PUBLIC
SAP Cloud for Customer
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Solution Guide for SAP Service Cloud

THE BEST RUN

Content

1 Solution Guide for SAP Service Cloud

This guide aims to provide you with sufficient knowledge of the capabilities we support in SAP Service Cloud and help you accomplish your daily tasks.

With SAP Service Cloud, your service agents would have your customer information at their fingertips. Using available collaboration tools and knowledge base you would know which service resources are available to address a customer need immediately. Technicians can order spare parts, check inventory, manage tasks, and complete service jobs on their mobile devices.

Create new Tickets [page 26] and update existing ones automatically. With native integration with SAP Jam™ Collaboration, you can search and share content from within agent workspaces and stay up-to-date on the latest service requests, comments, discussions, and decisions online. SAP Service Cloud automatically assigns tasks to a ticket based on relevant attributes to help guide agents through complex processes and create workflow rules with ease that can generate notifications, update fields, and trigger requests for multilevel approvals based on context and time.

Create serialized Registered Products [page 173] with customer, location, and warranty information and add to a ticket, a maintenance plan, or replicate equipment from SAP ERP as registered products.

Use Resource Scheduler [page 274] to allocate technicians to tasks and enable real-time visibility of work tickets in the technician calendar via desktop or mobile devices.

Use Skills Management [page 311] to schedule on-site visits efficiently by knowing which technicians are available to meet service needs.

For more information about initial setup of your system, setting up the solution on mobile devices, integrating analytics, and customizing the solution to your needs, see the appropriate guide on the SAP Cloud for Customer page on the SAP Help Portal.

2 Scoping Customer Service

Customer service relies on certain core functions that must be enabled in other scoping areas, including under Sales.

You can find more detailed information on the scoping process in the setup guide referenced in the Related Links section at the end of this topic.

Go to *Business Configuration* > *Implementation Projects*. Highlight the appropriate project and choose *Edit Project Scope*.

You can find most of the features used in customer service under *Service*. However, some settings are located under *Sales* and other elements. Scoping settings for specific service features are located with the feature information throughout this guide.

Scoping

Many of the scoping elements are automatically selected and cannot be deselected.

This table lists the sales and marketing scoping elements and sub-elements that should be **deselected** in a customer service only implementation.

Deselect for Service Only Systems

Scoping Elements	Sub-Elements
Sales Campaign	Market Development > Competitor Information
	Campaign Management
Sales	Lead Management
	Product and Service Portfolio for Sales
	Sell Standard Products
	New Business
	Sales Lead Generation
	Opportunities
	Sales Planning (SAP Cloud for Customer)

This table lists features you can use in customer service that must be enabled in other areas.

> **i Note**
>
> For additional information on each respective business topic, refer to the topic descriptions within the system.

Features to Enable outside of Service

If You Want to Use This Feature...	Select this Scoping Element
Mass communication with customers using e-mail blast	*Sales Campaign* > *Campaign Management* > *Target Groups*
Customer surveys	*Sales Campaign* > *Enhanced Sales Campaign Functionalities* > *Enhanced Campaign Execution*
Ticket routing based on territory assignment	*Sales* > *Account and Activity Management* > *Territory Management*
Connection between your legacy system and SAP Cloud for Customer	*Communication and Information Exchange* > *Business Process Management* > *Application Programming Interface*
Integration with SAP Jam	*Communication and Information Exchange* > *People Collaboration, Intranet, and External Services* > *Communities, Document Management and External Services*
Integration with **SAP ERP** or **SAP CRM**	*Communication and Information Exchange* > *Integration with External Applications and Solutions:* • *Integration with SAP ERP* • *Integration with SAP CRM* • *Integration of Master Data* • *Integration into Sales, Service, and Marketing Processes* • *360 Overview — Account*
Approvals by e-mail	*Built-In Services and Support* > *System Management* > *E-Mail Security*

Questions

Once you select the desired elements, you enable features at a more granular level in the **Questions** step. Review the questions under each scoping element to further define the capabilities of your solution. Based on best practices, the system has preselected features that you can accept or, where possible, adjust. Some features are mandatory for your scope and cannot be changed. Enable specific features by marking them *In Scope*.

Questions to set as In Scope Outside of Service

If You Want to Enable This Feature...	Mark This Question In Scope
Allow users to e-mail target groups directly for mass messaging	*Sales Campaign* > *Campaign Management* > *Campaigns* > *Campaign Execution* > *Do you want to execute campaigns by sending e-mails directly to target groups?* **Note** You must also enable e-mail blast in *Questions* > *Sales* > *Account and Activity Management* > *Activity Management*. And *Sales Campaign: Target Groups* work center must be assigned to users.
Account Hierarchy (users can view accounts in a hierarchical structure) You can also migrate account hierarchies. For more information, see **Migrating Account Hierarchies** in the Related Information section.	*Sales* > *Account and Activity Management* > *Account Management* > *Account Hierarchy* > *Do you want to use account hierarchies?*
Record customer interactions while resolving tickets	*Sales* > *Account and Activity Management* > *Activity Management* > *Activity Types* • **Record Phone Calls** Enables users to view incoming phone call information displayed in *Live Activity*. • **Record Chat Activities** Enables users to view incoming chat information displayed in *Live Activity*. • **Record Messaging Activity** Enables users to record information in the system from SMS messages. You must enable computer telephony integration in *Service* > *Customer Care* > *Service Request Management* for *Live Activity* to record phone call and chat information.
Create and use a template to send custom-formatted mass e-mail messages to all members of a target group at the same time	*Sales* > *Account and Activity Management* > *Activity Management* > *E-Mail Blast* > *Do you want to send personalized mass e-mails to many accounts at the same time?*

If You Want to Enable This Feature...	Mark This Question In Scope
Schedule visits to a customer's physical location and record information about the visit in the solution	*Sales* › *Account and Activity Management* › *Activity Management* › *Visits* › *You go to your customers' physical locations periodically. Do you want to record information from these visits in your system?* Additional visit options available. See related links for where to find more information.
Route tickets to service agents based on territory assignment	*Sales* › *Account and Activity Management* › *Territory Management* › *Do you want to use territory management?* If you enabled the Territory Management scoping element in the previous step, then you must enable Territory Management here as well.
Send sales quotes to customers as part of the ticket resolution process	*Sales* › *New Business* › *Communications for New Business* › *Sales Quote Forms* (multiple questions)
Integration with SAP Jam, including use as a knowledge base	*Communication and Information Exchange* › *People Collaboration, Intranet and External Services* › *Communities, Document Management and External Services* › *SAP Jam Integration* (multiple questions) Enabling SAP Jam integration is a multi-step process. See the related links section for where to go for more information.
Check for duplicate accounts, individual accounts, and contacts	*General Business Data* › *Business Partners* › *Handling of Business Partners* › *Duplicate Check for Business Partners* Select the appropriate question to apply weak, strong, or medium rules for the duplicate check.
Clean up your records by merging account and individual customer records	*General Business Data* › *Business Partners* › *Handling of Business Partners* › *Business Partner Merge* (multiple questions) Select up to three customers to define a customer merge instance. Once you trigger the merge, the system runs a background job to merge the data according to your specifications to the designated master record. Any transactions associated with the duplicate records that can be manually changed will be reassigned to the master record (for example, tickets, appointments, visits, opportunities, etc.).

If You Want to Enable This Feature...	Mark This Question In Scope
Associate time entries with a ticket and submit time reports for manager approval	*General Business Data* › *Employees and Service Agents* › *Employees* › *Enable Time Recording* and *Time Recording - General* (multiple questions) Additional options are available for time recording.
Enter address information for accounts in multiple character sets — for example, in the Greek or Roman alphabets, or in Cyrillic or Thai script, among others.	*Built-in Services and Support* › *Business Environment* › *Addresses and Languages* › *International Address Versions* › *Do you want to specify textual master data using international address versions?* Once you activate this feature, you can configure the fine-tuning activity *International Address Versions* to specify the alternative alphabets or scripts to be used in your solution.
Enable encryption and signature approval for e-mail	*Built-in Services and Support* › *System Management* › *Security* › *E-Mail Security* › *Do you want to use encryption and signatures for e-mails?*

Related Information

Key not found: loio0c75c97a09694e5d976bb38b0b84b016 Set Up Guide

Solution Guide for Key not found: loio0c75c97a09694e5d976bb38b0b84b016

Prepackaged Integration with SAP CRM

Prepackaged Integration with SAP Jam

Scope and Configure Visits

Scoping Employee Support [page 24]

Administrators must enable core functions under Customer Care and other elements in order to set up Employee Support.

3 Scoping Employee Support

Administrators must enable core functions under Customer Care and other elements in order to set up Employee Support.

Employee Support shares many core functions with customer service. If you are scoping a system for employee support, you must first configure these core functions under *Customer Care*. You must also enable certain functions under *Sales* and other element areas.

> **! Restriction**
>
> Scope core functions under *Customer Care* before you can enable an Employee Support system.

You can find more information on the core functions you need to scope under Customer Care and elsewhere in the **Scoping Customer Service** topic referenced in the related links section.

The options you choose during the scoping phase of your implementation project are used by the system to generate an activity list that you need to complete to go live.

To begin, go to *Business Configuration* > *Implementation Projects*. Highlight the appropriate project and choose *Edit Project Scope*.

Certain functions can be enabled in **either** customer care, or employee support. Please be aware that if you activate an option in one area the same function is also deployed for the other area, because they share the same settings.

Functions That You Can Enable Either Under Customer Care or Employee Support

Employee Support	Customer Care
Employee Support > *Knowledge Base* > *Knowledge Base Options* > *Knowledge Base Integration*	*Customer Care* > *Service Request Management* > *Knowledge Base Integration*
Employee Support > *Knowledge Base* > *Knowledge Base Options* > *Enable SSO for Knowledge Base Integration*	*Customer Care* > *Service Request Management* > *Enable SSO for Knowledge Base Integration*
Employee Support > *Knowledge Base* > *Knowledge Base Options* > *Open KB Details in New Browser Window*	*Customer Care* > *Service Request Management* > *Open KB Details in New Browser Window*
Employee Support > *Ticket Management* > *Entitlement Usage for Tickets* > *Service Level Agreement Determination*	*Customer Care* > *Service Request Management* > *Service Level Agreement Determination*
Employee Support > *Ticket Management* > *Profanity Check*	*Customer Care* > *Service Request Management* > *Profanity Check*

Employee Support	Customer Care
Employee Support > Communication Channel - Email > E-Mail Channel Options > Maintain Service Requests Automatically from Incoming E-Mails	*Customer Care > Service Request Management > Automatic Creation of Service Requests from E-Mails*
Employee Support > Analysis for Employee Support > Ticket History	*Customer Care > Service Request Management > Service Request History*

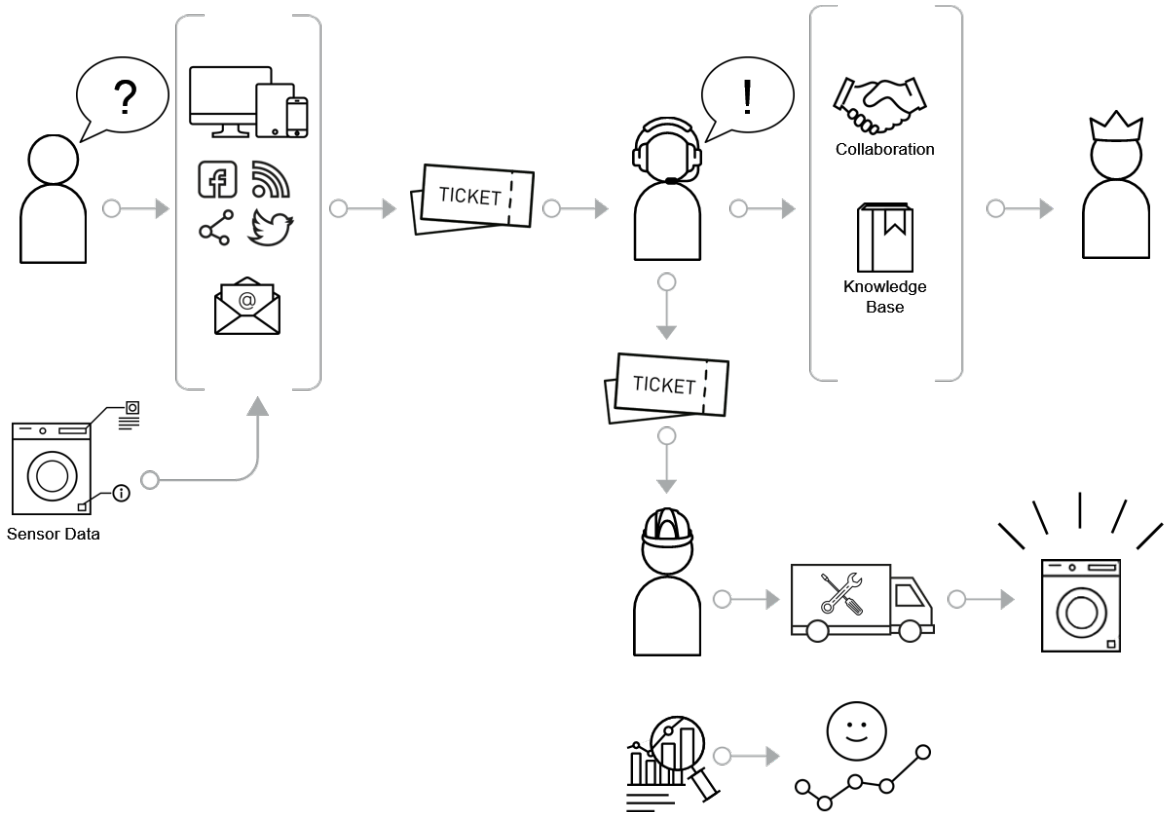
Related Information

Scoping Customer Service [page 19]
Customer service relies on certain core functions that must be enabled in other scoping areas, including under Sales.

4 Tickets

Learn how the system creates tickets, how to work with the ticket list, and how to respond to tickets to resolve customer issues.

Tickets are a record in the system of a request for some type of service or support from an account, customer, or employee. This record allows you to track interactions with the service requestor, as well as details like how much time has passed since the ticket was created, what actions were taken to resolve the issue, priority, associated products, or warranties, and much more. Tickets are also sometimes referred to as service requests.



- The solution creates a ticket from an incoming support request. This request could arrive from any one of a number of channels, such as social media, a phone call, or an e-mail. Tickets can also be created automatically from service contracts, or by sensor data on connected products.
- The system may do some automatic processing of the request to classify and route the ticket.
- As an agent, you might add crucial information such as customer contact information from a phone call, or specify how quickly the issue must be resolved.
- Use the knowledge base, collaborate with colleagues in real time, or work with other systems to access the information required to resolve the problem.
- Some tickets may require a visit by a service technician. Schedule an appointment and arrange for repair parts as needed.

- Respond to the requestor. Communicate the solution to the customer through the same channel used to make the initial request, or any other preferred contact point.
- Once the issue is resolved you can close the ticket.
- Use ticket analytics and reports to help you fine-tune your service strategy and make your organization more efficient.

4.1 Scope and Configure Tickets

Administrators can configure tickets using scoping, scoping questions, and fine-tuning activities.

> → Recommendation
>
> We recommend that you review all the scoping questions in the areas that are relevant and that you have included in your scope. When you select a question, more information appears on the tabs in the details section of the screen.

Scoping questions and fine-tuning activities that are straightforward may not be included in this list.

4.1.1 Enable Tickets

To use tickets, administrators must add tickets to the scope of the project.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Service* > *Customer Care* > *Service Request Management*.

Some ticket-related options do appear under other scoping elements. Scoping paths are provided for each option.

4.1.2 Configure Ticket Creation

Administrators can configure ticket creation using the quick create form, or create tickets in detail view.

Go to *Administration* > *Service and Social* > *Tickets* > *Ticket Configuration*.

To create new tickets using ticket detail view, select the option labeled: *Create tickets in detail view*. If this option left unselected, the default behavior is to create new tickets with the quick create form.

> ! Restriction
>
> Creating tickets in detail view is currently incompatible with offline mode on mobile devices. Use the default quick create form if your organization uses offline mode.

4.1.3 Configure Approval in Tickets

Administrators can explore how to incorporate conditions into the approval process for tickets, such as who would be allowed to approve the ticket.

The administrator can set the work distribution for tickets. These can be: Approver of Ticket, Direct Approvers, Manager of Agent Responsible for Ticket, Manager of Service Technician for Ticket, or Responsible for Account.

Activate the approval process for tickets under *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Service* > *Customer Care* > *Service Request Management* > *Group: Approval for Tickets*. Go to *Questions* and check the boxes for the questions: **Do you want to use a multi step approval for tickets?** and **Do you want that the system submits automatically a ticket for approval?**

You can edit the approval process by editing steps, adding additional steps, and by changing the order of the steps. You must define who receives approval tasks. You can also define conditions by which an approver is to receive an approval task.

Once you scope approval for tickets, then you detail the approval process. For this step, you define the approval conditions and an approver before the approval process is ready to use. Navigate to *Administrator* > *Approval Process*. See **Creating an Approval Process for details**.

> **i Note**
>
> At least one approval process must be active. To define an approval process, copy the default approval process and adapt the approval validity, ensuring one process has an unlimited validity.

Related Information

4.1.4 Configure Number Range in a Ticket

The administrator can configure the number range for your tickets via fine tuning.

You can maintain Number Range in a ticket for Customer and Employee Support. Go to *Business Configuration* and search for Ticket. Your search would display the *Tickets for Customer Support* and *Tickets for Employee Support* activities.

1. Click *Maintain Number Range*.
2. Adapt the *Begin Number* and *End Number*.
3. Save your changes.

4.1.5 Configure Document Types in Tickets

Document types represent ticket types in your application. Your administrator can help you create custom ticket types via fine tuning.

Create custom ticket types in your solution to:

- filter your tickets
- define reports
- assign service levels and define flexible notifications. For more information, see **Configuring Service Level Agreements** and **Configure Workflow Rules** topics.

To configure Document Types in a ticket for Customer and Employee Support, go to *Business Configuration* and search for *Ticket*. Your search would display the *Tickets for Customer Support* and *Tickets for Employee Support* activities.

Adding a Document Type

1. Click *Maintain Document Types*.
2. Click *Add Row* and enter the required document type code and a description.
3. Decide the process variant that you want to use the document type for. For Example: employee or customer support. You can make the type visible by checking the *Requires Work* flag. You can also select a different status schema.
   The process variant controls the appearance of work centers, fields, and status suitable for the corresponding processes.

   > **i Note**
   >
   > The process variant is pre-set with the corresponding setting, based on whether you opened the activity under *Tickets for Customer Support* or *Tickets for Employee Support*.
4. Save your changes.
5. To delete a document type, simply select the entry you want to delete and click *Delete*. Save your changes.

> **i Note**
>
> You can't delete document types that are used in your tickets.

4.1.6 Configure Status Schemas for a Ticket

In addition to the standard status and status schemas for tickets, you can specify custom ones as well by mapping them to a valid combination of life cycle status and assignment status. The administrator can configure this activity via fine tuning.

You can change visibility, and sequence of the standard statuses. With the status schemas, you can realize different processes in your company. For Example: you can create a status schema for your internal employee support, as well as a status schema that is valid for the interaction with your partners.

To maintain status schemas in a ticket for Customer and Employee Support, go to *Business Configuration* and search for *Ticket*. Your search displays the *Tickets for Customer Support* and *Tickets for Employee Support* activities.

- **Adding a New Status Schema**
  1. Under *Status Schemas* click *Add Row*.
  2. Enter an ID and a name for the schema.
  3. Save your changes.
     Now you can assign statuses to your schema.
- **Assigning Status Codes to Schema**
  1. Click *Add Row* under *Assign Status Codes to Status Schema*.
  2. Enter a number in the column *Sort Sequence* to specify the status sequence in the dropdown list in the application.
  3. Select a *Status* from the value help that comes from the *Ticket Status Dictionary*.
  4. Decide whether this status should be the initial entry for all newly created tickets and whether it should be visible in the dropdown list in ticket handling.

     > i Note
     >
     > - Only the **`Open`** *Life Cycle Status* can be selected as initial status.
     > - You can select the **`Closed`** *Life Cycle Status* but you can't set it to visible.
  5. Then save your changes.
- **Maintaining a Status Schema**
  You can change the name of a schema and the sort sequence of the assigned statuses, statuses itself, and checkboxes *Initial Status* and *Status Visibility*.
- **Deleting**
  Select the line that you want to delete and click *Delete*.

  > i Note
  >
  > Only statuses can be deleted that aren't used.

4.1.7 Configure Reporter at Ticket Creation

Use party determination to configure whether the reporter information is copied from the account data linked to the ticket.

Context

Your administrator can choose whether the ticket reporter is copied from the account contact information, entered as the currently logged in user, or entered manually.

Procedure

1. Go to *Business Configuration* and search for **Ticket**. Your search returns the *Tickets for Customer Support* and *Tickets for Employee Support* activities.
2. Based on your scenario, click either of the links and navigate to *Maintain Involved Parties*.
3. Select the *Reporter* role, and then select *Maintain Determinations*.
4. Select the steps used to populate the ticket reporter field.
    - Copied from Partner Contact
    - Copied from Contact of Account
    - Copied from Individual Customer
    - Current User

> → Tip
>
> Each of these steps is evaluated in the order shown. The first value found is used to fill the reporter field. For example, if you select all four steps, and there is no account associated with the ticket, then the currently logged in user is used as the reporter. If no steps are selected, then the reporter must always be entered manually.
>
> If the ticket is created as a follow-up, or copied from an existing ticket, then the reporter and other party information is copied from the source object.

4.1.8 Configure Ticket Status Dictionary

To use your own ticket statuses in your processes and schemas, the administrator would have to create the statuses first in the *Ticket Status Dictionary* and assign them to life cycle and assignment status.

To maintain entries for ticket status schemas, you first create them in the *Ticket Status Dictionary*. Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity Lists* > *Fine-Tune* and search for *Tickets for Customer Support*. Click *Maintain Status Dictionary Entries*, and using the *Add Row* button, maintain the status and create additional status for tickets here.

Use the status values you create in ticket status dictionary and then go to *Ticket Status Schemas* to assign them to a ticket.

The following table lists the pre delivered status values that you can select in the ticket and the possibilities to change them in the ticket. When you create your statuses keep these possibilities in mind.

You can change the description of the pre delivered statuses, but you can't delete them.

Current Status	Reachable Statuses	Non-Reachable Statuses	Description
`Open`	• `In Process` • `Customer Action` • `Completed`	• `Copied to CRM` • `Closed`	This status is not reachable from any other value.

Current Status	Reachable Statuses	Non-Reachable Statuses	Description
In Process	• **Copied to CRM** • **Customer Action** • **Completed**	• **Open** • **Closed**	If the status changes from **In Process** to **Closed** the system completes and closes the ticket.
Copied to CRM	None	• **Open** • **In Process** • **Customer Action** • **Completed** • **Closed**	This status is only reachable after **In Process**. If this status is set the ticket is replicated to the SAP CRM On-Premise system. It is not reachable if the document is inconsistent and it cannot be changed in the SAP Cloud for Customer system. But the status is changeable for inbound actions because in case a ticket is set to **Completed** in the CRM On-Premise system the status **Completed** is written back to the Cloud system.
Requires Work	• **In Process** • **Copied to CRM** • **Completed**	• **Open** • **Closed**	when creating a ticket, if you select the ticket type as work relevant, the *Requires Work* status flag gets enabled.
Completed	• **In Process** • **Customer Action** • **Closed**	• **Open** • **Copied to CRM**	A ticket, which is **Completed** cannot be set to **Copied to CRM**. **In Process** is not reachable if the ticket was completed by the On-Premise system. A ticket can only be revoked if it was not transferred to an On-Premise system.

Current Status	Reachable Statuses	Non-Reachable Statuses	Description
`Closed`	None	• `Open` • `In Process` • `Copied to CRM` • `Customer Action` • `Completed`	If a ticket is closed, it is not possible to open it again. This status can only be used for tickets still in the system. New tickets are not allowed to use `Closed`. **i Note** Once a ticket is set to **closed**, you can't change the ticket status.

Besides these, our solution also provides you with various statuses for tickets integrated with SAP ERP. The SAP ERP ticket statuses are as follows:

- **Release to SAP ERP**: Once your work on the ticket is complete, you can set the action to *Finish Work*. The ticket is now ready to be released to SAP ERP.
- **Release Pending**: When the ticket is in process the ticket has the *Release Pending* status.
- **Release Discarded**: If there are issues when data is sent to SAP ERP, errors display in the error log of the ticket.
- **Released**: If there are no issues in the ticket data when released to SAP ERP, the status updates to *Released*.

Add and Delete Ticket Status

To add a status click *Add Row*, enter a description, select the wanted life cycle and assignment status, and save your changes.

To delete a status, select the corresponding status line, click *Delete*, and save your changes.

4.1.9 Configure Item Processing Codes for Tickets

To enable ticket item defaulting based on item processing codes, the administrator has to configure item processing codes via business configuration.

When you create a ticket item and set a ticket type to it, the system assigns it a processing code based on the code mapping maintained in the rules table. The administrator has the ability to edit these mappings in the rules table.

Each of the processing codes in turn are associated with and mapped to certain values and flags, such as Pricing Relevant, ERP Relevant, Scheduling Method. You have the ability to set these values and flags in the system using the business configuration activity list.

So when you select a ticket type when creating a ticket item, then the system displays default values in the fields based on the item processing code set in the system. However, at this point, the user has the ability to edit these fields and change the default values.

Follow the steps below to set-up item processing codes for your business.

1. Go to *Business Configuration* > *Open Activity List* > *Fine-Tune* > *Show All Activities* > *Tickets for Customer Support* > *Maintain Item Processing Codes*.
2. Select *Add Row*.
3. To create item processing codes, populate the required fields. Enter a description.
4. Select the required *System Processing Type* and the *Invoicing Method*.
    - *System Processing Type*
      With the *System Processing Type* you trigger the accounting records for costs and goods movement in your company.
        - *Billing Request* creates a request for billing.
        - *Complaint Request* can be used to report complaints on external document items. This feature requires SDK development in order to be exposed as a front-end capability.
        - *External Procurement* creates an SAP ERP sales order with procurement items (item category TAS), based on actual quantity.
        - *Item Planning and Item Confirmation* allows custom integration scenarios based on planned quantity or actual quantity.
        - *Part Consumption from Technician Stock* marks the item as taken out of the stock of the technician and triggers the required billing and costing.
        - *Part Advance Shipment to Customer Consignment Stock* marks the item to be shipped to the customer's consignment stock before the technician plans to visit the customer.
        - *Part Consumption from Customer Consignment Stock* marks the item as consumed material from the customer consignment stock. It triggers also the required billing and costing.
        - *Part Return from Customer Consignment Stock* marks the item as the to be returned material (partly or completely) from the customer consignment stock.
        - *Time* creates a CATS time posting based on actual quantity. The line item in Billing Request is based on Invoice Method.
          If no integration with SAP ERP exists, the *Type* field is hidden and always defaulted to this value.
    - *Invoicing Method*
      With the *Invoicing Method* you decide how the item shall be invoiced in SAP ERP:
        - *Fixed Price* takes the planned quantities for billing.

          > **i Note**
          >
          > Please note that advance shipment doesn't work with fixed price.
        - *Time and Material* is the default setting and takes the confirmed (actual) time and quantity for billing.
        - *Not Relevant*
5. Save your entries.

> **i Note**
>
> Custom processing codes begin with Z. The rest of the codes are provided by the solution.

Example

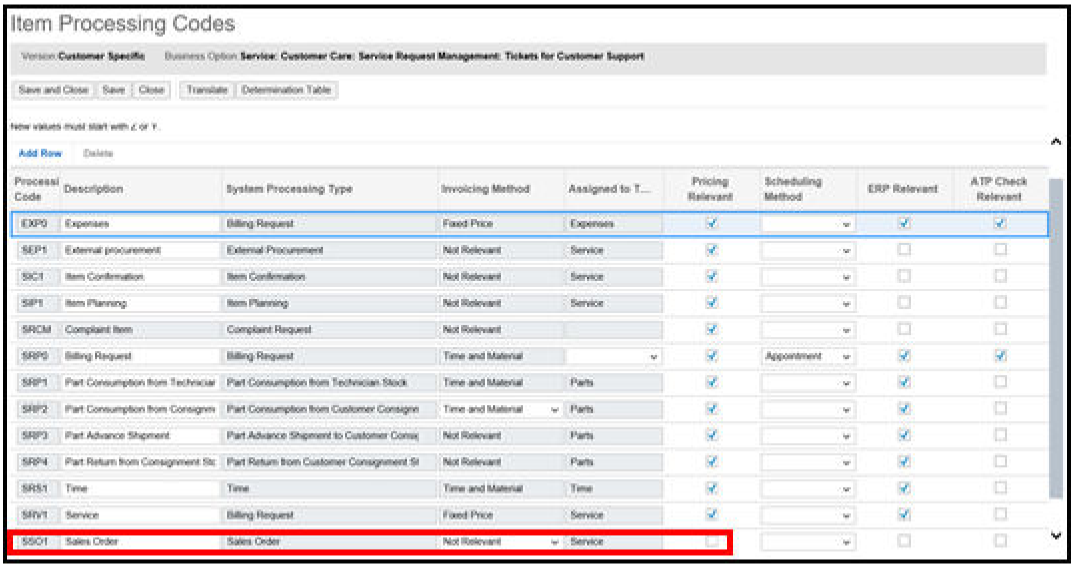
If an item processing code is flagged as *Pricing Relevant*, then a ticket item will be set by default as relevant for pricing. However, this only applies if the ticket type is also set as *Pricing Relevant*. The default pricing flag at ticket item level can be changed by the user. In this case, the pricing flag is re-determined.

4.1.10 Configure Sales Order Processing Code for Tickets

The administrator can select the *Sales Order* processing type code available for Ticket items under Item Processing Codes activity in fine tuning. Customers can use this processing code while creating Sales Orders in SAP ERP.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List*, and search and select *Tickets for Customer Support* or *Tickets for Employee Support*.

Click *Maintain Item Processing Codes* and select *Sales Order* to set the processing code.



4.1.11 Configure Involved Parties in a Ticket (Customer and Employee Support)

Your administrator would have to maintain Involved Parties in a ticket for Customer and Employee Support via fine tuning.

Context

You can automatically determine all involved parties for business transactions and their related documents using party roles and determination rules. This allows you to streamline account team assignments, and ensure that business partners are correctly assigned to business objects in a way that matches your company processes.

Procedure

1. Go to *Business Configuration* and search for Ticket. Your search would display the *Tickets for Customer Support* and *Tickets for Employee Support* activities.
2. Based on your scenario, click either of the links and navigate to *Maintain Involved Parties*. You can decide which party roles you want to use in your application. However some party roles are set as mandatory by default and you cannot deactivate these.
3. Add or edit party roles and under *Party Role Assignments* click *Add Row*.
4. Select a *Party Role* from the dropdown list.
5. Decide whether the role should be, for example, active, mandatory, unique, or should be forbidden for manual changes.
6. Save your changes.
7. Then click *Maintain Determinations* where you can edit the determination for the newly added party role.
8. For Delete Role Assignments, select the line you want to delete and click *Delete*.

Related Information

Scope and Configure Involved Parties [page 970]
Administrators can configure involved parties using scoping, scoping questions, and fine-tuning activities.

4.1.12 Configure Item Processing Determination for Tickets

For item processing determination, you can configure which processing codes can be determined based on the product, product category, or ticket type

When creating an item in a ticket, after you enter the product, the determination of the **ItemProcessingCode** is triggered based on the settings you've maintained in the Item Processing Determination fine tuning table.

Follow the steps below to set-up and assign item processing codes with the item processing determination for your business.

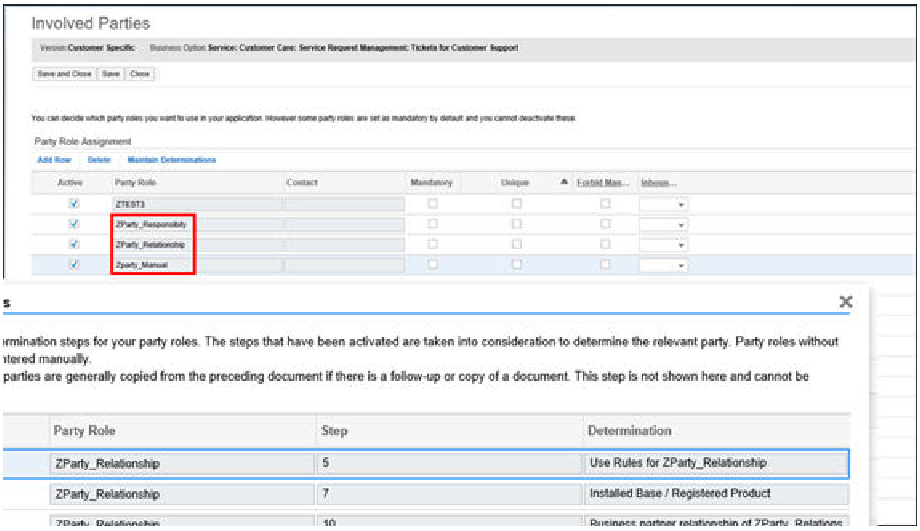
1. Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *Show All Activities* > *Tickets for Customer Support* > *Maintain Item Processing Determination*.
2. Select *Add Row*.
3. To create item processing determination, populate the required fields, such as *Usage Type* and *Item Processing Codes*.
4. Save your entries and activate the rule.

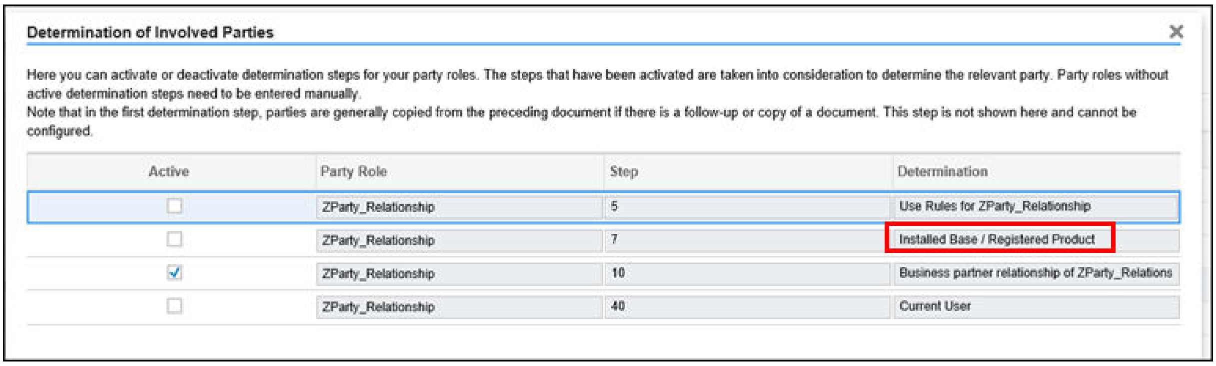
4.1.13 Configure Custom Involved Parties for Tickets

The administrator can configure custom involved parties for a ticket. You can then determine custom involved parties from Installed Base or Registered Product, using the party determination framework.

Use the determination option for Installed Base and Registered Product for custom parties to provide flexibility to customers where they can add custom involved parties to a ticket and also take advantage of the party determination framework for custom involved parties.

To add a custom involved party, navigate to *Business Configuration* > *Activity List* > *Tickets for Customer Support* > *Involved Parties*.





4.1.14 Enable Party Determination Rules for Creating Tickets from Registered Products, Installed Base, and Installation Points

You can choose to determine the Service Technician and Service Technician Team using party determination rules instead of copying this information from the associated registered product, installed base, and installation point, when creating ticket from them. Your administrator can enable this option by selecting the related question in business configuration.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Service* > *Customer Care* > *Service Request Management*, and under the *Business Option*, select the scoping question: **Use rules to determine technician and team when creating new ticket from registered product, installed base, or installation point?**

4.1.15 Configure Ticket Routing Rules

Administrators can create routing rules for automated ticket assignment.

Context

> **! Restriction**
>
> Your organization can choose to route tickets **either** with routing rules, or by work distribution, but not both.

Procedure

1. Go to *Administrator* > *Service and Social* > *Work Distribution*, then select one of these options:
   - *Ticket Routing Rules by Organization or Territory*
   - *Ticket Routing Rules by Employee*
2. Set up the rules table with *Adapt Columns*.

   The first time you set up business rules you must configure the rules table. By default, the first 20 fields on the screen appear as columns in the table. Use the left and right arrow buttons to remove any unwanted default columns and add only the fields you wish to use. You can have up to 15 columns in the table, including the results column.

   > **→ Tip**
   >
   > Use only the columns required for assigning objects. Extra columns can impact performance. You can add additional columns and rules at any time.
3. Choose *Insert Row* above the rules table. A new row with an asterisk in each field of the row is added to the table.

   You can add values to more than one field in a row. The fields in one row evaluate with a logical **AND** relationship. The field values must **all** evaluate to true in order for the rule to evaluate to true.
4. Click the asterisk symbol (*) in a cell to enter a value for that field. The rules table offers a variety of logical operators to define your values.

> → Tip
>
> We recommend that you take full advantage of operators to consolidate your rules for better performance.
>
> For example, if your rules determine assignments based on ZIP codes, use the **Between** operator to set up a range of ZIP codes in sequence. Use the **Include** operator to group ZIP codes that have the same prefix.
>
> The Comparison Operations document in the **Related Links** section provides detailed information on operators in your solution.

5. Continue to add rows for each desired result.

   The system compares rows using the logical **OR** operator. The system compares each rule, top to bottom, until **ONE** evaluates to **true**.

   Rearrange rows by selecting the row and clicking *Swap*.

> → Tip
>
> Among other properties, you can specify customer language as a criteria for ticket routing rules, to assign tickets to a team or a territory.

6. Choose *Save* when finished.
7. Click *Activate Rules*.

   To enable your changes, you must activate the new rules. Otherwise, the system uses the previous rule set.

Related Information

http://help.sap.com/saphelp_nw73/helpdata/en/50/9eecf3152c4fb08d50e94faaf4a277/content.htm

4.1.16 Configure Ticket Routing Rule Restrictions for Local Administrators

Assign local administrators to geographical areas for which they can create rules.

Context

Only administrators with global access rights can create and edit restrictions for local administrators.

Procedure

1. Go to *Administrator* > *Service and Social* > *Work Distribution* > *Ticket Routing Rules* to open the rules table.
2. Choose *Add Row* above the *Local Administrators Restrictions* table.
3. Enter a *Country* and *Region* to allow for rule creation.
4. Choose a local administrator for that country and region.

   The local administrator can create rules that apply only to the specified country and region.
5. Continue to add rows for each local administrator you wish to assign.
6. Choose *Save* when finished.

4.1.17 Configure Ticket Routing by Organization or Employee

Administrators can define work distribution rules to enable routing of tickets to particular team or agent queues.

Prerequisites

> **! Restriction**
>
> Your organization can choose to route tickets **either** with routing rules, or by work distribution, but not both.

- You have created or uploaded employee and product data.
- You've created and activated your organizational structure, and set up your teams for ticket handling.
- If your system is configured to support social media channels and you want to use social media channels as routing criteria, you've configured those channels.
- If your system is configured to support e-mail as a channel and you want to use e-mail as routing criteria, you have configured e-mail and added the corresponding inbound e-mail addresses.

Context

Work items are tickets in the system created from customer messages. You can also create organizational work distribution rules to manage escalation routing and routing based on social media channels.

By default, all incoming customer service tickets are visible to all employees with the corresponding access rights. The *Organizational Work Distribution* and *Employee Work Distribution* views enable you to manage the distribution of customer tickets within your service organization. You create rules that allow the system to evaluate the tickets and distribute them to the responsible team or the responsible processing agent.

Procedure

1. Go to *Administrator* > *Service and Social Settings* > *Organizational Work Distribution*, OR *Employee Work Distribution*.
2. Select the work category: *Service and Support Team for Service Requests - Social Media* and choose *Edit*.
3. Choose *Add Rule* or *Copy Rule*.

   The system processes work distribution rules according to their priorities. If you have maintained multiple rules for a work category, the system only uses the first rule that applies. By default, new rules are added to the bottom of the list, and so have the lowest priority. To change the priority, move a rule up or down in the table.

   > **i Note**
   >
   > To ensure that all tickets are routed properly, we recommend that you create a default rule at the bottom of the rule list. Make the default rule applicable to the properties of any incoming customer message. If no other routing rules apply, the default rule routes tickets.

4. Enter the name, choose, or enter the ID of the responsible customer service org. unit, or service agent and enter the validity period for the rule.
5. Go to the *Rule Details* section and specify the parameters for the rule.

   Each of the following parameters appears as a tab. Using the parameters, you can specify which parameter is to be included in the rule or excluded from the rule.

   - ABC Classification
   - Country/region
   - Product Category
   - Service Category
   - Account (Includes all individual customers and customer accounts)
   - Service Priority Code
   - Escalation Status
   - Channel Type

     > **i Note**
     >
     > The social media channel type is only supported by SAP Cloud for Social Engagement.

   - Channel
6. Choose *Check* to verify that your rule is consistent and then save your entries.
7. Move the rule up or down in the list to set priority in the processing sequence.

4.1.18 Configure Next Ticket

You, as an administrator can enable and set the scope and order for the next ticket queue.

Context

If your service organization's ticket processing flow allows agents to request tickets from a list, then you can enable the next ticket feature and set up the queue.

Procedure

1. Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > > *Questions* > *Service* > *Customer Care* > *Service Request Management* > *Next Ticket Option for Agent* and select the scoping question: *Do you want to allow agents to request the next available ticket?*
2. Set up the logic that defines which ticket agents receive when they request the next ticket. Go to: *Administrator* > *Service and Social* > *Work Distribution* > *Next Ticket Configuration*.
3. In the *SCOPE* section, select the pool of tickets that make up the next ticket queue.
    - *All tickets that can be viewed and edited by the agent (All Tickets)*
    - *Tickets assigned to the Team to which the agent belongs (My Team Queue)*
    - *Tickets belonging to a Territory to which the agent is assigned*
4. In the *SORTING* section, select the fields to use for sorting the tickets, and set the sort order. Select fields then use the right and left arrow buttons to move the desired *Available Fields* to the *Selected Fields* list. Use the up and down arrows to change the order of the selected fields.

    The top field in the list determines the primary sort order. The next field is used as a secondary sort within the primary order, and so on. Typically, the sort is based on the priority in combination with one or more of the date fields.

    > **i Note**
    >
    > If the next ticket in the queue is locked - by another user or an automated process - when a user requests the next ticket, then the locked ticket is skipped and the user receives the following ticket in the queue.

4.1.19 Configure Service Level for Tickets

The administrator would create a new service level in the system.

Context

Follow these steps to create a new service level in the solution.

Procedure

1. Go to *Administrator* > *Service and Social Settings* > *SLA Setup*

   Configure the settings for the new service level in the four tabs: *General*, *Reaction Times*, and *Operating Hours*. The *Changes* tab is for change history and is blank for new entries.
2. Enter a name, ID, and description for the new service level on the *General* tab.
3. Add milestones on the *Reaction Times* tab.
4. Select a milestone type.
   - *Due Date for Completion*
   - *Due Date for Initial Review*
   - *Due Date for On-site Arrival*
   - *Due Date for Resolution*
   - *Due Date for Response*
     You can set the *Recurring* flag for the *Due Date for Response* option. Each time a customer responds to a ticket, *Due Date for Response* is recalculated according to the time you define for this milestone (in the *Operating Hours* tab under *Time Ranges*).

     > **! Restriction**
     >
     > Automatic alerts for overdue **custom** milestones are not currently supported in SAP Cloud for Customer.
5. Add details for a milestone. Select an entry in the *Milestones* table and then add rows to the Details of Milestone table as needed. Select *Type of Service*, *Priority*, and *Net Labor Time* for each row.

   You can maintain multiple service types and priorities for a milestone. Add a new row for each priority.

   > **→ Tip**
   >
   > For *Net Labor Time* if you enter the duration in hours, the system only considers operating hours. If you enter the duration in days, the system uses the Weekly Configuration, but not the time ranges. You enter this information on the *Operating Hours* tab in the next step.
   >
   > > **Example**
   > >
   > > Your working days are from Monday to Friday, from 8:00 to 18:00 and the reporting date is Wednesday 1.1.2014, 15:00

- If you enter a duration of 2 days the system calculates a due date on Friday, 3.1.2014,15:00.
- If you enter a duration of 48 hours the system calculates a due date on Wednesday,8.1.14, 13:00.

6. Set the *Working Day Calendar*, *Time Zone*, *Weekly Configuration*, and *Time Ranges* on the *Operating Hours* tab.

   Time Ranges allows you to set the hours when your service staff is available. *Operating Hours* may not be available, depending on your configuration. If you do not enter operating hours, the system assumes that service is available 24/7.
7. Select *Save* to save the new service level. The service level is saved in the system and added to the *Service Levels* tab.
8. Activate the new service level. Select the row for the newly created service level and select *Change Status*, then choose *Active*. Status options include: *Active*, *Blocked*, and *Obsolete*.

4.1.20 Configure Service Level Determination Rules for Tickets

Administrators can set up rules that automatically assign service levels to tickets.

Context

When you create or edit a service request or ticket, the system uses rules to evaluate which service level to apply. When a rule is found that matches the ticket, the system applies the appropriate service level. The service level pushes details about reaction times and due date calculations to the ticket.

Procedure

1. Go to *Administrator* > *Service and Social* > *SLA Setup* > *Determine Service Level* to open the rules table.
2. Set up the rules table with *Adapt Columns*.

   The first time you set up business rules you must configure the rules table. By default, the first 15 fields on the screen appear as columns in the table. Use the left and right arrow buttons to remove any unwanted default columns and add only the fields you wish to use. You can have up to 15 columns in the table, including the results column.

   > → Tip
   >
   > Use only the columns required for assigning objects. Extra columns can impact performance. You can add additional columns and rules at any time.

3. Choose *Insert Row* above the rules table. A new row with an asterisk in each field of the row is added to the table.

   You can add values to more than one field in a row. The fields in one row evaluate with a logical **AND** relationship. The field values must **all** evaluate to true in order for the rule to evaluate to true.
4. Click the asterisk symbol (*) in a cell to enter a value for that field. The rules table offers a variety of logical operators to define your values.

   > → Tip
   >
   > We recommend that you take full advantage of operators to consolidate your rules for better performance.
   >
   > For example, if your rules determine assignments based on zip codes, use the **Between** operator to set up a range of zip codes in sequence. Use the **Include** operator to group zip codes that have the same prefix.
   >
   > The Comparison Operations document in the **Related Links** section provides detailed information on operators in your solution.
5. Continue to add rows for each desired result.

   The system compares rows using the logical **OR** operator. The system compares each rule, top to bottom, until **ONE** evaluates to **true**.

   Rearrange rows by selecting the row and clicking *Swap*.
6. Choose *Save* when finished.
7. Click *Activate Rules*.

   Enable your changes by activating the new rules. Otherwise, the system uses the previous rule set.

Related Information

http://help.sap.com/saphelp_nw73/helpdata/en/50/9eecf3152c4fb08d50e94faaf4a277/content.htm

4.1.21 Configure External Pricing Call in Tickets

Administrators can learn about external pricing call configuration to retrieve the complete pricing result from SAP on premise systems to your cloud solution.

If external pricing is selected, a synchronous call is required to retrieve the complete pricing result from the SAP on premise system to your cloud solution. Replicated sales documents also require a synchronous pricing update once the sales document is updated during save.

If the document was previously replicate, with this configuration, you can disable the synchronous pricing call to the system,. In addition, you can disable the synchronous call completely, which is also valid for quotes created in your cloud solution. For both configuration options, the pricing status is calculated successfully through the asynchronous call from the external system. The user can still trigger pricing synchronously by clicking the asynchronous call action.

To configure external pricing call, go to fine-tuning activity *Ticket* > *Tickets for Customer Support* > *Document Types*:

- Enable *External Pricing* for ticket type.
- Enable ticket item processing code for pricing.

Next, go to *Ticket* > *Tickets for Customer Support* > *Item Processing Codes*:

- If an item processing code is flagged as *Pricing Relevant*, then the ticket item would be set as relevant for pricing, by default.
- The default pricing flag on ticket item level can be changed by the user.
- The pricing flag is re-determined if the item processing code is changed by the user.

4.1.22 Configure Main Ticket Closure

Administrators can configure the solution to prevent closing main tickets with open sub-tickets.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Service* > *Customer Care* > *Service Request Management* > *Questions* > *Ticket Completion*.

To prevent closing main tickets with open sub-tickets, select the scoping question: *Do you want to prevent users from completing main tickets when sub-tickets remain open?*

4.1.23 Configure Skills in Ticket

The administrator must enable Skills via business configuration to use the feature in ticket.

Go to *Service* > *Customer Care* > *Service Request Management* > *Questions* and select the question: **Do you want to enable Skills Functionality in Ticket?**

4.1.24 Configure Tickets Summary and Signature

Administrators can configure the template for a ticket summary.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Service* > *Customer Care* > *Service Request Management* > *Ticket Summary Templates* and select the scoping question: **Do you want to use locally-stored templates for ticket summary reports?**

4.1.25 Configure Employee Work Distribution Rules

As an administrator, you can create employee work distribution rules to enable the system to evaluate work items and to determine the responsible service agent.

Context

In this case the work items are tickets in the system created from customer messages. You can also create organizational work distribution rules to manage escalation routing and routing based on social media channels.

Procedure

1. Go to *Administrator* › *Service and Social Settings* › *Employee Work Distribution*.
2. Select the work category: *Service and Support Team for Service Requests - Social Media* and choose *Edit*.
3. Choose *Add Rule* or *Copy Rule*.

   The system processes work distribution rules according to their priorities. If you have maintained multiple rules for a work category, the system only uses the first rule that applies. By default, new rules are added to the bottom of the list, and so have the lowest priority. To change the priority, move a rule up or down in the table.
4. Enter the name, choose or enter the ID of the responsible customer service agent, and enter the validity period for the rule.
5. Go to the *Rule Details* section and specify the parameters for the rule.

   Each of the following parameters appears as a tab. Using the parameters, you can specify which parameter is to be included in the rule or excluded from the rule.
   - ABC Classification
   - Country
   - Product Category
   - Service Category
   - Account (Includes all individual customers and customer accounts)
   - Service Priority Code
   - Escalation Status
   - Channel Type

     > **i Note**
     >
     > The social media channel type is only supported by SAP Cloud for Social Engagement.
   - Channel
6. Choose *Check* to verify that your rule is consistent and then save your entries.

7. Move the rule up or down in the list to set priority in the processing sequence.

4.1.26 Configure Ticket Response Templates

Administrators and users can create templates for standard ticket response text.

Context

Follow the steps to create and set up a template for ticket response.

Procedure

1. Go to *Service* > *Templates*.
2. Add a new template and enter the required information: *Name*, *Subject*, *Channel Type*, and *Template Text*. For response templates, select *Text-Based* for *Template Type*.

   You can edit the template text as needed when you add placeholders.

   > **i Note**
   >
   > Use document-based templates to create branding that surrounds the reply text. Branding templates can be linked to specific communications channels.

3. Select *Save and Open* to view template details for further editing.
4. Add placeholders (optional). Add a row to the placeholder table. Define a placeholder tag in the first column and select a field in the second column to populate the placeholder.

   Placeholders names are surrounded by the pound sign (#). For example, define a placeholder name #CustID# and select the field *Customer ID* to insert the customer ID number into the template text. Once you define your desired placeholders, you can insert them into the template text. When the user selects the template, the solution fills in the placeholders with ticket data.
5. Set template as *Corporate* to make it available to all users (optional).

4.1.27 Configure Microsoft Outlook for Ticket Responses

The administrator would set up your system to use Microsoft Outlook to respond to service tickets.

Context

You must scope Microsoft Outlook in your solution to use the tool for responding to your customers.

Procedure

1. Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Service* > *Customer Care* > *Service Request Management* > *Group: E-mail replies via Microsoft Outlook (1)*.
2. Set the question to *In Scope*.
3. Instruct all agents to download and install the SAP Cloud for Customer Add-In for Microsoft Outlook from the *Download* page.

Results

Service agents can now use Microsoft Outlook to respond to tickets. Agents can also respond with the built-in response editor by deselecting the *Use Microsoft Outlook* checkbox in *Interactions*.

4.1.28 Configure ATP Check for Tickets

Administrators can set up document types and item processing codes for available-to-promise (ATP) check.

Context

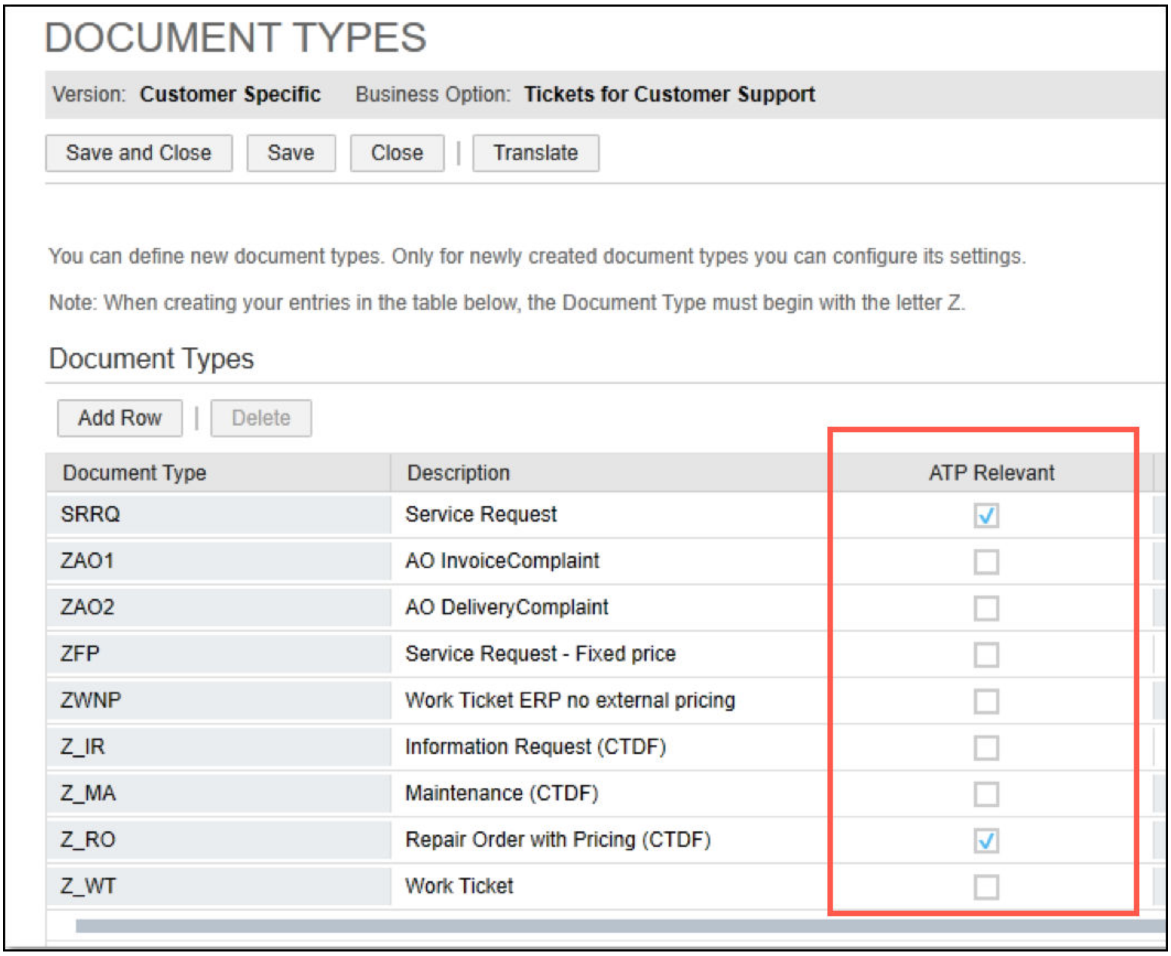
ATP check is only available for tickets with specific criteria.

- The document type is relevant for ATP
- The item processing code is relevant for ATP check
- The status for ticket item work progress is:
  - Open
  - Ready

- Not Relevant

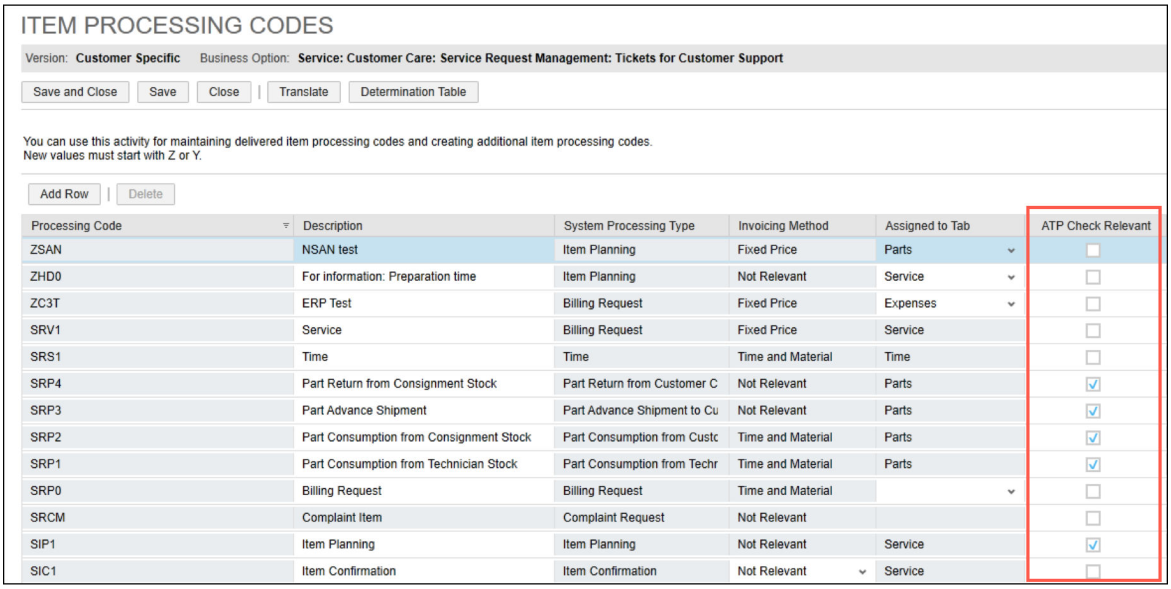
Procedure

1. Configure document types. Go to *Business Configuration* > *Implementation Projects* and select *Open Activity List*. Select *All Activities*, then search for **ticket**. Select *Tickets for Customer Support*, then select *Maintain Document Types*. Select the *ATP Relevant* checkbox for each document type you wish to enable for ATP check.



2. Configure item processing codes. Go toGo to *Business Configuration* > *Implementation Projects* and select *Open Activity List*. Select *All Activities*, then search for **ticket**. Select *Tickets for Customer Support*, then select *Maintain Item Processing Codes*. Select the *ATP Check Relevant* checkbox for each processing

code you wish to enable for ATP check.



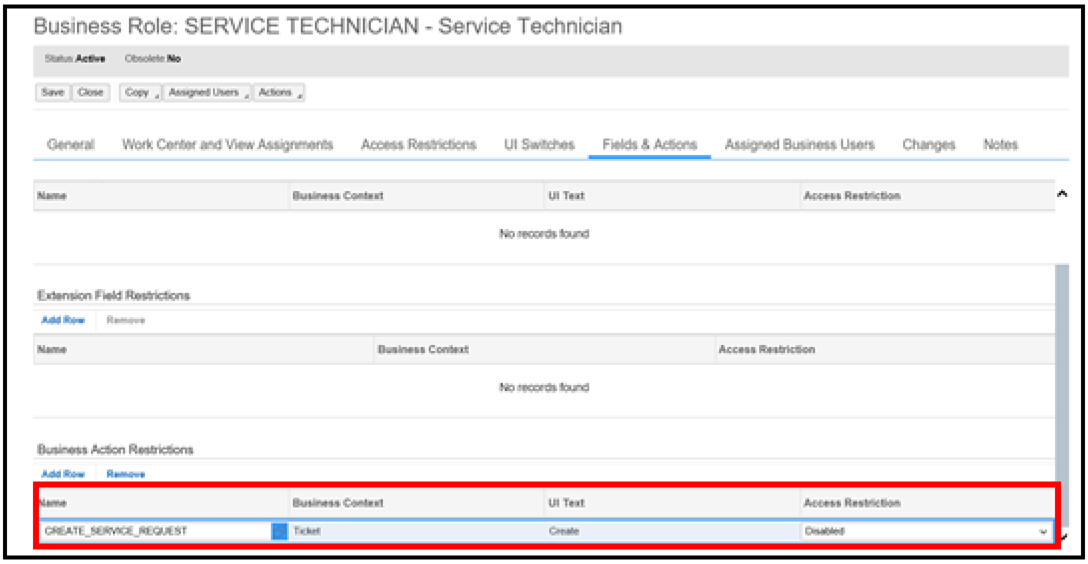
Processing Code	Description	System Processing Type	Invoicing Method	Assigned to Tab	ATP Check Relevant
ZSAN	NSAN test	Item Planning	Fixed Price	Parts	☐
ZHD0	For information: Preparation time	Item Planning	Not Relevant	Service	☐
ZC3T	ERP Test	Billing Request	Fixed Price	Expenses	☐
SRV1	Service	Billing Request	Fixed Price	Service	☐
SRS1	Time	Time	Time and Material	Time	☐
SRP4	Part Return from Consignment Stock	Part Return from Customer C	Not Relevant	Parts	☑
SRP3	Part Advance Shipment	Part Advance Shipment to Cu	Not Relevant	Parts	☑
SRP2	Part Consumption from Consignment Stock	Part Consumption from Custc	Time and Material	Parts	☑
SRP1	Part Consumption from Technician Stock	Part Consumption from Techr	Time and Material	Parts	☑
SRP0	Billing Request	Billing Request	Time and Material		☐
SRCM	Complaint Item	Complaint Request	Not Relevant		☐
SIP1	Item Planning	Item Planning	Not Relevant	Service	☑
SIC1	Item Confirmation	Item Confirmation	Not Relevant	Service	☐

4.1.29 Configure Access Restriction for Tickets Via Business Role

The administrator can restrict some business roles from creating new tickets, by configuring authorization via Access Restriction. This feature restricts ticket creation to selected employees, based on their role.

Navigate to *Administrator* › *General Settings* › *Users* › *Business Roles* and select the necessary business role to set up access restrictions for ticket creation.

> **Note**
>
> This feature is available online only.



4.1.30 Configure Ticket Access by Employee Service Organization

You, as an administrator, can authorize all service-related screens by employee service organization, rather than by service unit. Authorizing by organization enables **all** employees within a service organization to access tickets assigned to any employee within the organization hierarchy.

Go to *Administrator* > *General Settings* > *Users* > *Business Roles*.

1. Select the business role, then select the *Tickets* work center view.
2. Select *View All*, then on the *Access Restrictions* tab, select the technical name: *SEOD_TICKETMD_SADL_WCVIEW*.
3. Select restriction rule: *6 - Service Organization of Employee*.

4.1.31 Configure Contract Restrictions Based on Ticket Type

The administrator would configure contract types and usage restrictions based on additional criteria such as ticket type.

You can create different contract document types with restricted coverage based on the context they are used in. You can associate specific contract types with specific ticket types to auto assign the appropriate contract for a ticket type.

Set up ticket document types to support contract restrictions as follows:

1. Go to *Business Configuration* > *Implementation Projects*.
2. Select your implementation project and choose *Open Activity List*.
3. Go to *Fine Tune* > *Activity List* > *Tickets for Customer Support* > *Tickets for Customer Support* > *Maintain Document Types*.
4. Add document types and descriptions. A new document type should start with the letter **Z**.
5. Select a *Contract Usage Restriction* for each document type as required.
6. Choose *Save* and *Close*when finished.

Users can specify usage restrictions for each contract item. When a user creates a work ticket, the system automatically applies the specified usage restrictions based on the ticket type.

4.1.32 Configure Stock for Tickets

Scoping the Stock allows you to view all stock-related information for service technicians, service team, or service organizations. To use the stock option in a ticket, the administrator would have to assign the *Stock* work center to the field service technician business role.

To scope stock for your solution, go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Service* > *Entitlement Management* > *Stock Location* and select the checkbox. Next, go to the *Questions* tab to select the option for using the *Stock* work center to enable you to view the stock location data.

To assign the *Stock* work center to the field service technician business role, go to *Administration* > *Work Center and View Assignments* tab. Assign the *Stock* work center to the field service technician business role with COD_*STOCKLOCATION*_WCF ID code.

4.1.33 Configure Knowledge Base Integration for Tickets

The administrator has to scope and enable Knowledge Base Integration in SAP Cloud for Customer solution.

Context

Enabling this feature turns on the solution finder feature of the workspace where your external knowledge base is integrated.

Procedure

1. Go to *Business Configuration* > *Implementation Projects* and select the relevant implementation project.
2. Click *Edit Project Scope*.
3. Click *Next >* until you reach *Questions*.
4. In the *Scoping Elements* list, select *Service* > *Customer Care* > *Service Request Management*.
5. Enable *Knowledge Base Integration* by selecting *In Scope* for that question.
6. Click *Next* .
7. Click *Next* .

4.1.34 Configure Web Service

Administrators can create a knowledge base web service.

Context

Create a web service to access knowledge base content.

Procedure

1. Go to *Administrator* > *Mashup Web Services*.
2. Click *New*, then *RSS/Atom Service*.

   Single sign-on (SSO) is **not** supported for knowledge base integration.
3. Enter the URL of the RSS or Atom feed and click *Extract Parameters*.
4. The system extracts any parameters and displays them under *Input Parameters*.
5. If you already have the input parameters, you can also enter them manually.
6. Adjust the input parameter values as required, ensuring that the search term parameter is blank.
7. Save your entries and activate the service.

Example

For example, if the URL for the RSS or Atom feed for your knowledge base vendor is `https://KBvendor.com/search?q=test`, then the system would extract the parameter, `q`, with the constant, `test`. You would need to delete the constant value so it remains blank.

4.1.35 Configure Data Mashup

As the administrator, once you've created the web service for your knowledge base, create a data mashup to specify the mapping between the search parameters used by the system and the web service input parameters.

Procedure

1. Go to *Administrator* > *Mashup Authoring*.
2. Click *New*, then *Data Mashup* to open the guided activity for creating a new mashup.
3. On the *General Information* screen, enter the *Mashup Name* as: **`KNOWLEDGE_BASE`**.

   The name **must** be **`KNOWLEDGE_BASE`** for the mashup to function correctly.

   Enter a description if desired.
4. For *Port Binding*, choose *Knowledge Base Search*. You can type the first few characters into the field for a quick search, or select from the value list.
5. Select *Next* to define the mashup details.
6. Select *+ Binding Port* under *Add Initial Input*. The Input-Binding Port should be *Knowledge_Base_Search_Info*.
7. Click the *Input-Binding Port* title to open the properties. Enter a test search expression that you know will return results.

You'll use the test search expression to preview the mashup results later in this process.

8. Add a service and select **RSS/Atom Service**.
9. Select the knowledge base web service you created previously as the source for the data mashup.
10. Edit the source properties by clicking the *Service Source* title. For the input variable you configured in the web service, select the **Search Expression** parameter.
11. Click *Preview* to preview the results of your test search expression in the result pane.
12. Click *Next* to review the mashup.
13. Verify the details and click *Finish* to save and activate your mashup.

4.1.36 Configure SAP JAM as Knowledge Base for Tickets

The administrator would scope and configure SAP Jam as a knowledge base for ticket responses.

> **i Note**
>
> Your system must be integrated with SAP Jam for Feed content before you can use SAP Jam as a knowledge base.

To scope, go to *Service* › *Customer Care* › *Service Request Management* › *Questions*. In the scoping questions for the **Knowledge Base Group**, select and scope the question **Do you want to use SAP Jam as a knowledge base provider?**

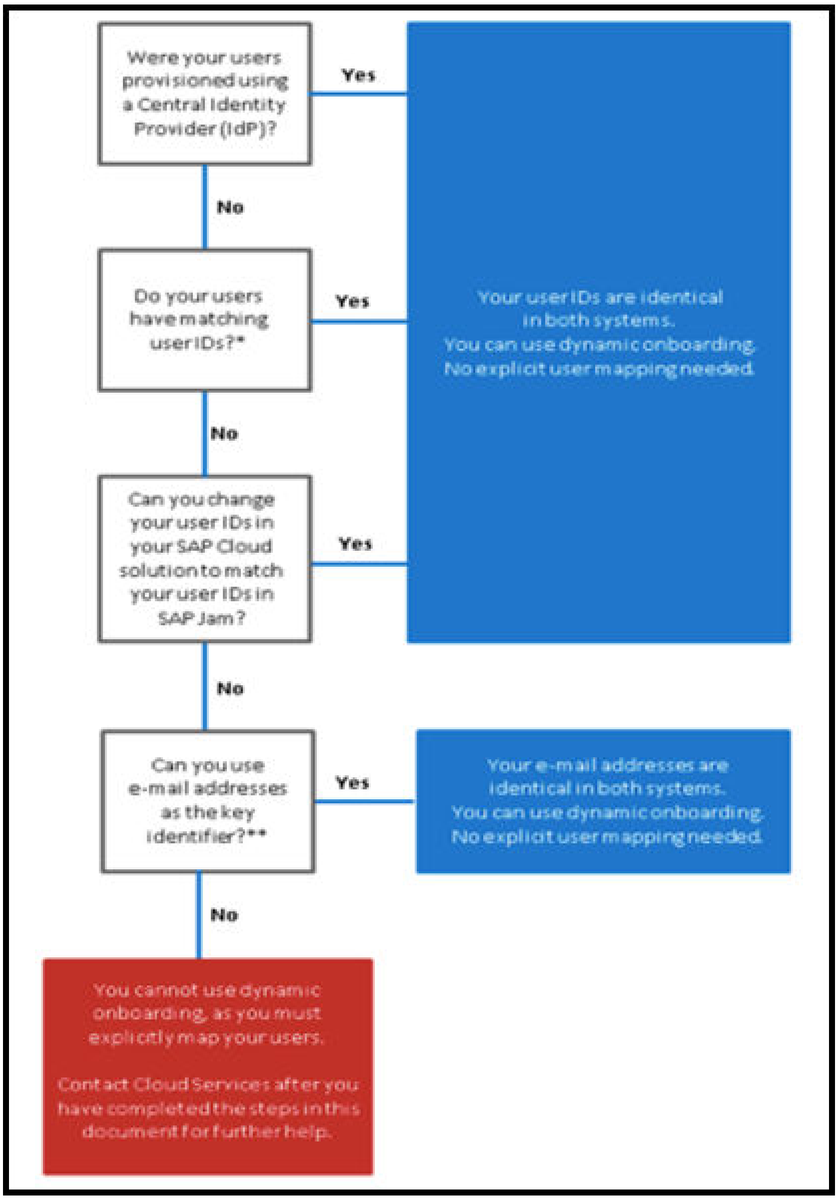
4.1.37 Set Up SAP JAM for Collaboration

As the administrator, once you've enabled SAP JAM for collaborating in a ticket, set up SAP JAM in your system.

Follow these steps for setting up your system:

1. In SAP JAM, register your solution as an OAuth Client.
2. In your solution, register the SAP JAM system.
3. In SAP JAM, register your solution as a SAML Identity provider.
4. Confirm successful integration within your solution.

> **→ Tip**
>
> We recommend using dynamic on-boarding, without explicit user mapping. There are several ways to achieve this. Refer to the screenshot and find the appropriate option that addresses your user provisioning:



4.1.38 Configure SAP JAM Integration in Ticket

To use SAP JAM to collaborate and resolve a ticket, the administrator must first enable the feature, and integrate it with our solution.

Go to *Scoping* > *Business Configuration* > *Implement Project* > *Edit Project Scope* > *Communication and Information Exchange* > *People Collaboration, Intranet and External Services* > *Communities and Document Management* > *Questions*. Under SAP JAM Integration, select the question: **Do you want to integrate SAP JAM with your cloud solution?**

4.1.39 Configure System Processing Type for External Procurement

Each of the item processing codes maintained in fine tuning for Tickets is associated with and mapped to certain values and flags. These can be Pricing Relevant, SAP ERP Relevant, or Scheduling Method. The administrator can set these values and flags in the system using the business configuration activity list.

Maintain system processing type code for External Procurement, which would in turn create a SAP ERP sales order with procurement items (item category TAS). This can also be used for SAP ERP sales order with regular items (TAN).

4.1.40 Configure Processor and Team Consistency Check

You, as an administrator can configure the processor and team consistency check in business configuration scoping. If enabled, the consistency check ensures that the ticket processor belongs to the team assigned to the ticket.

If you disable the consistency check, you can override the consistency check and assign any user as the ticket processor, even if that user isn't a member of the team currently assigned to the ticket.

Navigate to *Business Configuration* > *Implementation Projects* > *Questions* > *Service* > *Customer Care* > *Service Request Management*, and under the *Processor and Team Consistency Check* section. There are two questions in this section. They're mutually exclusive: if you select one you can't select the other.

- *Disable consistency check between processor and service support team when reassigning a ticket?*
- *Enable check and assign primary and secondary processor based on their service team when reassigning ticket?*

Team and Processor Consistency Check Options

Nothing scoped in this section	The system checks whether the processor is a member of the currently assigned team. If a new processor is assigned and not a member of the currently assigned team, the team assignment is removed. If a new team is assigned which doesn't include the current processor, the processor assignment is removed.
"**Disable consistency check ...**" in scope	Turns off the check and allows you to assign any processor and team.
"**Enable check and assign primary and secondary processor ...**" in scope	Enables consistency check, and the system also considers secondary team assignment. Therefore, if you change the assigned team, and the current agent has a secondary relationship with the new team, then the system retains the agent assignment.

i Note

If you wish to make the team field **mandatory** so that a processor team is always assigned, set the field as mandatory in **fine tuning** for involved parties. Setting the filed as mandatory in fine tuning ensures that a warning appears in case you assign a new processor to a ticket who doesn't belong to the current team by primary or secondary assignment.

Related Information

[Configure Involved Parties in a Ticket (Customer and Employee Support) [page 72]]
Your administrator would have to maintain Involved Parties in a ticket for Customer and Employee Support via fine tuning.

4.1.41 Configure Workflow Rule Triggers

Administrators can trigger workflow rules based on the value of the Pricing Status and ERP Release Status fields, or on keywords contained in ticket subject and body.

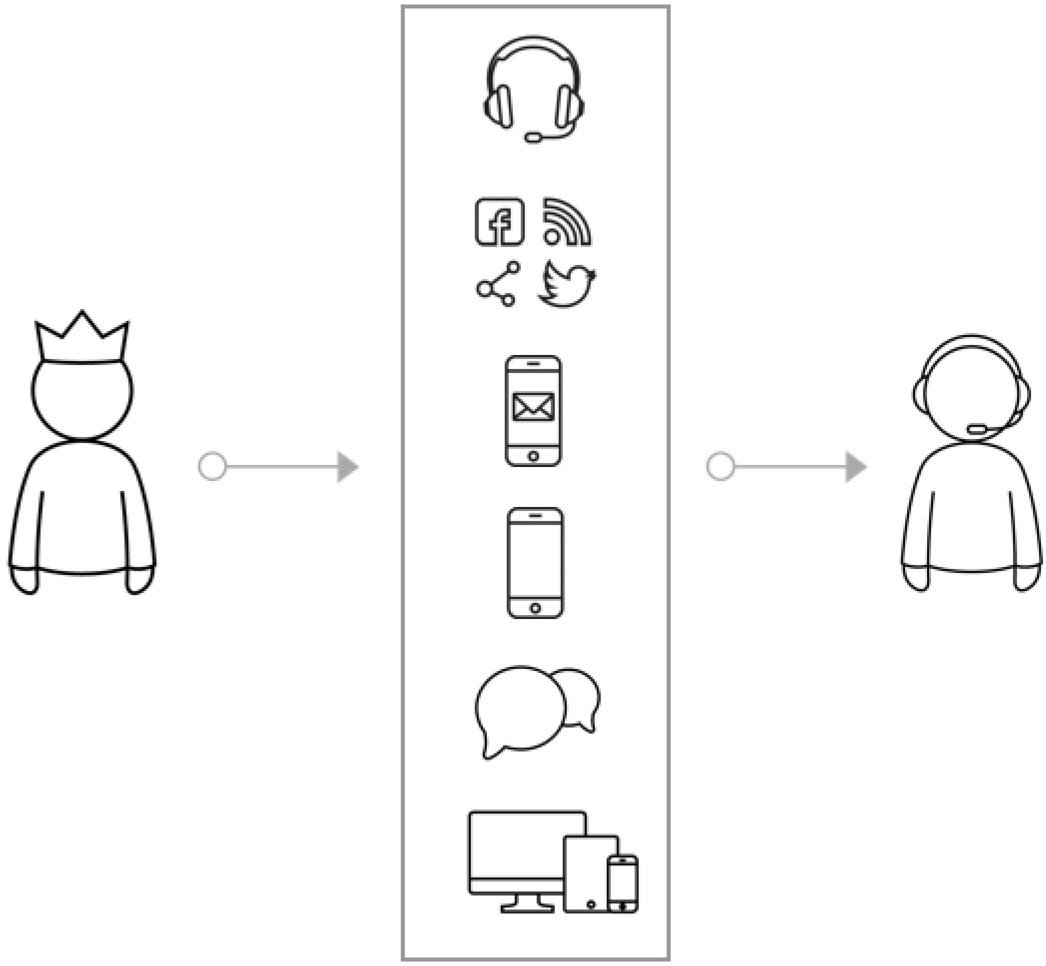
- Create workflow rules based on the values in the Pricing Status and ERP Release Status fields. These triggers allow you to set up rules that automatically release a ticket to an SAP ERP system, or request pricing information.
- Keywords contained in the subject or body text of a ticket can also trigger workflow actions. For example, route tickets based on whether certain text appears in the ticket. The text or keywords can be entered by the customer or the agent. For tickets generated from e-mail channels, the body text of the e-mail message is copied into the ticket description. Therefore, defining rules based on the ticket description is equivalent to monitoring for keywords in the body of incoming messages.

4.2 Create Tickets

You can create a ticket manually from the Tickets or Work Ticket work centers, and employee support (within our solution) based on incoming communication from various available channels.

Click the *Create* icon (at the bottom of the screen) to create a new ticket. We recommend data input in the *Type*, *Source*, and *Subject* fields. Of course, the *Subject* field is mandatory. The *Source* field dropdown let's you select the source of the incoming communication that led to the ticket creation. The dropdown list displays communication channels based on what is configured and integrated in your system.

> i Note
>
> When you create a ticket manually, you are able to use certain source types. The remaining source types are assigned to a ticket when the tickets are created via available channels.



You can create a ticket from the following screens:

- Ticket
- Copy e-mail to multiple Tickets
- Create from un-associated e-mails
- Sub Tickets (from *Related Items* tab)
- Account
- Contact
- Contract
- Opportunity
- Sales Order
    - Task
    - Items
    - Involved parties
- Individual Customer
- Registered Products
- Employee
- Installed Base
- Installation Point

- Maintenance Plans

The ticket gets automatically associated to the object from where you created.

Disable Contact Determination for Tickets

Disable the contact determination for tickets created from registered product.

Procedure

1. Navigate to *Business Configuration* > *Implementation Project*.
2. Select your project and click on *Edit Project Scope* > *Scoping* > *Questions* > *Service* > *Customer Care* > *Service Request Management* > *Party determination for Installed Base / Installation Point / Registered Product*.
3. Select the scoping question - *Use rules to determine contact of account when creating new ticket from registered product*.

4.2.1 Configure Ticket Creation

Administrators can configure ticket creation using the quick create form, or create tickets in detail view.

Go to *Administration* > *Service and Social* > *Tickets* > *Ticket Configuration*.

To create new tickets using ticket detail view, select the option labeled: *Create tickets in detail view*. If this option left unselected, the default behavior is to create new tickets with the quick create form.

> **! Restriction**
>
> Creating tickets in detail view is currently incompatible with offline mode on mobile devices. Use the default quick create form if your organization uses offline mode.

4.2.2 Configure Reporter at Ticket Creation

Use party determination to configure whether the reporter information is copied from the account data linked to the ticket.

Context

Your administrator can choose whether the ticket reporter is copied from the account contact information, entered as the currently logged in user, or entered manually.

Procedure

1. Go to *Business Configuration* and search for **Ticket**. Your search returns the *Tickets for Customer Support* and *Tickets for Employee Support* activities.
2. Based on your scenario, click either of the links and navigate to *Maintain Involved Parties*.
3. Select the *Reporter* role, and then select *Maintain Determinations*.
4. Select the steps used to populate the ticket reporter field.
    - Copied from Partner Contact
    - Copied from Contact of Account
    - Copied from Individual Customer
    - Current User

> → Tip
>
> Each of these steps is evaluated in the order shown. The first value found is used to fill the reporter field. For example, if you select all four steps, and there is no account associated with the ticket, then the currently logged in user is used as the reporter. If no steps are selected, then the reporter must always be entered manually.
>
> If the ticket is created as a follow-up, or copied from an existing ticket, then the reporter and other party information is copied from the source object.

4.3 Manage Tickets

Learn about the options and parameters you have for handling ticket setup and management in the solution.

You have a wide variety of options for classifying, organizing, linking, and routing tickets in the solution. Your administrator or service manager sets many of these options based on how your organization uses tickets.

Managing the Ticket List [page 62]
The *Tickets* tab displays all tickets in the solution.

Use Ticket Types [page 65]
Select a ticket *Type* to define the kind of ticket you are creating in the system.

Status Handling in Tickets [page 66]
You can maintain dictionary entries for the user status, combine the dictionary entries, assign them to status schemas, and finally assign the status schemas to ticket types.

Assign Involved Parties to Tickets [page 71]
You can assign involved party to a ticket at creation or after creating the ticket.

Number Range in Tickets [page 75]
Ticket Number is created and assigned at the creation of the ticket. Administrators can define number ranges for tickets. When you create a ticket the system automatically determines the next free number of the defined number range.

Apply Access Restrictions to Tickets [page 76]

Apply consistent access restrictions to the various ticket work centers. The administrator sets this up in the system.

Time Points [page 77]
Time Points comprise of various time lines in a ticket providing you with information about when certain ticket tasks were created, highlighting deadlines, and the time range when a ticket for a particular stage of processing needs to be completed.

Credit Check in Tickets [page 79]
You can check the credit status, credit limit, and credit exposure for your customers before providing them any service.

Organize Tickets with a Ticket Hierarchy [page 79]
Organize tickets by adding sub-tickets to a main ticket.

Determine Skills in Tickets [page 80]
In tickets, skills are determined from customers, registered products, products, and installed base. Skills can be determined in tickets only in the online mode.

Define Service Location in Tickets [page 82]
The Service Location in a ticket refers to the location or address where the service would be performed. The address can be defined as: Address of a Business Partner (Ship-To-Party), Address of an Installation Point or Installed Base or Registered Product, Document-specific address in the ticket.

Route Tickets [page 82]
Set up ticket routing based either on organizational structure or team and territory.

Next Ticket [page 87]
The next ticket queue can help you process tickets more efficently.

Set Up Service Level Agreements for Tickets [page 89]
Service levels determine the initial response and completion due time for processing customer support tickets.

Create Service Categories for Tickets [page 92]
Service categories are used to capture consistent information, to allow for reporting and benchmarking, and for determining service level assignments.

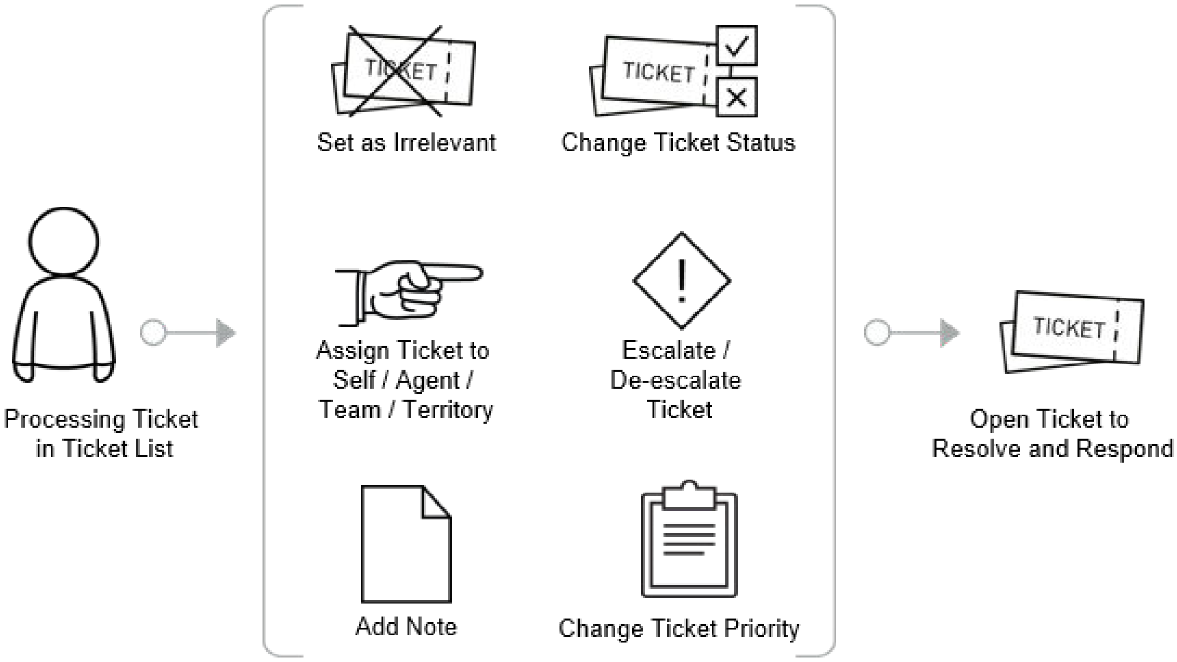
4.3.1 Managing the Ticket List

The *Tickets* tab displays all tickets in the solution.

Once you log on to the system, navigate to *Service* > *Tickets* to view tickets in the system. You have further options to see a list of open and in-process tickets from this tab by choosing a different search filter.

> **Note**
>
> You can't delete tickets from the system, but tickets with status set to **Irrelevant** are removed from all lists.

The following graphic shows the tasks that you can perform with the tickets in your ticket list:



→ Tip

You can find all ticket processing options in the *Actions* menu.

Here's a short video to get you started working with tickets:

Related Information

4.3.1.1 Ticket Queries

Use the queries in the ticket list to narrow the pool of tickets shown. Here are a few selected queries and how they act to filter the list.

Ticket Queries

Query	Description
My Tickets	Tickets with you (the logged in user) assigned as the agent.
My Team	Tickets assigned to your team or teams. If you don't belong to any service team, then the query returns all tickets.
All Tickets	Returns all tickets.

Query	Description
Tickets with My Involvement	Tickets listing your user in any role.
Work Tickets with My Involvement	Work tickets listing your user in any role.
My Team Queue	**Open** or **in-process** tickets assigned to your team or teams.

> **i Note**
>
> All queries shown in the table exclude irrelevant tickets (tickets with status set to **irrelevant**).

4.3.1.2 Edit Ticket Subject and Priority in Work List

Update ticket subject and priority in the work list without having to open the ticket detail view.

Context

You, as an administrator can enable editing in the work list by logging into the fiori client, navigating to your user profile menu and selecting *Settings* > *Company Settings* > *Enable Editing in Dataset in Fiori Client*.

Procedure

1. Find the ticket you wish to edit in the ticket list.
2. Select the ticket, then select the *Edit* icon at the top right of the list.
3. Select the ticket **subject** or **priority** and edit as required.

   Select a new priority from the menu. *Subject* is a text field you can edit as usual.
4. Select *Save* to save your changes and exit edit mode.

4.3.1.3 Tickets Tab in Detail View

You can link tickets to related objects such as accounts, customers, contacts, and opportunities. Related tickets appear in the *Tickets* tab in the object detail view.

You can search, sort, and filter the related tickets list. Choose default views to see:

- All Tickets
- Tickets I Created
- Tickets Involving This (Object) in Any Role

4.3.1.4 Show Tickets with Account in Secondary Role

View tickets where the current account, contact, or individual customer is involved in a secondary role.

Context

When you open the tickets tab for an account, contact or individual customer, the default view for the list shows you tickets where the account, contact, or individual customer has the primary role. You can select a view with broader parameters to see tickets that include the current account, contact, or individual customer in a secondary role, such as the bill-to or ship-to party.

Procedure

1. Open the *Tickets* tab for an account, contact, or individual customer.
2. Select the view labeled: *Tickets involving Account in Any Role*.

   The filter label reflects the type of object you're viewing - Account, Contact, or Individual Customer.

4.3.2 Use Ticket Types

Select a ticket *Type* to define the kind of ticket you are creating in the system.

SAP provides one standard ticket type each for *Employee Support* and *Service Request*. You can define your own ticket types and associated processes. Administrators can define new ticket types in business configuration, where this is referred to as document types.

> **i Note**
>
> You can only configure settings for the document or ticket type that you create.

Based on the ticket type, you can define the status schema; whether it is relevant for external pricing, contract use, work tickets, or ATP (available to promise).

Example

If you'd like to handle inquiries, feedback, or complaint processes differently in your organization, you would create three different ticket types.

4.3.2.1 Configure Document Types in Tickets

Document types represent ticket types in your application. Your administrator can help you create custom ticket types via fine tuning.

Create custom ticket types in your solution to:

- filter your tickets
- define reports
- assign service levels and define flexible notifications. For more information, see **Configuring Service Level Agreements** and **Configure Workflow Rules** topics.

To configure Document Types in a ticket for Customer and Employee Support, go to *Business Configuration* and search for *Ticket*. Your search would display the *Tickets for Customer Support* and *Tickets for Employee Support* activities.

Adding a Document Type

1. Click *Maintain Document Types*.
2. Click *Add Row* and enter the required document type code and a description.
3. Decide the process variant that you want to use the document type for. For Example: employee or customer support. You can make the type visible by checking the *Requires Work* flag. You can also select a different status schema.
   The process variant controls the appearance of work centers, fields, and status suitable for the corresponding processes.

   > i Note
   >
   > The process variant is pre-set with the corresponding setting, based on whether you opened the activity under *Tickets for Customer Support* or *Tickets for Employee Support*.
4. Save your changes.
5. To delete a document type, simply select the entry you want to delete and click *Delete*. Save your changes.

> i Note
>
> You can't delete document types that are used in your tickets.

4.3.3 Status Handling in Tickets

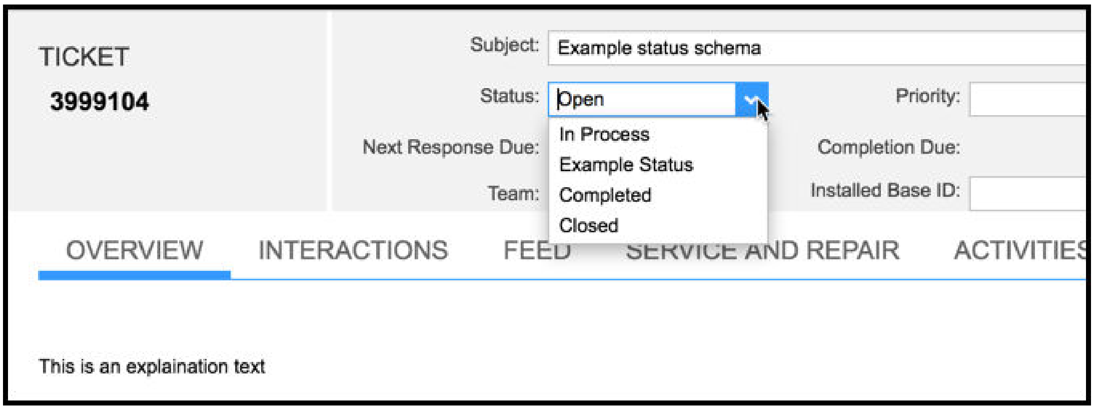
You can maintain dictionary entries for the user status, combine the dictionary entries, assign them to status schemas, and finally assign the status schemas to ticket types.

In a Ticket, for the user status dropdown list, only those entries that you've maintained via configuration display.

i Note

You can set the status for multiple tickets in the *Tickets* tab.

Example



Example

The following are few commonly used status:

Work Progress Status

- Open
- Partially Ready:
    - At least one item is in status *Ready*, and at least one item is in status *Open* or *In Scheduling*.
- In scheduling
- Ready:
    - When *Requires Work* flag is set (via Ticket Type or Status), item work progress status is automatically set to *Ready*.
    - If Resource Scheduling is scoped, then for items with service requirement, scheduling flag is set. Those items aren't directly set to status ready. Status is set to *Ready* when an assignment is created.
- Started:
    - Status *Started* is set when actual quantity of one item is changed, or when item action *Start Work* is triggered.
- Finished:
    - Use the *Finish Work* item action to set the ticket status to *Finished*. *Finish Work* also copies the planned quantity to actual quantity for an item, and marks the item as **Read Only**, preparing the item for release to ERP.

Release to ERP Status

- Not Relevant

- Not Released to ERP
- Released to ERP

4.3.3.1 Configure Ticket Status Dictionary

To use your own ticket statuses in your processes and schemas, the administrator would have to create the statuses first in the *Ticket Status Dictionary* and assign them to life cycle and assignment status.

To maintain entries for ticket status schemas, you first create them in the *Ticket Status Dictionary*. Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity Lists* > *Fine-Tune* and search for *Tickets for Customer Support*. Click *Maintain Status Dictionary Entries*, and using the *Add Row* button, maintain the status and create additional status for tickets here.

Use the status values you create in ticket status dictionary and then go to *Ticket Status Schemas* to assign them to a ticket.

The following table lists the pre delivered status values that you can select in the ticket and the possibilities to change them in the ticket. When you create your statuses keep these possibilities in mind.

You can change the description of the pre delivered statuses, but you can't delete them.

Current Status	Reachable Statuses	Non-Reachable Statuses	Description
`Open`	• `In Process` • `Customer Action` • `Completed`	• `Copied to CRM` • `Closed`	This status is not reachable from any other value.
`In Process`	• `Copied to CRM` • `Customer Action` • `Completed`	• `Open` • `Closed`	If the status changes from `In Process` to `Closed` the system completes and closes the ticket.

Current Status	Reachable Statuses	Non-Reachable Statuses	Description
`Copied to CRM`	None	• **`Open`** • **`In Process`** • **`Customer Action`** • **`Completed`** • **`Closed`**	This status is only reachable after **`In Process`**. If this status is set the ticket is replicated to the SAP CRM On-Premise system. It is not reachable if the document is inconsistent and it can-not be changed in the SAP Cloud for Customer system. But the status is changeable for inbound actions because in case a ticket is set to **`Completed`** in the CRM On-Premise system the status **`Completed`** is written back to the Cloud system.
`Requires Work`	• **`In Process`** • **`Copied to CRM`** • **`Completed`**	• **`Open`** • **`Closed`**	when creating a ticket, if you select the ticket type as work relevant, the *Requires Work* status flag gets enabled.
`Completed`	• **`In Process`** • **`Customer Action`** • **`Closed`**	• **`Open`** • **`Copied to CRM`**	A ticket, which is **`Completed`** cannot be set to **`Copied to CRM`**. **`In Process`** is not reachable if the ticket was completed by the On-Premise system. A ticket can only be revoked if it was not transferred to an On-Premise system.
`Closed`	None	• **`Open`** • **`In Process`** • **`Copied to CRM`** • **`Customer Action`** • **`Completed`**	If a ticket is closed, it is not possible to open it again. This status can only be used for tickets still in the system. New tickets are not allowed to use **`Closed`**. **i Note** Once a ticket is set to **closed**, you can't change the ticket status.

Besides these, our solution also provides you with various statuses for tickets integrated with SAP ERP. The SAP ERP ticket statuses are as follows:

- **Release to SAP ERP**: Once your work on the ticket is complete, you can set the action to *Finish Work*. The ticket is now ready to be released to SAP ERP.
- **Release Pending**: When the ticket is in process the ticket has the *Release Pending* status.
- **Release Discarded**: If there are issues when data is sent to SAP ERP, errors display in the error log of the ticket.
- **Released**: If there are no issues in the ticket data when released to SAP ERP, the status updates to *Released*.

Add and Delete Ticket Status

To add a status click *Add Row*, enter a description, select the wanted life cycle and assignment status, and save your changes.

To delete a status, select the corresponding status line, click *Delete*, and save your changes.

4.3.3.2 Configure Status Schemas for a Ticket

In addition to the standard status and status schemas for tickets, you can specify custom ones as well by mapping them to a valid combination of life cycle status and assignment status. The administrator can configure this activity via fine tuning.

You can change visibility, and sequence of the standard statuses. With the status schemas, you can realize different processes in your company. For Example: you can create a status schema for your internal employee support, as well as a status schema that is valid for the interaction with your partners.

To maintain status schemas in a ticket for Customer and Employee Support, go to *Business Configuration* and search for *Ticket*. Your search displays the *Tickets for Customer Support* and *Tickets for Employee Support* activities.

- **Adding a New Status Schema**
  1. Under *Status Schemas* click *Add Row*.
  2. Enter an ID and a name for the schema.
  3. Save your changes.
     Now you can assign statuses to your schema.
- **Assigning Status Codes to Schema**
  1. Click *Add Row* under *Assign Status Codes to Status Schema*.
  2. Enter a number in the column *Sort Sequence* to specify the status sequence in the dropdown list in the application.
  3. Select a *Status* from the value help that comes from the *Ticket Status Dictionary*.
  4. Decide whether this status should be the initial entry for all newly created tickets and whether it should be visible in the dropdown list in ticket handling.

     > **i Note**
     > - Only the `Open` *Life Cycle Status* can be selected as initial status.
     > - You can select the `Closed` *Life Cycle Status* but you can't set it to visible.

5. Then save your changes.

- **Maintaining a Status Schema**
  You can change the name of a schema and the sort sequence of the assigned statuses, statuses itself, and checkboxes *Initial Status* and *Status Visibility*.
- **Deleting**
  Select the line that you want to delete and click *Delete*.

  > **i Note**
  >
  > Only statuses can be deleted that aren't used.

4.3.3.3 Assignment Status of a Ticket

The *Assignment Status* of a ticket tells you who the ticket is assigned to and has several options.

- **`Processor Action`**: The ticket is created by the requestor and the processor has to react to the ticket, for example, the customer creates a ticket and the first level support reacts to the ticket.
- **`Planner Action`**: The ticket is forwarded to a planner or technician who has to do the work, such as repairing a technical issue, or delivering services. This assignment status sets also the *Requires Work* flag in the ticket.
- **`Requestor Action`**: The ticket is in process and the support colleague asks the customer to do something on his or her side to solve the issue.
- **`Provider Action`**: The first level support cannot solve the ticket alone and needs help from the second level support or a third party provider. He or she can use this status and the ticket is forwarded automatically to the corresponding destination, for example, an external system.
- **`Not Assigned`**: Can only be used with *Life Cycle Status* **`Closed`**.

4.3.4 Assign Involved Parties to Tickets

You can assign involved party to a ticket at creation or after creating the ticket.

You can automatically determine involved parties for a ticket using determination rules and master data. Add a role and party based on maintained configuration. You can activate or deactivate these roles in configuration. However some party roles are set as mandatory by default and you cannot deactivate them.

While creating a ticket for a registered product, party information such as Customer and Service Technician, is copied to the ticket from the registered product. For some parties the information is based on involved party determination rules defined for the ticket.

4.3.4.1 Configure Involved Parties in a Ticket (Customer and Employee Support)

Your administrator would have to maintain Involved Parties in a ticket for Customer and Employee Support via fine tuning.

Context

You can automatically determine all involved parties for business transactions and their related documents using party roles and determination rules. This allows you to streamline account team assignments, and ensure that business partners are correctly assigned to business objects in a way that matches your company processes.

Procedure

1. Go to *Business Configuration* and search for Ticket. Your search would display the *Tickets for Customer Support* and *Tickets for Employee Support* activities.
2. Based on your scenario, click either of the links and navigate to *Maintain Involved Parties*. You can decide which party roles you want to use in your application. However some party roles are set as mandatory by default and you cannot deactivate these.
3. Add or edit party roles and under *Party Role Assignments* click *Add Row*.
4. Select a *Party Role* from the dropdown list.
5. Decide whether the role should be, for example, active, mandatory, unique, or should be forbidden for manual changes.
6. Save your changes.
7. Then click *Maintain Determinations* where you can edit the determination for the newly added party role.
8. For Delete Role Assignments, select the line you want to delete and click *Delete*.

Related Information

Scope and Configure Involved Parties [page 970]
Administrators can configure involved parties using scoping, scoping questions, and fine-tuning activities.

4.3.4.2 Configure Reporter at Ticket Creation

Use party determination to configure whether the reporter information is copied from the account data linked to the ticket.

Context

Your administrator can choose whether the ticket reporter is copied from the account contact information, entered as the currently logged in user, or entered manually.

Procedure

1. Go to *Business Configuration* and search for **Ticket**. Your search returns the *Tickets for Customer Support* and *Tickets for Employee Support* activities.
2. Based on your scenario, click either of the links and navigate to *Maintain Involved Parties*.
3. Select the *Reporter* role, and then select *Maintain Determinations*.
4. Select the steps used to populate the ticket reporter field.
    - Copied from Partner Contact
    - Copied from Contact of Account
    - Copied from Individual Customer
    - Current User

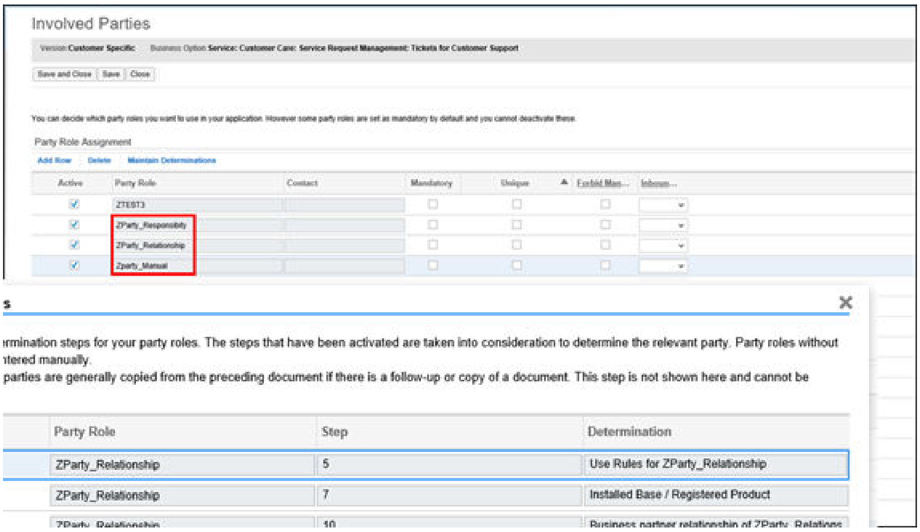
> → Tip
>
> Each of these steps is evaluated in the order shown. The first value found is used to fill the reporter field. For example, if you select all four steps, and there is no account associated with the ticket, then the currently logged in user is used as the reporter. If no steps are selected, then the reporter must always be entered manually.
>
> If the ticket is created as a follow-up, or copied from an existing ticket, then the reporter and other party information is copied from the source object.

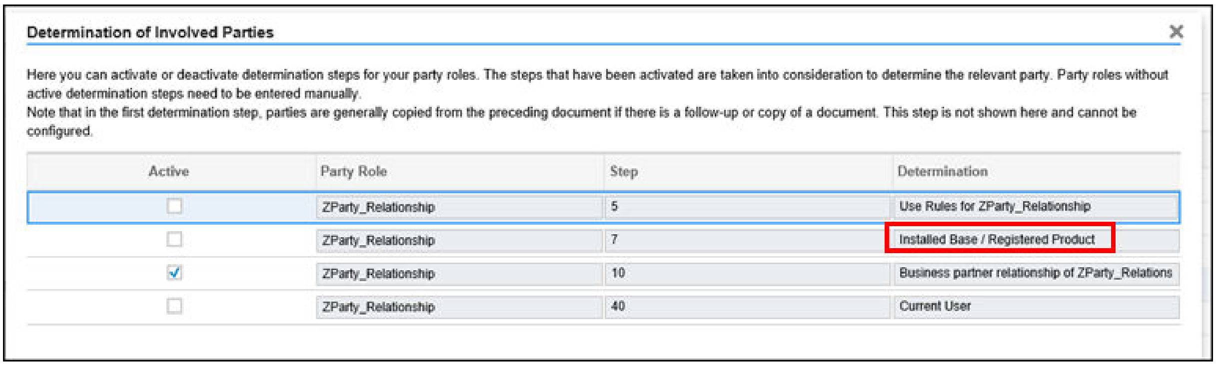
4.3.4.3 Configure Custom Involved Parties for Tickets

The administrator can configure custom involved parties for a ticket. You can then determine custom involved parties from Installed Base or Registered Product, using the party determination framework.

Use the determination option for Installed Base and Registered Product for custom parties to provide flexibility to customers where they can add custom involved parties to a ticket and also take advantage of the party determination framework for custom involved parties.

To add a custom involved party, navigate to *Business Configuration* > *Activity List* > *Tickets for Customer Support* > *Involved Parties*.





4.3.4.4 Enable Party Determination Rules for Creating Tickets from Registered Products, Installed Base, and Installation Points

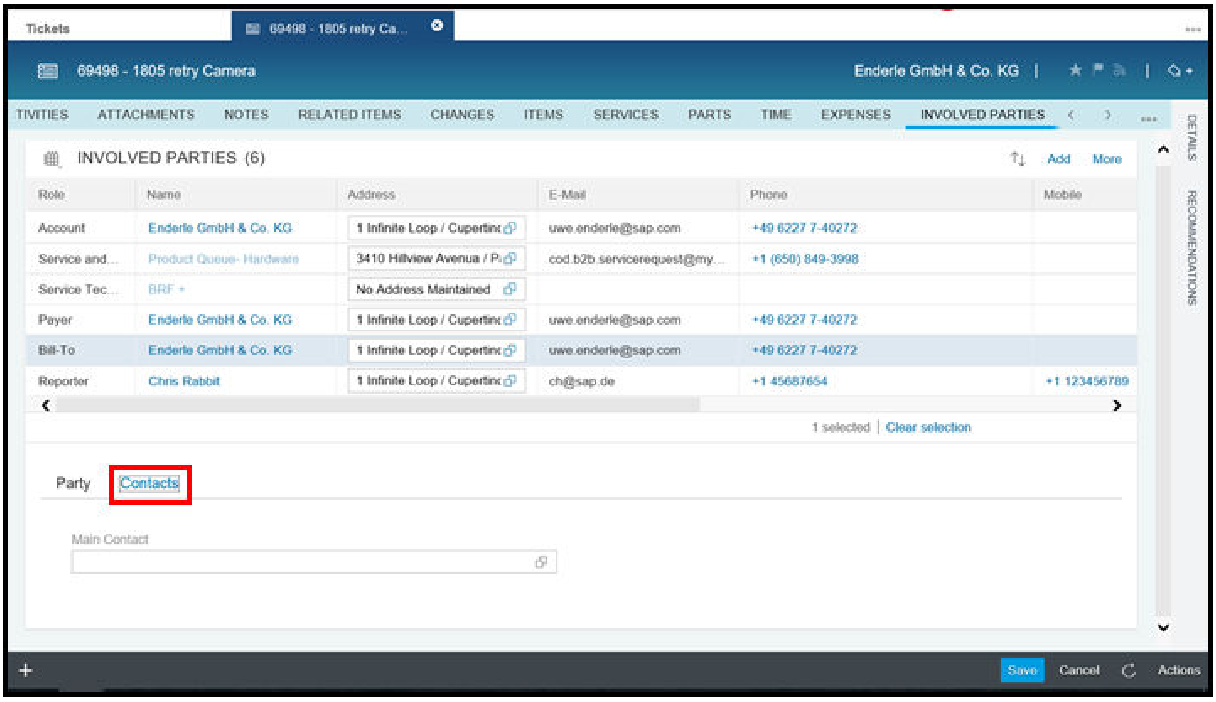
You can choose to determine the Service Technician and Service Technician Team using party determination rules instead of copying this information from the associated registered product, installed base, and installation point, when creating ticket from them. Your administrator can enable this option by selecting the related question in business configuration.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Service* > *Customer Care* > *Service Request Management*, and under the *Business Option*, select the scoping question: **Use rules to determine technician and team when creating new ticket from registered product, installed base, or installation point?**

4.3.4.5 Add Contact for Custom Involved Party in a Ticket

Add a contact for custom involved party of category *Other Party* directly in a ticket.

Go to *Tickets* > *Involved Parties* and set contact field for custom parties.



4.3.5 Number Range in Tickets

Ticket Number is created and assigned at the creation of the ticket. Administrators can define number ranges for tickets. When you create a ticket the system automatically determines the next free number of the defined number range.

Number range for tickets may not always be in sequence. Depending on where the ticket is created the corresponding number ranges is picked up and assigned. Hence they may not be in the sequence.

Sometimes there maybe missing ticket numbers. Ticket number is created and assigned at the creation of the ticket. If the Ticket fails to save due to user cancellation or any other process this number would be lost explaining the missing ticket numbers.

4.3.5.1 Configure Number Range in a Ticket

The administrator can configure the number range for your tickets via fine tuning.

You can maintain Number Range in a ticket for Customer and Employee Support. Go to *Business Configuration* and search for Ticket. Your search would display the *Tickets for Customer Support* and *Tickets for Employee Support* activities.

1. Click *Maintain Number Range*.
2. Adapt the *Begin Number* and *End Number*.
3. Save your changes.

4.3.6 Apply Access Restrictions to Tickets

Apply consistent access restrictions to the various ticket work centers. The administrator sets this up in the system.

When access restrictions are applied to any ticket work center, they apply to context access. This results in the most lenient access all tickets-related work centers that share the access context.

Ticket work centers in same access context

Work Center	Technical Name
Tickets	SEOD_TICKETMD_SADL_WCVIEW
Queue	SEOD_QUEUE_SADL_OWL
(Not visible to end user)	TICKET_DESKTOP_NAVIGATION
(Not visible to end user)	TICKET_TABLET_NAVIGATION

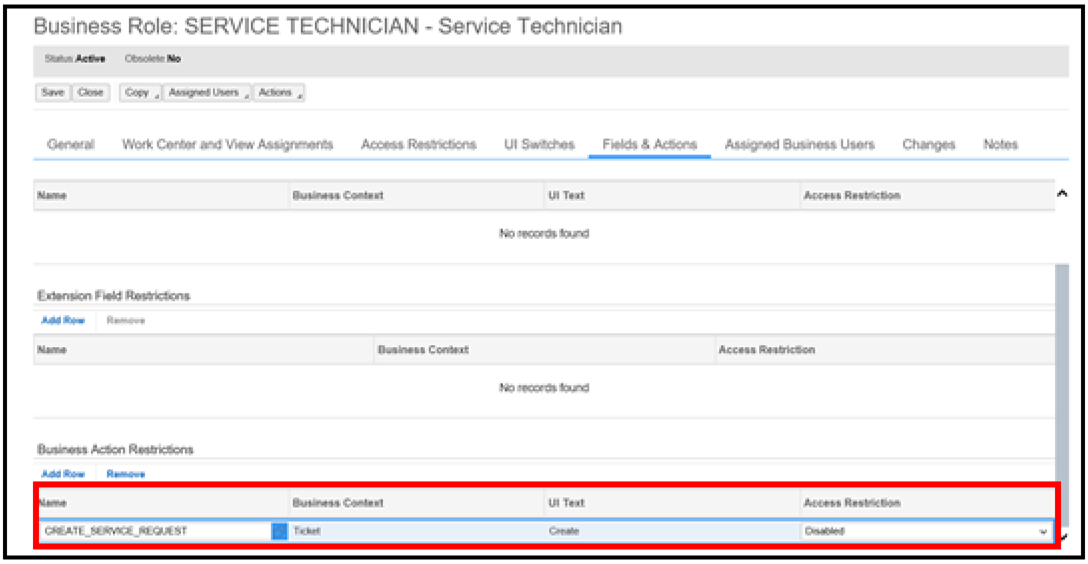
> → Remember
>
> All work centers assigned to a business user or business role that share the same access context should have the same level of access restriction.

4.3.6.1 Configure Access Restriction for Tickets Via Business Role

The administrator can restrict some business roles from creating new tickets, by configuring authorization via Access Restriction. This feature restricts ticket creation to selected employees, based on their role.

Navigate to *Administrator* > *General Settings* > *Users* > *Business Roles* and select the necessary business role to set up access restrictions for ticket creation.

> i Note
>
> This feature is available online only.



4.3.6.2 Configure Ticket Access by Employee Service Organization

You, as an administrator, can authorize all service-related screens by employee service organization, rather than by service unit. Authorizing by organization enables **all** employees within a service organization to access tickets assigned to any employee within the organization hierarchy.

Go to *Administrator* > *General Settings* > *Users* > *Business Roles* .

1. Select the business role, then select the *Tickets* work center view.
2. Select *View All*, then on the *Access Restrictions* tab, select the technical name: *SEOD_TICKETMD_SADL_WCVIEW*.
3. Select restriction rule: *6 - Service Organization of Employee*.

4.3.7 Time Points

Time Points comprise of various time lines in a ticket providing you with information about when certain ticket tasks were created, highlighting deadlines, and the time range when a ticket for a particular stage of processing needs to be completed.

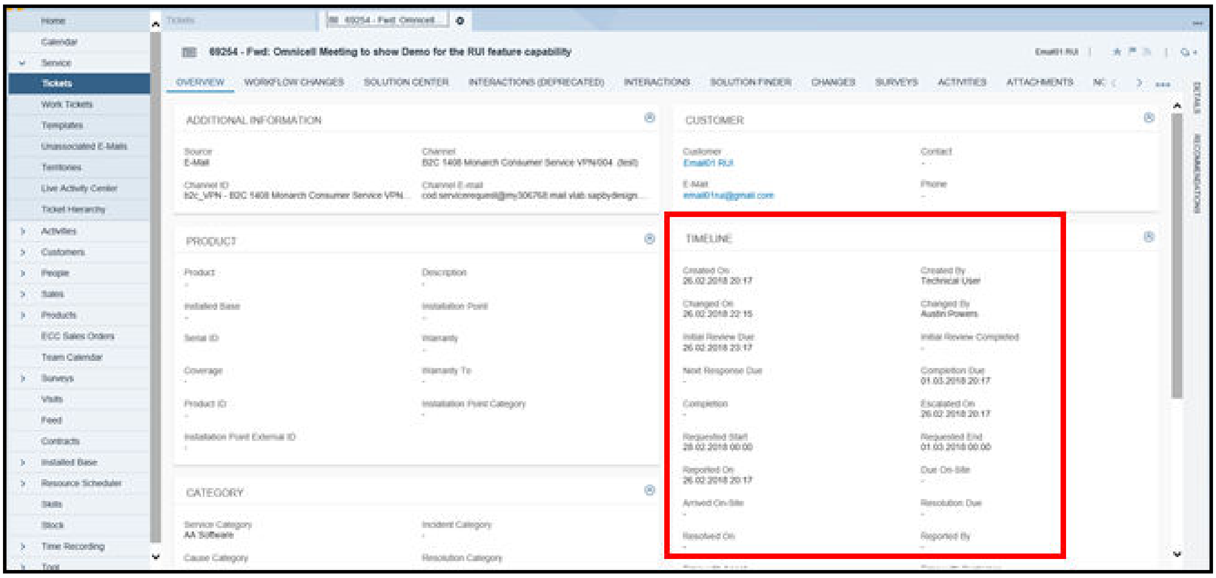
The following list provides you with options of ticket tasks that you might want to capture in your ticket:

Time Point	Explanation
Request Receipt Time Point	Time point at which a request is received, and when Ticket is reopened.

Time Point	Explanation
Warranty start reference time point	Together with a duration from the date profile, the warranty start reference time point determines the start date of a warranty, which is assigned to a ticket.
Escalation Time Point	Time point when the ticket was escalated. Deescalation initializes the time point.
Posting Time Point	Time point at which an accounting document in Financial Accounting becomes effective and the period balances of the concerned accounts change.
Due Date for Completion	Time point at which something shall be completed.
Due Date for On-site Arrival	Time point at which the technician shall be at the customers site.
On-site Arrival Date	Time point at which the technician arrived at the customers site.
Due Date for Resolution	Time point at which the issue shall be fixed for the customer.
Resolved On Date	Time point at which the issue was fixed for the customer.
Due Date for Initial Review	Time point at which an initial reaction should take place (Set to In Process)
Due Date for Response	Ticket creator(such as: Customer) will be continuously informed about the Ticket status and progress. As long as the ticket is in "Processor Action", the processor needs to send an update, such as:. every 2 hours.
Response by Processor Reference Time Point	Reference Time point for calculation of Due Date for Response
Response by Processor Time Point	Time point at which the processor sends an update to the requester (such as: Customer). Sets also the reference time point.
Response by Requester Time Point	Time point at which the requester (such as: Customer) sends an update onto the Ticket. Sets also the reference time point.
Request Closed at Time Point	Time point at which a request is considered as finally closed.
Request Finished at Time Point	Time point at which the processing of a request is completed.
Request Initial Receipt Time Point	Time point at which a request is received for the first time (customer reports incident)

Time Point	Explanation
Request in Process at Tme Point	Time point at which an order is taken up for processing.

You would be able to see the maintained Time Points in a ticket as displayed in the following screenshot:



4.3.8 Credit Check in Tickets

You can check the credit status, credit limit, and credit exposure for your customers before providing them any service.

In a ticket, selecting *Actions* > *Request External Pricing* would provide you information for *Credit Status*, *Credit Limit*, and *Credit Exposure* from the SAP ERP system.

> **Note**
>
> Credit Status is added in Ticket Approval workflow as a condition.

4.3.9 Organize Tickets with a Ticket Hierarchy

Organize tickets by adding sub-tickets to a main ticket.

View ticket hierarchy under *Service* > *Ticket Hierarchy* .

4.3.9.1 Sub-Tickets

Sub-tickets enable you to group multiple tickets under one main ticket. For example, several tickets created due to the same root cause can be grouped under one main ticket and closed once the underlying issue is resolved.

From the ticket detail view, *Sub-Tickets* tab you can perform the following actions with sub-tickets, both online and while working in offline mode:

- Add an existing ticket as a sub-ticket
- Create a new ticket as a sub-ticket to this main ticket
- Set status for one or more sub-tickets
- Add items to sub-tickets

You can quickly add the current ticket as a sub-ticket by entering a ticket ID in the *Main Ticket* field in the header area on the *Overview* tab.

4.3.9.2 Configure Main Ticket Closure

Administrators can configure the solution to prevent closing main tickets with open sub-tickets.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Service* > *Customer Care* > *Service Request Management* > *Questions* > *Ticket Completion*.

To prevent closing main tickets with open sub-tickets, select the scoping question: *Do you want to prevent users from completing main tickets when sub-tickets remain open?*

4.3.10 Determine Skills in Tickets

In tickets, skills are determined from customers, registered products, products, and installed base. Skills can be determined in tickets only in the online mode.

The *Skills* tab of *Tickets* displays the list of all skills that are determined or added at the tickets header level. If any of the entities (customers, registered products, products, or installed base) is updated in a ticket, skills are redetermined. You can modify a skill by selecting or deselecting the *Mandatory* checkbox. You can also delete a skill. If a skill is updated manually, it is not updated during redetermination.

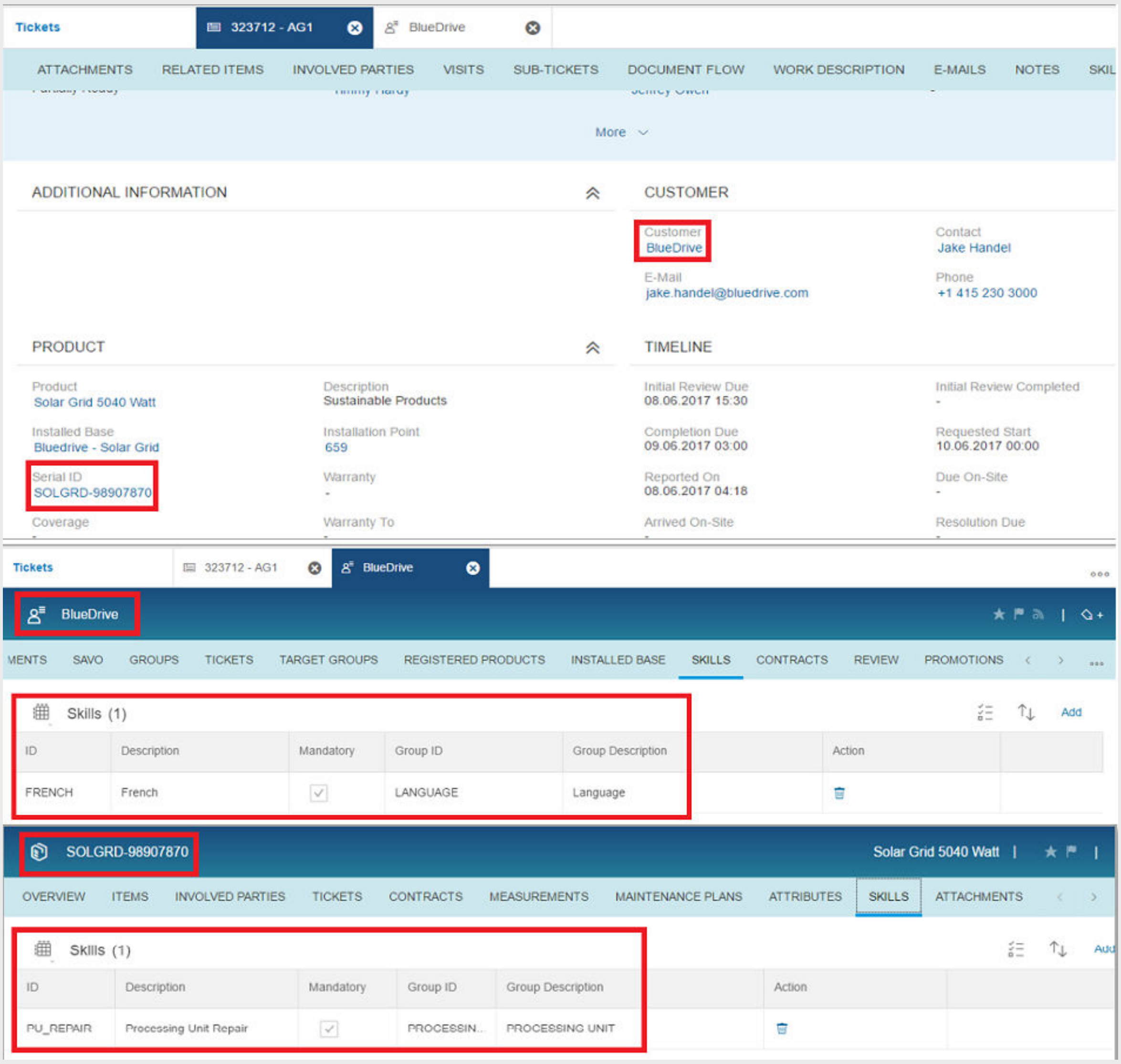
If you want to add additional skills, you have to add them manually. To add skills manually to tickets, on the *Skills* tab, click *Add* and in the *Add Skills* window, enter the required details.

> **i Note**
>
> If you want to make the skill mandatory, select the *Mandatory* checkbox.

When you add a new skill, skills are redetermined in the ticket.

Example

There is a ticket for a customer named BlueDrive, and **French** is maintained as a language skill for this customer. The ticket also has a registered product associated to it. The Serial ID is SOLGRD 98907870. For this registered product, the **Processing Unit Repair** skill is maintained. Therefore, based on the customer and the registered product, these two skills (French and Processing Unit Repair) are determined for the ticket.



Determine Skills in Ticket Items

When an item is added in a ticket, skills from the ticket header are determined for the item as well. Skills maintained for a product are also determined at the ticket item level.

The *Skills* tab at the ticket item level displays the list of skills for that item. You can modify a skill by selecting or deselecting the *Mandatory* checkbox. You can also delete a skill.

If you want to add additional skills, you have to add them manually. To add skills manually to a ticket item, on the *Skills* tab, click *Add* and in the *Add Skills* window, enter the required details.

> **i Note**
>
> If you want to make the skill mandatory, select the *Mandatory* checkbox.

If an item is in *Ready* or equivalent status, you cannot update or determine the skill.

4.3.10.1 Configure Skills in Ticket

The administrator must enable Skills via business configuration to use the feature in ticket.

Go to *Service* > *Customer Care* > *Service Request Management* > *Questions* and select the question: **Do you want to enable Skills Functionality in Ticket?**

4.3.11 Define Service Location in Tickets

The Service Location in a ticket refers to the location or address where the service would be performed. The address can be defined as: Address of a Business Partner (Ship-To-Party), Address of an Installation Point or Installed Base or Registered Product, Document-specific address in the ticket.

- **Address of a Business Partner (ship-to-party)**:
  Create a new ticket and enter a customer. The service location information is automatically referenced from the customer information.
- **Address of an Installation Point, Installed Base, or Registered Product**:
  Create a new ticket and enter a customer, and serial ID of the product. The service location information is automatically referenced from the information maintained in the product via serial ID.
- **Document-specific Address in Ticket**:
  Create a new ticket and enter service location information directly in the ticket.

4.3.12 Route Tickets

Set up ticket routing based either on organizational structure or team and territory.

4.3.12.1 Route Tickets by Team or Territory

Set up ticket routing based on service teams or territories.

> **i Note**
>
> Among other properties, you can specify customer language as a ticket routing rule criteria to assign tickets to a team or a territory.

4.3.12.2 Configure Ticket Routing Rules

Administrators can create routing rules for automated ticket assignment.

Context

> ! Restriction
>
> Your organization can choose to route tickets **either** with routing rules, or by work distribution, but not both.

Procedure

1. Go to *Administrator* > *Service and Social* > *Work Distribution*, then select one of these options:
    - *Ticket Routing Rules by Organization or Territory*
    - *Ticket Routing Rules by Employee*
2. Set up the rules table with *Adapt Columns*.

    The first time you set up business rules you must configure the rules table. By default, the first 20 fields on the screen appear as columns in the table. Use the left and right arrow buttons to remove any unwanted default columns and add only the fields you wish to use. You can have up to 15 columns in the table, including the results column.

    > → Tip
    >
    > Use only the columns required for assigning objects. Extra columns can impact performance. You can add additional columns and rules at any time.
3. Choose *Insert Row* above the rules table. A new row with an asterisk in each field of the row is added to the table.

    You can add values to more than one field in a row. The fields in one row evaluate with a logical **AND** relationship. The field values must **all** evaluate to true in order for the rule to evaluate to true.
4. Click the asterisk symbol (*) in a cell to enter a value for that field. The rules table offers a variety of logical operators to define your values.

    > → Tip
    >
    > We recommend that you take full advantage of operators to consolidate your rules for better performance.
    >
    > For example, if your rules determine assignments based on ZIP codes, use the **Between** operator to set up a range of ZIP codes in sequence. Use the **Include** operator to group ZIP codes that have the same prefix.
    >
    > The Comparison Operations document in the **Related Links** section provides detailed information on operators in your solution.

5. Continue to add rows for each desired result.

   The system compares rows using the logical **OR** operator. The system compares each rule, top to bottom, until **ONE** evaluates to **true**.

   Rearrange rows by selecting the row and clicking *Swap*.

   > → Tip
   >
   > Among other properties, you can specify customer language as a criteria for ticket routing rules, to assign tickets to a team or a territory.

6. Choose *Save* when finished.
7. Click *Activate Rules*.

   To enable your changes, you must activate the new rules. Otherwise, the system uses the previous rule set.

Related Information

http://help.sap.com/saphelp_nw73/helpdata/en/50/9eecf3152c4fb08d50e94faaf4a277/content.htm

4.3.12.3 Configure Processor and Team Consistency Check

You, as an administrator can configure the processor and team consistency check in business configuration scoping. If enabled, the consistency check ensures that the ticket processor belongs to the team assigned to the ticket.

If you disable the consistency check, you can override the consistency check and assign any user as the ticket processor, even if that user isn't a member of the team currently assigned to the ticket.

Navigate to *Business Configuration* > *Implementation Projects* > *Questions* > *Service* > *Customer Care* > *Service Request Management*, and under the *Processor and Team Consistency Check* section. There are two questions in this section. They're mutually exclusive: if you select one you can't select the other.

- *Disable consistency check between processor and service support team when reassigning a ticket?*
- *Enable check and assign primary and secondary processor based on their service team when reassigning ticket?*

Team and Processor Consistency Check Options

Nothing scoped in this section	The system checks whether the processor is a member of the currently assigned team. If a new processor is assigned and not a member of the currently assigned team, the team assignment is removed. If a new team is assigned which doesn't include the current processor, the processor assignment is removed.
"**Disable consistency check ...**" in scope	Turns off the check and allows you to assign any processor and team.

"**Enable check and assign primary and secondary processor ...**" in scope	Enables consistency check, and the system also considers secondary team assignment. Therefore, if you change the assigned team, and the current agent has a secondary relationship with the new team, then the system retains the agent assignment.

> **i Note**
>
> If you wish to make the team field **mandatory** so that a processor team is always assigned, set the field as mandatory in **fine tuning** for involved parties. Setting the filed as mandatory in fine tuning ensures that a warning appears in case you assign a new processor to a ticket who doesn't belong to the current team by primary or secondary assignment.

Related Information

Configure Involved Parties in a Ticket (Customer and Employee Support) [page 72]
Your administrator would have to maintain Involved Parties in a ticket for Customer and Employee Support via fine tuning.

4.3.12.4 Configure Ticket Routing Rule Restrictions for Local Administrators

Assign local administrators to geographical areas for which they can create rules.

Context

Only administrators with global access rights can create and edit restrictions for local administrators.

Procedure

1. Go to *Administrator* > *Service and Social* > *Work Distribution* > *Ticket Routing Rules* to open the rules table.
2. Choose *Add Row* above the *Local Administrators Restrictions* table.
3. Enter a *Country* and *Region* to allow for rule creation.
4. Choose a local administrator for that country and region.

   The local administrator can create rules that apply only to the specified country and region.
5. Continue to add rows for each local administrator you wish to assign.

6. Choose *Save* when finished.

4.3.12.5 Configure Ticket Routing by Organization or Employee

Administrators can define work distribution rules to enable routing of tickets to particular team or agent queues.

Prerequisites

> **! Restriction**
>
> Your organization can choose to route tickets **either** with routing rules, or by work distribution, but not both.

- You have created or uploaded employee and product data.
- You've created and activated your organizational structure, and set up your teams for ticket handling.
- If your system is configured to support social media channels and you want to use social media channels as routing criteria, you've configured those channels.
- If your system is configured to support e-mail as a channel and you want to use e-mail as routing criteria, you have configured e-mail and added the corresponding inbound e-mail addresses.

Context

Work items are tickets in the system created from customer messages. You can also create organizational work distribution rules to manage escalation routing and routing based on social media channels.

By default, all incoming customer service tickets are visible to all employees with the corresponding access rights. The *Organizational Work Distribution* and *Employee Work Distribution* views enable you to manage the distribution of customer tickets within your service organization. You create rules that allow the system to evaluate the tickets and distribute them to the responsible team or the responsible processing agent.

Procedure

1. Go to *Administrator* > *Service and Social Settings* > *Organizational Work Distribution*, OR *Employee Work Distribution*.
2. Select the work category: *Service and Support Team for Service Requests - Social Media* and choose *Edit*.
3. Choose *Add Rule* or *Copy Rule*.

   The system processes work distribution rules according to their priorities. If you have maintained multiple rules for a work category, the system only uses the first rule that applies. By default, new rules are added to the bottom of the list, and so have the lowest priority. To change the priority, move a rule up or down in the table.

> **i Note**
>
> To ensure that all tickets are routed properly, we recommend that you create a default rule at the bottom of the rule list. Make the default rule applicable to the properties of any incoming customer message. If no other routing rules apply, the default rule routes tickets.

4. Enter the name, choose, or enter the ID of the responsible customer service org. unit, or service agent and enter the validity period for the rule.
5. Go to the *Rule Details* section and specify the parameters for the rule.

   Each of the following parameters appears as a tab. Using the parameters, you can specify which parameter is to be included in the rule or excluded from the rule.

   - ABC Classification
   - Country/region
   - Product Category
   - Service Category
   - Account (Includes all individual customers and customer accounts)
   - Service Priority Code
   - Escalation Status
   - Channel Type

     > **i Note**
     >
     > The social media channel type is only supported by SAP Cloud for Social Engagement.

   - Channel
6. Choose *Check* to verify that your rule is consistent and then save your entries.
7. Move the rule up or down in the list to set priority in the processing sequence.

4.3.13 Next Ticket

The next ticket queue can help you process tickets more efficently.

4.3.13.1 Configure Next Ticket

You, as an administrator can enable and set the scope and order for the next ticket queue.

Context

If your service organization's ticket processing flow allows agents to request tickets from a list, then you can enable the next ticket feature and set up the queue.

Procedure

1. Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > > *Questions* > *Service* > *Customer Care* > *Service Request Management* > *Next Ticket Option for Agent* and select the scoping question: *Do you want to allow agents to request the next available ticket?*
2. Set up the logic that defines which ticket agents receive when they request the next ticket. Go to: *Administrator* > *Service and Social* > *Work Distribution* > *Next Ticket Configuration*.
3. In the *SCOPE* section, select the pool of tickets that make up the next ticket queue.
   - *All tickets that can be viewed and edited by the agent (All Tickets)*
   - *Tickets assigned to the Team to which the agent belongs (My Team Queue)*
   - *Tickets belonging to a Territory to which the agent is assigned*
4. In the *SORTING* section, select the fields to use for sorting the tickets, and set the sort order. Select fields then use the right and left arrow buttons to move the desired *Available Fields* to the *Selected Fields* list. Use the up and down arrows to change the order of the selected fields.

   The top field in the list determines the primary sort order. The next field is used as a secondary sort within the primary order, and so on. Typically, the sort is based on the priority in combination with one or more of the date fields.

   > i Note
   >
   > If the next ticket in the queue is locked - by another user or an automated process - when a user requests the next ticket, then the locked ticket is skipped and the user receives the following ticket in the queue.

4.3.14 Set Up Service Level Agreements for Tickets

Service levels determine the initial response and completion due time for processing customer support tickets.

Service Levels

Use service levels to ensure that your organization delivers adequate service, on time, to all your customers. Define service levels for your organization in accordance with business priorities, to deliver a competitive cost model, and to measure performance and quality of customer service. Service levels include rules that impact tickets, which end up in your Queue.

Service Level Determination Rules

Determination rules are the conditions that determine how a service level is applied. The values and sequence (top to bottom) set out in the determination rules table is used for selecting and applying a service level for customer tickets.

> **! Restriction**
>
> To implement service level agreements, configure **both** service levels and determination rules. You can restrict service levels to:
>
> - A specific service type or priority maintained at the service level.
> - A particular product category, service category, or incident category, or particular country or customer group that you can maintain in the determination rules.

4.3.14.1 Configure Service Level for Tickets

The administrator would create a new service level in the system.

Context

Follow these steps to create a new service level in the solution.

Procedure

1. Go to ▸ *Administrator* ▸ *Service and Social Settings* ▸ *SLA Setup* ▸

   Configure the settings for the new service level in the four tabs: *General*, *Reaction Times*, and *Operating Hours*. The *Changes* tab is for change history and is blank for new entries.
2. Enter a name, ID, and description for the new service level on the *General* tab.
3. Add milestones on the *Reaction Times* tab.
4. Select a milestone type.
   - *Due Date for Completion*
   - *Due Date for Initial Review*
   - *Due Date for On-site Arrival*
   - *Due Date for Resolution*
   - *Due Date for Response*
     You can set the *Recurring* flag for the *Due Date for Response* option. Each time a customer responds to a ticket, *Due Date for Response* is recalculated according to the time you define for this milestone (in the *Operating Hours* tab under *Time Ranges*).

     > ! Restriction
     >
     > Automatic alerts for overdue **custom** milestones are not currently supported in SAP Cloud for Customer.
5. Add details for a milestone. Select an entry in the *Milestones* table and then add rows to the Details of Milestone table as needed. Select *Type of Service*, *Priority*, and *Net Labor Time* for each row.

   You can maintain multiple service types and priorities for a milestone. Add a new row for each priority.

   > → Tip
   >
   > For *Net Labor Time* if you enter the duration in hours, the system only considers operating hours. If you enter the duration in days, the system uses the Weekly Configuration, but not the time ranges. You enter this information on the *Operating Hours* tab in the next step.
   >
   > > Example
   > >
   > > Your working days are from Monday to Friday, from 8:00 to 18:00 and the reporting date is Wednesday 1.1.2014, 15:00
   > >
   > > - If you enter a duration of 2 days the system calculates a due date on Friday, 3.1.2014,15:00.
   > > - If you enter a duration of 48 hours the system calculates a due date on Wednesday,8.1.14, 13:00.
6. Set the *Working Day Calendar*, *Time Zone*, *Weekly Configuration*, and *Time Ranges* on the *Operating Hours* tab.

   Time Ranges allows you to set the hours when your service staff is available. *Operating Hours* may not be available, depending on your configuration. If you do not enter operating hours, the system assumes that service is available 24/7.
7. Select *Save* to save the new service level. The service level is saved in the system and added to the *Service Levels* tab.

8. Activate the new service level. Select the row for the newly created service level and select *Change Status*, then choose *Active*. Status options include: *Active*, *Blocked*, and *Obsolete*.

4.3.14.1.1 Recalculation of Custom Milestone

Allows recalculation for custom milestones in addition to the standard milestones.

Recalculation for custom milestone is enabled based on the waiting time. You can do your BADI implementation to influence the recalculation of the custom milestones as per your business needs.

4.3.14.2 Configure Service Level Determination Rules for Tickets

Administrators can set up rules that automatically assign service levels to tickets.

Context

When you create or edit a service request or ticket, the system uses rules to evaluate which service level to apply. When a rule is found that matches the ticket, the system applies the appropriate service level. The service level pushes details about reaction times and due date calculations to the ticket.

Procedure

1. Go to *Administrator* > *Service and Social* > *SLA Setup* > *Determine Service Level* to open the rules table.
2. Set up the rules table with *Adapt Columns*.

   The first time you set up business rules you must configure the rules table. By default, the first 15 fields on the screen appear as columns in the table. Use the left and right arrow buttons to remove any unwanted default columns and add only the fields you wish to use. You can have up to 15 columns in the table, including the results column.

   > → Tip
   >
   > Use only the columns required for assigning objects. Extra columns can impact performance. You can add additional columns and rules at any time.

3. Choose *Insert Row* above the rules table. A new row with an asterisk in each field of the row is added to the table.

   You can add values to more than one field in a row. The fields in one row evaluate with a logical **AND** relationship. The field values must **all** evaluate to true in order for the rule to evaluate to true.

4. Click the asterisk symbol (*) in a cell to enter a value for that field. The rules table offers a variety of logical operators to define your values.

   > → Tip
   >
   > We recommend that you take full advantage of operators to consolidate your rules for better performance.
   >
   > For example, if your rules determine assignments based on zip codes, use the **Between** operator to set up a range of zip codes in sequence. Use the **Include** operator to group zip codes that have the same prefix.
   >
   > The Comparison Operations document in the **Related Links** section provides detailed information on operators in your solution.

5. Continue to add rows for each desired result.

   The system compares rows using the logical **OR** operator. The system compares each rule, top to bottom, until **ONE** evaluates to **true**.

   Rearrange rows by selecting the row and clicking *Swap*.
6. Choose *Save* when finished.
7. Click *Activate Rules*.

   Enable your changes by activating the new rules. Otherwise, the system uses the previous rule set.

Related Information

http://help.sap.com/saphelp_nw73/helpdata/en/50/9eecf3152c4fb08d50e94faaf4a277/content.htm

4.3.15 Create Service Categories for Tickets

Service categories are used to capture consistent information, to allow for reporting and benchmarking, and for determining service level assignments.

A second reason why categorization plays a central role is that it gradually builds up valuable knowledge on the individual customer service business: Frequencies of categorizations among the respective business transaction documents can be analyzed and interpreted in terms of business requirements and market demands.

Creating and defining categories helps build valuable knowledge about the customer and also collects data that can be analyzed to understand business requirements and market demands.

The following are some service category functionality:

- Define Multi-Level Categories.
- Support categories in different languages.
- Create a version of the existing Catalog.
- Manage the status of a Catalog.

4.3.15.1 Create Service Category Catalog

The administrator can create and maintain service category catalog.

Context

The administrator can create *Service Categories* to channel incoming service incidents to different service catalogs, as defined in the system.

Procedure

1. To create and organize service categories and incident categories (subcategories) within service category catalogs, go to *Administrator* > *Service and Social Settings* and choose *Service Categories*.
2. Click *New*, then choose *Service Category Catalog* to open the *New Service Category Catalog* editor.
3. On the *General* tab, enter the following data:
   a. In the *General* section, enter the catalog name, valid from/to date, and description.
   b. In the *Usage* section, select the business documents that use the catalog.

   For SAP Service Cloud, select *Ticket*.
4. On the *Catalog Structure* tab, add your service categories to the catalog. The catalog consists of one top-level category by default.
   a. To add additional categories, click *Create* and select either *At Same Level* or *At Lower Level*.
   b. Enter a name and ID for your categories and select the *Category Type* for each category. Each category type is associated with a selection field, allowing agents to assign one or more categories to a ticket. The system checks your catalog structure and will not allow agents to select conflicting categories. You can choose from the following types:

Category Type	Workspace Selection Field	Category Type Code
Process	Service Category	1
Incident	Incident Category	2
Object Part	Object Category	4
Cause	Cause Category	5
Activity	Resolution Category	6

> → Tip
>
> We recommend starting with a **`Process`** category type at the top level of your catalog structure, followed by the other category types as sub level categories.

There is no limit to the number of service-category levels you can create in a service catalog. However, we recommend that you do not create more than four sublevels as an increased number of levels may make it more difficult to navigate.

5. To edit a category, select the category from the *Categories* table and edit the details, such as category name, type or ID.

   > → Tip
   >
   > A service category catalog can no longer be edited after the valid-from date is reached. In this case, simply create a new catalog version.

6. Click *Change Status*, then *Release* to release the new service category catalog.
7. Click *Save*.
8. Click *Close* to return to the *Service Categories* view.
9. The new service category catalog is added to the list in the *Service Categories* view. To open the service category catalog from this list, click the appropriate catalog ID link.

Results

Service and incident categories can be used as follows:

- To determine service level assignments
- Assigned to tickets
- Excluded from warranties

4.3.15.2 Upload Service Category Catalog

You can create a comma separated value (CSV) file to upload your entire service category catalog, rather than creating each entry manually in the system. This method also supports uploading multiple languages in the same file.

Create a spreadsheet with the following data pattern and save in CSV format.

```
<CategoryID>;<CategoryType>;<ParentCategoryID>;<Language1>;<Name1>;<Description1>
;<Language2>;<Name2>;<Description2>...
```

> ℹ Note
>
> Service category catalog files are Microsoft Excel files in comma separated value (CSV) format. Enter values as shown in the table.

CategoryID	Category-Type	ParentCa-tegoryID	Language1	Name1	Descrip-tion1	Language2	Name2	Descrip-tion2
TT-CO	1		EN	Complaint	Complaint	DE	Reklama-tion	Reklama-tion
CO-ACC	2	TT-CO	EN	Accommo-dation	Accommo-dation	DE	Unterkunft	Unterkunft
CO-TR	2	TT-CO	EN	Transfer	Transfer	DE	Transfer	Transfer
CO-AIR	2	TT-CO	EN	Airport	Airport	DE	Flughafen	Flughafen
CO-FL	2	TT-CO	EN	Flight	Flight	DE	Flug	Flug

For a complete list of supported language codes, refer to *SAP Cloud for Customer System and Software Requirements* .

Points to remember:

- The category ID and Parent Category ID must be different, or else the upload stops with an error.
- For category IDs, the prefix `CA_` is reserved for categories created manually in the system, and is **never** used for category IDs in upload files.
- Use a semicolon as a separator in the CVS file. The semicolon as a value separator allows you to use commas in entry text.
- The same restrictions on ID apply to uploaded records as to manually created categories.
- Use additional columns to add multiple languages. Repeat the same data pattern for each additional language.
- Uploading a catalog replaces the current catalog, if any. The system can have only one service category catalog.

i Note

Points to remember:

- category ID: no more than 25 characters
- category name: no more than 40 characters
- category description: no more than 80 characters
- Define a ParentCategoryID as a CategoryID before referencing as a parent category, for example, TT-CO in the example table

⚠ Caution

The upload file is limited to a combined total of 25,000 category entries in all languages. If you require a larger service category catalog, please contact SAP support.

1. Navigate to *Administrator* > *Service and Social Settings*
2. Select *New* > *Catalog from file* .
3. Select the file to upload.
   If you have included a header row in the file, select *Exclude Column Headers*. The system discards any entries in the first row.

4. Select *Upload*.
   Uploading the file creates a service category catalog with the status of **In Preparation**. Open the new catalog and verify that the contents have imported correctly.
5. Click *Change Status*, then *Release* to release the new service category catalog.
6. Click *Save*.
7. Click *Close* to return to the *Service Categories* tab.

Related Information

SAP Cloud for Customer System and Software Requirements

4.3.15.3 Create Catalog Version

To create a new version of a catalog, click on the catalog and select *New* then *Version*.

Consider the following when managing catalog versions:

- You can have only one active catalog per usage, for example for service requests, at any one time.
- Catalogs with overlapping periods and overlapping usages aren't allowed.

The following example shows the correct way to use catalog versions.

> Example
>
> Catalog 1 V1 from 1 January 2010 to 31 December 2010 for service requests
>
> Catalog 1 V2 from 1 January 2011 to 31 December 9999 also for service requests

The following example shows the wrong way to use catalog versions. In this case, there are overlapping periods for the same usage, service requests.

> Example
>
> Catalog 1 V1 from 1 January 2010 to 31 December 2010 for service requests
>
> Catalog 1 V2 from 1 August 2010 to 31 December 2010 also for service requests

> → Remember
>
> - Before deleting or changing categories in your catalog, consider where those ticket categories are used. Be sure to update your workflow rules, self-service portal, custom solutions, APIs, or any other instance that includes a list of categories.
> - When you create or update a ticket from APIs or custom solutions, the solution is lenient and saves the ticket with invalid categories. You'll see a warning message requesting a correction the next time you open that ticket in the system.

4.3.15.4 Change Status and Delete a Catalog

Consider the following when deleting a catalog or changing the status of a catalog:

- You can delete only catalogs that are *In Preparation*.
- You can set a released catalog back to *In Preparation* if the valid-from date has not yet been reached.
- Catalogs that have already been released and are in use cannot be deleted or modified. To remove the catalog from use, create a new version of the catalog, limit the valid-to date to today's date, and release it.

4.4 Process Tickets

Explore your options and tools that help you work with tickets in the solution.

The solution provides many tools and options that help you deliver excellent customer service. Respond to tickets, set up an on-site appointment for a work ticket, or check warranty or contract terms. The information in this section helps you with your daily ticket processing tasks.

Respond to Tickets [page 98]
Learn about your various options for responding to tickets.

Use Items in Tickets in Field Service [page 103]
Ticket Items can be used in multiple scenarios such as work tickets, complaint tickets, or simple billing requests. If you have enabled SAP ERP integration (required for Field Service scenarios), you are able to create items for Services, Expenses, Pricing, Shipping, Parts, and Time. Alternatively, only complaint and billing request items are available to you.

Use Activities in Tickets [page 107]
Tickets use two types of activities: phone calls and tasks.

Ticket Summary Reports [page 108]
Provide customers with ticket summary reports showing actions and resolution and any parts or services required.

Ticket Summary and Signature [page 109]
You can generate a ticket summary and capture a signature for it. This feature is also available in the offline mode.

Check Item Availability from Tickets [page 111]
Check in SAP ERP system if ticket items are available to promise (ATP).

Flexible Offline Pricing for Tickets [page 113]
Flexible offline pricing is available for tickets.

Use Surveys in Tickets [page 116]
Use surveys with tickets for checklists and satisfaction surveys.

Warranty in Tickets [page 117]
You can assign a warranty to a registered product or installation point, and determine its coverage in a ticket.

Contract Determination in Tickets [page 117]

A contract is determined and automatically added to a work ticket during ticket creation. This also applies to a SLA (service level agreement), which might form as part of a contract that you would be able to view after ticket determination in the ticket header.

Ticket Scheduling in Field Service [page 120]
Once you've determined that a ticket needs service, add service items in the *Items* tab based on service requirement.

Van Stock in Tickets for Field Service [page 122]
You have the option of consuming stock from the *Work Tickets* tab.

Approve Tickets [page 123]
Learn about the tickets approval process and how to define work distribution and edit conditions.

Assign Product Lists in Tickets [page 125]
Product List is a list of products or product categories that can be assigned to a customer, sales area, sales territory, product (required products), or product category. The Service Item category type of product list is used in a ticket.

Unlock a Ticket [page 127]
Unlock tickets opened for editing with unsaved changes.

4.4.1 Respond to Tickets

Learn about your various options for responding to tickets.

Once you start work on a ticket you can communicate back or respond to the customer to let them know:

- The ticket status
- That you require further information or follow-up steps
- You have a solution to the issue

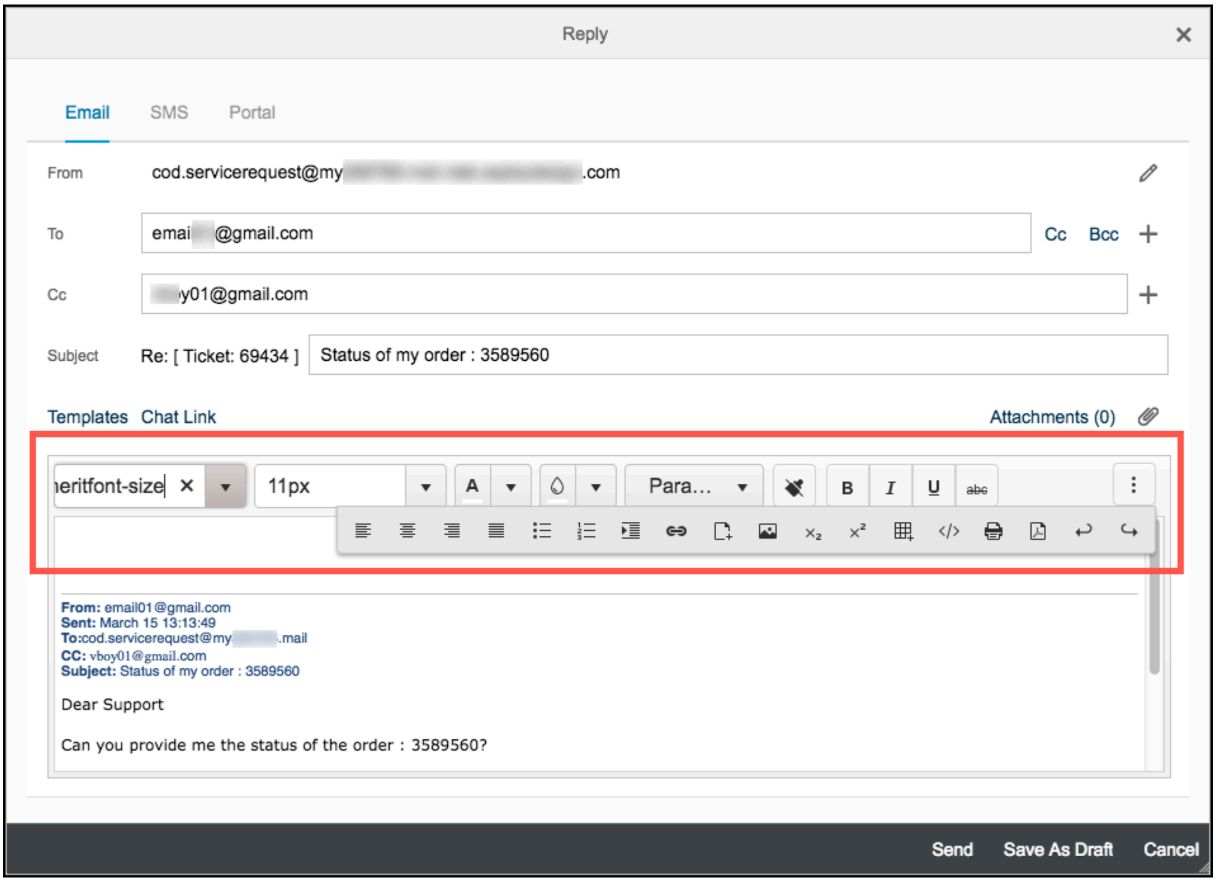
Respond either on the original communication channel or switch to a new, more appropriate communication channel, depending on the customer preference.

Compose your reply with the built-in response editor, or use an external e-mail application, depending on your company preference.

4.4.1.1 Ticket Response Editor

Use the built-in editor to compose and send ticket responses.

The response editor includes basic text formatting options. You can apply templates and add images to your response.



Basic text formatting tools are always visible above the text entry area. The *More tools* menu includes buttons to set alignment, insert tables, print the reply, and more.

→ Tip

Drag and drop images into your response, or browse for an image, or enter a URL for an on-line image.

To keep reply file size down, the current reply does not include images from previous messages in the thread. You can view all images in the thread in the interactions list.

4.4.1.2 Ticket Response Templates

Use response templates to save time when replying to tickets.

Response templates are text-only snippets containing frequently used content. These templates increase your efficiency by speeding up text entry for ticket responses.

Your organization can create corporate response templates visible to all agents. Each user can also create personal templates based on their own habits and preferences. Response templates can include placeholders that are automatically resolved by the system when adding them to a response. When you select a template, the system displays templates that match the current communication channel. For example, when composing an e-mail the system shows e-mail templates and not messaging or social media templates. Users and Administrators can define queries to show only specific templates. For example, show only response templates matching the ticket language.

4.4.1.3 Configure Ticket Response Templates

Administrators and users can create templates for standard ticket response text.

Context

Follow the steps to create and set up a template for ticket response.

Procedure

1. Go to *Service* > *Templates*.
2. Add a new template and enter the required information: *Name*, *Subject*, *Channel Type*, and *Template Text*. For response templates, select *Text-Based* for *Template Type*.

   You can edit the template text as needed when you add placeholders.

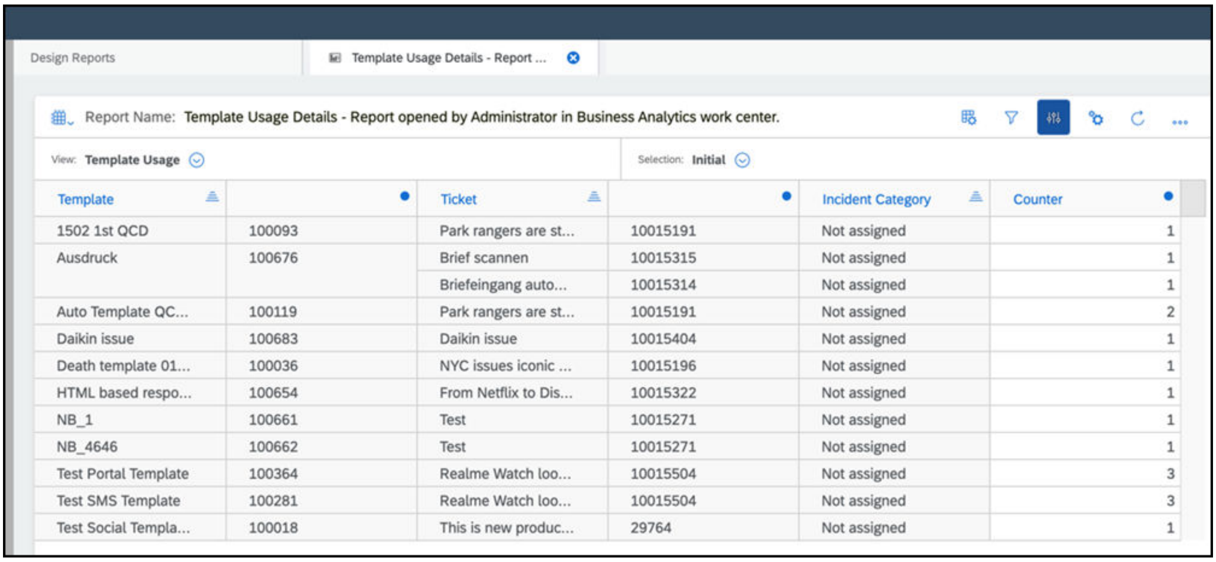
   > **Note**
   >
   > Use document-based templates to create branding that surrounds the reply text. Branding templates can be linked to specific communications channels.
3. Select *Save and Open* to view template details for further editing.
4. Add placeholders (optional). Add a row to the placeholder table. Define a placeholder tag in the first column and select a field in the second column to populate the placeholder.

   Placeholders names are surrounded by the pound sign (#). For example, define a placeholder name #CustID# and select the field *Customer ID* to insert the customer ID number into the template text. Once you define your desired placeholders, you can insert them into the template text. When the user selects the template, the solution fills in the placeholders with ticket data.
5. Set template as *Corporate* to make it available to all users (optional).

4.4.1.3.1 Template Reports

Your administrator can define Template Usage for additional channels like SMS, Portal, or Social.

You can summarize usage reporting across channels or segregate reporting by channel, ensuring templates with high usage are identified and low usage templates are made obsolete or updated.



Template		Ticket		Incident Category	Counter
1502 1st QCD	100093	Park rangers are st...	10015191	Not assigned	1
Ausdruck	100676	Brief scannen	10015315	Not assigned	1
		Briefeingang auto...	10015314	Not assigned	1
Auto Template QC...	100119	Park rangers are st...	10015191	Not assigned	2
Daikin issue	100683	Daikin issue	10015404	Not assigned	1
Death template 01...	100036	NYC issues iconic ...	10015196	Not assigned	1
HTML based respo...	100654	From Netflix to Dis...	10015322	Not assigned	1
NB_1	100661	Test	10015271	Not assigned	1
NB_4646	100662	Test	10015271	Not assigned	1
Test Portal Template	100364	Realme Watch loo...	10015504	Not assigned	3
Test SMS Template	100281	Realme Watch loo...	10015504	Not assigned	3
Test Social Templa...	100018	This is new produc...	29764	Not assigned	1

4.4.1.3.2 Configure Template Editing Permissions

Your non-admin users can now edit templates created by admins.

You can see the change history in the template detail view.

Scope and Configure

Enable this feature under *Business Configuration* > *Questions* > *General Business Data* > *Templates* > *Templates Configuration* > *Question "Allow non-administrator users to edit templates created by others"*.

4.4.1.4 Ticket Response with Microsoft Outlook

Reply to tickets using Microsoft Outlook as your external e-mail editor.

Service agents can use Microsoft Outlook and the SAP Cloud for Customer add-in for Microsoft Outlook to compose and send replies to tickets.

Your Administrator can configure your system to use an external e-mail editor for ticket replies, in this case, Microsoft Outlook. Replies sent via an external e-mail editor appear as replies on the Interactions tab, rather than as ticket activities. Once Outlook integration is enabled you can choose to reply from Outlook, or using the built-in response editor. When you reply with Outlook, you compose and send in a new Outlook window. To associate the reply with the ticket, include the ticket number in the subject line.

Each agent must download the SAP Cloud for Customer add-in for Microsoft Outlook and add any shared e-mail accounts your organization uses to respond to tickets to Microsoft Outlook.

4.4.1.5 Configure Microsoft Outlook for Ticket Responses

The administrator would set up your system to use Microsoft Outlook to respond to service tickets.

Context

You must scope Microsoft Outlook in your solution to use the tool for responding to your customers.

Procedure

1. Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Service* > *Customer Care* > *Service Request Management* > *Group: E-mail replies via Microsoft Outlook (1)*.
2. Set the question to *In Scope*.
3. Instruct all agents to download and install the SAP Cloud for Customer Add-In for Microsoft Outlook from the *Download* page.

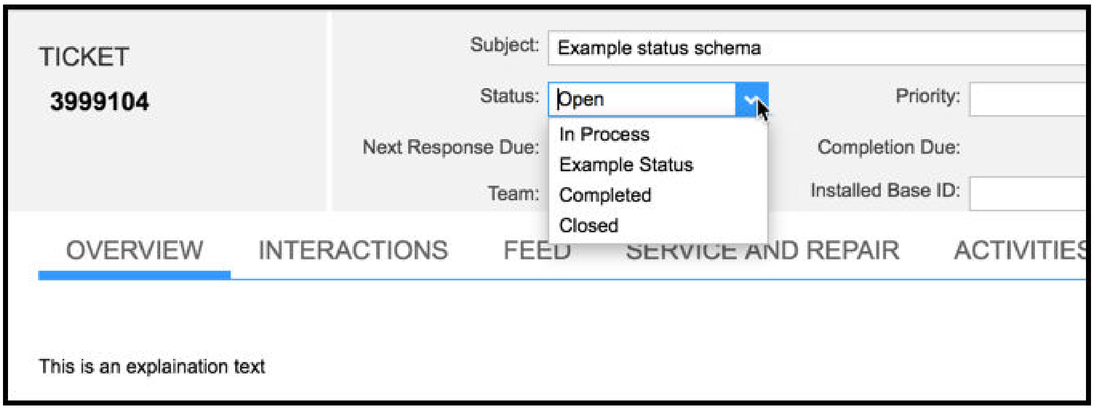
Results

Service agents can now use Microsoft Outlook to respond to tickets. Agents can also respond with the built-in response editor by deselecting the *Use Microsoft Outlook* checkbox in *Interactions*.

4.4.1.6 Set Ticket Status

Ticket status reflects the progress of tickets in the system. Status can be linked to approval process and assignment status.

Select a ticket status from the list in ticket details.



→ Tip

You can set the status for multiple tickets in the *Tickets* list.

Your administrator defines the statuses available in the list.

Related Information

Status Handling in Tickets [page 66]
You can maintain dictionary entries for the user status, combine the dictionary entries, assign them to status schemas, and finally assign the status schemas to ticket types.

4.4.1.7 Pause Ticket SLA Clock

Track the total time a ticket spends with an agent and the total time with the customer.

You can track the total elapsed time a ticket has spent in any status mapped to **processor action**. Use this information to track service level agreement (SLA) and milestone compliance.

- Pause the SLA clock while ticket is in customer action status. Resume when ticket returns to agent. This feature allows you to track the total time with the agent against the SLA terms. Applies to Completion Due, Resolution Due, and On-Site Arrival milestones.
- Time with agent and with customer appears in ticket details. Processor and requester durations are adjusted on status change. Use reports to check for SLA and milestone compliance.

4.4.2 Use Items in Tickets in Field Service

Ticket Items can be used in multiple scenarios such as work tickets, complaint tickets, or simple billing requests. If you have enabled SAP ERP integration (required for Field Service scenarios), you are able to create items for Services, Expenses, Pricing, Shipping, Parts, and Time. Alternatively, only complaint and billing request items are available to you.

i Note

You must maintain configuration for *Item Processing Codes* and *Item Processing Determination* to use this feature.

Field Technicians can create items in the *Items* tab, and based on assignments maintained via business configuration, the product would get assigned to the related tabs such as *Service*, *Parts*, *Time*, *Expenses*.

Administrators can assign Products to **Usage** in master data to filter product search by Service, Time, Part, and Expenses in the corresponding *Work Tickets* tab. Administrators can also assign Products to display in the related tabs such as: Service, Time, Parts, and Expenses based on the associated Processing Codes.

You can create Ticket Items for the following scenarios:

- Field Service or Work Tickets: items can be created for billing requests, services, parts, expenses.
- Complaint Tickets: items can be created for complaint requests, complaint follow-up documents.
- Normal Tickets: items can be created for billing requests.

Fixed Price Service

Services and Parts are invoiced based on the planned quantity and agreed pricing conditions. Time items are used for pricing only (Timesheet).

Time and Material Service (based on actual costs of parts and time)

Services are used for resource planning only. Time and Parts are invoiced based on the actual quantity. Time and Parts are also used as cost.

Time & Material Service (based on actual service and parts)

Planned Services is used for resource planning, and actual service and parts is used for billing. Parts are invoiced based on the actual quantity. Time items are only used for costing. This scenario lets you differentiate between the actual services that are invoiced to the customer, and the actual time (labor and travel) spend on a service assignment.

4.4.2.1 Configure Item Processing Codes for Tickets

To enable ticket item defaulting based on item processing codes, the administrator has to configure item processing codes via business configuration.

When you create a ticket item and set a ticket type to it, the system assigns it a processing code based on the code mapping maintained in the rules table. The administrator has the ability to edit these mappings in the rules table.

Each of the processing codes in turn are associated with and mapped to certain values and flags, such as Pricing Relevant, ERP Relevant, Scheduling Method. You have the ability to set these values and flags in the system using the business configuration activity list.

So when you select a ticket type when creating a ticket item, then the system displays default values in the fields based on the item processing code set in the system. However, at this point, the user has the ability to edit these fields and change the default values.

Follow the steps below to set-up item processing codes for your business.

1. Go to *Business Configuration* > *Open Activity List* > *Fine-Tune* > *Show All Activities* > *Tickets for Customer Support* > *Maintain Item Processing Codes*.
2. Select *Add Row*.
3. To create item processing codes, populate the required fields. Enter a description.
4. Select the required *System Processing Type* and the *Invoicing Method*.
    - *System Processing Type*
      With the *System Processing Type* you trigger the accounting records for costs and goods movement in your company.
        - *Billing Request* creates a request for billing.
        - *Complaint Request* can be used to report complaints on external document items. This feature requires SDK development in order to be exposed as a front-end capability.

        - *External Procurement* creates an SAP ERP sales order with procurement items (item category TAS), based on actual quantity.
        - *Item Planning and Item Confirmation* allows custom integration scenarios based on planned quantity or actual quantity.
        - *Part Consumption from Technician Stock* marks the item as taken out of the stock of the technician and triggers the required billing and costing.
        - *Part Advance Shipment to Customer Consignment Stock* marks the item to be shipped to the customer's consignment stock before the technician plans to visit the customer.
        - *Part Consumption from Customer Consignment Stock* marks the item as consumed material from the customer consignment stock. It triggers also the required billing and costing.
        - *Part Return from Customer Consignment Stock* marks the item as the to be returned material (partly or completely) from the customer consignment stock.
        - *Time* creates a CATS time posting based on actual quantity. The line item in Billing Request is based on Invoice Method.
          If no integration with SAP ERP exists, the *Type* field is hidden and always defaulted to this value.
    - *Invoicing Method*
      With the *Invoicing Method* you decide how the item shall be invoiced in SAP ERP:
        - *Fixed Price* takes the planned quantities for billing.

          > **i Note**
          >
          > Please note that advance shipment doesn't work with fixed price.

        - *Time and Material* is the default setting and takes the confirmed (actual) time and quantity for billing.
        - *Not Relevant*
5. Save your entries.

> **i Note**
>
> Custom processing codes begin with Z. The rest of the codes are provided by the solution.

Example

If an item processing code is flagged as *Pricing Relevant*, then a ticket item will be set by default as relevant for pricing. However, this only applies if the ticket type is also set as *Pricing Relevant*. The default pricing flag at ticket item level can be changed by the user. In this case, the pricing flag is re-determined.

4.4.2.2 System Processing Code Types

These are some system processing code types maintained by SAP in the back-end system, but not visible on the UI.

System Processing Type	Processing
TIME (0001)	• Creates a CATS time posting based on actual quantity • Line item in Billing Request, based on Invoice Method

PART CONSUMPTION FROM TECHNICIAN STOCK (0002)	• Creates a MM goods movement:
	  • Supports technician stock based on Plant & Storage Location combination
	  • Supports technician stock based on Consignment Stock
	• Line item in Billing Request, based on Invoice Method

PART ADVANCE SHIPMENT TO CUSTOMER CONSIGNMENT STOCK (0004)	Creates a sales order of type **Consignment Fill-up**
PART CONSUMPTION FROM CUSTOMER CONSIGNMENT STOCK (0003)	• Creates a MM goods movement from customer consignment stock • Line item in Billing Request, based on Invoice Method
PART RETURN FROM CUSTOMER CONSIGNMENT STOCK (0005)	Creates a sales order of type **Consignment Pick-up**
BILLING REQUEST (0007)	Creates a billing request
COMPLAINT REQUEST (0006)	No processing in ECC
ITEM PLANNING (0008) & ITEM CONFIRMATION (0009)	Allows custom integration scenarios based on planned quantity or actual quantity
EXTERNAL PROCUREMENT (0010)	Creates an ECC sales order with procurement items (item category TAS), based on actual qty

4.4.2.3 Configure Item Processing Determination for Tickets

For item processing determination, you can configure which processing codes can be determined based on the product, product category, or ticket type

When creating an item in a ticket, after you enter the product, the determination of the **ItemProcessingCode** is triggered based on the settings you've maintained in the Item Processing Determination fine tuning table.

Follow the steps below to set-up and assign item processing codes with the item processing determination for your business.

1. Go to *Business Configuration* › *Implementation Projects* . Select your project and navigate to *Open Activity List* › *Fine-Tune* › *Show All Activities* › *Tickets for Customer Support* › *Maintain Item Processing Determination* .
2. Select *Add Row*.
3. To create item processing determination, populate the required fields, such as *Usage Type* and *Item Processing Codes*.
4. Save your entries and activate the rule.

4.4.2.4 Items in Tickets Relevant for SAP ERP

All Work Tickets relevant for Field Service must have SAP ERP integration enabled.

- If an item processing code is flagged as *ERP Relevant*, the *ERP Release* status of a ticket item is set to *Not Released*.
- If an item processing code is not flagged as *ERP Relevant*, the *ERP Release* status of a ticket item is set to *Not Relevant*.
- The *ERP Release* status can be changed either way from *Not Relevant* to *Not Released* by using the item actions.

4.4.3 Use Activities in Tickets

Tickets use two types of activities: phone calls and tasks.

- Phone call activities are generated automatically from calls in the live activity center. The system associates call activities with tickets based on incoming call information. You can also add phone calls to a ticket manually.
- Task activities are typically added from activity plans associated with surveys.

Related Information

Activity Planning and Routing [page 1051]
Activity planner is used to plan activities such as surveys and tasks that help you achieve different business goals. By using routing rules, you can assign the surveys and tasks to business objects that are associated with specific accounts or territories.

Surveys [page 1090]

4.4.4 Ticket Summary Reports

Provide customers with ticket summary reports showing actions and resolution and any parts or services required.

Preview or attach the Adobe Acrobat (PDF) format summary report file to the ticket and send it to the customer. Include an optional customer signature as an acknowledgment or approval of work done.

Your administrator can customize the output by modifying the form templates with your company branding. You can create multiple output templates for different uses that include specific ticket information for each scenario.

4.4.4.1 Configure Ticket Summary Templates

Administrators can create and edit templates for ticket summary reports.

Prerequisites

Under *Downloads*, you have installed Adobe LiveCycle Designer and the Add-In for Adobe LiveCycle Designer.

Context

Use form templates to define the content and layout of ticket summary report documents. Summary reports are generated in portable document format (PDF) documents that can be printed, or sent as e-mail attachments.

You can create country/region-specific form template variants. Language variants are determined by the user logon language, or in certain cases, by the preferred language of the receiving business partner. For example, an employee in a German company sends a summary report to a business partner in France. The solution searches for a French language variant of the form template and uses this template to generate the document. If a language variant is not available in the recipient language, then the form template in the fallback language English is used.

> **i Note**
>
> Customers and partners can use the SAP Cloud Application Studio development tool to implement custom logic for selecting a template variant.

> **! Restriction**
>
> You cannot delete a form template once it is used to output a report because the template is referenced in the document output history.

→ Recommendation

We recommend that you edit form templates provided by SAP or partners instead of creating new form templates. Editing provided templates means that you do not have to adapt any output settings and you can also manage all versions of the template. Form template versions that you customize are not overwritten by SAP or partner upgrades.

Procedure

1. Go to *Administrator* > *Form Template Maintenance*.
2. Select a template and choose *Copy* > *As New Template*.

   As a starting point, select a template with characteristics similar to the form you want to create.
3. Enter a name and description, and select a language.

   If you are creating a country/region-specific form template, select the country/region. If the template is not country/region-specific, leave this field blank.
4. If you want to use master templates to determine the layout of the template, select the *Form Master Template* checkbox. If you use a company-specific form master template, the header, footer, and sender address used in the form are defined and consistent. If a company-specific master template in not available in the solution, the system uses a default master template.
5. Select the form template variant you want to edit and choose *Open* > *Adobe LiveCycle Designer*.

   For more information about using Adobe LiveCycle Designer, see the Adobe product documentation.
6. Save your changes.
7. Click *Publish*.

   Publishing makes your new template version available for all users.

Related Information

4.4.5 Ticket Summary and Signature

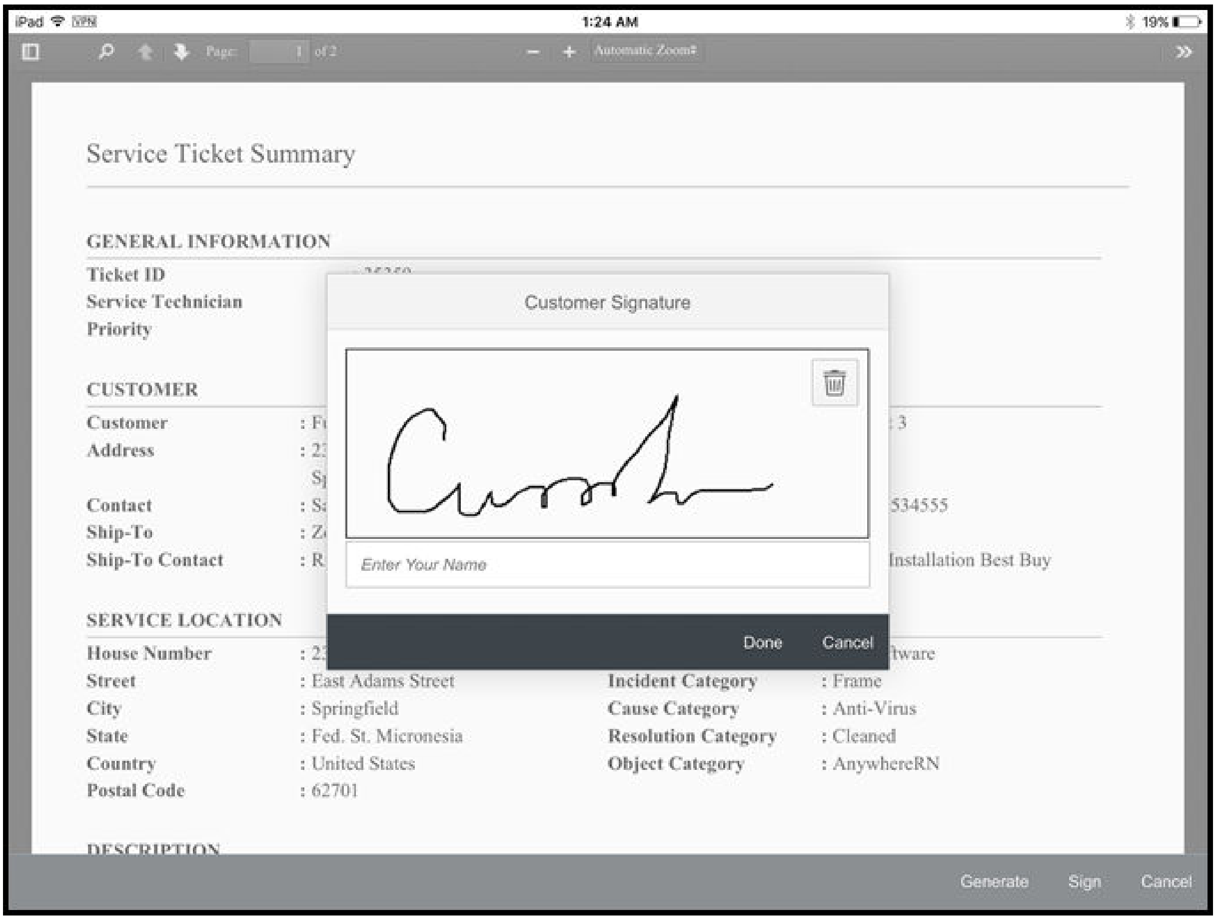
You can generate a ticket summary and capture a signature for it. This feature is also available in the offline mode.

Go to *Tickets* tab and select a ticket:

1. Select *Action* > *Generate Local Summary*.
2. Select a template whose summary is to be generated.
3. Select sign to capture signatures such as: Customer, Agent, or Technician signature on the PDF summary.

4. Select *Generate* after adding the signature. A summary is generated under *Attachments* tab with the added signatures.

> **i Note**
>
> Currently all published templates (irrespective of the country) are listed in the list of available templates. This feature is available in English only.



4.4.5.1 Configure Tickets Summary and Signature

Administrators can configure the template for a ticket summary.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Service* > *Customer Care* > *Service Request Management* > *Ticket Summary Templates* and select the scoping question: **Do you want to use locally-stored templates for ticket summary reports?**

4.4.6 Check Item Availability from Tickets

Check in SAP ERP system if ticket items are available to promise (ATP).

If you are using the Fiori client, you can check if ticket items are available to promise in your SAP EPR system. Trigger *ATP Check* in the *Actions* menu in ticket detail view. Availability date and quantity information appears on the *Items* tab under *ATP*.

4.4.6.1 Configure ATP Check for Tickets

Administrators can set up document types and item processing codes for available-to-promise (ATP) check.

Context

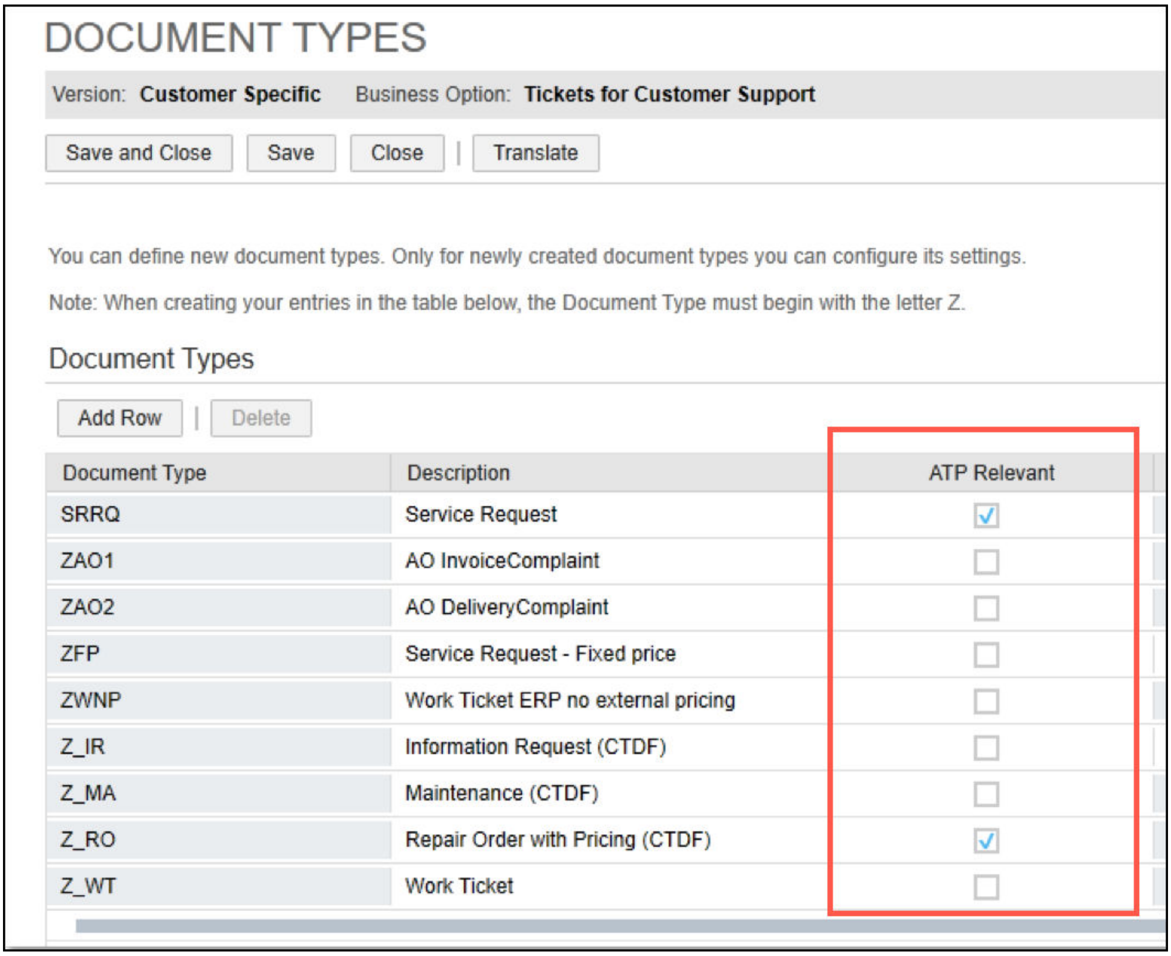
ATP check is only available for tickets with specific criteria.

- The document type is relevant for ATP
- The item processing code is relevant for ATP check
- The status for ticket item work progress is:
  - Open
  - Ready
  - Not Relevant

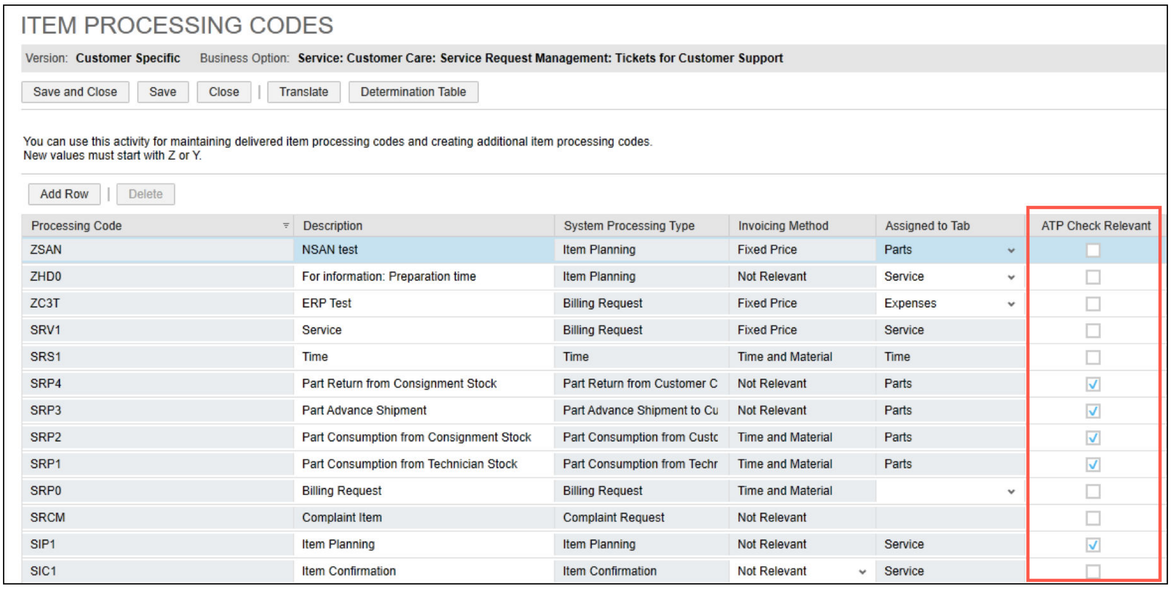
Procedure

1. Configure document types. Go to *Business Configuration* > *Implementation Projects* and select *Open Activity List*. Select *All Activities*, then search for **ticket**. Select *Tickets for Customer Support*, then select *Maintain Document Types*. Select the *ATP Relevant* checkbox for each document type you wish to enable

for ATP check.



2. Configure item processing codes. Go toGo to *Business Configuration* > *Implementation Projects* and select *Open Activity List*. Select *All Activities*, then search for **ticket**. Select *Tickets for Customer Support*, then select *Maintain Item Processing Codes*. Select the *ATP Check Relevant* checkbox for each processing code you wish to enable for ATP check.



4.4.7 Flexible Offline Pricing for Tickets

Flexible offline pricing is available for tickets.

Service technicians can request estimated pricing information for ticket service parts or products while working in offline mode. Service uses a subset of the offline pricing fields and functionality. The enablement steps are the same whether using offline pricing for Sales or Service.

The following four fields are used for offline pricing in service tickets:

- Sales Organization
- Distribution Channel
- Product
- Country/Region

> **! Restriction**
>
> Component-level breakdown for pricing is not available for service tickets.

4.4.7.1 Flexible Offline Pricing

Flexible offline pricing supports multiple fields, price, discount, and surcharge determination.

Reuse existing pricing procedures for supported fields from ERP by simply exporting them from SAP ERP and uploading them in SAP Cloud for Customer.

> **⚠ Caution**
>
> Lean offline pricing that you may have implemented is deprecated and is supported only until 1805. Once you have enabled the new flexible offline pricing, the previous lean offline pricing will no longer work.

> **i Note**
>
> You need to make sure that your SAP Cloud for Customer ERP add-on (CODERINT) should be in CODERINT 6.0 SP26 level or above.

Related Information

SAP Cloud for Customer Administrator Guide

4.4.7.2 Use External Pricing in Tickets

You can Request External Pricing in Ticket, External Pricing Conditions in Ticket, Re-Pricing Based on Actual Quantities in Ticket, Manual Pricing Changes in Ticket, Header Pricing Information in Ticket, or Release to SAP ERP with Pricing Conditions.

When you create a new ticket, based on the selected ticket type, you can request for pricing in the Items tab. In the *Items* tab, fill in data for *Planned Total* and *Actual Total* and select *Actions* > *Request External Pricing*. The *Net Price* field gets populated.

Based on the data entered in the *Planned Quantity* and *Actual Quantity* fields, the system can calculate the *Actual Total*, *Planned Total*, and *Net Price* of the ticket item.

You can change the actual quantity and request for pricing again. You can also manually change the price of the item in the *Items* tab.

You can maintain pricing data in the *Tickets* > *Pricing* tab.

4.4.7.3 Configure External Pricing Call in Tickets

Administrators can learn about external pricing call configuration to retrieve the complete pricing result from SAP on premise systems to your cloud solution.

If external pricing is selected, a synchronous call is required to retrieve the complete pricing result from the SAP on premise system to your cloud solution. Replicated sales documents also require a synchronous pricing update once the sales document is updated during save.

If the document was previously replicate, with this configuration, you can disable the synchronous pricing call to the system,. In addition, you can disable the synchronous call completely, which is also valid for quotes created in your cloud solution. For both configuration options, the pricing status is calculated successfully through the asynchronous call from the external system. The user can still trigger pricing synchronously by clicking the asynchronous call action.

To configure external pricing call, go to fine-tuning activity *Ticket* > *Tickets for Customer Support* > *Document Types*:

- Enable *External Pricing* for ticket type.
- Enable ticket item processing code for pricing.

Next, go to *Ticket* > *Tickets for Customer Support* > *Item Processing Codes*:

- If an item processing code is flagged as *Pricing Relevant*, then the ticket item would be set as relevant for pricing, by default.
- The default pricing flag on ticket item level can be changed by the user.
- The pricing flag is re-determined if the item processing code is changed by the user.

4.4.7.4 Item Coverage in Pricing Request for Tickets

You can set item coverage in the *Items* tab and request for pricing estimate in the offline mode.

This would help you provide price estimates to your customers on the spot in the offline mode, based on the ticket item coverage.

4.4.7.5 Cloud for Service Scenario

Offline pricing usage in SAP Service Cloud.

Service technicians can request estimated pricing information for ticket service parts or products while working in offline mode. Service uses a subset of the offline pricing fields and functionality. The enablement steps are the same whether using offline pricing for Sales or Service.

The following four fields are used for offline pricing in service tickets:

- Sales Organization
- Distribution Channel
- Product
- Country

> **! Restriction**
>
> In addition to the limitations listed in the Solution Scope section, component-level breakdown for pricing is not available for service tickets.

4.4.7.6 Request External Pricing with SAP ERP, SAP CRM, SAP S/4HANA

Learn more about how to request external pricing for sales quotes with SAP ERP, SAP CRM or SAP S/4HANA on premise solution.

Your administrator has correctly set-up external pricing. You create a quote, request the pricing from the external system by clicking *Actions* > *Request Pricing*. Similarly, you can use the action *Simulate* to retrieve external pricing for a sales order.

The external system then simulates a complete document, and you receive the results in your quote or order.

In the solution, you can adapt the following header hidden fields and make them visible for external pricing:

- *Pricing Status* – Only a successfully calculated quote can be submitted.
- *Pricing Date* – A hidden field, also available in internal pricing.
- *Pricing Procedure*
- *Total (Gross)*

On the detailed tab of the sales quote *Products* tab, the following fields are displayed:

- *Product Pricing* – Displays the pricing overview for the selected Product.
- *Total Pricing* – Displays the pricing overview for the complete sales quote.
- *Adjusted Item Price* – Considers item and header price elements
- *Adjusted Item Value* – Considers item and header price element times requested quantity.

> **i Note**
>
> Fields *List Price* and *Product Discount (%)* are not available in the product table for external pricing.

Follow-up Documents

You have an integration with an external system, process your sales orders, and can capture the references to the follow-up documents in the quote. Navigate to *Sales Documents* > *External Follow-Up Documents*.

If you have scoped external pricing, adapt and translate the condition types and pricing procedures from the external system to your own needs in the *External Pricing* fine-tune activity.

Also, set the *External Pricing* checkbox for the corresponding sales quote document types.

Assignment to External Pricing

If your solution includes integration to an external system and you've chosen to enable external pricing, you can configure the external price elements at the item and header levels for sales quotes to provide quick access to view and edit the pricing data. By configuring these elements, you can also remove the *Product Pricing* and *Total Pricing* tabs from the **Products** tab of the sales quote. Execute these steps to define the configuration:

1. In the fine tuning, go to *External Pricing* > *Labeling External Pricing Elements*.
2. Enter the Description for the price elements you plan to use and save your entries.
3. Go to the fine-tuning activity *External Pricing* > *Assignments of External Pricing Elements*
4. Add a row for each element you want to assign and select the relevant parameters for each.
   You can either choose or leave blank the **Pricing Procedure** for a particular element. If you leave it blank, users can edit that price element directly in the sales document without first having to trigger the action to Request Pricing from the external system.
5. Save your entries.

4.4.8 Use Surveys in Tickets

Use surveys with tickets for checklists and satisfaction surveys.

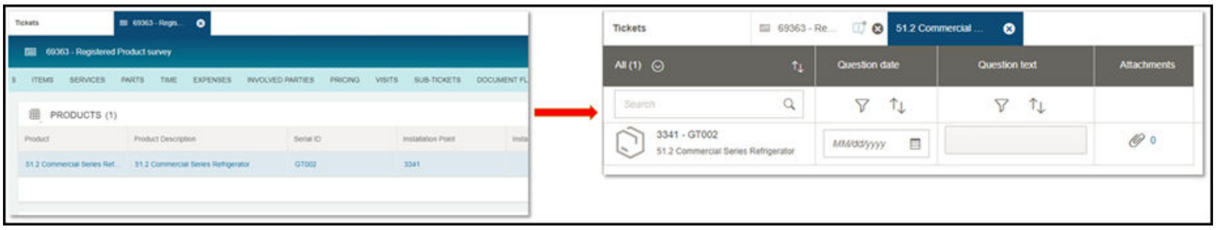
- Checklists for work tickets – This type of survey can be site safety checklists, equipment checklists, and other instances requiring a procedural aid, or guidelines. You can generate a summary of a survey and attach it to the ticket to provide a record of the responses. Summaries enable tracking of service policies and regulations.
- Customer satisfaction surveys – Once you complete a ticket you can send a link to a satisfaction survey requesting customer feedback.

Related Information

Surveys [page 1090]

4.4.8.1 Registered Products in Tickets Survey

You can define registered product surveys for specific products or product categories. Registered Product is determined in a survey based on the ticket context and product category.



4.4.9 Warranty in Tickets

You can assign a warranty to a registered product or installation point, and determine its coverage in a ticket.

A warranty gets determined in the ticket header. Warranty determination is based on installation point, registered product, service date, and ticket incident category. You can assign warranty coverage in a ticket, which is determined on the ticket header, with inheritance to items. It influences external pricing (item) based on the accounting indicator in SAP ERP.

4.4.10 Contract Determination in Tickets

A contract is determined and automatically added to a work ticket during ticket creation. This also applies to a SLA (service level agreement), which might form as part of a contract that you would be able to view after ticket determination in the ticket header.

The following are some features of contract determination ina ticket:

- Contract determination in a ticket occurs based on ticket header information and item data.
- There is no direst dependency between the contract determination given by ticket header and the contracts determined by the ticket items.
- It is possible to maintain multiple contracts in item level.
- Contract hierarchy is supported.
- Setting different contract determination logic and parameters is possible via BaDI implementation.

4.4.10.1 Configure Contract Restrictions Based on Ticket Type

The administrator would configure contract types and usage restrictions based on additional criteria such as ticket type.

You can create different contract document types with restricted coverage based on the context they are used in. You can associate specific contract types with specific ticket types to auto assign the appropriate contract for a ticket type.

Set up ticket document types to support contract restrictions as follows:

1. Go to *Business Configuration* > *Implementation Projects*.
2. Select your implementation project and choose *Open Activity List*.
3. Go to *Fine Tune* > *Activity List* > *Tickets for Customer Support* > *Tickets for Customer Support* > *Maintain Document Types*.
4. Add document types and descriptions. A new document type should start with the letter **Z**.
5. Select a *Contract Usage Restriction* for each document type as required.
6. Choose *Save* and *Close*when finished.

Users can specify usage restrictions for each contract item. When a user creates a work ticket, the system automatically applies the specified usage restrictions based on the ticket type.

4.4.10.2 Search for Tickets Related to Contracts

You can search for tickets associated with contract (on header and item level).

User can create or select queries for:

- *Header* - Contract was assigned on ticket header level.
- *All* - Contract was assigned on ticket header and or ticket item level (all tickets, to which this contract has been determined).
- *Items* - Only ticket item to contract item assignments.

> i Note
>
> Based on the selected query, there are different field compositions for advanced search and result columns.

4.4.10.3 Checking Tickets Related to a Contract

The covered object is equal to the reference object in the ticket – for that reason the agent can easily navigate from the ticket contract hyperlink directly to the contract to inform customers about their entitlements.

Context

A customer has an issue with a product and contacts the service representative providing them their contract id or contract name. To react quickly to the customer's request, the representative wants to view only the tickets only for a particular customer contract.

Procedure

1. Search for the contract and open it.
2. Navigate to *Tickets*.
3. Select the correct *Ticket ID*.
4. From the ticket overview, select *Summary* > *Preview* to review billing details.
5. If desired, add notes to the ticket.
6. Save your entries.

   For quantity contracts, you can select the quantity contract item and search in its *Release History* for related tickets to see remaining quantity.

   You can also navigate to the *Ticket* tab of the contract to see all tickets related to the contract.

Related Information

Tickets [page 26]
Learn how the system creates tickets, how to work with the ticket list, and how to respond to tickets to resolve customer issues.

4.4.10.4 Embed Tickets Table in Contracts

Learn how administrators can embed the tickets table tab in a contract overview section.

To have a highly flexible query for contract related tickets, we recommend embedding tickets section in contracts.

1. As an administrator, navigate to *Tickets* tab of a contract.

2. Go to *Adapt* > *Edit Master Layout*.
3. Click *Copy*.
4. Go to the contract *Overview* section.
5. Select a section in the *Overview* section to embed the *Tickets* table.
6. Click *Paste*.
7. Click *Apply*.
8. Click *Adapt* > *End Layout*.

You can now view the embedded *Tickets* table including all of its queries.

4.4.11 Ticket Scheduling in Field Service

Once you've determined that a ticket needs service, add service items in the *Items* tab based on service requirement.

The following are our supported scheduling methods:

- **Manual** scheduling requires a resource planner to assign a service technician for the requested service. Start and end times define time constraints for the planning phase and this data is inherited from the header. The expected duration for any service is calculated from the planned quantity of the item. Define a service team that would perform this service.
- **Auto Dispatch** scheduling automatically searches for an available service technician.
- **Appointment Offering** scheduling allows the service agent/technician to select appointment slots for their customer, when creating a service appointment. You have to first enable this option via fine tuning.

Once you maintain the ticket details, you can trigger the demand creation by setting the work progress of the ticket item to *Release for Scheduling*. This creates a demand and sends it to resource planning.

> i Note
>
> In the ticket, maintain the service team and requested time range.

This action sends the demand to the resource scheduler tab and sets the item to *In Scheduling*. Once the demand gets scheduled, the status changes to *Ready* and gets linked to the assignment.

The planned duration for this demand is calculated based on planned quantity. If this UoM is not a time based unit, then use the conversion rules for the product.

In the ticket, maintain the service technician team and requested time range.

4.4.11.1 Scheduling Workflow in Tickets

The scheduling method can be configured for the item processing codes for service items relevant for scheduling.

Context

This is the general flow of tasks and activities for scheduling in Tickets.

Procedure

1. Determine service technician team and technician in a ticket.
2. Enter service item with processing code relevant for scheduling.
3. Release ticket for scheduling and save ticket.
4. Work progress status of service item is set to *In Scheduling*.
5. Demand gets created and linked to the appropriate service item.
6. Assign demand to technician using Resource Scheduler or external scheduling tool (Multiresource Scheduling).
7. Assignment is created and linked to the service item.
8. Work progress of service item is set to *Ready*.
9. Service technician information gets updated in the ticket header and ticket service item.

4.4.11.2 Appointment Offering in Resource Scheduler

This feature offers your customers the ability to preselect time slots for a service appointment.

The service agent can offer the customer the ability to choose their appointment time slot and date range. However, you would need to enable this option first.

When you select the scheduling method for a repair item as *Appointment*, and choose *Release for Scheduling*, the *Appointment* button gets enabled.

> **i Note**
>
> Only items with *In Scheduling* work progress status are relevant for appointment booking. The *Appointment* button, is otherwise disabled. So to change the status of a ticket item to *In Scheduling*, you would have to execute an item based action.

On the *Appointment Offering* screen, you can select a date range and a time slot. Click the *Get Appointment* button to get a list of available appointment offerings within your selected date range and time.

Next, select the time your customer requests and save the appointment time to ensure that the time slot is booked.

Once you save, the item status displays as *Ready*, which means that the assignment for that item has been created. You can view details of this item in the *General Data* tab, at the bottom of the screen. You would also see that the system has assigned a technician for the appointment based on the requested time slot and date.

In the *Assignments* tab, you can view the appointment you scheduled. Here's a short video with more information on the *Appointment Offering* feature.

Fixed Flag

As the name suggests, this feature restricts editing the time slot or technician based on the type of fixed flag selection. You can choose this option when choosing an appointment.

The *Fixed* flag helps avoid any unintended changes to a set time slot. You can choose from these options:

- **Fixed Time**
  Selecting this option would restrict the appointment time. So if the time slot is fixed to morning, then you can move the appointment to a different hour within the morning time slot of the same day. However, you cannot move the appointment to the evening or another day. In this case, you would still have the option of changing the technician.
- **Fixed Time and Technician**
  Selecting this option would restrict the appointment time and the technician. Hence in addition to the time slot, you cannot change the technician.

4.4.12 Van Stock in Tickets for Field Service

You have the option of consuming stock from the *Work Tickets* tab.

The stock feature provides information on available parts in stock for servicing and repair. The stock data is replicated from SAP ERP to SAP Cloud for Customer based on the mapping of service technician, service team, and service organization with the plant and storage location.

- You have an option of adding stock from the *Work Tickets* work center.
- You also have the option of adding Van Stock Products as Ticket items.
- In the *Item Processing Determination* fine-tuning activity for tickets, you can maintain the item processing type depending on Stock type.

Follow these steps to use stock in a work ticket:

1. Go to *Work Tickets* > *Parts* > *Add from Stock Location*.
2. The dialog box displays a list of stock locations assigned to the user.
3. Select a location to display available products in that location.
4. In the section *Products* add the actual quantity of products you want to add.
5. Next, click *Add Products* to add it to the parts list.

> i Note
>
> If you change the stock location, then selected products get cleared.

6. The added item gets the item processing type as defined via fine-tuning.
7. For the added stock item, select *Finish Work*.
   Finish Work copies the planned quantity to actual quantity for an item, marks the item as **Read Only**, and enables the *Release to ERP* action.
8. Now you can release the item to SAP ERP.
9. After a successful release, you would see the status of the item as *Released*.

4.4.12.1 Configure Stock for Tickets

Scoping the Stock allows you to view all stock-related information for service technicians, service team, or service organizations. To use the stock option in a ticket, the administrator would have to assign the *Stock* work center to the field service technician business role.

To scope stock for your solution, go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Service* > *Entitlement Management* > *Stock Location* and select the checkbox. Next, go to the *Questions* tab to select the option for using the *Stock* work center to enable you to view the stock location data.

To assign the *Stock* work center to the field service technician business role, go to *Administration* > *Work Center and View Assignments* tab. Assign the *Stock* work center to the field service technician business role with COD_*STOCKLOCATION*_WCF ID code.

4.4.12.2 Part Consumption from Technician Stock

You can add stock from the *Work Tickets* tab.

In the *Parts* tab, choose the *Add from Stock Location* action. This displays the *My Stock Locations* screen, so you can choose the quantity from your available stock list. A technician can only consume parts from their own stock.

Next, you can set the work progress status to *Finished*, then *Release to ERP* and save your updates.

4.4.13 Approve Tickets

Learn about the tickets approval process and how to define work distribution and edit conditions.

If your administrator has configured approvals, a task is triggered to forward the ticket or hinder it from moving to the next stage.

Administrators can set up multilevel approval processes. Based on the configuration settings, user can:

- Edit and view approval notes in the *Approval* tab.
- Withdraw from approval under *Actions*, using the *Withdraw from Approval* field.
- Manager can submit for approval directly in the *Approval* tab.

- Approvals are submitted automatically based on the tickets output settings.

4.4.13.1 Configure Approval in Tickets

Administrators can explore how to incorporate conditions into the approval process for tickets, such as who would be allowed to approve the ticket.

The administrator can set the work distribution for tickets. These can be: Approver of Ticket, Direct Approvers, Manager of Agent Responsible for Ticket, Manager of Service Technician for Ticket, or Responsible for Account.

Activate the approval process for tickets under *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Service* > *Customer Care* > *Service Request Management* > *Group: Approval for Tickets*. Go to *Questions* and check the boxes for the questions: **Do you want to use a multi step approval for tickets?** and **Do you want that the system submits automatically a ticket for approval?**

You can edit the approval process by editing steps, adding additional steps, and by changing the order of the steps. You must define who receives approval tasks. You can also define conditions by which an approver is to receive an approval task.

Once you scope approval for tickets, then you detail the approval process. For this step, you define the approval conditions and an approver before the approval process is ready to use. Navigate to *Administrator* > *Approval Process*. See **Creating an Approval Process for details**.

> **i Note**
>
> At least one approval process must be active. To define an approval process, copy the default approval process and adapt the approval validity, ensuring one process has an unlimited validity.

Related Information

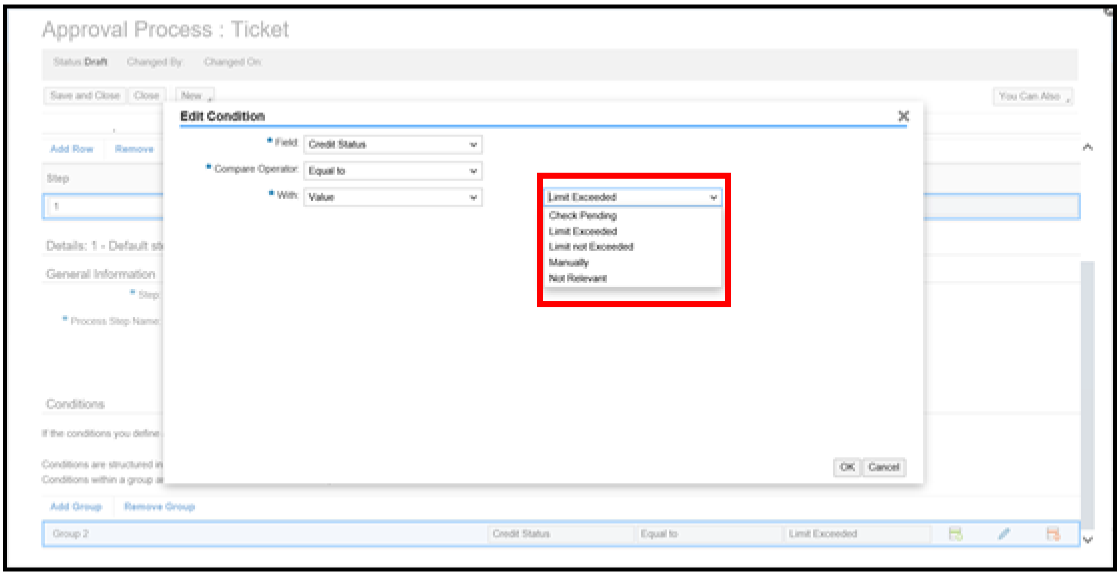
4.4.13.2 Additional Ticket Approval Conditions

You have the option to set approval conditions for a ticket based on additional fields.

The following fields have been added to the ticket approval condition fields:

- Payment Terms
- Incoterms
- Delivery Priority Code
- Incoterms Location
- Billing Block

- Delivery Block
- Order Block
- Credit Status
- Agent ID
- Service Technician ID
- Created On
- Created By
- Changed On
- Reported On
- Changed By
- Completion Due
- Initial Review Due
- Due On-Site
- Arrived On-Site
- Resolved On
- Sales Organization ID
- Sales Territory ID
- Service Organization ID
- Country



4.4.14 Assign Product Lists in Tickets

Product List is a list of products or product categories that can be assigned to a customer, sales area, sales territory, product (required products), or product category. The Service Item category type of product list is used in a ticket.

Product list in a ticket can be determined from: Maintenance Plans, Reference Product, or Generic Product List.

Related Information

Product Lists [page 1023]
Product Lists with SAP Cloud for Customer offers your company flexible product proposals in sales transactions enabling users to streamline sales processes.

4.4.14.1 Create Ticket Item From Product List

Create item from product list in the *Tickets* work center.

Context

A planner or service technician would be able to plan or confirm items in a ticket based on a predefined list of parts, service, or expenses.

Procedure

1. Create a new ticket with *Service Items* type product list. Add a customer and reference product.
2. Go to *Items* tab and click *Action* > *Add From List*.
3. Select the product from list and click *OK*.
4. For the selected product, items are created in the ticket.

Results

The referenced Product and Customer from the ticket header is used for product list determination, and those products are displayed. Product Categories from Product List are resolved.

4.4.14.2 Generate Items Based on Maintenance Plan

You can add products to a ticket from a product list, or if a ticket is created from a maintenance plan, then items are added to the ticket from the product list assigned to that maintenance plan.

Context

When a ticket is created from a maintenance plan, the product list maintained in the maintenance plan can be used to assign products.

Procedure

1. Go to *Registered Products* > *Maintenance Plans*.
2. Create a new maintenance plan.
3. Maintain Ticket information and go to *Set Product List*.
4. Enter a maintenance item.

4.4.15 Unlock a Ticket

Unlock tickets opened for editing with unsaved changes.

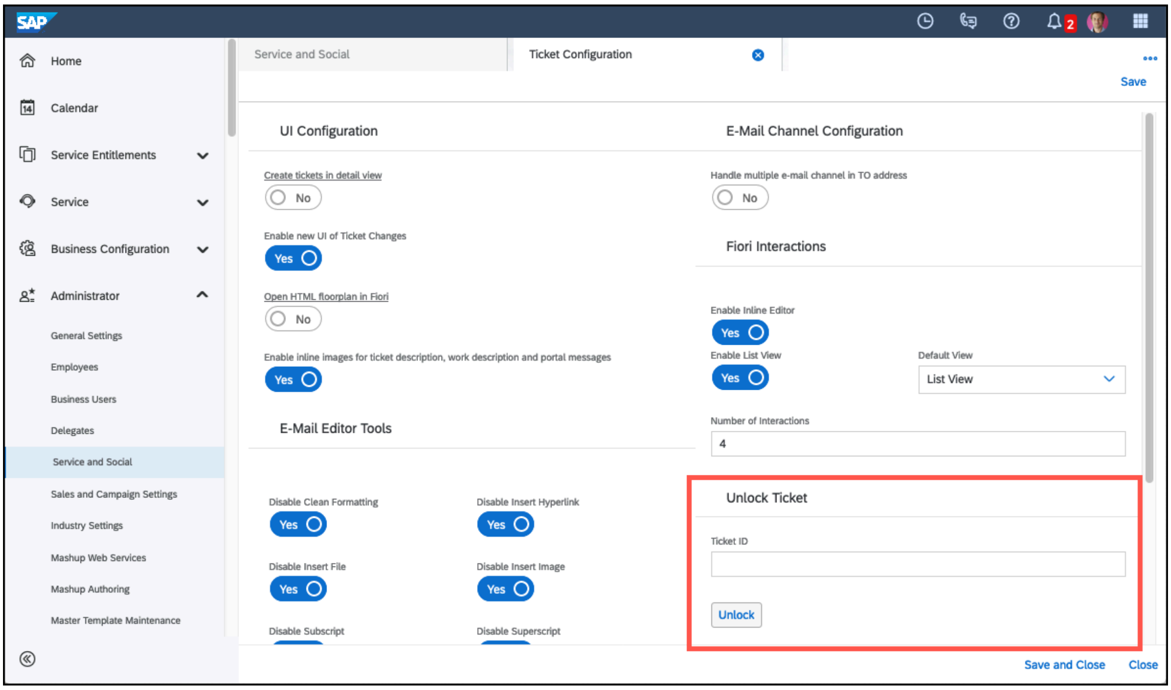
Context

When you edit a ticket, the solution locks that ticket until you save your changes. The lock prevents others from making conflicting changes at the same time. Normally, the solution unlocks the ticket when you save your changes. If you make changes, but don't save, the ticket remains locked. For example, you could be called away before saving, or become disconnected from the network. You, as an administrator, can unlock the ticket to allow editing and changes in case the person that last worked on the ticket is unavailable.

> ⚠ Caution
>
> Unlocking a ticket deletes any unsaved changes made by the person that opened the ticket for editing.

Procedure

1. Navigate to: *Administrator* > *Service and Social* > *Ticket Configuration*.
2. Enter the ticket ID in the *Unlock Ticket* section.
3. Select *Unlock*.



4.5 Resolve Tickets

Discover how to find answers and resolve customer issues.

The heart of customer service is resolving issues quickly and accurately. Use a knowledge base and collaborate with colleagues to find the answers to your customer issues. If a customer requires new equipment to resolve an issue, you can create sales quotes, opportunities, and other follow-up items from a ticket. Managers can review aggregated ticket data to improve organizational efficiency.

Use Knowledge Base to Resolve Tickets [page 129]
The knowledge base may be pre-populated with articles based on any tags associated with the ticket. If browsing in your knowledge base is enabled, you can search the knowledge base for relevant articles.

Use Collaboration to Resolve Tickets [page 133]
Collaborate with your colleagues to find solutions to customer issues.

Analytics in Tickets [page 135]
View ticket data in various ways.

Solution Tracking for Tickets [page 135]
Quickly identify the solution that solved the issue and closed the ticket.

Change History for Tickets [page 135]

Any changes you make to a ticket after it has been created can be viewed in the *Changes* tab of the *Ticket* work center. This tab helps you track attribute updates made in a ticket.

Create Follow-Up Items for Tickets [page 136]

While working on a ticket, you may discover the customer requires additional products, an upgrade, or other services. Create a follow-up item to associate the new request with the existing ticket.

Remove Personal Data in Tickets [page 136]

Use *Depersonalize* in *Tickets* to remove personal data from obsolete tickets.

4.5.1 Use Knowledge Base to Resolve Tickets

The knowledge base may be pre-populated with articles based on any tags associated with the ticket. If browsing in your knowledge base is enabled, you can search the knowledge base for relevant articles.

- Choose an article to preview it. Then attach it to the ticket by hovering over the article and choosing Attach, and send the response back to your customer.
- When you attach an article from the knowledge base, a URL will be entered into the reply box. Choose Reset to clear your search terms and return to the original list of recommended solutions.

4.5.1.1 Prerequisites for Knowledge Base Integration for Tickets

Enable agents to search for solutions and attach articles to responses without having to leave the workspace by integrating an external knowledge base.

By integrating an external knowledge base, you enable agents to search for solutions and attach articles to responses without having to leave the workspace. The workspace will also include a list of recommended articles based on an automatic search of the knowledge base using the product and other keywords identified via text analysis as the search parameters.

Prerequisites

- You have an external knowledge base that supports the OpenSearch standard with an RSS or Atom based search API.
- You know the URL for the API (from your knowledge base vendor).
- You know the search term input parameter for the API (from your knowledge base vendor).

> **i Note**
>
> Single sign on (SSO) is **not** supported for knowledge base integration.

4.5.1.2 Configure Knowledge Base Integration for Tickets

The administrator has to scope and enable Knowledge Base Integration in SAP Cloud for Customer solution.

Context

Enabling this feature turns on the solution finder feature of the workspace where your external knowledge base is integrated.

Procedure

1. Go to *Business Configuration* > *Implementation Projects* and select the relevant implementation project.
2. Click *Edit Project Scope*.
3. Click *Next >* until you reach *Questions*.
4. In the *Scoping Elements* list, select *Service* > *Customer Care* > *Service Request Management*.
5. Enable *Knowledge Base Integration* by selecting *In Scope* for that question.
6. Click *Next* .
7. Click *Next* .

4.5.1.3 Configure Web Service

Administrators can create a knowledge base web service.

Context

Create a web service to access knowledge base content.

Procedure

1. Go to *Administrator* > *Mashup Web Services*.
2. Click *New*, then *RSS/Atom Service*.

   Single sign-on (SSO) is **not** supported for knowledge base integration.

3. Enter the URL of the RSS or Atom feed and click *Extract Parameters*.
4. The system extracts any parameters and displays them under *Input Parameters*.
5. If you already have the input parameters, you can also enter them manually.
6. Adjust the input parameter values as required, ensuring that the search term parameter is blank.
7. Save your entries and activate the service.

Example

For example, if the URL for the RSS or Atom feed for your knowledge base vendor is `https://KBvendor.com/search?q=test`, then the system would extract the parameter, `q`, with the constant, `test`. You would need to delete the constant value so it remains blank.

4.5.1.4 Configure Data Mashup

As the administrator, once you've created the web service for your knowledge base, create a data mashup to specify the mapping between the search parameters used by the system and the web service input parameters.

Procedure

1. Go to *Administrator* > *Mashup Authoring*.
2. Click *New*, then *Data Mashup* to open the guided activity for creating a new mashup.
3. On the *General Information* screen, enter the *Mashup Name* as: **`KNOWLEDGE_BASE`**.

   The name **must** be **`KNOWLEDGE_BASE`** for the mashup to function correctly.

   Enter a description if desired.
4. For *Port Binding*, choose *Knowledge Base Search*. You can type the first few characters into the field for a quick search, or select from the value list.
5. Select *Next* to define the mashup details.
6. Select *+ Binding Port* under *Add Initial Input*. The Input-Binding Port should be *Knowledge_Base_Search_Info*.
7. Click the *Input-Binding Port* title to open the properties. Enter a test search expression that you know will return results.

   You'll use the test search expression to preview the mashup results later in this process.
8. Add a service and select **`RSS/Atom Service`**.
9. Select the knowledge base web service you created previously as the source for the data mashup.
10. Edit the source properties by clicking the *Service Source* title. For the input variable you configured in the web service, select the **`Search Expression`** parameter.

11. Click *Preview* to preview the results of your test search expression in the result pane.
12. Click *Next* to review the mashup.
13. Verify the details and click *Finish* to save and activate your mashup.

4.5.1.5 VIDEO: Creating a Knowledge Base Mashup

For Administrators: Find out how to create a data mashup to connect the articles in your external knowledge base to your solution.

4.5.1.6 Configure SAP JAM as Knowledge Base for Tickets

The administrator would scope and configure SAP Jam as a knowledge base for ticket responses.

> **i Note**
>
> Your system must be integrated with SAP Jam for Feed content before you can use SAP Jam as a knowledge base.

To scope, go to *Service* > *Customer Care* > *Service Request Management* > *Questions*. In the scoping questions for the **Knowledge Base Group**, select and scope the question **Do you want to use SAP Jam as a knowledge base provider?**

4.5.1.7 Select a JAM Group for Knowledge Base

As an administrator, after you've enabled SAP Jam as a knowledge base, choose a Jam group to use as your knowledge base.

Go to *Administrator* > *Service and Social* > *Knowledge Base* > *SAP Jam Settings*, enter the SAP Jam group that you want to use as knowledge base.

> **i Note**
>
> If the knowledge base name is left blank, the solution finder queries all groups to which the user has access.

4.5.2 Use Collaboration to Resolve Tickets

Collaborate with your colleagues to find solutions to customer issues.

The solution provides several ways to collaborate with your colleagues. How you collaborate depends on which optional features your organization has purchased and configured.

Collaboration Option	Description
Feed	Native collaboration option for the solution. You can post updates, follow other users and items, and view feed updates sent by other users.
SAP Jam Feed	SAP Jam replaces and enhances the native feed function. You can post in forums, upload content, create polls and surveys and much more.

4.5.2.1 Collaborate Using SAP JAM

You can collaborate using SAP JAM groups with some ticket capabilities.

You can:

- Create new SAP JAM group within the context of a ticket.
- View all JAM group updates for that ticket.

Bring your partners on a single collaboration platform to increase partner engagement and loyalty. Use dedicated communities to connect with your partner contacts to exchange ideas, collaborate and deliver superior content.

For details on JAM Groups and how you can use SAP JAM see topic **Partner Channel Management**.

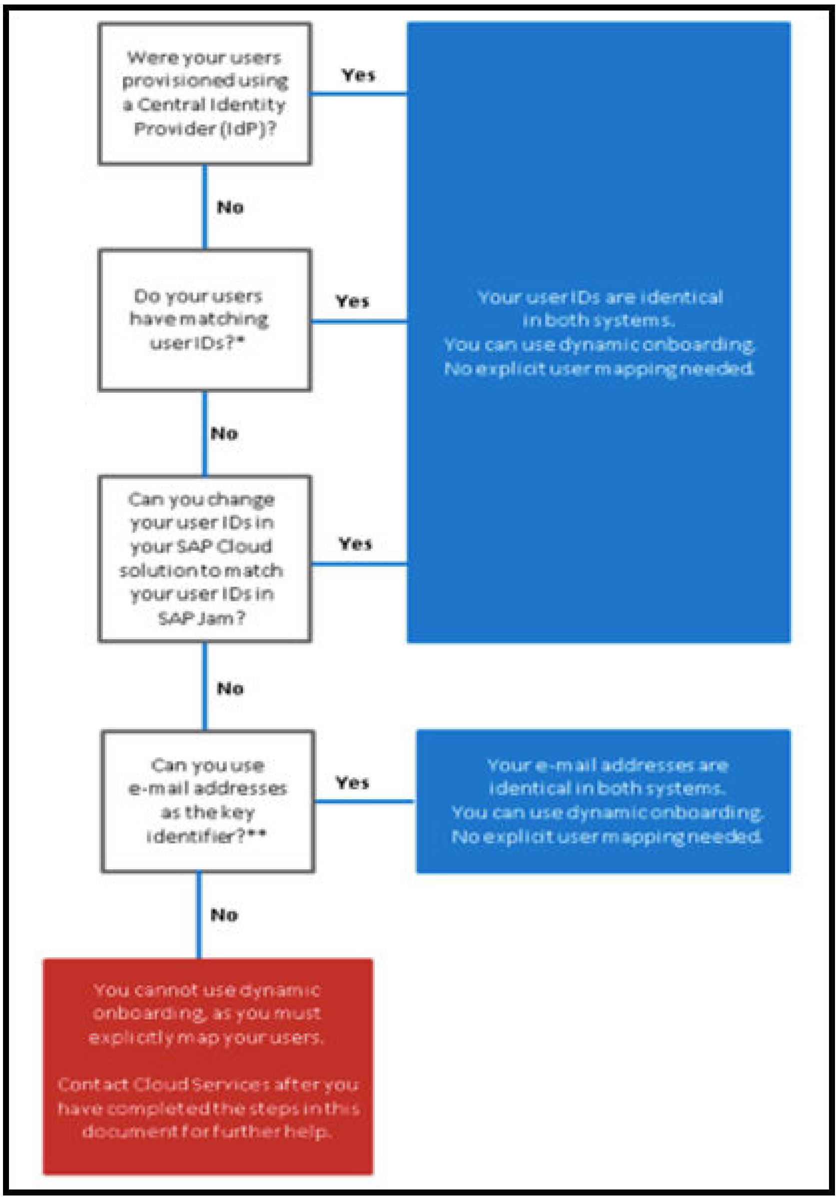
4.5.2.2 Set Up SAP JAM for Collaboration

As the administrator, once you've enabled SAP JAM for collaborating in a ticket, set up SAP JAM in your system.

Follow these steps for setting up your system:

1. In SAP JAM, register your solution as an OAuth Client.
2. In your solution, register the SAP JAM system.
3. In SAP JAM, register your solution as a SAML Identity provider.
4. Confirm successful integration within your solution.

> → Tip
>
> We recommend using dynamic on-boarding, without explicit user mapping. There are several ways to achieve this. Refer to the screenshot and find the appropriate option that addresses your user provisioning:



4.5.2.3 Configure SAP JAM Integration in Ticket

To use SAP JAM to collaborate and resolve a ticket, the administrator must first enable the feature, and integrate it with our solution.

Go to *Scoping* > *Business Configuration* > *Implement Project* > *Edit Project Scope* > *Communication and Information Exchange* > *People Collaboration, Intranet and External Services* > *Communities and Document Management* > *Questions*. Under SAP JAM Integration, select the question: **Do you want to integrate SAP JAM with your cloud solution?**

4.5.2.4 Use Product Lists Feed

Learn about the product list feed, which allows you to follow product lists that are relevant to you.

When an administrator creates product lists, an action appears in the product list feed displayed in *Feed* or within the product list on the *Feed* tab.

Users can view feed product list changes by using the follow action.

4.5.3 Analytics in Tickets

View ticket data in various ways.

Your Administrator can configure various reports that allow you to view ticket data on your home page, in dashboards, and as reports. You can also download report data and work with the numbers in Microsoft Excel.

You can find more information on working with analytics in the SAP Cloud for Customer Business Analytics Guide, available at https://help.sap.com/cloud4customer.

4.5.4 Solution Tracking for Tickets

Quickly identify the solution that solved the issue and closed the ticket.

Use the Solution Center tab to track the solutions used in ticket resolution. Identify the link, note, or attachment that solved the issue associated with a ticket. This streamlined information access can help find the solution to similar issues. Future releases may use this data to train machine learning algorithms to enhance the accuracy of recommended solutions.

4.5.5 Change History for Tickets

Any changes you make to a ticket after it has been created can be viewed in the *Changes* tab of the *Ticket* work center. This tab helps you track attribute updates made in a ticket.

When you want to see the changes made within a certain time frame, fill in the appropriate date range and select the attribute for which you want to see the changes, and click *Go*. The system brings up the changes and selecting each change will display its details.

For the ticket change history, we maintain a white list to indicate which fields will be displayed.

4.5.6 Create Follow-Up Items for Tickets

While working on a ticket, you may discover the customer requires additional products, an upgrade, or other services. Create a follow-up item to associate the new request with the existing ticket.

Find follow-up items created from and associated with this ticket in the *Related Items* tab. You may need to adapt or personalize the ticket detail layout to make the *Related Items* tab visible in your solution.

The following table outlines the types of requests, lists examples, and indicates how to create them in the different client interfaces.

Sample Follow-Up Items

Example	Request Type	Choose
Product not working	Spare parts or repair (ticket)	Fiori Client: + › *Ticket* HTML Client: *Follow-Up Items* › *Create Ticket*
Customer wants pricing for product accessories	Price quote (sales quote)	Fiori Client: + › *Sales Quote* HTML Client: *Follow-Up Items* › *Create Sales Quote*
Machine requires upgrade to the latest model	Opportunities	Fiori Client: + › *Opportunity* HTML Client: *Follow-Up Items* › *Create* › *Opportunity*
Customer interested in additional products	Product information (lead)	Fiori Client: + › *Lead* HTML Client: *Follow-Up Items* › *Create Lead*

4.5.7 Remove Personal Data in Tickets

Use *Depersonalize* in *Tickets* to remove personal data from obsolete tickets.

The *Depersonalize* action allows you to remove personal data from a business object to ensure compliance with the applicable data protection requirements. *Depersonalize* only appears in the *Actions* menu for users assigned the *Data Protection and Privacy* work center.

When you depersonalize a ticket, the system makes the personal information associated with that ticket anonymous. All references within the ticket are removed. Hence, when you open a ticket after depersonalization, you won't see any information related to the contact, customer, or employee associated with the ticket. The information you see depends on the Read-Access-Login information.

> Example
>
> When you search for a ticket and view its related information, your name or ID is captured by the system and displays in the *Change History* or *Notes* tab.

This information also becomes anonymous when you depersonalize a ticket.

All associated information from a ticket is removed from:

- Documents
- Notes
- Attachments
- Change History
- Involved Parties

> Note
>
> Ticket must be in status *Closed* to depersonalize it.

Once a ticket is depersonalized, you can't edit or delete it.

Related Information

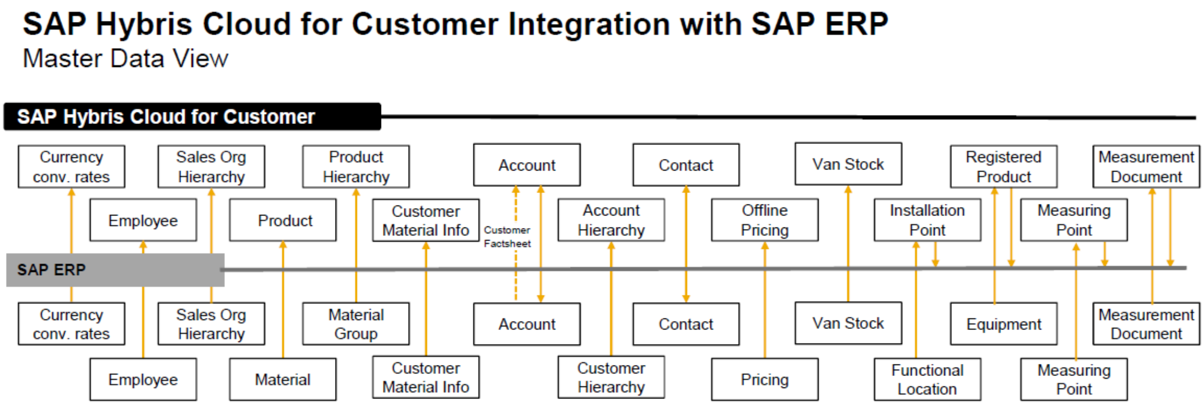
Personal Data Protection and Privacy
Create Business Roles and Assign Work Centers and Views

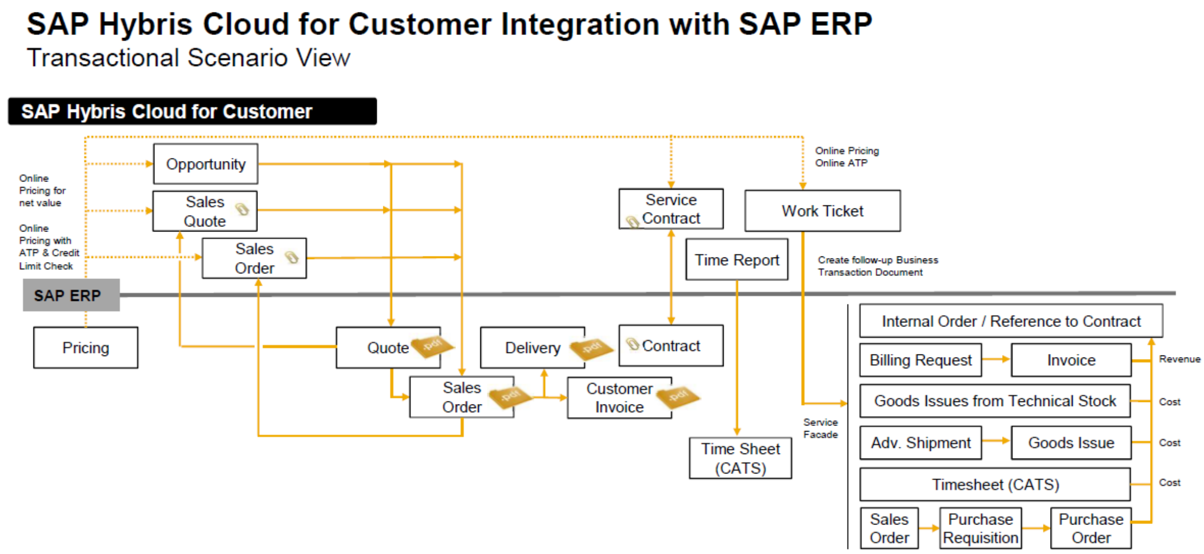
4.6 Integrate with SAP ERP for Tickets

This topic displays the scope of integration between SAP Cloud for Customer and SAP ERP via high level integrated functional scenarios.

When a Field Service technician adds the required services and parts, the type impacts how the integration works with SAP ERP. If the type is *Part* then a goods movement is issued to SAP ERP for the use of the part. If the type *Service* is used, then automatic time recording is integrated with SAP ERP. A billing request for the parts and services gets created in SAP ERP.

These process flow diagrams display areas where you would integrate our solution with SAP ERP. Service areas with focus on Tickets pertains to our solution Guide.





See **Prepackaged Integration with SAP ERP Guide** for details on how to integrate the pertinent business objects in *SAP ERP*.

Integrate Work Tickets with SAP ERP [page 139]
: Learn how to integrate work ticket created in SAP Cloud for Customer with SAP ERP.

Integrate Stock with SAP ERP [page 142]
: After choosing parts required to complete the service for a ticket, you have the option to *Release to ERP*. This action triggers the stock update process in SAP ERP.

Integrate Advance Shipment with SAP ERP [page 143]
: Advance Shipment order is created in our solution, but processed in SAP ERP.

Integrate Finance and Costing with SAP ERP [page 144]
: Request for Finance and Costing is made in SAP Cloud for Customer, but processed in SAP Cloud for Customer.

Use External Pricing in Tickets [page 114]
: You can Request External Pricing in Ticket, External Pricing Conditions in Ticket, Re-Pricing Based on Actual Quantities in Ticket, Manual Pricing Changes in Ticket, Header Pricing Information in Ticket, or Release to SAP ERP with Pricing Conditions.

Integrate with Multiple Registered Products in Ticket [page 147]

You can add multiple registered products in the ticket header, link a single registered product or installation point to a ticket item, and integrate with SAP ERP.

Integrate Item Processing Code with SAP ERP [page 147]

This topic describes scenarios where integration occurs between Item Processing Codes and SAP ERP.

Integrate ATP Check with SAP ERP [page 148]

The available to promise (ATP) feature in a ticket, for our solution requires integration with the SAP ERP system. The request for ATP is made in the *Items* tab of our solution, but the request or check is processed in SAP ERP.

Integrate with External Procurement [page 151]

External Procurement integrates with SAP ERP.

4.6.1 Integrate Work Tickets with SAP ERP

Learn how to integrate work ticket created in SAP Cloud for Customer with SAP ERP.

Prerequisites

- Scope the option in Cloud: *Integration with External Applications and Solutions* > *Integration into Sales, Service, and Marketing Processing* > *Do you want to create follow-up documents for service requests from your cloud solution to an external application?*
- Create a controlling scenario in IAOM1, and set the controlling type as *Single-Object Controlling* in IAOM2 transaction in SAP ERP.
- Create each service technician or employee working on service tickets as a customer inSAP ERP.
- To identify the right consignment stock to be used by the technician, maintain the derivation log-in in SM30 in COD_V_PLANT_SRV.
- To identify the right activity type for CATS confirmation, maintain the material used on item level in SM30 in COD_V_MAT_ACTTY.
- Schedule jobs to ensure that booking from CATS are accounted to an internal order.

Context

Work tickets created in SAP Cloud for Customer lets you do the following:

- Integrate into controlling in SAP ERP.
- Automatic time confirmation for the time spent on the services. Once the time spent by a service technician is maintained in a work ticket, the corresponding time is automatically booked in the SAP ERP system.
- Automatic deduction of the material or spare parts used for a ticket, based on the actual quantity. Once the quantity used by a service technician is maintained in a work ticket, the corresponding material is automatically deducted in the consignment stock in the SAP ERP system.

- Advance shipments and returns. A technician might need a few goods shipped in advance to carry out a repair. Not all the quantity may be consumed, so the rest can also be returned.

Although, there are multiple activities performed for a single ticket, all the confirmations in ERP are created with reference to a single internal order.

Following is true for every work ticket item.

Procedure

1. An internal order is created or determined in SAP ERP.
2. A follow-on billing request for the work ticket is created based on the target quantity.
3. For a Service Item, an automatic time booking for the technician is made based on the actual quantity.
4. For a Part from the Technician Stock, the quantity of spare parts used is automatically reduced from the consignment stock based on the actual quantity.
5. For a Part from Advance Shipment, you can release the item to SAP ERP. Later, once the required quantity is consumed, you can maintain the consumed quantity and the quantity to return. Separate items are created for each of the two quantities, and you can release these items to SAP ERP. The last confirmed delivery date and the total of all the confirmed quantities of advance shipment items are replicated from SAP ERP.
   For a service item, both invoicing methods, Fixed Price and Time and Material Billing are supported.

4.6.1.1 Configure Ticket Status Dictionary

To use your own ticket statuses in your processes and schemas, the administrator would have to create the statuses first in the *Ticket Status Dictionary* and assign them to life cycle and assignment status.

To maintain entries for ticket status schemas, you first create them in the *Ticket Status Dictionary*. Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity Lists* > *Fine-Tune* and search for *Tickets for Customer Support*. Click *Maintain Status Dictionary Entries*, and using the *Add Row* button, maintain the status and create additional status for tickets here.

Use the status values you create in ticket status dictionary and then go to *Ticket Status Schemas* to assign them to a ticket.

The following table lists the pre delivered status values that you can select in the ticket and the possibilities to change them in the ticket. When you create your statuses keep these possibilities in mind.

You can change the description of the pre delivered statuses, but you can't delete them.

Current Status	Reachable Statuses	Non-Reachable Statuses	Description
`Open`	• `In Process` • `Customer Action` • `Completed`	• `Copied to CRM` • `Closed`	This status is not reachable from any other value.

Current Status	Reachable Statuses	Non-Reachable Statuses	Description
`In Process`	• `Copied to CRM` • `Customer Action` • `Completed`	• `Open` • `Closed`	If the status changes from `In Process` to `Closed` the system completes and closes the ticket.
`Copied to CRM`	None	• `Open` • `In Process` • `Customer Action` • `Completed` • `Closed`	This status is only reachable after `In Process`. If this status is set the ticket is replicated to the SAP CRM On-Premise system. It is not reachable if the document is inconsistent and it cannot be changed in the SAP Cloud for Customer system. But the status is changeable for inbound actions because in case a ticket is set to `Completed` in the CRM On-Premise system the status `Completed` is written back to the Cloud system.
`Requires Work`	• `In Process` • `Copied to CRM` • `Completed`	• `Open` • `Closed`	when creating a ticket, if you select the ticket type as work relevant, the *Requires Work* status flag gets enabled.
`Completed`	• `In Process` • `Customer Action` • `Closed`	• `Open` • `Copied to CRM`	A ticket, which is `Completed` cannot be set to `Copied to CRM`. `In Process` is not reachable if the ticket was completed by the On-Premise system. A ticket can only be revoked if it was not transferred to an On-Premise system.

Current Status	Reachable Statuses	Non-Reachable Statuses	Description
`Closed`	None	• `Open` • `In Process` • `Copied to CRM` • `Customer Action` • `Completed`	If a ticket is closed, it is not possible to open it again. This status can only be used for tickets still in the system. New tickets are not allowed to use `Closed`. i Note Once a ticket is set to **closed**, you can't change the ticket status.

Besides these, our solution also provides you with various statuses for tickets integrated with SAP ERP. The SAP ERP ticket statuses are as follows:

- **Release to SAP ERP**: Once your work on the ticket is complete, you can set the action to *Finish Work*. The ticket is now ready to be released to SAP ERP.
- **Release Pending**: When the ticket is in process the ticket has the *Release Pending* status.
- **Release Discarded**: If there are issues when data is sent to SAP ERP, errors display in the error log of the ticket.
- **Released**: If there are no issues in the ticket data when released to SAP ERP, the status updates to *Released*.

Add and Delete Ticket Status

To add a status click *Add Row*, enter a description, select the wanted life cycle and assignment status, and save your changes.

To delete a status, select the corresponding status line, click *Delete*, and save your changes.

4.6.2 Integrate Stock with SAP ERP

After choosing parts required to complete the service for a ticket, you have the option to *Release to ERP*. This action triggers the stock update process in SAP ERP.

You have to replicate stock data from SAP ERP to SAP Cloud for Customer to be able to use the stock feature in our solution.

There are prerequisites for SAP ERP integration:

- Maintain table **COD_PLANT_SRV**
- Map Service Organization / Service Technician Team / Service Employee with plant and storage location
- Maintain mapping table between SAP Cloud for Customer employee and SAP ERP employee ID

- Replicate stock data using SAP ERP report **RCOD_STOCK_EXTRACT**

4.6.2.1 Integrate Parts Consumption from Technician Stock

In the *Parts* tab, you can add parts with the actual quantity. Next, set the work progress status to *Finished* and release to SAP ERP and save.

> **Note**
>
> After you *Release to ERP*, Material Management (MM) movement occurs in SAP ERP.

4.6.2.2 Configure Stock for Tickets

Scoping the Stock allows you to view all stock-related information for service technicians, service team, or service organizations. To use the stock option in a ticket, the administrator would have to assign the *Stock* work center to the field service technician business role.

To scope stock for your solution, go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Service* > *Entitlement Management* > *Stock Location* and select the checkbox. Next, go to the *Questions* tab to select the option for using the *Stock* work center to enable you to view the stock location data.

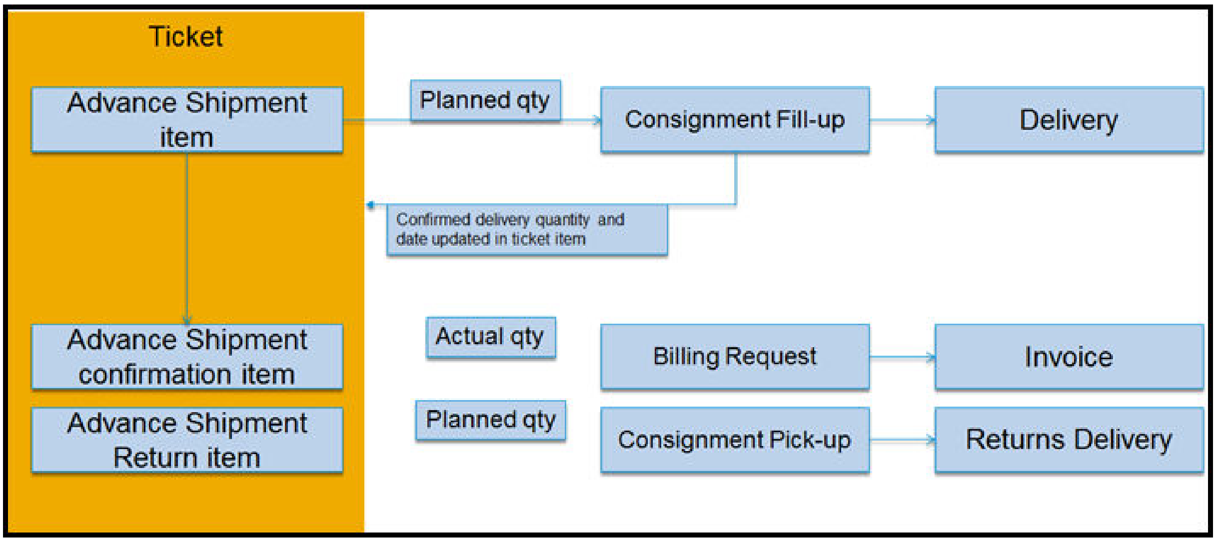
To assign the *Stock* work center to the field service technician business role, go to *Administration* > *Work Center and View Assignments* tab. Assign the *Stock* work center to the field service technician business role with COD_*STOCKLOCATION*_WCF ID code.

4.6.3 Integrate Advance Shipment with SAP ERP

Advance Shipment order is created in our solution, but processed in SAP ERP.

Context

The process flow diagram displays the advance shipment flow in a Ticket.



Procedure

1. The service agent creates a ticket and plans an advance shipment item. Go to *Service and Repair tab* > *Release to ERP* to release the item for processing to SAP ERP.
2. The document flow gets updated with the SAP ERP consignment fill-up order and can be viewed in the *Document Flow* tab.
3. The consignment order is processed in SAP ERP.
4. Next, the field technician confirms the advance shipment item. Go to *Parts tab* > *Confirm Part*.
5. The solution creates the part consumption and part return items. You can view the items in the *Parts* tab.
6. Release to SAP ERP and save. Follow-up processes occur in SAP ERP.
   Delivery notification to technician by workflow isn't currently supported.

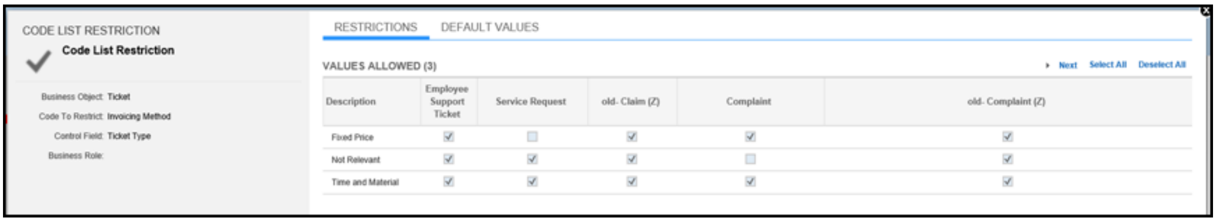
4.6.4 Integrate Finance and Costing with SAP ERP

Request for Finance and Costing is made in SAP Cloud for Customer, but processed in SAP Cloud for Customer.

In our solution, you have to select the *Invoicing Method* to implement the Finance and Costing process in SAP ERP. Go to *Tickets* > *Service and Repair* > *General Data* > *Invoicing Method* field.

You can select the *Invoicing Method* based on:

- **Time and Material**: billing based on actual quantity.
- **Fixed Price**: billing based on planned quantity.
- **Not Relevant**: item not relevant for billing.



Finance and Costing integration is influenced by the following factors:

- **System Processing Type:**
  - Time = billing and time posting
  - Billing Request = billing
- **Invoicing Method:**
  - Fixed Price
  - Time and Material
  - Not Relevant
- **Coverage and Pricing:**
  - External Pricing with manual condition changes
  - Coverage indicator from warranty or contract

4.6.5 Use External Pricing in Tickets

You can Request External Pricing in Ticket, External Pricing Conditions in Ticket, Re-Pricing Based on Actual Quantities in Ticket, Manual Pricing Changes in Ticket, Header Pricing Information in Ticket, or Release to SAP ERP with Pricing Conditions.

When you create a new ticket, based on the selected ticket type, you can request for pricing in the Items tab. In the *Items* tab, fill in data for *Planned Total* and *Actual Total* and select *Actions* > *Request External Pricing*. The *Net Price* field gets populated.

Based on the data entered in the *Planned Quantity* and *Actual Quantity* fields, the system can calculate the *Actual Total*, *Planned Total*, and *Net Price* of the ticket item.

You can change the actual quantity and request for pricing again. You can also manually change the price of the item in the *Items* tab.

You can maintain pricing data in the *Tickets* > *Pricing* tab.

4.6.5.1 Configure External Pricing Call in Tickets

Administrators can learn about external pricing call configuration to retrieve the complete pricing result from SAP on premise systems to your cloud solution.

If external pricing is selected, a synchronous call is required to retrieve the complete pricing result from the SAP on premise system to your cloud solution. Replicated sales documents also require a synchronous pricing update once the sales document is updated during save.

If the document was previously replicate, with this configuration, you can disable the synchronous pricing call to the system,. In addition, you can disable the synchronous call completely, which is also valid for quotes created in your cloud solution. For both configuration options, the pricing status is calculated successfully through the asynchronous call from the external system. The user can still trigger pricing synchronously by clicking the asynchronous call action.

To configure external pricing call, go to fine-tuning activity *Ticket* > *Tickets for Customer Support* > *Document Types*:

- Enable *External Pricing* for ticket type.
- Enable ticket item processing code for pricing.

Next, go to *Ticket* > *Tickets for Customer Support* > *Item Processing Codes*:

- If an item processing code is flagged as *Pricing Relevant*, then the ticket item would be set as relevant for pricing, by default.
- The default pricing flag on ticket item level can be changed by the user.
- The pricing flag is re-determined if the item processing code is changed by the user.

4.6.5.2 Release to SAP ERP with Pricing Conditions

You can *Request External Pricing* only if pricing relevant parameters are set.

Once you've set the necessary parameters, you can *Releases to ERP* to trigger a billing request. *Request External Pricing* is enabled as a workflow action.

> **i Note**
>
> *Release to ERP* is possible even if all ticket items are not relevant for pricing.

Related Information

Use External Pricing in Tickets [page 114]
You can Request External Pricing in Ticket, External Pricing Conditions in Ticket, Re-Pricing Based on Actual Quantities in Ticket, Manual Pricing Changes in Ticket, Header Pricing Information in Ticket, or Release to SAP ERP with Pricing Conditions.

4.6.5.3 Configure Workflow Rule Triggers

Administrators can trigger workflow rules based on the value of the Pricing Status and ERP Release Status fields, or on keywords contained in ticket subject and body.

- Create workflow rules based on the values in the Pricing Status and ERP Release Status fields. These triggers allow you to set up rules that automatically release a ticket to an SAP ERP system, or request pricing information.

- Keywords contained in the subject or body text of a ticket can also trigger workflow actions. For example, route tickets based on whether certain text appears in the ticket. The text or keywords can be entered by the customer or the agent. For tickets generated from e-mail channels, the body text of the e-mail message is copied into the ticket description. Therefore, defining rules based on the ticket description is equivalent to monitoring for keywords in the body of incoming messages.

4.6.6 Integrate with Multiple Registered Products in Ticket

You can add multiple registered products in the ticket header, link a single registered product or installation point to a ticket item, and integrate with SAP ERP.

When you add a Registered Product in a ticket that integrates with SAP ERP:

- You can add a Registered Product in the Ticket header, which is included in the Internal Order. The equipment number in the ticket header is also included in Internal Order.
- You can add a Registered Product in the Ticket item, which is included in the Billing Request item. The equipment number in the ticket item is also included in Billing Request.

4.6.7 Integrate Item Processing Code with SAP ERP

This topic describes scenarios where integration occurs between Item Processing Codes and SAP ERP.

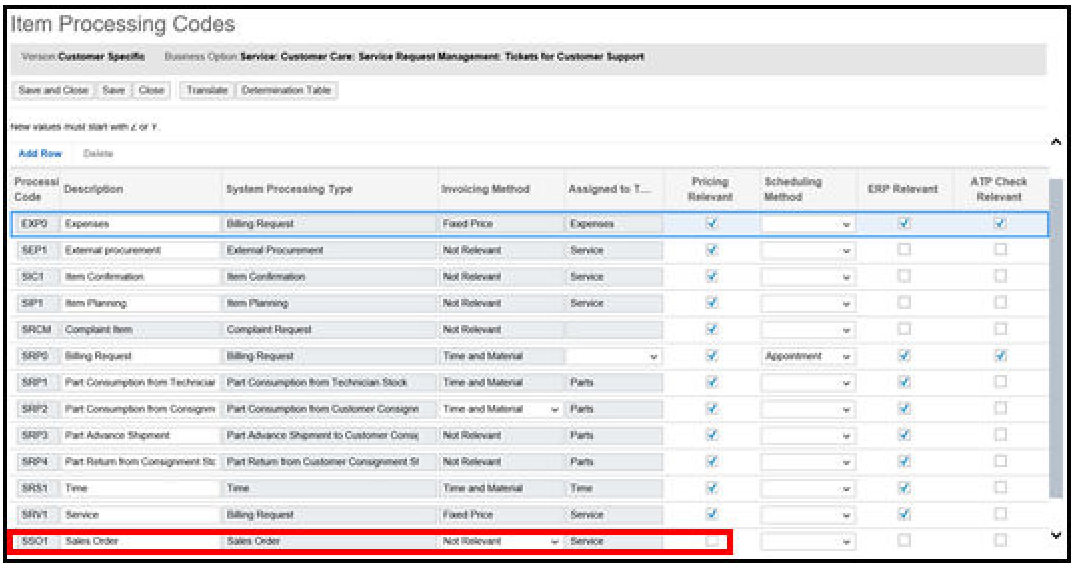
- If an item processing code is flagged as *ERP Relevant*, the *ERP Release* status of a ticket item is set to *Not Released*.
- If an item processing code is not flagged as *ERP Relevant*, the *ERP Release* status of a ticket item is set to *Not Released*.
- The *ERP Release* status can be changed between *Not Relevant* and *Not Released* using item actions.

4.6.7.1 Configure Sales Order Processing Code for Tickets

The administrator can select the *Sales Order* processing type code available for Ticket items under Item Processing Codes activity in fine tuning. Customers can use this processing code while creating Sales Orders in SAP ERP.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List*, and search and select *Tickets for Customer Support* or *Tickets for Employee Support*.

Click *Maintain Item Processing Codes* and select *Sales Order* to set the processing code.



4.6.7.2 Custom Processing Types

Use available BaDI in *SAP ERP* to create custom processing types or ticket items.

- **Custom processing type for** *Item Planning*: item can be released to *SAP ERP* based on a planned quantity. Work progress status is*Not Relevant*.
- **Custom processing type for** *Item Confirmation*: item can only be released to *SAP ERP* when work progress status is *Finished*.
- Use BaDI in *SAP ERP* interface to implement project specific integration flows.

4.6.8 Integrate ATP Check with SAP ERP

The available to promise (ATP) feature in a ticket, for our solution requires integration with the SAP ERP system. The request for ATP is made in the *Items* tab of our solution, but the request or check is processed in SAP ERP.

- ATP Check action occurs at the Ticket Header level.
- *ATP* tab in *Ticket* > *Item* , shows the data availability and quantity.
- ATP check executes a SD (Sales and Distribution module in SAP ERP) Sales Order simulation in SAP ERP.

4.6.8.1 Configure ATP Check for Tickets

Administrators can set up document types and item processing codes for available-to-promise (ATP) check.

Context

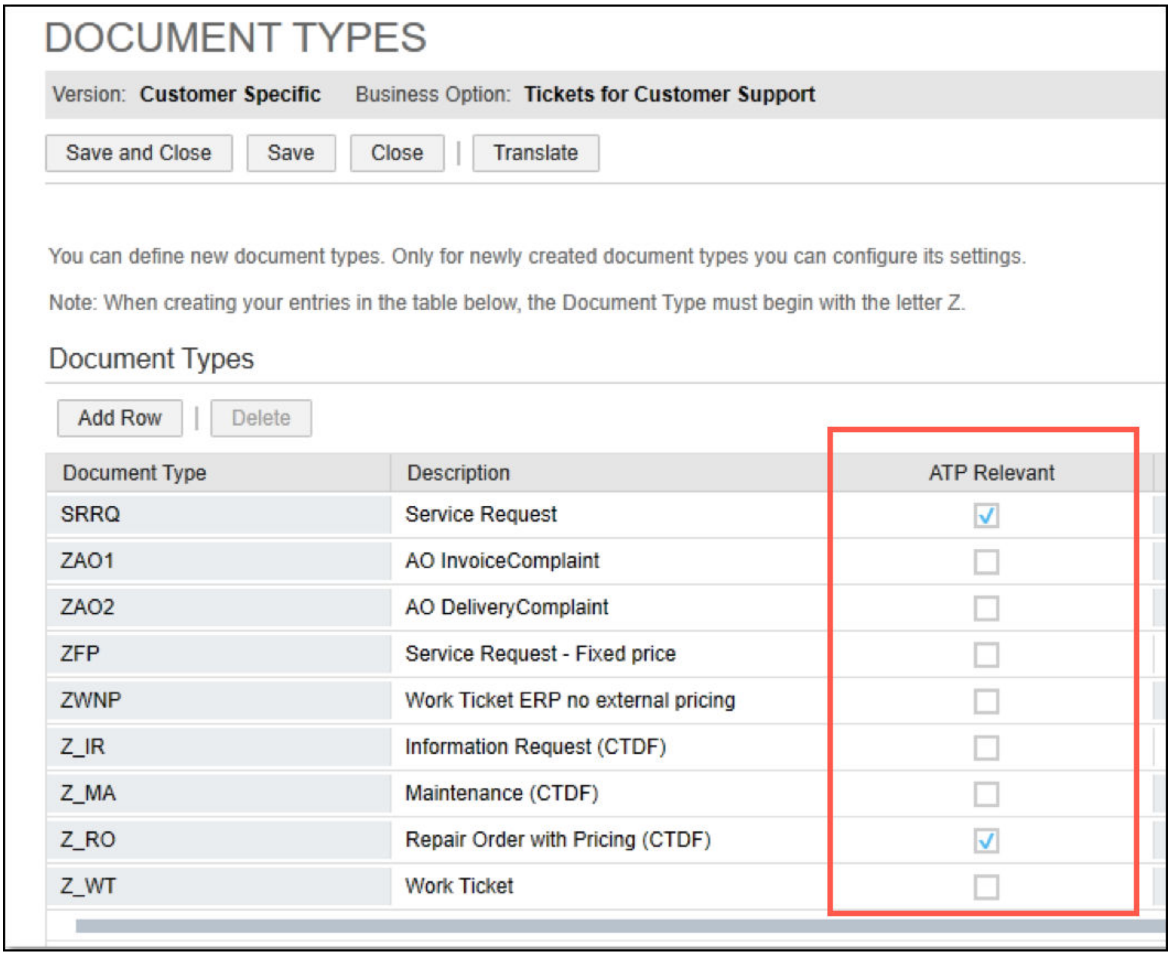
ATP check is only available for tickets with specific criteria.

- The document type is relevant for ATP
- The item processing code is relevant for ATP check
- The status for ticket item work progress is:
  - Open
  - Ready
  - Not Relevant

Procedure

1. Configure document types. Go to *Business Configuration* > *Implementation Projects* and select *Open Activity List*. Select *All Activities*, then search for **ticket**. Select *Tickets for Customer Support*, then select *Maintain Document Types*. Select the *ATP Relevant* checkbox for each document type you wish to enable

for ATP check.



DOCUMENT TYPES

Version: **Customer Specific** Business Option: **Tickets for Customer Support**

Save and Close | Save | Close | Translate

You can define new document types. Only for newly created document types you can configure its settings.

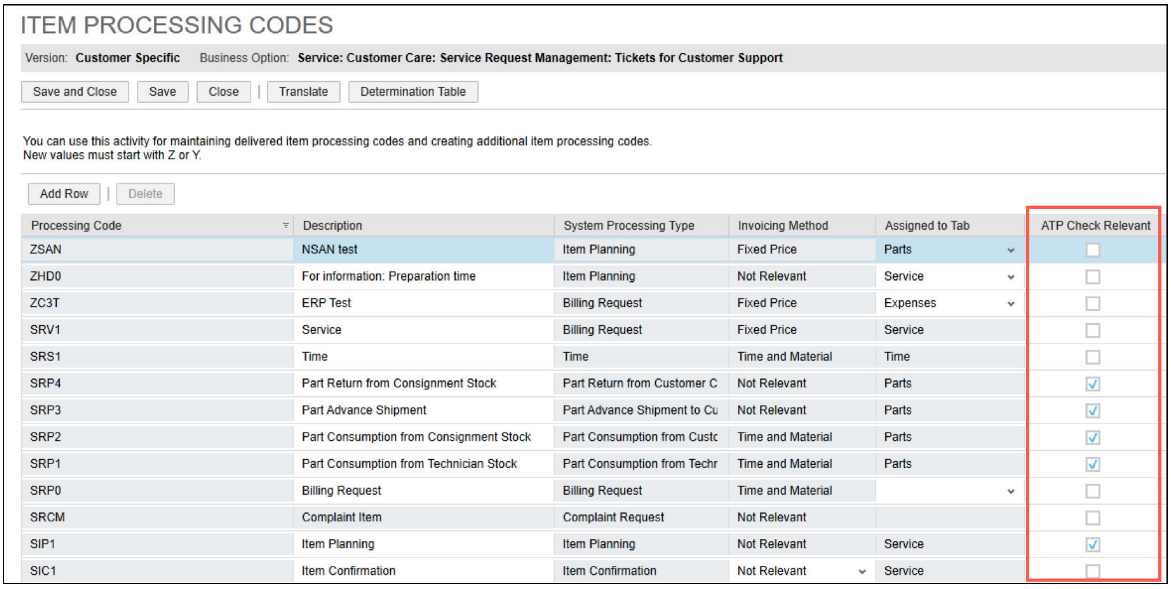
Note: When creating your entries in the table below, the Document Type must begin with the letter Z.

Document Types

Add Row | Delete

Document Type	Description	ATP Relevant
SRRQ	Service Request	☑
ZAO1	AO InvoiceComplaint	☐
ZAO2	AO DeliveryComplaint	☐
ZFP	Service Request - Fixed price	☐
ZWNP	Work Ticket ERP no external pricing	☐
Z_IR	Information Request (CTDF)	☐
Z_MA	Maintenance (CTDF)	☐
Z_RO	Repair Order with Pricing (CTDF)	☑
Z_WT	Work Ticket	☐

2. Configure item processing codes. Go toGo to *Business Configuration* > *Implementation Projects* and select *Open Activity List*. Select *All Activities*, then search for **ticket**. Select *Tickets for Customer Support*, then select *Maintain Item Processing Codes*. Select the *ATP Check Relevant* checkbox for each processing code you wish to enable for ATP check.



ITEM PROCESSING CODES

Version: **Customer Specific** Business Option: **Service: Customer Care: Service Request Management: Tickets for Customer Support**

Save and Close | Save | Close | Translate | Determination Table

You can use this activity for maintaining delivered item processing codes and creating additional item processing codes.
New values must start with Z or Y.

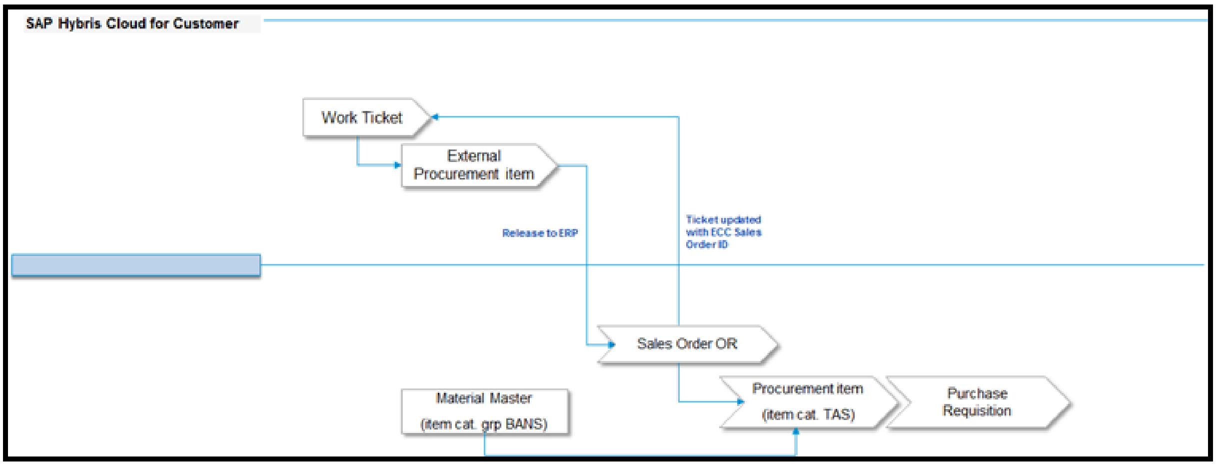
Add Row | Delete

Processing Code	Description	System Processing Type	Invoicing Method	Assigned to Tab	ATP Check Relevant
ZSAN	NSAN test	Item Planning	Fixed Price	Parts	☐
ZHD0	For information: Preparation time	Item Planning	Not Relevant	Service	☐
ZC3T	ERP Test	Billing Request	Fixed Price	Expenses	☐
SRV1	Service	Billing Request	Fixed Price	Service	☐
SRS1	Time	Time	Time and Material	Time	☐
SRP4	Part Return from Consignment Stock	Part Return from Customer C	Not Relevant	Parts	☑
SRP3	Part Advance Shipment	Part Advance Shipment to Cu	Not Relevant	Parts	☑
SRP2	Part Consumption from Consignment Stock	Part Consumption from Custc	Time and Material	Parts	☑
SRP1	Part Consumption from Technician Stock	Part Consumption from Techr	Time and Material	Parts	☑
SRP0	Billing Request	Billing Request	Time and Material		☐
SRCM	Complaint Item	Complaint Request	Not Relevant		☐
SIP1	Item Planning	Item Planning	Not Relevant	Service	☑
SIC1	Item Confirmation	Item Confirmation	Not Relevant	Service	☐

4.6.9 Integrate with External Procurement

External Procurement integrates with SAP ERP.

The following diagram helps explain External Procurement process flow:



4.6.9.1 Configure System Processing Type for External Procurement

Each of the item processing codes maintained in fine tuning for Tickets is associated with and mapped to certain values and flags. These can be Pricing Relevant, SAP ERP Relevant, or Scheduling Method. The administrator can set these values and flags in the system using the business configuration activity list.

Maintain system processing type code for External Procurement, which would in turn create a SAP ERP sales order with procurement items (item category TAS). This can also be used for SAP ERP sales order with regular items (TAN).

4.6.9.2 Configure Item Processing Codes for Tickets

To enable ticket item defaulting based on item processing codes, the administrator has to configure item processing codes via business configuration.

When you create a ticket item and set a ticket type to it, the system assigns it a processing code based on the code mapping maintained in the rules table. The administrator has the ability to edit these mappings in the rules table.

Each of the processing codes in turn are associated with and mapped to certain values and flags, such as Pricing Relevant, ERP Relevant, Scheduling Method. You have the ability to set these values and flags in the system using the business configuration activity list.

So when you select a ticket type when creating a ticket item, then the system displays default values in the fields based on the item processing code set in the system. However, at this point, the user has the ability to edit these fields and change the default values.

Follow the steps below to set-up item processing codes for your business.

1. Go to *Business Configuration* > *Open Activity List* > *Fine-Tune* > *Show All Activities* > *Tickets for Customer Support* > *Maintain Item Processing Codes*.
2. Select *Add Row*.
3. To create item processing codes, populate the required fields. Enter a description.
4. Select the required *System Processing Type* and the *Invoicing Method*.
   - *System Processing Type*
     With the *System Processing Type* you trigger the accounting records for costs and goods movement in your company.
     - *Billing Request* creates a request for billing.
     - *Complaint Request* can be used to report complaints on external document items. This feature requires SDK development in order to be exposed as a front-end capability.
     - *External Procurement* creates an SAP ERP sales order with procurement items (item category TAS), based on actual quantity.
     - *Item Planning and Item Confirmation* allows custom integration scenarios based on planned quantity or actual quantity.
     - *Part Consumption from Technician Stock* marks the item as taken out of the stock of the technician and triggers the required billing and costing.
     - *Part Advance Shipment to Customer Consignment Stock* marks the item to be shipped to the customer's consignment stock before the technician plans to visit the customer.
     - *Part Consumption from Customer Consignment Stock* marks the item as consumed material from the customer consignment stock. It triggers also the required billing and costing.
     - *Part Return from Customer Consignment Stock* marks the item as the to be returned material (partly or completely) from the customer consignment stock.
     - *Time* creates a CATS time posting based on actual quantity. The line item in Billing Request is based on Invoice Method.
       If no integration with SAP ERP exists, the *Type* field is hidden and always defaulted to this value.
   - *Invoicing Method*
     With the *Invoicing Method* you decide how the item shall be invoiced in SAP ERP:
     - *Fixed Price* takes the planned quantities for billing.

       > **i Note**
       >
       > Please note that advance shipment doesn't work with fixed price.

     - *Time and Material* is the default setting and takes the confirmed (actual) time and quantity for billing.
     - *Not Relevant*
5. Save your entries.

> **i Note**
>
> Custom processing codes begin with Z. The rest of the codes are provided by the solution.

Example

If an item processing code is flagged as *Pricing Relevant*, then a ticket item will be set by default as relevant for pricing. However, this only applies if the ticket type is also set as *Pricing Relevant*. The default pricing flag at ticket item level can be changed by the user. In this case, the pricing flag is re-determined.

4.7 Offline Features for Tickets

This topic presents an overview of supported features and limitations for service in offline mode.

Here is the list of objects supported in offline mode.

> **i Note**
>
> Not all the validations/determinations available online are available offline.

Tab	Section	Field	Create	Display	Edit (can edit directly via actions/navigation)
Work Tickets*/Tickets* *Objects have restrictions or some tabs missing	Overview		Y	Y	Y*
	Involved Parties			Y	
	Tasks		Y	Y	Y
	Follow-up Documents*		Y*	Y	
	Visits			Y	
	Items		Y	Y	Y
	Services		Y	Y	Y
	Parts		Y	Y	Y
	Time		Y	Y	Y
	Expenses		Y	Y	Y
	Work Description			Y	Y

Tab	Section	Field	Create	Display	Edit (can edit directly via actions/navigation)
	Sub-Tickets		Y	Y	Y
	Time Entries		Y	Y	Y
	Notes		Y	Y	Y
	Attachments		Y	Y	
	Assignments			Y	

Tab	Section	Field	Create	Display	Edit (can edit directly via actions/navigation)
Tickets	Header	Main Ticket		Y	Y
		Ticket ID		Y	
		Subject	Y	Y	
		Description	Y	Y	
	Overview	Priority	Y	Y	Y
		Escalation Status		Y	
		Status		Y	Y
		Work Progress		Y	
		Contract		Y	
		Ticket Type	Y	Y	
		Territory		Y	
		Assigned To		Y	Y
		Service Technician	Y	Y	Y
		Approval Status			
		Service and Support Team		Y	

Tab	Section	Field	Create	Display	Edit (can edit directly via actions/navigation)
		Service Technician Team		Y	Y
		Channel			
		Channel Type			
		Channel ID			
		Source		Y	
	Customer	Customer	Y	Y	Y
		Contact	Y	Y	Y
		E-Mail		Y	
		Phone		Y	
		Mobile		Y	
		Fax		Y	
		Gender		Y	
		Job Title			
		Department			
		Language			
		Category		Y	
		Address	Y		
		Individual Customer	Y		
		Account	Y		
	Service Location	Country	Y	Y	Y
		Building/Floor/Room	Y	Y	Y
		Street	Y	Y	Y
		House Number	Y	Y	Y

Tab	Section	Field	Create	Display	Edit (can edit directly via actions/navigation)
		City	Y	Y	Y
		State	Y	Y	Y
		Postal Code	Y	Y	Y
	Involved Parties	Name	Y	Y	Y
		Role	Y	Y	Y
		Address		Y	
		Email		Y	
		Phone		Y	
		Mobile		Y	
		Main Contact	Y	Y	Y
	Product	Product	Y	Y	Y
		Installed Base ID	Y	Y	Y
		Installation Point	Y	Y	Y
		Serial ID		Y	Y
		Warranty		Y	
		Coverage		Y	
		Reference Date			
		Warranty To		Y	
		Warranty From		Y	
		Product Category		Y	
	Survey			Y	Y
	Description		Y	Y	
	Work Description			Y	Y
	Category	Service Category		Y	Y
		Incident Category		Y	Y

Tab	Section	Field	Create	Display	Edit (can edit directly via actions/navigation)
		Resolution Category		Y	Y
		Cause Category		Y	Y
		Object Category		Y	Y
	Timeline	Created On		Y	
		Created By		Y	
		Changed On		Y	
		Changed By		Y	
		Requested Start Date	Y	Y	Y
		Requested End Date	Y	Y	Y
		Completion Due		Y	
		Completion Date		Y	
		Reported On		Y	Y
		Reported By			
		Initial Review Due		Y	
		Initial Review Completed		Y	
		Next Response Due		Y	
		Reported On		Y	
		Due On-site		Y	
		Arrived On-site		Y	Y
		Resolution Due		Y	
		Resolved On		Y	Y

Tab	Section	Field	Create	Display	Edit (can edit directly via actions/navigation)
		Last Customer Interaction			
		Last Agent Interaction			
		Customer Updated			
		Escalated On		Y	
	Integration (Organizational Data)	External Sales Order ID			
		Sales Organization		Y	
		Sales Unit			
		Division		Y	
		Distribution Channel		Y	
		External Ticket ID		Y	
		External Sales Order ID			
		External Sales System ID			
	Additional Information	Service Level ID			
		Service Level			
		Requires Work			
		Sales Order	Y	Y	Y
		Sales Order Item	Y	Y	Y
	Interaction	Notes		Y	
	Ticket Item	External Product ID		Y	
		Line		Y	

Tab	Section	Field	Create	Display	Edit (can edit directly via actions/navigation)
		Parent Line		Y	
		Product		Y	Y
		Description		Y	
		Work Progress		Y	
		Processing		Y	Y
		Invoicing Method		Y	Y
		Serial ID		Y	Y
		ERP Release Status			
		Planned Quantity		Y	Y
		Actual Quantity		Y	Y
		Planned Total			
		Actual Total			
		Product Category		Y	
		Requested Start	Y	Y	Y
		Actual Start	Y	Y	Y
		Actual End	Y	Y	Y
		Confirmed Delivery Date			
		Total Delivery Quantity			
		Service Technician		Y	Y
		Installation Point		Y	Y
		Net Price			
		Changed On			
		Pricing Relevant			
		Coverage		Y	Y

Tab	Section	Field	Create	Display	Edit (can edit directly via actions/navigation)
		Customer Information		Y	Y
	Succeeding Sales Order	Internal Note	Y	Y	
	Overview / Header	Address		Y	
		Start Date Time		Y	
		End Date Time		Y	
		Status		Y	Y
		Ticket		Y	
		Service Technician		Y	
		Notes		Y	

Available Offline Actions

Tab/Global	Section	Action	Offline Availability
Tickets / Work Tickets		Add attachments to tickets	Y
		Display notes on a new tab	Y
		Create Follow-Up Ticket	Y
		Prepopulate fields in follow-up tickets	Y
		Signature capture for a ticket	Y
		View ticket tab from the Sales Order tab	Y
		Employee, Sales Order and Sales Order Items are editable	Y
		Multiple signature captures (up to three signatures on a ticket)	Y

Tab/Global	Section	Action	Offline Availability
		Ticket tab available for more objects. The ticket tab now appears in: • Accounts • Contacts • Individual Customers You can create a new ticket from these objects.	Y
	Ticket List Level	Users can scan barcode of a registered product when off-line, to fill in data when cre-ating a ticket	
	Items Tab	Confirm Parts for ticket items	Y
		Involved Party: • Add • Delete • Refresh	Y
		Queries for *My Work Tickets* and *Work Tickets with my In-volvement*	Y
		Add Involved Party details in quick create for ticket	Y
		In quick create for ticket, you can add *Installed Base* and *Installation Point*.	Y
	Time Entries	New time entry enabled	Y
		Users can start and stop Time recording in offline mode	
Work Ticket Items		Start Work,	Y
		Undo Work Progress	Y
		Additional read-only ticket fields are available	Y
	Items List Level	Finish Work	Y

Tab/Global	Section	Action	Offline Availability
		Offline external Product ID is enabled for Ticket Items	
Time Recording	Time Entries	Advanced Search enabled	Y
		New time entries are enabled	Y
Work Tickets Sub-Tickets	Time Entries	Time entry enabled	Y
		Setting status enabled	Y
		Add sub-tickets to an existing ticket	Y
		Add items to sub-tickets	Y
		Migrate sub-tickets with main ticket reference	Y
Notes		Add internal notes in *Notes* tab in offline mode	Y
Installed Base		Activate	Y
		Block	Y
		Obsolete	Y
	Items	Activate	Y
		Block	Y
		Obsolete	Y
		Delete	Y
		Add Items (at the same level)	Y
Registered Product		Activate	Y
		Block	Y
		Obsolete	Y
	Items	Activate	Y
		Block	Y
		Obsolete	Y
		Delete	Y

Tab/Global	Section	Action	Offline Availability
		Add New Registered Product	Y
	List	Create New Ticket	Y
Measurement Logs and Readings		New measurement logs and readings can be created	Y
Stock		Add products from van stock as ticket item	Y
	Add from Stock Location	Search by Product ID or Description	Y
Installation Point		Create a new functional location	Y

Note

Capture Signature is replaced with Generate Summary. Users can capture signature when generating a ticket summary.

Offline Limitations for Tickets

- No workflow rules support offline.
- Limited availability of object actions offline.
- Limited *Work Ticket/Ticket* fields are editable offline.
- Available support for tickets follow-up for *Work Tickets* only.
- Limited data is copied for follow-up tickets only .
- *Solution Finder* tab is unavailable offline.
- *Changes* tab is unavailable offline.
- *Document Flow* tab is unavailable offline.
- *Groups* tab for tickets is unavailable offline.
- *Approval* tab for tickets is unavailable offline.
- Automatic *Attachment Download* for tickets is unavailable offline.
- Limited availability of read-only fields for tickets offline.
- Navigation link for follow-up items does not work.
- In the *Work Ticket/Ticket* list view, not all fields are available for *Advanced Filter*.
- Default/Determination for ticket items is not available offline.
- Service Category, as flat lists, is editable offline. Value help shows data correctly if user selects the categories in sequence as follows: *Parent Category* > *Child Category*.
- Involved Party for Ticket: Main indicator is not editable offline.
- Involved Party for Ticket: Determinations for main indicator is not available offline.

- Involved Party for Ticket: Only validation for unique is available offline.
- Involved Party for Ticket: No mandatory checks are performed offline.
- Involved Party for Ticket: Party determination does not take place for Ticket quick create in offline mode.
- Involved Party for Ticket: *Partner*, *Partner Contact*, and *Company* for involved parties for ticket is not enabled offline.
- Currently there is no offline validation for any ticket items.
- When creating a ticket, determination of installed base, serial ID, product and customer occurs only the first time you select an installation point. To redetermine, relaunch the QC for the Ticket . This applies to the ticket detail screen as well, close and reopen the ticket and select a new installation point to have the fields repopulate automatically.
- Entering *Ship-To* account when creating a ticket populates neither *Service Location* nor *Ship-To Contact* automatically.
- Contract determination is not available offline.
- Item contract determination is not available offline.

4.8 Tickets FAQ

4.8.1 Why can't I delete a ticket?

Learn why old tickets never die.

Once you resolve a customer support issue, you close the ticket. Closed tickets are referenced by numerous other objects in the solution and contain valuable information that can be used to resolve new issues and for analytics. Closed tickets provide a record of customer interactions, warranty usage information, response performance information and much more.

Tickets that are created accidentally, or generated by the system, but contain no real support issue can be set to the status of **Irrelevant**, which removes the ticket from all queues.

4.8.2 What are all these unassociated e-mails?

Where unassociated e-mail messages come from and how to deal with them.

If your system is configured to support e-mail as a channel for creating customer service tickets, then any incoming e-mails that the system cannot automatically convert to a new ticket or assign to an existing ticket get added to the list of unassociated e-mails. These e-mails must be manually processed by agents.

There are several reasons why an e-mail could not be automatically associated with a ticket. For example, your system may be configured to require manual processing or there may be more than one contact with the same sender e-mail address. The system displays the reason in the e-mail details to assist you determining whether the e-mail should be converted to a new ticket or assigned to an existing ticket.

→ Tip

You'll find the list of unassociated e-mail messages under: *Service* > *Unassociated E-Mails*.

4.8.3 Why do I see gibberish in tickets created from e-mail messages?

E-mail messages containing unsupported formatting codes may cause escape codes to appear in the message content.

Unsupported formatting codes can appear as gibberish or nonsense when you are reviewing the incoming message.

4.8.4 How to Create Scheduled Tasks/Jobs & How to Implement Custom Business Logic?

Custom logic to create scheduled tasks.

You can use the time-based workflow and email/notification workflow to create scheduled tasks.

Example

Select the business object - Ticket (you can select any other business object such as, opportunity, lead, activity, quote, order and so on) and perform the following steps:.

1. Configure workflow trigger to a time based event (24 hours after the Ticket "Changed On" date
2. Configure workflow condition where if the Ticket Processor is "blank".
3. Configure workflow action to send email, create BTM notification, and/or field update of a header field of the Ticket

If the workflow action is more complex such as updating a node field, creating node entries, creating follow-ups, or the if the workflow condition needs to evaluate a BO (business object) node field (BO node event like when a record is saved), then you will need to combine the workflow engine with some SDK ABSL/reuse functions to achieve the advanced logic you want to evaluate.

Use Case - You want the workflow engine to trigger an email notification when a particular Involved Party member, Ticket line item, and/or attachment is added/removed/edited from the Ticket.

To do this, you need to:

1. Create a before save node exit, where it would evaluate a condition true or false. If it is true, then update a Ticket header indicator extension field.
2. Next, create a workflow rule condition to evaluate if the Ticket header indicator field is true or false. Based on this, the workflow engine will execute the workflow action with one extra step to do a field update action to clear out the Ticket header indicator so that if another change is on the node, then workflow engine can be triggered again.

Use Case - You want the workflow engine to trigger business logic such as creating a note entry in the Ticket

For the workflow engine to trigger business logic such as creating a note entry in the Ticket, insert a default product in Ticket line item, and/or create a follow-up Opportunity, then do the following:

1. Create a custom header action on the Ticket. In the custom header action add the logic you want to create/edit in the Ticket node. You may even want to create a Reuse function to make the logic more generic and accept parameters and be consumed in other places besides this custom action
2. Create a custom indicator on the Ticket header.
3. Create a *beforesave* exit on the Ticket header where if the indicator is set true call the custom action. Once the custom action is executed, then set the indicator back to false d. Set-up a workflow condition where it would evaluate if the Ticket header indicator is true or false, if it is true, then call the workflow action which could be a simple email/notification/field update or again combine it with example #1 to call a custom follow-up action.

Using the above two examoles, you can cover just about any business logic automation scenario with a few lines of code and point and click configuration with the workflow engine.

4.8.5 How to Configure Workflow to Send E-mail Notifications and Tasks?

Steps to configure workflow to send e-mail notifications and tasks.

Prerequisites

1. Draft the content of the eßmail notification. This content can be simple text or branded HTML e-mail. There are also macros/placeholders that can **mail merge** the business object data into the email or task. For example, you can create a generic template e-mail with HTML content and placeholders. When the email notification is triggered, it can replace the *#CUSTOMERNAME#* placeholder in the template with the business object data.
2. Define the conditions or rules that define when an e-mail notification is sent. This rules engine is very flexible so it can evaluate any of the business object fields and create simple to complex multi-condition statements. For example, you can create a rule that when the service request status changes from *Open* to *In Progress* OR *processor = Default Team*, then send the e-mail notification

3. Define the recipients of the e-mail notification. You can define specific parties that receive the e-mail notification which can either be named Cloud for Customer users or the e-mail address of a customer. In addition, if you add additional party roles via flexible involved parties feature, they too can be recipients of the e-mail notification

Procedure

1. Under *Administrator (workcenter)* > *Workflow Rules* > *Workflow Notification Rules (screen)*, click *New* or *Edit* an existing rule.
2. Choose a business object, type of notification, content of notification, business object data you want in the notification, and the HTML template to format the notification.
3. Configure rules and conditions you want the notification to be sent.
4. Configure the recipients of the notification.
5. Test the notification.

5 Customer Hub

For real-time interactions that require quick access to customer information, customer hub provides a place to assess and enter information to help you resolve issues quickly.

Customer hub streamlines your service process and allows you to respond to support requests faster and more efficiently. You get more productivity and shorter support queues. This capability is especially useful for service organizations with a high call volume, supporting business-to-business customers.

If the solution automatically identifies an incoming call or chat request from a known customer or contact, customer hub opens automatically. Customer hub supports quickly-resolved interactions where a ticket may not be required or desired. The solution captures details of these ticketless interactions in the timeline.

- View customer or account details at the top of the screen in an emphasized header area.
- Access contact information, registered products, tickets and more in the left column.
- Scan interactions and notes in the timeline in the center of the customer hub.
- Resolve issues quickly with the knowledge base pane at the right side of the screen.

5.1 Scope and Configure Customer Hub

Enable Customer Hub in your system.

Collect configure and enable topics here. Reuse topics from specific feature enablement areas.

5.1.1 Enable Customer Hub

Activate *Customer Hub* in *Live Activity Settings*.

Prerequisites

CTI integration and live activity must be enabled and configured before you can use *Customer Hub*.

Procedure

1. Go to *Administrator* > *Service and Social* > *Communication Channels* > *Live Activity Configuration*.
2. Under *Fiori Client Settings*, enable *Open Customer Hub*.

3. Go to your user menu (top-right corner of screen), *Settings* > *Company Settings*
4. Under *General*, turn **on** *Enable Side Pane* and turn **off** *Disable Header Information From Top*.

   You can assign these settings for the entire company or for a specific business role.

5.1.2 Configure Timeline

Settings on various screens used to enable and configure the timeline.

Timeline Settings

Setting Function	Go To
Enable Timeline - adds timeline to ticket detail *Overview* tab and as separate tab in ticket detail view	*Administrator* > *Service and Social* > *Ticket Configuration* > *Timeline* > *Enable Timeline*
Prevent user from changing branding template for e-mail replies	*Administrator* > *Service and Social* > *Ticket Configuration* > *Fiori Interactions* > *Disable change of branding template in email feeder*
Select e-mail editor - default is Kendo (more configurable), alternate is TinyMCE (faster)	*Administrator* > *Service and Social* > *Ticket Configuration* > *Fiori Interactions* > *Enable TinyMCE Editor*
Enable internal memos for tickets - allows for rich text content versus internal notes. Also enables portal memos.	*Business Configuration* > *Implementation Projects* > *(your project)* > *Edit Project Scope* > *Questions* > *Service* > *Customer Care* > *Service Request Management* > *Internal Memos for Tickets* > *Enable internal memos for tickets?*

5.2 Timeline

Get up to speed on customer interactions with the timeline.

The timeline shows phone call and chat interactions, tickets and other touch points with the customer. You can access the timeline in ticket detail view, or in customer hub, or both, depending on how your administrator configured your solution. Timeline has the same capabilities as the interactions tab in ticket detail view, and will include additional functions in the future.

Configure Timeline [page 170]
Settings on various screens used to enable and configure the timeline.

Copy E-Mail Interaction to Existing Ticket [page 170]
Copy an e-mail interaction to an existing ticket.

Search Option in Timeline List View [page 171]
Use the search feature to find a particular interaction available in the list view of the timeline control.

Send E-Mails in the Background [page 171]
Send e-mails in the background using *Send Later*.

5.2.1 Configure Timeline

Settings on various screens used to enable and configure the timeline.

Timeline Settings

Setting Function	Go To
Enable Timeline - adds timeline to ticket detail *Overview* tab and as separate tab in ticket detail view	*Administrator* > *Service and Social* > *Ticket Configuration* > *Timeline* > *Enable Timeline*
Prevent user from changing branding template for e-mail replies	*Administrator* > *Service and Social* > *Ticket Configuration* > *Fiori Interactions* > *Disable change of branding template in email feeder*
Select e-mail editor - default is Kendo (more configurable), alternate is TinyMCE (faster)	*Administrator* > *Service and Social* > *Ticket Configuration* > *Fiori Interactions* > *Enable TinyMCE Editor*
Enable internal memos for tickets - allows for rich text content versus internal notes. Also enables portal memos.	*Business Configuration* > *Implementation Projects* > *(your project)* > *Edit Project Scope* > *Questions* > *Service* > *Customer Care* > *Service Request Management* > *Internal Memos for Tickets* > *Enable internal memos for tickets?*

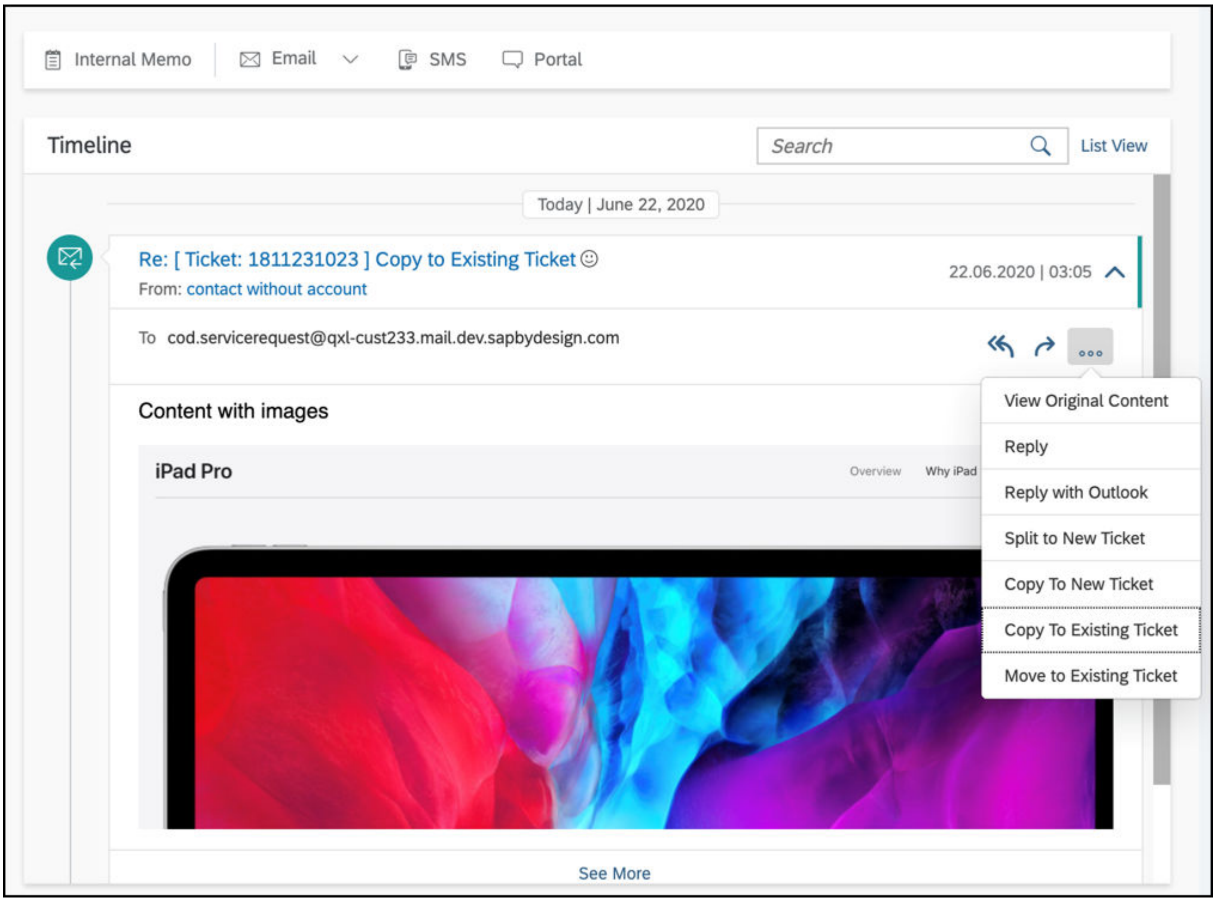
5.2.2 Copy E-Mail Interaction to Existing Ticket

Copy an e-mail interaction to an existing ticket.

Copy an e-mail interaction to an existing *Ticket*.

Link responses to a previous *Ticket* avoiding unnecessary processing.

The existing action *Copy to Ticket* has been renamed to “*Copy to New Ticket*” without any change in behaviour.



i Note

You can delete the first e-mail interaction and still retain the rest of the interaction history.

5.2.3 Search Option in Timeline List View

Use the search feature to find a particular interaction available in the list view of the timeline control.

This feature is similar to the search on list view of interactions.

5.2.4 Send E-Mails in the Background

Send e-mails in the background using *Send Later*.

Instead of waiting for the sending process, you can start with other tasks as soon as you click *Send Later*. E-mails that are sent via "Send Later" can be viewed in Outbox until they’re sent out and displays status as *Sending*. You can also view the e-mails pushed to the background in the *Outbox* feeder until they’re successfully sent with a status.

Once done you can view the sent e-mails in *Timeline Control*. The status changes to *Failure* showing the error due to which the message failed.

Perform actions like edit, discard, and resend on the failed e-mail. You can edit the failed e-mail and send or discard the e-mail which will delete it or you can resend the e-mail synchronously.

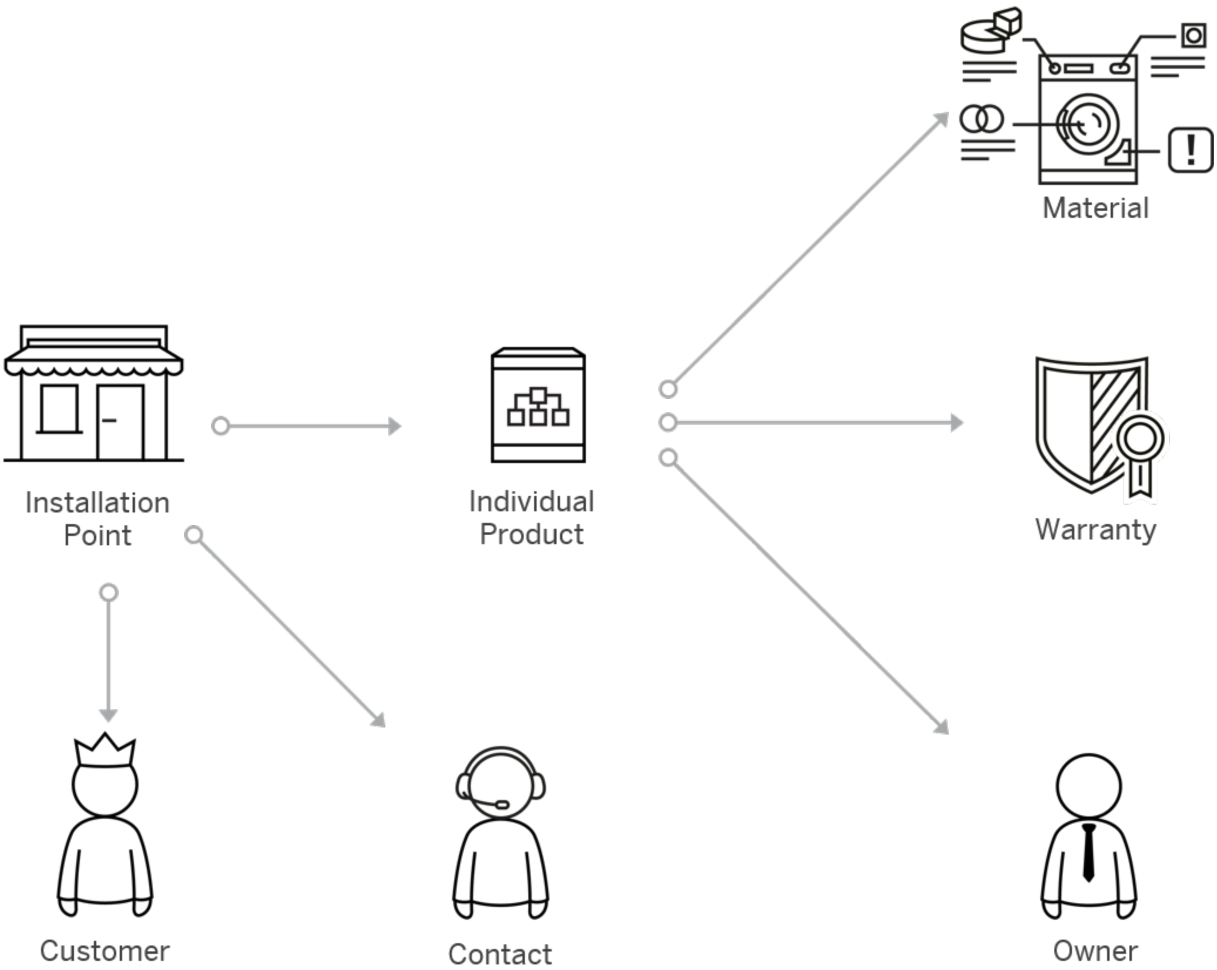
Procedure

1. Navigate to ▶ *Business Configuration* ▶ *Implementation Project* ▶
2. Select your project and click on ▶ *Edit Project Scope* ▶ *Scoping* ▶ *Questions* ▶ *Service* ▶ *Customer Care* ▶ *Service Request Management* ▶ *Email Handling* ▶
3. Select the scoping question - *Enable sending of an e-mail asynchronously*

6 Registered Products

A registered product is an instance of a product that is associated with a specific customer and generally has a serial number.

When a ticket is created, the registered product information allows the service agent to identify the customer product and any associated warranties or service entitlements. Additional information, such as product location is used in the service process.



You can do the following with a registered product:

- Create serialized registered products with customer, location, and warranty information
- Create a ticket that refers to a registered product
- Create a hierarchy of registered product items
- Add registered products to a maintenance plan
- Maintain measurement logs and readings for registered products
- Maintain attributes for a registered product

- Maintain involved parties, user status, sales and distribution data, and change tracking, attachments, notes, and reports
- Replicate an equipment from SAP ERP as a registered product

6.1 Scope and Configure Registered Products

Administrators can configure registered products using scoping, scoping questions, and fine-tuning activities.

> **i Note**
>
> Scoping questions and fine-tuning activities that are straightforward may not be included in this list.

6.1.1 Technical Information About Registered Products

The *Registered Product* user interface constitutes of two business objects—Installation Point and Individual Product.

The leading business object is Installation Point. The Installation Point business object has multiple categories. Registered Product is an installation point of category registered product.

When working with registered products, use the entities created for installation point for the following scenarios:

- Migration (web services, migration template)
- Mass data maintenance
- Reporting (data source)
- Workflow Rules

Related Information

Configure Migration of Registered Products [page 178]
As an administrator, use the *Installation Point Migration Template* to migrate registered products to your system.

Use A2X Services for Registered Products [page 179]
The A2X web services available for registered products are—*Query Registered Products* and *Manage Registered Products*. However, use the A2X services only to query registered products. For manage scenarios, use the A2A services.

Get Information for Registered Products [page 196]
You can get information for registered products by using reports and tracking your regictered products.

Create Workflow Rules for Registered Products [page 195]
As an administrator, create workflow rules for registered products. To create workflow rules, you must have access to the *Workflow* work center.

6.1.2 Configure Additional Configurations for Registered Products

As an administrator, allow for additional configurations for registered products to the scope of the project.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Service* > *Entitlement Management* > *Registered Products and Installed Base*. In the *Questions for Registered Products and Installed Base* section, under the *Additional options for Registered Product, Installed Base and Installation Points*, select the scoping question: *You can maintain additional configurations for Functional Location/Registered Product*.

6.1.3 Enable Registered Products

As an administrator, enable the feature in the solution.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Service* > *Entitlement Management*, and then select *Registered Products and Installed Base*. From *Questions for Registered Products and Installed Base*, select the scoping question: *You can manually register serialized products sold*.

> **Note**
>
> If you select the *You can manually maintain installed bases* business option, the option for Registered Products (*You can manually register serialized products sold*) also gets selected.

6.1.4 Configure Registered Product Categories

As an administrator, configure registered product categories using the fine-tuning activity.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *Additional configurations for Registered Product*.

On the *Additional configurations for Registered Product* page, under *Registered Product Categories*, click the *Maintain Registered Product Categories* link.

On the *Registered Product Categories* page, under *Create or Delete Registered Product Category*, click *Add*. Enter the required details, such as the name of the registered product category and its description.

Mark the Serial ID Field as Optional

When you create a registered product category, by default, the *Serial ID* field is mandatory. However, you can mark this field as optional for a specific registered product category.

Marking the *Serial ID* field optional enables replication of equipment from ERP that does not have a Serial ID. However, for a successful replication, make sure that code list mapping of the equipment is maintained in ERP.

To mark the *Serial ID* field as optional, follow these steps:

1. While you add a registered product category, select the *Serial ID Optional* checkbox.
2. Click *Save*.

6.1.5 Assign User Status to a Status Profile

As an administrator, you can create and maintain a status profile for a registered product, and then assign user status to the profile.

After you assign a status profile to a registered product, you cannot modify it. To assign user status to a status profile, go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *Additional configurations for Registered Product*.

On the *Additional configurations for Registered Product* page, under *Registered Product User Status*, click the *Maintain Registered Product User Status* link.

On the *Status Profiles* page, click *Add Row*, and then enter the required details such as staust profile name and description. Select the status profile, and in the *Assign User Status to Status Profile* section, define the user status.

6.1.6 Configure Involved Parties for Registered Products

As an administrator, configure involved parties for registered products using the fine-tuning activity.

Using the *Involved Parties for Registered Product, Installed Base and Installation Points* fine-tuning activity, you can decide the party roles that you want to use in your application. However, you cannot deactivate the party roles that are set as mandatory by default.

> **i Note**
>
> The party roles that you add using this fine-tuning activity are also applied to installed base and installation points.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *Involved Parties for Registered Product, Installed Base and Installation Points*.

On the *Involved Parties for Registered Product, Installed Base and Installation Points* page, click *Add Row*, and select the party role that you want to add.

6.1.7 Configure Registered Product Location Determination

By default, the location of a registered product is taken from the customer address. However, as an administrator, you can default the location from the ship-to party address instead.

To use the ship-to party address as the default address, administrators must enable the registered product location determination.

Navigate to *Service* > *Entitlement Management* > *Registered Products and Installed Base* > *Additional options for Registered Product, Installed Base and Installation Points*, and select *Registered Product uses customer address as the default location. Do you want to use the ship-to-party address instead?*

6.1.8 Configure Custom Attachment Types for Registered Products

As an administrator, you can define custom document types for attachments for registered products.

Context

The *Attachment* tab, due to a backend change in the registered product attachments, may require an adoption task to enable this feature for your users.

Procedure

1. Navigate to *Business Configuration* > *Overview*.
2. Search for *All Configuration Elements* > *Customer-Defined Document Types For Attachments*.
3. Open *Customer-Defined Document Types For Attachments* and select each *Document Type Code*. Under the *Usage* section, verify if *Registered Product (Obsolete)* is selected.
4. If *Registered Product (Obsolete)* is selected, deselect it, and then select *Installation Point/Registered Product*.
5. Click *Save*. Your users can now create attachments of custom document types in registered products.

6.1.9 Create Workflow Rules for Registered Products

As an administrator, create workflow rules for registered products. To create workflow rules, you must have access to the *Workflow* work center.

Workflow Rules for Registered Products

To create a new workflow rule for a registered product, do the following:

1. Navigate to *Administrator* > *Workflow Rules* > *New*.
2. On the *New Rule* page, in the *Enter Basic Data* tab, do the following:
    - Add a description.
    - Select the *Installation Point/Registered Product* business object value.
3. In the *Define Conditions* tab, define the rule conditions including extension fields: Sales Territory and Service Territory.

4. In the *Define Actions* tab, select the rule type. The following rule types are supported:
    - E-mail
    - Notification
    - Field Update - This rule type is supported only for the extension fields, Sales Territory, and Service Territory.
5. Review and confirm the rule.

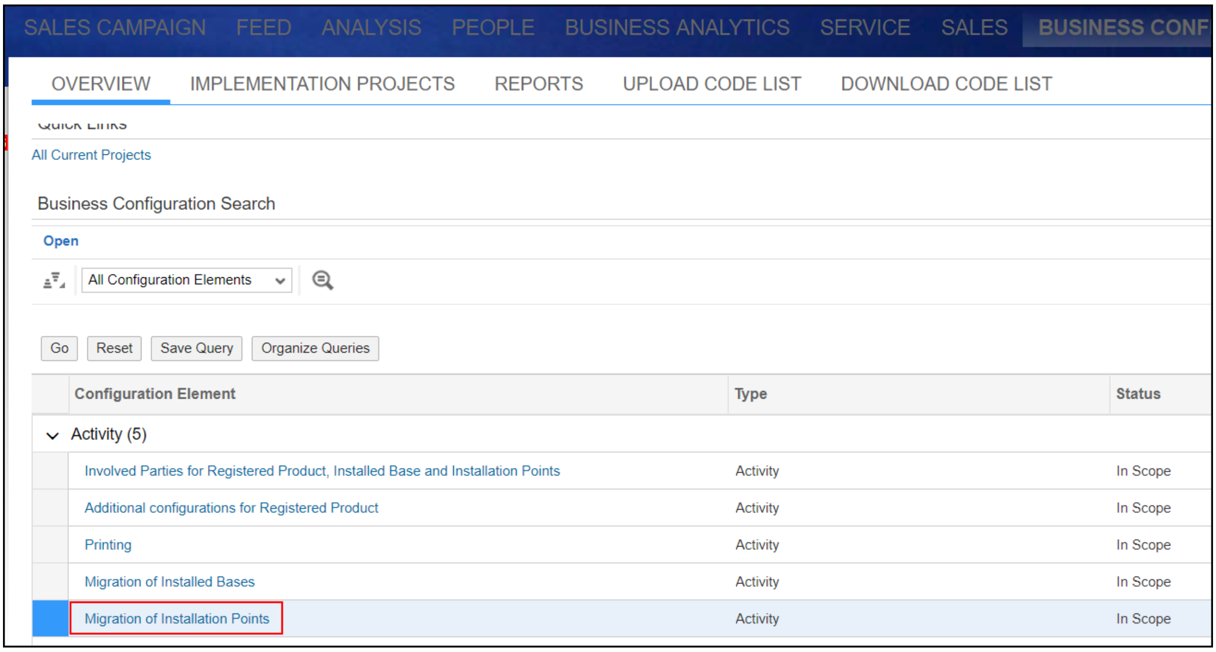
Related Information

Workflows [page 1069]
  Learn how you can use workflows to support your business processes.

6.1.10 Configure Migration of Registered Products

As an administrator, use the *Installation Point Migration Template* to migrate registered products to your system.

Navigate to *Business Configuration* > *Overview*, and search for the *Migration of Installation Points* activity. Use this object to migrate registered products into your system. (Registered Product is an installation point of category registered product.)



Create Registered Product Description

Create registered product description in different languages, by specifying the language code. The fields that appear for registered product description are as follows:

- **Installation Point ID**: The installation point ID for which you add the description.

- **Registered Product Description Language**: The language in which the registered product description is created. The entered text displays when the user logs in to the system in that language.
  Example: If the user creates an entry for *Reg Prod Description English* in *EN*, *Reg Prod Description English* appears in the *Registered Product Description* field. Similarly, for a *Reg Prod Description French* entry in *FR*, the *Reg Prod Description French* value appears in the *Registered Product Description* field.
- **Registered Product Description Content**:The actual description of the registered product.

Create Registered Product Detailed Description

Create registered product detailed description, to store data in notes and customer information of registered products, in different languages, by specifying the language code. The fields that appear for registered product description are as follows:

- **Installation Point ID**: The installation point ID for which detailed description is added.
- **Text type**: The value of the text type for notes and customer information. The following table describes the values and the text type:

Value	Text Type
10006	Notes
10024	Customer Information

- Language: The language in which the text is created. The entered text appears when the user logs in the particular language.
  Example: If the user creates an entry for *Notes English* in *EN*, for 10006 text type, *Notes English* appears in the **Notes** section. Similarly, for a *Notes French* entry in *FR* for 10006, *Notes French* appears in the **Notes** section.
- **Text content**: The actual content of the notes or customer information.

For more information about the activity, on the *Migrate Installation Points* page, under *You Can Also*, click *Show Migration Object Documentation*.

6.1.11 Use A2X Services for Registered Products

The A2X web services available for registered products are—*Query Registered Products* and *Manage Registered Products*. However, use the A2X services only to query registered products. For manage scenarios, use the A2A services.

Query Registered Products

The *Query Registered Products* service has two versions. Use version 2 of this service. You can use the following parameters to query registered products:

- Installation Point ID
- Serial ID
- Involved Parties
- External ID
- Registered Product Category

6.1.12 Configure Attributes for Measurements

Create a list of attributes for registered products on which readings will be recorded.

Context

Procedure

1. Go to *Administrator* > *Service and Social* > *Measurements and Maintenance* > *Configure Measurement Attributes*.
2. Add and configure attributes.

6.1.13 Configure Extension Fields as Read-Only Using Key User Tools in Offline Mode

As an administrator, configure extension fields as read-only for blocked and obsolete registered products and installed bases in the offline mode.

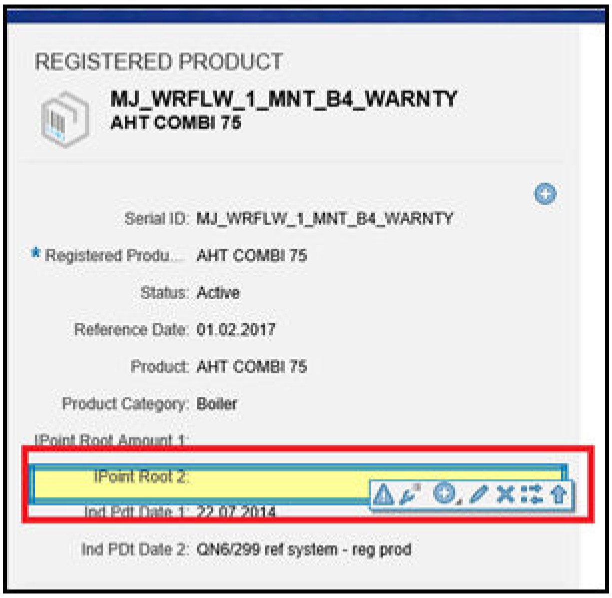
Currently, the extension fields for *Blocked* and *Obsolete* registered products and installed bases become editable in offline mode even when they are read-only in online mode. If you change the values of these extension fields offline, and try to sync the changes online, the sync fails.

You can avoid sync failure by creating a rule using *Key User Tool*.

> **i Note**
>
> We've used a registered product as an example. A similar rule can be created using an installed base.

To create a rule, follow these steps:

1. Open a *Registered Product* in *Active* or *In Preparation* status. Choose *Adapt* > *Edit Master Layout* from the menu.
2. Hover your cursor over the extension field and click *Change Properties Option* as shown here.



3. Click *Rule*.
4. Choose *Create New Rule* and create a new rule.
5. Apply the rule to the *Read Only* property of the extension field.
   The same rule can be applied to the read-only property of all extension fields.

6.1.14 Add Extension Fields to Registered Products

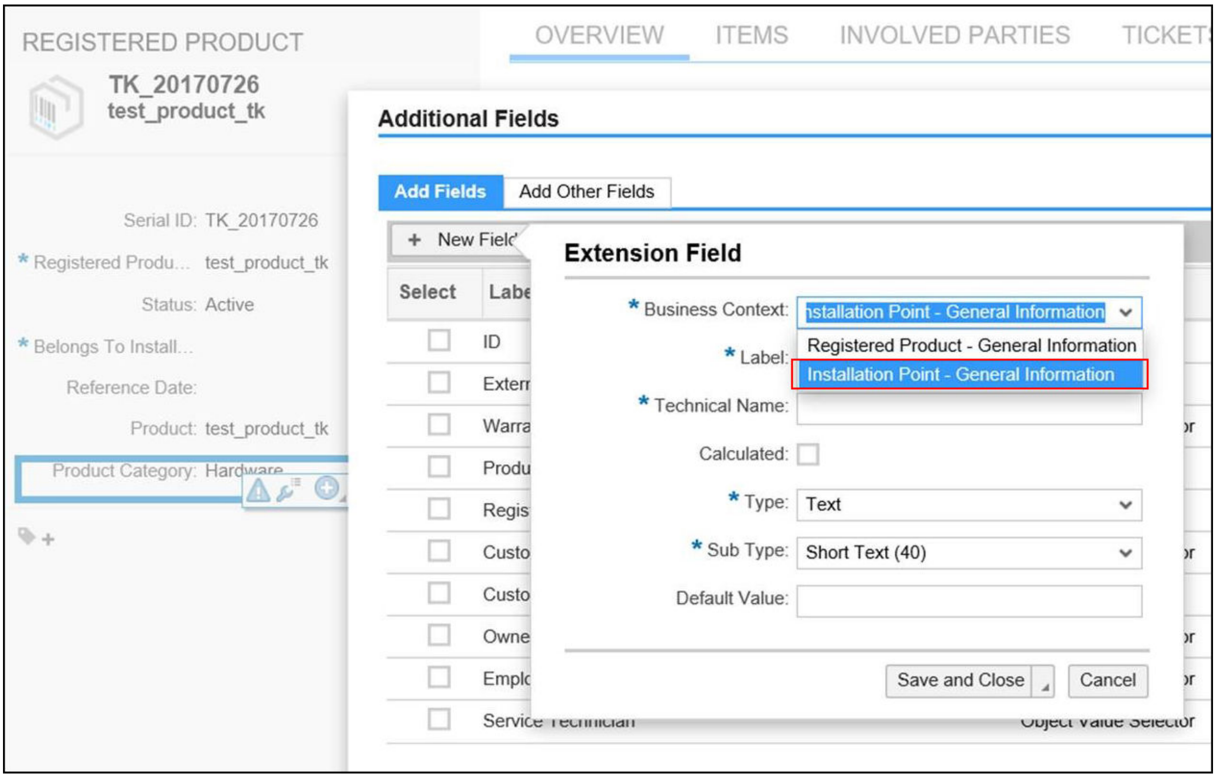
As an administrator, add extension fields to the header area of the Registered Product detail view.

Registered Product constitutes of the following business objects:

- Installation Point
- Individual Product

When you add extension fields to a registered product, we recommend that you add them to the *Installation Point – General Information* business object.

> **i Note**
>
> The extension fields added to the *Installation Point – General Information* business object cannot be enabled on the registered product quick create.

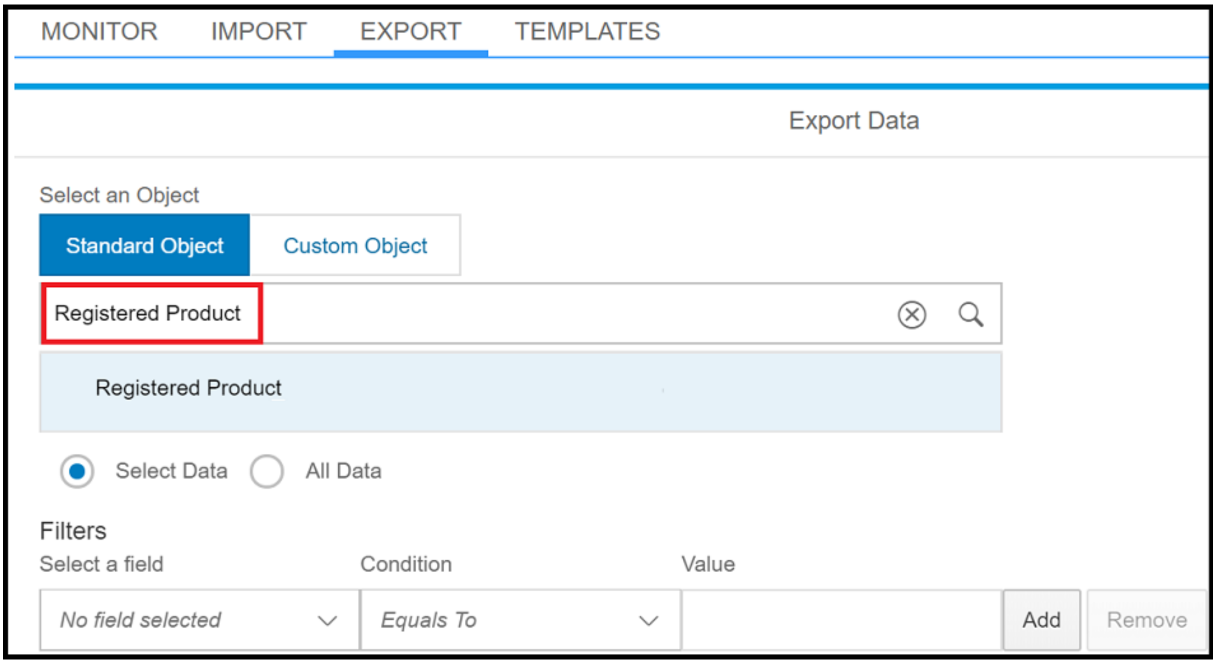


i Note

Information added to the header area appears automatically in the *Registered Product 360°* view report. If you want to include information from fields added to the *Customer* section, edit the form template with Adobe LiveCycle Designer.

6.1.15 Use Data Workbench Service for Registered Products

As an administrator, use the Data Workbench service to import, export, and update registered products data (from SAP Cloud for Customer).



> ℹ Note
>
> Extension fields added to **Registered Product: General Information** cannot be added to the registered product data workbench service. Similarly, address determination (main address/ship-to address/bill-to address) of a registered product from the customer/ship to party is not supported. You also cannot enter the warranty start and end date, as these fields are calculated based on the warranty ID.

Related Information

Data Workbench

6.1.16 Configure Code List Restrictions for Registered Products

As an administrator, you can enable code list restrictions for the extension fields added in a registered product.

To achieve this, follow these steps:

1. In the *Administrator* › *Code List Restrictions* tab, click *Code List Restrictions*.
2. Click *New*.

3. Select **Installation Point/Registered Product** in the *BO* field.
4. Maintain restrictions for the extension field and then save your update.

6.2 Create Registered Products

Register a product to create a unique instance of it in the system.

Context

When you create a registered product, the relevant information is automatically copied from the customer. For example, the customer location and involved parties such as Ship-to-Party, Bill-to-Party, and service technician.

When you create a registered product from the agent workspace, the customer and product information in the ticket are automatically copied into the form.

To register a product, follow these steps:

Procedure

1. Navigate to *Installed Base* > *Registered Products*, or navigate to *Products* > *Registered Products*, and click *New*.
2. Enter data for Customer, Product, and Serial ID for identifying the registered product.
3. Save your entries.

   Determine Service Technicians for Registered Products [page 184]
   When creating a new registered product, the service technician is determined from the account. The accounts team can have multiple service technicians as defined in *Party Role Definition*. The following parameters are considered:

   Enable Registered Product Quick Create Screen [page 185]
   A quick create screen is available for registered product. The new screen allows your administrator to add extension fields for Installation Point and Registered Product in online & offline mode.

6.2.1 Determine Service Technicians for Registered Products

When creating a new registered product, the service technician is determined from the account. The accounts team can have multiple service technicians as defined in *Party Role Definition*. The following parameters are considered:

- If sales data is maintained for the service technician, it is ignored

- If multiple service technicians (without sales data) exist, the primary one, based on validity and current date, is selected

6.2.2 Enable Registered Product Quick Create Screen

A quick create screen is available for registered product. The new screen allows your administrator to add extension fields for Installation Point and Registered Product in online & offline mode.

The quick create screen is available in the following areas:

- Registered Product worklist.
- Customer detailed view in registered product tab.
- Serial ID selection window in New Registration.

  > **i Note**
  >
  > New registration isn't available in offline mode.
- Create button (+) on Home page.
- Customer Hub

  > **i Note**
  >
  > Customer Hub isn't supported in offline mode.
- Root Level New Registered Product in the Items tab for installed base work center view.

> **! Restriction**
>
> - You must manually add the existing extension fields to the new quick create. So, we recommend you to take a snapshot of the old quick create to compare with the new quick create.
> - The new quick create screen isn't available in the Items tab of registered product detailed view and installation point detailed view.

Procedure

Your administrator can enable the feature by following the steps:

1. Navigate to *Business Configuration* > *Implementation Projects*
2. Select your project and click on *Edit Project Scope* > *Scoping* > *Questions* > *Service* > *Entitlement Management* > *Registered Products and Installed Base*.
3. Select the scoping option: *You can enable the new registered product Quick Create that allows you to add extension fields from Installation Point business context.*

6.3 Use Registered Products

Create a new registered product with information such as *Customer*, *Serial ID*, and *Location*.

Using the *Registered Products* functionality, you can do the following:

- Add notes and attachments
- Maintain involved parties, user status, sales, and distribution data
- Track the history of changes
- Create tickets for a registered product
- Associate a registered product with contracts
- Maintain measurement logs and readings for registered products
- Associate a registered product with maintenance plans
- Replicate an equipment from SAP ERP as a registered product

If there are changes made to the following fields on *Registered Products*, the system administrative data (such as the Changed On field) is not updated:

- Registered Product Description
- Serial ID
- Reference Date
- Warranty-related fields

Work with Registered Products [page 187]
Know more about options such as assigning skills, getting GPS coordinates for locations, updating locations, and using barcode scanning for registered products.

Get Information for Registered Products [page 196]
You can get information for registered products by using reports and tracking your regictered products.

Remove Personal Data in Registered Products [page 197]
Use *Depersonalize* in *Registered Products* to remove personal data from obsolete registered products.

Use Registered Products in Service [page 198]
Know more about the functionalities that help you to use the **Registered Products** feature in **Service**.

Use Registered Products in Sales [page 200]
Learn about creating an opportunity for a registered product, creating registered products from an account, and creating a survey based on the registered products for a specific account.

6.3.1 Work with Registered Products

Know more about options such as assigning skills, getting GPS coordinates for locations, updating locations, and using barcode scanning for registered products.

6.3.1.1 Assign Skills for Registered Products

You can assign skills for registered products in the *Registered Product* tab.

To add/maintain a skill for a registered product, follow these steps:

1. Navigate to the *Registered Products* tab, and select a registered product.
2. On the details page, click the *Skills* tab.
3. To add a new skill click *Add*, and then enter the required details.
4. Click *OK*.

6.3.1.2 Get GPS Coordinates for Locations of Registered Products

Geo location data of a registered product is inherited from the associated customer.

When you create a registered product and add a customer, the registered product inherits the customer address along with the latitude and longitude information. The address is then displayed as a hyperlink. Clicking the address link displays the location in a map. The address hyperlink is displayed even if the complete address is not maintained; however, the latitude or longitude information for the registered product must be available.

6.3.1.3 Configure Registered Product Location Determination

By default, the location of a registered product is taken from the customer address. However, as an administrator, you can default the location from the ship-to party address instead.

To use the ship-to party address as the default address, administrators must enable the registered product location determination.

Navigate to *Service* > *Entitlement Management* > *Registered Products and Installed Base* > *Additional options for Registered Product, Installed Base and Installation Points*, and select *Registered Product uses customer address as the default location. Do you want to use the ship-to-party address instead?*

6.3.1.4 Update Locations of Registered Products

The *Update Location* action on *Registered Product* enables you to update location from the main address, bill-to address, or ship-to address.

Based on your business configuration settings, the registered product location is determined either from the customer address or the ship-to-party address. For updating the location, the same source (customer or the ship-to-party address as chosen in the business configuration) is used. You can choose the address (main address, ship-to-party address, or bill-to-party address) that should be picked from that source.

6.3.1.5 Update Reference Product for Registered Product

In a registered product, you can update the *Reference Product*, if the existing one is incorrect.

Procedure

Your administrator can enable this feature as follows:

1. Navigate to *Business Configuration* > *Implementation Projects*.
2. Select your project and navigate to *Edit Project Scope* > *Questions* > *Service* > *Entitlement Management* > *Registered Products and Installed Base*.
3. Select the following scoping option: *You can update Product for Registered Product*.

> **Note**
>
> - Update the product from *Registered Product* UI is controlled via scoping question both online and offline.
> - Product of standard registered product object can be updated via data workbench irrespective of the scoping question.
> - The *Product* field in registered product OData is always editable.

6.3.1.6 Use Barcode Scanning for Product Registration and Search

Use your device camera to scan the barcode and register a product.

- Barcode Scan Search
  When searching for a registered product using barcode scanning, you can scan a serial ID or external ID (equipment ID) to begin the search. The system searches for the scanned ID and displays matching results.
- Barcode scan for registering a product
  To create a new registered product using barcode scanning, scan the serial ID of the product. The system enters the scanned value in the *Serial ID* field.

> **i Note**
>
> This feature is supported on iPad and Android tablets.

6.3.1.7 Work with the Registered Products Overview Tab

Use the *Overview* tab to modify customer information, product location details, user status and user status profile information, and so on. You can also create a new ticket and add a maintenance plan.

Maintain User Status and User Status Profile

Click *Edit* to maintain the *User Status Profile* and *User Status* for a registered product. After assigning a status profile to a registered product, you cannot change it.

Update Product Location

Based on your business configuration settings, the registered product location is determined either from the customer address or the ship-to-party address. For updating the location, the same source (customer or the ship-to-party address as chosen in the business configuration) is used. To update the location of a registered product, follow these steps:

- On the *Overview* tab of the selected registered product, click *Update Location From*, and then select the source address based on your business configuration settings.

  > **Example**
  >
  > If the location determination is based on customer, using the *Update Location From* option takes the location from the customer.

Generate a Summary

Click *Actions*, and then select *Preview* to generate a summary for the selected registered product. The summary displays the following details of the registered product:

- General Data
- Address
- Notes
- Warranty information
- Involved parties
- Associated contracts

- Associated maintenance plans

6.3.1.8 Assign User Status to a Status Profile

As an administrator, you can create and maintain a status profile for a registered product, and then assign user status to the profile.

After you assign a status profile to a registered product, you cannot modify it. To assign user status to a status profile, go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *Additional configurations for Registered Product*.

On the *Additional configurations for Registered Product* page, under *Registered Product User Status*, click the *Maintain Registered Product User Status* link.

On the *Status Profiles* page, click *Add Row*, and then enter the required details such as staust profile name and description. Select the status profile, and in the *Assign User Status to Status Profile* section, define the user status.

6.3.1.9 Work with the Registered Products Involved Parties Tab

Use the *Involved Parties* tab to maintain detailed technician information for a specific or preferred technician, based on skill requirement, for the servicing of a registered product.

- You can maintain roles and party here. SAP provides some standard roles, but you can create custom roles and custom parties. Maintain it in a party determination schema as an administrative task.
- While creating a ticket for a registered product, party information such as Customer and Service Technician, is copied to the ticket from the registered product. For some parties the information is based on involved party determination rules defined for the ticket.

6.3.1.10 Configure Involved Parties for Registered Products

As an administrator, configure involved parties for registered products using the fine-tuning activity.

Using the *Involved Parties for Registered Product, Installed Base and Installation Points* fine-tuning activity, you can decide the party roles that you want to use in your application. However, you cannot deactivate the party roles that are set as mandatory by default.

> **Note**
>
> The party roles that you add using this fine-tuning activity are also applied to installed base and installation points.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *Involved Parties for Registered Product, Installed Base and Installation Points*.

On the *Involved Parties for Registered Product, Installed Base and Installation Points* page, click *Add Row*, and select the party role that you want to add.

6.3.1.11 Manage the Items Hierarchy List of Registered Products

Registered product items are visible in a hierarchical list. You can add new or existing registered products at different levels in this list.

For registered product items, using the *Move* and *Remove* actions, update multiple records as the actions affect the selected item and its associated items. Therefore, updating more than 50 items using the actions from the UI affects performance.

> → Tip
>
> The administrator should trigger this action via Migration Workbench or Mass Data Maintenance in Business Configuration to perform the move or remove actions.

Actions such as *Locate* and *New Ticket*, available in the installed base items list, are not available in the registered product items hierarchy list.

6.3.1.12 View Associated Tickets for Registered Products

The *Tickets* tab displays all the associated tickets for a registered product.

In the *Tickets* tab, the *Tickets* query displays all the relevant tickets of the registered product; the *Irrelevant Tickets* query displays the irrelevant tickets of the registered product.

A service technician can open a ticket from the tab and view the work details. This tab is also useful to keep a track of the history of tickets for a registered product. This information helps the technician provide better service based on the information available for the registered products.

Use the tab when a technician is at a site for a service, and gets a request to service additional registered products at the same location. The technician can create a new ticket from this tab. The new ticket automatically populates all the customer information. The technician has to provide only the description or a specific information related to the service.

6.3.1.13 Work with Attachments and Changes in Registered Products

The *Attachments* and *Changes* tabs for registered products have standard functionalities.

Attachments Tab

You can work with standard attachments. Custom document types are also supported for registered products.

Changes Tab

You can track and view all updates and changes made to a registered product in this tab.

> **Note**
>
> Changes made to notes and attachments are not displayed.

6.3.1.14 Configure Custom Attachment Types for Registered Products

As an administrator, you can define custom document types for attachments for registered products.

Context

The *Attachment* tab, due to a backend change in the registered product attachments, may require an adoption task to enable this feature for your users.

Procedure

1. Navigate to *Business Configuration* > *Overview*.
2. Search for *All Configuration Elements* > *Customer-Defined Document Types For Attachments*.
3. Open *Customer-Defined Document Types For Attachments* and select each *Document Type Code*. Under the *Usage* section, verify if *Registered Product (Obsolete)* is selected.
4. If *Registered Product (Obsolete)* is selected, deselect it, and then select *Installation Point/Registered Product*.

5. Click *Save*. Your users can now create attachments of custom document types in registered products.

6.3.1.15 Replicate Attributes for Registered Products

Replicate classification data (Attributes) for registered products.

You can replicate equipment classification for a registered product from SAP ERP to the solution. The *Attributes* tab displays the classification data, including attributes and sets that are replicated from SAP ERP.

> **i Note**
>
> Replicate the attribute sets and attributes first. These attributes are different from the measurement attributes.

Search Using Attributes

You can also search for registered products based on attribute information. Navigate to the registered product list and display the *Advanced Search*. Under the *General Data* section, click the *Maintain Conditions* link and enter search details.

Related Information

Replicate Equipment as Registered Products [page 204]
You can replicate equipment from SAP ERP to SAP Cloud for Customer as registered products.

6.3.1.16 Use Registered Product Categories

A personalized field that is enabled by your administrator.

If serial ID for a specific registered product category is marked as optional, then you can create registered products without serial IDs under that category. Therefore, products from SAP ERP that do not have a serial ID, can also be replicated. This feature of an optional serial ID can be used with or without SAP ERP integration.

The following is a default function of this feature, when creating a registered product:

- Registered Product Category = blank
- Serial ID = mandatory

6.3.1.17 Configure Registered Product Categories

As an administrator, configure registered product categories using the fine-tuning activity.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *Additional configurations for Registered Product*.

On the *Additional configurations for Registered Product* page, under *Registered Product Categories*, click the *Maintain Registered Product Categories* link.

On the *Registered Product Categories* page, under *Create or Delete Registered Product Category*, click *Add*. Enter the required details, such as the name of the registered product category and its description.

Mark the Serial ID Field as Optional

When you create a registered product category, by default, the *Serial ID* field is mandatory. However, you can mark this field as optional for a specific registered product category.

Marking the *Serial ID* field optional enables replication of equipment from ERP that does not have a Serial ID. However, for a successful replication, make sure that code list mapping of the equipment is maintained in ERP.

To mark the *Serial ID* field as optional, follow these steps:

1. While you add a registered product category, select the *Serial ID Optional* checkbox.
2. Click *Save*.

6.3.1.18 Assign Measurement Logs to Registered Products

Assign one or more measurement logs to a registered product. Capture measurement readings throughout product life cycle.

- Configure list of attributes based on which readings are recorded
- Record multiple readings for each of these attributes from registered products

6.3.1.19 Configure Attributes for Measurements

Create a list of attributes for registered products on which readings will be recorded.

Context

Procedure

1. Go to *Administrator* > *Service and Social* > *Measurements and Maintenance* > *Configure Measurement Attributes*.
2. Add and configure attributes.

6.3.1.20 Create Workflow Rules for Registered Products

As an administrator, create workflow rules for registered products. To create workflow rules, you must have access to the *Workflow* work center.

Workflow Rules for Registered Products

To create a new workflow rule for a registered product, do the following:

1. Navigate to *Administrator* › *Workflow Rules* › *New*.
2. On the *New Rule* page, in the *Enter Basic Data* tab, do the following:
    - Add a description.
    - Select the *Installation Point/Registered Product* business object value.
3. In the *Define Conditions* tab, define the rule conditions including extension fields: Sales Territory and Service Territory.
4. In the *Define Actions* tab, select the rule type. The following rule types are supported:
    - E-mail
    - Notification
    - Field Update - This rule type is supported only for the extension fields, Sales Territory, and Service Territory.
5. Review and confirm the rule.

Related Information

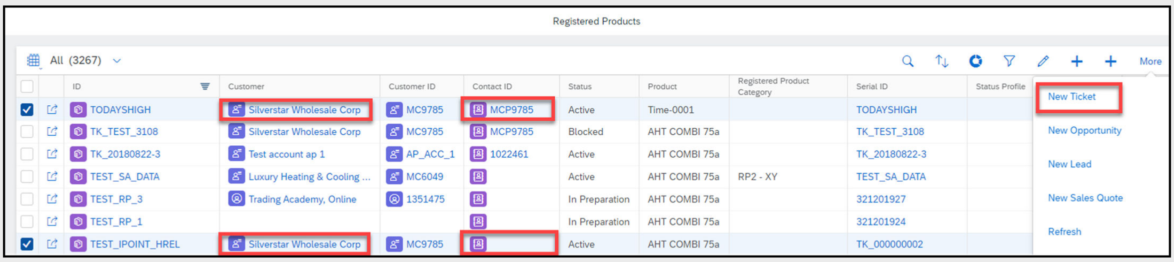
[Workflows [page 1069]](#)
Learn how you can use workflows to support your business processes.

6.3.1.21 Create Ticket for Multiple Registered Products

Create a ticket for multiple registered products, so you don't have to add the registered products to the created ticket one by one.

In the *Registered Products* worklist, select the registered products of the same customer and contact with the *Active* status. Then choose *New Ticket* from the action menu to create a ticket for all the selected registered products. All the selected registered products are added to the Products tab of the ticket.

> **Note**
>
> You can create a ticket for multiple active registered products of the same customer but without any contacts, as long as there's no more than one contact for these registered products.



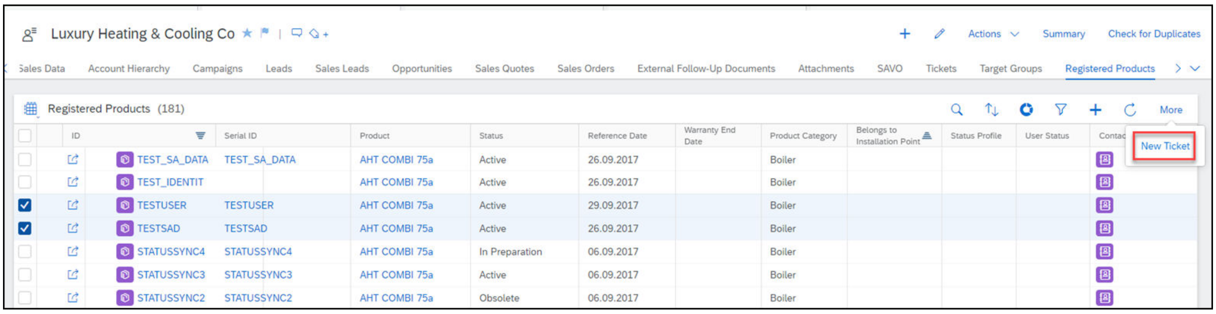
6.3.1.22 Create Ticket for Registered Products in Accounts, Individual Customers, or Contacts

You can create tickets directly from the *Registered Product* tab in the details view of an account, individual customer, or contact.

This enables you to create tickets for registered products right after identifying the customer in Accounts, Individual Customers, or Contacts.

You can create a ticket for multiple registered products at the same time.

In the *Registered Products* tab of the details view of an account, individual customer, or contact, select the registered products of the same customer or contact with the Active status. Then choose *New Ticket* from the action menu to create a ticket for all the selected registered products.



6.3.2 Get Information for Registered Products

You can get information for registered products by using reports and tracking your regictered products.

Use Reports for Registered Products

You can create reports for registered products using the installation point data source. For example, you can get a list of all registered products for a specific customer or based on the status of registered products.

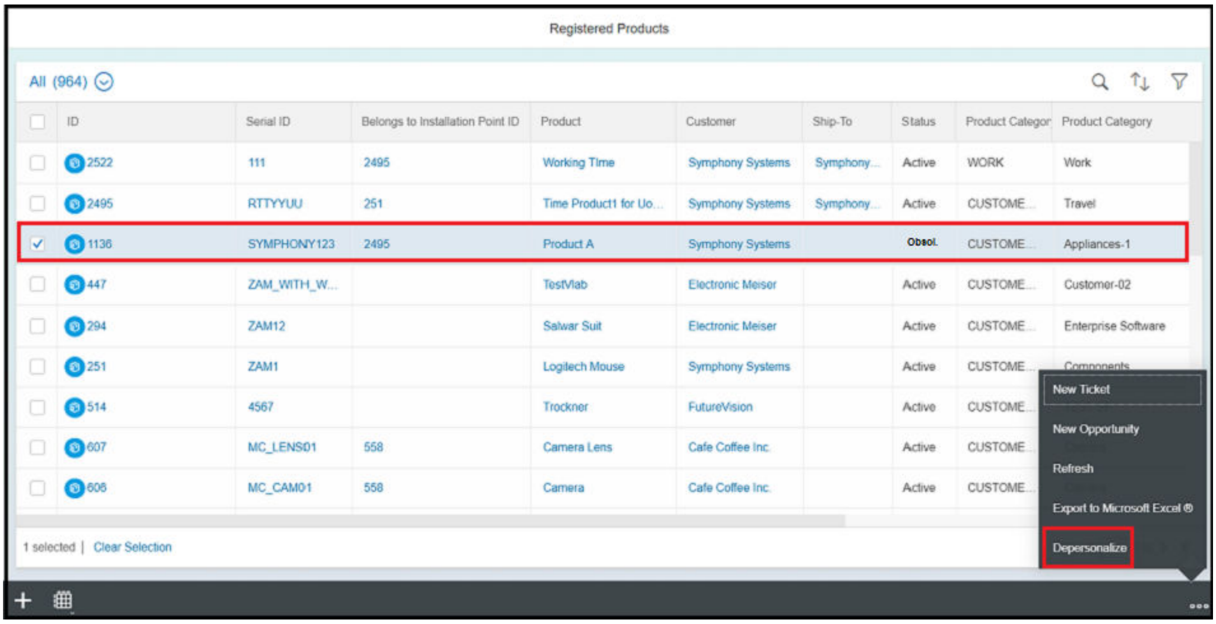
Track Registered Products

The following features help you to track your registered products:

- Generate a PDF for a registered product using the Equipment 360° view
- Download registered product repair history to an MS Excel® spreadsheet file. The repair history helps the service technician to get an overview of the registered product and the performed repair.
- View additional default queries in registered products (my registered products, registered products of my team, and so on)
- View a list of all contracts in which the registered product is a covered item
- View a list of all maintenance plans in which a registered product is a maintenance item

6.3.3 Remove Personal Data in Registered Products

Use *Depersonalize* in *Registered Products* to remove personal data from obsolete registered products.



Depersonalization is available only to users with access to the *Data Protection and Privacy* work center.

When you depersonalize data in *Registered Products*, the information related to creation of the data is removed. The change-related fields display the details of the user who initiated the depersonalization and the date on which it was initiated. The following details are also deleted from the system:

- Involved parties
- Address
- Notes and customer information
- Attachments
- Created by
- Created by of measurement logs (if any)
- Created by of measurement readings (if any)

The registered product items are not depersonalized automatically.

> **i Note**
>
> From the UI, you cannot select more than 10 registered product records for depersonalization. However, if you use the OData service to depersonalize, you can select any number of records at a time.

Related Information

Personal Data Protection and Privacy

6.3.4 Use Registered Products in Service

Know more about the functionalities that help you to use the **Registered Products** feature in **Service**.

6.3.4.1 Create Tickets for Registered Products

A typical scenario depicts a customer call to set up servicing for a registered product.

Click *New Ticket* from the side panel to create a ticket for setting up a service appointment. You can search for the registered product by the customer name or by the unique serial ID for the registered product.

When creating a ticket from the registered product UI, information maintained in various tabs of the registered product gets populated into the new ticket fields.

Under the product section of a ticket, you can see the following:

- Product details
- Serial ID
- Installation point ID (the unique ID for the registered product)

> **i Note**
>
> A registered product is an installation point of category *Registered Product*.

6.3.4.2 Add Registered Products to Contracts

A contract is a legally binding service agreement between parties stating their respective obligations and responsibilities.

When you create a contract, you can add registered products (or covered objects) in the contract from here. On the Registered Products user interface, you can see all the contracts and details of that contract associated for a registered product.

A contract provides all the required information, such as subject matter of contract, registered products (or covered objects), signature date and validity period, in one place.

6.3.4.3 Assign Measurement Log to Registered Products and Record Readings

Assign measurement logs (using measurement attributes) to a registered product and record readings for the logs. These logs form the basis for condition evaluation in maintenance plan.

This feature is useful for scenarios where an action is based on a reading. The **Measurements** tab maintains the reading types (or measurement logs) and its corresponding readings.

To maintain measurement readings, follow these steps:

1. Maintain measurement logs.

   > Example
   >
   > You can create a log named Odometer Reading by using the **Distance Traveled** measurement attribute. Multiple measurement logs can be maintained for a registered product.

2. Maintain readings. You can maintain multiple readings for a measurement log.

   > Example
   >
   > After servicing the car, the technician can maintain the odometer reading along with the date on which this reading was taken.

   > Note
   >
   > Before the May 2020 release, measurement logs set as a counter can only increase in value with time. Validation is based on the reading value and *Measured On* time stamp. After May 2020, the solution allows saving a measurement value equal to the last value. This enhancement is also available when working offline.

Measurement Log Template

Measurement log templates enable you to define common measurement attributes at the product level. The templates are inherited for each registered product created as reference of the product.

Let's take a common use case scenario to describe why we would maintain measurement parameters for a registered product.

> Example
>
> When multiple coffee machines are sold to a company, you can maintain measurement attributes for all the coffee machines. You can use the *Measurement Log Template* under the *Products* tab to maintain the attributes. When a registered product is created from this product, the measurement log maintained in the measurement log template automatically carries over to the registered product. The log template helps a technician has to service more than one coffee machine at a site. The technician can create a new reading log for each machine using the *Measurements* tab.

Track Changes for Measurement Logs and Measurement Readings

To track the changes made to measurement logs and measurement readings, go to the *Changes* tab in the Registered Product detail view.

The *Attribute* drop-down menu under the *Changes* tab provides you the values for filtering using which you can see the details about Create, Update, and Delete for both Measurement Logs and Measurement Readings of a registered product.

6.3.4.4 Add Registered Products to Maintenance Plans

Plan for periodic maintenance of registered products by adding them as maintenance items in the maintenance plan.

A maintenance plan consists of maintenance items, also known as registered products, for which rules can be set. Based on the set parameters, when the conditions are met, the system creates tickets automatically for scheduling maintenance service for a registered product.

You can do the following from a maintenance plan for a registered product:

- View list of all maintenance plans in which a registered product is a maintenance item.
- Display *Last Maintenance Date* for a registered product when the maintenance ticket is completed.
  - To view the last maintenance date field, open a registered product and navigate to *Maintenance Plans* tab and select a maintenance plan.
- From the maintenance plan UI, add registered products in bulk to a maintenance plan asynchronously as a background job. You can view the following:
  - A message indicating the bulk addition.
  - The list of added items (after you refresh the page).
  - Logs for this action in the *Maintenance Items Logs* tab.

6.3.4.5 Modify Installed Base for Registered Products

From the installed base section on registered product overview, you can add or replace an installed base for a registered product that is in *Active* or *In Preparation* status.

To add or replace an installed base, do the following:

1. Select the *Active* or *In Preparation* registered product for which you want to make the changes.
2. In the *Overview* tab, click *Edit*.
3. In the *Installed Base* section, from *Value Selection*, select the installed base that you want to add.
4. Click *Save*.

6.3.5 Use Registered Products in Sales

Learn about creating an opportunity for a registered product, creating registered products from an account, and creating a survey based on the registered products for a specific account.

6.3.5.1 Create Opportunities from Registered Products

Create opportunities from registered products using the *Opportunities* tab of a registered product or using the *Registered Products* tab when you select multiple products.

This feature allows you to create opportunities more easily when increasing your line of business from existing products.

Create an Opportunity from one Registered Product

From an open registered product, select the *Opportunities* tab then select *New* to begin creating the opportunity. When the opportunity quick create window opens, the serial ID and the customer fields auto populate for the registered product you selected. You can then add any other details for the new opportunity.

Create an Opportunity from Multiple Registered Products

To create a new opportunity with multiple registered products, follow these steps:

1. Log on to the system as the administrator and navigate to *Registered Product* tab.
2. From the displayed registered product list, select the row for which you want to create an opportunity.
3. Click the *Actions* icon and select *New Opportunity*.
4. On the *New Opportunity* screen, enter the required details.
5. Save the entries. If you select *Save and Open*, the *Opportunity Overview* tab is displayed.

6.3.5.2 Create Registered Products from Accounts

Create registered products directly from a customer account.

To create registered products from a customer account, follow these steps:

1. Navigate to *Customers* > *Accounts*.
2. Select the account for which you want to register a product.
3. Navigate to the *Registered Product* tab and click *New* to add a new registered product to the account.

6.3.5.3 Registered Product Surveys

Create a survey based on the registered products for a specific account.

To collect information regarding products that have been installed at a specific account, use a registered product survey.

Create a registered product survey like regular product survey, but without adding products to it. Instead, when you assign a survey to a visit, it automatically includes the registered products that have been set for the assigned account.

Related Information

Product Surveys [page 1095]
Use product surveys to collect data about products.

Visits

6.4 Search Registered Products

Search for registered products using various criteria.

Basic Search in Registered Products [page 202]
On the *Registered Products* lists screen, the basic search supports searching with the following fields:

Enterprise Search for Registered Products [page 203]
Search for registered products within the solution.

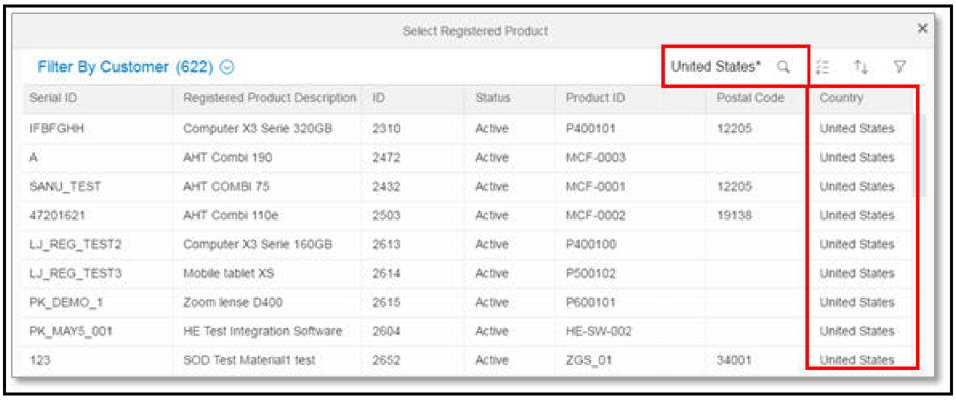
Search for Registered Products Using the Serial ID and Installation Point Value Help [page 203]
Search for registered products using the *Serial ID* value help and *Installation Point* value help in scenarios such as creating a new ticket or adding a new covered object in contracts.

6.4.1 Basic Search in Registered Products

On the *Registered Products* lists screen, the basic search supports searching with the following fields:

- Description
- Reference Product Description
- Serial ID
- Customer
- Contact
- Country
- Postal Code
- City
- Street

> **Note**
> Fields such as Contract, Country, Postal Code, City, and Street in the Serial ID value help are personalization hidden and can be enabled as required.



Select Registered Product

Filter By Customer (622)

United States*

Serial ID	Registered Product Description	ID	Status	Product ID	Postal Code	Country
IFBFGHH	Computer X3 Serie 320GB	2310	Active	P400101	12205	United States
A	AHT Combi 190	2472	Active	MCF-0003		United States
SANU_TEST	AHT COMBI 75	2432	Active	MCF-0001	12205	United States
47201621	AHT Combi 110e	2503	Active	MCF-0002	19138	United States
LJ_REG_TEST2	Computer X3 Serie 160GB	2613	Active	P400100		United States
LJ_REG_TEST3	Mobile tablet XS	2614	Active	P500102		United States
PK_DEMO_1	Zoom lense D400	2615	Active	P600101		United States
PK_MAY5_001	HE Test Integration Software	2604	Active	HE-SW-002		United States
123	SOD Test Material1 test	2652	Active	ZGS_01	34001	United States

Using *Search*, with the type ahead feature, in an input field (with value help) displays search results based on the supported fields in the basic search of that value help.

6.4.2 Enterprise Search for Registered Products

Search for registered products within the solution.

You can search for a registered product using the following search criteria:

- Registered Product ID
- External ID
- Registered Product Category
- Sales Territory
- Service territory
- Country
- State
- Postal Code
- City

6.4.3 Search for Registered Products Using the Serial ID and Installation Point Value Help

Search for registered products using the *Serial ID* value help and *Installation Point* value help in scenarios such as creating a new ticket or adding a new covered object in contracts.

A serial ID is not a unique field by itself—only a combination of product and serial ID is unique. Therefore, it is possible that duplicate serial IDs exist. If you select a duplicate serial ID, a message indicating to enter a product appears. In such cases, you can do one of the following:

- Enter the product and then select the serial ID
- Use the *Installation Point* value help as it is possible to identify a unique record. In the *Installation Point* value help, you can search by the serial ID as well.

6.5 Replicate Equipment as Registered Products

You can replicate equipment from SAP ERP to SAP Cloud for Customer as registered products.

The SAP ERP equipment replication allows only a unidirectional replication.

SAP ERP Equipment Replication

An SAP ERP equipment is mapped to the registered product in SAP Cloud for Customer. The *Equipment ID* field, maintained in SAP ERP is replicated to the *External ID* field in the solution.

Information replicated from SAP ERP include customer and location details, sales and distribution, user status, involved parties and warranty dates.

SAP ERP Warranty Dates Replication

If SAP ERP integration is enabled, the warranty dates maintained for the equipment in SAP ERP is replicated to SAP Cloud for Customer warranty dates.

If the warranty ID for equipment is maintained in SAP ERP, it is replicated to the *External Warranty ID* field in the solution.

Use SAP ERP Warranty in SAP Cloud for Customer Work Ticket

View the SAP ERP *Warranty* associated to the SAP Cloud for Customer *Warranty* in its master data.

Clearly identify any missing warranty claims in a customer ticketing process with a *Registered Product* due to missing mapping between its SAP ERP *Warranty* and a SAP Cloud for Customer *Warranty*.

Update Relationship Between Equipment

You can change the relationship between equipment during SAP ERP replication, irrespective of the status of the parent or child entity. For example, an equipment E1 is in blocked status, and a new (or existing) equipment E2 is added under E1 in SAP ERP. This change gets replicated toSAP Cloud for Customer.

> **i Note**
>
> From the UI, you cannot assign an equipment to another, when either is in blocked or obsolete status.

Replicate an Equipment Without a Customer

You can replicate an equipment without a customer, from SAP ERP to SAP Cloud for Customer.

> i Note
>
> When changes are made in the SAP Cloud for Customer UI, you cannot create a registered product without a customer. Additionally, if you make any changes to the registered product (that was replicated from SAP ERP without a customer), you cannot save the registered product without a customer.

Replicate Registered Product or Installation Point With Inactive Involved Parties

You can now replicate equipment with inactive involved parties from external systems to SAP Cloud for Customer. This feature supports both registered product and installation point and can be applicable for SAP ERP and SAP S/4HANA On Premise.

You can replicate equipment even when parties like *Sold-to*, *Ship-to* are inactive in SAP Cloud for Customer, and can save Monitoring and error handling effort with interface.

> i Note
>
> The parent question installation point/registered product replication needs to be in scope.
>
> UI still doesn't allow inactive parties.

Update Registered Products Fields

If a user changes the data of an inactive equipment in SAP ERP, the change gets replicated to SAP Cloud for Customer. This behavior is supported for changes to reference material of equipment as well. This is applicable only for an SAP ERP replication scenario.

> i Note
>
> Similar updates are not possible within the solution from the UI or Migration Work Bench.

You can update the fields, listed in the following table, when replicating a registered product from SAP ERP, even if the registered product is in blocked or obsolete status:

- Serial ID
- Reference Product
- Registered Product Category
- Description
- Status
- Status Profile
- User Status
- Involved Parties (all role code)
- Reference Data
- Address Fields
- Warranty
- External Warranty ID
- Sales Organization
- Distribution Channel
- Division
- Sales Office
- Sales Group
- Notes
- Customer Information

Example

A registered product in SAP Cloud for Customer is replicated from SAP ERP, and is in blocked status. Change or update the description, material, or serial number in the corresponding equipment in SAP ERP, which is in inactive status. The changes in SAP ERP trigger update to the description, product, or serial ID of the same Registered Product in SAP Cloud for Customer.

Note

You can replicate registered product data to an external system using either the ID, Registered Product ID, or Serial ID by following *Administrator* > *Extract Data to External System* > *Replicate Registered Product*

6.6 Offline Features for Registered Products

The *Registered Products* feature is available in offline mode with limited functionalities. Learn more about them in the following sections.

6.6.1 Offline Capabilities and Limitations for Registered Products

This topic describes the supported features and limitations for registered products in offline mode.

Offline Capabilities for Registered Products

Here is the list of objects supported in offline mode.

Note

Not all the validations/determinations available online is available offline.

Tab	Section	Field	Create	Display	Edit (can edit directly via actions/navi-gation)
Registered Product* *Objects have restrictions or some tabs missing	Overview		Y	Y	Y
	Involved Party		Y	Y	Y
	List Overview			Y	
	List (Advanced Search)			Y	Y
	Quick Create		Y	Y	
	Actions			Y	Y
	Items			Y	
	Tickets			Y	
	Contracts			Y	
	Attachments		Y	Y	
	Attributes			Y	Y

Available Offline Actions

Tab/Global	Section	Action	Offline Availability
Registered Product		Activate	Y
		Block	Y
		Obsolete	Y
	Items	Activate	Y
		Block	Y
		Obsolete	Y
		Delete	Y
		Add New Registered Product	Y

Tab/Global	Section	Action	Offline Availability
	List	Create New Ticket	Y

Offline Limitations for Registered Products

- *Warranty*, *Sales & Distribution*, and *User Status* sections on the *Overview* tab is unavailable.
- Address determination is unavailable.
- *Registered Product Summary* (PDF Preview) is unavailable.
- *Add Maintenance Plan* action is unavailable.
- *Update Product Location* action is unavailable.
- Mutlilanguage support for *Registered Product* notes is not supported offline.
- Personalized queries for *Registered Products* are not supported for offline data download.
- On *Registered Product* > *Tickets* tab, the *Create New Ticket* option is not supported offline.
- New Opportunity action is unavailable.
- Personalization done in online mode using Customer/Ship-to ID field in Advanced Find Form (Advanced Search) of Installation Point and Serial ID Value Helps does not work offline.
- Technical ID may be visible in Customer/Ship-to fields in Advanced Find Form (Advanced Search) of Installation Point and Serial ID Value Helps offline. On choosing another party in the Value Help, the ID displays.
- *Reported On Date* in the Tickets tab of registered product is not available in offline mode.
- The *Status Profile* and *User Status* are not available in quick create and the Items tab of registered product in offline mode.
- Update the reference product of the registered product is not supported in offline mode.
- Create ticket for mulitple registered product is not supported in offline mode.

List

- *My Queries* based on team / territory is unavailable.
- Export to excel is unavailable.
- *Advanced Search* for *Warranty* and *Service Technician* fields is unavailable.

Items

- Actions for adding existing registered product are unavailable.
- Actions for creating follow-up service tickets are unavailable.
- *Registered Product Items Hierarchical List* is not supported offline. A flat list displays offline.

6.6.2 Download Associated Registered Products

When you download accounts to your device in offline mode, the associated registered products can be downloaded to your offline device.

Your administrator must set up the relevant offline data download rules.

6.7 Registered Products FAQs

This section provides you with solutions to some commonly asked questions.

6.7.1 Can I edit a status profile?

You cannot edit the status profile field after you update the status profile information and save the registered product. However, you can change its user status.

6.7.2 What is the role of registered products in tickets?

The registered product information helps the service agent to identify the customer product, location, and any associated warranty that is crucial for the service process and reporting purposes.

As a service agent, you can create and ticket from the registered product UI. Also, while creating a ticket you can search for a registered product and add it to the ticket.

Based on the configuration settings, some of the information maintained in the registered product such as location or party information, are carried over to the ticket.

6.7.3 How is warranty determined for registered products?

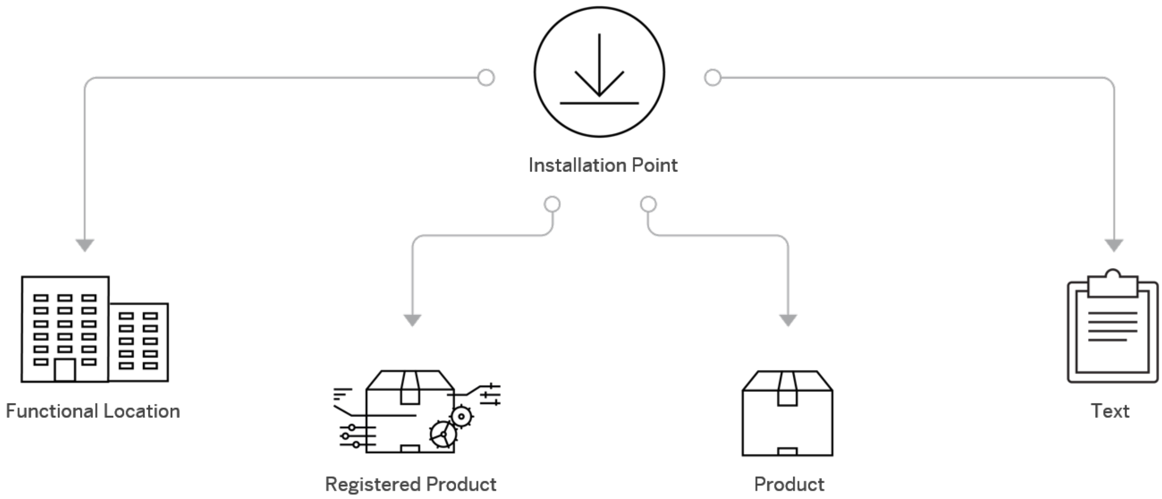
Warranty is assigned to a registered product. The start and end dates of the warranty coverage for a registered product gets determined based on its reference date. The reference date is the default start date and the warranty duration determines the end date.

7 Installation Points

An installation point is the physical location of the object that requires servicing or maintenance based on the service or maintenance plan for that object. It also consists of product and text information for an installation point.

It consists of these categories:

- Functional Location
- Product
- Text
- Registered Product



7.1 Scope and Configure Installation Points

Administrators can configure installation points using scoping, scoping questions, and fine-tuning activities.

> **i Note**
>
> Scoping questions and fine-tuning activities that are straightforward may not be included in this list.

7.1.1 Configure Additional Configurations for Functional Locations

As an administrator, allow additional configurations for functional locations to the scope of the project.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Service* > *Entitlement Management* > *Registered Products and Installed Base*. In the

Questions for Registered Products and Installed Base section, under the *Additional options for Registered Product, Installed Base and Installation Points* business option, select the scoping question: *You can maintain additional configurations for Functional Location/Registered Product*.

7.1.2 Configure Workflow Rules for Installation Points

Administrators can create workflow rules to send emails and notifications, or to update fields.

Context

To create workflow rules, you must have access to the *Workflow* work center.

To create a new workflow rule for an installation point, do the following:

Procedure

1. Navigate to *Administrator* › *Workflow Rules* › *New*.
2. On the *New Rule* page, in the *Enter Basic Data* tab, add a description and select the *Installation Point/ Registered Product* business object value.
3. In the *Define Conditions* tab, define the rule conditions.
4. In the *Define Actions* tab, select the rule type. The following rule types are supported:
    - E-mail
    - Notification
    - Field Update (Only extension fields, Sales Territory, and Service Territory are supported.)
5. Select a recipient. The available options are:
    - Employee Responsible
    - Contact Person of Customer
    - Owner
    - Service Technician
6. Review and confirm the rule.

Related Information

Workflows [page 1069]
Learn how you can use workflows to support your business processes.

7.1.3 Configure Involved Parties for Installation Points

Administrators can maintain involved parties for installation points by activating applicable party roles.

Using the *Involved Parties for Registered Product, Installed Base and Installation Points* fine-tuning activity, you can decide the party roles that you want to use in your application. However, you cannot deactivate the party roles that are set as mandatory by default.

> **Note**
>
> The party roles that you add using this fine-tuning activity are also applied to installed base and registered products.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *Involved Parties for Registered Product, Installed Base and Installation Points*.

On the *Involved Parties for Registered Product, Installed Base and Installation Points* page, choose *Add Row*, and select the party role that you want to add.

7.1.4 Enable Installation Points

As an administrator, enable the feature in the solution..

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Service* > *Entitlement Management* > *Registered Products and Installed Base*. From *Questions for Registered Products and Installed Base*, select the scoping question: *You can maintain Installed Bases and Installation Points*.

7.1.5 Use Data Workbench Service for Installation Points

Administrators can use the Data Workbench service to import, export, and update installation points data from SAP Cloud for Customer.

> **Note**
>
> For numeric installation point IDs, export on the *Belongs To Installation Point ID* field cannot be done using the *Starts With* option.

To learn more about Data Workbench service, view the SAP Cloud for Customer Data Workbench documentation in the SAP Cloud for Customer Help Center.

Related Information

Data Workbench

7.2 Create Installation Points

From the *Installation Point* tab, you can create a new installation point only with the category of functional location.

In addition to the common features, this category of installation point supports warranty, sales and distribution data, and replication from SAP ERP. The customer information and installed base sections are prepopulated when you create an installation point from an installed base.

Installation points that are categorized as registered products are only displayed in the *Registered Product* tab. You can assign a registered product to an installation point. You can also assign an existing registered product to a current installation point.

To assign an installation point, with product or text category, to an installed base, create the installation point from the *Installed Base*.

> **Note**
>
> You can add a functional location to an installed base using a migration template.

Enable Installation Points [page 213]
As an administrator, enable the feature in the solution..

Configure Involved Parties for Installation Points [page 213]
Administrators can maintain involved parties for installation points by activating applicable party roles.

Configure Workflow Rules for Installation Points [page 214]
Administrators can create workflow rules to send emails and notifications, or to update fields.

Use Data Workbench Service for Installation Points [page 215]
Administrators can use the Data Workbench service to import, export, and update installation points data from SAP Cloud for Customer.

7.2.1 Enable Installation Points

As an administrator, enable the feature in the solution..

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Service* > *Entitlement Management* > *Registered Products and Installed Base*. From *Questions for Registered Products and Installed Base*, select the scoping question: *You can maintain Installed Bases and Installation Points*.

7.2.2 Configure Involved Parties for Installation Points

Administrators can maintain involved parties for installation points by activating applicable party roles.

Using the *Involved Parties for Registered Product, Installed Base and Installation Points* fine-tuning activity, you can decide the party roles that you want to use in your application. However, you cannot deactivate the party roles that are set as mandatory by default.

> **Note**
> The party roles that you add using this fine-tuning activity are also applied to installed base and registered products.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *Involved Parties for Registered Product, Installed Base and Installation Points*.

On the *Involved Parties for Registered Product, Installed Base and Installation Points* page, choose *Add Row*, and select the party role that you want to add.

7.2.3 Configure Workflow Rules for Installation Points

Administrators can create workflow rules to send emails and notifications, or to update fields.

Context

To create workflow rules, you must have access to the *Workflow* work center.

To create a new workflow rule for an installation point, do the following:

Procedure

1. Navigate to *Administrator* > *Workflow Rules* > *New*.
2. On the *New Rule* page, in the *Enter Basic Data* tab, add a description and select the *Installation Point/ Registered Product* business object value.
3. In the *Define Conditions* tab, define the rule conditions.
4. In the *Define Actions* tab, select the rule type. The following rule types are supported:
    - E-mail
    - Notification
    - Field Update (Only extension fields, Sales Territory, and Service Territory are supported.)
5. Select a recipient. The available options are:
    - Employee Responsible
    - Contact Person of Customer
    - Owner
    - Service Technician
6. Review and confirm the rule.

Related Information

Workflows [page 1069]
Learn how you can use workflows to support your business processes.

7.2.4 Use Data Workbench Service for Installation Points

Administrators can use the Data Workbench service to import, export, and update installation points data from SAP Cloud for Customer.

> **i Note**
>
> For numeric installation point IDs, export on the *Belongs To Installation Point ID* field cannot be done using the *Starts With* option.

To learn more about Data Workbench service, view the SAP Cloud for Customer Data Workbench documentation in the SAP Cloud for Customer Help Center.

Related Information

Data Workbench

7.3 Use Installation Points

Learn more about using the feature in the solution.

Work with Installation Points [page 215]
Know more about working with installation points.

Remove Personal Data in Installation Point [page 216]
Use *Depersonalize* in *Installation Points* to remove personal data from obsolete installation points.

7.3.1 Work with Installation Points

Know more about working with installation points.

7.3.1.1 Create Items for Installation Points

Items consist of objects that need servicing, maintenance, or repair. Items must be assigned to installation points in your SAP solution.

You can maintain the hierarchy structure of an installation point by creating a functional location and assigning items to it. You can maintain another functional location as the parent of an installation point using the *Belongs to Installation Point ID* field. You can also create a new functional location or registered product, or add an existing registered product as an item to the functional location.

The hierarchy view of the items is displayed in the *Items Hierarchy* tab of the *Installation Point* details view, but it's hidden by default. You need to set it visible through Adaptation.

> **i Note**
>
> If a functional location contains equipment, then that equipment also appears in the list on the *Items* tab.

7.3.1.2 Export Installation Points to Microsoft Excel File

Export all entries of installation points to a Microsoft Excel file.

In the *Installation Points* worklist, choose *Export to Microsoft Excel ®* from the action menu to export all entries of the installation points based on the query you choose.

7.3.1.3 View Associated Tickets for Installation Points

The *Tickets* tab displays all the associated tickets for an installation point.

In the *Tickets* tab, the *Tickets* query displays all the relevant tickets of the installation point; the *Irrelevant Tickets* query displays the irrelevant tickets of the installation point.

A service technician can open a ticket from the tab and view the work details. This tab is also useful to keep a track of the history of tickets for an installation point. This information helps the technician provide better service based on the information available for the installation points.

7.3.2 Remove Personal Data in Installation Point

Use *Depersonalize* in *Installation Points* to remove personal data from obsolete installation points.

Depersonalization is available only to users with access to the *Data Protection and Privacy* work center.

When you depersonalize data in *Installation Point*, the information related to creation of the data is removed. The change-related fields display the details of the user who initiated the depersonalization and the date on which it was initiated. The following details are also deleted from the system:

- Involved parties

- Address
- Notes
- Created By
- Attachments

The installation point items are not depersonalized automatically.

> **Note**
>
> From the UI, you cannot select more than 10 installation point records for depersonalization. However, if you use the OData service to depersonalize, you can select any number of records at a time.

Related Information

Personal Data Protection and Privacy

7.4 Search Installation Points

Search for installation points using various criteria.

On the *Installation Points* screen, the basic search supports searching with the following fields:

- ID
- Description (for all categories of installation Points)
- Serial ID
- External ID
- Address (Country, Region, City, Street, Postal Code, Building, House, Floor, Room)
- Customer
- Installed Base

7.5 Replicate Functional Location and Hierarchy to Installation Points

SAP ERP functional location is mapped to Installation Points (with functional location category) in SAP Cloud for Customer as they carry similar information.

When you replicate the functional location from SAP ERP, most of the party information relevant for installation point is replicated to SAP Cloud for Customer. The *Functional Location ID* maintained in SAP ERP is replicated to the *External ID* field in SAP Cloud for Customer.

i Note

Information for *Notes* and *Customer* displayed in SAP Cloud for Customer is replicated from SAP ERP as well.

When replicating a functional location with a hierarchy, the entire hierarchy tree is replicated. The *External ID* field in the *Items* tab indicates that the functional location has been replicated from SAP ERP.

Update Functional Location Changes to Installation Points [page 218]
SAP Cloud for Customer allows updates for the *Functional Location* fields irrespective of status, when a change is triggered in SAP ERP.

7.5.1 Update Functional Location Changes to Installation Points

SAP Cloud for Customer allows updates for the *Functional Location* fields irrespective of status, when a change is triggered in SAP ERP.

If you change the data of inactive equipment without changing the status, the change gets replicated to the SAP Cloud for Customer solution. This behavior is supported for changes to reference material of equipment as well. It is applicable only to the SAP ERP replication scenario.

i Note

Similar updates are not possible in the solution from the UI or the migration work bench.

You can update the following functional location fields when replicating functional location from SAP ERP, even if the functional location is in blocked or obsolete status:

- Status
- Status Profile
- User Status
- Parties (all role codes)
- Description
- Address Fields
- Customer Information

Example

A functional location in SAP Cloud for Customer is replicated from SAP ERP that is in blocked status. Change or update the description, material, or serial number in the corresponding equipment in SAP ERP, which is in inactive status. The changes in SAP ERP triggers update to the description, product, or serial ID of the same functional location in SAP Cloud for Customer.

7.5.1.1 Configure Additional Configurations for Functional Locations

As an administrator, allow additional configurations for functional locations to the scope of the project.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Service* > *Entitlement Management* > *Registered Products and Installed Base*. In the *Questions for Registered Products and Installed Base* section, under the *Additional options for Registered Product, Installed Base and Installation Points* business option, select the scoping question: *You can maintain additional configurations for Functional Location/Registered Product*.

7.6 Installation Points Offline

The *Installation Points* feature is available in offline mode with limited functionalities. Learn more about them in the following sections.

7.6.1 Offline Capabilities and Limitations for Installation Points

This topic presents an overview of supported features and limitations for installation points in offline mode.

Offline Capabilities for Installation Points

> **Note**
>
> Not all the validations/determinations available online are available offline.

Objects Supported in Offline Mode

Tab	Section	Field	Create	Display	Edit (can edit directly via actions/navigation)
Installation Points	Overview		Y	Y	Y
	Items		Y	Y	Y

Tab	Section	Field	Create	Display	Edit (can edit directly via actions/navi-gation)
		Add Item - New Functional Location	Y	Y	Y
		Add Item - New Registered Product	Y	Y	Y
	Involved Parties		Y	Y	Y

Available Offline Actions

Tab/Global	Section	Action	Offline Availability
Installation Point		Create a new functional location.	Y

Offline Limitations for Installation Points

- **List**
  - *My Queries* based on team/territory is unavailable.
  - Export to excel is unavailable.
  - *Advanced Search* for *Warranty* and *Service Technician* fields is unavailable.
  - Export installation point list to Microsoft Excel is not supported in offline mode.
  - *Reported On Date* in the Tickets tab of installed base is not available in offline mode.
- **Object**
  - *Warranty*, *Sales & Distribution*, and *User Status* sections on the *Overview* tab are unavailable.
  - Address determination is unavailable.
  - *Add Maintenance Plan* action is unavailable.
  - *Update Location From* action is unavailable.
  - Multilanguage support for *Installation Point* notes is not supported offline.
  - Personalized queries for *Installation Point* are not supported for offline data download.
  - *Belongs to Installation Point ID* is not editable.
  - On *Installation Point* > *Tickets* tab, the *Create New Ticket* option is not supported offline.
  - Personalization done in online mode using Customer/Ship-to ID field in Advanced Find Form (Advanced Search) of Installation Point and Serial ID Value Helps does not work offline.
  - Technical ID may be visible in Customer/Ship-to fields in Advanced Find Form (Advanced Search) of Installation Point and Serial ID Value Helps offline. On choosing another party in the Value Help, the ID displays.
  - Any other feature not mentioned in the supported list is unavailable.

    - The *Status Profile* and *User Status* are not available in quick create and the Items tab of installation point in offline mode.
- **Object Items**
    - Action for adding existing registered product is unavailable.

7.7 Installation Point FAQs

This section provides you with solutions to some commonly asked questions.

7.7.1 Is functional location equivalent to installed base?

No. In SAP Service Cloud, a functional location is an installation point of type *Functional Location* and is shown in the *Installation Point* UI.

7.7.2 What is the difference between installed base and installation point?

Installed base management enables you to maintain a hierarchical representation of items installed at customer sites. The items contained within are installation points with various installation points types such as registered product, products, text, and functional location.

7.7.3 How can I indicate that an installation point is related to another installation point?

The *Belongs to Installation Point ID* field (if filled) indicates that the installation point is part of the structure (as a child) of another installation point (registered product or functional location).

This field is a hyperlink to open the parent installation point.

Example

Belongs to Installation Point ID for registered product Coffee Machine CM01 displays 21. When you click 21, the UI for Installation Point 21 is launched, which is a functional location Floor 1. The *Items* tab of Floor 1 shows CM01, which means that coffee machine CM01 is under Floor 1.

7.7.4 What is the difference between items in installation point and registered product?

Items in *Registered Product* display the included child items in a hierarchy, while in *Installation Point*, this is a flat list and only a single item level displays.

In SAP ERP, a functional location can have equipment and other functional locations included under its hierarchy. Similarly, equipment can have other equipments in a hierarchy under it too. This is supported in SAP Service Cloud.

A registered product can have other registered products as items and an installation point (functional location) can have other functional locations or registered products as items.

For a registered product scenario, where installed base is not scoped in, items can consist of registered products only.

For an installed base scenario, items such as registered products, products, and text can be added directly under a registered product in the installed base hierarchy.

7.7.5 Why can't I add a functional location as an item in the installed base?

The functional location is included as a separate entity that results from the replication from SAP ERP integration and can be created separately within the *Installation Point* tab. However, it cannot be added as an installed base item.

8 Installed Base

Installed base is a hierarchical arrangement of items installed at your customer's location.

In the *Installed Base* work center, you can do the following:

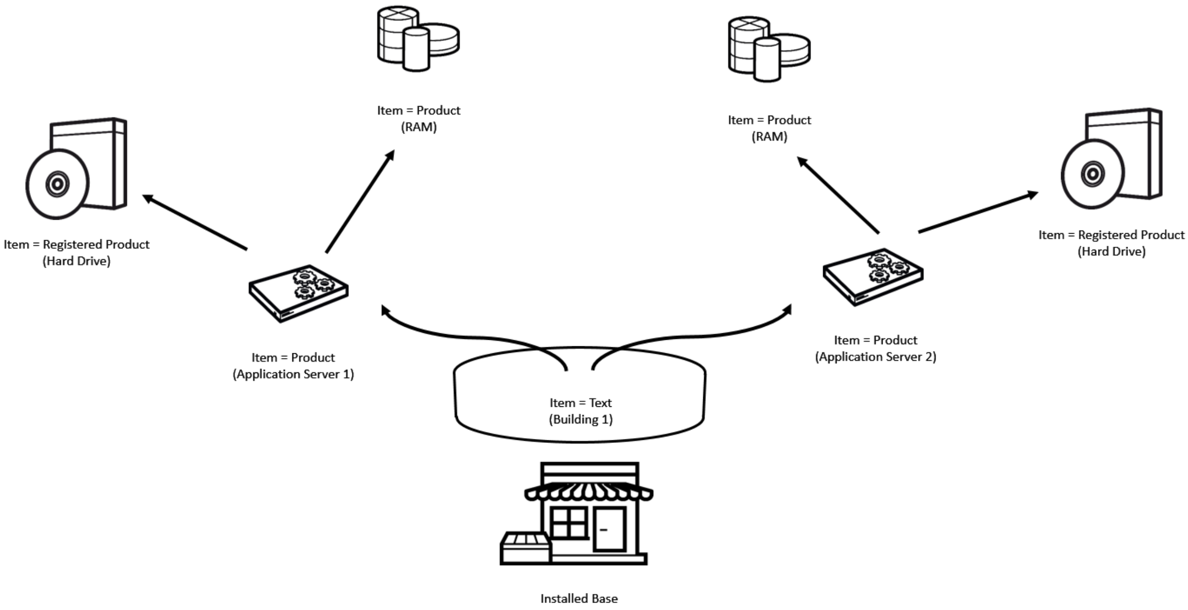
- View the list of maintained installed bases.
- Get information about customer, contact, location, and status, and access an installed base
- Create new installed bases

Certain information can be maintained at the installed base header level. For example, *Involved Parties*, *Attachments*, *Notes* and *Competitor Products*. The status of the installed base changes to *In Preparation* after it is saved.

Example

You can maintain an installed base for Company ABC where your servers are installed.

Here's an example of an Installed Base set up:



Here's what you can do with the Installed Base management feature:

- Create installed bases to track installed assets.
- Create a hierarchy of Installed Base items with any number of levels.
- Create a ticket with reference to an Installed Base or Installed Base item.
- Maintain competitor products for your Installed Base.
- Maintain involved parties for Installed Base or Installed Base items.

- Track changes, add attachments/notes, and create reports.
- Use the Installed Base and Installation Points (installed base items) migration templates for data load.

8.1 Scope and Configure Installed Base

Administrators can configure installed base using scoping, scoping questions, and fine-tuning activities.

> i Note
>
> Scoping questions and fine-tuning activities that are straightforward may not be included in this list.

8.1.1 Enable Installed Bases

As an administrator, enable the feature in the solution.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Service* > *Entitlement Management* > *Registered Products and Installed Base*. From *Questions for Registered Products and Installed Base*, select the scoping question: *You can maintain Installed Bases and Installation Points*.

> i Note
>
> When you select the *You can maintain Installed Bases and Installation Points* business option, the option for Registered Products (*You can manually register serialized products sold*) also gets selected.

8.1.2 Configure Involved Parties for Installed Base

As an administrator, configure involved parties for installed base using the fine-tuning activity.

Using the *Involved Parties for Registered Product, Installed Base and Installation Points* fine-tuning activity, you can decide the party roles that you want to use in your application. However, you cannot deactivate the party roles that are set as mandatory by default.

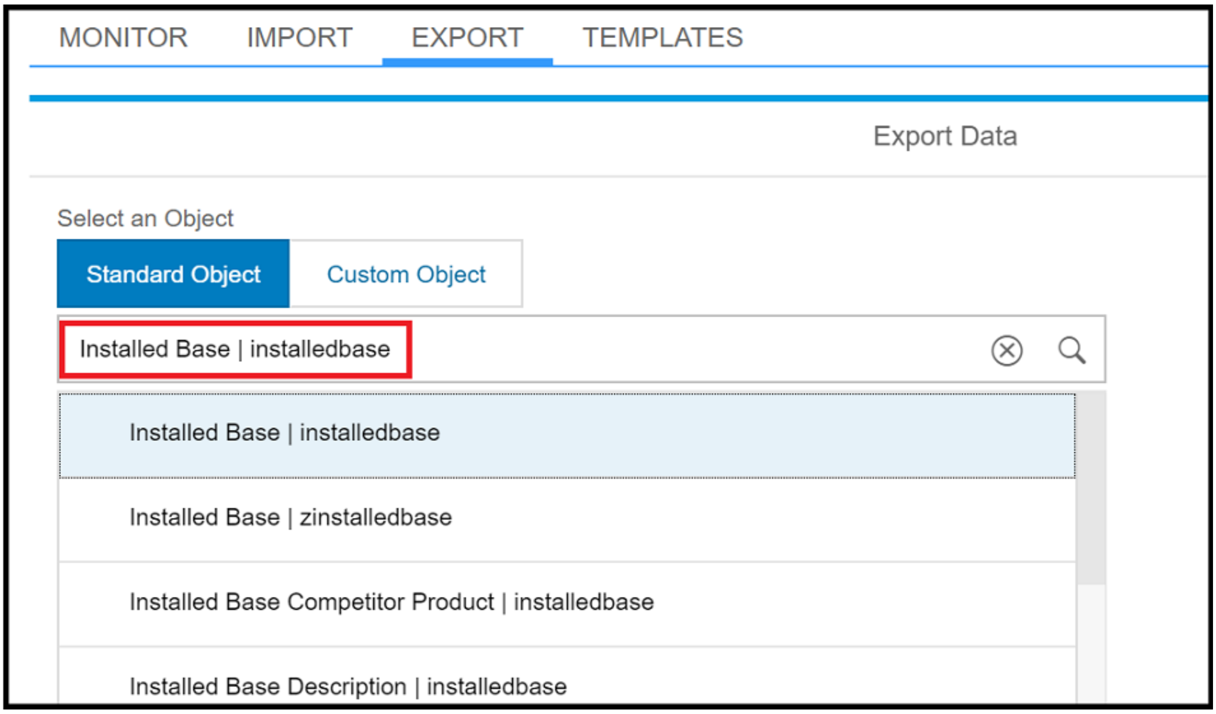
> i Note
>
> The party roles that you add using this fine-tuning activity are also applied to registered products and installation points.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *Involved Parties for Registered Product, Installed Base and Installation Points*.

On the *Involved Parties for Registered Product, Installed Base and Installation Points* page, click *Add Row*, and select the party role that you want to add..

8.1.3 Configure Migration of Installed Bases

As an administrator, use the Data Workbench service to import, export, and update installed base data (from SAP Cloud for Customer).



You can also use the Installed Base migration template to migrate installed bases to your system. Navigate to *Business Configuration* > *Overview*, and search for the *Migration of Installed Bases* activity.

8.1.4 Create Workflow Rules for Installed Base

Administrators can create workflow rules for installation base.

Context

To create workflow rules, you must have access to the *Workflow* work center.

Procedure

1. Navigate to *Administrator* > *Workflow Rules* > *New*.
2. On the *New Rule* page, in the *Enter Basic Data* tab, add a description and select the *Installed Base* business object value.

3. In the *Define Conditions* tab, define the rule conditions.
4. In the *Define Actions* tab, select the rule type. The following rule types are supported:
   - E-mail
   - Notification
   - Field Update (Only extension fields, Sales Territory, and Service Territory are supported.)
5. Select a recipient. The available options are:
   - Employee Responsible
   - Contact Person of Customer
   - Owner
   - Service Technician
6. Review and confirm the rule.

Related Information

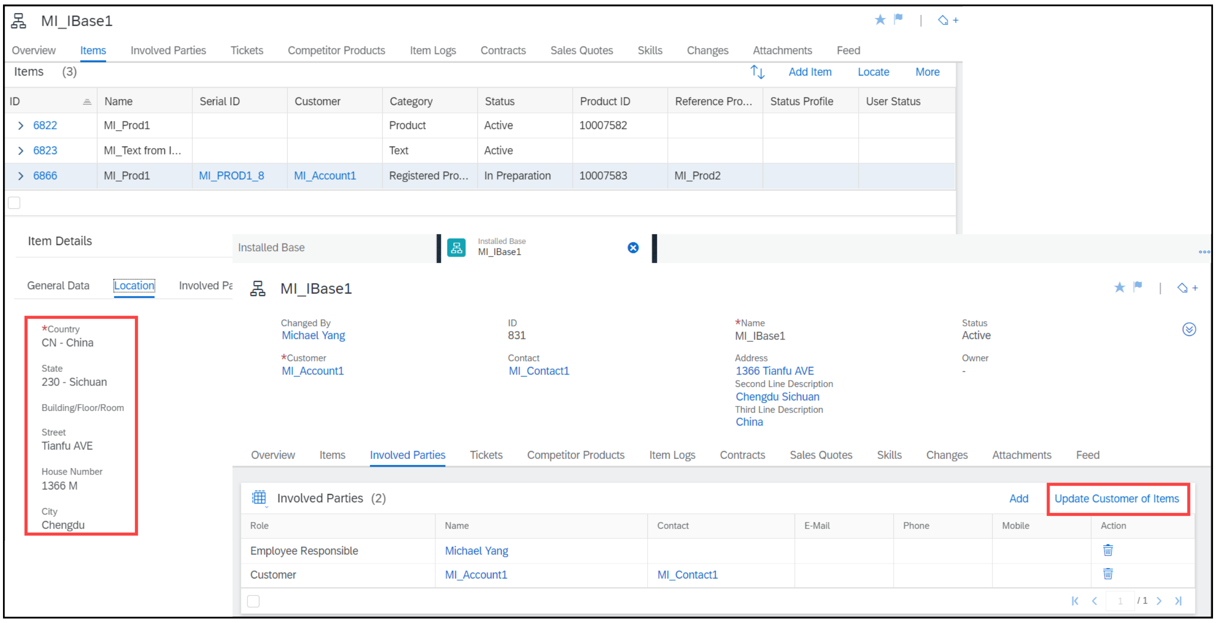
Workflows [page 1069]
Learn how you can use workflows to support your business processes.

8.1.5 Configure Auto-Update Location of Items Along with Customer of Items for Installed Base

As an administrator, you can configure whether to automatically update the location of an item when the customer of the item is updated in Installed Base.

To enable the auto-update, go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Service* > *Entitlement Management* > *Registered Products and Installed Base* and select the scoping question: *Automatically update location of Items when updating customer of items for Installed Base?*

- If the scoping question: *Functional Location/Registered Product uses customer address as the default location. Do you want to use the ship-to-party address instead?* is also checked, when you choose *Update Customer of Items*, the location of item is automatically updated to the ship-to-party main address of the item. In case ship-to-party is not maintained, location of the item is updated to empty.
- If the scoping question: *Functional Location/Registered Product uses customer address as the default location. Do you want to use the ship-to-party address instead?* is not checked, the location of item is automatically updated to the main address of the customer.



8.1.6 Configure Code List Restrictions for Installed Base

As an administrator, you can enable code list restrictions for the extension fields added in an installed base.

Context

To enable code list restrictions:

Procedure

1. Go to *Administrator* > *Code List Restrictions* and choose *Code List Restrictions*.
2. Choose *New*.
3. In the *BO* field, select *Installed Base* in the *BO* field.
4. Maintain restrictions for the extension field and then save your update.

8.2 Use Installed Base

Create a new installed base with nformation such as *Name*, *Customer*, and *Owner*.

Using the *Installed Base* functionality, you can:

- Maintain competitor products for your installed base
- Add notes and attachments
- Track history of changes
- Create tickets for installed base
- Associate installed base with contracts

Work with Installed Base [page 228]
Know more about viewing installed base details, working with involved parties, getting GPS coordinates for locations, and creating and viewing tickets for installed bases.

Work with the Installed Base Items [page 232]
An installed base item is an installation point of a specific category. The *Category* field differentiates types of items.

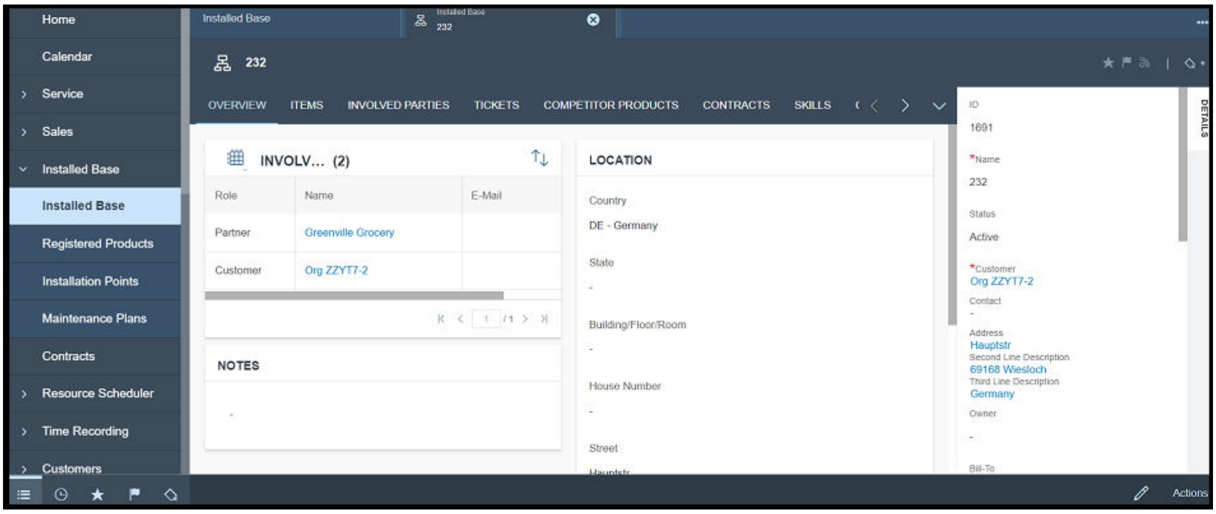
Remove Personal Data in Installed Base [page 237]
Use *Depersonalize* in *Installed Base* to remove personal data from obsolete installed bases.

8.2.1 Work with Installed Base

Know more about viewing installed base details, working with involved parties, getting GPS coordinates for locations, and creating and viewing tickets for installed bases.

8.2.1.1 View Installed Base Details

On the *Overview* tab, view the installed base details such as involved parties and location.



You can edit a customer and other related information here.

8.2.1.2 Work with Installed Base Involved Parties

The *Involved Party* section in the *Overview* tab displays the name of the customer associated with the installed base.

You can add an installed base to a specific item from here. You can also add an involved party from the items tab.

> **i Note**
>
> You can have only one involved party associated with one role.

The following involved parties are supported:

- Customer
- Owner
- Service Technician
- Service Technician team
- Bill-To
- Ship-To
- Payer

Using the *Involved Parties* tab you can maintain roles and party. SAP provides some standard roles, but you can create custom roles and custom parties. Maintain it in a party determination schema as an administrative task.

8.2.1.3 Configure Involved Parties for Installed Base

As an administrator, configure involved parties for installed base using the fine-tuning activity.

Using the *Involved Parties for Registered Product, Installed Base and Installation Points* fine-tuning activity, you can decide the party roles that you want to use in your application. However, you cannot deactivate the party roles that are set as mandatory by default.

> **i Note**
>
> The party roles that you add using this fine-tuning activity are also applied to registered products and installation points.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *Involved Parties for Registered Product, Installed Base and Installation Points*.

On the *Involved Parties for Registered Product, Installed Base and Installation Points* page, click *Add Row*, and select the party role that you want to add..

8.2.1.4 GPS Coordinates for Locations of Installed Bases

Geo location data of an installed base is inherited from the associated customer.

When you create an installed base and add a customer, the installed base inherits the customer address along with the latitude and longitude information. The address is then displayed as a hyperlink. Clicking the address link displays the location in a map.

8.2.1.5 View Associated Tickets for Installed Bases

In the *Tickets* tab, view a list of all tickets created for an installed base and its items.

In the *Tickets* tab, the *Tickets* query displays all the relevant tickets of the installed base; the *Irrelevant Tickets* query displays the irrelevant tickets of the installed base.

You can also create a new ticket for an installed base item (in *Active* status only). All associated installed base information is carried over to the new ticket.

You can also create a new ticket for an installed base and maintain competitor products for it. Select an item and choose *New Ticket* to create a ticket. The information about item, customer, service technician, and service technician team get copied over to the ticket.

> **i Note**
>
> By default, the location of an item is the location of the installed base, but it can be changed.

8.2.1.6 Maintain Competitor Products List for Installed Bases

Use the *Competitor Products* tab to add and maintain a list of competitor products for an installed base and keep track of all the competitor products.

Maintaining this information helps in sales-related decisions and in gathering various insights for use in analytics. Click the *Add* buttonto get a list of all competitor products maintained in the system. You can select the appropriate product and maintain a list on this screen for the selected installed base.

8.2.1.7 Add Installed Bases to Contracts

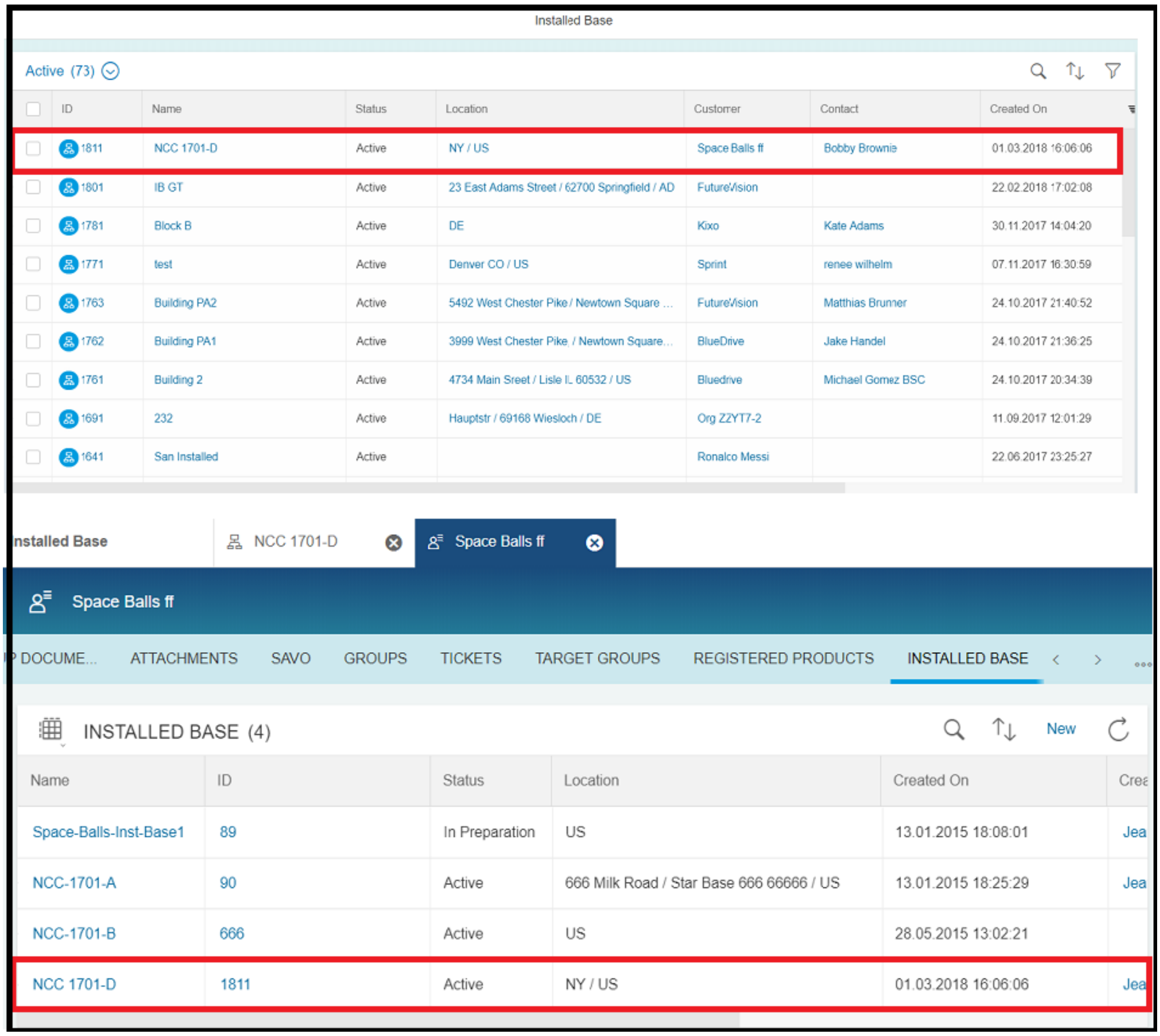
A contract is a legally binding service agreement between parties stating their respective obligations and responsibilities.

When you create a contract, you can add installed bases as covered objects in the contract. On the *Installed Base* user interface, you can see all the contracts associated with an installed base.

A contract provides all the required information, such as subject matter of contract, installed bases (or covered objects), signature date and validity period, in one place.

8.2.1.8 View Installed Bases for Accounts Added in any Role

The *Installed Base* tab on *Accounts* lists all the installed bases where an account is added in any role (including Z parties).



You can also view the list of installed bases where individual customers are added in any role.

8.2.1.9 Export Installed Bases to Microsoft Excel File

Export all entries of installed bases to a Microsoft Excel file.

In the *Installed Base* worklist, choose *Export to Microsoft Excel* ® from the action menu to export entries of installed bases based on the query you choose.

8.2.1.10 Create Workflow Rules for Installed Base

Administrators can create workflow rules for installation base.

Context

To create workflow rules, you must have access to the *Workflow* work center.

Procedure

1. Navigate to *Administrator* > *Workflow Rules* > *New*.
2. On the *New Rule* page, in the *Enter Basic Data* tab, add a description and select the *Installed Base* business object value.
3. In the *Define Conditions* tab, define the rule conditions.
4. In the *Define Actions* tab, select the rule type. The following rule types are supported:
   - E-mail
   - Notification
   - Field Update (Only extension fields, Sales Territory, and Service Territory are supported.)
5. Select a recipient. The available options are:
   - Employee Responsible
   - Contact Person of Customer
   - Owner
   - Service Technician
6. Review and confirm the rule.

Related Information

Workflows [page 1069]
Learn how you can use workflows to support your business processes.

8.2.2 Work with the Installed Base Items

An installed base item is an installation point of a specific category. The *Category* field differentiates types of items.

When you create an installed base and add items to it, the customer for that installed base gets copied over to the items. However, if you change the customer for that installed base, the customer for the related items will not get updated automatically. The items will still display the previous customer information. So if you want the customer associated with the items to be updated to the edited installed base customer as well, then navigate to the *Involved Parties* tab and select the *Update Customer of Items* button. This will update customer information for all items. The update occurs in the background. In case of any errors that result because of the update, you will see these listed in the *Items Log* tab.

You can choose if you want to update the customer information for all the items. Sometimes, the customer information for an installed base and that for the items is maintained separately. In that case, you can keep that information as is.

8.2.2.1 Add Installed Base Items

You can add three categories of items to an installed base.

- **Registered Product** - a unique instance of a product that generally has a serial ID. You can maintain a warranty for a registered product. One registered product can be part of only one installed base at a time.
- **Product** - an instance of a product.
- **Text** - a flexible category, which can represent, for example, a location or a grouping.

You can add a hierarchy of sub items under each of the displayed top level/line items. From the *Add Item* menu button, you can choose the category of items that you want to add.

Actions

Activate

After you create a new item, it acquires the *In Preparation* status by default. To enable ticket creation and other service-related activities, you have to select the item and choose *Activate*.

Block

In instances of an issue associated with an item, you might want to set a temporary pause to stop any work done on it—use *Block* to achieve this.

Obsolete

Use this option if an item isn't in use anymore.

Difference Between Delete and Remove

You can delete an item only when it is in *In Preparation* status. Deleting an item deletes the instance of that item that was created in the system. When you remove an item from the hierarchy, it gets delinked from that installed base. However, it doesn't get removed from the system. So, the standalone item continues to exist in the system. A search in the *Installation Point* tab displays that item.

> **i Note**
>
> Removing items with Product and Text categories as these are not useful as standalone items, unless they are part of an installed base. However, a Registered Product can exist as a standalone item as it has a lot of features associated with it.

New Ticket

You can also create a new ticket for an installed base item (in Active status only). All associated installed base information gets parsed to the new ticket.

> **Note**
>
> By default, the location of an item is the location of the installed base, but you can change this.

Using the *Move* and *Remove* actions can update multiple records as the actions affect the selected item and its sub items. Therefore, updating more than 50 items using the actions from the UI can affect performance.

> **→ Tip**
>
> The administrator should trigger these actions via *Migration Workbench* or *Mass Data Maintenance* in *Business Configuration*.

Item Details

This section displays details such as location, involved parties, and warranty parameters, of the selected line item.

In the *General Data* section, you can modify the following:

- For an item with category *Product*, you can edit the quantity.
- For an item with category *Registered Product*, you can edit the name field.
- Edit options for an item with category *Text* is unavailable.

You can edit *Location* information for products, registered products, and text item categories.

In the *Involved Parties* section, you can add an additional involved party to any item category.

The *Warranty* section displays associated warranty information for installed base items for registered product category only. You can edit this information here as well.

8.2.2.2 Locate Installed Base Items

Use *Locate* to search for an item in the hierarchical list.

All the items belonging to the selected installed base are displayed. You can search using the basic search or the advanced search to locate an item.

8.2.2.3 Move Installed Base Items

Move *Active* or *In Preparation* installed base items within the same or another installed base.

> **i Note**
>
> The option is disabled based on an item status. For example, you cannot move items that are in obsolete/blocked status.

You can move an item directly under the root of the target installed base or under any other item in the target installed base. If the selected item has further items under it, the item is moved with its entire hierarchy to the new installed base.

You can also move an item by using *Add Item* > *Existing Registered Products* in the *Items* tab. Selecting a registered product that is already assigned to another installed base moves the registered product to the current installed base.

8.2.2.4 Activate Installed Base Items in Bulk

Select an installed base item in the hierarchical list and click the *Activate Items* actions to mass activate the selected item and the items under it.

The items get activated irrespective of their statuses. The activation is carried out asynchronously in the background. To view the changes, close the *Installed Base* screen and open it again. Click the *Item Logs* tab to view the status of mass activation.

You can also mass activate all items using the *Actions* button. Select an installed base and then from the *Actions* button, click *Activate Items*.

> **i Note**
>
> Actions to activate items in bulk is available only in the online mode.

8.2.2.5 Block Installed Base Items in Bulk

Select an installed base item in the hierarchical list and click the *Block Items* actions to block the selected item and the items under it.

The items get blocked irrespective of their statuses. The activation is carried out asynchronously in the background. To view the changes, close the *Installed Base* screen and open it again. Click the *Item Logs* tab to view the status of mass activation.

> **i Note**
>
> Actions to block items in bulk is available only in the online mode.

8.2.2.6 Obsolete Installed Base Items in Bulk

Select an installed base item in the hierarchical list and click the *Obsolete Items* actions to obsolete the selected item and the items under it.

The items get obsolete irrespective of their statuses. The action is carried out asynchronously in the background. To view the changes, close the *Installed Base* screen and open it again. Click the *Item Logs* tab to view the status of mass activation.

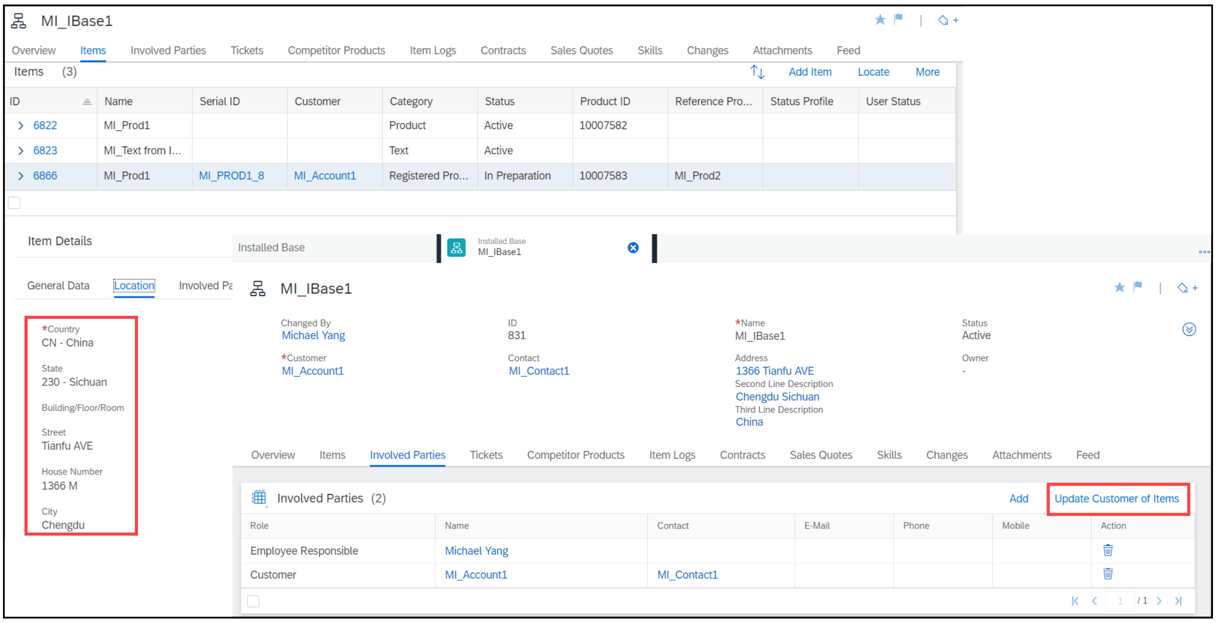
> **i Note**
>
> Actions to obsolete items in bulk are available only in the online mode.

8.2.2.7 Configure Auto-Update Location of Items Along with Customer of Items for Installed Base

As an administrator, you can configure whether to automatically update the location of an item when the customer of the item is updated in Installed Base.

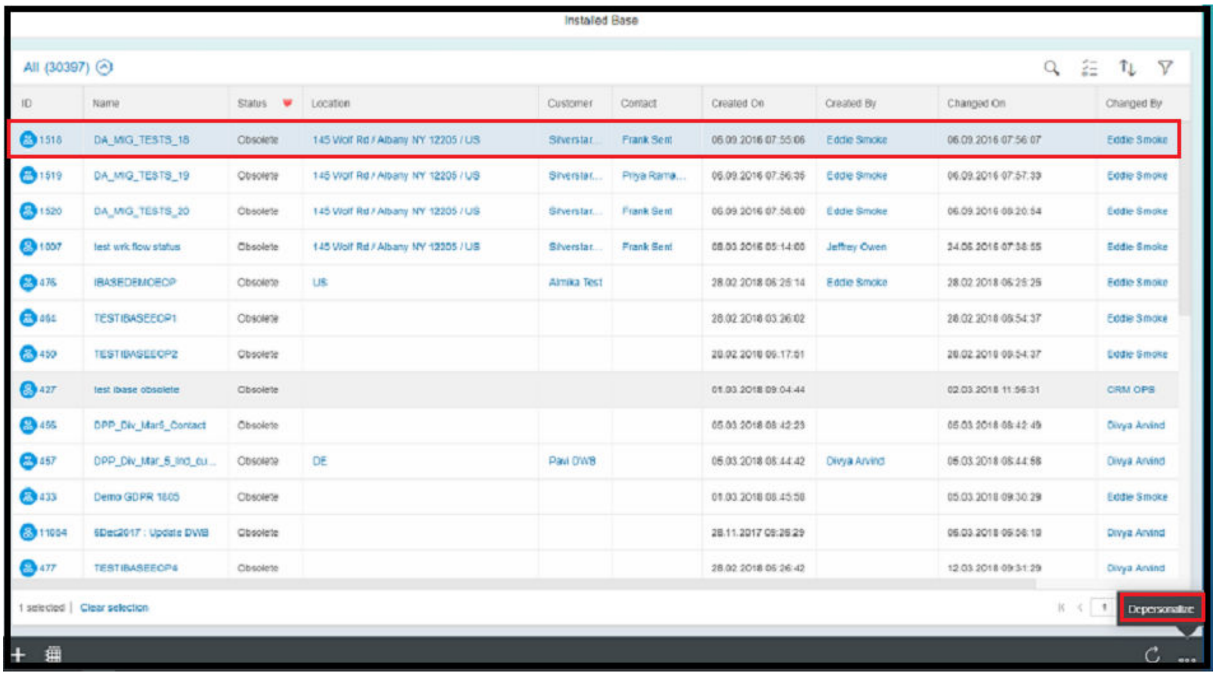
To enable the auto-update, go to *Business Configuration* › *Implementation Projects*. Select your project and navigate to *Edit Project Scope* › *Questions* › *Service* › *Entitlement Management* › *Registered Products and Installed Base* and select the scoping question: *Automatically update location of Items when updating customer of items for Installed Base?*

- If the scoping question: *Functional Location/Registered Product uses customer address as the default location. Do you want to use the ship-to-party address instead?* is also checked, when you choose *Update Customer of Items*, the location of item is automatically updated to the ship-to-party main address of the item. In case ship-to-party is not maintained, location of the item is updated to empty.
- If the scoping question: *Functional Location/Registered Product uses customer address as the default location. Do you want to use the ship-to-party address instead?* is not checked, the location of item is automatically updated to the main address of the customer.



8.2.3 Remove Personal Data in Installed Base

Use *Depersonalize* in *Installed Base* to remove personal data from obsolete installed bases.



Depersonalization is available only to users with access to the *Data Protection and Privacy* work center.

When you depersonalize data in *Installed Base*, the information related to creation of the data is removed. The change-related fields display the details of the user who initiated the depersonalization and the date on which it was initiated. The following details are also deleted from the system:

- Involved parties
- Address
- Notes
- Created By
- Attachments

The installed base items are not depersonalized automatically. If you want to depersonalize an installed base with items, you have to first depersonalize the items from their respective OWLs and then depersonalize the installed base.

> **i Note**
>
> From the UI, you cannot select more than 10 installed base records for depersonalization. However, if you use the OData service to depersonalize, you can select any number of records at a time.

8.3 Offline Features for Installed Base

The *Installed Base* feature is available in offline mode with limited functionalities. Learn more about them in the following section.

8.3.1 Offline Capabilities and Limitations for Installed Base

This topic presents an overview of supported features and limitations for installed base in offline mode.

Offline Capabilities for Installed Base

Here is the list of objects supported in offline mode.

> **Note**
>
> Not all the validations or determinations available online are available offline.

Tab	Section	Field	Create	Display	Edit (can edit directly via actions/navigation)
Installed Base* *Objects have restrictions or some tabs missing	Overview		Y	Y	Y
	Involved Party		Y	Y	
	Items		Y	Y	Y
	Competitor Products				
	List Overview			Y	
	List (Advanced Search)				Y
	Quick Create		Y	Y	
	Overview			Y	Y
	Involved Parties		Y	Y	Y
	Actions			Y	Y

Tab	Section	Field	Create	Display	Edit (can edit directly via actions/navi-gation)
	Competitor Products			Y	
	Items	General Data		Y	
		Location		Y	Y
		Involved Parties		Y	Y
		Warranty		Y	

Available Offline Actions

Tab/Global	Section	Action	Offline Availability
Installed Base		Activate	Y
		Block	Y
		Obsolete	Y
	Items	Activate	Y
		Block	Y
		Obsolete	Y
		Delete	Y
		Add Items (at the same level)	Y

Offline Limitations for Installed Base

- When creating follow up ticket from *Installed Base*, determinations (such as location, service technician) are not available.
- *My Queries*, based on team / territory is unavailable.
- Attachments are unavailable.
- Address determination is unavailable.
- Multilanguage support for *Installed Base* and *Registered Product* notes is not supported.
- *Reported On Date* in the Tickets tab of installed base is not available in offline mode.
- The *Status Profile* and *User Status* are not available in quick create and the Items tab of installed base in offline mode.

- Export installed base list to Microsoft Excel is not supported in offline mode.

Items

- Hierarchical List for Installed Base items is unavailable. A flat list is displayed for the *Items*.
- Adding lower level items to an item is unavailable.
- Moving and removing items is unavailable.
- General Data dynamic fields based on category not supported.
- *Add Existing Registered Product* on installed base *Items* tab is not supported.
- *Add/Delete* of *Involved Parties* for installed base items is not supported offline.
- Creating follow up service tickets from installed base items is not supported.

8.4 Installed Base FAQs

This section provides you with solutions to some commonly asked questions.

8.4.1 Is there a limit to create levels for installed base hierarchy?

There is no limit to the number of levels that can be created in an installed base hierarchy. However, too many levels may become difficult to maintain. Decide on an optimal number based on your scenario.

8.4.2 What is the significance of multiple tabs for Registered Products, Installed Base, and Installation Points?

Registered Products, Installed Base, and Installation Point tabs are displayed at various locations in the solution. However, each display is used in a unique way and for a variety of purposes. the following table describes the significance of each display:

Tab	Significance
Registered Products	Registered products can be used standalone if you need to track serialized products as individual items.
Installed Base	Use this tab if you need a hierarchical representation and a consolidated view of installed items. When you enable the *Installed Base* feature, the *Registered Products* tab is automatically enabled as registered product can be an item in an installed base.

Tab	Significance
Installation Points	Use this tab to enable replication of SAP ERP functional locations to SAP Cloud for Customer. You can also use this tab as standalone without the SAP ERP integration. This view displays installation points of functional location, product, and text categories. When you enable the *Installed Base* feature, the *Installation Points* tab gets enabled.

9 Maintenance Plans

Create maintenance plans based on contract agreements with customers and create work tickets automatically, based on the maintenance schedule.

Maintenance plans have the flexibility to both automatically create work tickets based on a schedule, and cover customer calls for routine maintenance. When setting up a maintenance plan, define conditions and parameters for maintained objects or registered products. If registered products meet the defined condition, then the solution generates work tickets automatically.

For an overview, watch the following video:

9.1 Scope and Configure Maintenance Plans

Administrators can configure maintenance plans using scoping, scoping questions, and fine-tuning activities.

> **Note**
>
> Scoping questions and fine-tuning activities that are straightforward may not be included in this list.

9.1.1 Configure Maintenance Plans

Scoping maintenance plans enables you to create maintenance plans for customers.

Maintenance Plans help the service organizations execute on the preventative maintenance scenarios (that may be stipulated in the service contract), by automatically creating work tickets based on the maintenance schedule. While setting up a maintenance plan, you can define conditions and certain parameters for maintained objects or registered products. If these registered products meet the defined conditions, the work tickets get generated automatically.

Navigate to *Business Configuration* > *Implementation Projects* > *Edit Project Scope* > *Service* > *Sales Entitlement Management* > *Maintenance Plan*, and select the checkbox.

9.1.2 Configure Attachments Tab in Maintenance Plan

You, as an administrator can enable the solution to carry forward attachments from maintenance plans into generated tickets.

Context

Attachments are documents such as instructions, sequences, pictures, or guidelines that you use while creating tickets. Select, add, and carry forward attachments from the library.

> **! Restriction**
>
> Only attachments added from the library can be copied when creating tickets.

You can also access the attachment directly from the related maintenance tickets.

Procedure

1. Navigate to *Business Configuration* > *Implementation Projects*.
2. Select your project and click on *Edit Project Scope* > *Scoping* > *Questions* > *Service* > *Service Entitlements* > *Maintenance Plan*.
3. Select the question: *Do you want to carry forward attachments from Maintenance Plans while creating Tickets?*

9.1.3 Allow Manual Ticket Creation for Maintenance Plans

Allow service agents to create manual tickets for maintenance plans outside of the specified service schedule.

To allow creation of maintenance tickets outside of the defined schedule conditions, go to: *Business Configuration* > *Implementation Projects* > *Edit Project Scope* > *Questions* > *Service* > *Entitlement Management* > *Maintenance Plan* and set the question *Allow agents to create tickets for maintenance plans outside of the defined service schedule?* to *In Scope*.

9.1.4 Allow Maintenance Plans without Conditions

Enable employees to create maintenance plans without specifying schedule conditions.

A maintenance plan without conditions is typically used to generate tickets for existing registered products before a maintenance schedule begins.

To allow creation of maintenance plans without schedule conditions, go to: *Business Configuration* › *Implementation Projects* › *Edit Project Scope* › *Questions* › *Service* › *Entitlement Management* › *Maintenance Plan* and set the question *Do you want to create Maintenance Plans without any conditions?* to *In Scope*.

9.1.5 Configure Maintenance Plan Runs

Define when the system checks maintenance plans and generates work tickets for items that require maintenance.

Context

In the *Administrator* tab, schedule maintenance plan runs to automate ticket creation. To schedule jobs, follow theses steps:

Procedure

1. Go to *Administrator* › *Service and Social Settings*.
2. Choose *Measurements and Maintenance* › *Configure Maintenance Plan Runs*.
3. Choose *New* › *New Mass Data Run Object Template Run*, and fill in the required details in the *General Data* and *Control Parameters* sections.
4. In the *Select By MDRO ID* tab, choose *Add Row* and enter the same run ID you entered in the previous step into the *Lower Boundary MDRO ID* field.
5. In the *Select by Maintenance Plan Status* tab, choose *Add Row* and enter the following details:
    a. InclusionExclusionCode = Inclusion
    b. Interval Definition = Equal to
    c. Lower Boundary Status = Active
6. Next, save the run and activate it. This will make the *MDRO Run ID* available for selection in the in the maintenance plan details screen.
7. Now, in the *Maintenance Plan* tab, select the *MDRO Run* field and select the MDRO Run ID that you created in the configure maintenance plan runs tab. Save the maintenance plan.
8. The maintenance plan runs are based on the *MDRO Run ID* and *Maintenance Plan Status* values provided when configuring the run.

9.2 Create Maintenance Plans

Create preventive maintenance plans and schedule automatic ticket generation based on a schedule and measurement readings from covered products.

To create a maintenance plan, follow these steps:

1. Go to *Installed Base* > *Maintenance Plans*, choose *New*, and fill in the required fields.

   > **Note**
   >
   > The *Schedule Conditions* for the maintenance plan can be time or counter based, or a combination of both.

2. The status of the maintenance plan is initially in-preparation, which can be changed to active/blocked/complete, depending on the stage the task is in.

   > **Note**
   >
   > After creating a maintenance plan, you cannot change the schedule conditions and schedule type.

3. You would schedule maintenance plan runs in SAP Cloud for Customer as an administrator, which would run automatically based on the schedule. For details, refer to Configure Maintenance Plan Runs [page 266]. Once you have created a maintenance plan, save and then open it.
4. Next, navigate to the *Plan Definition* tab to add conditions to the maintenence plan.

Plan Definition

Create and add conditions to your maintenance plans here. Conditions are generally structured in groups, and you have the ability to add multiple groups within a condition. Set conditions within each group and maintain the plan definition. You can set a threshold (tolerance) value for your condition with a lower limit.

> **Example**
>
> If the value for a printer is set to 5000 and the threshold is set to 50, then a ticket gets automatically generated when the condition reaches the 5000 minus 50 stage.

All conditions are inclusive, so all have to be met to create the work ticket. You can update the conditions as long as the plan has the *In-Preparation* status.

Choose *Add Group* to set the measurement attribute, value, and threshold for that condition .

> **Note**
>
> When adding a time based condition, you can add the time based on weeks, months, or days.

> **Note**
>
> The *Plan Definition* work center is not supported in the Silverlight UI version of the solution.

Maintenance Items

Next, click on *Add* and add the registered products on which the conditions created in plan definition needs to be evaluated.

If the registered product you choose, does not have any measurement attribute associated with it, then you will receive a warning message (saying that the condition you have chosen in your plan definition, is not maintained for the registered product).

To view all assigned attributes for a registered product, go to *Registered Product* > *Measurements*.

> **Note**
>
> When there are several maintenance items in a maintenance plan and if an operation such as sorting or filtering is enabled, the time taken to load the items list can be more.

You can add or remove registered products and modify a ticket template as long as the plan is in an *Active* status.

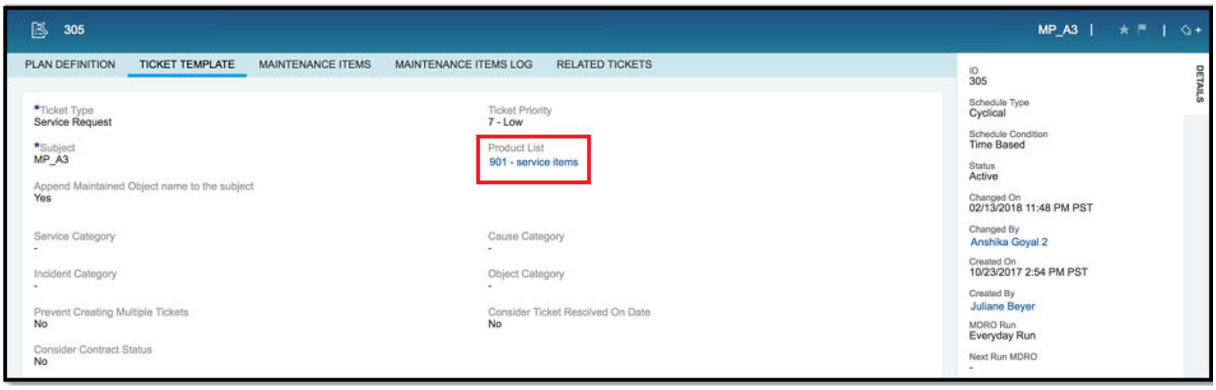
Ticket Template

Next, maintain a template for the ticket. The auto-generated ticket is based on the parameters you define here. Change the status of the maintenance plan to Active.

> **Note**
>
> A ticket is created when the condition is fulfilled.

Simulate Run to ensure all set conditions have been met. You can manually simulate creating a ticket. Go to *Actions* > *Simulate Run* to see if the ticket got created. In general, you would schedule jobs as an administrator in the *Administrator* tab to automate creating tickets. For details on how to schedule jobs, see Configure Maintenance Plan Runs [page 266].

You can also open the product list by clicking the hyperlink under *Product List*.



Prevent Creating Multiple Tickets

As a field service manager you can define that no additional tickets are generated for a maintenance plan, if there are any existing, open, or in-process tickets for it.

Create a new maintenance plan. In the *Ticket Template* tab, if you select the *Prevent Creating Multiple Tickets* checkbox, then even if the defined conditions are met, the system will not create multiple tickets for a registered product in the maintenance plan, if an open/in-process ticket exists.

Related Tickets

This tab displays all tickets created for the selected maintenance plan.

Mass Addition of Products

You can now add registered products in mass to a maintenance plan, in the maintenance items screen.

1. After creating a maintenance plan, go to the *Maintenance Items* tab.
2. Navigate to the action icon and choose the *Mass Addition from Product* option to mass add registered products based on a reference product.
3. You can now choose the product and all active registered products with the given reference product will be added to you selected maintenance plan.
4. Save and close.

Activity Plan

You can now pre-define tasks/surveys to be included in tickets generated from maintenance plans.

1. Create an activity plan with the required tasks/surveys.
2. Then create an activity routing rule with business application as *Ticket* and link the activity plan in the routing rule.
3. Define the conditions in the rule (where maintenance plan fields are available). When ticket is generated, the tasks and surveys defined in the activity plan get copied over to the ticket, if the routing rule conditions are met.

> **i Note**
>
> For more information on creating activity plans and routing rules see *Configuring Visits and Configuring Ticket Routing Rules*.

Next Run

For each maintained object, you can see the next trigger, when the tickets are ready to be generated.

1. On the *Maintenance Items* tab, choose a maintained object from the list.
2. The *Next Run* field provides information for the next trigger (reading/time) at which the next ticket becomes eligible to be generated, as per the conditions and the previous ticket.
3. 3.The measurement attribute along with the reading value for the next trigger is displayed.

> **i Note**
>
> If a threshold is maintained in a maintenance plan definition, the next run calculation is incorrect.

Outstanding Ticket

You can view any outstanding tickets for maintained objects.

1. On the *Maintenance Items* tab, choose a maintained object from the list.
2. The *Outstanding Ticket* field displays the ticket ID and the subject.

> **i Note**
>
> If more than one ticket exists, then a message displays stating that multiple tickets are open.

Select Schedule Type [page 249]
You can select one of the five available schedule types for a maintenance plan. Each schedule type follows a different logic while checking the conditions.

Select Schedule Conditions [page 252]
Maintenance plans use different logic for creating tickets, depending upon which condition you select for the plan.

9.2.1 Select Schedule Type

You can select one of the five available schedule types for a maintenance plan. Each schedule type follows a different logic while checking the conditions.

The schedule types are as follows:

- Absolute
- Alternating
- Cyclical
- Fixed Values
- One Time

9.2.1.1 Absolute

For an absolute maintenance plan, the conditions are checked with the latest reading of measurement log at the instant when the plan is running. A ticket is generated if the conditions are met. So a ticket would be generated whenever the conditions are met without considering historical readings or the ticket generated data (as compared to other maintenance plan types as cyclical, fixed or once types). This condition type is valid only with Counter based conditions. The conditions in this type are always maintained with an operator, while the threshold is irrelevant.

Example

A maintenance plan with registered products RP100, RP200 and RP300.

Condition: AVERAGE_PRINT_CONSUMPTION GREATER THAN 10000.

Latest Readings:

- RP1 – 9000
- RP2 – 10000
- RP3 – 11000

When the maintenance plan runs, tickets would be generated for RP2 and RP3 since those conditions are met. For RP1, the ticket would not be generated. If the maintenance plan runs again, the tickets would be generated again, as mentioned above, since the historical reading at which the earlier tickets were generated is not taken into consideration.

9.2.1.2 Alternating

An Alternating maintenance plan allows you to define a plan with specific exceptions and a ticket is created against a registered product which meets the exceptional condition.

> **Example**
>
> If the maintenance for a registered product is required at every 10000 units except at 30000 units, then a ticket is created at every 10000, 20000 but not at 30000 and then again at 40000, 50000 but not at 60000 units and so on.

Define the condition in the Maintenance Plan definition with the excluding value. The excluding value should be a multiple of the condition value.

You can assign one of the following schedule conditions to cyclical maintenance plans:

- Counter based
- Time based

9.2.1.3 Cyclical

A cyclical maintenance plan creates a service ticket against a registered product every time the condition, as specified in the maintenance plan, is met.

You can assign one of the following schedule conditions to cyclical maintenance plans:

- Counter based
- Time based
- Time and Counter based

Related Information

Additional Capabilities of Time-Based Maintenance Plans [page 255]
This section describes the additional capabilities of time-based maintenance plans.

9.2.1.4 Fixed Values

This type of maintenance plan can have a fixed list of conditions. Schedule condition can be counter or time based.

> **! Restriction**
>
> Multiple condition groups (logical OR conditions) are not supported. Conditions related to multiple measurement logs are also not supported.

> ✤ Example
>
> MILEAGE_COUNTER is a measurement log that is associated to one or more registered products (RP1, RP2, and RP3). If you create and activate a maintenance plan with these registered products, the conditions specified in the maintenance plan would appear as follows:
>
> - MILEAGE_COUNTER 'At' 10,000 Miles
> - MILEAGE_COUNTER 'At' 50,000 Miles

> ✤ Example
>
> On January 1 2015, the measurement reading values for each registered product are as follows:
>
> - RP1 – 12,000
> - RP2 – 10,000
> - RP3 – 6,000

When the maintenance plan runs, the system creates tickets for RP1 and RP2 since the first condition is satisfied. In subsequent runs, the first condition is ignored for RP1 and RP2, since it was already satisfied once.

9.2.1.5 Once

In this type, the conditions are checked on parameters similar to the cyclical type with the exception that in subsequent runs, if there is already an existing ticket created in an earlier run, then the tickets are not created.

> ✤ Example
>
> A maintenance plan with counter based schedule condition, with registered products RP1, RP2, and RP3.
>
> Condition: MILEAGE_COUNTER at 50000 miles
>
> Current readings:
>
> - RP1 – 51000 miles
> - RP2 – 40000 miles
> - RP3 – 20000 miles

Now when the maintenance plan is run, a ticket would be generated for RP1 since the condition is met. But no tickets are generated for RP2 and RP3.

For subsequent runs, RP1 would not be considered since a ticket was already generated once. So the specified condition was met at least once.

The same logic is applied for *Time* and*Time and Counter* based maintenance plans with type *Once* .

9.2.1.6 Once - No Conditions

This type of maintenance plan is created without any schedule condition. Whenever the maintenance plan is run, a ticket is created for all the registered products which are part of this maintenance plan. The ticket creation happens only once. So even if the same maintenance plan is run again, tickets will not be generated again.

If there are registered products in this maintenance plan for which a ticket was not created in the first run, then a ticket would be created in a subsequent run. This condition can arise in the following scenarios:

- New registered products are added to an existing active maintenance plan after the plan's first run.
- The maintenance plan was run manually by choosing the trigger manual run for selective registered products.

9.2.1.6.1 Allow Maintenance Plans without Conditions

Enable employees to create maintenance plans without specifying schedule conditions.

A maintenance plan without conditions is typically used to generate tickets for existing registered products before a maintenance schedule begins.

To allow creation of maintenance plans without schedule conditions, go to: *Business Configuration* > *Implementation Projects* > *Edit Project Scope* > *Questions* > *Service* > *Entitlement Management* > *Maintenance Plan* and set the question *Do you want to create Maintenance Plans without any conditions?* to *In Scope*.

9.2.2 Select Schedule Conditions

Maintenance plans use different logic for creating tickets, depending upon which condition you select for the plan.

Select one of the following conditions when you set up a maintenance plan:

- Counter based
- Time based
- Time and counter based

9.2.2.1 Counter Based

A counter based cyclical maintenance plan compares the measurement reading value of a registered product against the condition specified for the same measurement log in the maintenance plan.

> **Example**
>
> `MILEAGE_COUNTER` is a measurement log which is associated to one or more registered products such as: RP1, RP2, and RP3. A maintenance plan is created and activated with the mentioned registered products. The condition specified in the maintenance plan would look as follows:
>
> - MILEAGE_COUNTER every 10000 Miles

Whenever the maintenance plan runs, the system looks for the measurement reading value of `MILEAGE_COUNTER` against RP1, RP2, and RP3. When it finds a measurement reading with value greater than 10000 miles, it creates a ticket. Once a ticket is created for a registered product, in subsequent runs of the maintenance plan, the system checks whether the measurement reading value has exceeded the last reading when the ticket was created + 10000.

> **Example**
>
> On 1/1/2015 the measurement reading values for each registered products are as follows:
>
> - RP1 – 11000
> - RP2 – 9000
> - RP3 – 6000
>
> When the maintenance plan runs on this date (or on a later date depending on how the maintenance plan is scheduled), the system generates a ticket for RP1 since the measurement reading value has exceeded 10000, as specified in the condition.
>
> In subsequent runs, the system compares the measurement reading values as shown below:
>
> - For RP1 – 21000 (last reading when ticket was created + condition value) – 11000 + 10000
> - For RP2 – 10000 (condition value since no ticket was created earlier)
> - For RP3 – 10000 (condition value since no ticket was created earlier)
>
> If the document value has exceeded or equals the mentioned condition value, a ticket is created.

> **Note**
>
> If there is no measurement reading against the measurement log (for a particular registered product), the value is considered as 0.

9.2.2.2 Time Based

> **Example**
>
> gistered product, such as: RP1, RP2, and RP3. A maintenance plan is created and activated with the mentioned registered products. The condition would look as follows:
>
> - OIL_CHANGE every six months

Scenario 1: First time service/ticket creation

The valid from date of the registered product is compared to the current date. If this value exceeds six months (as mentioned in the example), a ticket is created. If there is no valid from date, the reference date of the registered product is considered. The measurement reading is not required here as it is a time based condition. The measurement log needs to be associated with the registered product.

> **Example**
>
> - RP1 – *Valid from* date is 3/1/2015
> - RP2 – *Reference* date 3/3/2015

- RP3 – *Valid from* date is 8/1/2015

If the maintenance plan is running on 10/1/2015, then the system will check the values as follows:

- For RP1 – 10/1/2015 minus 3/1/2015. This value is more than six months, so the condition is met and a ticket is created.
- For RP2 – 10/1/2015 minus 3/32015. This value is more than six months, so the condition is met and a ticket is created.
- For RP3 – 10/1/2015 minus 9/1/2015. The value is less than six months, so the condition is not met and hence a ticket is not created.

Scenario 2: A ticket is already created

Refer to the earlier example where a ticket was created for RP1 and RP2, and no ticket for RP3. The subsequent run logic would work as follows:

- For RP1 – System looks at the ticket creation date of the previous ticket. In the last example, the ticket was created on 10/1/2015. A new ticket will be created six months after the first ticket creation (six months from 10/1/2015).
- For RP2 – Same as RP1.
- For RP3 – Scenario1 logic is applied; hence no ticket was created in the earlier step.

9.2.2.3 Time and Counter Based

In a *time and counter* based cyclical maintenance plan, you have the option of specifying a combination of counter and time based conditions. The logic remains the same as explained in the two previous cases.

If there are multiple conditions specified (such as: OR or AND) in a cyclical maintenance plan, then whenever a ticket is created against a reading/date for each of the conditions, the reading is stored for the counter. In subsequent runs, these values are considered while checking each of the conditions.

Example

RP1: MILEAGE_COUNTER reading is 8000

VALID FROM is 3/1/2015

Condition: MIELAGE_COUNTER every 10000 OR OIL_CHANGE every six months

If the maintenance plan runs on 10/1/2015, a ticket would be created since the condition OIL_CHANGE every six months is satisfied. For subsequent runs, the following condition would be taken into consideration:

- MILEAGE_COUNTER greater than or equal to 18000 (reading at last ticket creation + condition value)
- OIL_CHANGE – Six months from 10/1/2015

9.2.2.4 Additional Capabilities of Time-Based Maintenance Plans

This section describes the additional capabilities of time-based maintenance plans.

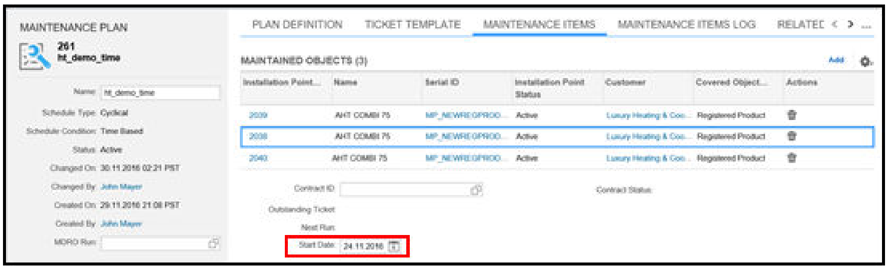
Measurement Attribute is Optional

It is not mandatory to maintain a measurement attribute in the *Plan Definition* tab. You have the option to use the measurement log maintained in registered product. However, if selected, then this'll work as well.

For time based plan the logic to determine the first service ticket generation has been enhanced. The new *Start Date* field can be set for a *Maintained Object* which is considered for first time ticket generation. If no start date is maintained here, the existing logic will be used (Valid From/Reference Date of Registered Product is considered).

Start Date Field for Maintained Objects

The *Start Date* field can be set for a *Maintained Object*, which is considered for first time ticket generation. If no start date is maintained, then the existing logic will be used (Valid From/Reference Date of Registered Product is considered). The tickets would be generated based on the parameters defined in plan definition for that maintenance plan



If you choose to *Trigger Manual Run*, then the *Start Date* field gets disabled, as the manual run action overwrites the start date value. Start date can be edited until the first ticket has been created for it.

9.2.3 Define Maintenance Plan Conditions

Create and add conditions to your maintenance plans on the *Plan Definition* tab.

Conditions are structured in groups, and you can add multiple groups within a condition. Set conditions within each group and maintain the plan definition. You can set a threshold (tolerance) value for your condition with a lower limit.

Example

If the value for a printer is set to 5000 and the threshold is set to 50, then a ticket is automatically generated when the condition reaches the 5000 minus 50 stage.

All conditions are inclusive, so all have to be met to create the work ticket. You can update the conditions as long as the plan has the *In-Preparation* status.

Choose *Add Group* to set the measurement attribute, value, and threshold for that condition .

Note

When adding a time-based condition, you can add the time based on weeks, months, or days.

9.2.4 Add Maintenance Items

Choose the registered products to evaluate with the conditions created in plan definition.

If the registered product you choose doesn't have any measurement attribute associated with it, then you receive a warning message stating that the condition you chose in your plan definition isn't maintained for that registered product.

To view all assigned attributes for a registered product, go to *Registered Product* > *Measurements*.

Note

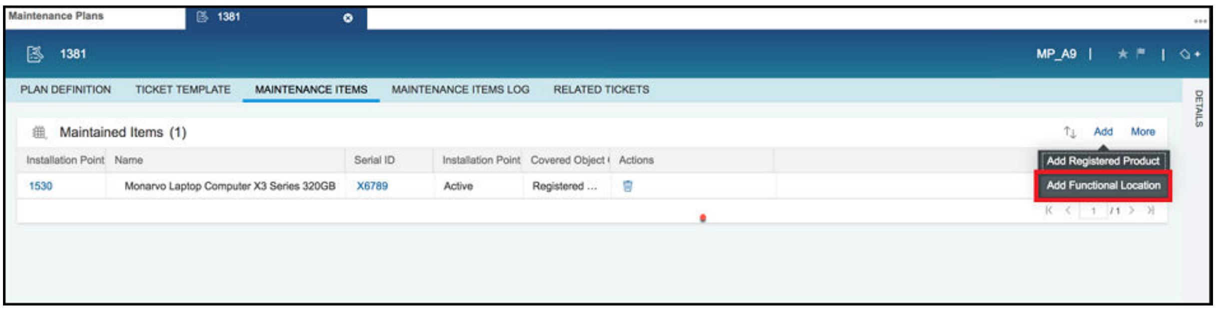
When there are several maintenance items in a maintenance plan, and if an operation such as sorting or filtering is enabled, the item list can take a long time to load.

You can add or remove registered products and modify a ticket template as long as the plan is in an *Active* status.

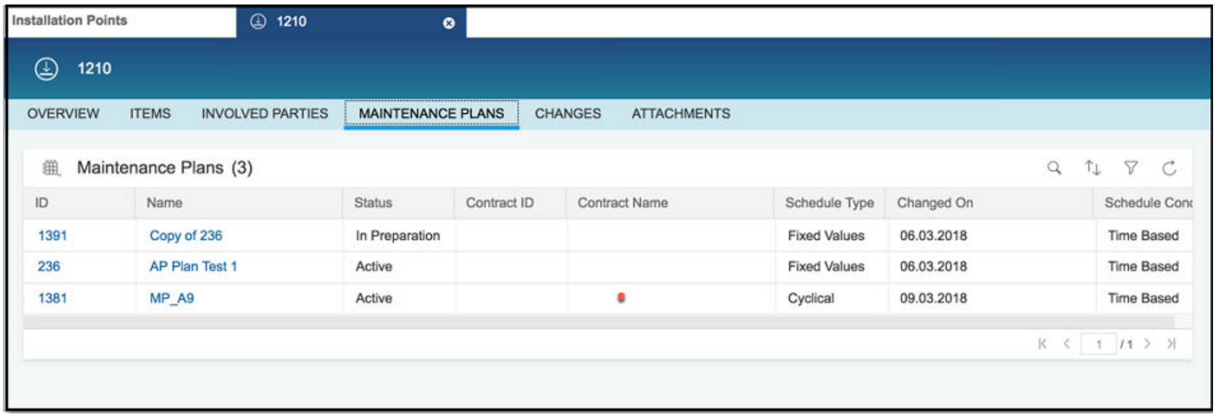
9.2.5 Add Functional Location as Maintenance Items

Add functional locations as maintenance items for time-based maintenance plans.

To add functional location as a maintenance item, navigate to *Maintenance Plans* > *Maintenance Items* > *Add* and select *Add Functional Location*.



To view the list of maintenance plans in which functional locations are added as maintenance items, navigate to *Installation Points* > *Maintenance Plans* .



i Note

When you add a functional location to a maintenance plan, only the functional location is added. That is, the registered products under the functional location, if any, do not get added automatically to the maintenance plan.

9.2.6 Configure the Ticket Template and Simulate Run

Define the ticket parameters used to auto-generate tickets for the maintenance plan. Then ensure the template works as expected by simulating a maintenance plan run.

Procedure

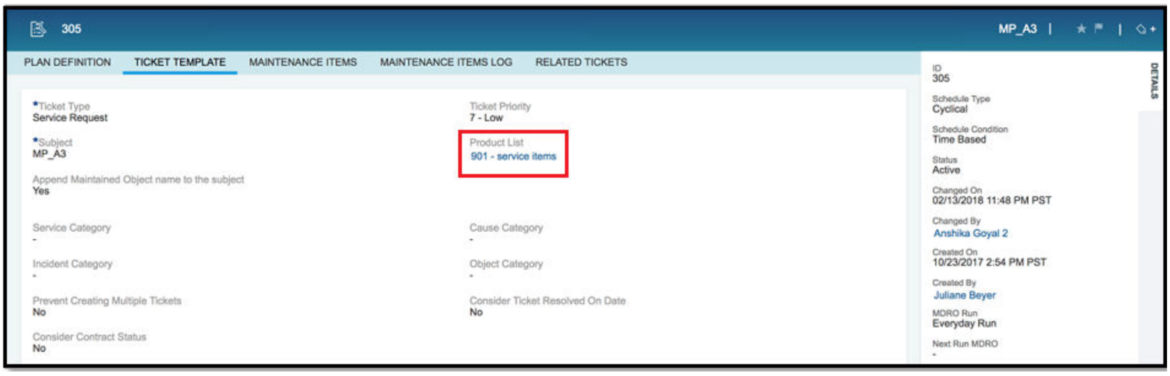
1. Go to the *Ticket Template* tab.
2. Fill in your desired parameters for tickets generated for this maintenance plan.

   Ticket Type and *Subject* are mandatory. Fill in values for the other ticket fields as desired.
3. Change the status of the maintenance plan to *Active*.

   Once the maintenance plan is in status *Active*, the system creates a ticket when the condition is fulfilled.

   → Tip

   You can open the product list directly from the *Maintenance Plans* UI. On the *Ticket Template* tab of *Maintenance Plans*, click the hyperlink under *Product List*.



4. Simulate a maintenance plan run to ensure all set conditions are met. Go to *Actions* > *Simulate Run* to see if a ticket is created correctly.

   As an administrator, you can schedule jobs in the *Administrator* tab to automate creating tickets. For details on how to schedule jobs, see the following related links.

Related Information

Configure Maintenance Plan Runs [page 266]
Define when the system checks maintenance plans and generates work tickets for items that require maintenance.

9.2.6.1 Configure Attachments Tab in Maintenance Plan

You, as an administrator can enable the solution to carry forward attachments from maintenance plans into generated tickets.

Context

Attachments are documents such as instructions, sequences, pictures, or guidelines that you use while creating tickets. Select, add, and carry forward attachments from the library.

> **! Restriction**
>
> Only attachments added from the library can be copied when creating tickets.

You can also access the attachment directly from the related maintenance tickets.

Procedure

1. Navigate to *Business Configuration* > *Implementation Projects*.
2. Select your project and click on *Edit Project Scope* > *Scoping* > *Questions* > *Service* > *Service Entitlements* > *Maintenance Plan*.
3. Select the question: *Do you want to carry forward attachments from Maintenance Plans while creating Tickets?*

9.2.7 Prevent Multiple Tickets

As a field service manager, you can specify that no additional tickets are generated for a maintenance plan with open, or in-process tickets. If an open or in-process ticket exists for this maintenance plan, then even if the defined conditions are met, the system doesn't create multiple tickets for a registered product.

Procedure

1. Go to the *Ticket Template* tab.
2. Select *Prevent Creating Multiple Tickets*.

> **i Note**
>
> This doesn't prevent the creation of tickets from other maintenance plans for the same registered product.

9.2.8 Consider Ticket Resolved On Date

As a service manager, while defining the conditions for a maintenance plan, you can specify that the subsequent ticket is generated based on the previous ticket's resolution date instead of the creation date. You can do this by selecting the Consider Ticket Resolved On Date flag in a maintenance plan. This flag helps in considering the delays in processing of a ticket.

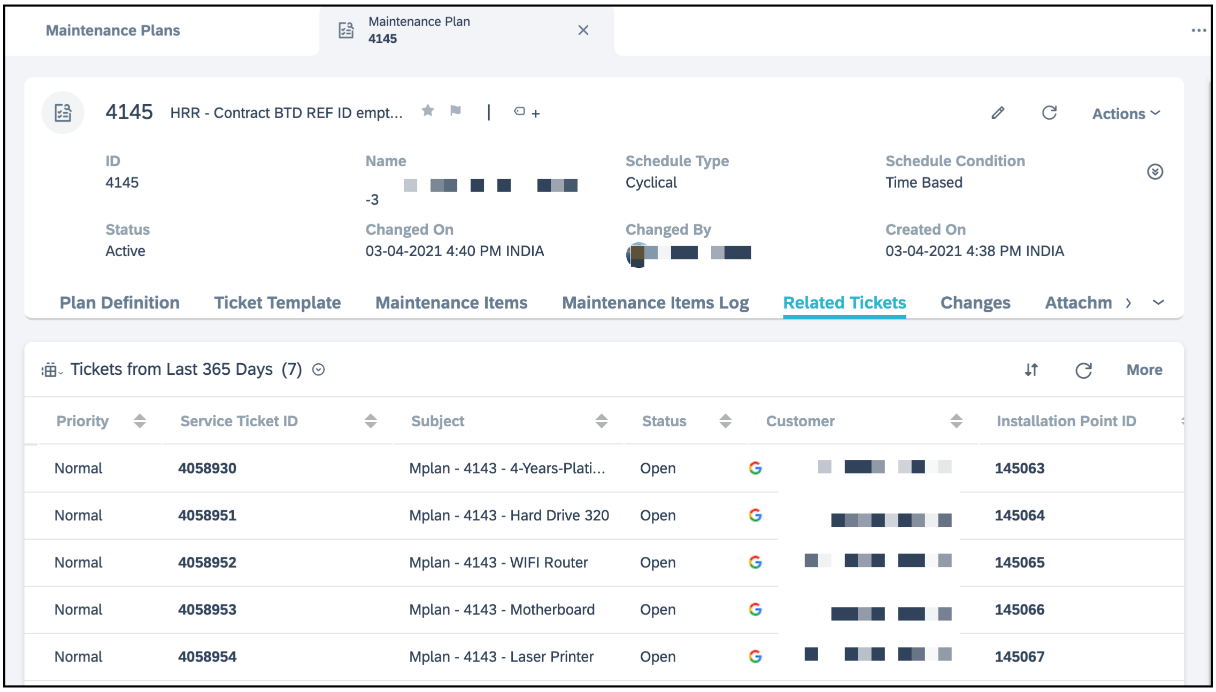
Procedure

1. Go to the *Ticket Template* tab.
2. Select *Consider Ticket Resolved on Date*.

> **i Note**
>
> The Consider Ticket Resolved On Date flag is relevant only for maintenance plans with scheduling type as cyclical or alternating with time based conditions.

9.2.9 View Related Tickets

The *Related Tickets* tab displays all tickets created for the selected maintenance plan.



9.2.10 Add Registered Products to Maintenance Plans

Plan for periodic maintenance of registered products by adding them as maintenance items in the maintenance plan.

Context

A maintenance plan consists of maintenance items, also known as registered products, for which rules can be set. Based on the set parameters, when the conditions are met, the system creates tickets automatically for scheduling maintenance service for a registered product.

You can do the following from a maintenance plan for a registered product:

- View list of all maintenance plans in which a registered product is a maintenance item.
- Display *Last Maintenance Date* for a registered product when the maintenance ticket is completed.
  - To view the last maintenance date field, open a registered product and navigate to *Maintenance Plans* tab and select a maintenance plan.
- From the maintenance plan UI, add registered products in bulk to a maintenance plan asynchronously as a background job. You can view the following:
  - A message indicating the bulk addition.
  - The list of added items (after you refresh the page).
  - Logs for this action in the *Maintenance Items Logs* tab.

Add registered products in mass to a maintenance plan from the maintenance items screen:

Procedure

1. Go to the *Maintenance Items* tab.
2. Choose the *Mass Addition from Product* option from the *Action* menu to mass add registered products based on a reference product.
3. Select a product.
4. Save and close.

Results

All active, registered products matching the reference product are added to the maintenance plan.

9.2.11 Define an Activity Plan

Define tasks and surveys to include in tickets generated from maintenance plans.

Procedure

1. Create an activity plan with the required tasks or surveys.
2. Create an activity routing rule with business application as *Ticket* and link your activity plan in the routing rule.
3. Define the conditions in the rule (where maintenance plan fields are available).

   When the solution generates a ticket for this maintenance plan, the tasks and surveys defined in the **activity plan** get copied over to the ticket, if the routing rule conditions are met.

Related Information

9.2.12 Check the Next Run

View the next trigger for each maintained object that determines when tickets are ready to be generated.

Procedure

1. On the *Maintenance Items* tab, choose a maintained object from the list.
2. Check the *Next Run* field for the next trigger (reading/time) at which the next ticket becomes eligible to be generated, as per the conditions and the previous ticket.

   The measurement attribute along with the reading value for the next trigger is displayed.

9.2.13 View Outstanding Tickets

View any outstanding tickets for maintained objects.

Procedure

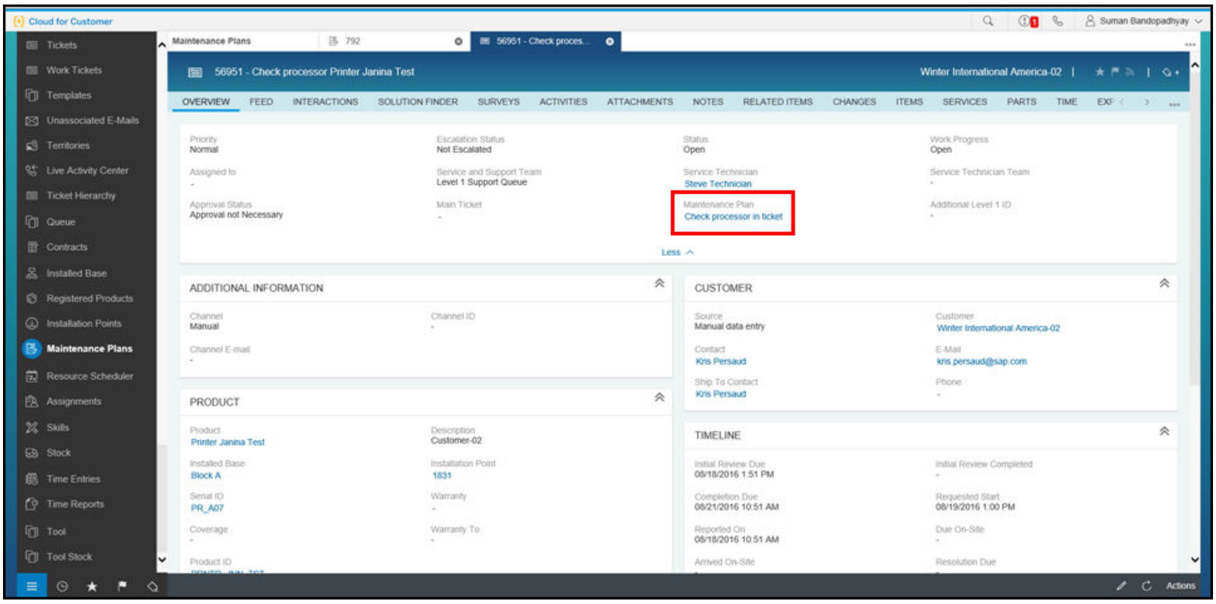
1. On the *Maintenance Items* tab, choose a maintained object from the list.
2. Check the ticket ID and the subject in the *Outstanding Ticket* field.

   If more than one ticket exists, then a message appears stating that multiple tickets are open.

9.2.14 Show Maintenance Plan in Ticket

If a ticket is created from a Maintenance Plan, then you are able to see a new field displaying the Maintenance Plan ID and the name in the ticket header.

You can see the Maintenance Plan in the Ticket itself and navigate to the maintenance plan from which the ticket was created.



9.2.15 Create Maintenance Plan from Contract

Create maintenance plan from *Maintenance Plan* tab of service *Contract* using + button.

Context

Select and add the covered objects of the contract as *Maintenance Items*.

Contract is linked to maintenance plan and supports service contracts independent of its status.

Procedure

1. Select *Add Maintenance Items.*

   The selection of the covered objects as Maintenance Items depends whether the data entered is *Counter Based*, or *Time Based*, or both.
2. Select or deselect *Header Covered Objects* for a given Contract to be considered in the new Maintenance Plan:
   - For counter-based plans, only covered objects of type: registered products are displayed and can be copied.
   - For time-based plans both, registered products and functional location are copied. Installation points of other types are ignored.

   The created maintenance plan contains selected covered objects of the contract including the details.

3. Manually adjust the *Start Date* or *End Dates* of contract.
4. Select *Activate*.
    - Newly created maintenance plan is now added and can be seen on the maintenance plan table.
    - Select the maintenance plan name to view the details.

9.2.16 Contract Covered Items in Maintenance Plans

Access related maintenance plans through the service contract.

9.2.16.1 Consider Covered Objects on Contract Item

View objects on header and on item level as *Covered Objects* under *Contract Items*.

Use *Service Contract* as alternative starting point for *Maintenance Plan* creation.

9.2.16.2 Add Contract Covered Object to Existing Maintenance Plans

Add covered objects of a contract to any existing maintenance plans, irrespective of whether the plans are already associated to the contract or not.

Search for a suitable *Maintenance Plan* and select multiple covered objects in the current contract to be added to the maintenance plan as *Maintenance Items*.

You can then access related maintenance plans through the service contract. A duplicate check prevents adding a covered object as a maintenance item to a maintenance plan in which the covered object is already listed.

The *Add Existing Maintenance Plan* option is personalized hidden. You must personalize or adapt the screen to enable this feature.

> **i Note**
>
> Ensure that the *Maintenance Plan* work center is assigned to your user.

9.2.16.3 List or Delete Covered Objects in Existing Maintenance Plan

Display or delete maintenance items of a maintenance plan from the service contract.

If the covered objects of a service contract associated to a selected maintenance plan are deleted, then the maintenance plan also gets removed from the maintenance plan table of this contract.

9.3 Maintenance Plan Runs

9.3.1 Schedule Maintenance Plan Run

You can schedule maintenance plan runs based on the maintenance plan ID and status created while configuring a maintenance plan run.

Context

You have configured the maintenance plan run and are now ready to schedule runs so that they run automatically within a set time period.

Procedure

1. Under *Measurements and Maintenance*, choose *Configure Maintenance Plan Runs* tab, and and select the specific run you want to schedule a job for, and choose *Schedule*.
2. Specify the details of when the job should run. Then save and close.
3. After the jobs have run based on the defined schedule, you can view the log in the MDRO details screen.

9.3.1.1 Configure Maintenance Plan Runs

Define when the system checks maintenance plans and generates work tickets for items that require maintenance.

Context

In the *Administrator* tab, schedule maintenance plan runs to automate ticket creation. To schedule jobs, follow theses steps:

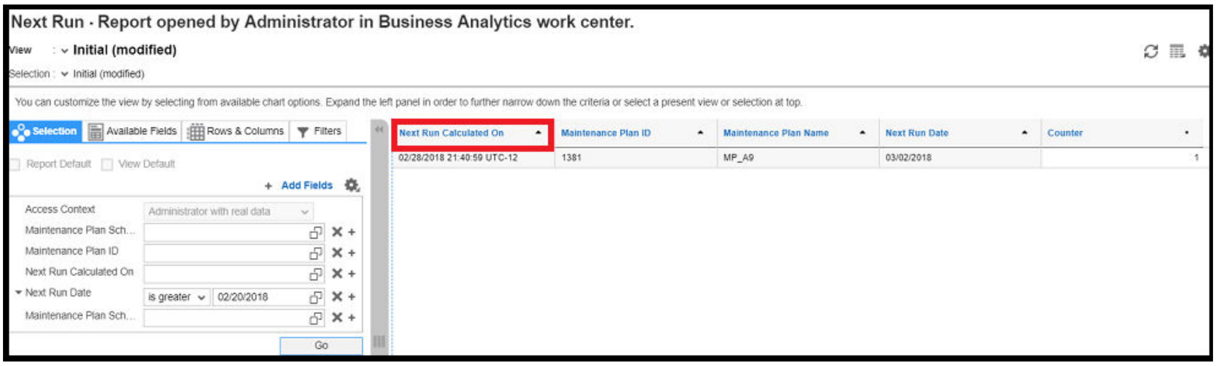
Procedure

1. Go to *Administrator* > *Service and Social Settings* .
2. Choose *Measurements and Maintenance* > *Configure Maintenance Plan Runs* .
3. Choose *New* > *New Mass Data Run Object Template Run* , and fill in the required details in the *General Data* and *Control Parameters* sections.
4. In the *Select By MDRO ID* tab, choose *Add Row* and enter the same run ID you entered in the previous step into the *Lower Boundary MDRO ID* field.
5. In the *Select by Maintenance Plan Status* tab, choose *Add Row* and enter the following details:
    a. InclusionExclusionCode = Inclusion
    b. Interval Definition = Equal to
    c. Lower Boundary Status = Active
6. Next, save the run and activate it. This will make the *MDRO Run ID* available for selection in the in the maintenance plan details screen.
7. Now, in the *Maintenance Plan* tab, select the *MDRO Run* field and select the MDRO Run ID that you created in the configure maintenance plan runs tab. Save the maintenance plan.
8. The maintenance plan runs are based on the *MDRO Run ID* and *Maintenance Plan Status* values provided when configuring the run.

9.3.2 Include the Next Run Date Field to Generate Reports for Maintenance Plans

Generate analytics reports including the **Next Run Date** field for time-based maintenance plans.

The *Next Run Date Calculated on* field displays the date on which the calculation was last performed.



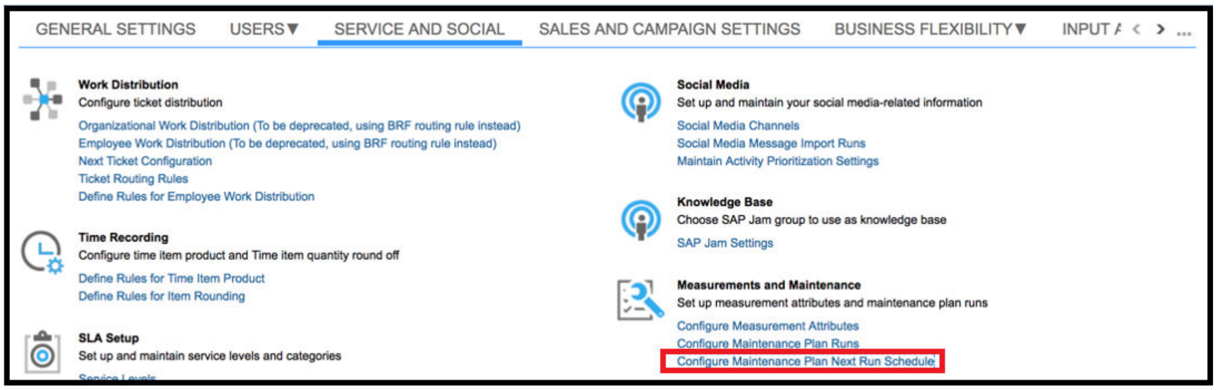
> **i Note**
>
> The **Next Run Date** is not relevant for the *One Time* and *One Time - No Conditions* schedule types.

9.3.2.1 Configure Next Run Date Calculation Schedule for Maintenance Plans

As an administrator, set up the schedule to calculate the next run date for time-based maintenance plans.

> **i Note**
>
> The **Next Run Date** field is a new field and is different from the *Next Run* field. **Next Run Date** is not available on the UI. However, the field is included in the maintenance plan data source.

To set up the schedule, navigate to *Administrator* > *Service and Social* > *Configure Maintenance Plan Next Run Schedule*.



9.4 Maintenance Plans in Other Objects

Maintenance Plans in Service Contracts [page 268]

You can view objects on header and on item level as *Covered Objects* under *Contract Items*.

[Maintenance Plans in Tickets [page 269]](#)

If a ticket is created from a Maintenance Plan, then a new field displaying the Maintenance Plan ID and the name is added to the ticket header.

[Maintenance Plans in Registered Products [page 269]](#)

You can view the corresponding maintenance plans under the *Maintenance Plans* tab.

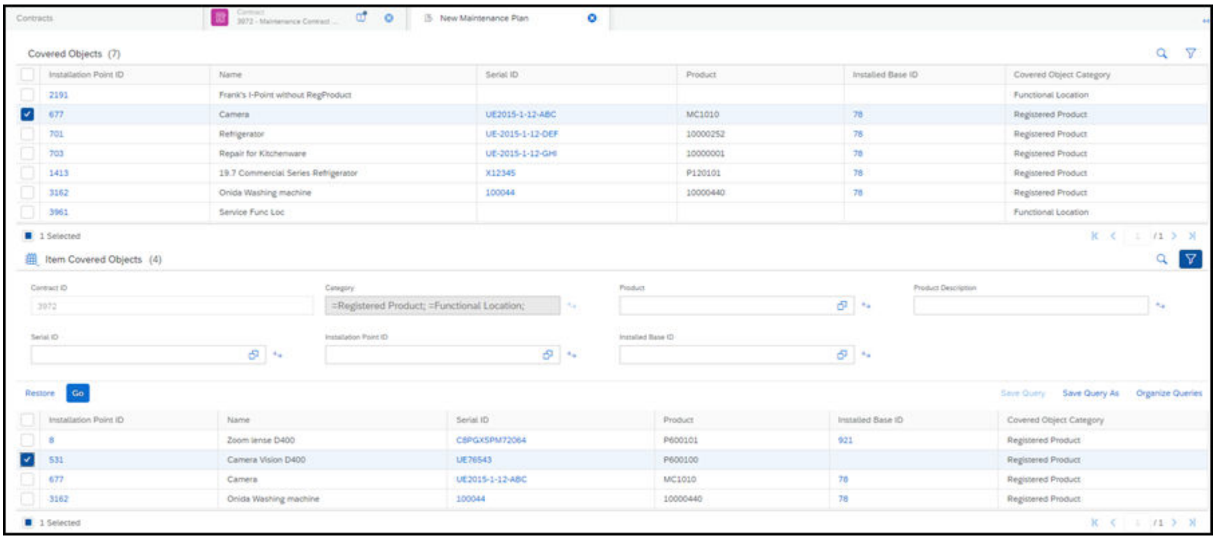
[Maintenance Plans in Installation Points [page 270]](#)

You can view the corresponding maintenance plans under the *Maintenance Plans* tab.

9.4.1 Maintenance Plans in Service Contracts

You can view objects on header and on item level as *Covered Objects* under *Contract Items*.

You can also establish *Service Contract* as alternative starting point for *Maintenance Plan* creation.



Add Contract Covered Object to Existing Maintenance Plans

Add covered objects of a contract to any existing maintenance plans, irrespective of whether the plans are already associated to the contract or not.

This feature enables you to access related maintenance plans through service contract. You can use the search option to select a suitable *Maintenance Plan* and choose in a multiselect table those covered objects of the current contract that are eligible for this maintenance plan to be taken up as *Maintenance Item*.

It enables you to access related maintenance plans through service contract. It isn't possible to add a covered object as maintenance item to a maintenance plan in which this covered object is already listed as the system check prevents creation of maintenance item duplicates in a selected maintenance plan.

The *Add Existing Maintenance Plan* option is personalized hidden and you can select it to enable the feature.

> **i Note**
>
> Ensure that the *Maintenance Plan* work center is assigned to you.

List or Delete Covered Objects in Existing Maintenance Plan

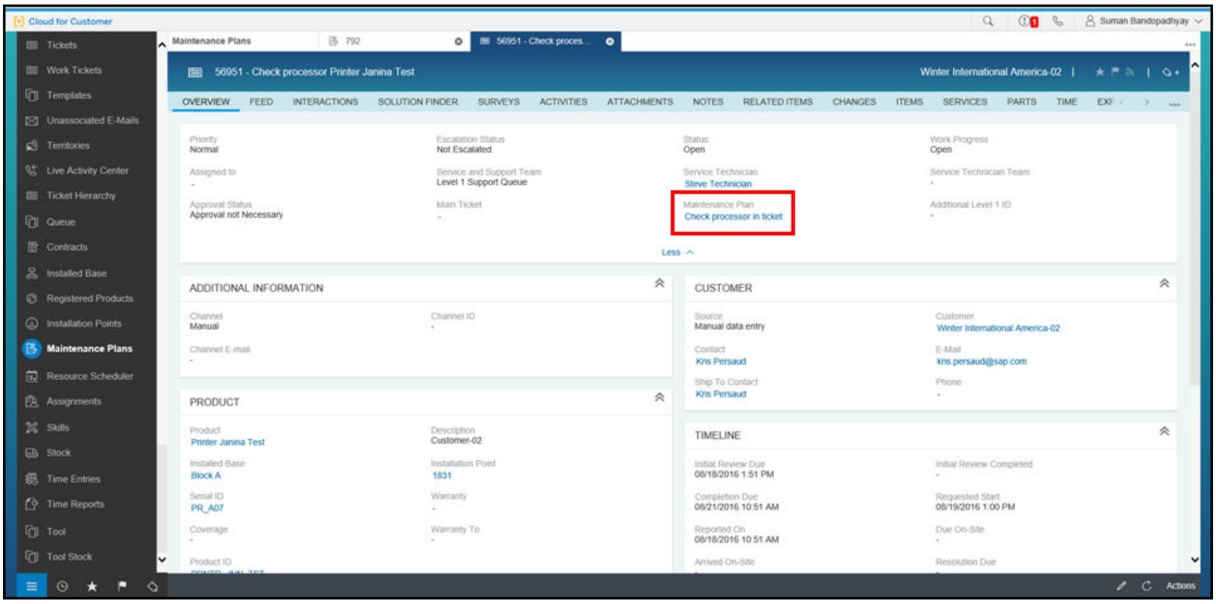
Display or delete *Maintenance Items* of a Maintenance *Plan* from the service contract.

If the associated covered objects of a service contract to a selected maintenance plan are deleted, then the maintenance plan also gets removed from the maintenance plan table of this contract.

9.4.2 Maintenance Plans in Tickets

If a ticket is created from a Maintenance Plan, then a new field displaying the Maintenance Plan ID and the name is added to the ticket header.

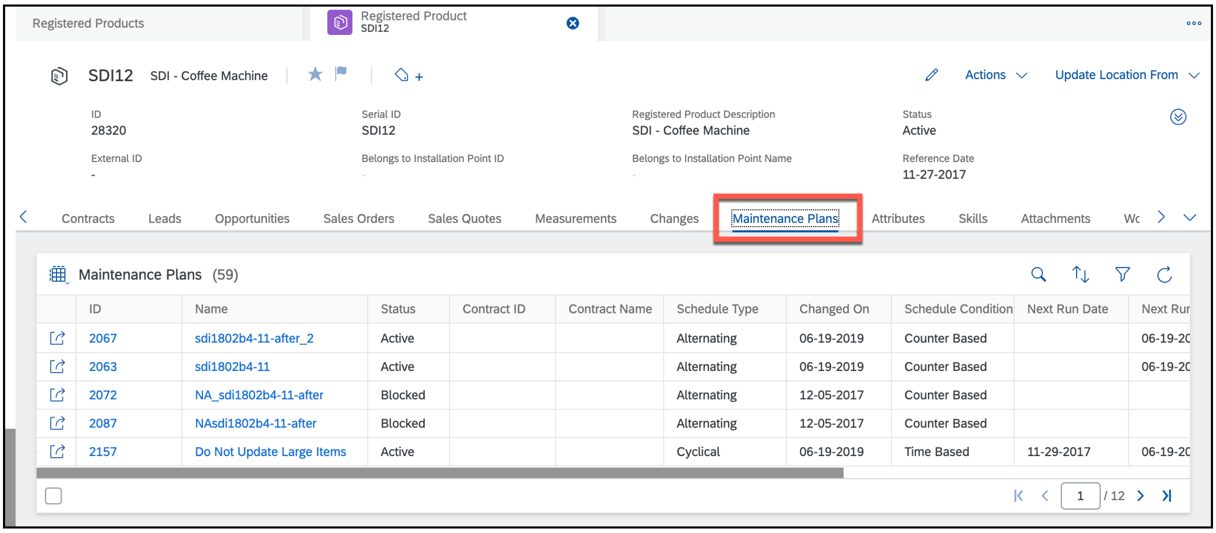
You can see the Maintenance Plan in the Ticket itself and navigate to the maintenance plan from which the ticket was created.



9.4.3 Maintenance Plans in Registered Products

You can view the corresponding maintenance plans under the *Maintenance Plans* tab.

To add a maintenance plan, click the *Actions* drop-down menu and choose *Add Maintenance Plan*.



Related Information

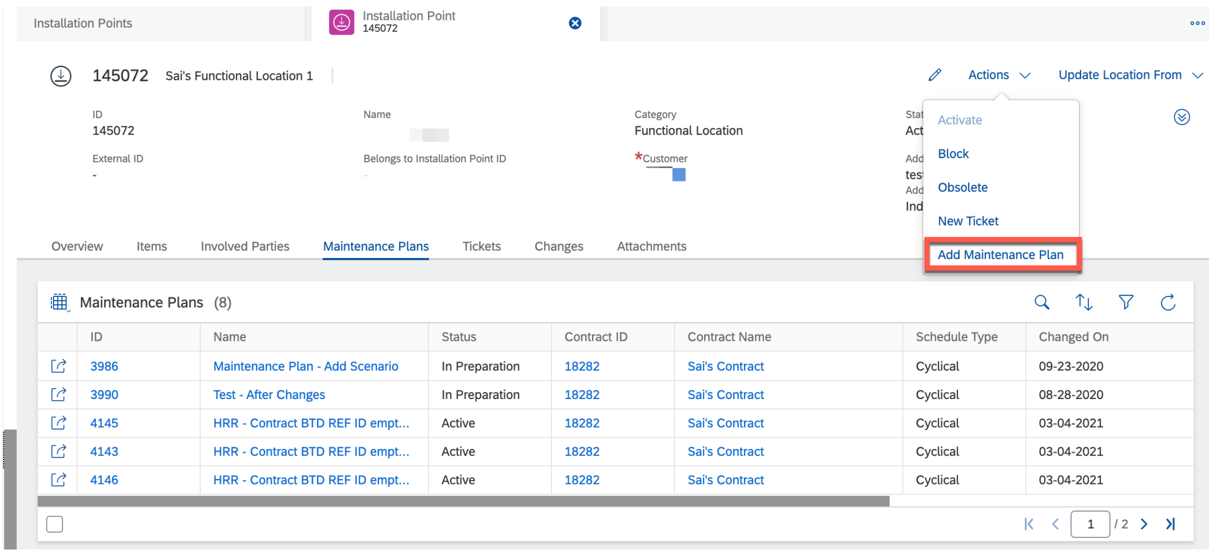
[Add Registered Products to Maintenance Plans [page 260]](#)

Plan for periodic maintenance of registered products by adding them as maintenance items in the maintenance plan.

9.4.4 Maintenance Plans in Installation Points

You can view the corresponding maintenance plans under the *Maintenance Plans* tab.

To add a maintenance plan, click the *Actions* drop-down menu and choose *Add Maintenance Plan*.



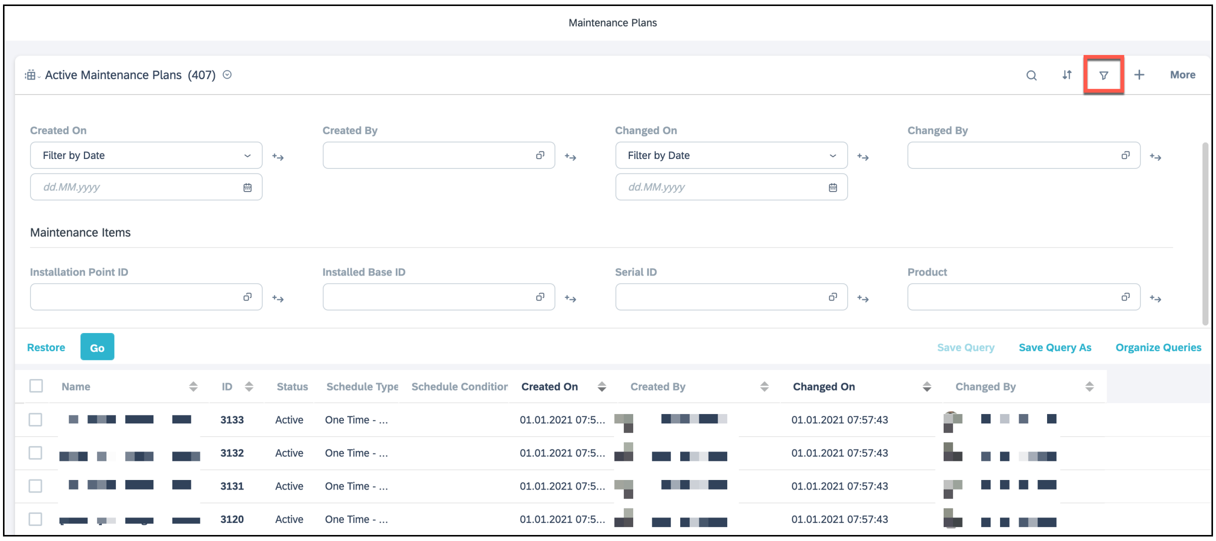
Related Information

[Define Maintenance Plan Conditions [page 255]](#)
Create and add conditions to your maintenance plans on the *Plan Definition* tab.

9.5 Search for Maintenance Plans

Filter associated tickets by advance search and result list in contracts.

You can filter by fields such as Source, Product, Product Category, Serial ID, IPoint, IBase, Contract Determination, Created On, Completion Date, Requested End, Reported on, Maintenance Plan ID (only result list).



9.6 Analyze Maintenance Plan Data

Maintenance plan reporting is enabled with Plan Definition attributes.

The plan definition tab contains parameters such as *Measurement Attribute*, *Condition Group ID*, *Value*, *Value Unit*, *Starting Value*, *Threshold*, and *Threshold Unit*.

This feature is useful for detailed reporting on the plan definition parameters and ensures improved maintenance control by reducing time delays in maintenance during the execution of assets.

9.6.1 Configure Analytics in Maintenance Plans

Enable maintenance plan reporting on the *Plan Definition* attributes.

Enable reporting parameters:

- *Measurement Attribute*
- *Condition Group ID*
- *Value*
- *Value Unit*
- *Starting Value*
- *Threshold*
- *Threshold Unit*

Useful for detailed reporting on the plan definition parameters and ensures improved maintenance control by reducing time delays in maintenance during the execution of assets.

9.7 Maintenance Plan FAQs

Check this list of questions and answers for help with maintenance plans.

9.7.1 How does the maintenance plan receive updates to registered products for the active contract?

Context

The maintenance plan uses the contract ID listed for the product or installation point to retrieve registered product data from the linked contract. Here's how to link a maintenance plan to a contract:

Procedure

1. Open the *Installed Base* > *Maintenance Plans*.
2. Open a maintenance plan.
3. Open the *Maintenance Items* tab.
4. Add a product or installation point.

5. Add a contract ID in the *Contract ID* field.
6. Save the changes.
7. Go to the *Contracts* work center.
8. Open the contract with the ID you entered for the product or installation point.
9. Open the *Maintenance Plan* tab.

   You can see the maintenance plan that you linked by entering the contract ID. The registered product information used by the maintenance plan comes from this active contract.

10 Resource Scheduler

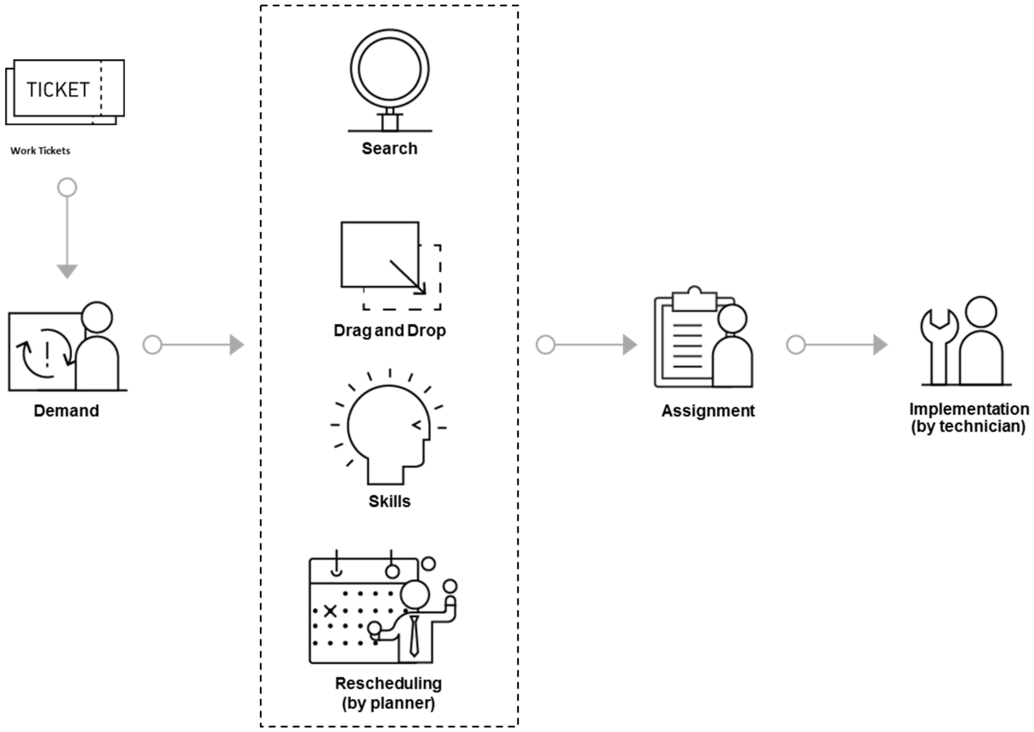
The resource scheduler feature in SAP Service Cloud helps in efficient planning and scheduling during the service process.

As of release 2202, the Resource Scheduler functionality is supported for existing customers, and you can continue using its functionality, however the scoping questions are hidden for new customers and this functionality can't be configured.

For new customers, SAP recommends using the Planning and Dispatching Dashboard in SAP Field Service Management (FSM) instead of the Resource Scheduler app.

> **Note**
>
> The Resource Scheduler functionality is set to be on maintenance mode and existing customers requiring any change in the hidden scoping questions are requested to open a ticket with SAP support.

The planner can see the available field service resources at any given time to work on a specific task. This information is represented in a Gantt chart which offers various features to aid the planning process.



Once a service item is released for scheduling, a demand gets created. For each time-frame chosen in the Gantt chart, the demands that require scheduling, are displayed. The technicians can easily see a list of tasks assigned to them and record their progress. This is also supported on mobile so technicians can start working on these assignments while on the move.

On the *Resource Scheduler* screen, when a team is chosen, the employees assigned to this team display in the Gantt area.

The Resource Scheduler screen consists of:

- **Demand List**
  Demands are displayed on the left of your screen. By default, this list displays service items pertaining to the team of the logged on user.
- **Gantt Chart**
  Team member names are listed along with their availability on the Gantt chart. Different time frame views are available such as: Day/Week/Work Week/Month.
- **Details Section**
  Details for the selected demand and assignments are displayed at the bottom of your screen.

> i Note
>
> Number of items displayed on your screen depends on your screen resolution.

Resource Scheduler offers integration with SAP Multiresource Scheduling (MRS) solution and SAP Multiresource Scheduling, option for SAP S/4HANA solution as well.

10.1 Scope and Configure Resource Scheduling

Administrators can configure the Resource Scheduler features in SAP Service Cloud to help in efficient planning and scheduling during the service process.

> → Recommendation
>
> We recommend that you review all the scoping questions in the areas that are relevant and that you have included in your scope. When you select a question, more information appears on the tabs in the details section of the screen.

Scoping questions and fine-tuning activities that are straightforward may not be included in this list.

10.1.1 Enable Resource Scheduler

Administrators must scope Resource Scheduler so employees can schedule a service for a customer, and also pick and assign a technician for the task. Use fine tuning to configure available features in Resource Scheduler.

1. Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Service* > *General Business Data* > *Resource Scheduler*, and check the box.
2. In the *Questions* tab and select the appropriate option for using different features of resource scheduler.
3. Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* and search for **Demand Processing** to configure available fine tuning options.

10.1.2 Define Colors for Display of Assignments in Resource Scheduler

Administrators can set and define colors for displaying assignments in Resource Scheduler.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List*, and search for *Demand Processing*. Choose *Maintain Colors for Display of Assignments* and maintain the necessary settings.

Choose *Add Row* and maintain a color code, description, and color for your assignment display in the resource scheduler. Choose *Save* to save and enable your settings.

10.1.3 Configure External Status Codes, Color Coding, and Time Types for Automatic Time Entry in Resource Scheduler

As an administrator, you can maintain colors for the respective status and time (past, present, or future). Additionally, you can also define time types to start automatic time entry when setting the status.

Define external status codes for an assignment activity using fine tuning. The status reflects the progress of the work in details.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List*, and search for *Demand Processing*. Choose *Maintain External Status Codes for Assignment Activity* and maintain the necessary settings.

Example

You can define a status as **Start Travel**. When you select this status, you can start the time recoding automatically (also defined and associated in the fine tuning activity) with a time type **Travel**.

10.1.4 Configure Attributes and Colors for Assignment Bar

As an administrator, you can configure the attributes and colors for the assignment bar (fill and border colors) in *Resource Scheduler*.

To configure, go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *Demand Processing* > *Maintain Color Profile for Assignment Bar*.

On the *Maintain Color Profile for Assignment Bar* page, in the *Assignment Bar Color Profile* section, select the field for which you want to maintain the color profile. The available fields for the background and border bar areas are as follows:

- Ticket Type
- Assignment External Status
- Ticket Priority
- Ticket Item Processing Code

In the *Set Color* section, you can maintain colors for past, present, and future assignments.

As there are no default color profiles available, if a color profile is not defined, no colors are visible on the Resource Scheduler Gantt chart.

Points to Remember

- If you do not configure the color profile on this page, the colors maintained in the *Maintain Service Request Type Color Mapping* and *Maintain External Status Codes for Assignment Activity* fine-tune activities are followed.
- The default value for the assignment bar border color is *Ticket Type* and the assignment bar background color is *Assignment External Status*. However, the values and color codes maintained in the existing configuration activities are not copied to the new one. They are still applied as mentioned in the previous point, until the new configuration is maintained.
- If in this configuration activity, mapping is changed for only one assignment area (border or background), configuration for the other area is still followed based on the relevant existing configuration activity. For example, in the *Assignment Bar Color Profile* section, you change the value for assignment bar border color to *Ticket Priority* and do not change the default value for the background color. Then, the border colors maintained for *Ticket Priority* are applied based on the *Maintain Color Profile for Assignment Bar* activity, and the background colors maintained for the *Assignment External Status* are based on *Maintain External Status Codes for Assignment Activity*.
- You can use this configuration to reverse the mapping that is described in the previous point. In such cases, the color profile needs to be set again in this configuration activity.

10.1.5 Define Service Request Type Color Mapping in Resource Scheduler

Administrators can maintain mapping between service request type and color for display in the Resource Scheduler Gantt chart.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List*, and search for *Demand Processing*.

Choose *Maintain Service Request Type Color Mapping*. Then choose *Add Row* and select the *Service Request Type* from the dropdown and select a color to associate with the service type. Save your selection.

> **Note**
>
> Multiple ticket types can have the same color to group similar jobs.

10.1.6 Configure and Define Slots for Appointment Offering in Resource Scheduler

Administrators can maintain slots for appointment offering via fine tuning.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List*, and search for *Demand Processing*. Choose *Maintain Slots for Appointment Offering* and maintain the *Appointment Slot Code*, *Description*, and time for each slot.

Depending on how you maintain the appointment slots here, the service agent/technician can select appointment slots when creating a service appointment for their customer.

Example

You can maintain a full day time slot with an assigned duration of 8:00 to 18:00 hours.

10.1.7 Define Working Hours Type in Resource Scheduler

As an administrator, you can maintain color for regular working hours, on duty, and overtime hours. Additionally, you can also configure the behavior for *On Duty* and *Overtime* hours for the initial drag and drop of a demand on the Gantt chart. You can also maintain color codes for these working hours.

Color coding these new working hour types helps identify each type on the Gantt chart. You can drag and drop demands to these additional work hour slots as well.

The default value is *Available* which allows the user to drag and drop a demand on the hours shown as *Regular*, *Overtime*, and *On Duty*. *Unavailable* means that the user cannot drag and drop a demand to these hours.

> **i Note**
>
> After the initial drag and drop, you have the flexibility to move assignments over on to these hours.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List*, and search for *Demand Processing*. Choose *Maintain Working Hours Type* and maintain the necessary settings.

10.1.8 Configure Fields for Assignment Bar in Resource Scheduler

In the *Maintain Fields for Assignment Bar* activity, the administrator can maintain a list of fields that you want displayed in the Assignment Bar of the Resource Scheduler Gantt chart.

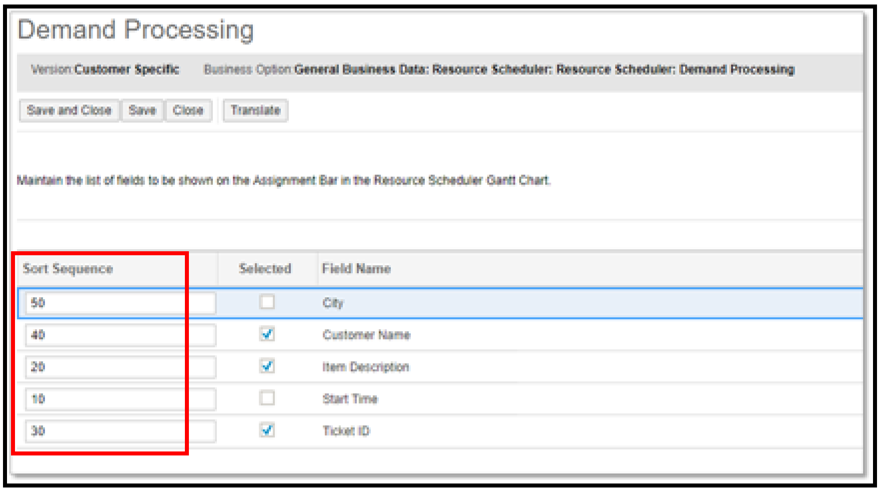
In addition to selecting the list of fields to display in the *Assignment* bar, you can also define the sequence of these fields via fine tuning activity.

Define and maintain the order in which attributes are displayed in the additional column via fine tuning. The list displays in the same order in the *Assignment* bar of the Gantt chart.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune*, and search for *Demand Processing*. Choose *Maintain Fields for Assignment Bar*.

In the *Sort Sequence* column, maintain values that correspond to the order of display in the assignment bar in Gantt chart.

> **Note**
>
> This configuration does not affect the *Group By Day* mode. When you Group by Day, Start time, Customer, and City values display in the *Assignment* bar.



10.1.9 Maintain Workflow for Assignments in Resource Scheduler

The administrator can create workflow rules for assignments, such as sending e-mail notification to the customer or technician when an assignment is created or assignment status is updated.

> **Note**
>
> The administrator has to create the workflow rules and e-mail templates.

10.1.10 Code List Restrictions for Assignments Status in Resource Scheduler

As an administrator, you can manipulate the path of a status flow (from open to begin travel, begin work, complete work, or canceled) via code list restrictions. Create a new code list restriction and maintain the status values you want displayed for assignments.

Go to *Administrator* > *General Settings* > *Code List Restrictions* > *New*, and maintain the desired status values. You would be able to see the choice of options in the *Status* drop down list in assignment.

10.1.11 Configure Group Assignments in Resource Scheduler

Administrator can enable the Grouping of Assignments feature in the system to use it. Enabling this feature would let you use the Group by Day and Group by Demand features in the solution.

This feature enables you to group multiple assignments for better visualization, and also work on the group as a whole, except when you move an assignment manually. You can group assignments for each technician that has been scheduled for the same day, and have the same customer, ticket type, and location. The same parameters would apply for Group by Demand.

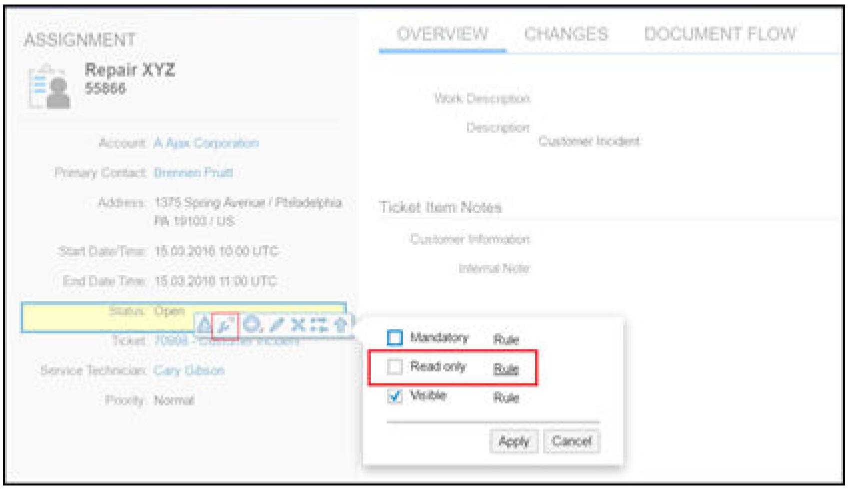
To use the *Group Assignments* feature, select the related question by navigating to: *Scoping* > *General Business Data* > *Resource Scheduler*. In the *Questions* tab, select: *Do you want to enable Grouping for C4C Resource Scheduler?*

10.1.12 Make Status Fields Read-Only in Resource Scheduler Using Key User Tools

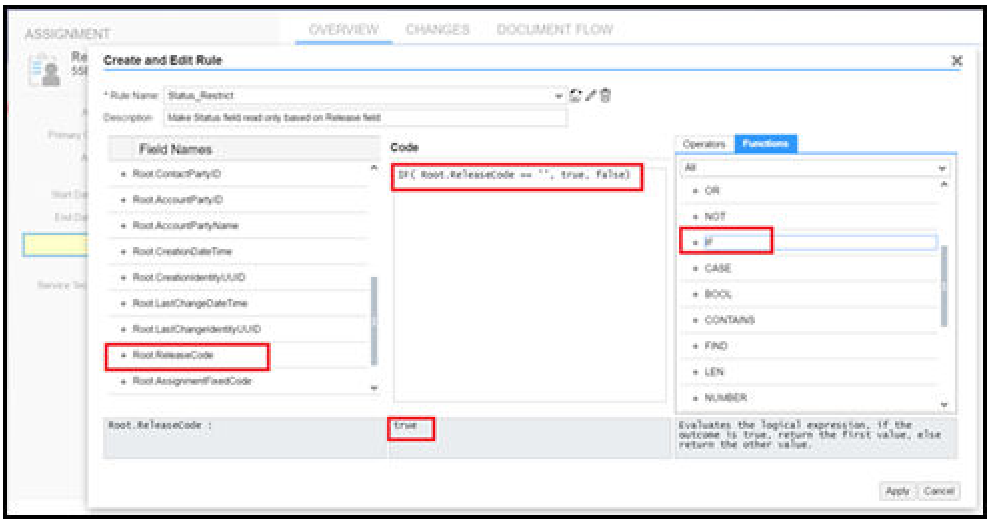
This topic explains the process of how the customer can prevent technicians from working on unreleased assignments.

Currently, the resource planner creates an assignment based on a work ticket with defined parameters for the service duration and time frame. The planner then assigns the demand to a service technician and saves the assignment. By default, the service technician can start working on these assignments. However, if the planner wants to restrict the service technicians from working on unreleased assignments, then you must follow these steps:

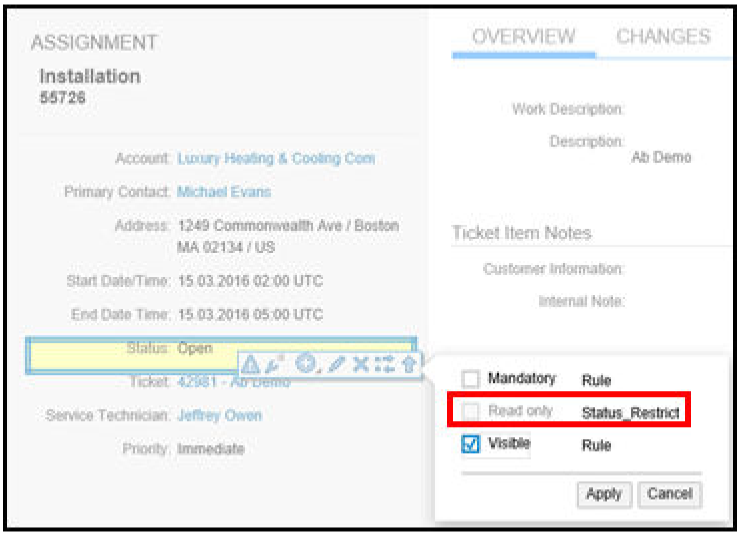
1. Navigate to *Resource Scheduler* > *Assignment* and open an assignment in *Open/In Process* status.
2. Go to *Adapt* > *Edit Master Layout* and hover over the *Status* field to view options.
3. Next, click *Change Properties* > *Rule* hyperlink.



4. Click the *Create New Rule* icon and create a new rule (see below), and then choose *Apply*.



5. Next, apply the rule to the *Read only* property of the field.



6. Go to ▸ *Adapt* ▸ *End Layout Changes* ▸.

The *Status* field displays as read-only for all unreleased assignments, and is enabled and editable for all released assignments.

10.1.13 Mass Release Assignments in Resource Scheduler Using MDRO Runs

As an administrator, if you have chosen to restrict the service technicians from working on unreleased assignments, you can release an assignment automatically for it to become available to the service technician.

To release an assignment automatically, define an MDRO run. Based on the time defined in the run, all assignments within the defined time slot gets released automatically.

Go to *Administrator* > *Service and Social* > *Configure Assignment Release Run*, and create *NEW MASS DATA RUN OBJECT TEMPLATE RUN*. Then create a new MDRO run and set the parameters.

> **Note**
>
> *Service Team* value is mandatory.

10.1.14 Configure Complete Fulfillment in Resource Scheduler

The system creates assignments everyday until a demand is completely fulfilled (based on certain rules), which is helpful for planning demands of long duration. The dispatcher does not have to create assignments manually.

Administrators can enable the complete fulfillment feature via scoping. Go to *Business Configuration* > *General Business Data* > *Resource Scheduler* > *Questions*, and select the question: **Do you want the system to create assignments automatically till a demand is fulfilled?**

10.1.15 Maintain Threshold for Complete Fulfillment

Administrators can maintain a threshold value based on the non-working hours and all-day events taken into account when creating assignments as per complete fulfillment logic.

In scoping, if you have chosen to create assignments automatically, until a demand is fulfilled, you can maintain a threshold value based on the Non working hours or All-day events that are taken into account when the system creates assignments on multiple days, until a demand is completely fulfilled.

The default threshold value is 72 hours, which means the system would not create assignments during Non working hours or All day events for up to 72 hours, and would continue to create assignments during the hours following that. If Non working hours or All day events are found for more than 72 hours at a stretch, assignments are created up to the start of this period and remaining hours (if any) are sent back to the demand list.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List*, and search for *Demand Processing*. Choose *Maintain Threshold for Complete Fulfillment*, then define the threshold hours and save.

10.1.16 Configure Time Snapping in Resource Scheduler

This feature places an assignment to the nearest thirty-minute time slot when moving or resizing an assignment, hence making the move easy for the user.

Administrators can enable the *Time Snapping* feature via scoping. Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *General Business Data* > *Resource Scheduler*, and select the scoping question: *Do you want the system to place an assignment (snap) to the nearest 30 minutes' slot when moving assignment on the Gantt chart?*

10.1.17 Configure Cancelled Assignment in Resource Scheduler

If you do not want the hours from a canceled assignment to be sent back to the demand list, then you must enable this feature via scoping.

Go to *Business Configuration* > *Implementation Projects* > *Edit Project Scope* > *General Business Data* > *Resource Scheduler*, and enable the question: **When a technician cancels an assignment, should the planned duration not be sent back to the demand list?**

10.2 Scope and Configure Resource Scheduling with SAP Multiresource Scheduling

You can integrate SAP Multiresource Scheduling with Resource Scheduler for scheduling demands. The following topics walk you through the integration steps.

10.2.1 Enable SAP Multiresource Scheduling (MRS) Integration with Resource Scheduler

The administrator can enable MRS integration via business configuration in the SAP Cloud for Customer system.

Context

Perform business configuration to enable MRS integration in the SAP Cloud for Customer system. Navigate to *Business Configuration* > *Implementation Projects* > *Edit Project Scope* > *General Business Data* > *Resource Scheduler*.

> ⚠ Caution
>
> If you have enabled SAP Multiresource Scheduling integration for SAP Cloud for Customer, do not use the native *Resource Scheduler* feature in SAP Cloud for Customer.

Procedure

1. First, scope in Resource Scheduler.
2. Next, go to *Questions* tab and select *Resource Scheduler* to display related questions as follows:
   a. Do you want to use C4C Resource Scheduler?
   b. Do you want to integrate with MRS?
3. Selecting to integrate with MRS enables the MRS integration in the SAP Cloud for Customer tenant and would make associated MRS scenarios available.
4. Next, perform fine tuning activities for customer support tickets.

SAP Multiresource Scheduling Links

This section contains links to relevant MRS content.

Related Information

For SAP Cloud for Customer and MRS integration content, see the *Application Help* document set on the SAP Help portal: http://help.sap.com/mrs.

Then navigate to the

- Configuration Guide > Basic Configuration for SAP Multiresource Scheduling > Configuration of SAP Cloud for Customer > Integration
- Configuration Guide > Specific Configuration for SAP Multiresource Scheduling > Setting up Appointment Booking > Appointment Booking
- Master Guide and Upgrade Information > Setting Up Your System Landscape > Setting Up a System Landscape with SAP Cloud for Customer

10.2.2 Maintain Fine Tuning in Resource Scheduler for Customer Support Tickets

As the administrator, perform fine tuning activities for *Define Document Types*, *Ticket Status Schema*, *Involved Parties,* and *Item Processing Codes*.

Context

Perform fine tuning activities to set up customer support tickets.

Procedure

1. Go to *Open Activity List* > *Fine Tune* , and search for *Tickets for Customer Support*. Click the activity to open and view the various steps mentioned to set up your tickets for service request functionality.
2. Open *Document Types* to display the types of header you can set for the service tickets. Here you can set the different document types and associate it with the status schema. You can maintain custom status schema and link it to the document type here.
3. To define document types, go to *Ticket Status Schema*. Define statuses and map it to a life cycle status. Here you can define the header ticket status.

   You cannot configure ticket item status.
4. Next, click *Involved Parties*. If you want to maintain several assignments for a service ticket item, then enable the service technician role in this fine tuning activity and do not mark it as unique.
5. Click *Item Processing Codes* to define various item processing types.

Example

For item processing type, the scheduling relevant flag is not enabled. Items that unassociated with the *Service* tab will not let you enable it in the items section of a service ticket.

10.2.3 Create Communication System in Resource Scheduler for MRS Integration

The administrator has to create a communication system in SAP Cloud for Customer to enable interaction with MRS.

Context

Create a communication system on SAP Cloud for Customer.

Procedure

1. Go to *Administrator* > *Communication Systems* under the *Integration* section, and create an entity. In the communication systems screen, enable the *SAP Business Suite flag* for the MRS system ID and provide PI or HCI as the host name, as you would be accessing either of these systems.
2. Next, define the *Business System ID*,*Logical System ID*, and the *Preferred Application Protocol*, required for communication between SAP Cloud for Customer and the HCI or PI systems. Save your entries.
3. Next, create the communication arrangement.

10.2.4 Create Communication Arrangement from Resource Scheduler to MRS Integration

The administrator can create communication arrangements for demand replication to, and employee replication from an external system. The external system here is MRS.

For Demand Replication to External System

1. Now, you have to create communication arrangement for this communication system. Navigate to *Administrator* > *Communication Arrangements* . Since MRS integration is scoped, the *Demand Replication to External System* communication scenario becomes available here.
2. When you click this communication scenario, you would view a set of inbound and outbound services as follows:

   Outbound Communications:Replicate Demand to External System Replicate Demand Assignment Status to External System Inbound Communication:Replicate Assignments for Demands from External System

   > **Note**
   >
   > Associate the service URLs on these communications to the HCI or PI system you are using.

3. Click *View All*. In the *Technical Data* tab, you can maintain various aspects of the communication such as authentication method, and several other settings.

4. Save and activate the communication. Once activated, the corresponding end points become active as well. Based on triggers from corresponding business objects, messages get created in SAP Cloud for Customer.
5. In the *Business Data* tab, *My Communication Data* is the system ID of the SAP Cloud for Customer tenant that we sent to MRS.

> **Note**
>
> You would set this communication arrangement for the entities in MRS you are interacting with.

For Employee Replication from External System

Next, set up another communication arrangement for *Employee Replication from External System*. In this communication arrangement, the employees from MRS are replicated to SAP Cloud for Customer.

> **Note**
>
> Before setting up the communication arrangement, enable it in business configuration.

Follow these steps to enable the employee replication inbound into SAP Cloud for Customer.

1. Go to *Business Configuration* > *Implementation Projects* > *Edit Project Scope* > *Communication and Information Exchange* > *Integration with External Applications and Solutions*, and scope in *Integration of Master Data*.
2. In the *Questions* tab, enable the employee-related question: *Do you want to replicate employee data from an external application or solution to your cloud solution*?
3. In the communication arrangement screen, you can see the *Communication Arrangement Overview: Employee Replication from External System* arrangement along with the url, which is the inbound communication arrangement system into SAP Cloud for Customer.

10.2.5 Organization Setup in Resource Scheduler for MRS Integration

The administrator has to perform organization setup manually.

Perform the organization setup as follows.

Go to *Administrator* > *Org Structures*, and set up and define your MRS organization structures and activate them. Enable the *Service Organization* and *Customer Service* flags under the *Functions* tab, to display the tickets for the service technician team.

10.2.6 ID Mapping from Resource Scheduler into MRS

The administrator can set up the organization structure, perform ID mapping to the corresponding IDs in MRS for organization units, employees, and employee setup.

This is the next step after setting up the Org. structure. Perform ID mapping to the corresponding IDs in MRS.

For Organization Units

1. Navigate to *Administrator* > *Edit ID Mapping for Integration*.
2. In the *Mapping Of* field, select *CRM Organization and Units*, which refers to the organization unit that you've set up.
3. Next, provide the *System Instance ID* (this is the same as the Business System ID), which you defined in the communication arrangements screen, and choose *Go* to display all the organization units along with their Cloud for Customer ID, External ID, and the Business System ID. The business system ID means that whenever a specific organization message is sent to this business system, the ID displayed in the External ID column is populated by the system.

For Employees

For replicating employees from the business system, choose ERP Employees from the *Mapping Of* dropdown list, and choose *Go* to display the list of employees you have replicated from MRS. Mapping of external ID to SAP Cloud for Customer occurs automatically. This information is displayed in the *Origin* column in the *ID Mapping for Integration* screen.

Employee Setup

Employee replication from MRS to SAP Cloud for Customer is handled via iDocs. To set up employee, perform the steps mentioned in the https://archive.sap.com/documents/docs/DOC-57644 document.

10.2.7 Transfer Employees from MRS to Resource Scheduling in SAP Cloud for Customer

As an administrator, you can transfer employees from MRS to SAP Cloud for Customer.

Context

As a final prerequisite step, perform transfer of employees from MRS to SAP Cloud for Customer.

Procedure

1. Navigate to *Data Integration* > *Complete Employee Master Data Replication*.
2. You can view all employees that were replicated from the MRS system in this intermediate staging area, where you can view all the employee names and correct any errors.
3. Trigger replication and refresh. After replication is complete, the employee name disappears from the list.
4. Navigate to *Employees* > *People* tab, to view the replicated employee. When you click to display employee details, you can view the *External ID*, and the *External System* the employee got replicated from.

10.3 Scope and Configure Resource Scheduling with SAP Multiresource Scheduling for SAP S/4HANA

You can integrate SAP Multiresource Scheduling for SAP S/4HANA with Resource Scheduler for scheduling demands. The following topics walk you through the integration steps.

10.3.1 Enable SAP Multiresource Scheduling, Option for SAP S/4HANA for Appointment Offering Feature in Resource Scheduling

Integrate SAP Cloud for Customer with SAP Multiresource Scheduling, option for SAP S/4HANA to select the appointment offering functionality.

Scoping

The *Appointment Offering* feature is available within SAP Cloud for Customer, and also from SAP Multiresource Scheduling, option for SAP S/4HANA. For using the feature from SAP Multiresource Scheduling, you must first select the appropriate scoping question in business configuration.

Navigate to *Business Configuration* > *Implementation Projects* > *Edit Project Scope* > *General Business Data* > *Resource Scheduler* > *Questions*, and in the MRS Integration group, select the question: **Do you want to integrate with MRS on SAP S/4HANA?**

Feature Behavior with SAP Multiresource Scheduling, option for SAP S/4HANA Integration

The appointment offering feature in SAP Multiresource Scheduling behaves a bit differently. In MRS, from the appointment offering search dialog screen, the available time slots display. When a slot is selected in the SAP Cloud for Customer solution, it gets blocked in MRS for the corresponding service technician team. However, an actual assignment is not scheduled until the MRS optimizer is executed.

10.3.2 Use Resource Scheduler with SAP Multiresource Scheduling, Option for SAP S/4HANA Links

This section contains links to relevant SAP Multiresource Scheduling, options for SAP S/4HANA content.

Related Information

For SAP Cloud for Customer and SAP Multiresource Scheduling, option for SAP S/4HANA integration content, see the *Product Assistance* document set on the SAP Help portal: https://help.sap.com/mrs_s4hana .

Then go to the

- *Configuration Guide* > *Basic Configuration Settings* > *Setting up the Integration with SAP Cloud for Customer*
- *Configuration Guide* > *Specific Configuration Settings* > *Setting up Appointment Booking* > *Setting up Appointment Booking for Work Tickets*

10.4 Create Work Ticket and Add Service Items for Resource Scheduling

Create a work ticket in the *Work Tickets* tab.

1. Create a service ticket under the *Tickets* tab.
2. Once you've determined that the ticket needs service, add service items in the *Items* tab based on service requirement. The scheduling method can be configured for the item processing codes for service items relevant for scheduling.
   The following are our supported scheduling methods:
   - **Manual** scheduling requires a resource planner to assign a service technician for the requested service. Start and end times define time constraints for the planning phase and this data is inherited from the header. The expected duration for any service is calculated from the planned quantity of the item. Define a service team that would perform this service.
   - **Auto Dispatch** scheduling automatically searches for an available service technician.
   - **Appointment Offering** scheduling allows the service agent/technician to select appointment slots for their customer, when creating a service appointment. You have to first enable this option via fine tuning.
3. Once you maintain the ticket details, you can trigger the demand creation by setting the work progress of the ticket item to *Release for Scheduling*. This creates a demand and sends it to resource planning.

   > **i Note**
   >
   > In the ticket, maintain the service team and requested time range.

   This action sends the demand to the resource scheduler tab and sets the item to *In Scheduling*. Once the demand gets scheduled, the status changes to *Ready* and gets linked to the assignment.
4. The planned duration for this demand is calculated based on planned quantity. If this UoM is not a time based unit, then use the conversion rules for the product.

In the ticket, maintain the service technician team and requested time range.

10.5 Use the Resource Scheduler

Resource Scheduler is a built-in scheduling tool for creating assignments based on demands from work tickets with real-time integration with technician calendars.

The Resource Scheduler allows the resource managers and service managers to view the availability of technicians in the team and assign work to them based on their skills. When you scope resource scheduler in business configuration, you can create and send service ticket items as demands to the resource scheduler.

1. In the *Resource Scheduling* tab, on the left half of the screen, you can define responsibility for your team. You can set one query as default, so that when you access the resource scheduler tab, the data is fetched and displayed at once. The left side of the screen displays all the demands for your team, while the right section displays the names of all team members and their availability.
2. Using drag and drop, you can assign a task or demand to a technician in the Gantt chart that can display multiple technicians. A detail section at the bottom of the screen displays details of demands and assignments. Once you save your plan, the assignments are created.
3. The resource scheduler displays all status updates made to the assignments. After an assignment is completed, an employee can confirm the same in the ticket section. The assignments can also be seen in the corresponding employee calendar.
4. You can rearrange or shorten assignments. Lengthen or shorten the time by grabbing the sides of the assignment display in the employee calendar. The unaccounted balance time displays in the *Demands* list allowing you to reassign them. Once you save your changes, the updated assignment displays in the *Assignments* tab.

   > **i Note**
   >
   > The *Assignments* tab has a map and list view and displays all your assignments.

Plan and Assign Demands in Resource Scheduler [page 291]
Every ticket item relevant for dispatch or service, represents a demand.

Use the Gantt Chart in Resource Scheduler [page 294]
The Gantt chart provides an overview of assigned demands in preset color codes for status and time.

Complete Fulfillment in Resource Scheduler [page 300]
Complete Fulfillment allows the system to create assignments everyday until a demand is completely fulfilled, based on certain defined rules. This helps plan demands with long duration. The dispatcher does not have to create the assignments manually.

10.5.1 Plan and Assign Demands in Resource Scheduler

Every ticket item relevant for dispatch or service, represents a demand.

Choosing a team begins the search for unscheduled demands. You can define queries to structure the resources and find the correct data. Using drag-and-drop, you can assign the demand to a resource for a specific time frame. After the demand is complete, it disappears from the demands list.

When you choose a team, the employees assigned to this team, who have working times assigned, are displayed in the Gantt chart. The Gantt chart shows an overview of assigned demands with color codes, via status and time. You can assign every system status to multiple free definable user status, which can be displayed in a color defined by you in the fine-tuning activity during business configuration. After you save the assignments, they become visible in the employee calendar. An employee can directly jump to an assignment from the calendar.

When you click a demand in the demand list, the demand details display immediately in the details area below the Gantt chart. All existing assignments display as well.

> **i Note**
>
> You can define searches to filter demands, or show demands from a different time period. The unplanned demands valid for the used time frame of the Gantt area are displayed.

10.5.1.1 Plan Multiple Demands in Resource Scheduler

In the Resource Scheduler, you can assign multiple demands at once.

To do so:

1. Choose multiple demands in the demands list and double click on a cell in the Gantt chart.
2. Assignments are created for the selected demands in an order and display in the Gantt chart.
3. If a demand does not fit within the available work hours for that day, the entire demand is returned back to the demand list.

   > **i Note**
   >
   > Behavior is different in case complete fulfillment is scoped in. For more details, see topic **Complete Fulfillment in Resource Scheduler**Complete Fulfillment in Resource Scheduler [page 300].

10.5.1.2 Assign Demands in Resource Scheduler

This section explains how demands appear in the demand list based on queries and time frame.

Demands

On the Gantt chart, using drag and drop, assign a demand to a resource for a specific time period. On the resource scheduler screen, clicking on a demand, in the demand list, displays its details in the details area below the Gantt chart.

On the resource scheduler screen, when assigning demands via drag and drop, longer demands, which do not fit into the available working hours for that day end at the end of the working hour. The remaining time displays in the demand list. The scheduler can then assign the remaining time of the assignment to the same or different resource. To assign the long running demands at once, you can use the complete fulfillment feature.

10.5.1.3 Demands List in Resource Scheduler

This section explains how to work with the demands list in resource scheduler. Every ticket item relevant for service and dispatching indicates a required task that needs performing. Once you release the item for scheduling, it appears in the demands list.

Search Query

Use search queries to find demands and resources. You can define searches to show planned demands or demands in a different time period. Based on your query, all relevant demands for your team would be displayed in the Gantt Chart. You can search with a customer name as well.

Choose from the following search query options.

- **All Demands**:
  Displays all demands irrespective of their status.
- **My Team's Demands**:
  Displays all demands that require scheduling.
- **To-be-Scheduled Demands**:
  Displays all to-be-scheduled and partially scheduled demands. The default list is the same as *My Team's Demands*. Additionally, using advanced search, you can also display the to-be-scheduled demands for other teams as well.

> **i Note**
>
> For all the search queries, if user changes the time window in the Gantt chart, the demand list gets refreshed based on the new time window.

Advanced Search

In addition to the standard queries, there are many other fields such as *Ticket Type/Ticket Priority/City* and others, which can be used to filter the data further. A few fields such as *Service Team/Status* are shown based on the selected search query.

If the user searches by *Requested Start* and *Requested End* dates, the list of demands that fall within the given dates are displayed, independent of the current time window. In this case, changing the time window in the Gantt chart does not refresh the demands list.

> **i Note**
>
> Serial ID in the advanced search refers to the main registered product in a ticket.

Demand List Personalization

Additional fields from advanced search are also available in the demand list (via personalization) and demand details sections.

In the *Resource Scheduler* tab, you can enable a set of fields relevant for demand list using personalization. Navigate to *More* button and select *Settings* > *Personalize* > *Add Fields*. Choose the fields you want to enable or disable, and select *OK* to complete personalization.

10.5.2 Use the Gantt Chart in Resource Scheduler

The Gantt chart provides an overview of assigned demands in preset color codes for status and time.

10.5.2.1 Employee Working Hours Type

Working time is maintained at employee or service provider master data level. These times show up in the Resource Scheduler to ensure that technicians are assigned tasks within their working time only.

Members of this team without a working time assigned are not shown as plannable resource for the dispatcher. Hence they cannot be assigned any service tasks.

To show the availability of the resources, working hours are maintained for the employees. Non-working hours are indicated as blocked (grayed out) in the Gantt chart. In addition, the duration for any regular appointment is also shown as blocked in the Gantt chart.

Besides regular working hours, you can additionally maintain *On Duty* and *Overtime* hours for an employee. Color coding these working hour types helps identify each type on the Gantt chart. You can drag and drop demands to these additional work hour slots as well.

1. Navigate to *People* > *Employee* > *Working Hours* tab.
2. Next, select *Add Row* and maintain working period (on-duty/overtime) the valid from and to dates, time zone, and work day calendar.
3. Maintain working days and working hours in the lower section of the screen. Once maintained, you would see the updates in the *Resource Scheduler* Gantt chart.
4. When scheduling manually, a planner can drag and drop a demand during *Overtime* and *On-Duty* hours. For *Appointment Offering* and *Auto-Dispatch* methods, assignments are not created during on-duty hours. Overtime is treated the same way as regular working hours.

10.5.2.2 Maintain Employee Work Hours Type in Resource Scheduler

Working time is a recurring pattern repeated every week that contains the time zone and working day calendar.

Members of a team without an assigned working time are not shown as resources who can be scheduled in the resource scheduler. Besides regular working hours, you can also maintain *On Duty* and *Overtime* hours for an employee. Color coding these additional working hour types helps identify each type on the Gantt chart.

Follow these steps to maintain work hours type for an employee:

1. Navigate to *People* > *Employee* > *Working Hours* tab.
2. Next, select *Add Row* and maintain working period (on duty or overtime) the valid from and to dates, time zone, and work day calendar.
3. Maintain working days and working hours in the lower section of the screen. Once maintained here, the updates would display in the *Resource Scheduler* Gantt chart.

10.5.2.3 Define Working Hours Type in Resource Scheduler

As an administrator, you can maintain color for regular working hours, on duty, and overtime hours. Additionally, you can also configure the behavior for *On Duty* and *Overtime* hours for the initial drag and drop of a demand on the Gantt chart. You can also maintain color codes for these working hours.

Color coding these new working hour types helps identify each type on the Gantt chart. You can drag and drop demands to these additional work hour slots as well.

The default value is *Available* which allows the user to drag and drop a demand on the hours shown as *Regular*, *Overtime*, and *On Duty*. *Unavailable* means that the user cannot drag and drop a demand to these hours.

> **Note**
>
> After the initial drag and drop, you have the flexibility to move assignments over on to these hours.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List*, and search for *Demand Processing*. Choose *Maintain Working Hours Type* and maintain the necessary settings.

10.5.2.4 Time Frame and Settings in Resource Scheduler

Different time frame views are available on the Gantt chart to show relevant data in day/week/work week/month view. Planning is done in the day view.

> **Note**
>
> Month view is display-only.

Clicking on a day in the Gantt chart displays the day view of the chosen day. However, the month view is read-only view. You can define the default start-up view in user specific settings.

Use the *Settings* button available on top of the Gantt chart to set the following default time frame view (day/week/month). Using this button, you can also choose different time zones in which the Gantt chart details display.

Assignment Tool Tip

You can enable the assignment tool tip in the *Resource Scheduler* tab. Navigate to *More* button and select the *Settings* > *Show Tool-tip for Assignment*. After enabling the assignment tool tip, hover over any assignment in the Gantt chart to view its details.

10.5.2.5 Assignments in the Gantt Chart

Assignments in the Gantt chart can be shown in different colors based on the status. It is also possible to set a border color for the assignment based on ticket type. This visualization helps the dispatcher in judging the status and type of assignment at a glance.

10.5.2.6 Define Colors for Display of Assignments in Resource Scheduler

Administrators can set and define colors for displaying assignments in Resource Scheduler.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List*, and search for *Demand Processing*. Choose *Maintain Colors for Display of Assignments* and maintain the necessary settings.

Choose *Add Row* and maintain a color code, description, and color for your assignment display in the resource scheduler. Choose *Save* to save and enable your settings.

10.5.2.7 Edit Assignment in the Resource Scheduler Gantt Chart

In the *Edit Assignment* dialog box, the *End Date Time* field is visible and can be edited.

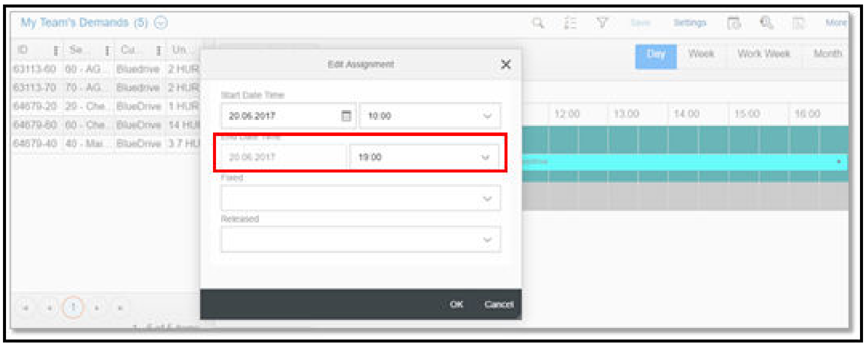
Edit Assignments:

From the Gantt chart, when you select an assignment and navigate to *More* > *Edit Assignment*, in the displayed dialog box the end time field is editable. On change of start date and time, the system recalculates the assignment end date and time. On change of end time, the system recalculates the assignment duration (resize).

The end date is read-only and is set based on the start date.

i Note

If the start date is set to a date, which falls outside the temporary team assignment for an employee, a message displays.



Employee validity check:

When editing an assignment on the Gantt chart, the system performs employee organizational unit, and temporary assignment validity checks in the background and displays warning messages. If the start date is set to a date, which falls beyond the temporary team assignment for an employee, a message displays.

10.5.2.8 Temporary Team Assignments

When an employee is temporarily assigned to another team, the employee shows up in the employee list Gantt chart, for the duration of the temporary team assignment.

The employee does not appear in the temporary assigned list beyond the assignment validity period.

For the duration of the temporary assignment, the employee working hours in the primary team displays as unavailable, and is grayed out.

For auto dispatch and appointment offering options, the employee is considered unavailable in the primary team, for the duration of the temporary assignment.

10.5.2.9 Grouping Assignments in Resource Scheduler

Once grouping of assignments is enabled in the system, you can group multiple assignments for better visualization, and also work on the group as a whole. Group assignments for each technician that have been scheduled for the same day, and have the same customer, ticket type, and location.

When you select *Group Mode*, all relevant demands get clubbed together and appear as one on the Gantt chart. Clicking on *Normal Mode* takes you back to displaying the demands separately.

On the Gantt chart, the group displays as a static background color. On selecting a group, the list of all assignments in that group gets displayed in the details area at the bottom of the screen. After grouping, the planner can move the group to another technician or change the starting time. The planner has better visualization, as at a glance, the group indicates that there is work to be done by a technician at the same customer site. With this functionality, further planning becomes more efficient.

Moving a group is based on certain conditions such as: status of assignments in the group, employee working hours etc.

> **i Note**
>
> You can move assignments around to different resources or time periods as long as their status is *Open*.

10.5.2.10 Configure Group Assignments in Resource Scheduler

Administrator can enable the Grouping of Assignments feature in the system to use it. Enabling this feature would let you use the Group by Day and Group by Demand features in the solution.

This feature enables you to group multiple assignments for better visualization, and also work on the group as a whole, except when you move an assignment manually. You can group assignments for each technician that has been scheduled for the same day, and have the same customer, ticket type, and location. The same parameters would apply for Group by Demand.

To use the *Group Assignments* feature, select the related question by navigating to: *Scoping* > *General Business Data* > *Resource Scheduler*. In the *Questions* tab, select: *Do you want to enable Grouping for C4C Resource Scheduler?*

10.5.2.11 Configure Assignment Bar Fields in the Resource Scheduler

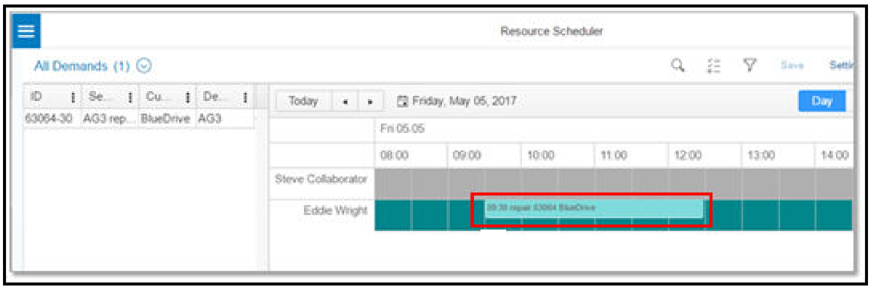
The administrator can choose the list of fields to be displayed in the *Assignment Bar* on the Gantt chart.

These fields are available by default: Start Time, Item Description, and Ticket ID. However, in fine tuning, you can choose to display Customer Name and City fields as well.

This feature helps in efficient utilization of limited available space.

> **i Note**
>
> The default fields can be deselected.

Navigate to *Business Configuration* > *Implementation Projects* > *Activity List* > *Fine Tune*, and search for *Demand Processing*. In the *Maintain Fields for Assignments Bar* activity, select the fields you'd like to display in the assignment bar.



i Note

In the Resource Scheduler Gantt Chart, the text in assignment bar is displayed in white color. Keep this in mind when you define the background color for the assignment bar.

10.5.2.12 Configure Time Snapping in Resource Scheduler

This feature places an assignment to the nearest thirty-minute time slot when moving or resizing an assignment, hence making the move easy for the user.

Administrators can enable the *Time Snapping* feature via scoping. Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *General Business Data* > *Resource Scheduler*, and select the scoping question: *Do you want the system to place an assignment (snap) to the nearest 30 minutes' slot when moving assignment on the Gantt chart?*

10.5.2.13 Weekday Labels in the Resource Scheduler Gantt Chart

Weekday labels are displayed in the Gantt Chart in all views.

Weekday labels (such as Mon, Tue), are displayed in the Gantt chart in all the views: *Day*, *Week*, *Work Week*, and *Month*. The date format for the date (displayed next to the weekday) takes the display format from the user settings.

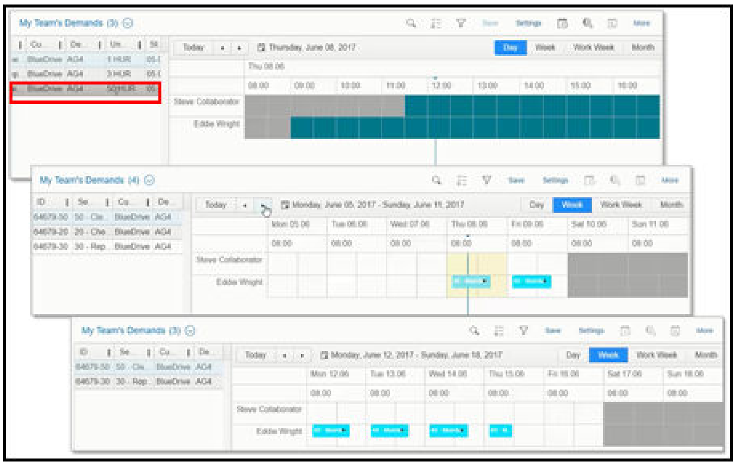
i Note

In Resource Scheduler, public holidays are not supported. (There is no visualization for this or any other criteria/rules).

10.5.3 Complete Fulfillment in Resource Scheduler

Complete Fulfillment allows the system to create assignments everyday until a demand is completely fulfilled, based on certain defined rules. This helps plan demands with long duration. The dispatcher does not have to create the assignments manually.

Complete Fulfillment



To use this feature, your administrator would have to enable this via business configuration scoping and if required, maintain the threshold value in the fine tuning activity.

Sometimes assignments cannot be created due to certain reasons. In such scenarios, the system plans as per validity/availability. The remaining hours are sent back to the demand list, and a message displays stating the same.

These are some examples why assignments may not get created:

- If non-working hours or all-day events exist at a stretch for more than the defined threshold value.
- If temporary team assignment ends.
- If the employee validity expires.

> **i Note**
>
> Complete fulfillment follows all criteria of manual scheduling. For example, if there are existing assignments/appointments, the new assignments created via fulfillment will overlap with them.

10.5.3.1 Maintain Threshold for Complete Fulfillment

Administrators can maintain a threshold value based on the non-working hours and all-day events taken into account when creating assignments as per complete fulfillment logic.

In scoping, if you have chosen to create assignments automatically, until a demand is fulfilled, you can maintain a threshold value based on the Non working hours or All-day events that are taken into account when the system creates assignments on multiple days, until a demand is completely fulfilled.

The default threshold value is 72 hours, which means the system would not create assignments during Non working hours or All day events for up to 72 hours, and would continue to create assignments during the hours following that. If Non working hours or All day events are found for more than 72 hours at a stretch, assignments are created up to the start of this period and remaining hours (if any) are sent back to the demand list.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List*, and search for *Demand Processing*. Choose *Maintain Threshold for Complete Fulfillment*, then define the threshold hours and save.

10.6 Assignments in Resource Scheduler

All assignments are displayed in the *Assignment* tab, where the technician can view and work on jobs assigned for the day.

Assignments can be viewed ordered by time and can be displayed on a map as well. The technician can directly jump to the ticket, the assignment, or the master data and enter their specific data required to process jobs.

The service technicians can easily see their assignments in the employee calendar and can work on tasks assigned to them for the day. They can update the assignment status as they progress with their task.

Assignment Status [page 302]
  Service technicians can update the assignment status as they progress with their task.

Home Page Tile for My Assignments in Resource Scheduler [page 303]
  You can add the *My Assignments* tile to your home page for quick access. This will help you navigate to your assignment list directly.

Assignment Location in Resource Scheduler [page 303]
  Assignment location is a hyperlink in the *Assignment* tab.

Cancel Assignment in Resource Scheduler [page 304]
  When a technician cancels an assignment in the *Assignment* tab, the initial planned duration of the assignment is sent back to the demand list as unplanned hours.

Create Automatic Time Entries in Resource Scheduler [page 304]
  Time types can be assigned to the assignment user (based on assignment status) via fine tuning.

10.6.1 Assignment Status

Service technicians can update the assignment status as they progress with their task.

Context

A service item with work progress status as *In Scheduling* creates a demand with *To be Scheduled* status. A demand is set to *Scheduled* or *Partially Scheduled* when an assignment is created.

Procedure

1. When an assignment is created, the service item is set to *Ready* status.
2. An assignment is always created with *Open* status.
3. When an assignment is deleted in the Gantt chart, the status is set to canceled. The initial planned duration of the assignment is sent back to the demand list as unplanned hours.
4. An assignment and can also be set to *Cancelled* when a scheduled item is removed from the ticket.

Results

The assignment is now available in the workflow, which means that emails can be triggered by the release status.

10.6.1.1 Maintain Workflow for Assignments in Resource Scheduler

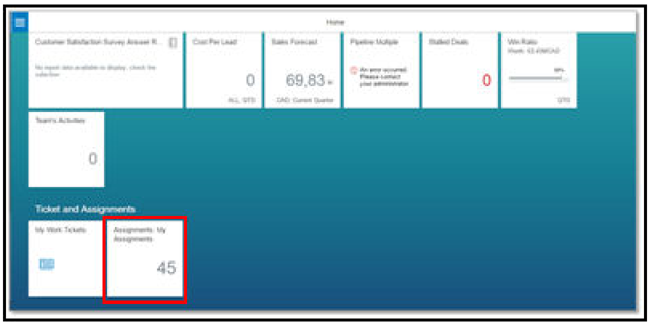
The administrator can create workflow rules for assignments, such as sending e-mail notification to the customer or technician when an assignment is created or assignment status is updated.

> **Note**
>
> The administrator has to create the workflow rules and e-mail templates.

10.6.2 Home Page Tile for My Assignments in Resource Scheduler

You can add the *My Assignments* tile to your home page for quick access. This will help you navigate to your assignment list directly.

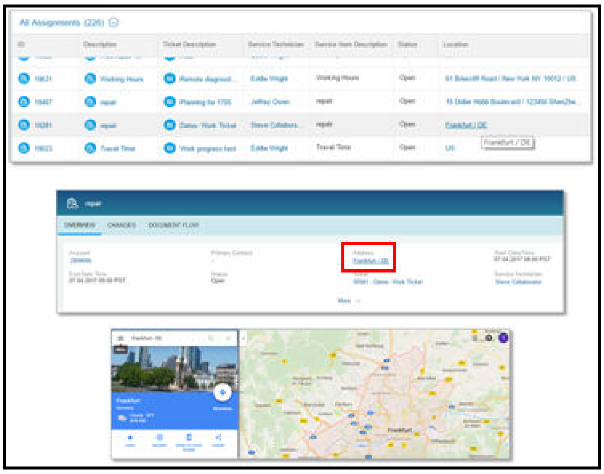
A key user can add the tile for a service technician. This tile loads the service technician's *Assignment* work center and loads the *My Assignments* list by default.



10.6.3 Assignment Location in Resource Scheduler

Assignment location is a hyperlink in the *Assignment* tab.

Clicking on the address of an assignment on the *Assignment List* or *Overview* tab navigates to the address on the map. This feature is helpful when using mobile devices (for driving directions) to get to the assignment location.



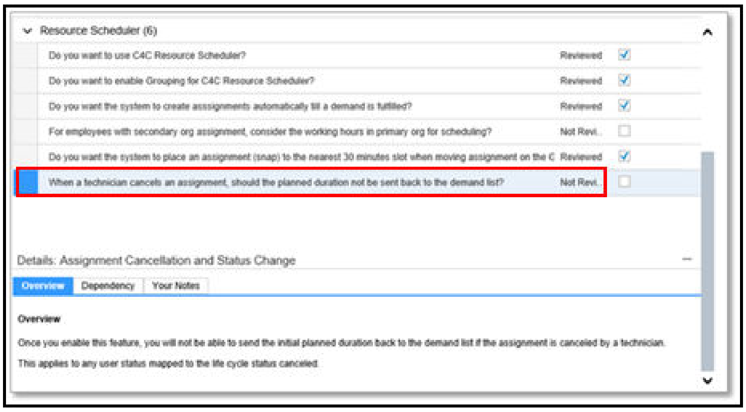
10.6.4 Cancel Assignment in Resource Scheduler

When a technician cancels an assignment in the *Assignment* tab, the initial planned duration of the assignment is sent back to the demand list as unplanned hours.

If you do not want the hours from a canceled assignment to be sent back to the demand list, then you must enable this feature via scoping.

Once this option is enabled, after a canceled assignment, the hours are not sent back to the demand list. So these hours are not available for rescheduling.

> **Note**
>
> Define code list restrictions to make *Canceled* as the final status for an assignment. If code list restriction is not set, then the technician is able to change the status back from canceled to open. As a result, duplicate hours are added to the planner list.



10.6.4.1 Configure Cancelled Assignment in Resource Scheduler

If you do not want the hours from a canceled assignment to be sent back to the demand list, then you must enable this feature via scoping.

Go to *Business Configuration* > *Implementation Projects* > *Edit Project Scope* > *General Business Data* > *Resource Scheduler*, and enable the question: **When a technician cancels an assignment, should the planned duration not be sent back to the demand list?**

10.6.5 Create Automatic Time Entries in Resource Scheduler

Time types can be assigned to the assignment user (based on assignment status) via fine tuning.

If time types are assigned to user status, then it is used to start a new time entry when user status is set for an assignment. The new time entry displays in the *Time Entries*tab, and its corresponding ticket.

Time entries can be created and aligned manually as well. If no time type is assigned to a status, then no new entry gets created, but a possible running one is stopped. These time entries can be used for CATS reporting, and can also be used to create time items for billing to the customer.

Example

You can define a status as **Start Travel**. When you select this status, you can start the time recoding automatically (also defined and associated in the fine tuning activity) with a time type **Travel**.

10.6.5.1 Configure External Status Codes, Color Coding, and Time Types for Automatic Time Entry in Resource Scheduler

As an administrator, you can maintain colors for the respective status and time (past, present, or future). Additionally, you can also define time types to start automatic time entry when setting the status.

Define external status codes for an assignment activity using fine tuning. The status reflects the progress of the work in details.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List*, and search for *Demand Processing*. Choose *Maintain External Status Codes for Assignment Activity* and maintain the necessary settings.

Example

You can define a status as **Start Travel**. When you select this status, you can start the time recoding automatically (also defined and associated in the fine tuning activity) with a time type **Travel**.

10.7 Use Appointment Offering and Auto Dispatch in Resource Scheduler

Use the Appointment Offering and Auto Dispatch features in Resource Scheduler to preselect time slots or create automatic scheduling in the system,

Appointment Offering in Resource Scheduler [page 121]
This feature offers your customers the ability to preselect time slots for a service appointment.

Auto Dispatch in Resource Scheduler [page 307]
Use the *Auto Dispatch* scheduling method to create automatic scheduling in the system.

10.7.1 Appointment Offering in Resource Scheduler

This feature offers your customers the ability to preselect time slots for a service appointment.

The service agent can offer the customer the ability to choose their appointment time slot and date range. However, you would need to enable this option first.

When you select the scheduling method for a repair item as *Appointment*, and choose *Release for Scheduling*, the *Appointment* button gets enabled.

> **i Note**
>
> Only items with *In Scheduling* work progress status are relevant for appointment booking. The *Appointment* button, is otherwise disabled. So to change the status of a ticket item to *In Scheduling*, you would have to execute an item based action.

On the *Appointment Offering* screen, you can select a date range and a time slot. Click the *Get Appointment* button to get a list of available appointment offerings within your selected date range and time.

Next, select the time your customer requests and save the appointment time to ensure that the time slot is booked.

Once you save, the item status displays as *Ready*, which means that the assignment for that item has been created. You can view details of this item in the *General Data* tab, at the bottom of the screen. You would also see that the system has assigned a technician for the appointment based on the requested time slot and date.

In the *Assignments* tab, you can view the appointment you scheduled. Here's a short video with more information on the *Appointment Offering* feature.

Fixed Flag

As the name suggests, this feature restricts editing the time slot or technician based on the type of fixed flag selection. You can choose this option when choosing an appointment.

The *Fixed* flag helps avoid any unintended changes to a set time slot. You can choose from these options:

- **Fixed Time**
  Selecting this option would restrict the appointment time. So if the time slot is fixed to morning, then you can move the appointment to a different hour within the morning time slot of the same day. However, you cannot move the appointment to the evening or another day. In this case, you would still have the option of changing the technician.
- **Fixed Time and Technician**
  Selecting this option would restrict the appointment time and the technician. Hence in addition to the time slot, you cannot change the technician.

10.7.1.1 Configure and Define Slots for Appointment Offering in Resource Scheduler

Administrators can maintain slots for appointment offering via fine tuning.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List*, and search for *Demand Processing*. Choose *Maintain Slots for Appointment Offering* and maintain the *Appointment Slot Code*, *Description*, and time for each slot.

Depending on how you maintain the appointment slots here, the service agent/technician can select appointment slots when creating a service appointment for their customer.

Example

You can maintain a full day time slot with an assigned duration of 8:00 to 18:00 hours.

10.7.2 Auto Dispatch in Resource Scheduler

Use the *Auto Dispatch* scheduling method to create automatic scheduling in the system.

After a ticket item has been released for scheduling, auto dispatch allows the system to create assignments in the background without any user intervention.

The general criteria to create automatic assignments is based on the availability of technicians, and the number of existing assignments in the system. The system searches for a technician who is available in the required time frame with the least number of assignments. If multiple technicians match the criteria, then the system randomly picks one.

10.8 Integrate SAP Multiresource Scheduling into Resource Scheduler

You can use the native feature in SAP Service Cloud for *Appointment Offering*, or integrate with SAP Multiresource Scheduling option for SAP S/4HANA for Appointment Offering. For manual scheduling, you can integrate with SAP Multiresource Scheduling.

For more information (integrate with SAP Multiresource Scheduling option for SAP S/4HANA for Appointment Offering) see Enable SAP Multiresource Scheduling, Option for SAP S/4HANA for Appointment Offering Feature in Resource Scheduling [page 289]

For more information (to integrate with SAP Multiresource Scheduling) see Enable SAP Multiresource Scheduling (MRS) Integration with Resource Scheduler [page 284]

10.9 Mobile/Offline Features for Resource Scheduler

This section provides you a quick overview of offline features available for Resource Scheduler.

This topic presents an overview of supported features and limitations for Resource Scheduler- Assignments in offline mode.

> **Note**
>
> Not all the validations/determinations available online are available offline.

Tab	Section	Field	Create	Display	Edit (can edit directly via actions/navigation)
Resource Scheduler > *Assignments*	Overview / Header	Address		Y	
		Start Date Time		Y	
		End Date Time		Y	
		Status		Y	Y
		Ticket		Y	
		Service Technician		Y	
		Notes		Y	

Offline Limitations for Resource Scheduler

Assignments

- Changing the status of an assignment in offline mode does not start automatic time entry.
- Code list restriction for Assignment External status code is not supported offline.
- Assignments are not supported in offline calendar.

10.10 Resource Scheduler FAQs

This section provides you with solutions to some commonly asked questions.

10.10.1 What are the different scheduling methods?

You can choose from three available scheduling options.

1. **Manual Scheduling**:
   Demands created using this method are scheduled manually. The planner can choose when and for whom to create the assignments.
2. **Appointment Offering**:
   The service agent can offer customers the ability to choose their appointment time slot and date range. The system creates an assignment based on the chosen parameters.
3. **Auto Dispatch**:
   The system automatically creates an assignment in the background, when you schedule using this method.

10.10.2 How can I edit assignments In Resource Scheduler?

You can edit an assignment using the *Edit Assignment* option.

After dropping a demand on the Gantt chart, you may want to update it. You can edit an assignment in two ways:

1. By moving it, or by changing the assignment length in the Gantt chart.
2. By using the *Edit Assignment* option.

Your ability to edit an assignment (move an assignment, or update its duration) depends on the *Fixed* flag. The *Edit Assignment* action gives you the option to change the fixed flag and edit the assignment.

> i Note
>
> You can edit an assignment only if it is in *Open* status. If you edit assignments that are created via *Appointment Offering*, then they are treated as regular assignments from then on. this means, that the restriction of the appointment offering slot will no longer apply.

10.10.3 What is the use of the release flag in Resource Scheduler?

If there is a need to restrict editing of an assignment, you can use the release flag for this purpose.

A configuration step can be performed. With the configuration in place, your technicians can only see an assignment but not edit it unless the planner has released the assignment.

To release an assignment, select the relevant assignment in the resource scheduler Gantt chart and select *Edit Assignment* option. Then choose the release action. You can also release an assignment automatically using the MDRO run option.

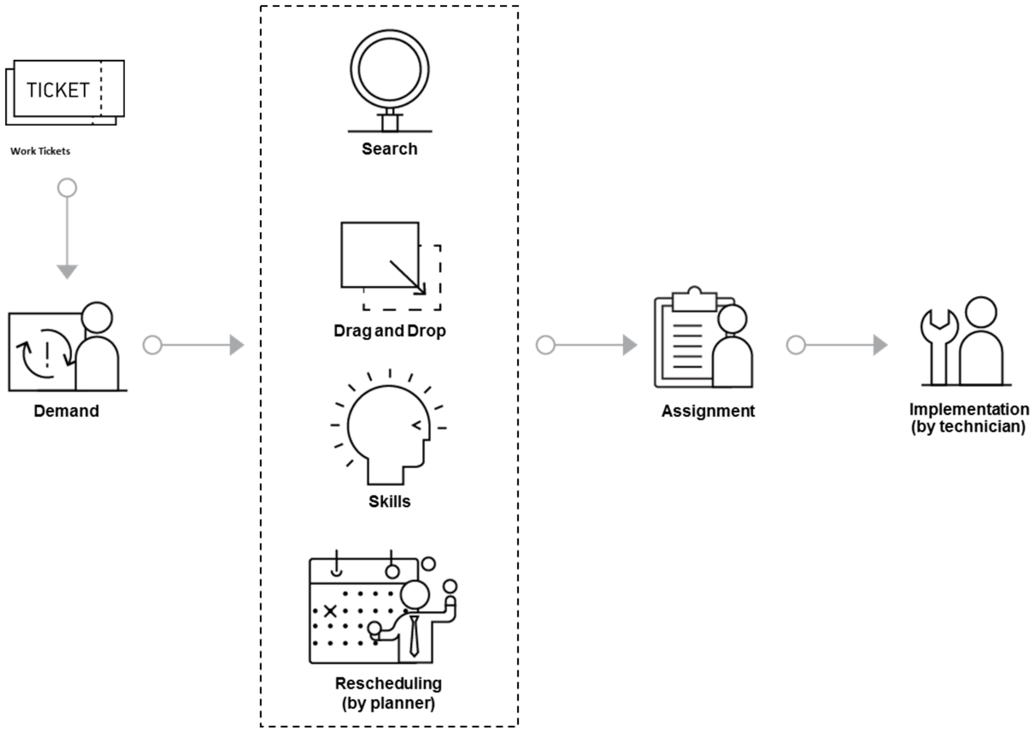
10.10.4 What does the fix flag indicate?

The *Fix* flag limits shifting an assignment to a different time or time period. In some cases, it can be moved to another resource.

11 Skills Management

Skills Management enables an organization to maintain the skills structure and skills requirements for various entities.

You can evaluate skills during the scheduling process to identify the best person to work on a specific task. It also helps in planning for the required trainings, keeping the work force up to date, and avoiding certificate expirations (such as access authorizations).



11.1 Scope and Configure Skills Management

Administrators can configure skills management using scoping and scoping questions.

> **i Note**
>
> Scoping questions that are straightforward may not be included in this list.

11.1.1 Enable Skills Management

As an administrator, enable the feature in the solution.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Scoping* > *General Business Data* > *Skills Management* > *Skills Management*.

11.1.2 Configure Skills for Tickets and Resource Scheduler

Configure the skills process for tickets and resource scheduler.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Service* > *Customer Care* > *Service Request Management*. From *Questions for Service Request Management*, select the scoping question: *Do you want to enable Skill Functionality in Ticket?*

11.1.3 Use Data Workbench Service for Skills Management

As an administrator, use the *Data Workbench* service to import, export, and update employee, account, individual customer, and installed base skills data.

For more information about data workbench services related to **Skills** and **Data Workbench** in general, see the Data Workbench user guide.

11.2 Work with Skills Management

Know more about creating and assigning skills, determining skills in tickets, verifying skills in resource scheduler, using the data workbench service, and creating reports to manage skills.

Create Skill Groups and Skills [page 313]
Create skill groups and skills in a hierarchy.

Assign Skills [page 314]
Assign skills to customers, installed base, employees, registered products, and products.

Determine Skills in Tickets [page 316]
In tickets, skills are determined from customers, registered products, products, and installed base. Skills can be determined in tickets only in the online mode.

Use Skills in Resource Scheduler [page 318]
Skills determined in tickets can be used in the scheduling process.

View Changes Related to Skills [page 319]
On the *Changes* tab of business objects such as *Employee* and *Customer*, you can see the updates related to the respective skills.

Create Reports for Skills Management [page 320]
Use data sources and create reports in the *Business Analytics* work center to manage skills. For example, you can create a report to get the list of employees whose validity of a skill expires in the next one month.

11.2.1 Create Skill Groups and Skills

Create skill groups and skills in a hierarchy.

Context

Status change at a skill group level reflects in all the skills and skill groups under it. To create a skill group or a skill, follow these steps:

Procedure

1. On the *Skills* page, click *New* and select one of the following:

Option	Description
Skill Group	Opens the *New Group* window
Skill	Opens the *New Skill* window

2. Enter the Skill ID.
3. In the *Description* section, select the language in which you want to maintain the description.
4. Click *Save*.

11.2.2 Assign Skills

Assign skills to customers, installed base, employees, registered products, and products.

11.2.2.1 Assign Skills to Customers

To add a skill to a customer account, follow these steps:

Procedure

1. Navigate to the *Accounts* tab, and select an account.
2. On the details page, click the *Skills* tab.
3. Click *Add* and in the *Add Skills* window, enter the required details.

   If you want to make the skill mandatory, select the *Mandatory* checkbox.
4. Click *Add*.

11.2.2.2 Assign Skills to Installed Bases

To add a skill to an installed base, follow these steps:

Procedure

1. Navigate to the *Installed Base* tab, and select the installed base ID for which you want to add a skill.
2. On the details page, click the *Skills* tab.
3. Click *Add* and in the *Add Skills* window, enter the required details.

   If you want to make the skill mandatory, select the *Mandatory* checkbox.
4. Click *Add*.

11.2.2.3 Assign Skills to Employees

To add a skill to an employee, follow these steps:

Procedure

1. Navigate to the *Employees* tab, and select an employee.
2. On the details page, click the *Skills* tab.
3. Click *Add* and in the *Add Skills* window, enter the required details.

   To set the validity of the skill, select the relevant dates in the *Valid From* and *Valid To* fields.
4. Click *Add*.

11.2.2.4 Assign Skills to Registered Products

To add a skill to a registered product, follow these steps:

Procedure

1. Navigate to the *Registered Products* tab, and select a registered product.
2. On the details page, click the *Skills* tab.
3. Click *Add* and in the *Add Skills* window, enter the required details.

   If you want to make the skill mandatory, select the *Mandatory* checkbox.
4. Click *Add*.

11.2.2.5 Assign Skills to Products

To add a skill to a product, follow these steps:

Procedure

1. Navigate to the *Product Administration* tab, and select a product.
2. On the details page, click the *Skills* tab.
3. Click *Add* and in the *Add Skills* window, enter the required details.

   If you want to make the skill mandatory, select the *Mandatory* checkbox.

4. Click *Add*.

11.2.3 Determine Skills in Tickets

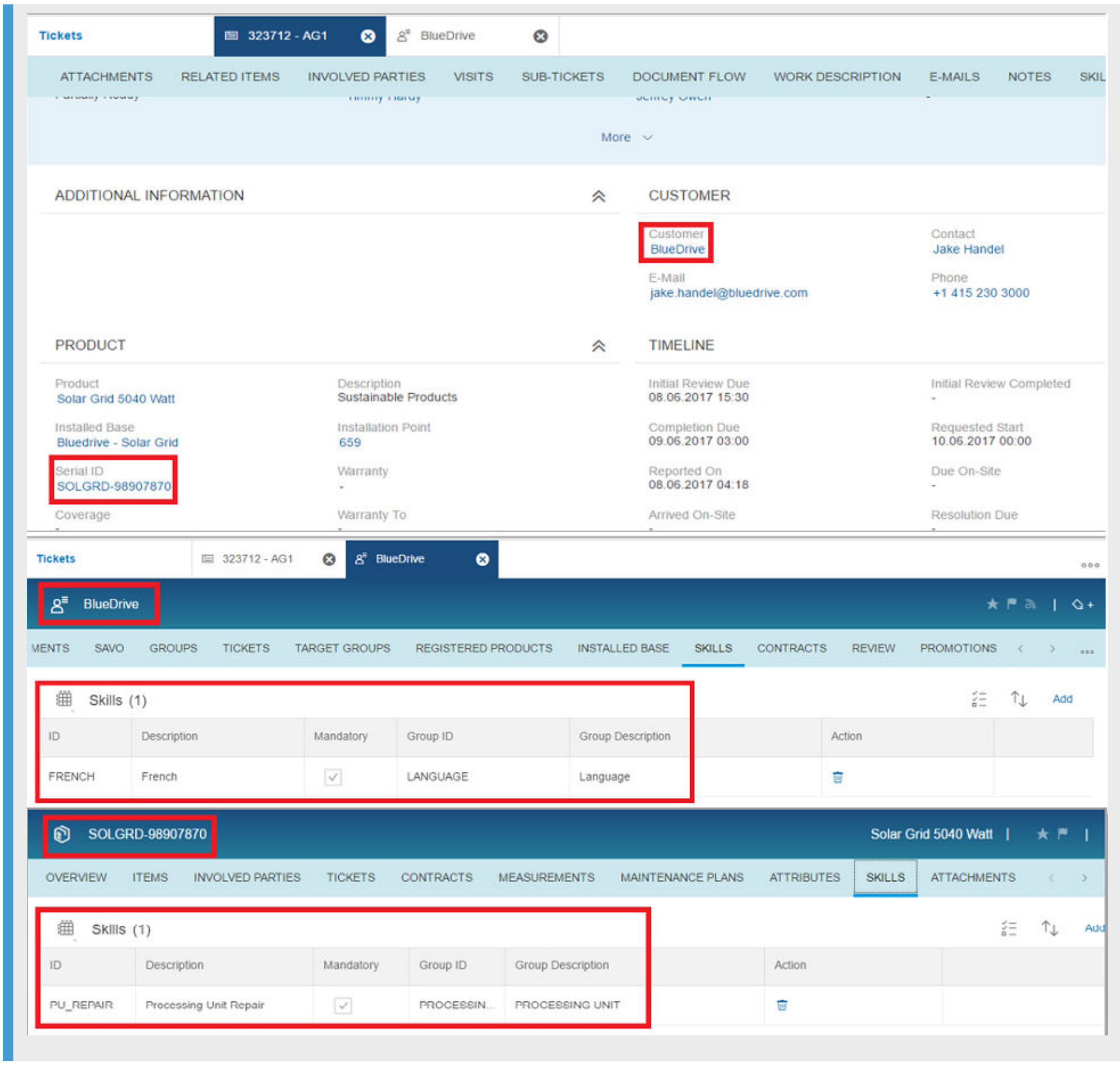
In tickets, skills are determined from customers, registered products, products, and installed base. Skills can be determined in tickets only in the online mode.

The *Skills* tab of *Tickets* displays the list of all skills that are determined or added at the tickets header level. If any of the entities (customers, registered products, products, or installed base) is updated in a ticket, skills are redetermined. You can modify a skill by selecting or deselecting the *Mandatory* checkbox. You can also delete a skill. If a skill is updated manually, it is not updated during redetermination.

If you want to add additional skills, you have to add them manually. To add skills manually to tickets, on the *Skills* tab, click *Add* and in the *Add Skills* window, enter the required details.

When you add a new skill, skills are redetermined in the ticket.

> Example
>
> There is a ticket for a customer named BlueDrive, and **French** is maintained as a language skill for this customer. The ticket also has a registered product associated to it. The Serial ID is SOLGRD 98907870. For this registered product, the **Processing Unit Repair** skill is maintained. Therefore, based on the customer and the registered product, these two skills (French and Processing Unit Repair) are determined for the ticket.



11.2.3.1 Determine Skills in Ticket Items

When an item is added in a ticket, skills from the ticket header are determined for the item as well. Skills maintained for a product are also determined at the ticket item level.

The *Skills* tab at the ticket item level displays the list of skills for that item. You can modify a skill by selecting or deselecting the *Mandatory* checkbox. You can also delete a skill.

If you want to add additional skills, you have to add them manually. To add skills manually to a ticket item, on the *Skills* tab, click *Add* and in the *Add Skills* window, enter the required details.

> **i Note**
>
> If you want to make the skill mandatory, select the *Mandatory* checkbox.

If an item is in *Ready* or equivalent status, you cannot update or determine the skill.

11.2.3.2 Configure Skills for Tickets and Resource Scheduler

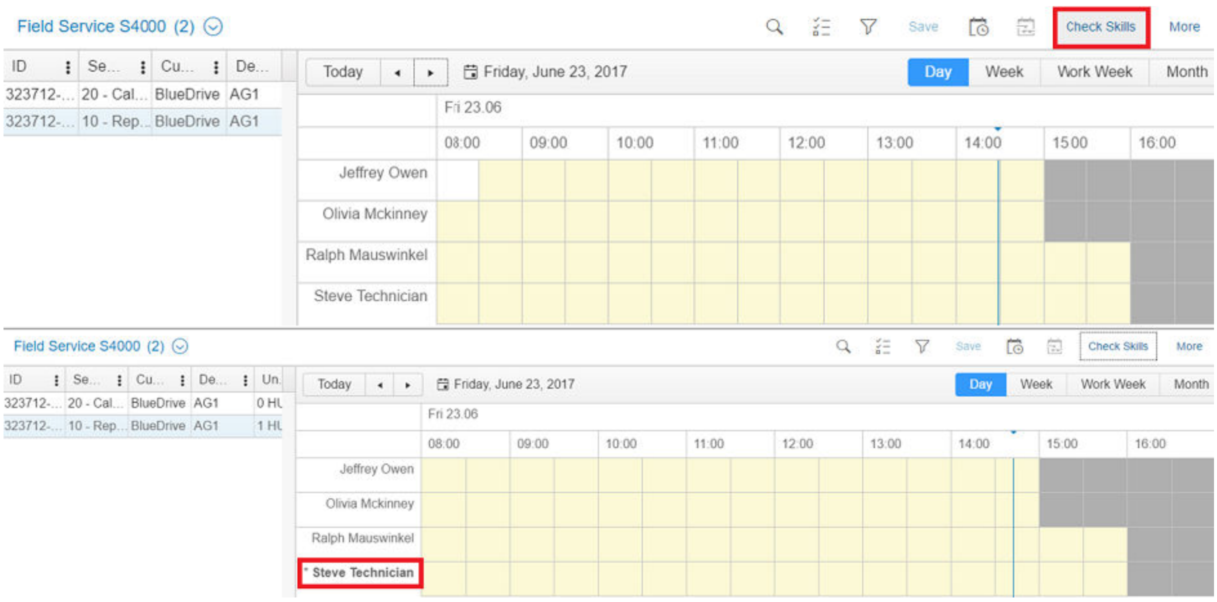
Configure the skills process for tickets and resource scheduler.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Service* > *Customer Care* > *Service Request Management*. From *Questions for Service Request Management*, select the scoping question: *Do you want to enable Skill Functionality in Ticket?*

11.2.4 Use Skills in Resource Scheduler

Skills determined in tickets can be used in the scheduling process.

When an item in a ticket is released for scheduling, the system uses the skills at the item level to suggest the technicians. When you select a demand and select *Check Skills*, the technicians with all the mandatory skills are highlighted in bold font and with an asterisk (*) mark.



You can also assign a demand to a technician different from what the system suggests.

To verify whether the correct technician is highlighted, select the technician and in the details section, click *Skills*. You can also verify the skills on the *Employees* UI by selecting the employee and clicking the *Skills* tab.

11.2.4.1 Configure Skills for Tickets and Resource Scheduler

Configure the skills process for tickets and resource scheduler.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Service* > *Customer Care* > *Service Request Management*. From *Questions for Service Request Management*, select the scoping question: *Do you want to enable Skill Functionality in Ticket?*

11.2.4.2 Check Skills for Multiple Demands

Check skills for multiple demands simultaneously.

On *Resource Scheduler*, select the required demands, and then select *Check Skills*. The technicians with all the mandatory skills are highlighted in bold font and with an asterisk (*) mark.

11.2.4.3 Check Skills for Assignments

To check skills for an assignment, select an assignment and select *Check Skills*.

The technicians with all the mandatory skills for the assignment are highlighted in bold font and with an asterisk (*) mark. Checking skills for an assignment helps when an existing assignment has to be rescheduled. In such a scenario, the user can know the resources that have the required skills to perform the task.

11.2.4.4 Skills Tab for Assignments

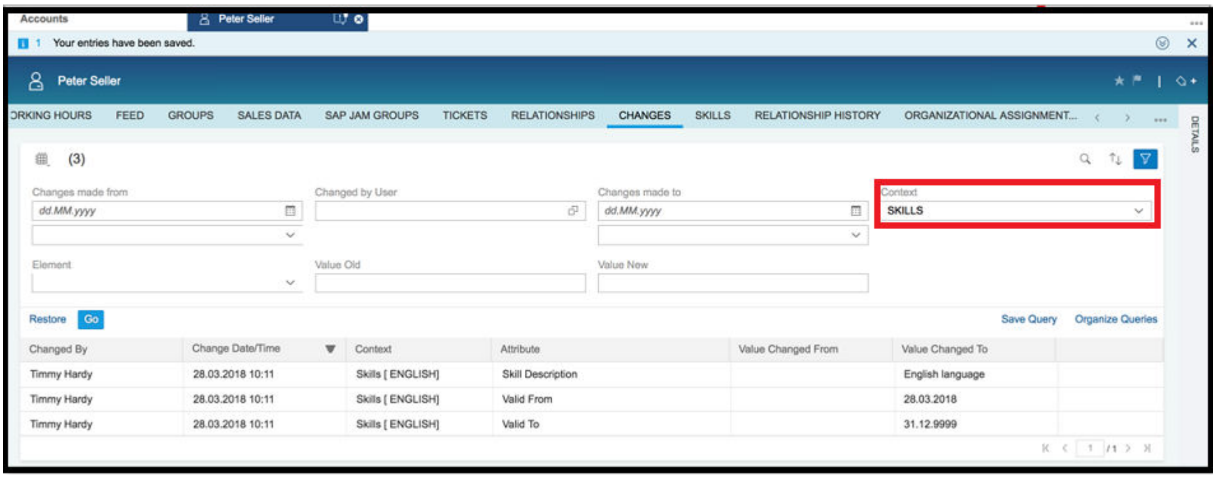
When you select an assignment, the *Skills* tab in the details section displays the list of skills for the assignment.

If the planner requires to move the assignment to another technician, the planner can use this information to identify the required skills.

11.2.5 View Changes Related to Skills

On the *Changes* tab of business objects such as *Employee* and *Customer*, you can see the updates related to the respective skills.

For example, to view updates in employee skills, go to the *Changes* tab of an employee.



ℹ Note

Currently, the *Changes* tab of *Tickets*, *Installed Base*, *Registered Products*, and *Products* do not display the updates for skills.

11.2.6 Create Reports for Skills Management

Use data sources and create reports in the *Business Analytics* work center to manage skills. For example, you can create a report to get the list of employees whose validity of a skill expires in the next one month.

The available data sources are:

- Skills of Employees
- Installed Base and Skills
- Installation Point and Skills
- Skills

Related Information

SAP Cloud for Customer Business Analytics Guide

11.3 Skills Management FAQs

This section provides you with solutions to some commonly asked questions.

11.3.1 How are skills managed for the appointment offering scheduling method?

For the appointment offering scheduling method, appointment slots are displayed for the available technicians who have the mandatory skills.

11.3.2 How are skills managed for the auto-dispatch scheduling method?

For the auto-dispatch scheduling method, the system creates appointments for the first technician available with the mandatory skills. If no resources are found that match the required skills, assignment is not created, and a message is displayed.

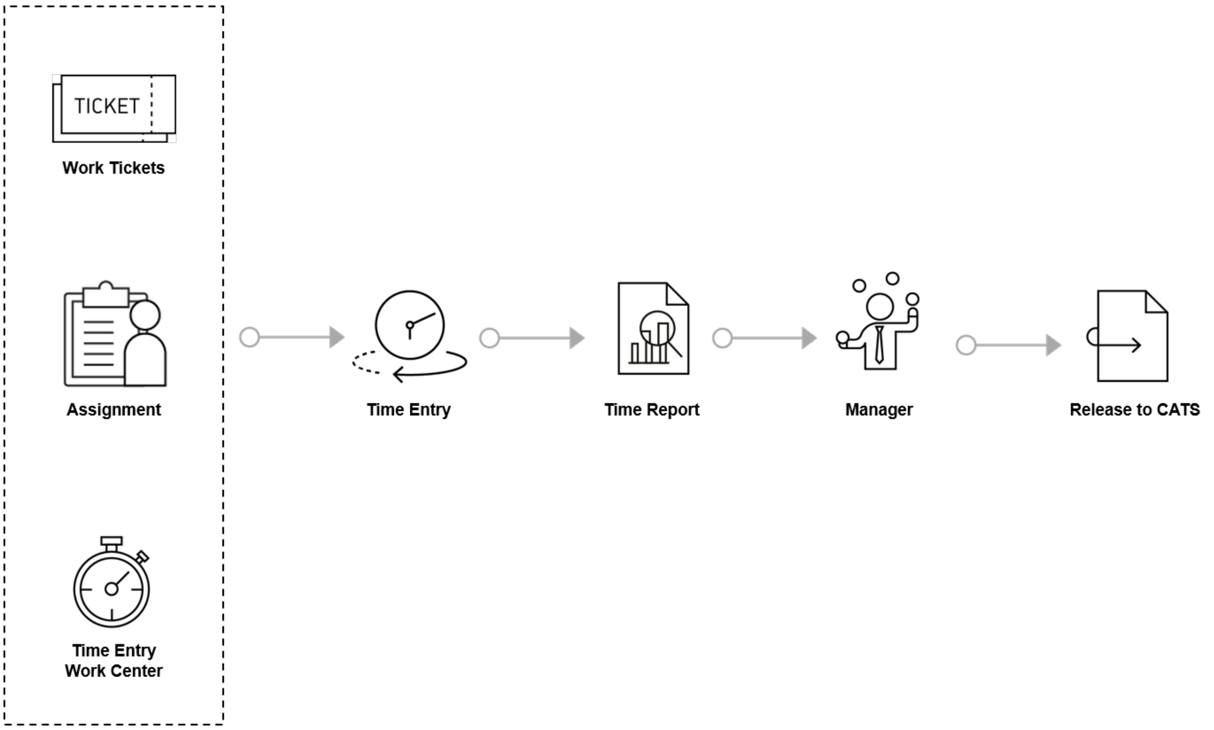
12 Time Recording

Time Recording consists of *Time Entries* and *Time Reports*.

Time entries help employees record and manage the time they spend performing their activities. A time report is a collection of time entries, which can be defined for a date or date range and can be submitted for approval to one or more approvers.

Employees can create time entries and import them into a time report. They can also record time for different time types such as: work, travel, administration, vacation and so on; and for tickets or independent of a ticket. This helps managers track productive time, which could be time spent on tickets as well as non productive time such as: training, vacation and so on, by the employees.

To use the *Time Recording* feature, administrators would first have to enable this feature via scoping.



12.1 Scope and Configure Time Recording

As an administrator, you must enable time recording, configure time types, and configure e-mail notifications using workflow rules before users can work with time recording.

12.1.1 Enable Time Recording

The administrator would have to scope *Time Recording* to log the time.

Go to ▶ *Business Configuration* ▶ *Implementation Projects* ▶. Select your project and navigate to ▶ *Edit Project Scope* ▶ *Questions* ▶ *Service* ▶ *General Business Data* ▶ *Employees* ▶, and select the scoping question: **Do you wish to enable Time Recording feature?**

12.1.2 Fine Tune Time Type

You can define the time types available for use in time reporting with the fine tuning activity: *Time Types for Time Recording*. Your administrator would have to enable the fine tuning activity.

Go to ▶ *Business Configuration* ▶ *Implementation Projects* ▶. Select your project and navigate to ▶ *Open Activity List* ▶ *Fine-Tune* ▶, and search for *Time Types for Time Recording* activity. In the *Time Types for Time Recording* fine tune activity screen, choose the *Add* button and add a time type code and a description for it.

Example

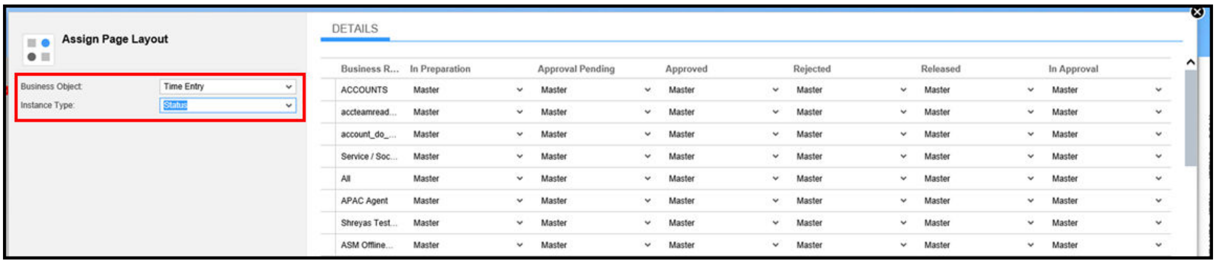
Use codes such as 01, 02, or 03, and descriptions can be based on relevant task types; such as: Billable Hours, Non-Billable Hours, Travel, or Training.

12.1.3 Configure Page Layout

You can create various page layouts based on different attributes for Time Entries and Time Reports. Your administrator would have to set these attributes for you.

You can use the following attributes:

- Attributes for Time Entry
  - Status
  - Time Type
- Attributes for Time Report
  - Status



For more information on enabling and using page layout options, see the SAP Cloud for Customer Extension Guide.

12.1.4 Configure Time Item Rounding Rules

The administrator can set up time item rounding rules, when creating time items from time entries.

Log on to system using administrator credentials and navigate to *Administrator* > *Service and Social* > *Time Recording* > *Define Rules for Time Item Rounding*.

12.1.5 Configure Approval Process for Time Reporting

The administrator would have to enable the standard multistep approval process for time reports.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *General Business Data* > *Employees and Service Agents* > *Employees* > *Enable Time Recording* and select the scoping question: *Do you want to use a multi-step approval for time recording?*

12.1.6 Configure Additional Approvers for Time Report

Your administrators can enable additional approver option for a time report by maintaining this in the approval process.

Go to *Administrator* > *Approval Processes* and select the new work distribution rule: *Approver of Time Report* in the Time Report approval process.

12.1.7 Configure Auto Submit Time Report for Approval

Your administrator can enable auto submit time report for approval using business configuration, so you can auto submit for approval as soon as the time report is saved.

Select the scoping question to enable auto submitting a time report for approval.

Go to *Edit Project Scope* > *First Implementation* > *Questions.* Drill down to *General Business Data* > *Employees and Service Agents* > *Employees*, and select the question: **Do you want the system to automatically submit a time report for approval?**

12.1.8 Configure Assign Time Types for Time Recording

The administrator can assign time types to assignment status to trigger time recording from assignment.

You can assign time types to different assignment statuses in the fine tuning activity. Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune*, and search for *Demand Processing*. Maintain the external status codes for assignment here.

12.1.9 Configure Product Determination for Time Recording

The administrator has to confirm a business configuration scoping question to enable auto determination of Time Item Product based on time entries.

If you select the option, then the time item product is determined automatically. However, if you do not select it, then select the product for time item manually from the list of displayed products.

Navigate to *Edit Project Scope* > *First Implementation* > *Questions for Employees* > *Enable Product Determination for Time Recording*, and select the question: *Do you want to enable rule based product determination for a ticket from Time Recording?*

You can determine Time Item Product, based on different attributes of Time Entries (Time Type, Start Time, End Time), and Ticket (Service Org., Time Type).

12.1.10 Configure Time Item Product Rules

The administrator can add dimensions to determine the time item product created from the time entry linked to a ticket.

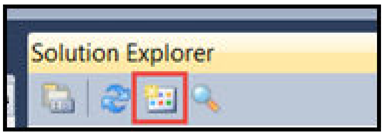
Log on to system using administrator credentials and navigate to *Administrator* > *Service and Social* > *Time Recording* > *Define Rules for Time Item Product*.

12.1.11 Use BAdI to Create Time Items

You have the option of implementing a BAdI while creating time item from time entry to modify or copy information using custom logic and implementation.

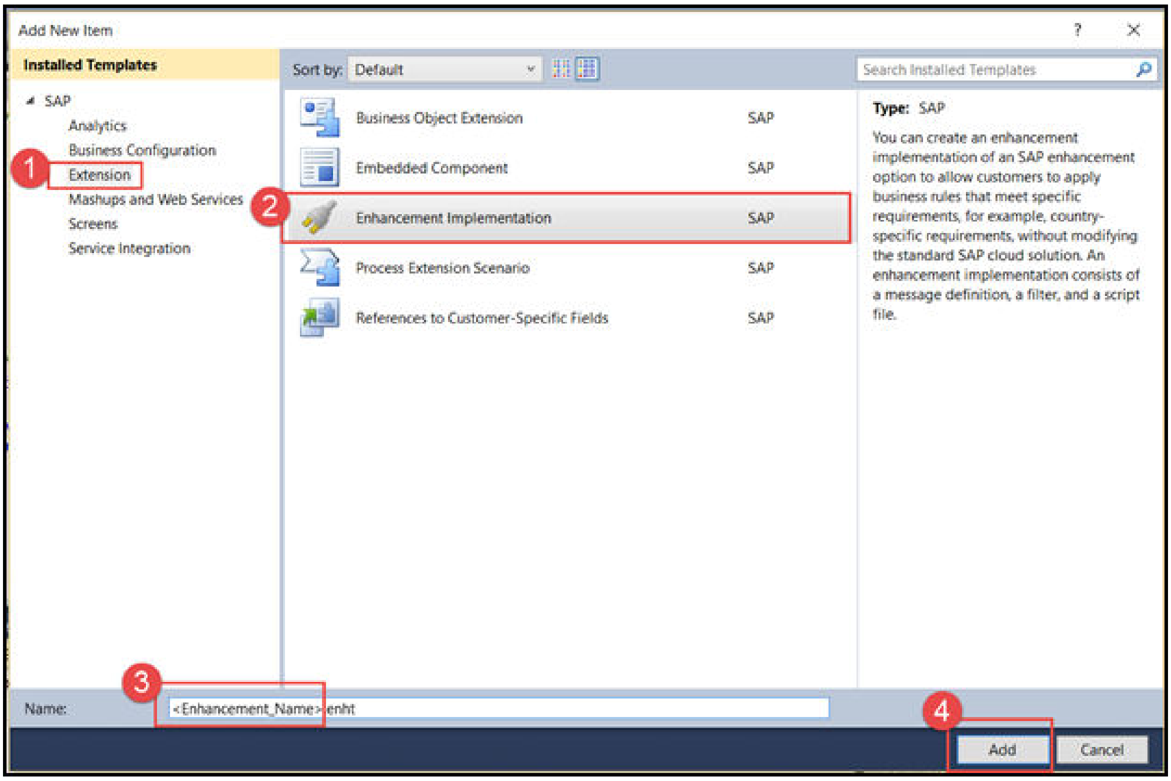
This is PDI enabled BAdI and can be implemented using SAP Cloud Applications Studio by adding an item to the solution as follows:

1. Logon to SAP Cloud Applications Studio.
2. Next, open the solution specific to your project from the repository.
3. Right click the solution in the *Solution Explorer Window* and click *Add New Item*.

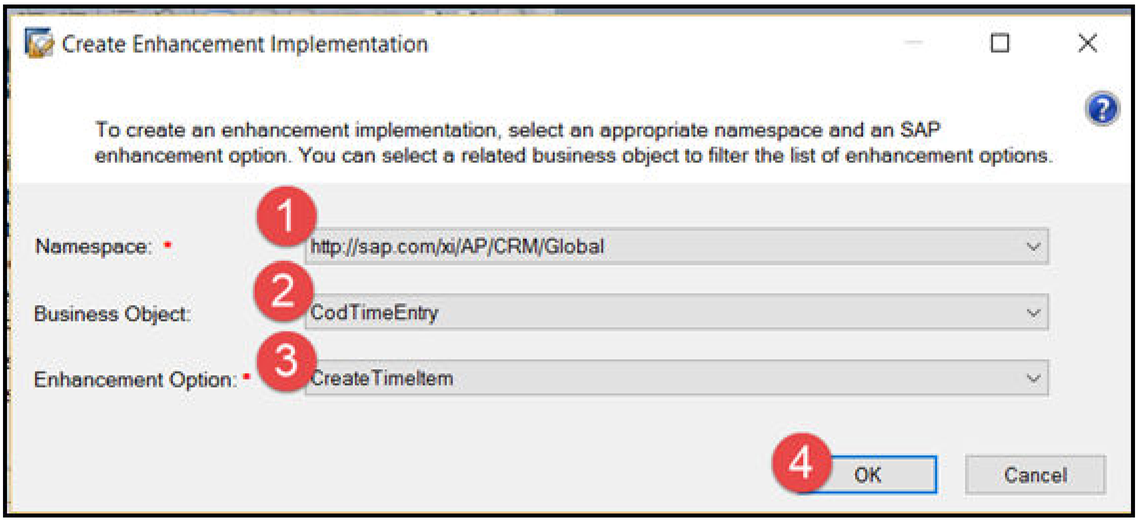


4. Once the add item window displays, follow the steps mentioned in the screenshot below.

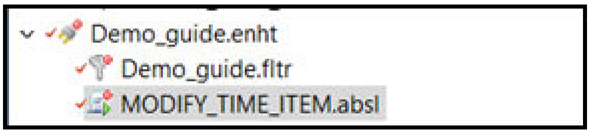
> **i Note**
>
> Name the enhancement as per defined naming convention.



5. Follow next steps and add values (mentioned below) to create the *Enhancement Implementation*.



6. Click *OK* to continue. The following enhancement tree is added as a part of your solution.



7. Open and code `MODIFY_TIME_ITEM.absl` for custom logic.
8. Once you've completed the task, activate the enhancement.

12.1.12 Configure and Assign Code List Restrictions for Time Types

The administrator can assign code list restrictions to time types and assign various time type values to different roles.

Go to *Administrator* > *General Settings* > *Code List Restrictions*, and apply code list restrictions to time types in the business object Time Entry.

12.1.13 Configure Duration Round Off at Service Item Level

The administrator has the ability to decide whether the rounding should happen at the time or service item level. This will avoid rounding at the time item (child) and service item (parent) level at the same time.

To enable this feature, navigate to *Edit Project Scope: First Implementation* > *General Business Data* > *Employees and Service Agents* > *Employees*, and in the *Questions* tab select the option: *Do you want to round off the quantity at Service Item Level?*

12.1.14 Integrate Time Entry with SAP ERP CATS

It is possible to integrate with SAP ERP for CATS time entry in the system.

You can release approved time entries to CATS in SAP ERP. For this integration, you need to maintain mapping between time types of the time entries in our system, and activity types in SAP ERP.

> **i Note**
>
> Time entries, with reference to tickets, can be released only if the corresponding ticket has already been released to SAP ERP.

12.1.15 Configure Release Time Entry to CATS without Ticket Dependency

The administrator has to enable this function via business configuration, which lets you release time entries independent of the related ticket status.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *General Business Data* > *Employees and Service Agents* > *Employees* and select the scoping question: **Ignore related ticket release status when releasing time entries to SAP ERP?**

12.2 Integrate Time Entry with SAP ERP CATS

It is possible to integrate with SAP ERP for CATS time entry in the system.

You can release approved time entries to CATS in SAP ERP. For this integration, you need to maintain mapping between time types of the time entries in our system, and activity types in SAP ERP.

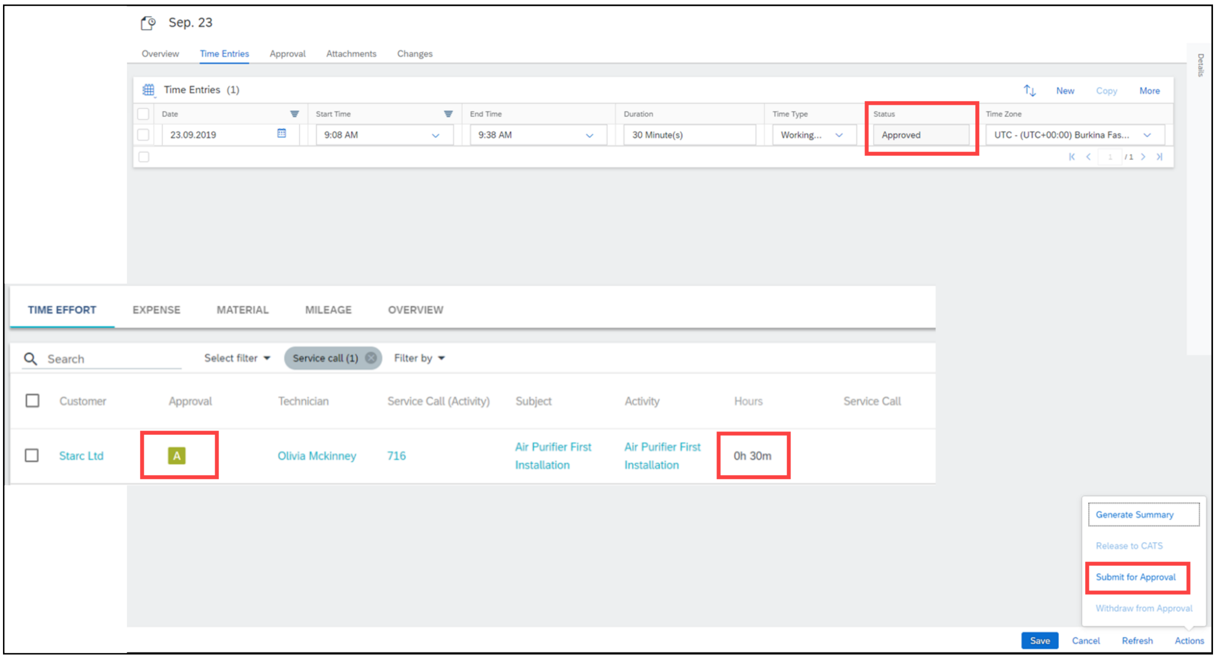
> **Note**
>
> Time entries, with reference to tickets, can be released only if the corresponding ticket has already been released to SAP ERP.

Release Time Efforts from FSM to ERP CATS [page 328]
In the FSM and ERP integration through C4C scenario, you can record time once in FSM, and the time can be released to ERP when the time report is approved in C4C.

12.2.1 Release Time Efforts from FSM to ERP CATS

In the FSM and ERP integration through C4C scenario, you can record time once in FSM, and the time can be released to ERP when the time report is approved in C4C.

The approved time efforts from FSM are replicated to C4C as approved time entries. These approved time entries can be imported to a time report. Then you can *Submit for Approval* for the time report with incorporated time entries with the approved status.



12.3 Work with Time Entries

Employees can create time entries and import the created time entries into a time report. *Time Entries* can be created from within a ticket, or can be independent of any ticket.

You can do the following for time entries:

- Add, edit, or delete time entries.
- Enter time either as duration or as actual clock times.
- Record time for different time types, such as: working, travel, administration, vacation, and so on.
- Record time for a ticket or independent of any ticket.

> **i Note**
>
> Administrators can add new time types to the list of predefined time types using fine tuning.

Use Time Types [page 331]
When creating a time entry, you can choose the time type for that entry. Administrators can add new time types to the list of predefined time types using fine tuning.

Create Time Entries [page 332]
You can create a time entry manually or automatically.

Merge and Split Time Entries [page 333]
You can merge multiple time entries to create a single time item. In the same way, you can also split a single time entry into multiple time items for billing.

Release Time Entries [page 333]
As a manager, you can manually change the status of the time entries to *Released*.

Release Time Entries to CATS without Ticket Dependency [page 334]
Release time entries to SAP ERP CATS when submitting a time report for approval, without depending on the related ticket status.

Use Copy to Create New Time Entries [page 334]
You can easily create new time entries by copying the existing ones.

Create Time Items [page 334]
A Time Entry, whether created manually or automatically can be converted to a time item when you are ready to bill the customer for the time spent on an assignment.

Rounding Off Time at Service Item Level [page 336]
When the user converts a time entry to a time item, the time item can be rounded off to the nearest defined time. This depends on how much rounding you have defined in the rounding rules under administrator settings.

Auto Determine Time Item Product [page 337]
You can convert a time entry to a time item product for billing purposes. You can choose a time item manually or it can be determined automatically by the system based on the time item product determination rule set in business configuration.

Automatic Time Recording [page 337]
In the field service scenario, technician has to track time spent on various tasks to bill customers appropriately; and also maintain their time entries for creating time reports.

Changes Tab for Time Entries and Time Reports [page 338]
Use the *Changes* tab in *Time Recording* work center to track different attribute changes for time entries and time reports.

Sort in Time Recording [page 339]
You have the option of sorting time reports by the start date and start time in the *Time Recording* tab.

Time Entries for Ticket Summary Form [page 339]
Use time entries for a Ticket in the Standard Ticket PDF Form Template used in *Preview Summary* and *Add Summary for Ticket*.

Queries for Ticket [page 339]
When you create a new time entry, you can extend the ticket search using the *Ticket with my Involvement* query parameter.

Page Layout for Time Entries [page 339]
You can assign page layout for time entries using configuration.

Add Approved Time Entries to Time Report [page 340]
Replicated approved time entries from FSM can be added to time report for further processing.

Time Item Created Indicator for Time Entries [page 340]
The *Time Item Created* indicator is available for the Time Entries work list and the Time Entries tab in Ticket.

Related Information

SAP Cloud for Customer Administrator Guide

12.3.1 Use Time Types

When creating a time entry, you can choose the time type for that entry. Administrators can add new time types to the list of predefined time types using fine tuning.

You can do the following using time types:

- During time recording, employees can record time for different time types such as: working, travel, administration, vacation, and so on.
- If time types are assigned to user status in an assignment, the fine tuning section, this time type is used to start a new time entry when this user status is set at the assignment level. The new time entry displays in the time entries work center and corresponding ticket.
- If no time type is assigned to a user status for an assignment, no new entry is created. However, a possible running one is stopped.
- Approved time entries can be released to SAP ERP. In SAP ERP, there is a mapping between *Time Type* and SAP ERP *Activity Type*.

12.3.1.1 Fine Tune Time Type

You can define the time types available for use in time reporting with the fine tuning activity: *Time Types for Time Recording*. Your administrator would have to enable the fine tuning activity.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune*, and search for *Time Types for Time Recording* activity. In the *Time Types for Time Recording* fine tune activity screen, choose the *Add* button and add a time type code and a description for it.

Example

Use codes such as 01, 02, or 03, and descriptions can be based on relevant task types; such as: Billable Hours, Non-Billable Hours, Travel, or Training.

12.3.1.2 Configure and Assign Code List Restrictions for Time Types

The administrator can assign code list restrictions to time types and assign various time type values to different roles.

Go to *Administrator* > *General Settings* > *Code List Restrictions*, and apply code list restrictions to time types in the business object Time Entry.

12.3.2 Create Time Entries

You can create a time entry manually or automatically.

> **i Note**
>
> When creating new time entries, date defaults to current date, and time zone defaults to the time zone based on user settings. Employees can change the default data for the time entry.

> **i Note**
>
> You cannot change or delete time entries with status *Released*.

12.3.2.1 Create Manual Time Entry

For manual recording, use the *New* button.

From the *Ticket* work center, navigate to *Ticket* > *Time Entries* > *New* to create a new time entry directly from a ticket.

From the *Time Entries* work center, navigate to *Create* > *New Time Entries*

> **i Note**
>
> You can also create time entries on behalf of your team members based on the access restriction.

12.3.2.2 Create Automatic Time Entry

Employees can use the *Start Recording* and *Stop Recording* button to record their time.

Once the recording starts a new time entry is created. When the employee stops the recording the corresponding time entry is updated with the end time and the total duration. Users can adjust these time entries later.

Create time entries automatically:

- From the *Time Entry* tab by navigating to *Time Entries* > *Start Recording*.
- From the *Ticket* work center by navigating to *Time Entries* > *Start Recording*.

12.3.2.3 Create Automatic Time Entry Based on Assignment Status Change

If your administrator has already assigned time types to a user status for assignment, in the fine-tuning section, this time type is used to start a new time entry, once you set the status for the assignment.

The new time entry displays in the *Time Entries* work center, and the corresponding ticket.

12.3.2.4 Configure Assign Time Types for Time Recording

The administrator can assign time types to assignment status to trigger time recording from assignment.

You can assign time types to different assignment statuses in the fine tuning activity. Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune*, and search for *Demand Processing*. Maintain the external status codes for assignment here.

12.3.3 Merge and Split Time Entries

You can merge multiple time entries to create a single time item. In the same way, you can also split a single time entry into multiple time items for billing.

Navigate to *Tickets* tab and select a time entry. Go to *Time Entries* > *More* > *Merge to Time Item* or *Time Entries* > *More* > *Split into Time Items*.

12.3.4 Release Time Entries

As a manager, you can manually change the status of the time entries to *Released*.

Once the status is set to released, it cannot be changed or deleted. This status can also be used when the time entries are released to a third party system.

> **i Note**
>
> Only approved time entries can be changed to released.

12.3.5 Release Time Entries to CATS without Ticket Dependency

Release time entries to SAP ERP CATS when submitting a time report for approval, without depending on the related ticket status.

The administrator can enable this functionality via business configuration.

12.3.5.1 Configure Release Time Entry to CATS without Ticket Dependency

The administrator has to enable this function via business configuration, which lets you release time entries independent of the related ticket status.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *General Business Data* > *Employees and Service Agents* > *Employees* and select the scoping question: **Ignore related ticket release status when releasing time entries to SAP ERP?**

12.3.6 Use Copy to Create New Time Entries

You can easily create new time entries by copying the existing ones.

The *Copy* button is available for use from these screens:

- *Time Entries* tab.
- *Time Report* > *Time Entries* tab.
- *Ticket* > *Time Entries* tab.

> **Note**
>
> When copying from an existing time entry in a ticket, the ticket ID gets copied over to the newly created time entry.

12.3.7 Create Time Items

A Time Entry, whether created manually or automatically can be converted to a time item when you are ready to bill the customer for the time spent on an assignment.

In the solution, ticket items are integrated with SAP ERP for billing processes. For billing of time, spent on a ticket or ticket items, time items can be used. After a time entry is created, it can be converted to a time item of a ticket for billing purpose.

Click *Create Time Item* action, and select the *Time Item* (Product with usage Time). This product can either be selected by the user or can be set up by the administrator for automatic selection of the product.

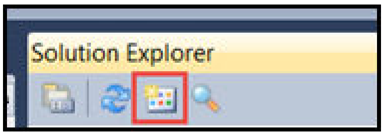
- You can create a time item from the *Time Entries* tab:
  - Select a time entry and choose *Create Time Items*.
  - Select the ticket ID and product for creating the time item. A list of products with *Usage* field displays.
- You can create a time item from a ticket:
  - System creates a complete time item with start and end dates.

12.3.7.1 Use BAdI to Create Time Items

You have the option of implementing a BAdI while creating time item from time entry to modify or copy information using custom logic and implementation.

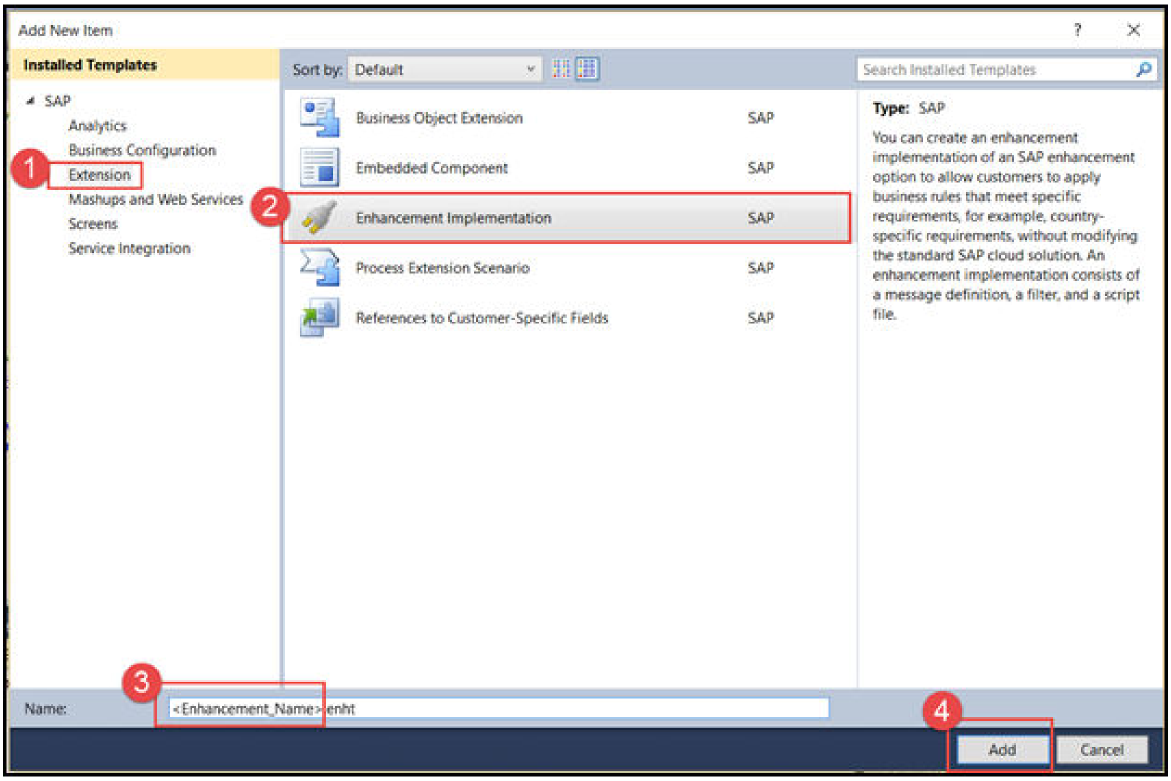
This is PDI enabled BAdI and can be implemented using SAP Cloud Applications Studio by adding an item to the solution as follows:

1. Logon to SAP Cloud Applications Studio.
2. Next, open the solution specific to your project from the repository.
3. Right click the solution in the *Solution Explorer Window* and click *Add New Item*.

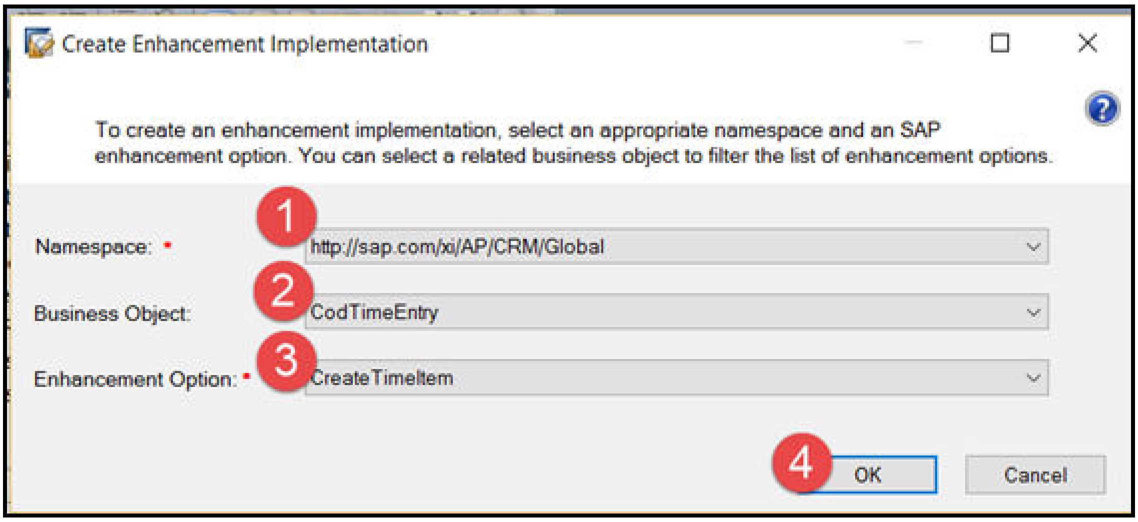


4. Once the add item window displays, follow the steps mentioned in the screenshot below.

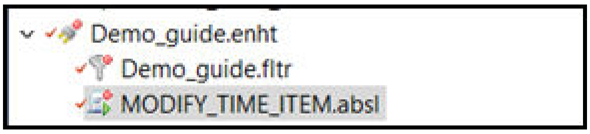
> **Note**
>
> Name the enhancement as per defined naming convention.



5. Follow next steps and add values (mentioned below) to create the *Enhancement Implementation*.



6. Click *OK* to continue. The following enhancement tree is added as a part of your solution.



7. Open and code `MODIFY_TIME_ITEM.absl` for custom logic.
8. Once you've completed the task, activate the enhancement.

12.3.7.2 Configure Duration Round Off at Service Item Level

The administrator has the ability to decide whether the rounding should happen at the time or service item level. This will avoid rounding at the time item (child) and service item (parent) level at the same time.

To enable this feature, navigate to *Edit Project Scope: First Implementation* > *General Business Data* > *Employees and Service Agents* > *Employees*, and in the *Questions* tab select the option: *Do you want to round off the quantity at Service Item Level?*

12.3.8 Rounding Off Time at Service Item Level

When the user converts a time entry to a time item, the time item can be rounded off to the nearest defined time. This depends on how much rounding you have defined in the rounding rules under administrator settings.

By default, rounding off occurs at the time item level. Select a configuration question to enable rounding at the service item level.

> **i Note**
>
> Rounding is now enabled at the parent service item level for time entry, when converting to time item. Your administrator can create rules to round off time entry duration while creating time items.

12.3.8.1 Configure Time Item Rounding Rules

The administrator can set up time item rounding rules, when creating time items from time entries.

Log on to system using administrator credentials and navigate to *Administrator* > *Service and Social* > *Time Recording* > *Define Rules for Time Item Rounding*.

12.3.9 Auto Determine Time Item Product

You can convert a time entry to a time item product for billing purposes. You can choose a time item manually or it can be determined automatically by the system based on the time item product determination rule set in business configuration.

You have the flexibility to determine the time item product for a ticket based on different attributes of time entries (such as time type), and tickets (such as service organization).

Example

Based on the Service Organization of the ticket and time type of the time entry, different products can be assigned as ticket time item.

12.3.9.1 Configure Product Determination for Time Recording

The administrator has to confirm a business configuration scoping question to enable auto determination of Time Item Product based on time entries.

If you select the option, then the time item product is determined automatically. However, if you do not select it, then select the product for time item manually from the list of displayed products.

Navigate to *Edit Project Scope* > *First Implementation* > *Questions for Employees* > *Enable Product Determination for Time Recording*, and select the question: *Do you want to enable rule based product determination for a ticket from Time Recording?*

You can determine Time Item Product, based on different attributes of Time Entries (Time Type, Start Time, End Time), and Ticket (Service Org., Time Type).

12.3.10 Automatic Time Recording

In the field service scenario, technician has to track time spent on various tasks to bill customers appropriately; and also maintain their time entries for creating time reports.

To facilitate and make time recording easy for the technicians, auto time recording can be used. Using this feature, the technician can record time for a ticket, or independent of a ticket. Once the recording starts, a new time entry for the corresponding ticket gets automatically created. When the technician stops the recording the corresponding time entry is updated with the end time and duration. Technicians can adjust the time entries later.

> **Note**
>
> Only a single time recording can be active at a given time.

Following are points to remember about automatic time recording:

- You can edit time entries after stopping the time recording.
- If you edit the time entry before stopping the recording, then recording stops and your edits are given precedence.
- If you start a time recording on one date and stop in another, the system creates a time entry with duration only. Time entries can be created for one date only.
- You can have only one auto time recording at a time.

12.3.10.1 Start and Stop Time Recording

An employee can start and stop time recording from the *Time Entries* and *Tickets* tab.

Procedure

1. To record time automatically from the time entries tab, navigate to the *Time Entries* tab and choose the *Start Recording* button to begin recording time.
2. Choose a time type, which displays the current date, time, and time zone. The system indicates the time entry for which auto recording is going on.
3. To record time automatically from the tickets tab, navigate to the *Tickets* > *Time Entries* tab and then *Tickets* tab and choose the *Start Recording* button to begin recording time. In this scenario, the system assigns the ticket ID for the recorded time entry.

12.3.11 Changes Tab for Time Entries and Time Reports

Use the *Changes* tab in *Time Recording* work center to track different attribute changes for time entries and time reports.

When you scope *Time Entries*, the *Changes* tab is enabled by default. This tab helps you track attribute updates made to time entries.

When you scope *Time Reports*, the *Changes* tab is enabled by default, and also displays a list of time report attributes. This tab helps you track attribute updates made to time reports.

12.3.12 Sort in Time Recording

You have the option of sorting time reports by the start date and start time in the *Time Recording* tab.

12.3.13 Time Entries for Ticket Summary Form

Use time entries for a Ticket in the Standard Ticket PDF Form Template used in *Preview Summary* and *Add Summary for Ticket*.

Time Entries

Date	Type	Start Time	End Time	Duration	Status	Employee
Jul 31, 2015	Working Hours	8:15 AM	8:15 AM	48 Second (s)	In Preparation	Eddie Smoke
Jul 31, 2015	Non-Working Hours	8:37 AM	8:54 AM	16 Minute(s) 11 Second (s)	In Preparation	Eddie Smoke
Jul 31, 2015	Working Hours	10:03 AM	10:04 AM	1 Minute(s) 20 Second (s)	In Preparation	Eddie Smoke

12.3.14 Queries for Ticket

When you create a new time entry, you can extend the ticket search using the *Ticket with my Involvement* query parameter.

You can assign an existing time entry to a ticket after the time entry is created. For default queries in ticket, use *My Open Work Tickets*, *All Tickets*, *My Tickets*, and *My Work Tickets* queries, you can assign time entries to a ticket.

You can quickly filter the tickets based on involvement while assigning ticket for a time entry. To access the query, navigate to *Time Reports* > *Time Entries* > *New* > *Ticket ID*.

User can be added as the technician either in the ticket header level, or as a technician at the ticket item level.

12.3.15 Page Layout for Time Entries

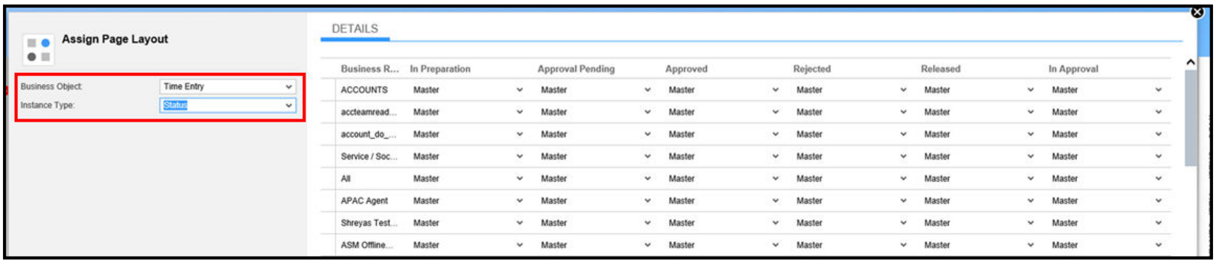
You can assign page layout for time entries using configuration.

12.3.15.1 Configure Page Layout

You can create various page layouts based on different attributes for Time Entries and Time Reports. Your administrator would have to set these attributes for you.

You can use the following attributes:

- Attributes for Time Entry
  - Status
  - Time Type
- Attributes for Time Report
  - Status

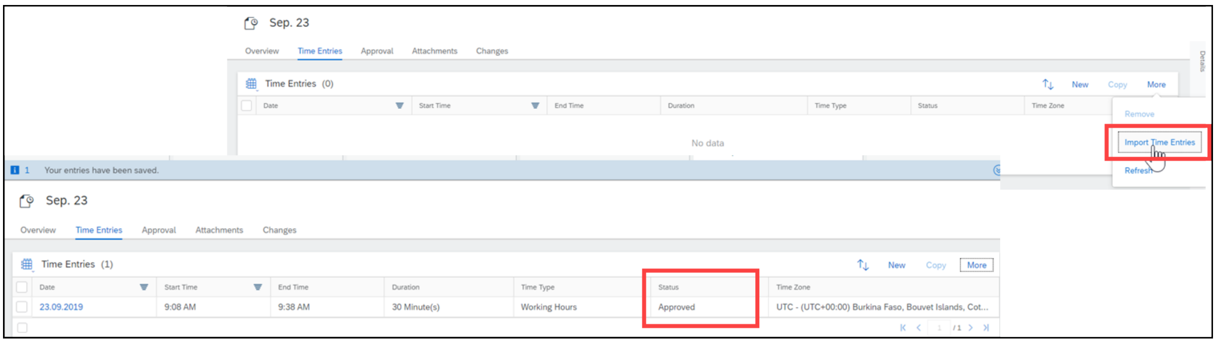


For more information on enabling and using page layout options, see the SAP Cloud for Customer Extension Guide.

12.3.16 Add Approved Time Entries to Time Report

Replicated approved time entries from FSM can be added to time report for further processing.

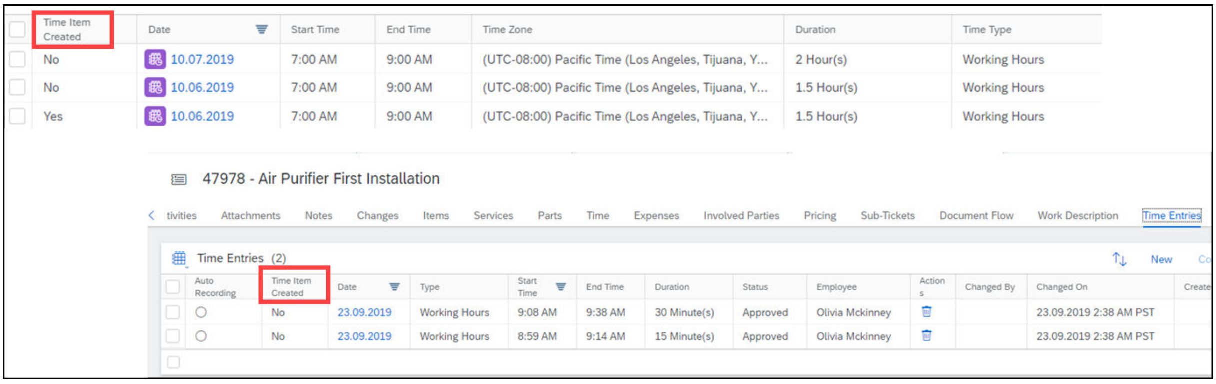
When the T&M Journals are approved in FSM and replicated to C4C, the time entries status is unchanged. The time entries can be imported to the corresponding C4C time report for further approval and releasing to ERP.



12.3.17 Time Item Created Indicator for Time Entries

The *Time Item Created* indicator is available for the Time Entries work list and the Time Entries tab in Ticket.

You can directly know if a time item has been created for this time entry or not.



12.4 Work with Time Reports

Time report is like a time sheet or time card used for a date or date range.

A time report is a collection of time entries, which can be submitted for approval to one or more approvers. Approvers can view the time reports submitted for approval and decide whether to approve or reject a time report.

You can do the following for time reports:

- Add, edit, or delete time reports.
- Import new time entries into time report and submit it for approval.
- Add new time entries from time reports.
- Remove time entries from reports that are not required.
- Approve or reject time reports.

There can be only one time report for a given date or date range. One time entry can belong to only one date. A single time report for each employee for a date or date range makes it easy for the manager to look at their team members recorded time.

Time reports are used for approval purpose only. Manager or approver can see the time entries entered by the employees through time reports.

When a time report is accepted all the time entries get accepted and same is true for rejection.

Time reports cannot have overlapping start and end dates.

Every time a time entry is added to a time report, the total duration for a time report (summation of the duration of all the time entries for the time report) is calculated.

The administrator can set standard work flow rules to set up notifications or emails based on changes in the time reports.

Create Time Reports [page 342]
Users can create time reports for a given date range. When a time report is created for the first time, user has to import time entries into the time report, which were created before the creation of time report. All time entries created later get added to the corresponding time reports automatically.

Edit Time Entries and Time Reports [page 342]

Users can record productive and non productive hours for a work ticket and create time entries and reports and submit time reports for manager approval.

Approval Process in Time Reports [page 343]
You can use standard approval process for time reports approval . The approver can see the notification and accept or reject the time report from the notification itself, or can navigate to the time report for approval. There are options of accepting or rejecting a time report from the time report approval tab. Hence the approver does not have to go back to the notification after reviewing the time report details.

View Delegated Time Reports [page 345]
As a user, you would be able to see time reports of another team, which you've been delegated. In the *Time Reports* work center, when you view reports using the *Delegated Time Reports* criteria, you are able to see all time reports delegated to you.

Add Attachments, Summary, and Signature to Time Reports [page 345]
You can add attachments, summary, and signatures to a time report.

Extension Fields for Ticket in Time Entries List for Time Reports [page 345]
The administrator can add the following fields via personalization.

12.4.1 Create Time Reports

Users can create time reports for a given date range. When a time report is created for the first time, user has to import time entries into the time report, which were created before the creation of time report. All time entries created later get added to the corresponding time reports automatically.

> **i Note**
>
> You can also create time reports on behalf of your team members based on the access restriction.

12.4.2 Edit Time Entries and Time Reports

Users can record productive and non productive hours for a work ticket and create time entries and reports and submit time reports for manager approval.

Once a time entry is added or edited for a time report, the status of the time entry as well as the time report changes to *In Preparation*.

User has the flexibility to add, edit, or delete the time entries after the time report is approved, or rejected. When user updates an entry in a report, the time entries and the time report change to *In Preparation* status; thus allowing the employee submit the report for approval again.

If a new time entry is added in a time report containing one or more time entries with approved or rejected status, the existing status of those time entries don't change. When such time report is submitted for approval again, the status of the *In Preparation* time entries changes to *Approval Pending*. (The approver knows that those time entries were approved or rejected before.)

12.4.2.1 Fine Tune Time Type

You can define the time types available for use in time reporting with the fine tuning activity: *Time Types for Time Recording*. Your administrator would have to enable the fine tuning activity.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune*, and search for *Time Types for Time Recording* activity. In the *Time Types for Time Recording* fine tune activity screen, choose the *Add* button and add a time type code and a description for it.

Example

Use codes such as 01, 02, or 03, and descriptions can be based on relevant task types; such as: Billable Hours, Non-Billable Hours, Travel, or Training.

12.4.3 Approval Process in Time Reports

You can use standard approval process for time reports approval . The approver can see the notification and accept or reject the time report from the notification itself, or can navigate to the time report for approval. There are options of accepting or rejecting a time report from the time report approval tab. Hence the approver does not have to go back to the notification after reviewing the time report details.

12.4.3.1 Approve or Reject Time Reports

Time reports are used for approval or rejection only. Managers or approvers can see the time entries (entered by the employees) in a time report. When a time report gets approved, all entries within the report get accepted as well. The same behavior holds true for time report rejection. Once a time entry is added or edited for a time report, the status of the time entry as well as the time report changes to *In Preparation*.

You have the flexibility to add, edit, or delete the time entries even after a time report is approved or rejected. When you update an entry in a report, both the time entries and the time report status changes to *In Preparation*. At that point, the employee can submit the report for approval again.

If a new time entry is added to a time report that contains one or more time entries with approved or rejected status, then the existing status of those time entries does not change. So when the time report is submitted for approval again, the time entries with *In Preparation* status changes to status *Approval Pending*. (This is done so that the approver knows that those time entries were approved or rejected before.)

When a Time Report is accepted, all the time entries except ones with status *Released* are approved. When a Time Report is rejected, all the time entries except the ones that are *Released*, are rejected.

> **i Note**
>
> This behavior helps the approver know that those time entries were approved or rejected before.

12.4.3.2 Withdraw Time Report From Approval

Users can withdraw a time report even after submitting it for approval, hence allowing them to make necessary corrections in the time report and re-submit it for approval.

As part of the time report submission process, as soon as the user submits a report for approval, the approver receives a notification for the same. However, if the time report gets withdrawn, then the notification gets withdrawn from the approver's notification list.

12.4.3.3 Configure Approval Process for Time Reporting

The administrator would have to enable the standard multistep approval process for time reports.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *General Business Data* > *Employees and Service Agents* > *Employees* > *Enable Time Recording* and select the scoping question: *Do you want to use a multi-step approval for time recording?*

12.4.3.4 Configure Auto Submit Time Report for Approval

Your administrator can enable auto submit time report for approval using business configuration, so you can auto submit for approval as soon as the time report is saved.

Select the scoping question to enable auto submitting a time report for approval.

Go to *Edit Project Scope* > *First Implementation* > *Questions.* Drill down to *General Business Data* > *Employees and Service Agents* > *Employees*, and select the question: **Do you want the system to automatically submit a time report for approval?**

12.4.3.5 Assign Additional Approvers for Time Report

Select the approval process option to send a time report to a set of approvers. You can add multiple approvers for a time report from the *Approver Parties* tab.

Go to *Time Recording* > *Approver Parties* to add additional approvers for a time report.

12.4.3.6 Configure Additional Approvers for Time Report

Your administrators can enable additional approver option for a time report by maintaining this in the approval process.

Go to *Administrator* > *Approval Processes* and select the new work distribution rule: *Approver of Time Report* in the Time Report approval process.

12.4.4 View Delegated Time Reports

As a user, you would be able to see time reports of another team, which you've been delegated. In the *Time Reports* work center, when you view reports using the *Delegated Time Reports* criteria, you are able to see all time reports delegated to you.

12.4.5 Add Attachments, Summary, and Signature to Time Reports

You can add attachments, summary, and signatures to a time report.

- Attach different file types to a time report.
- Generate a time report summary displaying time report and time entry details. Display a time report and navigate to *Actions* > *Generate Summary*.
- Add a signature for time report summary. After you trigger the generate summary action, select a signature type from the dropdown list, capture signature, selec t *Add Signature*, and then choose *Generate*. Navigate to the *Attachments* tab to view the generated summary with the captured signature.

12.4.6 Extension Fields for Ticket in Time Entries List for Time Reports

The administrator can add the following fields via personalization.

If a time entry is associated with a ticket, the following ticket fields are displayed in the time entries list within a time report:

- Ticket Item ID
- Ticket Item Description
- Ticket main Installation Point ID
- Ticket main Serial ID
- Ticket main Product ID
- Ticket main Product Description
- Ticket Customer ID

- Ticket Customer Name
- Ticket ID

ℹ Note

You can see the key data related to the ticket for time entry in the list itself and do not need to navigate to the ticket.

12.5 Remove Personal Data in Time Entry and Time Reports

The depersonalization function allows you to remove personal data from a business object to ensure compliance with the applicable data protection requirements. Depersonalization is only available for users with access to the Data Protection and Privacy work center.

You are able to depersonalize data for *Time Entry* and *Time Reports*. So all associated personal information for employee is no longer visible. However, you are able to search for and display the time entry or time report as a record, without any personal information.

All associated information from a Time Entry and Time Report is removed from:

- Employee
- Party Node
- Reporter (only for Time Report)

The following table displays delete or depersonalize functions available for Time Entry and Time Reports:

Business Objects	Delete	Depersonalize
Time Entry	No	Yes
Time Report	No	Yes

Related Information

Personal Data Protection and Privacy

12.6 Analytics for Time Recording

Our solution delivers two data sources for analytics using information from time recording.

They are:

- data source with all time entries
- data source of all time reports with its time entries

You can generate analytics for both the data sources based on the following key figures:

- **Time Entry**
  Total Duration, Date, and Today.
- **Time Report**
  Start Date, End Date, and Today.

> i Note
>
> An administrator is able to generate standard reports for time entries and time reports from the *Business Analytics* work center in the administrative section of the SAP Cloud for Customer solution.

12.7 Offline Functions for Time Recording (Mobile)

This topic presents an overview of supported functions for offline time recording.

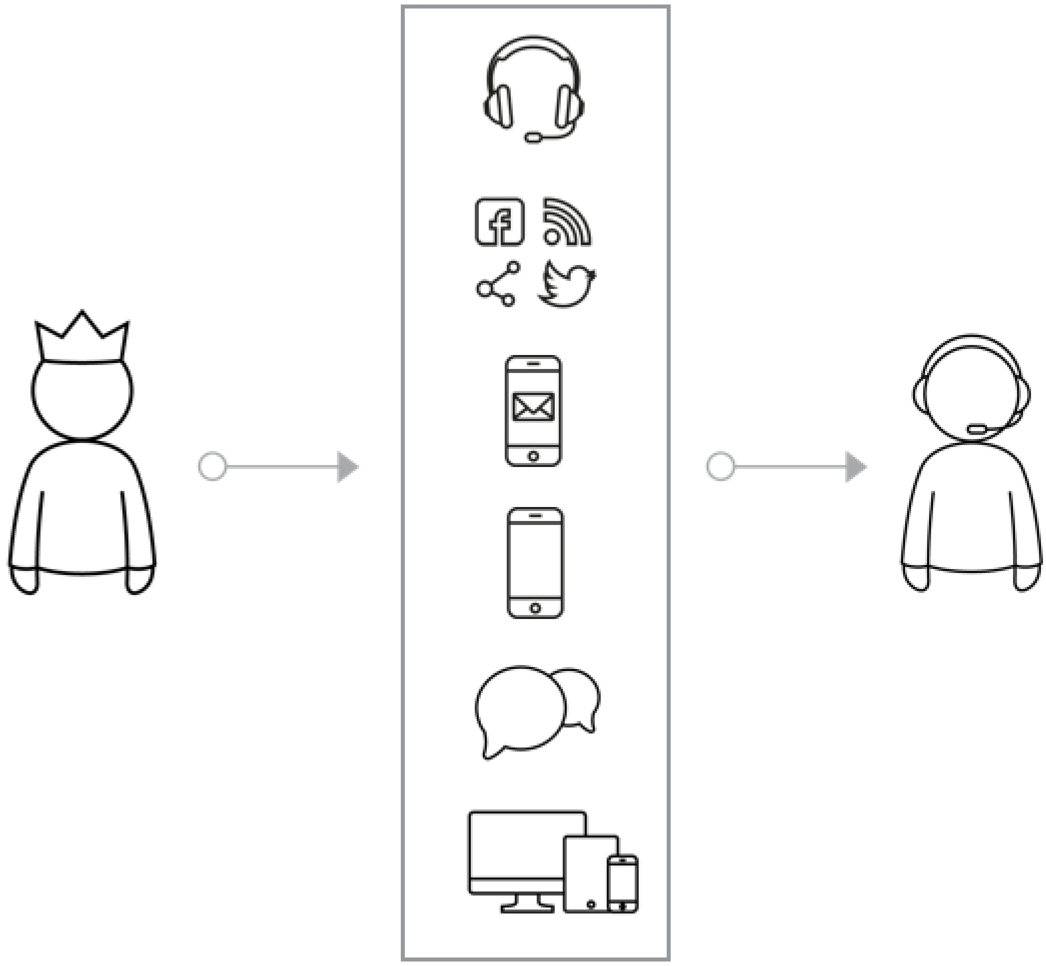
> i Note
>
> Offline is not enabled for time reports.

The following are available offline functions for time recording:

- The *Time Entry* tab is enabled for mobile offline for display/edit/create scenarios.
- When creating a time entry the system validates that start time is less than the end time.
- Advanced search is enabled in the *Time Recording* tab for Time Entries.
- *Time Entries* tab for ticket is available.
- You can create new time entries for a ticket in the *Time Entry* tab.
- You can create new time entries based on service item.

13 Set Up and Configure Communication Channels

The SAP Service Cloud solution enables customer service communication across multiple contact channels such as: phone, e-mail, chat, messaging, portal, and several social media channels. The service process begins with incoming complaints/queries/requests from these sources. The customers communicate with agents using these channels.



The Ticket creating process begins with incoming customer communication via different communication channels. Our solution supports the following channels.

E-Mail Communication Channel [page 349]
: E-mail messages routed to the system automatically generate service tickets that are sent to service agents for processing.

Social Media Communication Channel [page 369]
: The system can process and route messages from multiple social media channels such as: Facebook, Twitter, YouTube, or create a custom social channel.

13.1 E-Mail Communication Channel

E-mail messages routed to the system automatically generate service tickets that are sent to service agents for processing.

In order to respond to an e-mail message, the customer's e-mail address must be stored in the system database. You have the option to reply to a ticket, or compose a new e-mail. If you choose to reply, the previous customer message will be copied, and the reply will be sent to all recipients of the last e-mail.

If your system is set up to support it, you can respond to tickets from the agent workspace using Microsoft Outlook. To do this, you must download and install the SAP Cloud for Customer Add-In for Microsoft Outlook.

Your administrator can expose different e-mail addresses to customers. For each address, your company must evaluate whether to use the business-to-business (B2B), or business-to-customer (B2C) process, based on your master data policies, and set up e-mail forwarding accordingly.

13.1.1 VIDEO: Set Up E-Mail Channels

For Administrators: find out how to set up e-mail channels in your solution.

13.1.2 Enable E-Mail Channels

Administrators can enable e-mail as a communication channel in business configuration scoping.

Context

As an administrator, you can enable e-mail as a communication channel for either customer service or employee support.

Procedure

1. Enable scoping element *Service* > *Employee Support* > *Communication Channel - E-Mail*

   This setting enables e-mail as a communication channel for both customer service and employee support. There is an equivalent setting under customer support. Either element can be selected and enables both scoping elements.
2. Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions*.
3. Set the following questions as *In-Scope*:
   - For **Customer Service** under *Service* > *Customer Care* > *Service Request management*:
     - **Group: E-Mail Integration with Service Request Management for Corporate Accounts** : *Do you want to support e-mail channels for corporate accounts*
     - **Group: E-Mail Integration with Service Request Management for Individual Customers** : *Do you want to support e-mail channels for individual customers*
   - For **Employee Support** under *Service* > *Employee Support* > *Communication Channel - E-Mail*:
     - **Group: Maintain Service Requests Automatically from Incoming E-Mails** : *Do you want to maintain tickets automatically from incoming e-mails*

13.1.2.1 Creation of Tickets for Unsupported Attachments

Create tickets from an e-mail with unsupported attachments.

When you receive an e-mail with unsupported attachment, instead of blocking the e-mail and ticketing processing, the system replaces the unscoped attachments type with a text attachment which contains the details of removed attachment and the reason.

Procedure

1. Navigate to *Business Configuration* > *Implementation Project*.
2. Select your project and click on *Edit Project Scope* > *Scoping* > *Questions* > *Service* > *Customer Care* > *Email Handling*.
3. Select the scoping question - *Enable Ticket Creation from an incoming e-mail having attachments of unscoped mime type*.

13.1.2.2 Verify E-Mail Channel Addresses

This feature introduces the necessity to verify all the new e-mail channel addresses through a verification code sent over the e-mail address used in the channel.

You must verify and activate the new e-mail channel to make it usable.

Existing e-mail channels aren't affected until the e-mail address configured in them is modified.

If you modify the e-mail address, the channel gets inactive and verification of the e-mail address thorough the verification code is required in order to reactivate.

> **i Note**
>
> The status of the existing channel remains active until you change the email address.

13.1.2.3 Display E-mail Address in Ticket List View

View the originating E-mail Address for an email interaction in the ticket list view.

This feature enables your user to view the originating e-mail address without opening the interactions in ticket detailed view.

13.1.2.4 New Placeholders in Service E-Mail Workflow

Three new placeholders namely *Main Channel*, *Recipients* , and *Associated Ticket* are introduced along with a new recipient determination feature called *Message From* in the service e-mail workflow objects.

Your administrator can use the new placeholders in the service e-mail workflow rule to configure various conditions and recipient determination to suit different business needs.

13.1.3 Add Allowed Domains for Outbound E-Mail Channels

The administrator would have to configure **from** domains used to respond to support tickets.

E-mail addresses that you use as the sender address in e-mail responses must belong to allowed domains. Add allowed domains in the table for *Allowed Sender E-Mail Domains*.

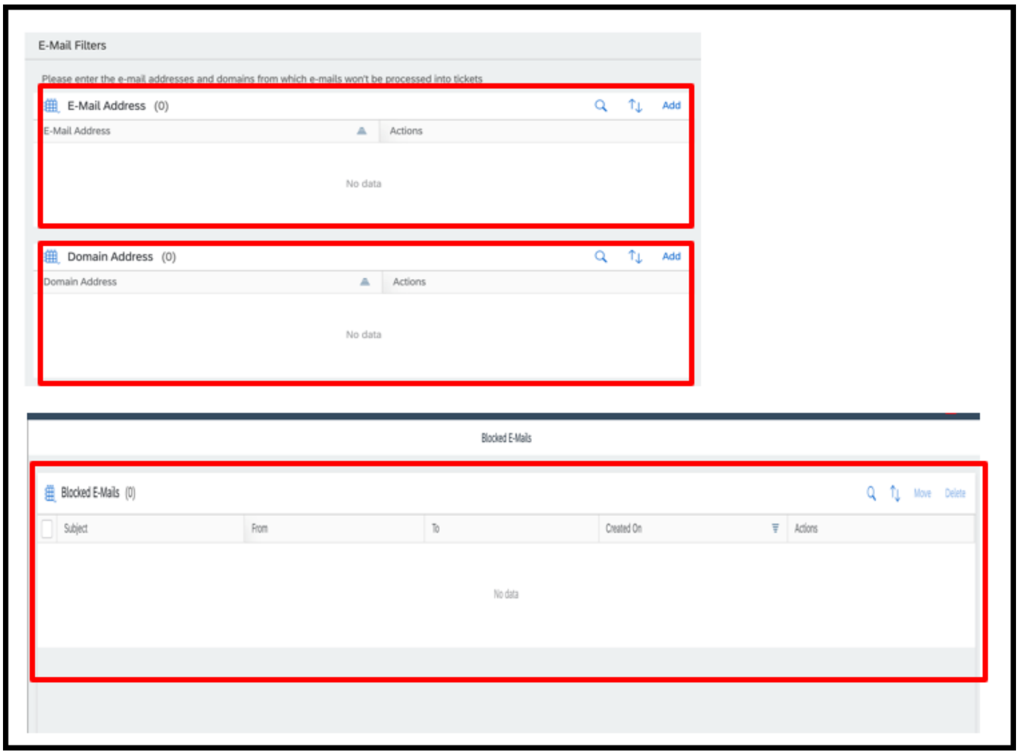
Go to *Business Configuration* > *Activity List* > *E-Mail and Fax Settings*.

13.1.4 Block Incoming E-Mails

The administrator can now block e-mail addresses or domains to ensure unnecessary tickets are not created.

Manage global e-mail requirements within one central location, removing complexity for your service teams to manage the process. It also provide additional autonomy for e-mail processing without impacting e-mail client administrators.

Go to *Administrator* > *Service and Social* > *Ticket Configuration*.



13.1.5 Add Outbound E-Mail Channels

Your administrator would set up default addresses for e-mail responses.

Procedure

1. Go to *Administrator* > *General Settings* > *Company* > *Org Structures*
2. Select and edit the service organizational unit in the org structure.
3. Select the tab *Addresses* and under *Communication Details* and specify the e-mail address that to be used as the default outbound e-mail address in the organization.

> **! Restriction**
>
> Ensure the domain of this outbound e-mail address is an allowed domain. See previous step - **Add Allowed Domains for E-Mail Addresses**.

13.1.6 Set Up Branding Templates

The administrator would set up and maintain HTML-based templates for outgoing e-mail messages.

Context

Branding templates are applied to all outbound e-mail messages sent from the channel, adding it **around** the response prepared by the agent.

A branding template is a simple HTML file with a #TEXT# placeholder. The placeholder is usually located between a standard header and footer. The header and footer can include your brand logos and any standard text or disclaimers. Create the branding template file with your preferred HTML editor. You can configure a different branding template for each channel.

E-mail messages sent to your customer are the sum of: the agent response to the ticket, plus any response template selected by the agent, plus the branding template defined for the channel.

Procedure

1. Go to *Service* > *Templates*.
2. Choose *New*.
3. Enter the template name.
4. Select *E-Mail* as the template channel type.
5. Select *Document-Based* as the template type.
6. Select *Branding Template*.
7. Enter the e-mail *Subject* line.
8. Browse to the HTML file to be used as the template and save your entries.

   The template is now available to add to e-mail channels.
9. (Optional) Preview the template. From the list of templates, click the template name.

   > → Tip
   >
   > To change the file used for the template, click *Replace*, then browse to and select the new file.

13.1.7 Set Up Inbound E-Mail Channels

Your administrator would have to add the inbound e-mail addresses that you use for customer interactions and ticket routing.

Context

When an e-mail message is received in the solution, the system creates a ticket for the corresponding e-mail channel. If you implement routing rules, the solution routes the ticket for the selected channel as specified.

Procedure

1. Go to *Administrator* > *Service and Social Settings* > *Communication Channels* > *E-Mail Addresses*.
2. Click *New* to create a new channel, or select and *Edit* an existing channel.
3. Specify the inbound e-mail address to which the tickets are routed. Also specify the **channel ID** and **name**.
4. Specify the *Channel Direction*. The default is *Inbound and Outbound*, but you can choose to make the channel inbound only, or outbound only.
5. Select the channel type for inbound configuration. You can choose from the following values:
    - *Customer Service- Business to Business (B2B)*
    - *Customer Service-Business to Consumer (B2C)*
    - *Employee Support*
6. Enter a default account for inbound configuration.
    1. **For B2B**:
       The solution categorizes incoming e-mail messages with an unrecognized address as *Unassociated E-Mail* and no ticket is created. You can add a default e-mail account to each channel. If the sender address is unknown, the solution assigns the default account to the message and creates a ticket.
       Default accounts must meet these criteria:
        - Match the e-mail address type that you select for your e-mail channel
        - Have a corporate account in the cloud solution
        - Have a default contact (corporate accounts)
    2. **For B2C**:
       You can specify a default customer for each B2C channel. If the sender e-mail address is unknown, then the solution assigns this default customer to the message and creates a ticket.
       If the *Default Customer* field is empty, then a new individual customer is created for each unknown sender.
       Default accounts must meet the following criteria:
        - Match the e-mail address type that you select for your e-mail channel
        - Have an individual customer account in the cloud solution
7. Select a pattern for e-mail response subject line for the outbound configuration.

This standard pattern enables all messages pertaining to a specific ticket to be associated with (threaded to) that ticket. You can choose between two subject line patterns for reply messages:

- [Ticket: 123456] Subject
- 123456 - Subject

> **! Restriction**
>
> After you select the message subject pattern for a channel, it cannot be changed, because any existing messages would no longer thread properly.

8. Select the branding template for the outbound configuration.

   You can add a branding template to your e-mail channels to control the look and feel of e-mails sent by agents. Every time an agent sends an e-mail from one of those channels, the solution embeds the content within the branding HTML.

   > **→ Tip**
   >
   > You must have already set up the required branding templates.

Related Information

[Set Up Branding Templates [page 354]]
The administrator would set up and maintain HTML-based templates for outgoing e-mail messages.

13.1.8 Set Up Encryption for Inbound and Outbound Mails

The administrator would configure the encryption settings for incoming and outgoing e-mail messages.

Procedure

1. Go to *Business Configuration* > *Implementation Projects* . Select your project and navigate to *Edit Project Scope* > *Questions* > *Built-in Services and Support* > *System Management* > *Security* .
2. Under *Group: E-Mail Security*, set the question *Do you want to use encryption and signatures for e-mails?* to *In-Scope*.
3. Set the encryption levels for individual e-mail addresses in fine-tuning. Go to *Business Configuration* > *Activity List* > *Fine-Tune* > *E-Mail Encryption and Signature Check* .
   - **Incoming E-Mails Scenarios**: Specify for each e-mail scenario whether incoming e-mail messages are verified using a signature. Choose *Check (and Reject if Untrusted)* if you require a high-level or security. Select *Do Not Check* if you do not have security requirements. Set the signature for the following scenarios:

        - **SAP Service Cloud: E-Mail Security, B2B Scenario**
        - **SAP Service Cloud: E-Mail Security, B2C Scenario**
    - **Outgoing E-mail Scenarios**: Specify for each e-mail scenario whether the outgoing e-mail messages are encrypted and signed. Set the encryption and signature for the following scenarios. The recommended values are *Encrypt if Possible* and *Sign*.
        - **SAP Service Cloud: E-Mail Security, B2B Scenario**
        - **SAP Service Cloud: E-Mail Security, B2C Scenario**
4. Go to *Administrator* > *Common Tasks* > *Configure S/MIME*.
5. On the *Incoming E-Mail* tab, upload the CA certificates for each inbound e-mail address used for e-mail communications channels.
6. Activate your settings. Go to *Administrator* > *Common Tasks* > *Configure S/MIME* and select *Activate S/MIME*. Select one or more of these options:
    - *Check signature of Incoming E-Mails*
    - *Encrypt Outgoing E-Mails*
    - *Signing Outgoing E-Mails* - provide a signature to other systems.

    The settings you select in Fine-Tuning are only enabled if you activate them.
7. Save your settings.

13.1.9 Set Up Microsoft Outlook for Ticket Responses

Use the SAP Cloud for Customer Add-In for Microsoft Outlook to respond to tickets. Your administrator would set this up in the system.

Agents can use the editing features available in Microsoft Outlook when responding to tickets, and view e-mails as interactions in the associated ticket.

To enable Microsoft Outlook for Service in scoping, go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Service* > *Customer Care* > *Service Request Management* **Group: E-mail replies via Microsoft Outlook (1). Before**

using Microsoft Outlook to respond to tickets, agent must complete the following steps:

1. Download and install the add-in for Microsoft Outlook. Click on *Downloads* in the header bar and download *Add-In for Microsoft Outlook*.
2. Enable the service scenario in the add-in settings in Microsoft Outlook.
3. (Optional) Add any shared e-mail accounts used for responding to tickets to Microsoft Outlook. Agents must remember to select the correct account when responding to a ticket.
4. (Optional) Set the shared e-mail account as the default, so you don't have to select it manually when replying.

Tips to remember when using Microsoft Outlook for ticket responses:

- If this feature is enabled, when an agent responds to a ticket via e-mail, a new Microsoft Outlook window opens to compose the response message.
- Include the ticket number in the subject line so that the e-mail is associated with the ticket as an interaction.

- When you enable the service scenario in the Add-In for Microsoft Outlook settings, e-mails sent from Microsoft Outlook are not recorded in SAP Cloud for Customer as activities. Instead, they are recorded only as ticket responses.
- If your administrator enables this feature, service agents are still able to respond to tickets without using Microsoft Outlook by deselecting the *Use Microsoft Outlook* option.

13.1.9.1 Configure a Default Profile for Microsoft Outlook

Administrators can define a default profile for all users who use the SAP Cloud for Customer Add-In for Microsoft Outlook.

Context

You can send around guidelines for users to set up their profiles for the add-in. However, it may be easier to simply define a default profile for your company. Users can then adapt it to their own workstyle later, if they choose.

Procedure

1. Go to *Administrator* > *Groupware Add-In Settings*.

   The settings you see are the same ones that can be made directly in the add-in.
2. Make the settings to define the default profile for the add-in for all users at your company.
3. Save your settings.

   When your company upgrades to the next release and as each user logs on, your default profile overwrites any settings they may have made previously.

13.1.9.2 Configure Remote Installation of Add-In with MSI File

In addition to each end user being able to install the add-in manually, administrators can use an MSI file to install the add-in on multiple clients remotely.

Context

To download the MSI file, do the following:

Procedure

1. As an administrator, you can download the MSI file from the SAP Software Download Center at https://support.sap.com/software/installations.html.
2. Search for `C4C_OUTLK_ADDIN_MSI` and download it.

Example

For example, you could use the following command line for silent installation:

```
>> msiexec  /i   <path to msi>  /quiet
```

13.1.9.3 Prevent Synchronization of E-Mail Marked as Private or Confidential

As an administrator, you can set up your system to exclude e-mail marked as either private or e-mail marked as confidential from being synchronized to SAP Cloud for Customer.

Context

To make this setting, do the following:

Procedure

1. Log on as an administrator and go to *Administrator* > *General Settings* > *Groupware Add-In Settings* > *Microsoft Outlook* > *General Settings* > *Sync Settings* and choose whether you want to exclude confidential e-mail, private e-mail, or both from synchronization.
2. Choose whether you want to exclude confidential e-mail, private e-mail, or both from synchronization.

13.1.9.4 Prevent Synchronization of Notes and Attachments for Visits and Appointments

As an administrator, you can set up your system to prevent notes and attachments from being synchronized to and from SAP Cloud for Customer for appointments and visits.

Context

> **Note**
>
> These settings always affect both appointments and visits. For example, it is not possible to prevent synchronization for appointments and not for visits.

To make this setting, do the following:

Procedure

1. Log on as an administrator and choose *Administrator* > *General Settings* > *Users* > *Business Roles*.

2. Use the filter to show all active business roles.
3. Select and edit the role for which you want to prevent synchronization of notes and attachments.
4. In the user role, add the appropriate business action restriction:
    - To prevent synchronization of attachments for appointments and visits (GW_APPT_ATTACH_UPLOAD_DOWNLOAD)
    - To prevent synchronization of notes for appointments and visits (GW_APPT_NOTES_UPLOAD_DOWNLOAD)

13.1.10 Monitor Business Communication for E-Mails

Use business communication monitoring to verify that e-mail messages are transmitted successfully. Your administrator would have to set up the feature in the system.

Check that your business documents were sent and received, and by which process. Identify technical errors and resolve them to prevent problems in follow-on processes or with your business partner.

Go to *Administration* > *General Settings* > *System Administration* > *Web Service Message Monitoring*

13.1.10.1 Configure E-Mail Service Monitoring

Users can save a query for in-bound e-mail monitoring by following these steps in the system.

Context

Use business communication monitoring to verify that e-mail messages are transmitted successfully.

Procedure

1. Go to *Administration* > *Integration* > *Web Service Message Monitoring*.
2. In the monitoring screen, click *Show Advanced Filter*.
3. In the advanced filter click *Service Interface* > *More Options* search parameter.
4. Click *Add Option* button and add some or all service interfaces, depending on the business scenario requirement:
    - ServiceRequestingIn: For B2C E-mail Scenario
    - EmailServiceRequestingIn: For B2B E-mail Scenario
5. Select any other search parameter option necessary for your query.
6. Once done, click *Save Query* to save the e-mail monitoring query for future use. You can mark this as default query.

13.1.11 Use E-Mail Response Editor

SAP Cloud for Customer provides you with a native e-mail editor that you can use to send and receive e-mail communications. Additionally, you continue to have the option to use Microsoft Outlook or integrate with any other third-party e-mail communication option.

13.1.11.1 Inline E-Mail Editor in Interactions Tab

The inline e-mail editor is a useful feature when you have to copy content from tickets or other ticket-related tabs. The feature is available in the *Interactions* tab, and your administrator would have to enable it.

> **i Note**
>
> You can either use the existing e-mail editor or the inline e-mail editor.

The following are some features for the inline e-mail editor:

- You can change the height of the response area by using the expand button at the bottom of editor.
- Functionality is similar to the existing e-mail editor, and you can use all existing BAdIs for the inline e-mail editor as well.
- The inline e-mail editor is available for both, *Grid View* and *List View*.

13.1.11.2 Enable Inline E-Mail Editor

The administrator must enable the inline e-mail editor option via scoping.

Navigate to *Administrator* > *Service and Social* > *Tickets* > *Ticket Configuration* and check the box for *Enable Inline Editor* option.

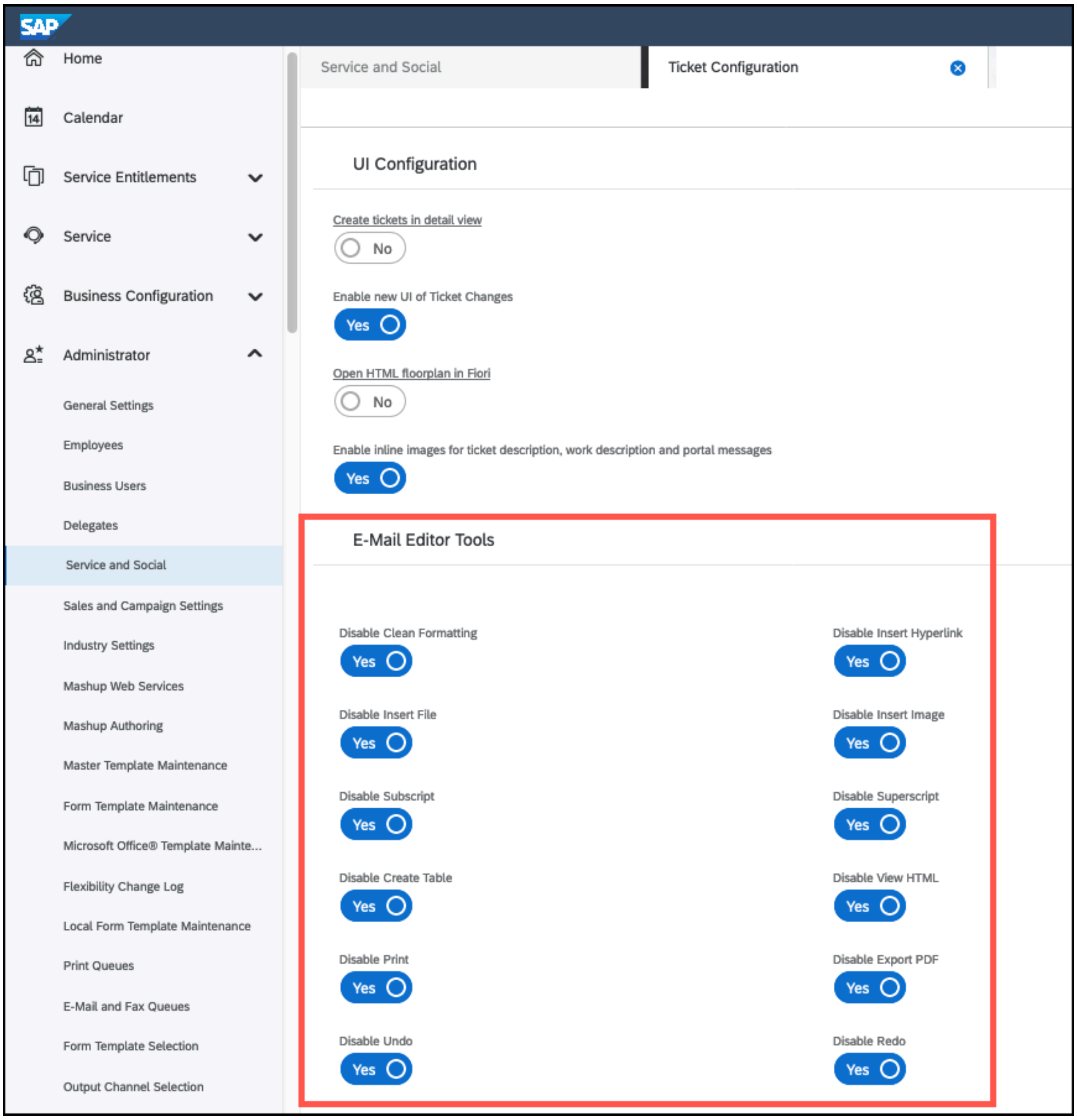
13.1.11.3 Configure Response Editor Tools

As an Administrator, you can configure which tools appear on the response editor. Limiting formatting tools can provide a large performance improvement.

Procedure

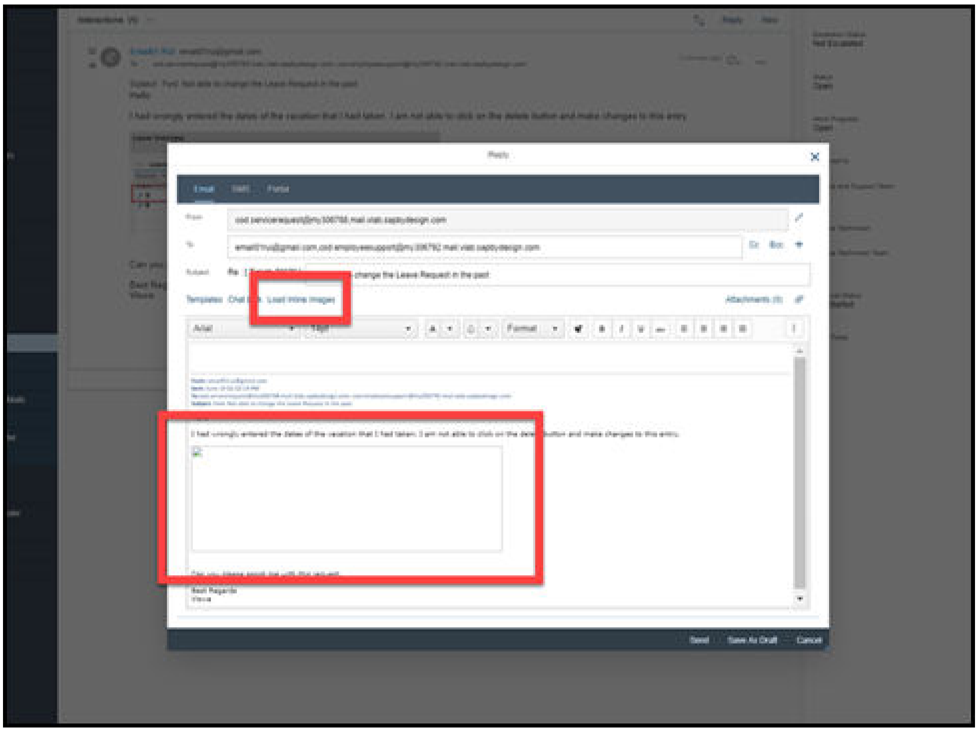
1. Navigate to *Administrator* > *Service and Social* > *Tickets* > *Ticket Configuration* .
2. Turn off formatting tools that you wish to exclude from the formatting bar in the response editor.

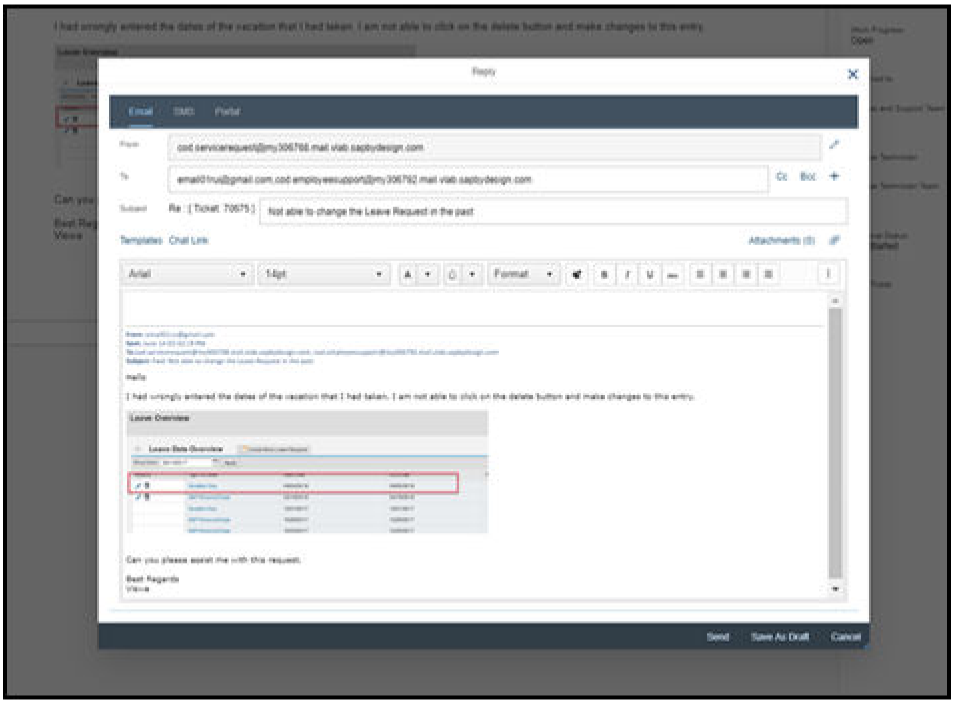
   All formatting tools are enabled by default.



13.1.11.4 Inline Image Enhancement for E-Mail Response

When responding to or forwarding an e-mail, the service agent can click the *Load Inline Images* button to load all inline images from the e-mail chain. This helps the agent set context to the e-mail response. To load all inline images automatically, enable the Auto Load of Embedded images under *Administrator* > *Service and Social* > *Ticket Configuration*.




Reply
Email
SMS
Portal
From
To
Subject
Re : [Ticket: 70675]
Not able to change the Leave Request in the past
Templates
Chat Link
Attachments (0)
Arial
14pt
Format
I had wrongly entered the dates of the vacation that I had taken. I am not able to click on the delete button and make changes to this entry.
Leave Overview
Can you please assist me with this request.
Best Regards
Send
Save As Draft
Cancel

13.1.11.5 System Notification Message for E-Mail Server Issue

The system displays a notification in case of e-mail server connectivity issues. This helps inform the service agents.

> **i Note**
>
> Create a support incident to make a request for enabling this feature in your system.

13.1.11.6 Usability in Responsive UI for E-Mail Feeder

Redesigned e-mail feeder in Responsive UI provides more writing space for e-mails. You can resize the e-mail feeder as well, which impacts the RichTextEditor accordingly. Additionally, you can reuse the font and letter size options from the previous use until you clear the cache.

13.1.11.7 Save-as-Draft Available for E-Mail

You can save the content in an e-mail editor as draft. The *Save as Draft* action checks all validations required for the e-mail to be saved without any errors. Additionally, you can save an inline image in a draft e-mail.

Service agents would be able to save e-mail as drafts and edit them later.

> **i Note**
>
> You can save multiple drafts of e-mails.

Select an e-mail draft to edit or discard the e-mail.

> **i Note**
>
> This feature is available in Responsive UI only.

13.1.11.8 BAdI to Manage Communication Actions in E-Mail

You can use the available BAdI option to enable or disable all reply options such as: *Reply*, *Forward*, or *Reply with Outlook* for e-mail. Additionally, you can set the *To* address option to a default address.

On the *Interactions* tab, using the available BAdI, you can hide or make visible the *Reply* and *Send* options for an e-mail, based on certain ticket criteria. You can also set the *To* address field as default to a specific person.

13.1.11.9 Outbound Inline Images for Email Channel

You can respond to an email with inline images using drag and drop, paste from clipboard, and insert images from your local storage. This facilitates in better communication and ease of use.

13.1.11.10 Reply with Outlook

Our solution provides you with a *Reply with Outlook* option button in the *Interactions* tab for your ease of use.

As a service agent, go to *Tickets* > *Interactions* and click the *Reply with Outlook* option button to launch the outlook email client and communicate with the customer.

> **i Note**
>
> Agent must have configured the external email client option to view the *Reply with Outlook* button.

Navigate to *Business Configuration* > *Implementation Projects* > *Edit Project Scope* > *Communication and Information Exchange* > *Office and Desktop Integration* > *Integration with Local E-Mail Applications* > *Questions*, and select the *Integration with Local E-Mail Applications* option.

> **i Note**
>
> Content of an email is limited to a length of 2000 characters when responding to an email via Outlook.

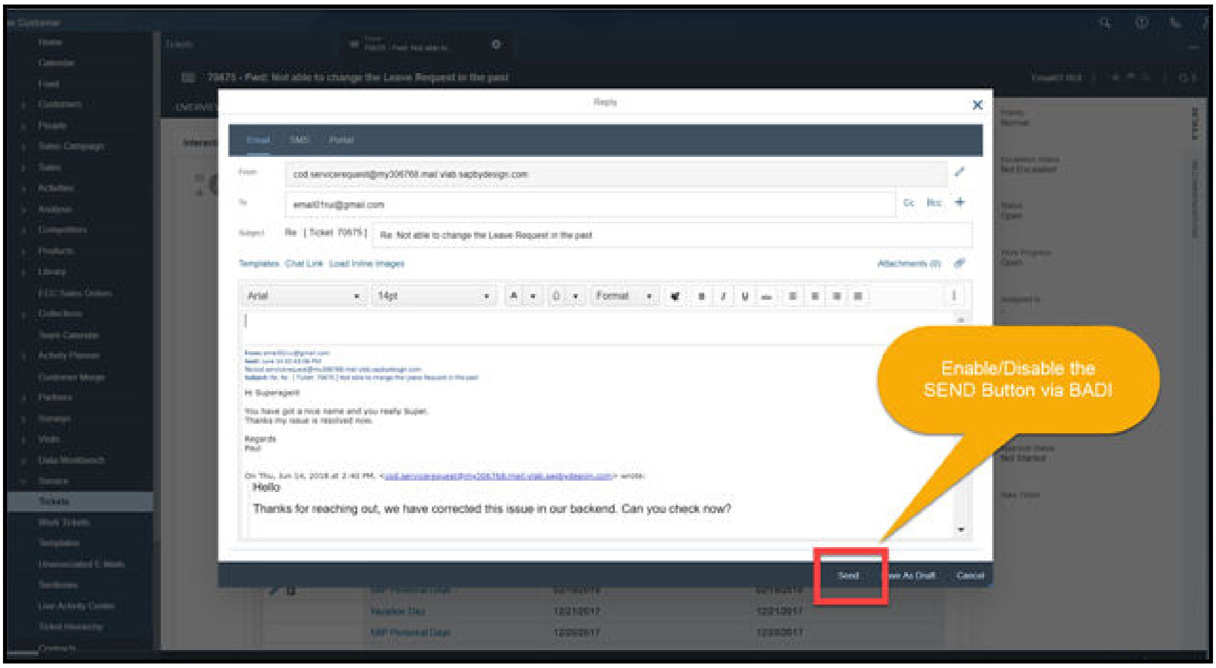
13.1.11.11 Use BAdI to Enable/Disable Send Action for E-Mail Response

Use the available BAdI (DISABLE_FEEDER_SEND) option to enable or disable the *Send* action for an e-mail response. Once disabled, the agent can use the *Save as Draft* option and save the e-mail response, but not send it. You can use this feature based on roles and authorization.

> **i Note**
>
> By default, the *Send* action button is enabled in the e-mail editor.

The following are some use case scenarios for disabling the *Send* option for e-mail response:

- Use the feature with the approval process to restrict sending out a response without an approval.
- Use the feature with skills to restrict agents from sending out e-mail responses without review.



i Note

BAdI logic does not apply for any external e-mail editor.

13.1.11.12 Configure Ticket Creation from E-Mail Response

Include a support channel e-mail address in the BCC field of a response e-mail to a business-to-business (B2B) customer.

Create ticket for B2B scenario for the channels maintained in BCC.You can also configure your solution to create a new ticket from an e-mail response to an existing ticket.

Procedure

Navigate to *Administrator* > *Service and Social* > *Ticket Configuration* > *E-Mail Channel Configuration* Enable the option:*Do you want to support e-mails which contain the channel in BCC?*. Enable the option:*Do you want to support e-mail channels for corporate accounts?*. Enable the option: *Do you want to create ticket automatically for BCC channels?* .

Once this feature is enabled, you can create a new ticket from your e-mail response by adding the support channel e-mail address to the BCC field.

13.1.11.13 HR Service Center E-mailing

Define the behavior of defaulting the email address in To field for a reporter party while composing a new e-mail message.

This feature is relevant in the employee support scenario.

You can control the e-mail address of the employee or of the reporter by party by setting it to default.

Procedure

1. Your administrator can navigate to *Administrator* > *Service and Social* > *Fiori Interactions*.
2. Enable the option: *Default the e-mail address of Reporter Party as Recipient in Employee Support New E-mail*.

13.1.12 Set up Routing Rules for Tickets from E-Mails

Create rules to route tickets to teams or agents.

Once you've added your e-mail channels, you can create work distribution rules to route the resulting tickets to teams or agents. For detailed information, search for the topic **Defining Rules for Ticket Routing**.

13.1.13 Party Determination for Emails

Learn more about party determination scenarios for emails.

B2B Scenario

- The party which refers to the sender of the e-mail (address) will be fetched from any unique, active Contact in the system. In case no matches are found, then the Party ID/ Name will remain empty.
- If no Contact is found and a default account has been defined in the channel, the system will use this default account in the ticket creation.
- The contact information in ticket overview will also be defined in case the default account has a main contact set up.
- If the e-mail subject has a valid ticket ID, then it is threaded to ticket even if there is no contact/ account maintained for the sender.
- If no party name is found and hence matched with the sender, then the e-mail address will not be used in the Party Name field.

B2C Scenario

- The party which refers to the sender of the e-mail (address) will be fetched from any individual customer in the system.
- The sender is fetched as an Individual Customer/ Person (which is not an Employee). If multiple entries are found, then the latest changed entry is taken into consideration.

Employee Support

- An active Employee is considered and matched with the sender address. The status of the employee will be considered, not it's validity date.

13.2 Social Media Communication Channel

The system can process and route messages from multiple social media channels such as: Facebook, Twitter, YouTube, or create a custom social channel.

The customer can communicate in any of the following ways:

- Post a question.
- Post a broadcast message and handle.
- Create or update their social media profile.
- Create a top level social media activity.

Disclaimer

The Solution may enable access to certain Third Party Web Services. "Third Party Web Services" means (i) any and all web services made available by third parties (other than SAP, SAP SE and/or any of their affiliated companies) that are accessible through or enabled by the Solution, and (ii) any and all application programming interfaces, web service definition files, and other materials made available by or on behalf of such third party web service providers to facilitate the access to and use of such web services. The following terms apply to all Third Party Web Services:

- Licensee is solely responsible for obtaining all account and authentication credentials required to access or use the Third Party Web Service's API or the Third Party Web Service.
- Use of the Third Party Web Service's API is subject to Licensee's acceptance of the Third Party Web Service's terms and conditions, which must be obtained from the Third Party Web Service provider. SAP is not a party to the agreement between the Licensee and the Third Party Web Service provider
- Licensee is solely responsible for executing any agreements required in connection with the use of the Third Party Web Services, including any agreements to process and transfer personal data required under applicable law.

- The Third Party Web Service’s API and the Third Party Web Service are excluded from all SAP representation, warranties, indemnifications and support obligations.
- Licensee expressly agrees to indemnify SAP, its officers, employees, agents and subcontractors from and against all claims, liabilities, losses, damages and costs (including reasonable attorney fees) suffered by SAP arising from the use of any Third Party Web Services by Licensee or its Affiliates.
- SAP may throttle, suspend or terminate the Licensee’s access to the Third Party Web Service’s API through the Product if Licensee violates or causes SAP to violate Third Party Web Service provider’s terms of service or other applicable Third Party Web Service provider agreements or policies (including, without limitation, exceeding any data or usage limits).

Add Facebook Social Media Channels [page 370]
Add Facebook as a channel to create tickets and route them to service agents.

Add Twitter Social Media Channels [page 376]
Add Twitter handle to create tickets and route them to service agents.

Add YouTube Social Media Channels [page 381]
Create a YouTube social media channel to process comments from YouTube video pages into service tickets, which can be routed for processing.

Add WeChat Social Media Channels [page 384]
Add WeChat as a channel to create tickets and route them to service agents.

Use Custom Social Channels [page 387]
You can integrate our solution with different external systems for the purpose of creating service tickets. This requires you to create custom channels.

13.2.1 Add Facebook Social Media Channels

Add Facebook as a channel to create tickets and route them to service agents.

Customers can send either public messages by commenting on your company's Facebook wall or send private messages by messaging your company using Facebook.

Your response is automatically public if the customer message was public, or private if the customer message was private.

Example scenarios:

- If you reply to a Facebook message, your response is sent to Facebook as a reply to the customer's original message.
- If your company's Facebook page allows nested commenting and your solution is configured to support it, you can reply to comments on a post. Your response appears underneath the original comment.

13.2.1.1 Create Facebook App

Administrators must set up a Facebook App for use with SAP Cloud for Customer, to access your Facebook pages and import Facebook posts, comments, or Facebook Messenger messages.

Prerequisites

- You have a Facebook account and have the developer access to this account.
- You've created a Facebook App to use with your pages.

Context

You must set up a Facebook App for use with SAP Cloud for Customer. The App is used to access various pages you want to monitor and to extract posts from. By using one or more applications, most rate limit errors can be eliminated.

> **! Restriction**
>
> Facebook must review your App before it can be used. The review process can take up to 3 weeks. Be sure to allow for this time when planning your implementation. For more information on the Facebook review process, see the related links at the end of this topic.

> **i Note**
>
> The following is an example of the steps you can follow to create a new Facebook App. Texts and field labels can be different. For more information, refer to Facebook developer documentation.

Procedure

1. Log on to your Facebook for Developers page.
2. Go to *My Apps* to add a new App.
3. Go to *Settings* > *Basic* and enter the following information:
   - *Display Name*: the name that appears whenever agents respond to a ticket from the channels using the App. For example, *2 hours ago via< display name>*.
   - *App Domains*: enter **`ondemand.com`**.
   - *Website*: maintain the site URL with your SAP Cloud for Customer tenant URL.
4. Go to *PRODUCTS* > *Facebook Login* > *Settings* and enter *Valid OAuth Redirect URIs*. The URL should be in this format: https//myXYZ.crm.ondemand.com/sap/byd/oauth/facebook.
5. Note down *App ID* and *App Secret* as you need to enter these values in SAP Cloud for Customer when creating Facebook channels.

Related Information

https://developers.facebook.com/docs/apps/review/
https://developers.facebook.com/blog/post/2018/07/02/app-review-deadlines-approaching/
https://blogs.sap.com/2019/07/19/facebook-page-and-sap-cloud-for-service-integration-requires-facebook-app-review/

13.2.1.2 Configure Facebook Social Media Channel

Configure Facebook accounts as communication channels to support your service organization.

The system can retrieve messages from a Facebook page, and agents can post their responses back to that page. As a prerequisite to this task, you must set up a social media channel for the Facebook page.

To view or edit existing Facebook channels, click the channel ID in the list to view the details screen.

Once you've created and connected your channel,

- Create and schedule a social media message import run for the channel.
- Create a routing rule for the channel.

13.2.1.3 Set Up Facebook Social Media Channel

Administrators can create a Facebook channel to enable processing and routing messages.

Prerequisites

- You have a Facebook account and have access to that account.
- You have requested Facebook App permissions: `manage_pages` and `publish_pages`.
- (Optional): You have enabled *Facebook Direct Message Integration* scoping element in your solution. If Facebook Direct Message is enabled, you should have requested Facebook App permission `page_messaging`.
- (Optional): You have enabled *Reply to Facebook Comments* feature.

Procedure

1. Go to *Administrator* > *Service and Social Settings*.
2. Under *Social Media*, choose *Social Media Channels* and click *New*.
3. Select the *Channel Type*, in this case, *Facebook*.

4. Define the *Advanced Settings*:
    a. Enter *App ID* and *App Secret* for the Facebook App you want to use with the channel.

        You can find these values on your Facebook for Developers page.
    b. Select a date and time for the initial import run. The initial import is the first import of messages from a channel.

        This setting indicates a specific date and time from which messages are imported once an import run has been scheduled for the channel. It allows you to front load the system with, for example, all messages from the last 30 days.
    c. Choose whether to remove the assigned processor for reopened tickets from Facebook using the *Remove Assigned Processor* switch.

        If the switch is on, the *Assigned To* field of the reopened ticket from Facebook is empty, which means the original processor of this ticket is removed. If the switch is off, the processor who closed the ticket is directly assigned to the ticket when it's reopened from Facebook.
5. Click *Connect with Channel*.

    The Facebook logon page opens in a new browser window.
6. Log on to Facebook. If the site asks you to allow the access to your app, allow it.
7. Once you see the message that your account has been authenticated, you can close the window and return to the system.
8. Next, set up the channel.
9. Click *Get Account Details*.
10. Select a page to configure and complete the following column fields in the table:

Column	Description
Select for Monitoring	This enables inbound messages. ⚠ Caution You must select this in order to enable the system to receive inbound messages from Facebook.
Block Responses	This disables outbound messages from the system to the Facebook page. Select this option if you're just testing a page to avoid any inadvertent responses or broadcast messages.
Channel ID	You can define the channel ID in a way that is meaningful to you. For example, all Facebook channels have a similar naming convention. ⚠ Caution This is the only chance you have to define the channel ID. After you save your entries, the field switches to read-only and can no longer be edited.

Column	Description
Channel	This is the display name throughout the system for the channel. For example, in the ticket or customer details. It's automatically populated with the Facebook account name associated with the channel and can't be edited.
Language	Select the native language of the channel. **i Note** This language setting is used for text analysis to extract keywords and senti-ments. It doesn't mean that messages posted in other languages to this channel will not be retrieved though text analysis will still be performed in the native language of the channel, so keyword and sentiment results may vary. If no language is selected, text analysis is performed for English.
Ticket Type	Ticket is created with a specified ticket type. If no ticket type is specified, `service request` is applied as the default value.
Customize Status for Reopened Ticket	By default, a social ticket reopened by a customer's comment or direct message is set to the *In Process* status. When this switch is turned on, you can set a custom status for all the completed social tickets reopened from this channel. **i Note** • Before you can enable this feature for tickets reopened through direct messages, you need to select *Add to Completed Ticket* from the *Direct Messages* dropdown menu. • Follow-up workflow rules based on the custom status are not applicable.

11. Save your entries.
12. The Facebook page is now set up as a social media channel in the system and can be selected from the list of available channels when creating a social media message import run.

13.2.1.4 Create Social Media Message Import Run

Your administrator would set up and trigger a Social Media extraction run.

Context

Set up social media channels to import your content from SAP Social Media Analytics and create different tickets types.

Procedure

1. Go to *Administrator* > *Service & Social* > *Social Media Channels*.
2. You would see the list of the Social Media Channels that are set up in the system.
3. In the list, when you click the *Channel Id* field, the *Social Media Channel* > *Import Run* screen displays.
4. Clicking the *Channel* field would take you to that social media channel page, such as: Facebook.
5. Log in to Facebook or Twitter or YouTube as a standard user and go to the specific page and enter a post there.
6. Next, you would have to schedule the extraction run from the *Social Media Channel* > *Import Run* screen and schedule it to run immediately. You can also schedule a run for every 3 minutes.
7. Once you schedule the extraction run, the messages from the Facebook or Twitter or YouTube are extracted into our system. The social media messages are extracted and created within our solution as Tickets. You would be able to see the new ticket by going into the *Tickets* work center, or if you want to look at the messages you could also go to Service - Social Media Messages and view the extracted messages there.
8. To create mass processing of messages, create a few messages on Facebook or Twitter or YouTube by different users and trigger the extraction run. This would result in the mass creation of Tickets.

13.2.1.5 Enable Facebook Direct Message Integration

If you want to support Facebook direct messaging, then you must enable the *Facebook Direct Message Integration* scoping element in your solution. You can also use the nested Facebook comments feature for which you would have to enable nested comments on your company's Facebook page.

To enable Facebook Direct Message Integration, go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > > *Service* > *Customer Care* > *Service Request Management* > *Facebook Direct Message Integration* and select the scoping question: **Do you want to support direct messages for Facebook channels?**

To enable the *Reply to Facebook Comments* feature, select the question: **Do you want to allow agents to reply to Facebook comments?**

13.2.1.6 View and Edit Facebook Channels

Administrators can view and edit the existing Facebook channels.

Procedure

1. Go to *Administrator* > *Service & Social* > *Social Media Channels*.

   The list of the Social Media Channels that are set up in the system appears.

2. To view or edit existing Facebook channels, click the channel ID in the list to view the details screen.

13.2.2 Add Twitter Social Media Channels

Add Twitter handle to create tickets and route them to service agents.

You can use Twitter to do the following:

- You can use Twitter to send a private message provided user follows the Twitter handle of the company used in the response.
- You can retweet a message to Twitter that is posted by a customer. Hover your mouse over the message in Interactions and choose Retweet. The message would be posted on your company Twitter page.
- You can set the channel to active.
- You can set the channel to read-only.
- You can also select an alternative response channel, which is helpful when the organization has a primary branding or marketing Twitter handle and a secondary customer service handle such as: @BrandX vs. @BrandXhelp.
- You can select the logging level.

If you reply to a tweet, your response would be sent to Twitter as a reply to the original tweet from the customer.

Public responses to Twitter tickets are limited to 280 characters, including spaces. If you enter a message greater than 280 characters, the response is not sent . The solution counts the remaining available characters as you type.

13.2.2.1 Set Up Twitter Application

Administrators must set up a Twitter application for use withSAP Cloud for Customer, to access your Twitter account and extract Tweets.

Prerequisites

- You have requested the Read, Write and Direct Messages permissions for your Twitter application.
- You have a Twitter account and developer access to that account.
- You have created a Twitter application for use with your handle(s).

Context

You can avoid most rate limit errors by using one or more applications. The following is an **example** of the steps you can follow to create a Twitter application.

> **i Note**
>
> Texts and field labels may be different. For more information, see the Twitter developer documentation http://dev.twitter.com/docs.

You have the log-on information for the Twitter handle.

Procedure

1. Log on to your Twitter developer page (http://dev.twitter.com).
2. Go to your applications page.
3. Create a new application.
4. Complete the application details and save your entries.

Next Steps

For both the *Website* and the *Callback URL*, you should enter your SAP Cloud for Customer tenant URL (http://<your tenant>.ondemand.com)

Once you have created the application and saved your settings, you need to note the *Consumer key* and *Consumer secret* as you'll need to enter these values in SAP Cloud for Customer when creating Twitter channels.

13.2.2.2 Configure Twitter Social Media Channel

Administrators can configure Twitter handles as communication channels to support your service organization. Channels can be configured to create tickets and route them to service agents.

To retrieve messages and enable agents to respond via Twitter handle, administrators must set up a social media channel for that handle. Once you have connected your channel, create and schedule the import run for message extraction. Finally, define the routing rules for the channel so that tickets get assigned to the right teams or agents.

To view or edit existing Twitter channels, click on the channel ID in the list to view the details screen.

13.2.2.3 Create Social Media Message Import Run

Your administrator would set up and trigger a Social Media extraction run.

Context

Set up social media channels to import your content from SAP Social Media Analytics and create different tickets types.

Procedure

1. Go to *Administrator* > *Service & Social* > *Social Media Channels*.
2. You would see the list of the Social Media Channels that are set up in the system.
3. In the list, when you click the *Channel Id* field, the *Social Media Channel* > *Import Run* screen displays.
4. Clicking the *Channel* field would take you to that social media channel page, such as: Facebook.
5. Log in to Facebook or Twitter or YouTube as a standard user and go to the specific page and enter a post there.
6. Next, you would have to schedule the extraction run from the *Social Media Channel* > *Import Run* screen and schedule it to run immediately. You can also schedule a run for every 3 minutes.
7. Once you schedule the extraction run, the messages from the Facebook or Twitter or YouTube are extracted into our system. The social media messages are extracted and created within our solution as Tickets. You would be able to see the new ticket by going into the *Tickets* work center, or if you want to look at the messages you could also go to Service - Social Media Messages and view the extracted messages there.
8. To create mass processing of messages, create a few messages on Facebook or Twitter or YouTube by different users and trigger the extraction run. This would result in the mass creation of Tickets.

13.2.2.4 Create a Twitter Social Media Channel

Create a Twitter channel in the solution.

Context

Go to *Administrator* > *Service and Social Settings* then under *Social Media*, choose *Social Media Channels* and click *New*.

Procedure

1. Select the *Channel Type*, in this case, *Twitter*.
2. Define the *Advanced Settings*.
   a. Enter the *Consumer Key* and *Consumer Secret* for the Twitter application you want to use with the channel.
      You can find these values on your Twitter developers page (http://dev.twitter.com/apps).
   b. Choose whether to remove the assigned processor for reopened tickets from Twitter using the *Remove Assigned Processor* switch.
      If the switch is on, the *Assigned To* field of the reopened ticket from Twitter is empty which means the original processor of this ticket is removed. If the switch is off, the processor who closed the ticket is directly assigned to the ticket when it is reopened from Twitter.
3. Click *Connect with Channel*.
4. The Twitter log-on page will open in a new browser window.
5. Log in to your Twitter account and authorize the application.
6. Once you see the message that your account has been authenticated, you can close the window and return to the system.
7. Set up the channel.
8. Click *Get Account Details*.
9. Complete the following channel settings:

Setting	Description
ID	You can define the channel ID in a way that is meaningful to you. For example, all Twitter channels may have a similar naming convention. ⚠ Caution This is the only chance you have to define the channel ID. After you save your entries, the field switches to read-only and can no longer be edited.
Channel	This will be the display name throughout the system for the channel. For example, in the message or customer account details. It is automatically populated with the Twitter account name associated with the channel and cannot be edited.
Language	Select the native language of the channel. ℹ Note This language setting is used for text analysis to extract keywords and sentiment. Messages posted in other languages to this channel will still be retrieved, but text analysis will be performed in the native language of the channel so keyword and sentiment results may vary. If no language is selected, text analysis is performed for English.
Block Responses	This disables outbound messages from the system to the Twitter handle.

Setting	Description
	You should select this option if you are just testing a page to avoid any inadvertent responses or broadcast messages.
Twitter Account for Responses	This allows you to add a separate response handle to the channel—so that responses sent by agents come from a different account than the one used to retrieve the original customer message. This essentially allows you to define one account as your primary response handle by setting the same response account for several, or all of, your Twitter channels. **Prerequisites**: You have created a channel for the Twitter account you plan to use as the response handle. **! Restriction** The response account applies only to **public** messages sent to your Twitter accounts. Responses to **direct messages** must originate from the receiving account, because Twitter does not allow proxy responses to direct messages.
Customize Status for Reopened Ticket	By default, a social ticket reopened by a customer's comment or direct message is set to the *In Process* status. When this switch is turned on, you can set a custom status for all the completed social tickets reopened from this channel. **i Note** • Before you can enable this feature for tickets reopened through direct messages, you need to select *Add to Completed Ticket* from the *Direct Messages* dropdown menu. • Follow-up workflow rules based on the custom status are not applicable.

10. Save your entries.
11. The Twitter handle is now set up as a social media channel in the system and can be selected from the list of available channels when creating a social media message import run.

Next Steps

- Create and schedule a social media message import run for the channel.
- Create a routing rule for the channel.

Related Information

Create Social Media Message Import Run [page 374]

Your administrator would set up and trigger a Social Media extraction run.

Configure Ticket Routing Rules [page 83]

Administrators can create routing rules for automated ticket assignment.

13.2.3 Add YouTube Social Media Channels

Create a YouTube social media channel to process comments from YouTube video pages into service tickets, which can be routed for processing.

> **i Note**
>
> YouTube social media channels work differently than Twitter or Facebook channels. Videos posted by your organization are treated as broadcast messages. One ticket is created in the solution per video uploaded to your YouTube channel. All interactions (comments) for a given video, even from different customers, are associated with that single ticket. You can manually split interactions into new tickets if desired.

13.2.3.1 Configure YouTube Social Media Channel

Configure YouTube accounts as communication channels to support your service organization. Channels can be configured to create tickets and route them to service agents.

Set up a social media channel for the YouTube account to retrieve comments from a YouTube video, and enable agents to post responses back to that video page. Once you've connected your channel, complete the following steps:

- Create and schedule a social media message import run for message extraction.
- Create routing rules for the channel so that tickets get assigned to the right teams or agents.

13.2.3.2 Set Up a Google Project

Administrators would create a Google project to access the various video pages you want to monitor and to extract comments.

Context

Create a Google account and note the client ID and client secret, as this information will be required when you set up a YouTube channel.

Procedure

1. Create a Project at.https://console.developers.google.com .
2. If necessary, select the project you just created.
3. Select *APIs & Services* in the sidebar on the left.
4. Search for and enable the **YouTube Data API v3** and **Google+ API** in the list of APIs.
5. Select *Credentials* under *APIs & Services* in the sidebar on the left.
6. Select *OAuth consent screen*.
7. Fill in the *e-mail address* and the *Product Name*. The rest of the fields can be left blank.
8. Save the consent screen information you just entered.
9. Select *Credentials* and then Choose *OAuth Client ID* under *Create credentials*.
10. Select *Application Type* as *Web Application*.
11. Add your system tenant URL in the `<Redirect URIs>` field. (example: https://my12345.ondemand.com/sap/byd/oauth/google).
12. Select *Create* and note the **Client ID** and **Client secret**. You'll need them to configure the social media channel associated with this project in your cloud solution.

13.2.3.3 Create a YouTube Social Media Channel

Administrators can create a YouTube channel to enable processing and routing messages.

Prerequisites

Before you can set up a social media channel for your YouTube account, you must do the following:

- Create a Google account and note the client ID and client secret.
- Create a YouTube channel with the Google Account to process comments on your YouTube channel.

Procedure

1. Go to *Administrator* › *Service and Social* › *Social Media*, and choose *Social Media Channels* › *New*.
2. Define the *Advanced Settings*.
    a. Enter the `<Client ID>`, and `<Client Secret>`.
    b. Choose whether to remove the assigned processor for reopened tickets from YouTube using the *Remove Assigned Processor* switch.

    If the switch is on, the *Assigned To* field of the reopened ticket from YouTube is empty which means the original processor of this ticket is removed. If the switch is off, the processor who closed the ticket is directly assigned to the ticket when it is reopened from YouTube.

3. Enter the `<Client ID>`, and `<Client Secret>` in under *Advanced Settings* section.
4. Choose *Connect with Channel*, and log in with your Google account e-mail address. Accept the conditions.
   The new YouTube channel is now authenticated and connected to your system.
5. Choose *Get Channel Details* and enter the following information:

Value	Description
ID	You can define the channel ID in a way that is meaningful to you. For example, all YouTube channels may have a similar naming convention. **i Note** This is the only chance you have to define the channel ID. After you save your entries, the field switches to read-only and can no longer be edited.
Channel Name	This would be the display name throughout the system for the channel. For example, in the ticket or customer details. It is automatically populated with the YouTube account name associated with the channel and cannot be edited.
Block Responses	This disables outbound messages from the system to the YouTube video page. You should select this option if you are just testing a page to avoid any inadvertent responses or broadcast messages.
Customize Status for Reopened Ticket	By default, a social ticket reopened by a customer's comment or direct message is set to the *In Process* status. When this switch is turned on, you can set a custom status for all the completed social tickets reopened from this channel. **i Note** • Before you can enable this feature for tickets reopened through direct messages, you need to select *Add to Completed Ticket* from the *Direct Messages* dropdown menu. • Follow-up workflow rules based on the custom status are not applicable.

6. Save the channel entries.

13.2.3.4 Create Social Media Message Import Run

Your administrator would set up and trigger a Social Media extraction run.

Context

Set up social media channels to import your content from SAP Social Media Analytics and create different tickets types.

Procedure

1. Go to *Administrator* > *Service & Social* > *Social Media Channels*.
2. You would see the list of the Social Media Channels that are set up in the system.
3. In the list, when you click the *Channel Id* field, the *Social Media Channel* > *Import Run* screen displays.
4. Clicking the *Channel* field would take you to that social media channel page, such as: Facebook.
5. Log in to Facebook or Twitter or YouTube as a standard user and go to the specific page and enter a post there.
6. Next, you would have to schedule the extraction run from the *Social Media Channel* > *Import Run* screen and schedule it to run immediately. You can also schedule a run for every 3 minutes.
7. Once you schedule the extraction run, the messages from the Facebook or Twitter or YouTube are extracted into our system. The social media messages are extracted and created within our solution as Tickets. You would be able to see the new ticket by going into the *Tickets* work center, or if you want to look at the messages you could also go to Service - Social Media Messages and view the extracted messages there.
8. To create mass processing of messages, create a few messages on Facebook or Twitter or YouTube by different users and trigger the extraction run. This would result in the mass creation of Tickets.

13.2.4 Add WeChat Social Media Channels

Add WeChat as a channel to create tickets and route them to service agents.

Customers can associate the WeChat account with either an individual customer (in B2C scenario) or with the contact of an account (in B2B scenario) in the solution. Then they can directly create service tickets from WeChat, and the service agents can post response back to WeChat from service tickets.

> **Note**
>
> To associate WeChat account with the contact of an account, the following scenarios are supported:
>
> - One contact has only one WeChat account and the account follows one or more WeChat official accounts.

- One contact has more than one WeChat accounts and each WeChat account follows different WeChat official accounts.

The following scenario is not supported:

One contact has more than one WeChat accounts and more than one WeChat accounts follow the same WeChat Official account.

Before proceeding with the WeChat integration, ensure that the following prerequisites are met:

- You have registered a WeChat official account with Subscription Account type from the WeChat Official Account platform.
- The API you need is included in our solution. For the list of APIs provided by our solution, see OData at https://help.sap.com/doc/d0f9ba822c08405da7d88174b304df84/LATEST/en-US/index.html.
- You have set up an intermediate app server to send and receive messages between WeChat Server and our solution.

13.2.4.1 Deploy Intermediate App Server

You can deploy the intermediate app server on SAP Cloud Platform or any third-party cloud platform.

For the process flow example and the sample code for B2C scenario, see: https://blogs.sap.com/2018/02/28/integration-of-wechat-and-c4c-service-ticket-on-html5-client/.

For the process flow example and the sample code for B2B scenario, see: https://github.com/kellynlee/C4CODataSampleCode .

13.2.4.2 Create Mashup Service for WeChat

Administrators can create a mashup service for WeChat to enable the interaction between the intermediate server and the solution.

Context

Create a mashup service for WeChat and note down the *Service ID* as it is required when you create the WeChat Channel.

Procedure

1. Go to *Administrator* > *Mashup Web Services*.
2. Choose *New* > *REST Service*.

3. In the *REST Service* popup window, enter the following information:
   - *Service Name*: Enter the mashup service name of your choice.
   - *Authorization Method*: Choose an authorization method of your choice.
   - *Service Protocol*: XML
   - *HTTP Method*: Post
   - *Content Type*: Form
   - *URL*: <server_address_of_intermediate_app_server>/<API_name_you_defined>
4. In the *Input Parameters* section, choose *Add Row* to add a parameter, with the name **content**, and set it as mandatory.
5. *Save* your entries and *Activate* the mashup service.

13.2.4.3 Create a WeChat Channel

Administrators can create a WeChat channel in the solution.

Procedure

1. Go to *Administrator* > *Service and Social*.
2. In the *Social Media* section, choose *Social Media Channels*.
3. In the *Social Media Channels* popup window, choose *New*.
4. In the *Social Media Channel Setup* popup window, select the *Social Media Channel Type*, in this case *WeChat*.
5. Enter the following channel information.

Setting	Description
Channel ID	Define the channel ID in a way that is meaningful to you. ⚠ Caution After you save your entries, the field switches to read-only and can no longer be edited.
Channel	The display name for the channel in the solution.
MashUp Service ID	The service ID of the mashup service you have created for the WeChat Channel.
Customize Status for Reopened Ticket	By default, a social ticket reopened by a customer's comment or direct message is set to the *In Process* status. When this switch is turned on, you can set a custom status for all the completed social tickets reopened from this channel.

Setting	Description
	ℹ Note • Before you can enable this feature for tickets reopened through direct messages, you need to select *Add to Completed Ticket* from the *Direct Messages* dropdown menu. • Follow-up workflow rules based on the custom status are not applicable.

6. *Save* your entries.

13.2.4.4 View and Edit WeChat Channels

Administrators can view and edit WeChat channels.

After you have created a WeChat channel, you can view and edit the channel. Go to *Administrator* › *Service and Social* › *Social Media Channels* and choose the *Channel ID* of the WeChat channel you want to view or edit.

13.2.5 Use Custom Social Channels

You can integrate our solution with different external systems for the purpose of creating service tickets. This requires you to create custom channels.

13.2.5.1 Configure Custom Channels

Create a custom channel type to communicate with external systems to generate service tickets.

Creating and configuring custom channels involves the following steps:

1. Create a custom channel type.
2. Add a custom channel.
3. Configure a custom channel.
4. Set up a Mashup Web Service for a Custom Channel.

13.2.5.2 Create a Custom Channel Type

Create a custom channel type and add the custom channel.

1. Go to *Business Configuration* › *Implementation Projects* .

2. Select the project for which you want to create the channel type.
3. Select *Open Activity List*.
4. Select *Fine-Tune* and then *All Activities* in *Show*.
5. Select *Create or Delete Custom Channel Type*, then select *Add to Project*.
6. Click *Create or Delete Custom Channel Type* to open the channel.
7. Click *Add*.
   Enter the channel type code and the name of the channel.
8. Save your selections.

13.2.5.3 Add a Custom Channel

Set up a custom channel in order for the system to retrieve messages from and enable agents to respond via a custom channel type.

To set up a custom channel, choose *Administrator* > *Service and Social Settings* > *Social Media Channels*.

You need the ID of the mashup web service you have previously created to respond to a custom channel.

1. Navigate to *Administrator* > *Service and Social Settings* > *Social Media Channels*.
2. Click *New*.
3. For *Channel Type*, select the channel name that you previously created.
4. Enter the mashup web service ID that you have created for the response.
5. Enter your *Channel ID*, *Channel Name*, and *Language*. You can choose to set the channel to *Listen Only* mode while you are setting up the system.

   > → Tip
   >
   > *Listen Only Mode* disables outbound messages from the system to the custom channel. You should select this option if you are testing a page to avoid any inadvertent responses or broadcast messages.

6. Save your options.

13.2.5.4 Maintain Configurations for a Custom Channel

Configure your SAP Cloud for Customer system to communicate with any channel.

To enable your system to send response messages to an external system, the external system should expose a web service. The web service should accept the content type **Form** and **parameter name** = “content”. The parameter content contains the JSON string, which has the response message. The JSON string appears in the following format:

This parameter contains:

{

"original_id": “<Identifier from social media channel e.g. Bazaar Voice (String)>”

"sma_id": “<Unique ID for service request fromSAP Service Cloud, if one exists (String)>”

"service_req_no": “<Unique ID for service request from SAP Service Cloud, if one exists(String)>”

"text": “<Text of the message/comment/SMA*(String)>”

"sma_create_datetime": “<Date Time at which media message was created (UTC String)>”

"private_ind": “<Indicator that social media activity is posted privately(String – “true”/”false”)>”

“author_name”: “<Agent’s Name(String)>”

"author_email": “<Agent’s Email(String)>”

}

original_id	Original Identifier from social media channel (from Generic Channel for example, Bazaar Voice)
sma_id	Social media activity (Internal ID from SAP Cloud for Social Engagement or SAP Service Cloud) Identifier.
service_req_no	Unique ID for service request from Service Request (original internal ticket ID from SAP Cloud for Social Engagement or SAP Service Cloud)
Text	Social media message text
sma_create_datetime	Point in time at which social media message was created in the social media channel (UTC)
private_ind	Indicator that social media activity is posted privately
author_name	Name of the agent who composed the response
author_email	E-mail of the agent who composed the response

Example

Content Type = 'application/x-www-form-urlencoded' Post parameter name = ‘content’

Content =

{"original_id":"083020120506","sma_id":"12942","service_req_no":"8789","author_name":"","author_email":"","sma_create_datetime":"2012-10-09T22:55:30Z","private_ind":"FALSE","text":"tests49"}

Follow-On Tasks

- Set Up a Mashup Web Service for a Custom Channel [page 390].

13.2.5.5 Create a Communication System

Create a communication system for configuring a custom channel.

Procedure

1. Choose *Administrator* > *General Settings* > *Integration* > *Communication Systems*.
2. Click *New*.
3. Enter the hostname.
4. For the System Access Type, choose *Internet*.
5. Save your entries and activate the communication system. Select *Actions* > *Set to Active*.

13.2.5.6 Create a Communication Arrangement

Create a communication arrangement for configuring a custom channel.

Procedure

1. Go to *Administrator* > *General Settings* then under *Integration*, click *Communication Arrangements*.
2. Click *New*.
3. For the communication scenario, select *Customer Service Portal Integration*. Click *Next*.
4. Select the *System Instance ID* of the communication system you created for your customer service portal. Click *Next*.
5. For *Authentication Method*, *User ID and Password* is the recommended option.
6. Click *Edit Credentials* and enter the user and password information for the Web site. Click *Next*.
7. A check for completeness is recommended.
8. Click *Finish*. The communication arrangement is saved and activated.

13.2.5.7 Set Up a Mashup Web Service for a Custom Channel

Administrators can create a mashup Web service to respond to a custom channel.

You've set up the channel type, and must have a Web service URL that accepts the standard response JSON interface.

Each channel you set up using SAP Social Media Analytics is connected to only one SAP Social Media Analytics topic. Each topic requires a separate Web service.

Example

If you've three topics defined on SAP Social Media Analytics that you want to use to monitor your custom channel, you must set up three separate web services, and three separate social media channels.

The custom channel used for responding to the messages captured via SAP Social Media Analytics can be the same.

13.2.5.8 Create a Mashup Web Service

Create a mashup web service for responding to a custom channel.

Procedure

1. Choose *Administrator* > *Mashup Web Services* .
2. Click *New*. The recommended service to select is the *REST Service*.

   A *SOAP* service can be used, but the *REST* service is recommended.
3. Enter the required information as follows:
   - Enter the Service Name
   - Choose an Authentication Method based on your needs. Fields for user name and password will appear.
   - Enter the user name and password for your service.
   - For Service Protocol, choose XML.
   - For HTTP Method, choose POST.
   - Enter the URL from the Web service that you have setup.
4. In the Input Parameters section, add rows to the table for each parameter defined for your channel.
5. Save your entries.

   The *Service ID* for the newly created Web service must be entered manually when creating the associated custom channel. For more information, see Adding an SAP Social Media Analytics Social Media Channel.

Next Steps

As a follow-on task, add a custom channel. For details, see Add a Custom Channel [page 388]

13.2.5.9 Create Social Media Message Import Run

Your administrator would set up and trigger a Social Media extraction run.

Context

Set up social media channels to import your content from SAP Social Media Analytics and create different tickets types.

Procedure

1. Go to *Administrator* > *Service & Social* > *Social Media Channels*.
2. You would see the list of the Social Media Channels that are set up in the system.
3. In the list, when you click the *Channel Id* field, the *Social Media Channel* > *Import Run* screen displays.
4. Clicking the *Channel* field would take you to that social media channel page, such as: Facebook.
5. Log in to Facebook or Twitter or YouTube as a standard user and go to the specific page and enter a post there.
6. Next, you would have to schedule the extraction run from the *Social Media Channel* > *Import Run* screen and schedule it to run immediately. You can also schedule a run for every 3 minutes.
7. Once you schedule the extraction run, the messages from the Facebook or Twitter or YouTube are extracted into our system. The social media messages are extracted and created within our solution as Tickets. You would be able to see the new ticket by going into the *Tickets* work center, or if you want to look at the messages you could also go to Service - Social Media Messages and view the extracted messages there.
8. To create mass processing of messages, create a few messages on Facebook or Twitter or YouTube by different users and trigger the extraction run. This would result in the mass creation of Tickets.

13.3 Computer Telephony Integration (CTI) Communication Channel

This document is intended for customers and partners who want to integrate their third party Computer Telephony Integration (CTI) adapters and widgets with SAP Cloud for Customer.

SAP Service Cloud can integrate with external computer telephony integration (CTI) solutions to support service processes. Download and install the CTI connector, and save the **CTI Client Adapter** shortcut to your desktop.

Your administrator can customize the CTI adapter behavior by downloading the project source code for the SAP Cloud for Customer CTI Client Adapter from the **Service Marketplace Software Download** area.

Depending on your CTI provider your administrator may also have the option to use widget-based integration to the solution. Widget-based integration eliminates the need for an external telephony client app and the adapter download.

This video demonstrates how to set up computer telephony integration with your SAP Cloud for Customer system.

CTI Call Process Flows [page 393]
See how the system processes out and inbound call information and passes call information to and from your CTI system.

Computer Telephony Integration Options [page 395]
You can integrate third-party CTI system providers with your solution using an SAP local adapter, or a widget.

Set Up Inbound Call Handling [page 407]
SAP Cloud for Customer does not have a native Computer Telephony Integration (CTI) capability; instead is able to integrate to other CTI solutions to support service processes.

Set Up Outbound Call Handling (Click-to-Call) [page 415]
You can make a phone call from any screen within our solution with the click of a mouse. With CTI integration enabled, outbound calls also create a phone activity linked to the call.

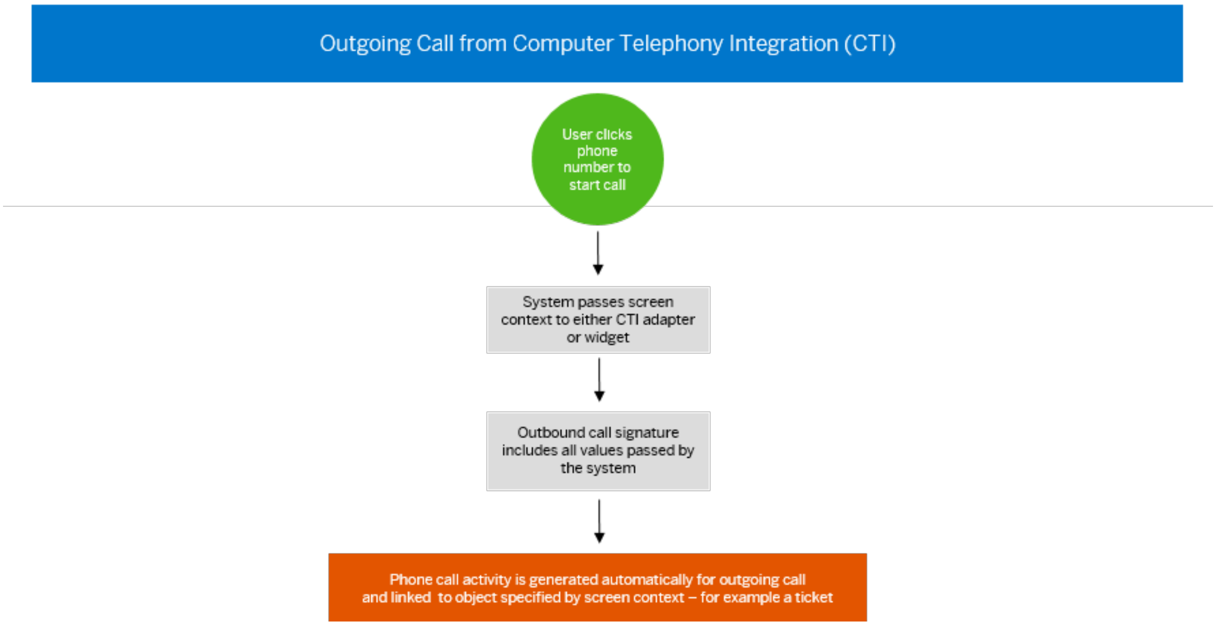
13.3.1 CTI Call Process Flows

See how the system processes out and inbound call information and passes call information to and from your CTI system.

13.3.1.1 Outbound Calls (Click-to-Call)

SAP Cloud for Customer supports initiating outbound calling from any screen within our solution via click-to-call feature.

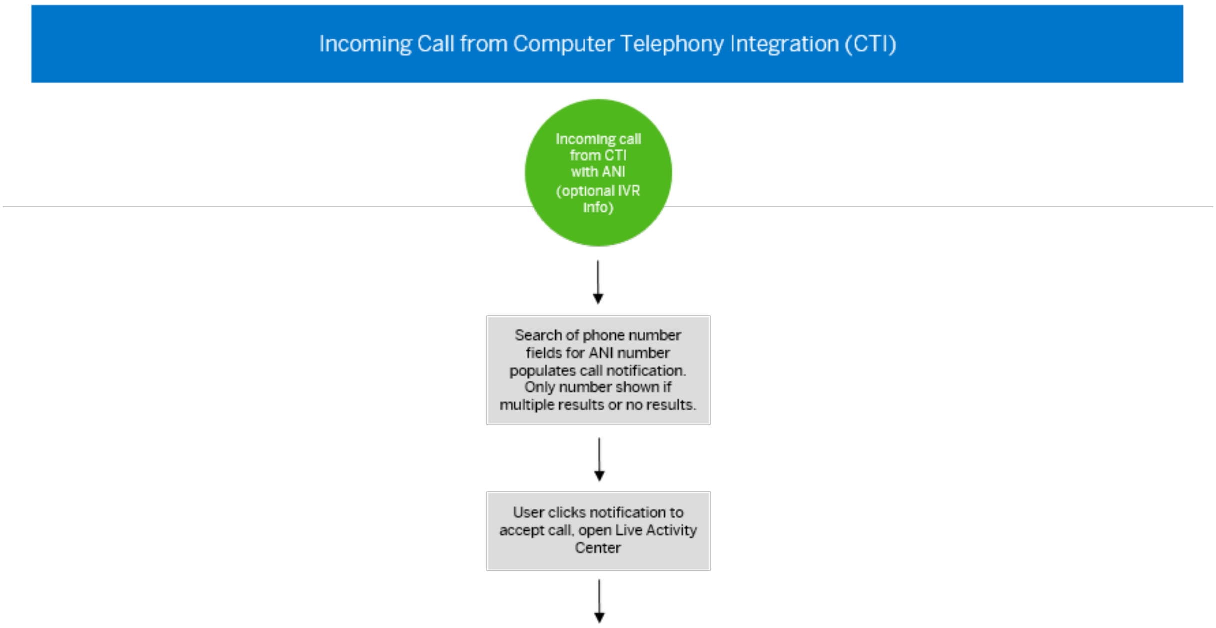
> **i Note**
>
> Maintain computer telephony integration (CTI) vendor integration to use the call feature. Call handling is done on CTI vendor application.

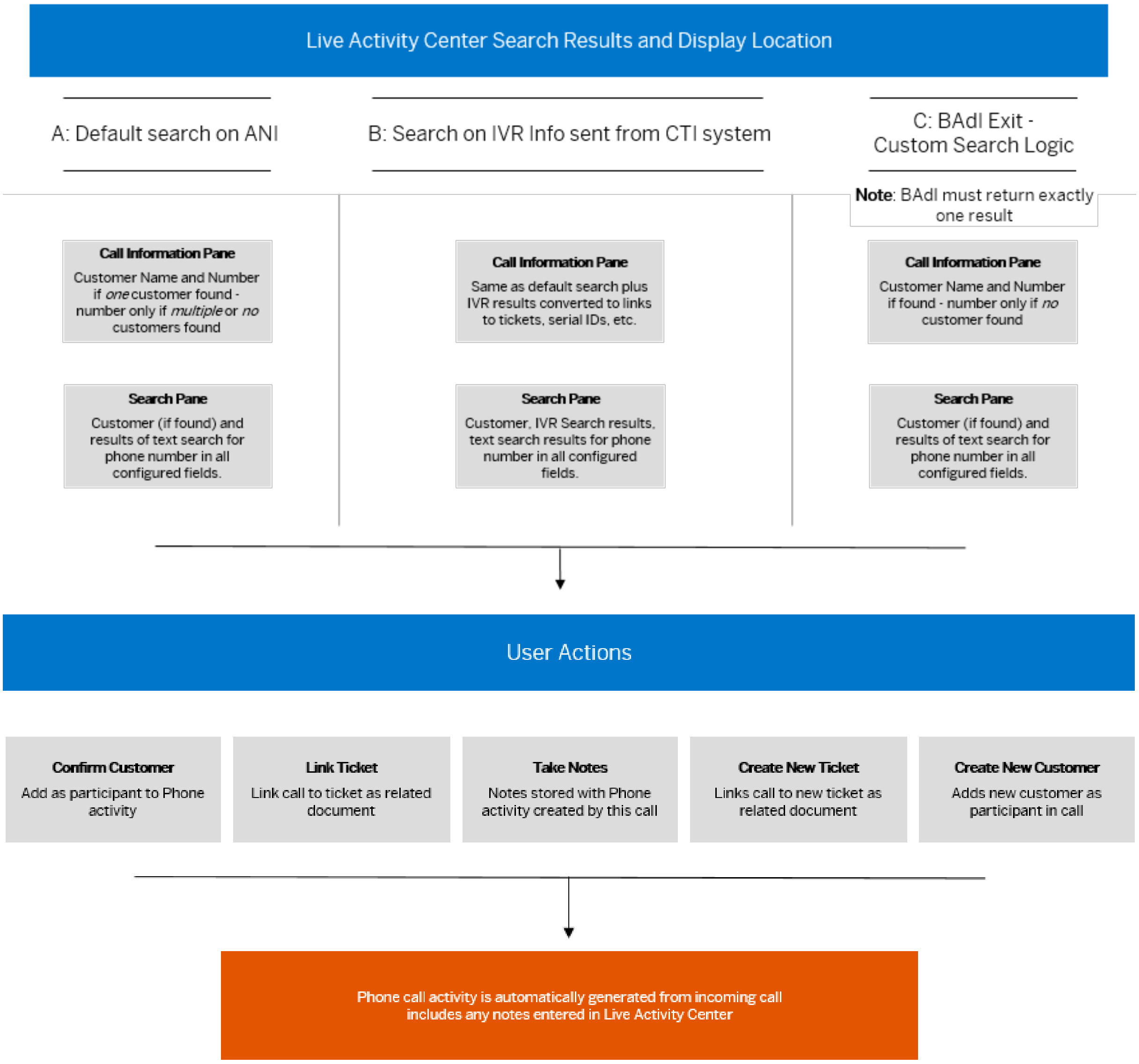


13.3.1.2 Inbound Calls

SAP Cloud for Customer supports inbound calling with display screen of incoming caller information.

> **i Note**
>
> Maintain computer telephony integration (CTI) vendor integration to use the call feature. Call handling is done on CTI vendor application.





13.3.2 Computer Telephony Integration Options

You can integrate third-party CTI system providers with your solution using an SAP local adapter, or a widget.

Description	Related Information
Local adapter integration connects your third-party Computer Telephony Integration (CTI) provider with SAP Cloud for Customer using a separate application running on the agent's computer.	Local Adapter Integration [page 396]

Description	Related Information
Live Activity is where you integrate your third-party communication system provider's CTI widget. Interact with customers through real-time communication channels that may or may not result in ticket creation.	Widget Integration with Live Activity [page 422]

13.3.2.1 Local Adapter Integration

Local adapter integration connects your third-party Computer Telephony Integration (CTI) provider with SAP Cloud for Customer using a separate application running on the agent's computer.

The adapter software communicates with the agent's desk phone and displays a call window in the solution. Every agent must download the CTI Adapter application to their local system. The CTI adapter software is available in SAP Cloud for Customer under *Downloads*.

The adapter application provides an empty method that partners can fill with their end point (the number where a call is placed or received). Every inbound or outbound call is routed to the end point defined by your communication system partner. Adapter-based integration is a reliable and tested method for telephony integration with SAP Cloud for Customer.

> ! Restriction
>
> Local adapter integration is **not** compatible with virtual desktops.

13.3.2.1.1 Prerequisites

These items are required to integrate your CTI solution to SAP Cloud for Customer.

Supported Operating System	Microsoft Windows Vista or later
Client-Side Application	Only client-side Integration is supported so you must have a client-side application to communicate via the built in adapter. Agents using the CTI solution must have this client-side application running on their desktop.
Microsoft® Visual Studio	In order to enable the outbound call feature, you need to use Microsoft® Visual Studio to edit the CTI Connector project.
SAP Cloud for Customer CTI Client Adapter	The adapter must be installed and run on each agent's desktop. The installation file for the CTI Client Adapter is available on the Downloads page of SAP Cloud for Customer.

> **i Note**
>
> If you want to use the https protocol to connect to your CTI client, you must start the adapter with administrator rights (right-click and select *run as administrator*).
>
> If you are **not** using https, you can start the adapter normally.

SAP Service Marketplace	Access to SAP Service Marketplace is required to download the CTI Connector project used for enabling outbound calls.

> **i Note**
>
> Access restrictions for Live Activity are determined from the Queue workcenter. Therefore any user or role assigned Live Activity must also be assigned Queue.

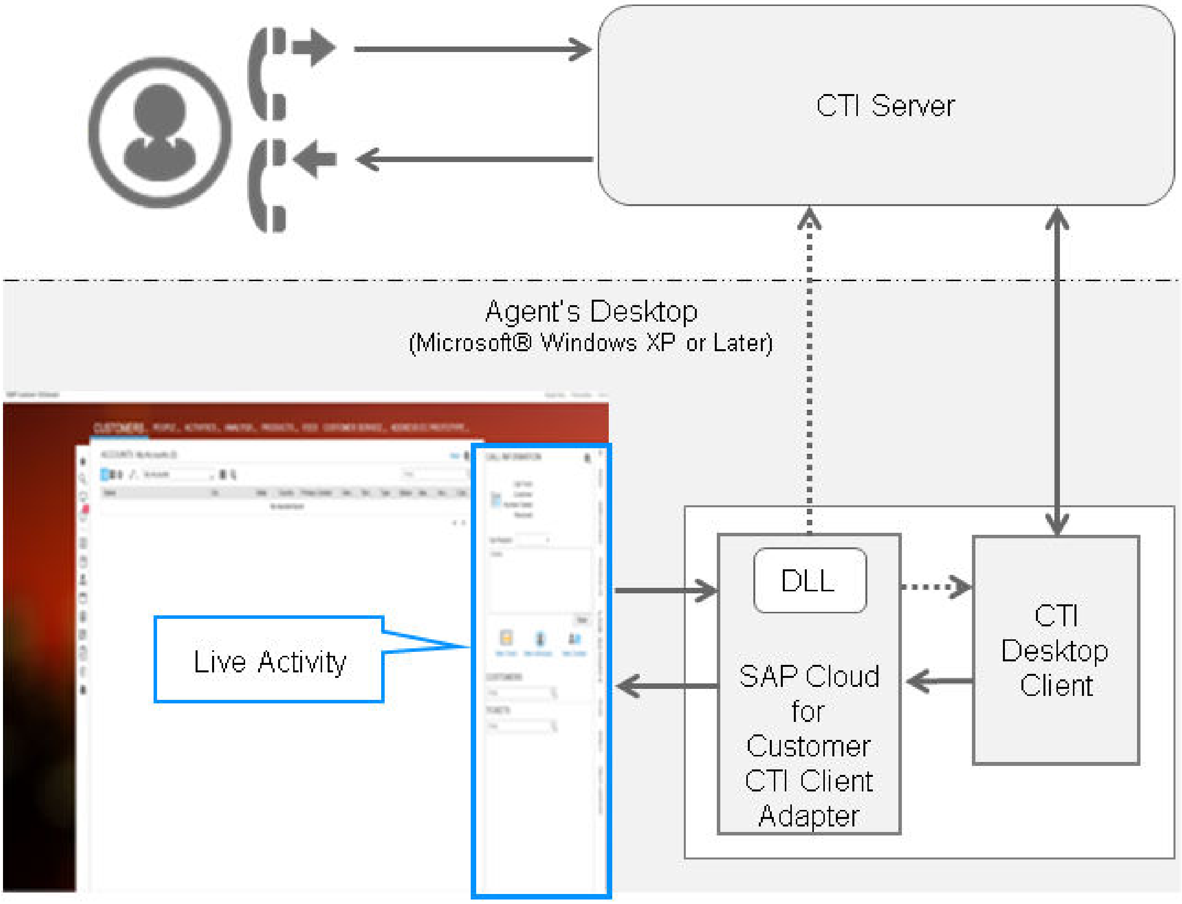
13.3.2.1.2 Architecture

A high level overview of the architecture that allows CTI integration with SAP Cloud for Customer.

Inbound calls are achieved using a parameterized URL that your client-side application passes to the SAP Cloud for Customer CTI Client Adapter. This allows the call attached data to display in the Live Activity pane in the solution.

Outbound calls are achieved by using a DLL which passes the dial out phone number from SAP Cloud for Customer to your CTI solution and in which you have included the necessary dial-out logic.

The architecture of the completed integration is modeled in the following diagram.



SAP Cloud for Customer CTI Integration Architecture

13.3.2.1.3 Enable Inbound Calls

URL parameters required to enable inbound phone calls.

Inbound call integration uses a parameterized URL call from the CTI desktop client to the SAP Cloud for Customer CTI Client Adapter to pass information like the ANI, DNIS, and CAD to the solution.

The URL is: `http://localhost:36729/?CID=<cid>&ANI=<phonenum>&DNIS=<phonenum2>&<cad1=xxxx&cad2=yyyy>`.

Additional parameters can be added to the URL so that extra information can be passed to SAP Cloud for Customer.

The following table lists the parameter names and the information each parameter contains:

Parameter	Description	Can Be Enabled for Default Live Activity Center Search
Type	CALL CHAT Defaults to CALL if no parameter specified.	
CID	The client ID. This is mandatory value. **i Note** Supported values are currently limited to: BCM1234, AVAYA5678, CISCO9876, GEN8923 (Genesys), SIE5281 (Siemens). Use CID=BCM1234 for other providers.	
ANI	The caller's number	√
DNIS	The number dialed	
BP	The caller's account ID	√
TicketID	The ID of a ticket associated with the call	√
SerialNo	A registered product serial number	√
Email	Caller's e-mail address	√
ExternalReferenceID	Unique call ID in the CTI system	
ExternalOriginalReferenceID	Original Reference ID of the call being transferred	
EventType	Supported Values: INBOUND OUTBOUND UPDATEACTIVITY TRANSFER	
Custom_1-4	Four fields you can use to pass any other call data	
ActivityUUID	Phone call activity UUID (if available). Available after `UPDATEACTIVITY` event is triggered by click-to-call action.	

Parameter	Description	Can Be Enabled for Default Live Activity Center Search
Transcript	Chat transcript passed back to system once chat is ended	

> **i Note**
>
> All of these parameters are included in the following extension spot, available in the SDK: `ES_COD_CTI_CALL_HANDLING`

Your customer requires that the following data is passed from your CTI solution to their SAP solution:

ANI (Dialing From):	408-361-3611	External ID:	56432156787890
Number Dialed:	1-800-455-5555	Custom_1:	value1
AccountID	1000655	Custom_2:	value2
Serial Number	XY234567T	Custom_3:	value3
TicketID	8003456	Custom_4:	value4

You would enter the following URL:

```
http://localhost:36729/?
CID=BCM1234&ANI=408-361-3611&DNIS=1-800-455-5555&BP=1000655&SerialNo=XY234567T&Tick
etID=8003456&
ExternalReferenceID=56432156787890&Custom_1=value1&Custom_2=value2&Custom_3=valu31&
Custom_4=value4.
```

Example

Example of C# code to send a parameterized call to SAP Cloud for Customer:

```
urlparam1 =
“ANI=408-361-3611&DNIS=1-800-455-5555&BP=1000655&SerialNo=XY234567T&TicketID=8003
456&Type=CALL&EventType=INBOUND”;
urlparam2 = urlparam1 +
ExternalReferenceID=56432156787890&Custom_1=value1&Custom_2=value2&Custom_3=valu3
1&Custom_4=value4”;
“url = http://localhost:36729/?CID=BCM1234&” + urlparam2;
HttpWebRequest webReq = (HttpWebRequest)WebRequest.Create(url);
HttpWebResponse WebResp = (HttpWebRequest)webReq.GetResponse();
```

In this example, Urlparam is split into multiple strings only for better readability.

13.3.2.1.4 Enable Outbound Calls

How to build your DLL file to enable outbound phone calls.

Context

To enable outbound calls, the SAP Cloud for Customer CTI Client Adapter uses the DLL, `CODCTIConnector.dll`, which contains a method for handling outbound calls. You must build your own DLL and in it specify your dial-out logic.

In order to facilitate this process, SAP provides the Microsoft Visual Studio project, **CTI Connector**. This project contains the class, **OutboundCallHandler**, which contains the method, **dialOut**. The phone number to dial is passed from the solution (when an agent initiates a call via Live Activity) as the parameter for the method.

To enable outbound phone calls, perform the following steps:

Procedure

1. Download the **CTI Connector** project from the Help Portal product page here: https://help.sap.com/http.svc/rc/67be88de0bdd4e53b662fae4f15a2b81/1805/en-US/SAPC4CCTIConnectorSetup.zip and install it.
2. Open the project in Microsoft Visual Studio.
3. Add the logic in the **dialOut** method to pass the phone number to the CTI solution (see the following example for details).
4. Build the DLL and deploy it in CTI Client Adapter file structure.

   To deploy the DLL, copy the DLL to `C:\Program Files (x86)\SAP\SAP Cloud for Customer CTI Client`.
5. Restart the adapter.

   `OutboundCallHandler.cs`:

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.IO;
using System.Runtime.InteropServices;
namespace SAP.COD.CTI.Connector
{
public class OutboundCallHandler
{
Logger logUtil;
//Add constructor to initiate logging
public OutboundCallHandler()
{
logUtil = new Logger();
}
//Destructor
~OutboundCallHandler()
{
```

```
logUtil.Close();
}
public bool dialOut(string dialData)
{
logUtil.writeLog("Dialed number:" + dialData);
//Add the logic to connect to the CTI system here
return true;
}
}
}
>>> MISSING TARGET TEXT FOR TEXT-ID: 'XTXT_a11y_SPExampleEnd' <<<
Top of Page
```

13.3.2.1.5 Implement Outbound Calls in Fiori client Via CTI Adapter

This feature lets you implement and enable the outbound calling feature in SAP Cloud for Customer.

Prerequisites

Ensure *Live Activity Center* configuration has appropriate settings for the provider. The provider type should be **CTI Adapter** and provider URL field should be left blank.

Context

These instructions are pertinent to customers who have integrated using CTI adapter. (Customers using their own call system need not follow these steps). Follow these steps to enable the *Click to Call* feature in the Fiori client via CTI adapter.

Procedure

1. Uninstall the current version of CTI Adapter installed on your machine.
2. Download and install the latest SAP CTI Adapter from the *Download* section.

   An older version of CTI Adapter (prior to May 2018 release) will not work with Fiori client.
3. Download the CTI Connector project from https://help.sap.com/http.svc/rc/67be88de0bdd4e53b662fae4f15a2b81/1805/en-US/SAPC4CCTIConnectorSetup.zip on the Help Portal.
4. Extract the zip file and import the project to Microsoft Visual Studio.
5. Open file **OutboundCallHandler.cs** and add the logic in the *dialOut* method to pass the phone number and context information to the CTI solution.
6. Next, save the file and build the project to generate a new **SAPCODCTIConnector.dll** file.

7. Once the **SAPCODCTIConnector.dll** file is generated, copy the DLL to: `C:\Program Files (x86)\SAP\SAP Cloud for Customer CTI Client` to deploy the DLL.
8. Restart the adapter.

13.3.2.1.6 Create a Security Certificate for HTTPS-Enabled Computer Telephony Integration (CTI)

You can enable HTTPS security for outbound phone calls made from your solution. To fully enable this feature, you'll need to create a security certificate using the command line.

To make outbound calls, you must have a CTI provider such as Sinch Contact Center (previously SAP Contact Center) or other third-party product.

After you complete this process, users will be able to call customers directly from the solution without having to navigate to another system.

Example: Creating a Security Certificate in the Command Line

> **Example**
>
> Enter the following into the CMD prompt: *button*
>
> 1. makecert -n "CN=CODCTI Authority" -cy authority -a sha256 –sv "CODCTI_authority.pvk" -r "CODCTI_authority.cer" -sr localmachine -ss ROOT
>
> Replace **CODCTI** with your company name.
>
> 2. makecert -n "CN=localhost" -ic "CODCTI_authority.cer" -iv "CODCTI_authority.pvk" -a sha256 -sky exchange -pe -sr localmachine -ss MY "codcti_adapter.cer"
>
> 3. netsh http add sslcert ipport=0.0.0.0:36731 certhash=0291c80612387afaee33f3589b4ab176c8d5336e appid={7e46cd40-39c6-4813-b414-019ad22e55b2}

In the example, **Certhash** is the thumbprint of the **codcti_adapter.cer**, You can look this up in the certificate. **Appid** is the appid of the CTI Client Adapter.

13.3.2.1.7 Live Activity - Chat Integration

If you are using a computer telephony integration (CTI) solution with SAP Cloud for Customer, you can enable chat integration in the Live Activity pane.

Integration with CTI Partner

The Live Activity pane provides capabilities to identify the customer by email address. Live Activity works with integration software running locally on the agent's desktop. The **SAP Cloud for Customer CTI Adapter** software acts as an adapter which communicates information to the Live Activity pane. You can download the adapter from the *Download* area within SAP Cloud for Customer.

The CTI Adapter runs a local server on the agent's system. This acts as a communication bridge with external CTI solutions. Posting information to CTI Adapter pushes information to Live Activity pane.

Incoming Chat Integration

A localhost GET/POST request is used to provide information to an agent about an incoming chat.

Example of a localhost get request:

```
http://localhost:36729/?
Type=CHAT&CID=BCM1234&EventType=INBOUND&Email=example@example.com&ExternalReference
ID=12345678
```

Chat Wrap up and Passing Transcript

A localhost GET/POST request can also be used after the chat has ended to post the chat transcript.

Example GET request to post a transcript:

```
http://localhost:36729/?
Type=CHAT&CID=BCM1234&EventType=UPDATEACTIVITY&Action=END&Email=example@example.com
&ExternalReferenceID=12345678&Transcript=<chat message transcript>
```

Fields Used with CTI Adapter

The following fields can be passed to the CTI adapter with the GET request:

Parameter	Description	Can Be Enabled for Default Live Activity Center Search
Type	CALL CHAT Defaults to CALL if no parameter specified.	
CID	The client ID. This is mandatory value. **i Note** Supported values are currently limited to: BCM1234, AVAYA5678, CISCO9876, GEN8923 (Genesys), SIE5281 (Siemens). Use CID=BCM1234 for other providers.	
ANI	The caller's number	√
DNIS	The number dialed	
BP	The caller's account ID	√
TicketID	The ID of a ticket associated with the call	√
SerialNo	A registered product serial number	√
Email	Caller's e-mail address	√
ExternalReferenceID	Unique call ID in the CTI system	
ExternalOriginalReferenceID	Original Reference ID of the call being transferred	
EventType	Supported Values: INBOUND OUTBOUND UPDATEACTIVITY TRANSFER	
Custom_1-4	Four fields you can use to pass any other call data	
ActivityUUID	Phone call activity UUID (if available). Available after `UPDATEACTIVITY` event is triggered by click-to-call action.	

Parameter	Description	Can Be Enabled for Default Live Activity Center Search
Transcript	Chat transcript passed back to system once chat is ended	

13.3.2.1.8 Simulate CTI Call

Simulate an incoming call in Live Activity with the SAP Cloud for Customer CTI Client Adapter.

Prerequisites

- Download, install, and launch the SAP Cloud for Customer CTI Client Adapter.
- Log on to SAP Cloud for Customer and open Live Activity.

Context

Use the CTI Client Adapter to simulate an inbound phone call to test the connection to Live Activity.

Procedure

1. Open the SAP Cloud for Customer CTI Client Adapter window on your computer.
2. Choose *Simulate*.
3. Enter the information you want to use for the inbound call or chat in the *SIMULATION* window.
4. Choose *Simulate* to simulate an inbound phone call.

Results

The information you entered in the simulation window appears in Live Activity as an incoming phone call.

13.3.3 Set Up Inbound Call Handling

SAP Cloud for Customer does not have a native Computer Telephony Integration (CTI) capability; instead is able to integrate to other CTI solutions to support service processes.

> **i Note**
>
> Scope phone as a communication channel via business configuration to use the phone call feature.

The CTI Client sends phone activity and attached data captured via IVR to our solution in the *Live Activity* screen via CTI Client adapter.

Live Activity feature looks up the customer or ticket using the data received and creates a new customer or ticket. In the incoming phone activity display window you are able to accept, reject, end, or transfer calls via CTI Client provided by the CTI vendor.

13.3.3.1 Enable Phone as a Communication Channel

The administrator must enable phone as a communication channel via business configuration to use the call feature in our solution.

Go to *Business Configuration* > *First Implementation* > *Edit Project Scope* > *Service* > *Customer Care* > *Service Request Management* > > *Questions*, and select the question: **Do you want to support Computer Telephony Integration (CTI)?**

13.3.3.2 Enable Inbound Calls

URL parameters required to enable inbound phone calls.

Inbound call integration uses a parameterized URL call from the CTI desktop client to the SAP Cloud for Customer CTI Client Adapter to pass information like the ANI, DNIS, and CAD to the solution.

The URL is: `http://localhost:36729/?CID=<cid>&ANI=<phonenum>&DNIS=<phonenum2>&<cad1=xxxx&cad2=yyyy>`.

Additional parameters can be added to the URL so that extra information can be passed to SAP Cloud for Customer.

The following table lists the parameter names and the information each parameter contains:

Parameter	Description	Can Be Enabled for Default Live Activity Center Search
Type	CALL CHAT Defaults to CALL if no parameter specified.	
CID	The client ID. This is mandatory value. **i Note** Supported values are currently limited to: BCM1234, AVAYA5678, CISCO9876, GEN8923 (Genesys), SIE5281 (Siemens). Use CID=BCM1234 for other providers.	
ANI	The caller's number	√
DNIS	The number dialed	
BP	The caller's account ID	√
TicketID	The ID of a ticket associated with the call	√
SerialNo	A registered product serial number	√
Email	Caller's e-mail address	√
ExternalReferenceID	Unique call ID in the CTI system	
ExternalOriginalReferenceID	Original Reference ID of the call being transferred	
EventType	Supported Values: INBOUND OUTBOUND UPDATEACTIVITY TRANSFER	
Custom_1-4	Four fields you can use to pass any other call data	
ActivityUUID	Phone call activity UUID (if available). Available after `UPDATEACTIVITY` event is triggered by click-to-call action.	

Parameter	Description	Can Be Enabled for Default Live Activity Center Search
Transcript	Chat transcript passed back to system once chat is ended	

> **Note**
>
> All of these parameters are included in the following extension spot, available in the SDK: `ES_COD_CTI_CALL_HANDLING`

Your customer requires that the following data is passed from your CTI solution to their SAP solution:

ANI (Dialing From):	408-361-3611	External ID:	56432156787890
Number Dialed:	1-800-455-5555	Custom_1:	value1
AccountID	1000655	Custom_2:	value2
Serial Number	XY234567T	Custom_3:	value3
TicketID	8003456	Custom_4:	value4

You would enter the following URL:

```
http://localhost:36729/?
CID=BCM1234&ANI=408-361-3611&DNIS=1-800-455-5555&BP=1000655&SerialNo=XY234567T&Tick
etID=8003456&
ExternalReferenceID=56432156787890&Custom_1=value1&Custom_2=value2&Custom_3=valu31&
Custom_4=value4.
```

Example

Example of C# code to send a parameterized call to SAP Cloud for Customer:

```
urlparam1 =
“ANI=408-361-3611&DNIS=1-800-455-5555&BP=1000655&SerialNo=XY234567T&TicketID=8003
456&Type=CALL&EventType=INBOUND”;
urlparam2 = urlparam1 +
ExternalReferenceID=56432156787890&Custom_1=value1&Custom_2=value2&Custom_3=valu3
1&Custom_4=value4”;
“url = http://localhost:36729/?CID=BCM1234&” + urlparam2;
HttpWebRequest webReq = (HttpWebRequest)WebRequest.Create(url);
HttpWebResponse WebResp = (HttpWebRequest)webReq.GetResponse();
```

In this example, Urlparam is split into multiple strings only for better readability.

13.3.3.3 Context Parameters for Incoming Calls

With an incoming phone call, call information is passed to our solution based on certain parameters.

When you click on the incoming call display window, our solution displays the Live Activity Center window with associated information for that incoming phone number.

In our solution, an incoming call information is passed based on ANI (incoming phone number), Search for Business Partners such as: Contact, Account, and Individual Customers.

Solution search could identify a unique customer, multiple customers, or may not identify any customer at all.

The following list displays the various parameters passed from the CTI Adapter or Widget for an incoming call. The system would either call all the properties (mentioned below), or a subset depending on parameters maintained in the adapter or widget.

Parameter	Description	Can Be Enabled for Default Live Activity Center Search
Type	CALL CHAT Defaults to CALL if no parameter specified.	
CID	The client ID. This is mandatory value. **i Note** Supported values are currently limited to: BCM1234, AVAYA5678, CISCO9876, GEN8923 (Genesys), SIE5281 (Siemens). Use CID=BCM1234 for other providers.	
ANI	The caller's number	√
DNIS	The number dialed	
BP	The caller's account ID	√
TicketID	The ID of a ticket associated with the call	√
SerialNo	A registered product serial number	√
Email	Caller's e-mail address	√
ExternalReferenceID	Unique call ID in the CTI system	

Parameter	Description	Can Be Enabled for Default Live Activity Center Search
ExternalOriginalReferenceID	Original Reference ID of the call being transferred	
EventType	Supported Values: INBOUND OUTBOUND UPDATEACTIVITY TRANSFER	
Custom_1-4	Four fields you can use to pass any other call data	
ActivityUUID	Phone call activity UUID (if available). Available after `UPDATEACTIVITY` event is triggered by click-to-call action.	
Transcript	Chat transcript passed back to system once chat is ended	

Example

The following is a sample of the incoming call payload:

<?xml version='1.0' encoding='utf-8' ?>

<payload>

<ANI>PHONENUMBER</ANI>

<TicketID>TICKETID</TicketID>

<ExternalReferenceID>EXTERNALREFID</ExternalReferenceID>

<Serial>SERIALID</Serial>

<DNIS>DIALLEDNUMBER</DNIS>

<BP>BPID</BP>

<Custom_1>CUSTOM1</Custom_1>

<Custom_2>CUSTOM2</Custom_2>

<Custom_3>CUSTOM3</Custom_3>

<Custom_4>CUSTOM4</Custom_4>

</payload>

13.3.3.4 Configure Dimensions for Live Activity Display Window

You can configure the size of the phone activity display window in the *Live Activity* tab.

Configure the phone activity display window dimensions so you are able to see all displayed information without using scroll bars.

Required Configuration: Go to *Administration* > *Service and Social* > *Communication Channels* > *Live Activity Configuration*, and set the appropriate height and width in the *Provider Control Dimensions* section.

13.3.3.5 Simulate CTI Call

Simulate an incoming call in Live Activity with the SAP Cloud for Customer CTI Client Adapter.

Prerequisites

- Download, install, and launch the SAP Cloud for Customer CTI Client Adapter.
- Log on to SAP Cloud for Customer and open Live Activity.

Context

Use the CTI Client Adapter to simulate an inbound phone call to test the connection to Live Activity.

Procedure

1. Open the SAP Cloud for Customer CTI Client Adapter window on your computer.
2. Choose *Simulate*.
3. Enter the information you want to use for the inbound call or chat in the *SIMULATION* window.
4. Choose *Simulate* to simulate an inbound phone call.

Results

The information you entered in the simulation window appears in Live Activity as an incoming phone call.

13.3.3.6 Warm Transfer for Computer Telephony Integration (CTI)

A warm transfer consists of an incoming or outgoing call that gets transferred to other consecutive agents. The persistent unique Original External ID, and incremental External IDs for each transfer identifies a warm transfer. Read on to know more about a typical warm transfer scenario.

Warm Transfer Scenario

An agent receives a call from a customer. The system identifies the customer based on the phone number, and is also able to associate it to the related ticket. The agent is unable to help the customer and transfers the call to Agent 2 after adding notes to the call activity.

Agent 2, receives the call, and can see the notes added by the first agent, the confirmed customer, and linked ticket in the *Live Activity* center. Unable to help the customer, Agent 2 takes additional notes and transfers the call to a third agent.

Agent 3 receives the call and is able to see the call context from Agent 2 and Agent 1 in the*Live Activity* screen. Agent 3 handles the call and helps the customer.

A warm transfer can pass the following context information:

- confirmed caller
- notes
- linked ticket

A warm transfer has a unique Original *External ID*, which remains constant through all the transfers. However, the *External ID* for each consecutive transfer changes. The Original *External ID* associates the transfers to the original call.

> **i Note**
>
> Update CTI vendor integration with our solution to be able to pass additional information.

You can view the entire warm transfer flow in the *Document Flow* tab.

13.3.3.7 Ticket Assignment Notification

If your organization assigns tickets with an external system you can also receive assignment notifications in the same way as incoming call notifications.

Organizations that assign tickets with an external system can use an API call to send a notification message to the assignee.

Notification works with both CTI Adapter integration or third-party widget integration in the same way as a call or chat is integrated with Live Activity.

When you assign a ticket with notification, the *Live Activity* notification popup opens displaying the Ticket ID. When you click the pop-up, the ticket detail view opens for the corresponding ticket.

Ticket Assignment Notification Signature Parameters

Parameter	Details
Type	Value is NOTIFICATION for push routing.
ObjectID	Object ID being pushed (assigned). The ticket ID. **Prerequi-site**: This object must already exist in the system.
ObjectUUID	Used for navigation
EventType	Is **Push** since the ticket is pushed to an agent.
ThingType	Used for navigation
Text	Define a length. Optional parameter. If not provided, default is **New Notification**

Examples of the signature in XML and JSON.

Sample Code

XML

```
<?xml version="1.0" encoding="UTF-8"?>
<payload>
<Type>Notification</Type>
<ObjectID>ObjectID</ObjectID>
<ObjectUUID>ObjectUUID</ObjectUUID>
<EventType>Push</EventType>
<ThingType>ThingType of the object</ThingType>
</payload>
```

Sample Code

JSON

```
{
     "payload": {
                         "Type": "NOTIFICATION",
                         "ObjectID": "OBJECTID",
                          "ObjectUUID" : "UUID of the Object"
                          "EventType":"Push",
                          "ThingType": "Thing Type of the object"


                   }
         }
```

13.3.4 Set Up Outbound Call Handling (Click-to-Call)

You can make a phone call from any screen within our solution with the click of a mouse. With CTI integration enabled, outbound calls also create a phone activity linked to the call.

> **Example**
>
> If the call is made from *Ticket* > *Customer* phone number, the phone activity is linked to the corresponding Ticket and Customer.

With CTI integration enabled when making the outbound call, the system can track and link the call with related information for that phone number.

> **Example**
>
> Related information could be a ticket, an account, contact, customer, or lead.

To display the *Live Activity Center* screen and search for related objects during the call, click the call status window (displays during a call).

> **Note**
>
> This feature is available in SAP Fiori Client only.

> **Remember**
>
> - You must have the Live Activity work center assigned to you.
> - Enable CTI integration.

If your system lacks CTI integration, clicking a phone number dials out using your operating system's default phone channel (for example, Skype on Windows OS). Automatic activity generation and linking requires CTI integration.

13.3.4.1 Enable Phone as a Communication Channel

The administrator must enable phone as a communication channel via business configuration to use the call feature in our solution.

Go to *Business Configuration* > *First Implementation* > *Edit Project Scope* > *Service* > *Customer Care* > *Service Request Management* > > *Questions*, and select the question: **Do you want to support Computer Telephony Integration (CTI)?**

13.3.4.2 Click-to-Call in Fiori Client Via CTI Adapter

You can easily make outgoing phone calls from your system using the Click-to-Call feature via CTI integration.

Use the Click to Call feature in any of the following ways:

- Click phone number in a ticket to initiate phone call via CTI
  From the *Overview* tab of a ticket, under the *Customer* section, click a phone number to place a call.
- Click the phone call status display to bring up the *Live Activity Center* screen that displays context of the call and the associated ticket.
  You can search using any or all available categories. These categories are available as search parameters from the *Live Activity Center* tab as well.

  > **Note**
  >
  > You can add custom search categories via configuration.
- When you click the phone number to initiate a call, the system creates the phone call activity with the ticket reference and the business partner as the participant to the activity.
  All this information is created and auto-populated in the *Live Activity Center* screen's Call Information section.

> **Note**
>
> You must have the *Live Activity Center* assigned to use the Click to Call feature. This feature is available only in the Fiori Client.

13.3.4.3 Implement Outbound Calls in Fiori client Via CTI Adapter

This feature lets you implement and enable the outbound calling feature in SAP Cloud for Customer.

Prerequisites

Ensure *Live Activity Center* configuration has appropriate settings for the provider. The provider type should be **CTI Adapter** and provider URL field should be left blank.

Context

These instructions are pertinent to customers who have integrated using CTI adapter. (Customers using their own call system need not follow these steps). Follow these steps to enable the *Click to Call* feature in the Fiori client via CTI adapter.

Procedure

1. Uninstall the current version of CTI Adapter installed on your machine.

2. Download and install the latest SAP CTI Adapter from the *Download* section.

   An older version of CTI Adapter (prior to May 2018 release) will not work with Fiori client.
3. Download the CTI Connector project from https://help.sap.com/http.svc/rc/67be88de0bdd4e53b662fae4f15a2b81/1805/en-US/SAPC4CCTIConnectorSetup.zip on the Help Portal.
4. Extract the zip file and import the project to Microsoft Visual Studio.
5. Open file **OutboundCallHandler.cs** and add the logic in the *dialOut* method to pass the phone number and context information to the CTI solution.
6. Next, save the file and build the project to generate a new **SAPCODCTIConnector.dll** file.
7. Once the **SAPCODCTIConnector.dll** file is generated, copy the DLL to: `C:\Program Files (x86)\SAP\SAP Cloud for Customer CTI Client` to deploy the DLL.
8. Restart the adapter.

13.3.4.4 Configure Dimensions for Live Activity Display Window

You can configure the size of the phone activity display window in the *Live Activity* tab.

Configure the phone activity display window dimensions so you are able to see all displayed information without using scroll bars.

Required Configuration: Go to *Administration* > *Service and Social* > *Communication Channels* > *Live Activity Configuration*, and set the appropriate height and width in the *Provider Control Dimensions* section.

13.3.4.5 Context Parameters for Outbound Calls

When you make a phone call from the solution, the system triggers several context parameters related to the phone number that is passed to the Live Activity Center. The Live Activity Center in turn creates a phone call activity for this outbound call and also passes this information to the CTI adapter or third party widget (based on which one you've integrated to), embedded in the call display window. This context is used to track the phone activity and link it to call details such as the call transcript or link to the recording.

When you make a call from a phone number within the system, it gets routed to the adapter or widget, which has a blank method that should be configured by the partner. Based on what value the partner has configured in the blank method, the system routes the phone call to the end point (defined by the partner). Click-to-Call can be made with or without context.

With Context

When the partner defines the blank method, calls are made using all or a sub-set of parameters provided by our solution (see list below). This indicates that calls are made with context.

The following list displays the various parameters passed to the CTI Adapter or Widget for a call. The system would either call all the properties (mentioned below), or a subset. This depends on what the system is sending which in turn is based on where the call originated.

Context Parameters	Description
BusinessPartnerID	BP ID of the callee
ObjectID	ID of the Object from where the call was triggered
ObjectUUID	UUID of the Object from where the call was triggered
ObjectTypeCode	Object Type Code from where the call was triggered
ESObjectID	Enterprise Search Object ID of from where the call was triggered
PhoneNumber	Phone Number called
ObjectThingType	Object Thing Type from where the call was triggered
IsBTDRef	True if the originating object is linked to the phone call activity
Direction	OUT for outbound call
LoggedInUserID	Logged in user ID of the person originating the call
ActivityUUID (this value is based on the business object from where the call is made)	UUID of the phone call activity created

Without Context

When the partner does not define the call parameters, calls are made using a set of three basic default parameters provided by our solution (see list below). This indicates that calls are made without context.

- PhoneNumber
- LoggedInUserID
- ActivityUUID

The call widget or adapter display window shows information based on the parameter fields maintained by the customer or partner.

> **Example**
>
> The following are samples of the outgoing call payload options:1. When context is passed, the payload would consist of the following or a subset of it.
>
> {
>
> BusinessPartnerID: "1666454",
>
> ObjectID: "4008867",
>
> ObjectUUID: "00163E07C01D1EE7B98941B0821ABD2B",
>
> ObjectTypeCode: "118",
>
> ESObjectID: "COD_SERVICE_REQUEST_ES_CO",
>
> PhoneNumber: "+91 943748393",

```
ObjectThingType: "COD_SRQ_AGENT_TT",

IsBTDRef: "X",

Direction: "OUT",

LoggedInUserID: "SOCIALADMIN01",

ActivityUUID: "00163E07C0211ED7BC99F84A3DF7622E"

}
When no context is passed:

{

PhoneNumber: "+91 943748393",

LoggedInUserID: "SOCIALADMIN01",

ActivityUUID: "00163E07C0211ED7BC99F84A3DF7622E"

}
```

13.3.4.6 Store External ID in Phone Activity

With the ability to store the External ID in a phone activity, you can access additional information on a customer phone call such as call transcript or a link to the call recording.

With enabled CTI integration, the third party vendor can communicate with customers via phone activity. When the CTI vendor initiates a phone call, The External ID from the CTI vendor gets populated in the phone call activity details as a reference. This ID helps identify the phone activity associated with it. Besides the External ID, the vendor also has the ability to save other details of a phone call such as the call transcript, or a link to the call recording. Our solution provides you with the ability to store the external ID in the system so the vendor can recall the phone call activity associated with it.

Phone activity details provides you with improved call analytics.

Required Configuration: To enable the ability to store External ID in phone activity, create a new communication system using the required fields and update Live Activity settings with the new communication system ID.

> **i Note**
>
> See **SAP Cloud for Customer Administrator Guide** for details.

Go to *Administration* > *Service and Social* > *Communication Channels* > *Live Activity Configuration*, and enter External ID.

13.3.4.7 Phone Activity UUID for Outbound Calls

The phone activity UUID value is passed from our solution to the CTI vendors for all outbound calls made within our solution. This provides you with integration flexibility and ease of use.

The third party CTI vendors can update the phone calls made from our solution with additional information such as: call transcript and link to the call recording. Additionally, they can use the phone activity UUID value to update all phone call activities using OData APIs provided by our solution.

> **Example**
>
> The phone activity UUID lets you update a phone call with an end time or URL with the call recording.

This functionality provides you with improved call analytics.

> **Note**
>
> The feature works with CTI third party vendors and Widget based integration; and can be viewed in SAP Fiori Client only.

13.3.4.8 Click-to-Call Search

You can search in the Live Activity display window using the unique customer ID. Additionally, you can store the External ID for an outbound phone call.

Search by Customer ID

When the service agent clicks on a customer, by default the system searches based on that unique customer ID, which helps save time by displaying related information for that contact number.

> **Example**
>
> Search results display Customer and Related Tickets for that customer.

> **Note**
>
> The agent can always override this default search parameter with a manual search.

13.3.4.9 Search Enabled for All Telephone Numbers

Our solution allows search for both: regular and mobile telephone numbers, which is the default behavior.

The system searches for both, regular and mobile phone numbers, providing higher work efficiency by saving time and providing better customer identification.

13.3.4.10 Click-to-Call Screen Behavior Examples

The following table displays the various parameters and contexts used for a call:

Screen	Context Passed	Window Display	Default Search Behavior	Linked Phone Activity
Ticket > *Customer Card* > *Overview*	• Business Partner ID • Ticket ID • Phone Number • Enterprise Search Object ID	Caller is identified from the business partner ID	The result list displays the related ticket and caller	Ticket and Customer
Ticket Quick View	• Business Partner ID • Ticket ID • Phone Number • Enterprise Search Object ID	Caller is identified from the business partner ID	The result list displays the related ticket and caller	Ticket and Customer
Customer Quick View	• Business Partner ID • Phone Number	Caller is identified from the business partner ID	The result list displays the caller	Customer
Contact Quick View	• Business Partner ID • • •	Caller is identified from the business partner ID	The result list displays the caller	Customer
Lead Overview	• Business Partner ID • Phone Number • Lead ID	Caller cannot be identified as the business partner cannot be searched	No result list displays as lead cannot be searched on	Lead and Customer
Phone Activity List	• Phone Activity UUID • Phone Number	Caller is searched based on phone number	The result list displays based on phone number search.	Phone Activity (from where call is made)

* Enterprise Search Object ID in Click-to-Call comprises of object IDs for Account, Contact, Individual Customer, and Registered Product. When making a call from a ticket, the system uses these search parameters to call up related information.

13.3.4.11 Warm Transfer for Computer Telephony Integration (CTI)

A warm transfer consists of an incoming or outgoing call that gets transferred to other consecutive agents. The persistent unique Original External ID, and incremental External IDs for each transfer identifies a warm transfer. Read on to know more about a typical warm transfer scenario.

Warm Transfer Scenario

An agent receives a call from a customer. The system identifies the customer based on the phone number, and is also able to associate it to the related ticket. The agent is unable to help the customer and transfers the call to Agent 2 after adding notes to the call activity.

Agent 2, receives the call, and can see the notes added by the first agent, the confirmed customer, and linked ticket in the *Live Activity* center. Unable to help the customer, Agent 2 takes additional notes and transfers the call to a third agent.

Agent 3 receives the call and is able to see the call context from Agent 2 and Agent 1 in the*Live Activity* screen. Agent 3 handles the call and helps the customer.

A warm transfer can pass the following context information:

- confirmed caller
- notes
- linked ticket

A warm transfer has a unique Original *External ID*, which remains constant through all the transfers. However, the *External ID* for each consecutive transfer changes. The Original *External ID* associates the transfers to the original call.

> i Note
>
> Update CTI vendor integration with our solution to be able to pass additional information.

You can view the entire warm transfer flow in the *Document Flow* tab.

13.4 Live Activity

Live Activity is where you integrate your third-party communication system provider's CTI widget. Interact with customers through real-time communication channels that may or may not result in ticket creation.

Live Activity is the pipeline to your real-time communication system. You can engage with customers through channels such as:

- Phone
- SMS
- Chat
- E-mail

> **Note**
>
> Communication channels and routing capability are provided by third-party communication solutions.

Track and record real-time customer interactions in SAP Service Cloud.

Live activity identifies known customers and automatically displays information such as prior tickets, product information, and more. Integrate with your communication system to send incoming interactions to available agents, record and playback calls, and save chat transcripts. Live activity and Customer Hub combine to give you a complete 360° view of your customer and engagement history in the timeline, while communicating with your customer in real time.

The live activity interaction involves these components and views:

Widget pop-up window	Embedded controls for third-party communication channels.
Live Activity Center	Identify customer and search for business objects such as tickets, products, contracts, and more. Also used for activity notes and follow-up actions like creating a ticket.
Customer Hub	Provides 360° customer information.

13.4.1 Scope and Configure Live Activity

13.4.1.1 Enable Live Activity

Enable live activity communications integration in your solution.

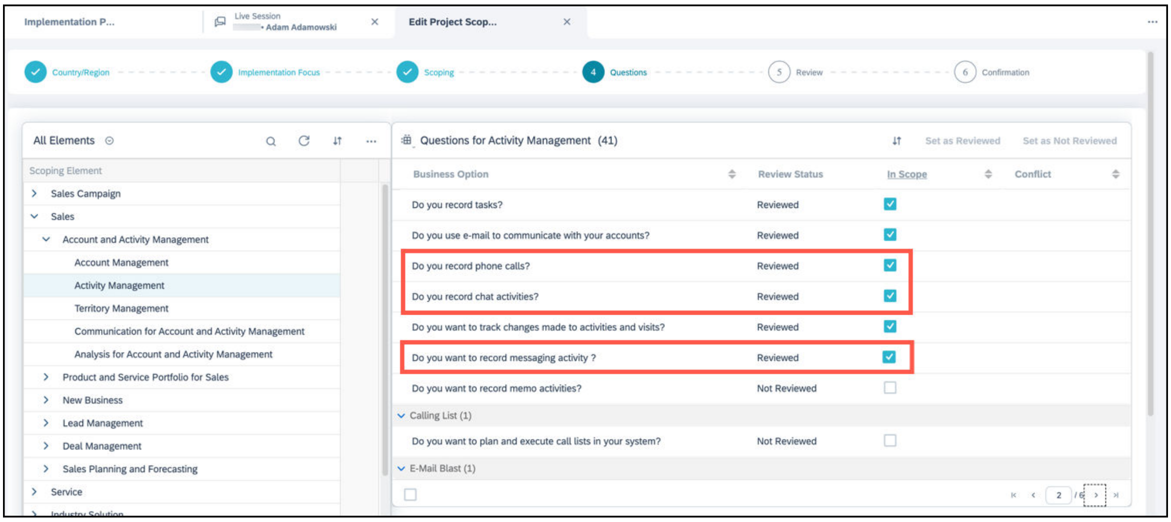
Context

Enable live activity so that you can integrate a third-party communication system with SAP Service Cloud.

Procedure

1. Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Service* > *Customer Care* > *Service Request Management* > *Computer Telephony Integration for SAP Cloud for Customer* and select the scoping question: *Do you want to support Computer Telephony Integration (CTI)?*

2. Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Sales* > *Account and Activity Management* > *Activity Management* and select the following scoping questions :
   - *Do you record phone calls?*
   - *Do you record chat activities?*
   - *Do you want to record messaging activities?*



3. Assign the **Live Activity Center** work center to users or groups that use phone or other communication channels to interact with customers. Assign work centers under: *Administrator* > *General Settings* > *Users* > *Business Roles* and *Business Users*.

   You can also use single sign-on options for CTI integration. Communication system vendors must configure their widget for single sign-on and connect to the same IDP server as SAP Service Cloud.

Related Information

Configure Your Solution for Single Sign-On

13.4.1.2 Configure Live Activity Settings

Set the live activity options for your solution.

Context

Procedure

1. Go to: ▶ *Administrator* ▶ *Service and Social* ▶ *Communication Channels* ▶ *Live Activity Configuration* ▶.
2. For *Provider*, select *External Provider*.
3. Choose your *CTI Vendor*. If your system vendor doesn't appear in the list, then select *Other*.
4. Enter the *Provider URL*.

   This URL points to the vendor control widget.
5. Leave the *Layout* setting as Fiori.
6. Enter the *Provider Control Dimensions*.

   Enter height and width in pixels.
7. Enable *Display Provider Control*

   Embeds provider controls in the notification popup.
8. Optional: Enable *Search All Fields* option.

   Select objects for automatic full-text search when user opens *Live Activity Center* from incoming call notification. The default only searches phone number fields.
9. Enter the communication system ID that you have set up for CTI integration in the *Comm. System ID* field.

   The communication system ID is required for CTI integration. This communication system is used internally and for passing external reference IDs to the communication system. Create a communication system using only required fields and enter the ID here.
10. Choose how to view identified customer details:
    - *Open Caller Detail View*
    - *Open Customer Hub*

    If a single matching caller is found in the system, either display caller info in a new tab, or open *Customer Hub*.
11. Optional: Enable *Open Details Automatically for Incoming Communication* option.

    Open details automatically in the live activity center, or ticket details screen when you accept an incoming communication. Optimizes customer interaction workflow.
12. Optional: Enable *Move and Resize Notification* option.

    Allows users to move and resize the live activity pop-up control.
13. Select business objects to search for in live activity. Select objects in the *Search Objects* list to override the default search settings.
14. If your SAP Service Cloud solution includes Utilities Contact Center, you can enable the following options, as desired:
    - *Enable Contract Account and Premise Tables*
    - *Select the custom field that you want to use to confirm Contract Account from IVR* (select a field name from the list)
    - *Consider independent communication phone number from IVR*
    - *Consider Contract Account View in Customer Hub*

    Find more information about configuring live activity for the utilities scenario in the Utilities Contact Center Administrator Guide. See the Related Links section.

Related Information

Create Communication Systems
Utilities Contact Center Administrator Guide - Live Activity and Enterprise Search

13.4.2 Integrate Channels Through Third-Party Vendors

Any third-party communication system provider or contact center application can integrate their channels with SAP Service Cloud using live activity. Communication channels used for live interactions with the end customer can include: phone, chat, and social media-based messaging apps.

> → Remember
>
> - Communication system providers are responsible for routing incoming messages on their channels.
> - The vendor-provided widget includes the controls for working with the channel. For example: accept, reject, transfer, and so forth.

Widget Integration Example [page 427]
Live Activity in SAP Service Cloud provides integration points for a control widget supplied by third-party communication systems offering a variety of channels and use cases.

Phone Events and Payload [page 428]
Integrate phone into live activity using your third-party communication system, and a vendor-provided UI widget designed for SAP Service Cloud.

Chat Events and Payload [page 432]
Integrate chat into SAP Service Cloud using your third-party communication system provider, and the UI widget in SAP Service Cloud.

SMS Messaging Events and Payload [page 437]
Integrate simple messaging service (SMS) messages through your communication system provider, rather than the built-in SMS communication channel in SAP Service Cloud.

Related Information

Customer Hub [page 168]
For real-time interactions that require quick access to customer information, customer hub provides a place to assess and enter information to help you resolve issues quickly.

13.4.2.1 Widget Integration Example

Live Activity in SAP Service Cloud provides integration points for a control widget supplied by third-party communication systems offering a variety of channels and use cases.

Communication systems vendors must provide a widget that integrates into SAP Service Cloud with browser events using `window.postMessage()`. For an incoming message, the widget passes a set of parameters in the form of a payload and pushes the information using `postMessage`.

Example payload construct for an incoming phone call:

Sample Code

```
/**
* construct the payload in XML format
* @param sDestination
* @param sOriginator
* @returns payload in xml format
* @private
*/
c4c.cti.integration.prototype._formXMLPayload = function(parameters){
    var sPayload = "<?xml version='1.0' encoding='utf-8' ?> <payload> " ;
    for(var key in parameters){
        var tag = "<" + key + ">" + parameters[key] +  "</" + key +">";
        sPayload = sPayload + tag;
    }
    sPayload = sPayload +  "</payload>";
    return sPayload;
};

/**
* Send information to C4C
* @param parameters
*/
c4c.cti.integration.prototype.sendIncomingCalltoC4C = function (parameters) {
    var payload = this._formXMLPayload(parameters);
    this._doCall(payload);
};

/**
* post to parent window
* @param sPayload
* @private
*/
c4c.cti.integration.prototype._doCall = function (sPayload) {
    window.parent.postMessage(sPayload, "*");
};
```

Note

The payload can be sent in JSON or XML format.

13.4.2.2 Phone Events and Payload

Integrate phone into live activity using your third-party communication system, and a vendor-provided UI widget designed for SAP Service Cloud.

Notify

When your communication system's routing algorithm assigns a phone call in the queue to a specific service agent, the notify event alerts the agent of the incoming call. The communication system uses the notify event until the agent accepts the call.

The notify event **doesn't** create a new phone activity in SAP Service Cloud.

You can provide payloads in either JSON or XML format. A sample payload (XML format) follows.

Sample Code


```
<?xml version="1.0" encoding="UTF-8"?>
<payload>
   <Type>CALL</Type>
   <EventType>INBOUND</EventType>
   <ACTION>NOTIFY</ACTION>
   <ANI>+358403573592</ANI>
   <ExternalReferenceID>EA42D48FEAD3EA11AA5EBC019352B05E</ExternalReferenceID>
   <ExternalOriginalReferenceID>E0163EA718FC1FFABDD5608C895AEF67</
ExternalOriginalReferenceID>
</payload>
```


Note

`ExternalReferenceID` and `ExternalOriginalReferenceID` can be maximum of 35 alpha-numeric characters, no special characters, or dashes.

You need to create a communication system and provide that system ID in the live activity configuration. See the related link at the bottom of this page for more details.

Accept

Your third-party communication system uses the **accept** event to indicate to SAP Service Cloud that a phone call has been accepted by a service agent.

The accept event creates a new phone call activity in SAP Service Cloud, and records the starting time and date.

A sample payload (XML format) follows.

Sample Code


```
<?xml version="1.0" encoding="UTF-8"?>
<payload>
```

```
    <Type>CALL</Type>
    <EventType>INBOUND</EventType>
    <ACTION>ACCEPT</ACTION>
    <ANI>+358403573592</ANI>
    <ExternalReferenceID>EA42D48FEAD3EA11AA5EBC019352B05E</ExternalReferenceID>
    <ExternalOriginalReferenceID>E0163EA718FC1FFABDD5608C895AEF67</
ExternalOriginalReferenceID>
</payload>
```

End

When the agent hangs up, your communication system uses the **end** event to update the call activity and record the ending time and date.

A sample payload follows.

Sample Code

```
<?xml version="1.0" encoding="UTF-8"?>
<payload>
    <Type>CALL</Type>
    <EventType>UPDATEACTIVITY</EventType>
    <ANI>+123456789012</ANI>
    <ExternalReferenceID>EA42D48FEAD3EA11AA5EBC019352B05E</
ExternalReferenceID>
    <Action>END</Action>
</payload>
```

Call Recording and Playback

Link a recording of a phone call with the activity document created in SAP Service Cloud. This link enables service agents to trigger play back directly from the SAP Service Cloud UI. To store the recording link, pass the additional parameter `<RecordingId>` to the phone call `END` event.

A sample payload follows.

Sample Code

```
<?xml version="1.0" encoding="UTF-8"?>
<payload>
    <Type>CALL</Type>
    <Event>UPDATEACTIVITY</Event>
    <ANI>+123456789012</ANI>
    <ExternalReferenceID>EA42D48FEAD3EA11AA5EBC019352B05E</ExternalReferenceID>
    <RecordingId>REC_67F9EA535AE0EA1180E000505687F2F</RecordingId>
    <Action>END</Action>
</payload>
```

For playback of a recording, SAP Service Cloud opens the phone call widget and sends the payload with recording details to your external communications system. Recording retrieval and playback controls are provided by your communications system within their widget.

A sample payload for opening a phone call recording:

Sample Code


```
{
InteractionId: "67F9EA535AE0EA1180E000505687F2FD" -> external reference
RecordingId: "REC_67F9EA535AE0EA1180E000505687F2F" -> Recording ID received
by CCTR
type: "recordingPlayback"
}
```


Outbound Call

SAP Service Cloud includes click-to-call functionality for phone numbers in specific fields. For example, in the customer detail screen, agents can click a phone number to place a phone call to the customer. To trigger the outbound phone call, SAP Service Cloud sends a payload to the widget containing the phone number.

A sample payload follows.

Sample Code


```
{
PhoneNumber: "+1 6503054000"
ActivityUUID: "00163EA718FC1EEABDD5608C895BDC71"
BusinessPartnerID: "1545766"
Direction: "OUT"
ESObjectID: "COD_CONTACT_ES_CO"
LoggedInUserID: "SERVICEAGENT01"
ObjectID: "1545766"
ObjectThingType: "COD_CONTACT_TT"
ObjectTypeCode: "147"
ObjectUUID: "00163E07C0211ED799FA20463CBFEF62"
}
```


Note

- The communication system's widget uses the phone number parameter to trigger the outbound call upon receiving the payload.
- ActivityUUID is the identifier for phone call activity created in SAP Service Cloud that can be used by your communication system provider to link the interaction record in their system.

Transfer

The transfer event is used by the communication system widget to indicate that SAP Service Cloud is transferring a call from one agent to another agent.

! Restriction

Transfer events aren't supported for SAP Service Agent Console add-on for SAP Service Cloud.

SAP Service Cloud creates a new phone call activity each time a call is transferred, and links these related phone call activities using references.

A sample payload follows.

Sample Code


```
<?xml version="1.0" encoding="UTF-8"?>
<payload>
   <Type>CALL</Type>
   <EventType>TRANSFER</EventType>
   <ANI>+16508997778</ANI>
   <TicketID>98798</TicketID>
   <SerialNo>987987987987</SerialNo>
   <ExternalReferenceID>00163EA718FC1EEABDD5608C895BDC71</ExternalReferenceID>
   <ExternalOriginalReferenceID>E0163EA718FC1FFABDD5608C895AEF67</
ExternalOriginalReferenceID>
</payload>
```


The `ExternalOriginalReferenceID` is the original ID of the interaction that originated from your third-party communication system. After transferring the call to another agent, the **external reference ID** changes, but the **original reference ID** remains the same.

CAD Information

SAP Service Cloud allows external communication systems to pass call attached data (CAD), or interactive voice response (IVR) information to be displayed to agents in the live activity center.

Supported CAD Fields

Attribute	Payload Field Key
Business Partner Number	CustomerUUID
Ticket ID	TicketID
Serial ID	Serial
External ID	ExternalID
E-mail ID	Email
Phone Number	ANI
Custom Field 1	Custom_1
Custom Field 2	Custom_2
Custom Field 3	Custom_3
Custom Field 4	Custom_4

The information passed in these fields is displayed as-is in the live activity center. Any other functionality required using the CAD parameters must be implemented through custom extensions.

Events that support CAD parameters are NOTIFY, ACCEPT, and TRANSFER.

A sample payload follows.

Sample Code


```
<?xml version="1.0" encoding="UTF-8"?>
<payload>
   <Type>CALL</Type>
   <EventType>INBOUND</EventType>
   <ACTION>NOTIFY</ACTION>
   <ANI>+358403573592</ANI>
   <ExternalReferenceID>EA42D48FEAD3EA11AA5EBC019352B05E</ExternalReferenceID>
   <ExternalOriginalReferenceID>E0163EA718FC1FFABDD5608C895AEF67</
ExternalOriginalReferenceID>
   <CustomerUUID>123456</CustomerUUID>
   <TicketID>983475</TicketID>
   <Serial>987987987987</Serial>
   <Email>johndoe@example.com</Email>
   <Custom_1>CAD4<Custom_1>
   <Custom_2>CAD5<Custom_2>
   <Custom_3>CAD6<Custom_3>
   <Custom_4>CAD7<Custom_4>
</payload>
```


Related Information

Configure Live Activity Settings [page 424]

Set the live activity options for your solution.

13.4.2.3 Chat Events and Payload

Integrate chat into SAP Service Cloud using your third-party communication system provider, and the UI widget in SAP Service Cloud.

Overview

You can route incoming chat interactions provided by your communication system vendor directly to the live activity UI widget. Your third-party communication system is then responsible for routing messages to agents.

Notify

When your communication system's routing algorithm assigns a chat interaction in the queue to a specific service agent, the notify event alerts the agent of the incoming chat request.

The notify event **doesn't** create a new chat activity in SAP Service Cloud.

You can provide payloads in either JSON or XML format. A sample payload (Formatted JSON Data) follows.

> Sample Code
>
>
> ```
> {
>    "payload":{
>       "Type": "CHAT",
>       "EventType":"INBOUND",
>       "Action":"NOTIFY",
>       "Email":"John@test.com",
>       "ExternalReferenceID":"ED4E4730D1C711EAAA5EBC019352B05E",
> }
> }
> ```
>

> **i Note**
>
> `ExternalReferenceID` can be maximum of 35 alpha-numeric characters, no special characters or dashes.
>
> You need to create a communication system and provide that system ID in the live activity configuration. See the related link at the bottom of this page for more details.

Accept

Your third-party communication system uses the **accept** event to indicate to SAP Service Cloud that a chat request has been accepted by an agent for further processing.

The accept event creates a new chat activity in SAP Service Cloud, and records the starting time and date.

A sample payload (Formatted JSON Data) follows.

> Sample Code
>
>
> ```
> {
>    "payload":{
>       "Type":"CHAT",
>       "EventType":"INBOUND",
>       "Action":"ACCEPT",
>       "Email":"John@test.com",
>       "ExternalReferenceID":"ED4E4730D1C711EAAA5EBC019352B05E",
> }
> }
> ```
>

End (Update Transcript)

Your communication system uses the **end** event to upload a transcript with a chat activity. When an agent concludes a chat interaction with a customer, the external communication system uploads the transcript to the chat activity, and records the ending time and date.

SAP Service Cloud supports only plain text for transcripts. Your external communication system must convert transcripts to plain text before uploading. To retain rich text in transcripts, output the transcript as an Adobe Acrobat format (PDF) document and add the file as an attachment to the corresponding activity. Refer to the following section for more details on chat attachments.

A sample payload (Formatted JSON Data) follows.

Sample Code

```
{
   "payload":{
      "Type":"CHAT",
      "EventType":"UPDATEACTIVITY",
      "Action":"END",
      "Email":"John@test.com",
      "ExternalReferenceID":"ED4E4730D1C711EAAA5EBC019352B05E",
      "Transcript":"support@sap.com : Hello John\nJohn@test.com :
Hello\nJohn@test.com : I need to book car services time\nsupport@sap.com :
would tomorrow 12.00 suit you\nJohn@test.com : yes thanks
bye\nsupport@sap.com : bye"
}
}
```

Chat Attachments

You can include file attachments with the chat activity in SAP Service Cloud for the following scenarios:

- Files shared with your customer during the chat
- Chat transcript as a portable document format (PDF) file to retain text formatting

! Restriction

CORS isn't supported for SAP Service Cloud OData consumption. OData calls must be triggered from the server side. Your third-party communication system provider must handle CORS issues.

! Restriction

Attachments aren't supported for chat interactions in SAP Service Agent Console add-on for SAP Service Cloud.

Use OData APIs to add attachments after the chat interaction is ended, but before the **end** payload following this two-part process.

1. Retrieve the chat activity UUID for current interaction.

   Sample Code

   ```
   https://<server-tenant>/sap/c4c/odata/v1/chatactivity/
   ChatActivityBTDReferenceCollection?$filter=ID eq '
   ED4E4730D1C711EAAA5EBC019352B05E ' and ChatActivityTypeCode
   eq '1976'&$format=json&$expand=ChatActivity
   ```

i Note

`ID eq ‘ED4E4730D1C711EAAA5EBC019352B05E’` is an example of an `ExternalReferenceID` used in the **accept** event. All the other parameters in the request to be entered as shown.

The result of the query provides the `ParentObjectID` and `ChatActivityID` as follows:

Output Code


```
{
   "ObjectID":"00163E5FA5BD1EDA94BB0043C3AAEA99",
   "ParentObjectID":"00163E5FA5BD1EDA94BB0043C3AB0A99",
   "ETag":"/Date(1581980656012)/",
   "ID":"80681377",
   "TypeCode":"86",
   "RoleCode":"6",
   "ChatBusinessSystemID":"",
   "ChatActivityID":"2351",
   "ChatActivityTypeCode":"1976"
}
```


2. Add attachments.
   Use the `ParentObjectID` and `ChatActivityID` from the preceding API output to upload the files for attachment.

Sample Code

```
https://<server-tenant>/sap/c4c/odata/v1/chatactivity/
ChatActivityCollection('<ParentObjectID>')/ChatActivityAttachment
```

Now, send a `POST` call with the following payload.

i Note

Send a binary file or URL pointing to a document. Use an `X-CSRF-Token` to make the OData `POST` call. Use the basic authorization credentials of a business use or technical user for integration purposes.

Sample Code

```
{
  "ParentObjectID": "00163E5FA5BD1EDA94BB0043C3AB0A99",
  "Name": "File1.txt”,
  "MimeType": "text/plain",
  "Binary": "VGVzdCBBdHRhY2htZW50IDEyMw==",
  "LinkWebURI": "", <use this parameter to link a document from external
web URL>
  "TypeCode": "10001",
  "CategoryCode": "2",
  "Title": " File1.txt ",
  "ChatActivityID": "2351",
  }
```

CAD Information

SAP Service Cloud allows external communication systems to pass call attached data (CAD), or interactive voice response (IVR) information to be displayed to agents in the live activity center.

Supported CAD Fields

Attribute	Payload Field Key
Business Partner Number	CustomerUUID
Ticket ID	TicketID
Serial ID	Serial
External ID	ExternalID
E-Mail ID	Email
Phone Number	ANI
Custom Field 1	Custom_1
Custom Field 2	Custom_2
Custom Field 3	Custom_3
Custom Field 4	Custom_4

The information passed in these fields is displayed as-is in the live activity center. Any other functionality required using the CAD parameters must be implemented through custom extensions.

Events that support CAD parameters are `NOTIFY`, `ACCEPT`, and `TRANSFER`.

A sample payload follows.

Sample Code

```
<?xml version="1.0" encoding="UTF-8"?>
<payload>
   <Type>CHAT</Type>
   <EventType>INBOUND</EventType>
   <ACTION>NOTIFY</ACTION>
   <ANI>+358403573592</ANI>
   <ExternalReferenceID>EA42D48FEAD3EA11AA5EBC019352B05E</ExternalReferenceID>
   <ExternalOriginalReferenceID>E0163EA718FC1FFABDD5608C895AEF67</
ExternalOriginalReferenceID>
   <CustomerUUID>123456</CustomerUUID>
   <TicketID>983475</TicketID>
   <Serial>987987987987</Serial>
   <Email>johndoe@example.com</Email>
   <Custom_1>CAD4<Custom_1>
   <Custom_2>CAD5<Custom_2>
   <Custom_3>CAD6<Custom_3>
   <Custom_4>CAD7<Custom_4>
</payload>
```

Related Information

Chat Communication Channel [page 451]
SAP Cloud for Service can integrate third-party chat solutions to support service processes.

SAP Cloud for Customer OData API

Configure Live Activity Settings [page 424]
Set the live activity options for your solution.

13.4.2.4 SMS Messaging Events and Payload

Integrate simple messaging service (SMS) messages through your communication system provider, rather than the built-in SMS communication channel in SAP Service Cloud.

Overview

SAP Service Cloud includes the messaging communications channel that creates a new ticket for each incoming SMS message. If your organization requires live agent chat support using SMS as a channel, then you can integrate with live activity using following touch points. Your third-party communication system is then responsible for routing messages to agents.

Notify

When your communication system's routing algorithm assigns a message in the queue to a specific service agent, the notify event alerts the agent of the incoming SMS message.

You can provide payloads in either JSON or XML format. A sample payload (Formatted JSON Data) follows.

Sample Code


```
{
   "payload":{
      "Type":"MESSAGE",
      "EventType":"INBOUND",
      "Action":"NOTIFY",
      "ANI":"+30040300597",
      "Text":"This is SMS text",
      "ExternalReferenceID":"77FB2990D24411EAAA5EBC019352B05E",
}
}
```


Note

`ExternalReferenceID` and `ExternalOriginalReferenceID` can be maximum of 35 alpha-numeric characters, no special characters or dashes.

You need to create a communication system and provide that system ID in the live activity configuration. See the related link at the bottom of this page for more details.

Accept

Your third-party communication system uses the **accept** event to indicate to SAP Service Cloud that an e-mail message has been accepted by an agent for further processing.

The **accept** event creates a new e-mail activity in SAP Service Cloud, and records the time and date.

A sample payload (Formatted JSON Data) follows.

Sample Code


```
{
   "payload":{
      "Type":"MESSAGE",
      "EventType":"INBOUND",
      "ANI":"+30040300597",
      "Text":"This is SMS text",
      "ExternalReferenceID":"77FB2990D24411EAAA5EBC019352B05E",
      "ExternalOriginalReferenceID":"E0163EA718FC1FFABDD5608C895AEF67"
}
}
```


Update Activity

Your communication system uses the update activity to upload a transcript with a messaging activity. When an agent concludes a chat-like interaction with a customer using SMS, the external communication system can upload the entire transcript to one messaging activity.

SAP Service Cloud supports only plain text for transcripts. Your external communication system must convert transcripts to plain text before uploading.

A sample payload (Formatted JSON Data) follows.

Sample Code


```
{
   "payload":{
      "Type":"MESSAGE",
      "EventType":"UPDATEACTIVITY",
      "Action":"END",
      "ExternalReferenceID":"77FB2990D24411EAAA5EBC019352B05E",
      "Transcript":"+30040300597 : Hi\nhelp@ssupport.com :
Hi\nhelp@ssupport.com : how you doing?\n+30040300597 : Please reschedule appt
to tomorrow.\nhelp@ssupport.com :Sure! Will look into that."
}
}
```

CAD Information

SAP Service Cloud allows external communication systems to pass call attached data (CAD), or interactive voice response (IVR) information to be displayed to agents in the live activity center.

Supported CAD Fields

Attribute	Payload Field Key
Business Partner Number	CustomerUUID
Ticket ID	TicketID
Serial ID	Serial
External ID	ExternalID
E-mail ID	Email
Phone Number	ANI
Custom Field 1	Custom_1
Custom Field 2	Custom_2
Custom Field 3	Custom_3
Custom Field 4	Custom_4

The information passed in these fields is displayed as-is in the live activity center. Any other functionality required using the CAD parameters must be implemented through custom extensions.

Events that support CAD parameters are `NOTIFY`, `ACCEPT`, and `TRANSFER`.

A sample payload follows.

Sample Code

```
<?xml version="1.0" encoding="UTF-8"?>
<payload>
   <Type>MESSAGE</Type>
   <EventType>INBOUND</EventType>
   <ACTION>NOTIFY</ACTION>
   <ANI>+358403573592</ANI>
   <ExternalReferenceID>EA42D48FEAD3EA11AA5EBC019352B05E</ExternalReferenceID>
   <ExternalOriginalReferenceID>E0163EA718FC1FFABDD5608C895AEF67</
ExternalOriginalReferenceID>
   <CustomerUUID>123456</CustomerUUID>
   <TicketID>983475</TicketID>
   <Serial>987987987987</Serial>
   <Email>johndoe@example.com</Email>
   <Custom_1>CAD4<Custom_1>
   <Custom_2>CAD5<Custom_2>
   <Custom_3>CAD6<Custom_3>
   <Custom_4>CAD7<Custom_4>
</payload>
```

Related Information

[Messaging Communication Channel [page 447]](#)
  Your customers can request support by sending an SMS text message.

[Configure Live Activity Settings [page 424]](#)
  Set the live activity options for your solution.

13.4.3 Use Live Activity Search

Live Activity Search in the Fiori client works in the same way for inbound and outbound calls.

When a phone call is passed to the solution, two searches can take place:

1. An automatic search on the ANI information (for inbound calls) is used to display any matching caller information on the incoming call notification.
2. Default search when the *Live Activity Center* opens based on information passed by your interactive voice response (IVR) system.

If they are passed by the IVR system, the default search includes the following parameters:

- Phone number: returns any contacts, accounts or individual customers containing a matching phone number
- Serial ID: returns any matching registered products
- Ticket ID: returns any matching tickets

Additional information passed from the IVR system appears at the top right of the *Live Activity Center*. The default search ignores this additional information.

> i Note
>
> You can configure the search parameters to exclude Serial ID and Ticket ID.

13.4.4 Live Activity Actions

For incoming or outbound calls, when you click the call activity display window, the *Live Activity Center* screen displays. You can perform some tasks in this screen.

Search Results:

Based on the defined parameters, the search results display all associated information for that specific phone number.

The agent can confirm a customer by clicking the icon. This means that the customer becomes the default CTI Customer.

> i Note
>
> This action is available for all objects.

You can click on the phone call link symbol to link to that specific ticket. The *Linked Ticket ID* displays in the *Call Information* section.

> **Note**
>
> A phone activity link is available only for tickets.

Notes:

Agents can capture notes in the *Notes* section.

New:

From the Live Activity Center screen, you can create a new Ticket, Individual Customer, Contact, or Account.

13.4.5 Enhanced Live Activity Search

As a service agent, you can revert back to the default search result any time.

When you click to display the *Live Activity* center from an incoming call, the system displays an information list based on associated information for that telephone number. Based on your need, you may search for other information in the *Live Activity* center *Search* field. However, you always have the option to go back to the first search result displayed by the system. The *Reset Default Search* tooltip for the icon next to the *Search* field, lets you go back to the system displayed search result.

13.4.6 Embedded Components

Live activity Center includes anchors for custom embedded components. You can create custom component with the Cloud Applications Studio such as softphone controls, mashups, and third party integration.

13.4.7 Personalize the Live Activity Pane for Embedded CTI Integration

Enable the Live activity pane to use native CTI support

Once your solution is configured for native CTI support you must adapt or personalize the UI to enable this functionality.

Procedure

Procedure

1. Log in the client.
2. Open the *Live Activity* pane and select *Personalize* from the pane settings menu at the top right.

   This opens the Live Activity page for editing.
3. Choose *Adapt* > *Enter Adaptation Mode*.
4. Choose *Adapt* > *Edit Screen*.

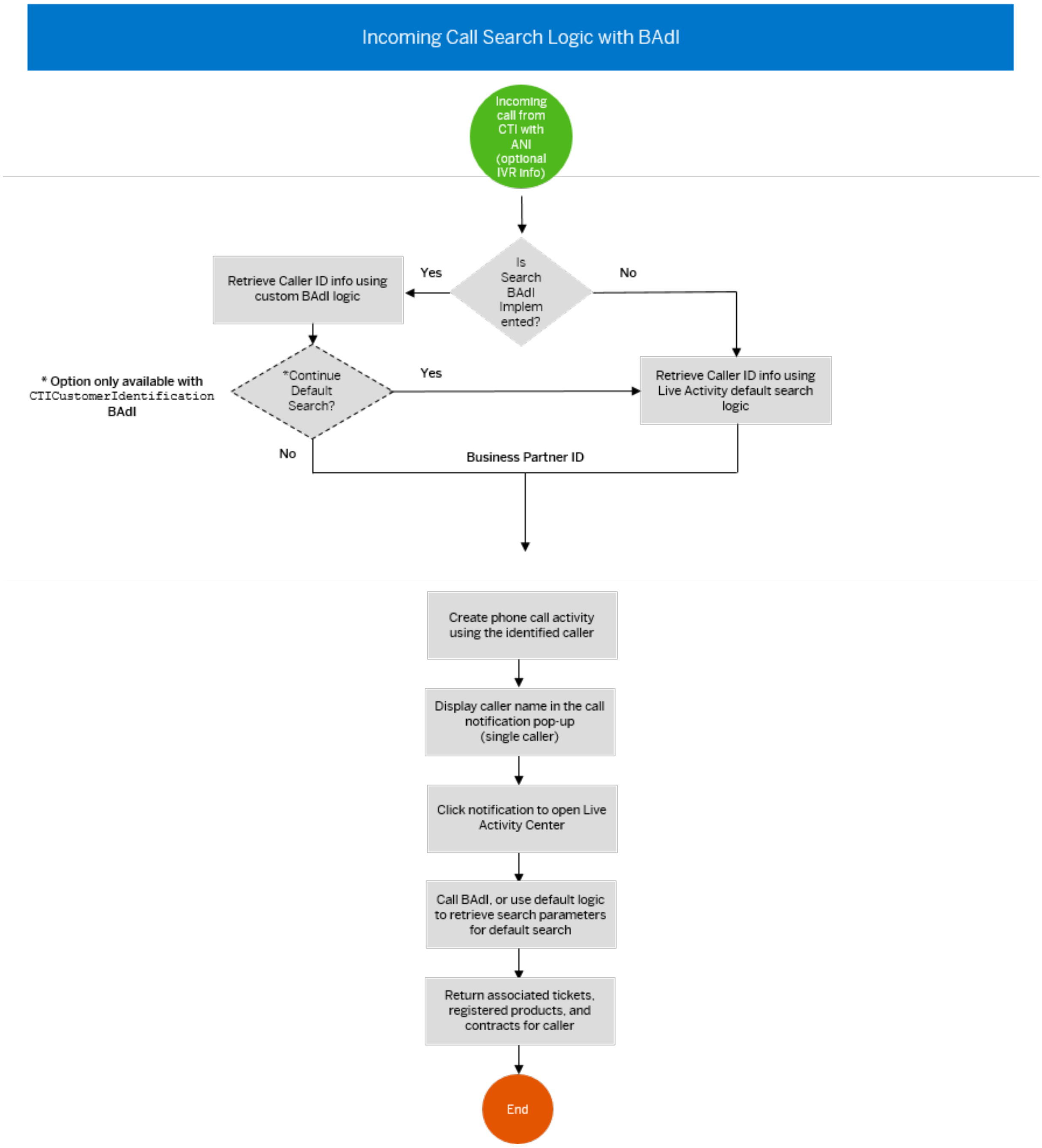
   The **Adapt Pane** opens for the **Live Activity** page.
5. If necessary, remove the checkmark in the **Visible** column for the sections titled:
   - Inbound Call Page
   - Outbound Call Page
6. Check the box in the **Visible** column for the section titled:
   - Embedded CTI Integration
7. Save and Publish the changes.
8. Close the **Live Activity** page.
9. Refresh your browser window to see the changes.

13.4.8 Custom Live Activity Customer Search BAdI Exit

Live Activity Center provides you with the option to identify customers for incoming calls by using custom logic with BAdI Exits.

You can override the default search for caller identification and implement your own logic to identify the caller. From there the process is similar to a regular phone call.

For a phone call activity, the system uses the caller returned by the defined BAdI logic instead of default search.



There are two BAdI exits available for custom search logic and both use the same input parameters:

- `CTICustomerIdentification` - newer option, recommended
- `CTICustomerSearch` - original option, still supported

Namespace: http://sap.com/xi/AP/FO/Activity/Global

Enhancement Option: CTICustomerIdentification **or** CTICustomerSearch

LiveActivityCallHandleInputParameter : InputData/result

Element	Data Type	Details
InputData.ANI	String	Phone number from caller ID data
InputData.BusinessPartnerID	String	Business partner ID
InputData.CustomField1	String	Custom field 1 data
InputData.CustomField2	String	Custom field 2 data
InputData.CustomField3	String	Custom field 3 data
InputData.CustomField4	String	Custom field 4 data
InputData.CustomField5	String	Custom field 5 data
InputData.CustomField6	String	Custom field 6 data
InputData.DNIS	String	Dialed number identification service information - number caller dialed
InputData.ExternalReferenceID	String	Call reference ID
InputData.PhoneActivityUUID	String	Phone call activity ID
InputData.SerialNumber	String	Registered product serial number
InputData.TicketID	String	Ticket ID number

Example BAdI code:

Sample Code

```
/*
                Add your SAP Business ByDesign scripting language
implementation for:
                Enhancement Option: CTICustomerIdentification
                Operation: CUSTOMER_IDENTIFICATION

                Script file signature
                ----------------------------
                Parameter: InputData of type
LiveActivityCallHandleInputParameter
                Returns: LiveActivityCTICustomerIdentificationInputParameter

                Note:
                - To use code completion, press CTRL+J.
                */
                import AP.FO.Activity.Global;

                var result :
LiveActivityCTICustomerIdentificationInputParameter;


                /*

                Supported Fields as input data.

                InputData.ANI;
                InputData.BusinessPartnerID;
                InputData.CustomField1;
                InputData.CustomField2;
                InputData.CustomField3;
                InputData.CustomField4;
                InputData.CustomField5;
                InputData.CustomField6;
                InputData.DNIS;
```

```
                InputData.ExternalReferenceID;
                InputData.PhoneActivityUUID;
                InputData.SerialNumber;
                InputData.TicketID;

                */

                result.IdentifiedCustomer.Add("1234"); // 1234 is the C4C
Customer ID

                if(result.IdentifiedCustomer.Count() <= 0) // if Customer not
found
                {
                result.ContinueStandardIdentificationLogic = true; // Setting
ContinueStandardIdentificationLogic to true will execute C4C standard caller
identification Search
                }


                return result;
```

13.4.9 Support for Multiple CTI Vendors

Multiple computer telephony integration (CTI) systems can be configured for one SAP Cloud for Customer tenant.

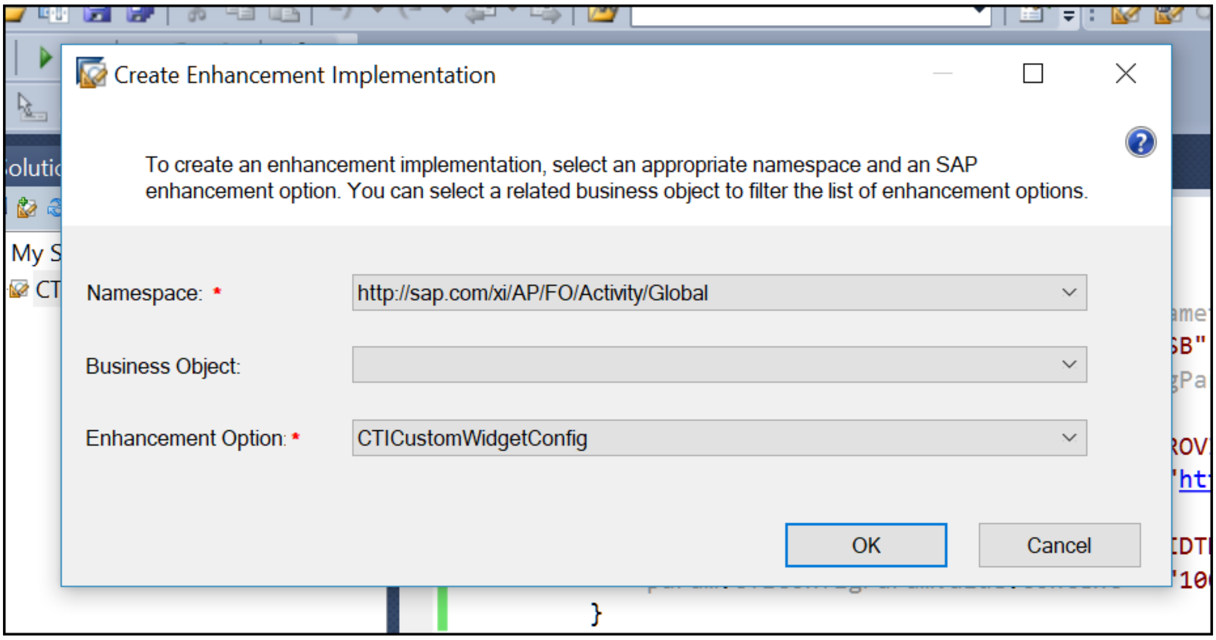
Use a BAdI exit to configure different CTI providers for widget-based integration in the Fiori client.

Administrators maintain the widget URL and other related properties on the *Live Activity Configuration* screen.

The BAdI : "CTI_WIDGET_URL", allows you to overwrite the default configuration maintained in Live Activity Configuration to influence the widget details at runtime. This BAdI is triggered only once, when the user logs in. Based on the output from the PDI, the widget and call popover are loaded. The BAdI is not called again until the user logs in again or reloads the browser.

Namespace: http://sap.com/xi/AP/FO/Activity/Global

Enhancement Option: CTICustomWidgetConfig



InputData and result are both of type: LiveActivityCTIWidgetConfigInputParameter

LiveActivityCTIWidgetConfigInputParameter : InputData/result

Element	Data Type	Details
InputData.LoggedInUser.content	String	Logged In User ID
InputData.LoggedInUser.content	InputData.LoggedInUser.content	Default Widget Config from Live Activity Configuration

LiveActivityCTIWidgetConfigParams : InputData.CTIWidgetConfigParams / result.CTIWidgetConfigParams

Element	Data Type	Details
CTIConfigParamKey.content	String	Parameter Key from Live Activity Configuration
CTIConfigParamValue.content	String	Parameter Value from Live Activity Configuration

Possible values of CTIConfigParamKey.content

Parameter Key	Description
PROVIDER_ID	This parameter does not influence any behavior in the Live Activity Call flow.
PROVIDER_URL	Widget URL - loaded in the call popover for call handling
DISPLAY	Display Provider Control flag. If this is true ("X"), the provider control is shown in the call popover. If false (" "), the provider control is hidden.
HEIGHT	Height of the provider control (numeric value only no units required - px, rem, and so forth)
WIDTH	Width of the provider control. (numeric value only no units required - px, rem, and so forth). Assumes minimum width to be 300.

Example BAdI code:

Sample Code

```
/*
    Add your SAP Business ByDesign scripting language implementation for:
        Enhancement Option: CTICustomWidgetConfig
        Operation: UPDATE_WIDGET_DETAILS

        Script file signature
        ----------------------------
        Parameter: InputData of type LiveActivityCTIWidgetConfigInputParameter
        Returns: LiveActivityCTIWidgetConfigInputParameter

    Note:
      - To use code completion, press CTRL+J.
*/
import AP.FO.Activity.Global;

var result : LiveActivityCTIWidgetConfigInputParameter;
if (InputData.LoggedInUser.content == "GESERZ0AHSB") {
    var defaultParams = InputData.CTIWidgetConfigParams;
    foreach(var param in defaultParams){
        if(param.CTIConfigParamKey.content == "PROVIDER_URL"){
            param.CTIConfigParamValue.content = "https://
servicecloudcti.cfapps.eu10.hana.ondemand.com";
        }
        if(param.CTIConfigParamKey.content == "WIDTH"){
            param.CTIConfigParamValue.content = "1000";
        }
        result.CTIWidgetConfigParams.Add(param);
    }
}
return result;
```

13.5 Messaging Communication Channel

Your customers can request support by sending an SMS text message.

Customers can send a text message to your company support number and trigger the following actions:

- Create a ticket
- Provide additional information about a ticket

As a service agent, you can respond to the SMS messages associated with a ticket.

Enable Messaging [page 448]
To use messaging as a communication channel for creating and responding to customer service tickets, administrators must scope Messaging via *Business Configuration*.

Configure SMS Channels [page 448]
Administrators can set up your SAP Cloud for Customer system to include messaging services, such as SMS, as communication channels for creating and responding to customer service tickets.

Create Messaging Channels [page 450]
The Administrator could use the short codes provided by the gateway provider, and the mashup web service, to set up the messaging channels that would generate tickets from incoming SMS messages.

13.5.1 Enable Messaging

To use messaging as a communication channel for creating and responding to customer service tickets, administrators must scope Messaging via *Business Configuration*.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Sales* > *Account and Activity Management* > *Activity Management* and select the scoping question: **Do you want to record messaging activity?**

With this setting, incoming SMS messages automatically generate a new ticket, or are appended to an existing open ticket. In addition, an individual customer profile is generated from the sender phone number if the phone number is not matched to any existing customers or account contacts.

13.5.2 Configure SMS Channels

Administrators can set up your SAP Cloud for Customer system to include messaging services, such as SMS, as communication channels for creating and responding to customer service tickets.

Each time a customer sends a text message to a specified routing number (short code), a ticket is created and routed to a team, or agent queue based on the defined rules.

Follow the tasks described in the following topics to configure SMS channels.

13.5.2.1 Create a Communication System as a Web Service

Administrators can create a new communication system and maintain the required details.

Go to *Administrator* > *General Settings* > *Integration* > *Communication System*, and create a new communication system. Maintain the following details:

- Host Name: Domain name for the gateway provider
- System Access Type: Internet
- System Instances ID (same as the communication system ID)
- Preferred Application Protocol (under *System Instances*) : *Web Service*.

> **Note**
>
> Activate the new communication system and make note of the system ID that you would have specify when creating the communication arrangement.

13.5.2.2 Set Up a Communication Arrangement

The Administrator would create a new communication arrangement with **Messaging Service** as the communication scenario.

Maintain the following:

- The System Instance ID under *Define Business Data* would be the same as the one you entered when you created the communication system.
- Under *Define Technical Data*, click *Edit Credentials*, and maintain a password for the system ID. Make a note of this user ID and password, as you would have to provide this information to the gateway provider to obtain the routing numbers, also known as short codes.

13.5.2.3 Request Short Codes and Outbound Endpoint from Gateway Provider

The administrator would have to provide the gateway provider with inbound and outbound endpoint URLs who would require them to provision the short codes.

Inbound SMS Messages

Share the following information with the gateway provider:

- The inbound endpoint URL, which would be used by the gateway provider for posting incoming SMS messages. The URL is a REST web service call, via HTTP Post method. Basic Authentication is required while making this REST call.

  > Example
  >
  > **Example of Inbound Endpoint**
  >
  > https://my1234.sapbydesign.com)/sap/ap/srt/rest/sap/II_CODCRM_SRQ_FROM_MS_ACT_IN/sap/PROCESS_MESSAGING_SERVICE/

- User ID and password that you maintained when you set up the communication arrangement.

Outbound SMS Messages

Request your gateway provider to supply an endpoint URL for outbound SMS messages.

13.5.2.4 Create Mashup Web Service for Outbound Messages

The administrator would have to create a mashup web service to reply to inbound SMS messages.

Go to *Administrator* > *Mashup Web Services*. Maintain the following when creating a new mashup web service:

- If you are using SAP SMS 365 as the gateway provider, choose *New* and select *Rest Service*. Other gateway providers may use a different type of service.

- The solution only supports the POST method with an XML Body payload.
- In the General Information area, enter the service name, and set the status to active.
- In the Service Information area, enter the required parameters based on the API properties of the gateway provider. It would include the outbound endpoint URL, and the following hash tags and square brackets as place holders that would be replaced by the actual parameters:
  - [#SUBJECT]
  - [#PHONE_NUMBERS]
  - [#MESSAGE]
  - [#SHORTCODE]
- In the case of SAP SMS 365, the gateway utilizes body XML format, which, when properly formatted appears as follows:

  Version=2.0
  Subject=[#SUBJECT]
  List=[#PHONE_NUMBERS]
  Text=[#MESSAGE]
  SplitText=YES
  OriginatingAddress=[#SHORTCODE]
- For encoding an outgoing SMS in UTF8, add the following tag in the mashup payload: `EncodeUTF8=TRUE` The solution encodes the message in UTF8 format before sending it out. This is in addition to any other encoding requirements that your SMS provider may impose.

  > **i Note**
  >
  > If UTF8 encoding is not needed, remove this tag from the payload. Do **NOT** set EncodeUTF8 to FALSE.

  The following is an example of an XML body payload for SAP SMS 365 with UTF8 encoding enabled:

  Version=2.0
  Subject=[#SUBJECT]
  List=[#PHONE_NUMBERS]
  Text=[#MESSAGE]
  SplitText=YES
  OriginatingAddress=[#SHORTCODE]
  DCS=UTF8
  EncodeUTF8=TRUE

> **i Note**
>
> Make a note of the Service ID number the system assigned to this service. Enter the service ID when you set up your messaging channels.

13.5.3 Create Messaging Channels

The Administrator could use the short codes provided by the gateway provider, and the mashup web service, to set up the messaging channels that would generate tickets from incoming SMS messages.

Go to *Administrator* > *Service and Social* > *Communication Channels* > *Messaging Services*.

SMS Inbound Configuration

Maintain the *Channel ID*, *Channel Name Short Code*, *Ticket Type* (default ticket type would be used if not maintained), and *Ticket Options*.for this channel. Enter the mashup service ID you noted in the previous task for outbound messages from this channel.

SMS Outbound Configuration

Specify the ID of the mashup service you configured for your gateway provider.

13.5.3.1 Set Up Routing Rules for Tickets from Messages

Once the administrator has added messaging channels, create work distribution rules to route the resulting tickets to the teams, or agents assigned to work on them.

For more information, see.Configure Ticket Routing Rules [page 83].

13.5.3.2 Business Communication Monitoring for Messages

You can use business communication monitoring to verify whether SMS messages have been transmitted successfully or not. If technical errors occur, they can be identified and resolved to prevent problems in follow-on processes or with your business partner

13.6 Chat Communication Channel

SAP Cloud for Service can integrate third-party chat solutions to support service processes.

Once chat is integrated with your solution your customers can interact with you in the following ways:

- Send a message on social media or via email. The service agent responds with a chat URL and requests the customer to enter the chat.
- Click a chat link to chat with the service agent currently processing the customer ticket. At the end of the chat, the ticket is updated with the chat transcript.

Example

Your customer, Christina, is browsing your company web pages looking for support. She finds the chat button and selects it. An initial information form displays asking for her name, email address, subject/topic, and other optional fields. Christina enters her information in all the required fields. Then the system adds additional information for you, the agent, who will be helping the Christina, and sends this to the agent or processor with the appropriate skill set. You, the service agent, send Christina a URL to begin the chat session. She then sees the welcome prompt for chat.

i Note

Depending on your system configuration, the chat transcript may be available to you after the live chat has ended in the ticket interactions.

! Restriction

The transcript does not include emoji that appear in the chat.

13.6.1 Configure Chat

Administrators would have to configure and enable a Chat Provider as a communication channel.

Context

Enable and add Chat as a communication channel to route and respond to tickets.

Procedure

1. Log on to the system.
2. Go to *Administrator* > *Service and Social* > *Communication Channels* > *Chat Provider*.
3. In the *Chat Provider Settings* screen maintain the following details:

Fields	Description
Channel ID	Any ID
Channel Name	Any Name
Service ID for API	Mashup Web Service ID
Base Chat URL	For calling the Mashup
Attributes Mapping	Mapping between Mashup Parameter and Service Request Parameter

4. Save and close.

13.7 Communication Channel for Support Portal Integration

Set up a support portal using either SAP HANA Cloud Portal or an external support portal provider.

For Customer Service you could set up a support portal using either SAP HANA Cloud Portal or an external support portal. However, for Employee Support, in addition to above options, you can also use the ASKHR solution from Employee Central.

A support portal enables your customers or employees to create and update tickets in SAP Cloud for Customer using a browser-based interface.

> i Note
>
> For setting up Support Portal, see documentation for the topic **Setting up Your Partner Portal** in the related information section.

Support Portal with SAP Business Technology Platform [page 453]
Set up a support portal for customers or employees to create and update tickets.

Rich Text Content in Self-Service Portal Requests [page 453]
Support rich text content, images, and extension fields in tickets created from self-service portals.

13.7.1 Support Portal with SAP Business Technology Platform

Set up a support portal for customers or employees to create and update tickets.

Enable your customers and employees to report incidents and create support requests with a web-enabled portal based on SAP Business Technology Platform.

> i Note
>
> Employee support requires integration with SucessFactors Employee Central.

- The portal site template is responsive - designed to run on mobile and desktop browsers
- No configuration necessary on your SAP Cloud for Customer system - Integration via oData APIs
- Fully customizable solution - incorporate your own branding

13.7.2 Rich Text Content in Self-Service Portal Requests

Support rich text content, images, and extension fields in tickets created from self-service portals.

Your organization maintains a website that enables your customers to create service requests. These requests must support both rich text capabilities and extension fields. SAP Service Cloud now supports these customer-generated tickets with a series of enhancements:

- New business activity type: **Memo**. Use the memo activity to capture content entered on the website. The data is then transferred to the ticket object.

- Memo list view and detail view
- Interactions – display memo activities in list view with **rich text content** and **extension fields**
- Response Editor – supports rich text content

The Memo activity is ideal for new customers starting a new implementation. If you already use portal capabilities, once you start using the new Memo activity, the data is stored in the Memo Activity and not directly in the Ticket. You can roll out the Memo activity to your users and consider it for your reporting use cases.

Memo Activity with Existing Self-Service Portal

Once you enable memo activities, you cannot switch back to the previous method of creating portal tickets. Therefore, we recommend that you start with your test tenant to check if the memo activity meets all your requirements. To enable the memo activity in your solution, create an incident requesting that SAP enable memo activities for portal tickets.

13.8 Remove Personal Data in Communication Channels

The depersonalization function allows you to remove personal data from a business object to ensure compliance with the applicable data protection requirements. Depersonalization is only available for users with access to the Data Protection and Privacy work center.

The following table displays delete or depersonalize functions available for different communication channels:

Business Objects	Delete	Depersonalize
E-mail	Yes	Yes
Phone Call	Yes	Yes
Chat	Yes	
Messaging	Yes	
Social Media/User Profile	Yes	

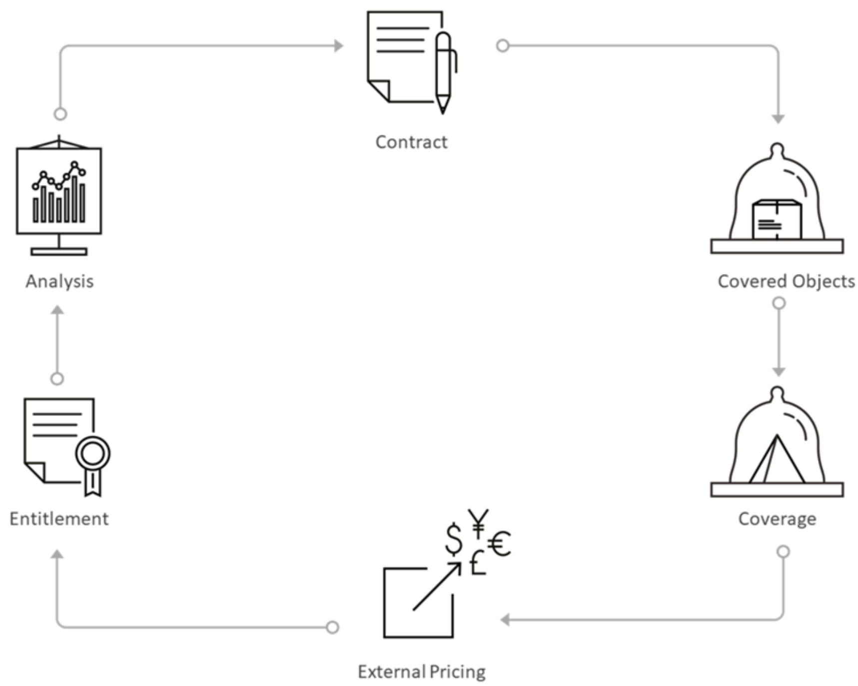
Related Information

Personal Data Protection and Privacy

14 Contracts

Learn about sales and service contracts which allow you to quickly create and maintain agreements, maintain contracts header, item, and covered objects, as well as create contracts from opportunities and sales orders.

> **i Note**
>
> Administrators and end-users will find details for both service and sales contracts in this solution guide. Any pertinent details that apply strictly to service contracts or solely for sales contracts will clearly identified. This document in available in both the Solution Guide for SAP Cloud for Sales as well as the Solution Guide for SAP Cloud for Service.



With service contracts you can manage customer support agreements between you and your customers for items according to the warranty coverage. With the solution you can track details about the type of support that your customers are eligible for as long as the customer has an active contract. Your contract administration team will define the contract details, such as entitlements (for service contracts), limited products, and pricing. In addition, depending on the contract template, other details such as support coverage based on hours, service level agreements (SLAs), as well support types may also be included in the contract.

Use sales contracts to determine contracts for quantity sales contracts with SAP ERP integration and contract determination on item level for quotes and orders. One of the principle features of sales contracts includes bi-directional quantity sales contract integration with SAP ERP. In addition, with sales contracts, contract determination on item level for orders and quotes is also available.

Whether you belong to the service team or sales team, as the end-user responsible for a customer contract, you simply need to create a contract from a ticket, opportunity, or a customer quote. From there, when a customer contacts you with an issue, the required information, such as contract subject matter, covered objects, signature date and validity period are bundled in one place.

The *Contracts* work center supports you in creating service and sales contracts based on the required details as well as displaying overview details about active contracts. As soon as you have finalized a contract with a customer and it is active, the contract is determined during ticket creation and automatically added to the ticket. If the contract contains SLAs (service level agreements), you will see them after the determination in the ticket.

As a manager, with contract analysis you can view and analyze contract data such as, contract items, contract value, release history, and more.

14.1 Scope and Configure Service and Sales Contracts

Administrators can configure service and or sales contracts using scoping, scoping questions, and fine-tuning activities.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Service* > *Entitlement Management* > *Service Contract Management* > *Questions* > *Service Contract Management.* Place a checkmark in the desired service contract sections and save your entries.

Administrators can configure sales contracts using scoping, scoping questions, and fine-tuning activities.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Sales* > *New Business* > *Sales Contracts* > *Business Option: Sales Contracts* > *Questions*. Place a checkmark in the desired sections and save your entries.

14.1.1 Configure Document Types

Administrators can create custom document types to streamline filtering, define reports, or facilitate assignments.

Administrators set-up documents types for sales and service contracts to enable data exchange with external applications such as SAP ERP. Some standard document types are delivered by the solution. Administrator can create document types that are transferable to SAP ERP configured as *External Data* in the solution.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *Opportunities* > *Document Types* > *Maintain Document Types* to edit your opportunity types.

14.1.2 Define Quote and Contract Document Types for SAP ERP Integration

Administrators can define quote, sales and service contract document types for SAP ERP with SAP Cloud for Customer quotes, sales, and service contracts.

The fine-tuning of *Document Types* allows multiple settings for SAP ERP integration. You can leverage each document type as a special business scenario/use case. Depending on your requirements, you can create multiple document types for your desired business scenarios.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *Activity Name: Sales Contracts, Service Contract, or Sales Quotes* > *Document Types* > *Maintain Document Types.* Select your *Document Type* and modify it to your business solution requirements.

External Pricing – A check in the box enables an external application such as SAP ERP, synchronously requests prices. The transaction simulation determines not only pricing, but sales quotes, free goods, product availability, and credit status based on SAP ERP customizing for this document type. From SAP Cloud for Customer, you trigger the external application, by clicking *Action* > *Request External Pricing.*

Replication – Administrators define the sales quote and the sales and service contract transfer behavior from your SAP on-premise system to your cloud solution by selecting one of the following options:

- *Bi-directional* – Sales quote edits in your cloud solution are replicated to your SAP on-premise system, syncing both quotes.

  > → Remember
  >
  > Your SAP on-premise system is the leading system for these sales quotes, sales, and, service contracts. Quotes created in your cloud solution can be replicated to your SAP on-premise system from *Action* > *Submit.* Quotes created in SAP ERP can be edited in SAP Cloud for Customer and the changes are replicated in SAP ERP.

- *Inbound* – Quote edits completed in your cloud solution are not replicated to your SAP on-premise system. Those quotes are overwritten if further replications are triggered from your SAP on-premise system.

  > i Note
  >
  > We recommend that you control editable fields and actions from the page layout and only open extension fields that do not require replication. (Creation of the sales quote is only possible in SAP ERP and changes performed in SAP Cloud for Customer are not sent to SAP ERP).

- *Empty* – Leaving this field blank indicates the sales quote stays in SAP Cloud for Customer, but this option still allows you to request external pricing.

> i Note
>
> This configuration only applies to new sales quotes as well as sales and service contracts. Existing sales quotes and sales and service contracts behave using the inherited document type configuration. Existing sales quotes and sales and service contracts behave as specified from the previous active document type configuration.

Asynchronous Pricing – Administrators can modify the settings for external pricing. A synchronous call is required to retrieve the complete pricing result from the SAP on-premise system to your cloud solution.

Replicated sales documents also require a synchronous pricing update once the sales document is updated during a save in SAP Cloud for Customer.

With this configuration, if the document was previously replicated, administrators can disable the synchronous pricing call to the external system. In addition, you can disable the synchronous call completely, which is valid for quotes created in your cloud solution. For both configuration options, the pricing status needs to be calculated successfully through the asynchronous call from the external system. Select the option that suits your business needs.

- *Empty* – Leaving this field blank triggers an automatic (once replicated) synchronous pricing call activation (You see pricing-related errors, but configuration has performance impacts.).
- *After replication* – If document was replicated successfully, an automatic synchronous pricing call is deactivated.
- *Always* – An automatic synchronous pricing call is always deactivated (leads to a performance advantage, but possible pricing call error messages are no longer displayed directly in the UI, only asynchronously).
  No matter the configuration, you can trigger pricing synchronously by clicking *Action* > *Request External Pricing.* With this configuration, avoid quote approvals that include external pricing elements.

> **i Note**
>
> To avoid data inconsistencies between SAP ERP and SAP Cloud for Customer, only replicated contracts are used in tickets.

> **→ Remember**
>
> Only new and sales and service contracts and sales quotes inherit changes in the document type configuration. Existing contracts and sales quotes behave as specified in past active document type configuration.

14.1.3 Define Contract Item Types

Administrators can explore and learn how to define contract item types.

Item types determine how an item category behaves in a contracts. Item item types are not necessary, but are relevant if you replicate quotes with an on premise system and administrators should remember to configure document types.

You can define alternative item types for the item types delivered in the standard solution. These alternative item types are then displayed for the corresponding items under the *Products* tab for contracts. You can use these custom item types to process items based on SAP ERP item categories. You can also use item types for, in order simulations to retrieve external pricing.

Define your own item types to reflect your company practices:

1. To quickly navigate to the fine-tuning activity, go to *Business Configuration* > *Overview* > *Sort by: Activities* > *Search* and type *Sales Quotes*.
2. Click *Contracts* > *Item Types* > *Maintain Item Types*.
3. Click *Add Row*.
4. Enter the desired details and save your entries.

i Note

If you want to define an item as a free sample or free good that should not affect pricing, flag it as *Not Relevant for Pricing*. When an item that is not relevant for pricing is added to a quote, it does contain a price. However, you can still add a price for this product manually.

14.1.4 Configure Sales Area Defaulting for Contracts

As an administrator, you can configure the sales area defaults for service and sales contracts.

Configure Sales Area Defaulting for service contracts by navigating to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Service* > *Entitlement Management* > *Service Contract Management* > *Business Option: Sales Area Determination for Contracts*.

Configure Sales Area Defaulting for sales contracts by navigating to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *New Business* > *Sales Contracts* > *Business Option: Sales Area Determination for Contracts*.

14.1.5 Configure Item Type Determination Rules

Administrators can configure multiple document and item types for contracts.

To edit involved parties, go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *Service Contracts* > *Item Type Determination Rules* > *Maintain Item Type Determination Rules for Contracts*.

14.1.6 Configure Involved Parties

Administrators can maintain involved parties for different types of items, such as leads or activities. In this step, you can assign party roles and use determination rules for involved parties.

To edit involved parties, go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *Sales Contract* > *Item Types* > *Involved Parties* > *Maintain Involved Parties.*

14.1.7 Configure Customer from Ship-To Party Role Determination

Explore how administrators can activate or deactivate determination steps for your party roles for sales contracts.

1. Go to *Business Configuration* > *Activity List* > *Service Contracts (or Sales Contracts)* > *Maintain Involved Parties* .
2. Go to *Party Role Account*.
3. Click *Maintain Determinations*.
4. Flag the determination steps.
5. Save and activate the desired determination.

14.1.8 Configure Contract Determination Dates

Administrators can configure active contract determination based on contract validity criteria for requested dates in related tickets.

Go to *Business Configuration* > *Implementation Projects* . Select your project and navigate to *Edit Project Scope* > *Questions* > *Service* > *Customer Care* > *Service Request Management* > *Group: Entitlement Usage for Service Requests* and select the scoping question: *Do you want to determine activated service contracts, based on the contract validity period at the time of the requested date in the ticket?*

The following use cases are relevant when your business requires date considerations for future and past tickets.

Date Considerations for Future Tickets

Future tickets are ones you create with a future request date. Contracts, which are currently in *Ready* status, can be determined by ticket creation. A typical use case is tickets created in advance by maintenance plan. The determination occurs if the status is *Active* at the requested future date of the service work ticket.

To create a ticket using future dates:

1. In the new work ticket, enter a requested date in the future.
2. Enter the entitled product in ticket.
3. The contract, with the applicable future date is determined.

14.1.9 Configure the Contract Determination Log

Learn how to add the contract determination log.

Go to *Administrator* > *Service and Social* > *Contract Support* > *Contract Determination Log* .

14.1.10 Configure Number Ranges for Contracts

Administrators need to configure number ranges to define the range of numbers assigned to sales and service contracts.

1. To quickly navigate to the fine-tuning activity, go to *Business Configuration* > *Overview* > *Activities* > *Search* and type *Number Ranges*.
2. Click *Maintain Number Range*.
3. On the following screen, review the default begin and end number that applies to sales quotes in the solution.
4. If you wish to define a different number range, choose *Change Current Number*.
5. On the following screen, enter the new current number, then click *Save and Close*.
6. Click *Save and Close* again.

14.1.11 Configure Contract Usage Restrictions

Learn how to set up usage restrictions for contracts to limit coverage based on additional criteria.

If you want to automatically restrict contracts to certain ticket types the first step is to create usage restrictions in the Contracts fine tuning activity.

1. Navigate to *Business Configuration* > *Implementation Projects.*
2. Select your implementation project and choose *Open Activity List.*
3. Select the *Fine-Tune* tab, and from the *Activity List*, choose *Contracts.*
4. Choose *Maintain Contract Usage Restriction* on the *Contracts* screen.
5. Add usage restriction codes and descriptions. Your codes should start with the letter **Z**.
6. Choose *Save and Close* when finished.

14.1.12 Configure Message Severity for Contracts

Upgrade, downgrade, or hide the severity level of errors and warnings for contracts.

You can configure message severity using the sales or service contract fine-tuning activity in the following location: *Business Configuration* > *Implementation Projects* > *First Implementation Project* > *Open Activity List* > *Fine-Tune* > *Sales Contracts (or Service Contracts)* > *Message Severity Configuration.*

14.1.13 Configure Covered Objects on Item Level

Administrators can maintain covered objects for items in a contract.

When a covered object is maintained at item level, this contract item is only determined if this covered object was set as reference object (in a ticket).

If there is no entry for a covered object on item level, this contract item can also be determined. The determination is then derived from either the covered objects of the next higher item level or by the covered objects stored on header level.

To configure this feature, go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Service Entitlement* > *Service Contract Management* > *Group: Covered Objects on Item Level* and select the scoping question: *Do you want to work with covered objects on an item level?*

14.1.14 Configure Release Authorized Parties

Administrators can configure the release authorized party for sales and or service contracts.

Go to *Business Configuration* > *Activity List* > *Service (or Sales)* > *Contracts* > *Involved Parties* and click the *Active* flag to activate *Authorized Party*. Next, in the *Involved Parties* tab, add the customer which is the authorized party.

14.1.15 Configure Object-Centric Contract Determination

Administrators can learn how to configure contract determination in tickets by scoping the system to determine the search strategy.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Service* > *Customer Care Service Request Management Group: Entitlement Usage for Service Requests* and select the scoping question: *Do you want to determine contracts in tickets (disregarding customer account) based only on Registered Products or Installation Points as reference?*

14.1.16 Define Custom Attachment Types for Contracts

Administrators can define additional documents types for attachments in contracts.

1. Go to *Business Configuration* > *Activity List* > *Customer-defined documents types for attachments*.
2. Place a check mark in the *Usage* section for contract header.
3. Click *Add Row*.
4. Enter an additional document type.
5. Save your entries.

Open a contract and navigate to *Attachments*, click *Add* to view the list of attachment types.

14.1.17 Configure Contract Restrictions Based on Ticket Type

Administrator can configure contract types and usage restrictions based on additional criteria such as ticket type.

You can create different contract document types with restricted coverage based on the context they are used in. You can associate specific contract types with specific ticket types to auto assign the appropriate contract for a ticket type.

Set up ticket document types to support contract restrictions as follows:

1. Go to *Business Configuration* > *Implementation Projects*.
2. Select your implementation project and choose *Open Activity List*.
3. Go to *Fine Tune* > *Activity List* > *Tickets for Customer Support* > *Tickets for Customer Support* > *Maintain Document Types*.
4. Add document types and descriptions. A new document type should start with the letter Z.
5. Select a *Contract Usage Restriction* for each document type as required.
6. Choose *Save* and *Close*when finished.

Users can specify usage restrictions for each contract item. When a user creates a work ticket, the system automatically applies the specified usage restrictions based on the ticket type.

14.1.18 Configure Contract Creation in Full Create Mode

Administrators can configure settings to create contract in full create mode. This allows you to skip a few additional UI steps required when creating in the quick create mode.

1. Navigate to *Administrator* > *Service and Social* > *Contract Configuration*.
2. Toggle the switch *Create Contracts in detail view* to *Yes*.
3. Sign out and sign in again to activate the change.

> **! Restriction**
>
> There is a limitation in this release. If you create contract in offline mode, you need to ensure that this configuration is deactivated.

14.1.19 Define Item Processing Codes for Tickets

Learn how to set-up item processing codes used for quantity contracts.

Context

Item processing codes are essential when working with quantity contracts. They determine how items (and their related products) are handled in the following business process. Specifically if there is an increase, decreases, or no impact in ticket items. Follow the steps below to set-up item processing codes for your business.

Procedure

1. 1. Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *Show All Activities* > *Tickets for Customer Support* > *Maintain Item Processing Codes*.
2. Select *Add Row*.
3. To create item processing codes, populate the required fields.
4. Save your entries.

14.1.20 Configure Contract Payment Terms

You configure payment terms in the solution, based on company business needs. Payment terms define when an invoice must be paid, and whether a discount is applicable, depending if payments were made within the agreed upon time period.

Configure payment terms for contracts under *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *Accounts* > *Payment Terms* > *Maintain Payment Terms.*

When working from the:

- *Contracts Header*, view the *Payment Terms*. Click the dropdown to select the correct payment term.
- *Contracts Items* tab, view the payment section in *General Data.* Click the dropdown to select the correct payment term.

14.1.21 Configure Offline Contract Item Determination

General availability has been made for administrators to configure contract item determination to use in offline mode. Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Service* > *Customer Care* > *Service Request Management* > and select the scoping question: *Do you want to determine contract items for tickets in offline mode?*

14.1.22 Modify Contract Types Using the Data Workbench

Administrators can use the *Data Workbench* to modify sales and service contract types even after they are created.

1. Navigate to the *Data Workbench.*
2. Export contracts.
3. Modify the contract type.
4. Update contracts in the *Data Workbench.*

14.1.23 Configure Excel Export Restriction for Contracts

Administrators can configure a restriction so that business role users cannot perform Excel exports for service and sales contracts.

Configure Excel export authorization restrictions by navigating to *Administrator* > *Business Roles* > *Select role (that includes the Contracts work center)* > *Fields & Actions* > *Business Actions Restrictions* > *Add row* and search for Microsoft Excel.

14.1.24 Remove Personal Data in Contracts

The depersonalization function allows users to remove personal data from a business object, such as contracts, to ensure compliance with the applicable data protection requirements.

Depersonalization is only available for users with access to the *Data Protection and Privacy* work center.

The *Data Privacy Management* tab allows those responsible for data protection issues in an organization to respond to personal information removal and disclosure.

Remove personal data in contracts by navigating to *Contracts* > *All Contracts (or select desired contracts* > *Actions* > *Depersonalize.*

Related Information

Personal Data Protection and Privacy

14.1.25 Configure Blocking Reasons for Sales Contracts

Administrators can configure blocking reasons for *Sales Contracts*.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Accounts* > *Sales Document Order Block Assignment* to configure the blocking reasons.

14.2 Create Contracts

Users can create a contract and add details such as name, service level, dates, and involved parties. Additional details such as covered objects, items, pricing, are added in their respective sections in the contract.

You can create the contract, request pricing, and send it to the customer for review before activating it upon receipt of the customer's signature. Further details such as covered objects, items, pricing, are added in their respective sections in the contract.

As long as contracts are in negotiations, such as an internal or external review process with customers, the contract status will remain with status *In Preparation*, meaning the contract is created but not ready to be used in service tickets.

You also have the option to select from existing contract templates which were are usually created by your contract administrator or manager. As an end-user, the contract template will help you save time by pre-populating fields especially for standard customer contract requests.

Some companies only have a fixed (standard) number of contracts with a defined portfolio of services in their market offering. Therefore, customized contracts won't be created and the contract representative will select one of the company's standard contracts.

Create a Contract [page 467]
Learn how to create a contract.

Create a Contract from a Template [page 470]
Create contracts using templates, which automatically populate data in selected fields.

Create Contracts from Accounts and Individual Customers [page 470]
Users can create a contract from accounts or individual customers.

Create a Contract from an Opportunity [page 471]
You can create contracts directly from the opportunity and some relevant details are copied to the contract. If desired, you can bypass creating an opportunity and create a contract (proposal) directly.

Create a Related Contract [page 472]
Create a related contract by copy everything into a new contract except the contract ID, external reference, signed on, begins on, ends on and internal comment.

Block Creation of Contracts [page 472]
You can maintain blocking reasons to block creation of *Sales Contracts* for specific accounts.

Assign Territories to Contracts [page 473]
Users can assign one territory to a contract, as well as search for and display territory changes in contracts.

14.2.1 Create a Contract

Learn how to create a contract.

1. Navigate to *Contracts* > *New*.
2. Add contract details.
3. Navigate to *Covered Objects* of the contract to search for the customer's product, preferably using the search function to look for the product's unique *Serial ID*.

   > **i Note**
   >
   > If you enter a serial ID, the corresponding product is added automatically. You can also use the *value help* to search for the serial ID or you can register it. To register a product select *New Registration* from the *value help*.

4. Select *Add* and the customer's desired product (covered object) are appended to the contract.

   > **i Note**
   >
   > Depending on how the product item was created in the solution, details such as the *serial ID*, *registered products*, *product category*, will be automatically populated in the contract fields.
   >
   > When adding product items to a covered object, select the *Product Value Selection* > *Show Advanced Filter* from the *Products* tab. This allows you to quickly filter filters such as *Product Category ID* and *Product Category Description*.

5. Navigate to the *Items*tab to assign for example, an entitlement product 'Extended warranty' for the previously added covered object.

   > **i Note**
   >
   > In this case, a product 'Extended Warranty´ has been added as a contract item. The desired warranty for example, 'Warranty 50%' is automatically added.

6. Assign an entitled services & parts product, for example 'Repair Hours'.

   > **i Note**
   >
   > This agreement gives the customer the right in case of an incident (within contract validity) to raise a claim of a 50% discount for all of the repair hours required to fix the product issue.

7. Save your entries.

14.2.1.1 Define Contract Item Types

Administrators can explore and learn how to define contract item types.

Item types determine how an item category behaves in a contracts. Item item types are not necessary, but are relevant if you replicate quotes with an on premise system and administrators should remember to configure document types.

You can define alternative item types for the item types delivered in the standard solution. These alternative item types are then displayed for the corresponding items under the *Products* tab for contracts. You can use these custom item types to process items based on SAP ERP item categories. You can also use item types for, in order simulations to retrieve external pricing.

Define your own item types to reflect your company practices:

1. To quickly navigate to the fine-tuning activity, go to *Business Configuration* > *Overview* > *Sort by: Activities* > *Search* and type *Sales Quotes*.
2. Click *Contracts* > *Item Types* > *Maintain Item Types*.
3. Click *Add Row*.
4. Enter the desired details and save your entries.

> **i Note**
>
> If you want to define an item as a free sample or free good that should not affect pricing, flag it as *Not Relevant for Pricing*. When an item that is not relevant for pricing is added to a quote, it does contain a price. However, you can still add a price for this product manually.

14.2.1.2 Configure Sales Area Defaulting for Contracts

As an administrator, you can configure the sales area defaults for service and sales contracts.

Configure Sales Area Defaulting for service contracts by navigating to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Service* > *Entitlement Management* > *Service Contract Management* > *Business Option: Sales Area Determination for Contracts*.

Configure Sales Area Defaulting for sales contracts by navigating to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *New Business* > *Sales Contracts* > *Business Option: Sales Area Determination for Contracts*.

14.2.1.3 Configure Number Ranges for Contracts

Administrators need to configure number ranges to define the range of numbers assigned to sales and service contracts.

1. To quickly navigate to the fine-tuning activity, go to *Business Configuration* > *Overview* > *Activities* > *Search* and type *Number Ranges*.
2. Click *Maintain Number Range*.
3. On the following screen, review the default begin and end number that applies to sales quotes in the solution.
4. If you wish to define a different number range, choose *Change Current Number*.
5. On the following screen, enter the new current number, then click *Save and Close*.
6. Click *Save and Close* again.

14.2.1.4 Configure Message Severity for Contracts

Upgrade, downgrade, or hide the severity level of errors and warnings for contracts.

You can configure message severity using the sales or service contract fine-tuning activity in the following location: *Business Configuration* > *Implementation Projects* > *First Implementation Project* > *Open Activity List* > *Fine-Tune* > *Sales Contracts (or Service Contracts)* > *Message Severity Configuration.*

14.2.1.5 Configure Contract Creation in Full Create Mode

Administrators can configure settings to create contract in full create mode. This allows you to skip a few additional UI steps required when creating in the quick create mode.

1. Navigate to *Administrator* > *Service and Social* > *Contract Configuration*.
2. Toggle the switch *Create Contracts in detail view* to *Yes*.
3. Sign out and sign in again to activate the change.

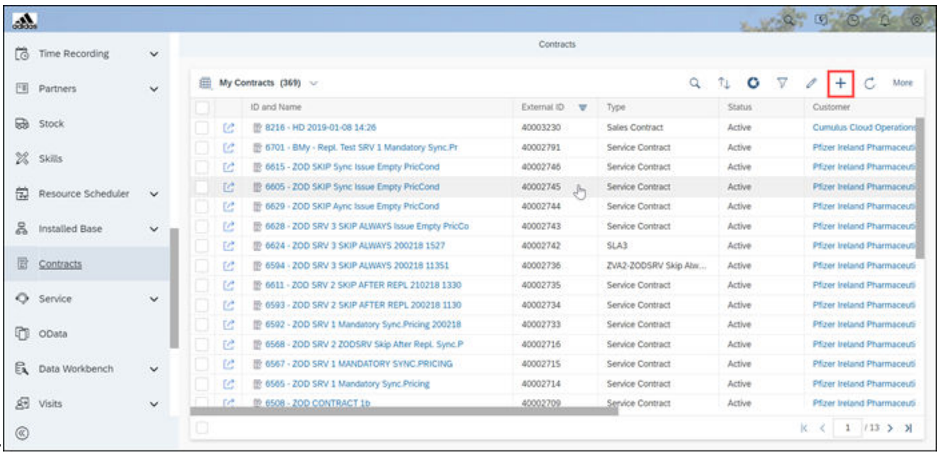
> **! Restriction**
>
> There is a limitation in this release. If you create contract in offline mode, you need to ensure that this configuration is deactivated.

14.2.1.6 Create Contract in Full Create Mode

Administrators can configure settings to create contracts in full create mode.

This feature allows you to skip additional steps that are required to create a contract in quick create mode.

Use full create to start a new contract in the contract list or in the *Contract* tab of customer master data.



14.2.1.6.1 Configure Full Create Mode

To enable the full create option for contract creation, follow these steps:

1. Navigate to *Administrator* > *Service and Social* > *Contract Configuration*.
2. Toggle the switch *Create Contracts in detail view* to *Yes*.
3. Sign out and sign in again to activate the change.

14.2.2 Create a Contract from a Template

Create contracts using templates, which automatically populate data in selected fields.

Context

Contract Templates can be used to accelerate and standardize contract creation.

Procedure

1. Create a new contract in the *Contracts* work center.
2. Click *Contract Template.*
3. Select the desired sales contract template.
4. Accept the template default contract data.
5. Click *Save and Open.*
6. Assign remaining entries such as the *Customer* details.

14.2.3 Create Contracts from Accounts and Individual Customers

Users can create a contract from accounts or individual customers.

1. Open an existing account or individual customer.
2. Go to the *Contracts* tab.
3. Click *New*.
4. Click *New Contract*.
5. The account you opened in the previous step is defaulted in the new contract.

> **i Note**
>
> The contract type (sales or service) is defaulted and equal to the type applied by the user in the last contract setup.

> **i Note**
>
> You can also default the sales area.

14.2.4 Create a Contract from an Opportunity

You can create contracts directly from the opportunity and some relevant details are copied to the contract. If desired, you can bypass creating an opportunity and create a contract (proposal) directly.

Context

In some cases, a customer might during their decision and proposal process inquire about a service contract before purchasing it which is why an opportunity is created for a contract.

For the companies providing contracts, opportunities are an indispensable prerequisite for calculating the company revenue forecast.

Procedure

1. Navigate to *Opportunities* > *New*.
2. Enter the required details such as the opportunity name, account, and owner.
3. Enter additional opportunity details such as the sales team, required service, and expected value.
4. Navigate to the *Contracts* tab of the opportunity and click *New*.
5. Save your entries.

14.2.5 Create a Related Contract

Create a related contract by copy everything into a new contract except the contract ID, external reference, signed on, begins on, ends on and internal comment.

Context

Related Contracts are associated and processed, for example, in contract renewal process.

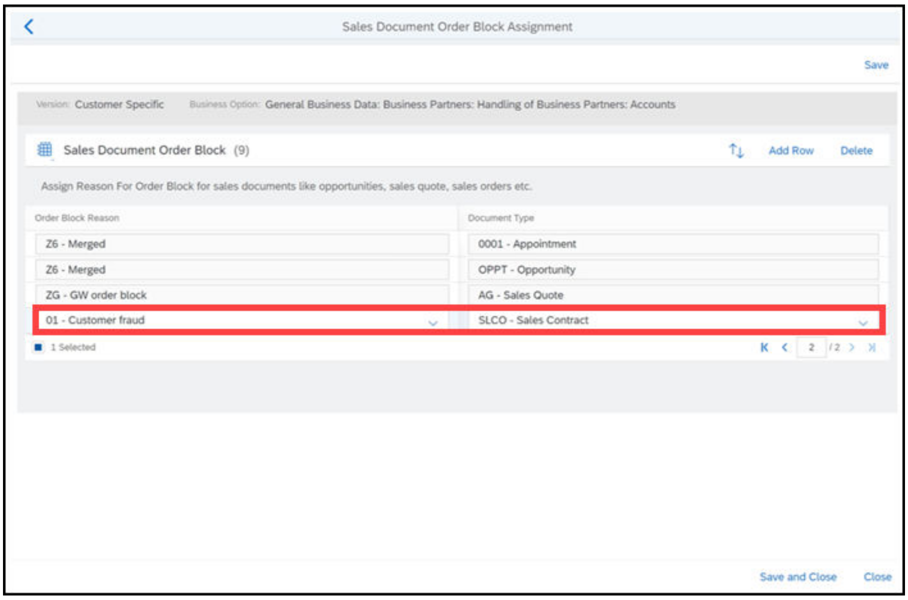
Procedure

1. Go to *Contracts* and open the contract from which you want to create the related contract.
2. Go to *Related Contracts* tab and choose *New*.
3. Enter the entries, such as *Signed On*, *Begins On*, and *Ends On*.
4. Save the entries.

14.2.6 Block Creation of Contracts

You can maintain blocking reasons to block creation of *Sales Contracts* for specific accounts.

To use this feature, administrators must select the fine-tuning activity *Accounts* > *Sales Document Order Block Assignment* and assign blocking reasons to the contract document type.



14.2.6.1 Configure Blocking Reasons for Sales Contracts

Administrators can configure blocking reasons for *Sales Contracts*.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Accounts* > *Sales Document Order Block Assignment* to configure the blocking reasons.

14.2.7 Assign Territories to Contracts

Users can assign one territory to a contract, as well as search for and display territory changes in contracts.

To assign a single territory to a contract (noting that only one territory per contract is allowed),

1. Create a new contract.
2. Enter the contract details.
3. Click the field help in the *Territory* field.
4. Use the value selector to filter territory displays, such as:
    - *All Territories*
    - *Related Territories*
    - *My Territories*
    - *My Related Territories*
5. Select a territory to assign to your contract and save your entries.
6. Territories assigned to contracts appear in the contract *Overview*, *Quick view*, as well as the contract list.

> **i Note**
>
> Territory modifications made to contracts appear in the *Contract Changes* tab.

14.2.7.1 Create Realignment Runs for Contracts

As an administrator, learn how to define a territory realignment run for contracts.

Follow the procedures to define a realignment run for contracts and territories.

To define a realignment run for contracts and territories, proceed as follows:

1. Choose *Sales* > *New* > *Realignment Runs.*.
   A wizard appears to help you create a realignment run.
2. In the first step, define rules for calculating territory owners. These rules determine how accounts are assigned to territories.
3. Choose *Next*.
4. In this step, you can add accounts that you want to maintain manually as exceptions to the rules you defined.
5. Choose *Next*.
6. In this step of the wizard, enter a title for the realignment run.

7. Choose *Create*.
   In the last step of the wizard, the system displays the ID of your realignment run and provides information about where to find it.
8. To display the realignment run, choose the title of the realignment run, which appears as a link.
   On the overview screen that appears, you can see the status, details, and results of the realignment. You can also access your realignment run as described in the task *Realigning Contracts and Territories*.
9. Make the changes you defined in this realignment run by realigning contracts and territories.

14.2.7.2 Access Restrictions for Contracts with Territories

Learn how to maintain access context for the *Contracts* work center.

1. Open the business role by clicking the work center *Administrator* > *General Settings* > *Business Roles* and select the hyperlink of the business roles you want to assign an access context to.
2. Click the *Access Restrictions* tab.
3. Select the *CONTRACT_WCVIEW* assign territory access context to it.
4. In the *Read Access* field, select *Unrestricted* or *Restricted*.

   > **i Note**
   >
   > Choosing *Unrestricted* means that the user has access to all business data related to the tab. Choosing *Restricted* means that the user only has access to specific business data, depending on the access context.

5. Choose *Restricted* to restrict the read access further.

   > **i Note**
   >
   > Not every work center tab has access context that can be modified.

   From the *Restriction Rule* dropdown, select the desired rule for the contract work center tab:
   - *Territories (Employees for Managers)*
   - *Territories, Employees*
   - *Territories*
   - *Employee Accounts (Account and Territory Team)*
6. In the *Write Access* field, select *Unrestricted*, *Restricted*, or *No Access*.

   > **i Note**
   >
   > Choose only *No Access* if the *Write Access* has been set to **Restricted** and this selection means that the user has no write access to the work center tab.

7. If you choose to restrict the *Write Access*, from the *Restriction Rule* dropdown, select the desired rule you wish to restrict.

14.3 Maintain Contracts

Once users have created contracts, they can modify contract details such as updating or adding the involved parties, covered objects, billing plan, customer call notes, as well as assigning territories assignment. When working with contracts, users benefit from the basic and advanced search to easily query contracts.

14.3.1 Maintain Involved Parties for Contracts

Users can maintain involved parties on header level and item level.

1. From the *Products* tab, use personalize or adapt to add *Item Involved Parties*.
2. Administrators must go to fine-tuning activity *Sales Quotes* > *Involved Item Parties*.
3. Party roles on item level are copied from header parties. If you do not need party roles for reporting or follow-up processes, we recommend deactivating them in the item party schema.

> **Note**
>
> Ship-to parties are maintained in the sales quote product table. Please keep the activation in the item schema in case a copy and follow-up action should also copy the item party.

14.3.1.1 Define Custom Attachment Types for Contracts

Administrators can define additional documents types for attachments in contracts.

1. Go to *Business Configuration* > *Activity List* > *Customer-defined documents types for attachments*.
2. Place a check mark in the *Usage* section for contract header.
3. Click *Add Row*.
4. Enter an additional document type.
5. Save your entries.

Open a contract and navigate to *Attachments*, click *Add* to view the list of attachment types.

14.3.1.2 Use Release Authorized Parties in Contract Determination

Learn how to use release authorized parties in contract determination.

Create a contract for an account. In the contract header, set the flag *Include Authorized Parties*. Next you can add the party role *Authorized Party*.

> **i Note**
>
> If required, from a contract, add the *Involved Parties* tab.

14.3.1.3 Use Account Hierarchy for Contracts

When working with contracts in accounts, users can set up details that consider *account* hierarchies for contracts.

1. Create a parent *account* with a child hierarchy.
2. From the parent *account*, navigate to *Contracts* and click *New* to create a contract.
3. In the contract, place a check mark in the *Include Account Hierarchy field.*
4. Navigate to the *Contracts* tab of the child *account* .
5. Click *Advanced Search* (*Involved Party* is the *Child account*) and place a check mark in the *Include Parent Accounts* field.
6. Search for and locate additional contracts from parent accounts.

14.3.1.4 Use Customer from Ship-To Party Role Determination

Learn how configure and use the determine customer for ship-to party roles in account relationships for contracts.

→ Remember

Administrators need first maintain involved parties. Go to *Business Configuration* > *Activity List* > *Service (and or Sales)* > *Maintain Involved Parties*. Go to party role account and click *Maintain Determinations* and flag the determination steps for the account.

Follow the steps to determine customer for ship-to party roles in account relationships for contracts.

1. Open an existing account.
2. Click the account *Relationships* tab.
3. Add the relationship *Has ship-to party* and the related business partner.
4. Go to *Quick Create* for contracts.
5. Click contract *Quick Create* or create a new contract.
6. Select the contract type such as service or sales.
7. Enter the ship-to party and the customer is automatically displayed and defaulted.

14.3.1.5 Use Involved Parties for Service Contracts with Territories

Administrators can learn which party roles can be activated or deactivated for contracts with territories.

Territories can be considered for party determination for the following roles:

- *Contract Administrator*: *Responsibility Contract Administrator of Account Team*
- *Employee Responsible/Owner*: *Employee Responsible of Account Team*
- *Sales Employee*: *Sales Employee of Account Team*

i Note

We recommend deactivating determination steps not needed for your business.

1. Navigate to the *Fine-Tune* party role *Service Contracts* > *Maintain Involved Party* > *Party Role Assignment.*
2. Click *Add Row*.

   i Note

   Only custom party roles can be added to a party schema.
3. Click *Delete* if you no longer require specific party roles.

> **i Note**
>
> You can only remove custom party roles from your party schema. Removal of the *Activate* flag can be used as an alternative.

> **i Note**
>
> Only active party roles appear in the *Involved Parties* value help.

4. Click *Maintain Determinations* › *Activate* or *Deactivate* the desired party roles.

14.3.2 Maintain Contract Items

You can explore the types of items used in contracts, how to structure and renumber contract items, as well as add contract items from templates.

14.3.2.1 Use Covered Objects on Item Level

As contract administrator, you maintain covered objects for items in a contract.

When covered objects are maintained at item level, the contract item will only be determined if this covered object was set as reference object (in a ticket).

If there is no entry for a covered object on item level, this contract item can also be determined. The determination is then derived from either the covered objects of the next higher item level or by the covered objects stored on header level.

If you don’t maintain covered objects on header and on item-level, then all objects are covered.

Example

- Contract **Gold**
  - **Covered objects** tab (Header Level): [Covered Objects] **A**, **B**, and **C**
  - **Items** tab
    Line 10 **Extended Warranty** - *Covered Object* tab: >no entry< [= ´A´, ´B´ and ´C´ are covered]
  - Item 20 **Extended Support** *Covered Objects* tab: >´A´<
    [= [only] product ´A´ is covered]
    - Item 20-10 (subset) *Covered Object* tab: ´no entry´
      [= [only] ´A´ is covered

In SAP ERP there are covered objects (internally known as technical objects) only on item level. To be compatible, we recommended a design the cloud contract as follows:

- Contract **Gold** (SAP ERP compatible)
  - *Covered Objects* tab (Header Level): >no entry<
  - **Items** tab
    - Item 10 ´Extended Warranty´ - *Covered Objects* tab: A, B, and C

    - Item 20 ´Extended Support´ *Covered Objects* tab: A
        - Item 20-10 (subset) *Covered Object* tab: A

In SAP ERP, the logic is: no technical object assigned on contract item level implicates the contract item is valid for all technical objects.

You can maintain a covered object for an item in a contract and also remove one or more covered object for an item in a contract. Highlight the items you wish to remove, and then select *More* > *Remove*.

You can search for contracts using the *Contracts* list table. This query searches for covered objects at the header or item level. Other functions include:

- Copy: When users copy a contract, the covered objects maintained at item level are also copied.
- Change: Any modifications to covered objects on item level (including creation, modifications, and or removal) are displayed in the contract *Changes* tab.

14.3.2.2 Add Contract Items from a Template

14.3.3 Maintain Contract Covered Objects

14.3.3.1 Use Covered Objects on Item Level

As contract administrator, you maintain covered objects for items in a contract.

When covered objects are maintained at item level, the contract item will only be determined if this covered object was set as reference object (in a ticket).

If there is no entry for a covered object on item level, this contract item can also be determined. The determination is then derived from either the covered objects of the next higher item level or by the covered objects stored on header level.

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Example

- Contract **Gold**
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    - **Items** tab
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    - Item 20 **Extended Support** *Covered Objects* tab: >´A´<
      [= [only] product ´A´ is covered]
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    - Item 10 ´Extended Warranty´ - *Covered Objects* tab: A, B, and C
    - Item 20 ´Extended Support´ *Covered Objects* tab: A
      - Item 20-10 (subset) *Covered Object* tab: A

In SAP ERP, the logic is: no technical object assigned on contract item level implicates the contract item is valid for all technical objects.

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- Copy: When users copy a contract, the covered objects maintained at item level are also copied.
- Change: Any modifications to covered objects on item level (including creation, modifications, and or removal) are displayed in the contract *Changes* tab.

14.3.4 Modify Contract Types Using the Data Workbench

Administrators can use the *Data Workbench* to modify sales and service contract types even after they are created.

1. Navigate to the *Data Workbench.*
2. Export contracts.
3. Modify the contract type.
4. Update contracts in the *Data Workbench.*

14.3.5 Copy and Paste Product Mass Entries in Service Contracts

Users can can copy items from Excel using the copy and paste function in the product table.

This task allows you to quickly paste *Items*, *Covered Objects*, *Entitled/ Excluded Services & Parts*. Ensure that the copied data exactly matches the order of columns in the user interface.

1. Open a contract.
2. Go to the *Items* tab of a contract.
3. Click the *Paste* icon and the paste field appears.
4. Click in the *Paste supported source data, such as Excel* field.
5. Use your keyboard paste function, such as Ctrl + V (or Shift + Insert) to paste the data in the field.

14.3.6 Service Contract Summary

14.3.7 Manage Access Restriction for Contracts

You can assign access rules to users for Contracts.

For users with assigned Business Roles, you can set Read and/or Write Access Rules for Contracts via Access Restrictions.

Restriction Rule	Rule Description
01 Employee	Access only if employee forms part of at least one of the Involved Parties used in the contract.
02 Sales data of Employee	Access only if Employee Sales Data (Sales Organization, Division, Distribution Channel) is equal to the Sales Data used in Contract.
03 Employee, Sales Data of Employee	Access only if the employee forms part of at least one of the Involved Parties of the contract or the Employee Sales Data (Sales Organization, Division, Distribution Channel) is equal to the Sales Data used in the Contract.
04 Sales Organization of Employee	Access only if the Sales Organization is equal to the Sales Organization used in the Contract.
05 Employees for Managers	Managers have access to all the contracts of the employees they are responsible for.
06 Employee, Accounts (Account Team)	Access if the employee is directly assigned as involved party in the contract and/or if employee is assigned to the Account Team of the Contract Account.

14.3.8 Use Contract Queries

You can use the predefined contract queries to display relevant contracts or download contracts for offline.

The predefined contract queries are:

- *Contracts Expiring Soon*
  The query lists the contracts which will be expired within next 28 days.
- *Contracts for My Territories*
  The query lists the contracts with same territory as you are assigned to.
- *My Contracts*
  The query lists the contracts where you are assigned as the Involved Party of Contract Administrator and/or Employee Responsible.
- *My Customers' Contracts*
  The query lists the contracts of the specific customers whose account teams you are assigned to, regardless of the role you are assigned in the account teams.

- *My Team's Contracts*
  The query lists the contracts where you or any of your team members are assigned as Involved Party of Contract Administrator and/or Employee Responsible.

14.3.9 Manage Territory in Contracts

Territory of Contracts is aligned with Territory of Accounts.

Contracts are included as part of the realignment runs while single territory per account is configured. When the territory of an account is updated, the territory of the associated contracts is also updated. The update interval for open contracts is 8 minutes and for closed contracts is 30 minutes.

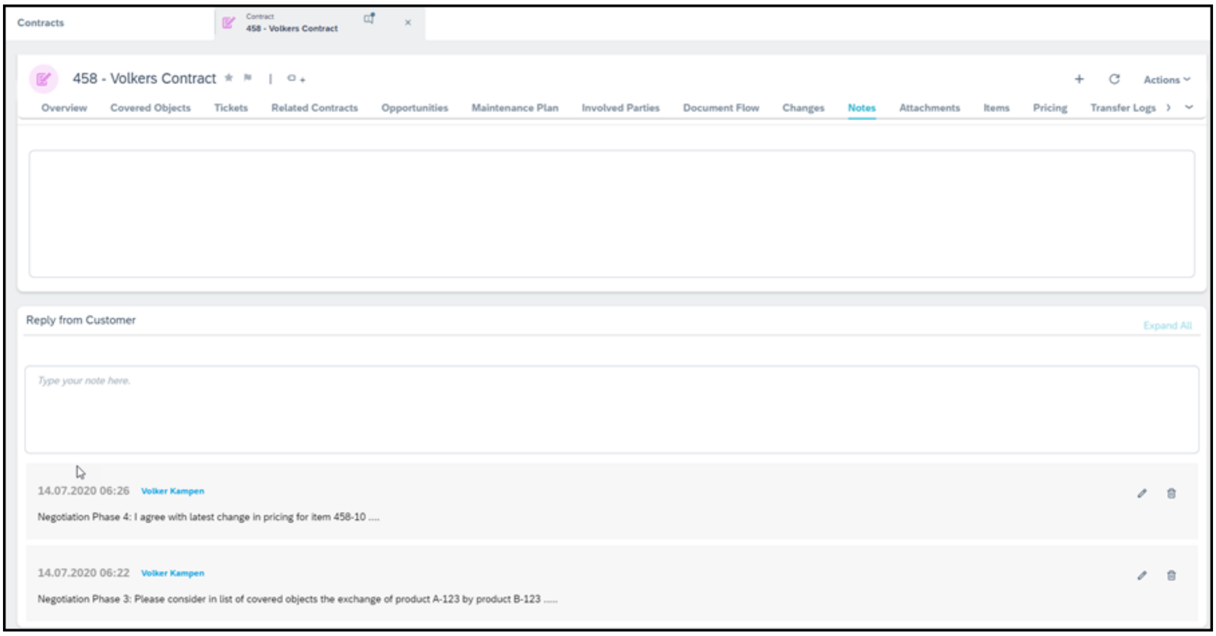
14.3.10 Use Incoterms in Contracts

Incoterms inform sales contracts the respective obligations, costs, and risks involved in the delivery of goods from the seller to the buyer.

14.3.11 Maintain Notes

Track notes in the History Mode.

You can get clear insights on customer negotiations and change requests.



> **i Note**
>
> Notes in history mode aren't replicated to or from SAP ERP or SAP S/4HANA.

Procedure

Enable this feature under *Contract* > *Adaptation mode* > *Add hidden Note Reply from Customer*.

14.4 Service Contracts and Tickets

Learn about covered objects, the reference object in the ticket and how agents can navigate from the ticket contract hyperlink directly to the contract, search for contracts, embed tickets in contracts, and determine relevance of covered objects in ticket header.

Display a Ticket from a Service Contract [page 483]
: Users can display tickets directly from a service contract by navigating to Contract and searching for or selecting a contract. From the contract, navigate to the Ticket tab.

Service Contract Determination in Tickets [page 485]
: Contract are determined and automatically added to a work ticket during ticket creation. This also applies to a SLA (service level agreement), which might form as part of a contract that you would be able to view after ticket determination in the ticket header.

Service Determination Relevance of Item Covered Objects in Ticket Header [page 486]
: Administrators can configure *Determination Relevance of Covered Objects*.

Compare Service Determination Relevance of Item Covered Objects in Ticket Header [page 486]
: Users can compare values entered as ticket references (such as *Products*, *iBase*, and *Serial ID*) to covered objects assigned to contract items to determine an applicable contract.

Choose Item Processing Codes for Quantity Service Contracts [page 486]
: Learn about item processing codes and how the target, release, and remaining quantities are calculated as well as the affect on your service tickets (items).

Add Service Technician to Service Contract [page 488]
: Assign service technician to service contract as involved party.

14.4.1 Display a Ticket from a Service Contract

Users can display tickets directly from a service contract by navigating to Contract and searching for or selecting a contract. From the contract, navigate to the Ticket tab.

14.4.1.1 Search for Tickets Related to Service Contracts

You can search for tickets associated with contract (on header and item level).

User can create or select queries for:

- *Header* - Contract was assigned on ticket header level.
- *All* - Contract was assigned on ticket header and or ticket item level (all tickets, to which this contract has been determined).
- *Items* - Only ticket item to contract item assignments.

> **i Note**
>
> Based on the selected query, there are different field compositions for advanced search and result columns.

14.4.1.2 Check Service Tickets Related to a Contract

The covered object is equal to the reference object in the ticket – for that reason the agent can easily navigate from the ticket contract hyperlink directly to the contract to inform customers about their entitlements.

Context

A customer has an issue with a product and contacts the service representative providing them their contract id or contract name. To react quickly to the customer's request, the representative wants to view only the tickets only for a particular customer contract.

Procedure

1. Search for the contract and open it.
2. Navigate to *Tickets*.
3. Select the correct *Ticket ID*.
4. From the ticket overview, select *Summary* > *Preview* to review billing details.
5. If desired, add notes to the ticket.
6. Save your entries.

   For quantity contracts, you can select the quantity contract item and search in its *Release History* for related tickets to see remaining quantity.

   You can also navigate to the *Ticket* tab of the contract to see all tickets related to the contract.

Related Information

Tickets [page 26]
Learn how the system creates tickets, how to work with the ticket list, and how to respond to tickets to resolve customer issues.

14.4.1.3 Embed Tickets Table in Service Contracts

Administrators can embed the tickets table tab in a contract overview section.

To have a highly flexible query for contract related tickets, we recommend embedding tickets section in contracts.

1. As an administrator, navigate to *Tickets* tab of a contract.
2. Go to *Adapt* > *Edit Master Layout*.
3. Click *Copy*.
4. Go to the contract *Overview* section.
5. Select a section in the *Overview* section to embed the *Tickets* table.
6. Click *Paste*.
7. Click *Apply*.
8. Click *Adapt* > *End Layout*.

You can now view the embedded *Tickets* table including all of its queries.

14.4.2 Service Contract Determination in Tickets

Contract are determined and automatically added to a work ticket during ticket creation. This also applies to a SLA (service level agreement), which might form as part of a contract that you would be able to view after ticket determination in the ticket header.

The following are some features of contract determination ina ticket:

- Contract determination in a ticket occurs based on ticket header information and item data.
- There is no direst dependency between the contract determination given by ticket header and the contracts determined by the ticket items.
- It is possible to maintain multiple contracts in item level.
- Contract hierarchy is supported.
- Setting different contract determination logic and parameters is possible via BaDI implementation.

14.4.3 Service Determination Relevance of Item Covered Objects in Ticket Header

Administrators can configure *Determination Relevance of Covered Objects.*

With the configuration, users can create a new contract and choose one of the following *Determination Relevance of Covered Objects* types:

- *Limited to Item Covered Objects* - This selection is the system default. If a user enters in the ticket processing a *Serial ID* as a *Ticket Reference Object*, the contract determination on ticket header is only considered for contracts where this *Serial ID* is listed as a covered object on contract item.
- *Consider Header Covered Objects* - If a user chooses this selection (or leaves the field blank), and enters ticket processing such as a *Serial ID* as a *Ticket Reference Object*, the contract determination on ticket header is only considered for contracts where this *Serial ID* is listed as a covered object on contract header

To configure *Determination Relevance of Covered Objects*, navigate to *Business Configuration* > *Implementation Projects* > *Open Activity List* > *Service Contracts* > *Document Types* > *Maintain Document Types* and add an select an entry from *Determination Relevance*.

14.4.4 Compare Service Determination Relevance of Item Covered Objects in Ticket Header

Users can compare values entered as ticket references (such as *Products*, *iBase*, and *Serial ID*) to covered objects assigned to contract items to determine an applicable contract.

When working with tickets that have a contract, the solution considers covered object assigned to contract items. It also considers covered objects assigned to the contract header referencing covered objects that fit.

14.4.5 Choose Item Processing Codes for Quantity Service Contracts

Learn about item processing codes and how the target, release, and remaining quantities are calculated as well as the affect on your service tickets (items).

With quantity contracts, you can administer contract determination for defined products which should be restricted in a period to a specific target quantity.

Businesses typically use quantity contracts when they need to:

- Enable a flexible contract design based on individual customer business needs.
- Keep their contract cost risk within an acceptable limit.
- Offer an easy and intuitive contract set up without operating errors.
- Stay informed about contract usage details.

In general, code types are used in tickets (items) to determine how items (and their related products) are handled in the business process. Therefore, if you have contracts in the system, the code types you choose when setting up item processing codes have a considerable influence on the way your business works with quantity contracts. Mainly, the choices made will result in how the target, release, and remaining quantities are calculated, so consider these factors when setting up your solution.

Whether the item processing code increases, decreases, or has no impact in ticket items, you'll find various service transaction processing type codes depending on your solution set-up. Depending on the item processing code, different handling for quantity call off (release) in contract items are relevant.

14.4.5.1 Decrease Remaining Quantity in Quantity Service Contracts

Learn about the item processing codes that have a (decrease) impact in quantity contracts.

The following item processing codes defined in fine-tuning have a (decrease) impact on defined product quantities in quantity contracts if they are used in tickets:

- 0001 SERVICE = Time
- 0002 PART_CONSUM_FROM_TECHN_STOCK = Part Consumption from Technician Stock
- 0004 PART_ADV_SHIP_TO_CONSI_STOCK = Part Advance Shipment to Customer Consignment Stock
- 0007 PRODUCT_WITHOUT_COST = Billing Request
- 0009 CUST_ITEM_CONFIRMATION = Item Confirmation

Example

A ticket is created and the technician provides a service, for example, using a spare part or time in accordance with the contract covered objects. Once the service occurs and is recorded in the solution, you will see a modification in the target definitions resulting in an increase in the release quantity and a reduction in the remaining quantity.

14.4.5.2 Increase Remaining Quantity in Quantity Service Contracts

Learn about the item processing code that has an (increase) impact in quantity contracts.

The following item processing code defined in fine-tuning has an (increase) impact on defined product quantities in quantity contracts if they are used in tickets:

- 0005 PART_RET_PICK_FROM_CONSI_STOCK = Part Return from Customer Consignment Stock

Example

The service technician provided a service in accordance with the contract covered objects. The stock for example, a boiler was returned. Once the service occurs and is recorded in the solution including the boiler return, you will see a modification in the target definitions resulting in a decrease in the release quantity and an increase in the remaining quantity.

14.4.5.3 Impact of Remaining Quantity in Quantity Service Contracts

Learn about the item processing code that have no impact in quantity contracts.

The following item processing codes defined in fine-tuning have no impact on defined product quantities in quantity contracts if they are used in tickets.

- 0003 PART_CONSUM_FROM_CONSI_STOCK = Part Consumption from Customer Consignment Stock
- 0006 COMPLAINT_REQUEST_PRODUCT = Complaint Request
- 0008 CUST_ITEM_PLANNING = Item Planning
- 0010 EXTERNAL_PROCUREMENT = External Procurement

Example

In the first example, the technician provided a service in accordance with the contract covered objects. The stock, for example, one boiler was already sent as ´Part Advance Shipment to Customer Consignment Stock part´ to the customer. This has had an impact on the product quantity of the quantity contract.

For this reason a ticket item with type ´Part Consumption from Customer Consignment Stock´ won´t have any further impact on the product quantity of the quantity contract resulting in the release quantity and remaining quantity staying the same.

Example

In the second example, the technician creates a complaint item about a product. As there is not yet a clear picture about the next steps for this ticket item, there is not an impact on target definitions. The same applies for external procurement for example in a DIY (Do it yourself).

14.4.6 Add Service Technician to Service Contract

Assign service technician to service contract as involved party.

This feature enables you to define one or more preferred technicians directly in the service contract.

> **i Note**
>
> The determination and sequence of service technicians from Registered Product, Service Contract, Account Team while ticket creation in SAP Cloud for Customer can be configured as custom solution using Partner Development Infrastructure (PDI).

Procedure

Follow the steps to enable the feature:

1. Navigate to *Business Configuration*.
2. Click on *Activities* > *Service Contracts* > *Maintain Involved Parties / Maintain Involved Item Parties*.

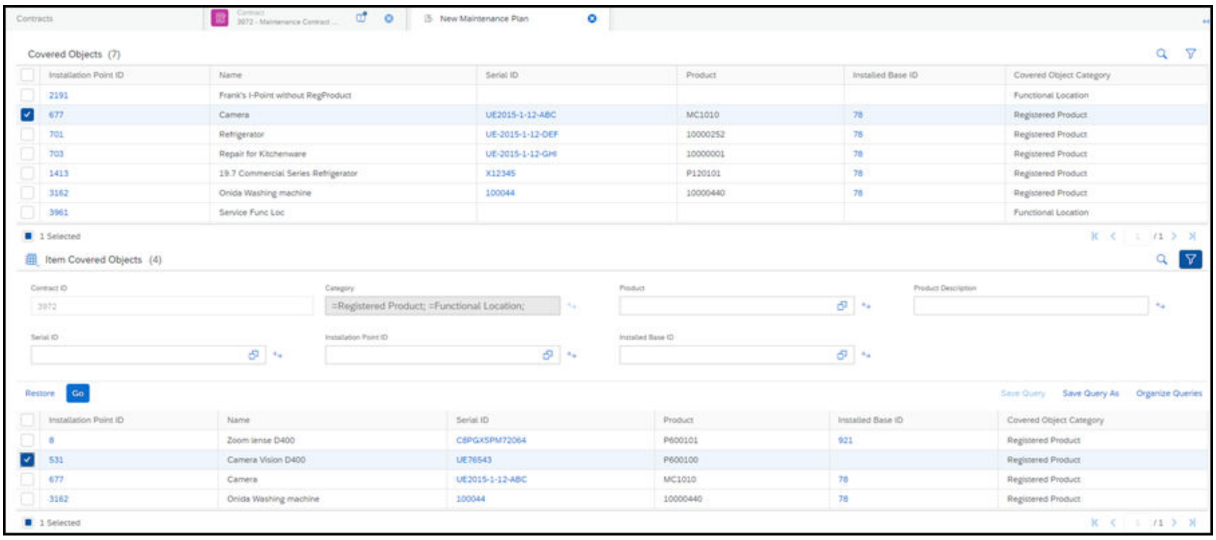
14.5 Service Contracts and Maintenance Plan

Maintenance Plan from Service Contract

Consider Covered Objects On Contract Item.

View objects on header and on item level as *Covered Objects* under *Contract Items*.

You can also establish *Service Contract* as alternative starting point for *Maintenance Plan* creation.



Add Contract Covered Object to Existing Maintenance Plans

Add covered objects of a contract to any existing maintenance plans, irrespective of whether the plans are already associated to the contract or not.

This feature enables you to access related maintenance plans through service contract. You can use the search option to select a suitable *Maintenance Plan* and choose in a multiselect table those covered objects of the current contract that are eligible for this maintenance plan to be taken up as *Maintenance Item*.

It enables you to access related maintenance plans through service contract. It isn't possible to add a covered object as maintenance item to a maintenance plan in which this covered object is already listed as the system check prevents creation of maintenance item duplicates in a selected maintenance plan.

The *Add Existing Maintenance Plan* option is personalized hidden and you can select it to enable the feature.

> **i Note**
>
> Ensure that the *Maintenance Plan* work center is assigned to you.

List or Delete Covered Objects in Existing Maintenance Plan

Display or delete *Maintenance Items* of a Maintenance *Plan* from the service contract.

If the associated covered objects of a service contract to a selected maintenance plan are deleted, then the maintenance plan also gets removed from the maintenance plan table of this contract.

14.6 Service Contract Determination and Assignment in Tickets

Learn how the systems uses contract determination to search for and reference to existing contracts created in the system as well as the assignment of tickets in contracts. Contracts are determined orders if they have the same product, customer (sold-to party) and org. data (sales org unit, distribution channel, and division).

Compare Service Determination Relevance of Item Covered Objects in Ticket Header [page 486]
Users can compare values entered as ticket references (such as *Products*, *iBase*, and *Serial ID*) to covered objects assigned to contract items to determine an applicable contract.

Use the Contract Determination Log [page 491]
Explore how you can use the contract determination log to view which sales and services contracts were determined and why.

Use Release Authorized Parties in Contract Determination [page 476]
Learn how to use release authorized parties in contract determination.

Include Eligible Parties for Call-Offs [page 491]
Users can assign quantity contracts to eligible parties for call-off quantities in sales orders and sales quotes.

14.6.1 Compare Service Determination Relevance of Item Covered Objects in Ticket Header

Users can compare values entered as ticket references (such as *Products*, *iBase*, and *Serial ID*) to covered objects assigned to contract items to determine an applicable contract.

When working with tickets that have a contract, the solution considers covered object assigned to contract items. It also considers covered objects assigned to the contract header referencing covered objects that fit.

14.6.2 Use the Contract Determination Log

Explore how you can use the contract determination log to view which sales and services contracts were determined and why.

1. Go to *Administrator* › *Service and Social* › *Contract Support* › *Contract Determination Log.*
2. Go to *Basic* search or *Advanced Search*.
3. In the *Reference Doc ID* field, enter the coordinating number.
4. Click *Go*.
5. Highlight the desired result from the query list.
6. Look in the *Details* tab for matching results, matching attributes that lead to or prevent a contract determination for this reference document.

> **i Note**
>
> The log is available for sales orders, sales quotes, and work tickets.

14.6.3 Use Release Authorized Parties in Contract Determination

Learn how to use release authorized parties in contract determination.

Create a contract for an account. In the contract header, set the flag *Include Authorized Parties*. Next you can add the party role *Authorized Party*.

> **i Note**
>
> If required, from a contract, add the *Involved Parties* tab.

14.6.4 Include Eligible Parties for Call-Offs

Users can assign quantity contracts to eligible parties for call-off quantities in sales orders and sales quotes.

Users can choose from one of the following in Overview section of a sales contract.

- *Include Account Hierarchy*: The account of the contract and all subordinated accounts within the account hierarchy are considered for contract determination.
- *Include Authorized Parties*: The account of the contract and all authorized parties added to the involved parties of the contract are considered for contract determination.

> **Note**
>
> To use include authorized parties, go to fine-tuning *Sales Contract* > *Involved Parties* and activate the party role *Authorized Party*.

14.7 Service Contact Determination Logic

During contract determination, the number of contract items is reduced by excluding specific contract items in stages using the elimination process in the check logic.

The main goal is always to find the most applicable contract(s), as well inapplicable, blocked, or obsolete contracts. This allows the service technician to make an informed decision about the correct contract to use for a service ticket.

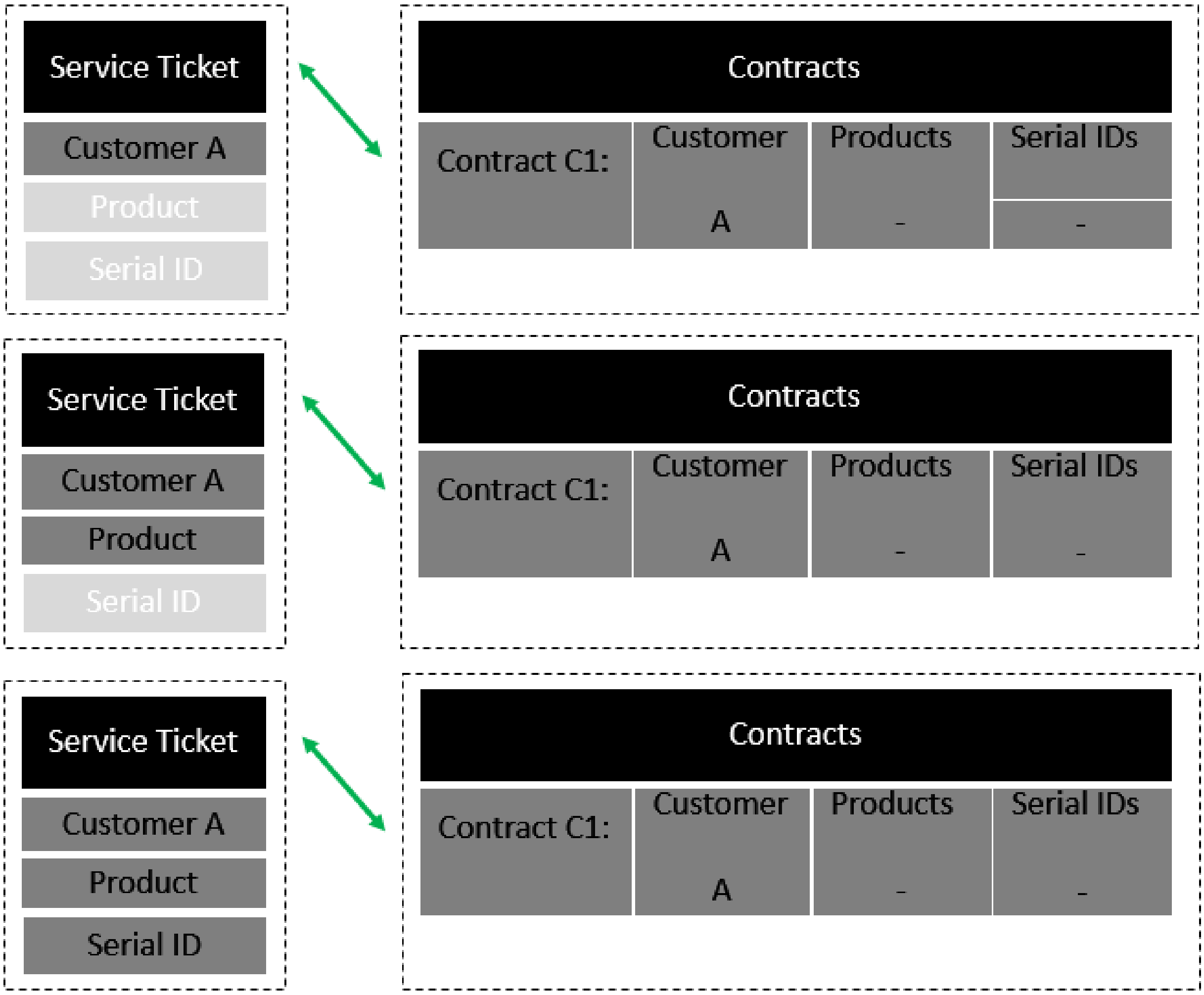
14.7.1 Account Hierarchy and Installed Base/Installation Point Contract Determination

Learn the contract determination logic for account hierarchy, installed base, and installation point (service reference objects).

To gain a better understanding, here are examples of account hierarchy contract determination.

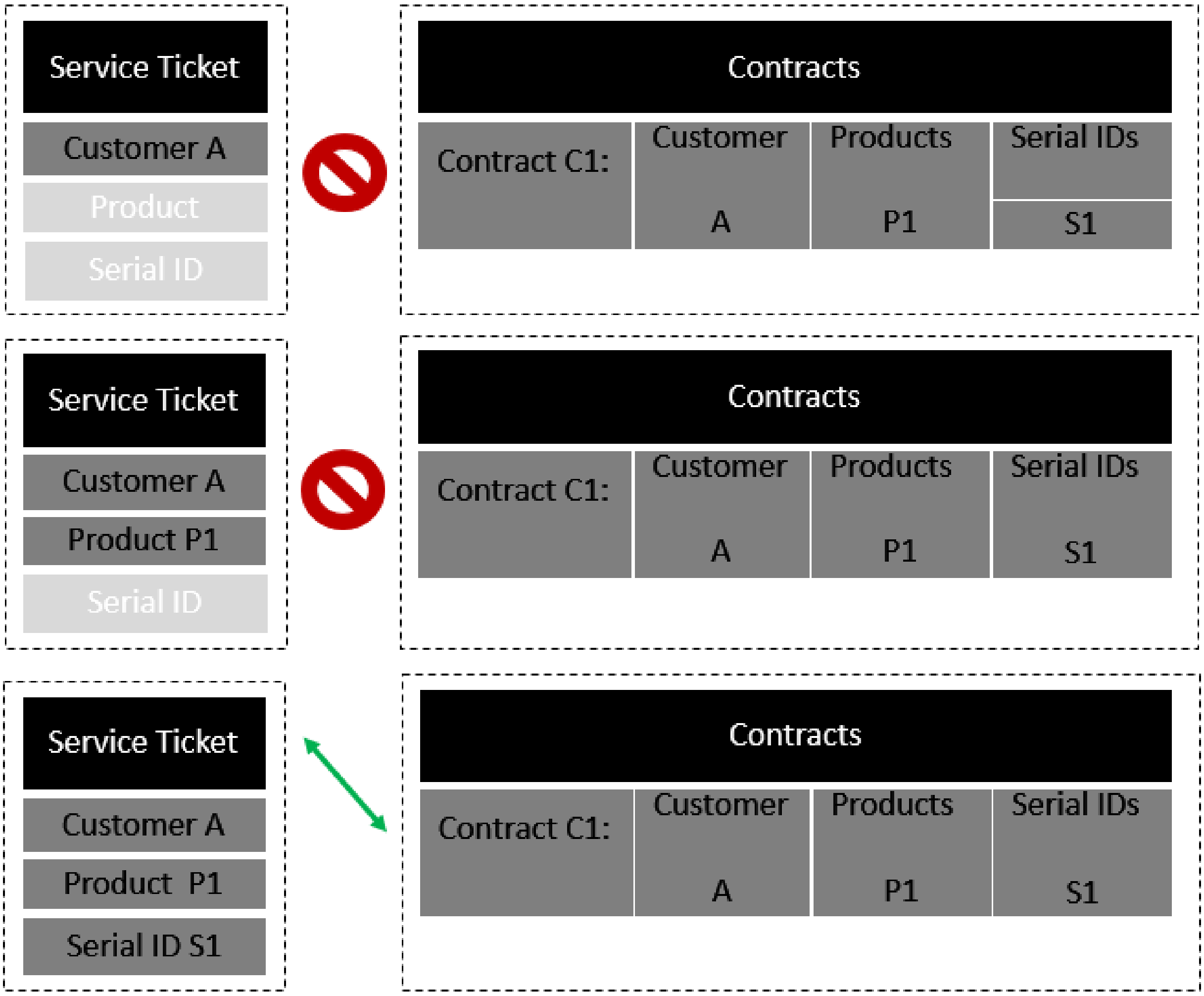
One Contract without Covered Objects

The service technician creates a service ticket and adds the customer account details. If the customer has a contract covering all products and all serial numbers, the contract is always applicable.



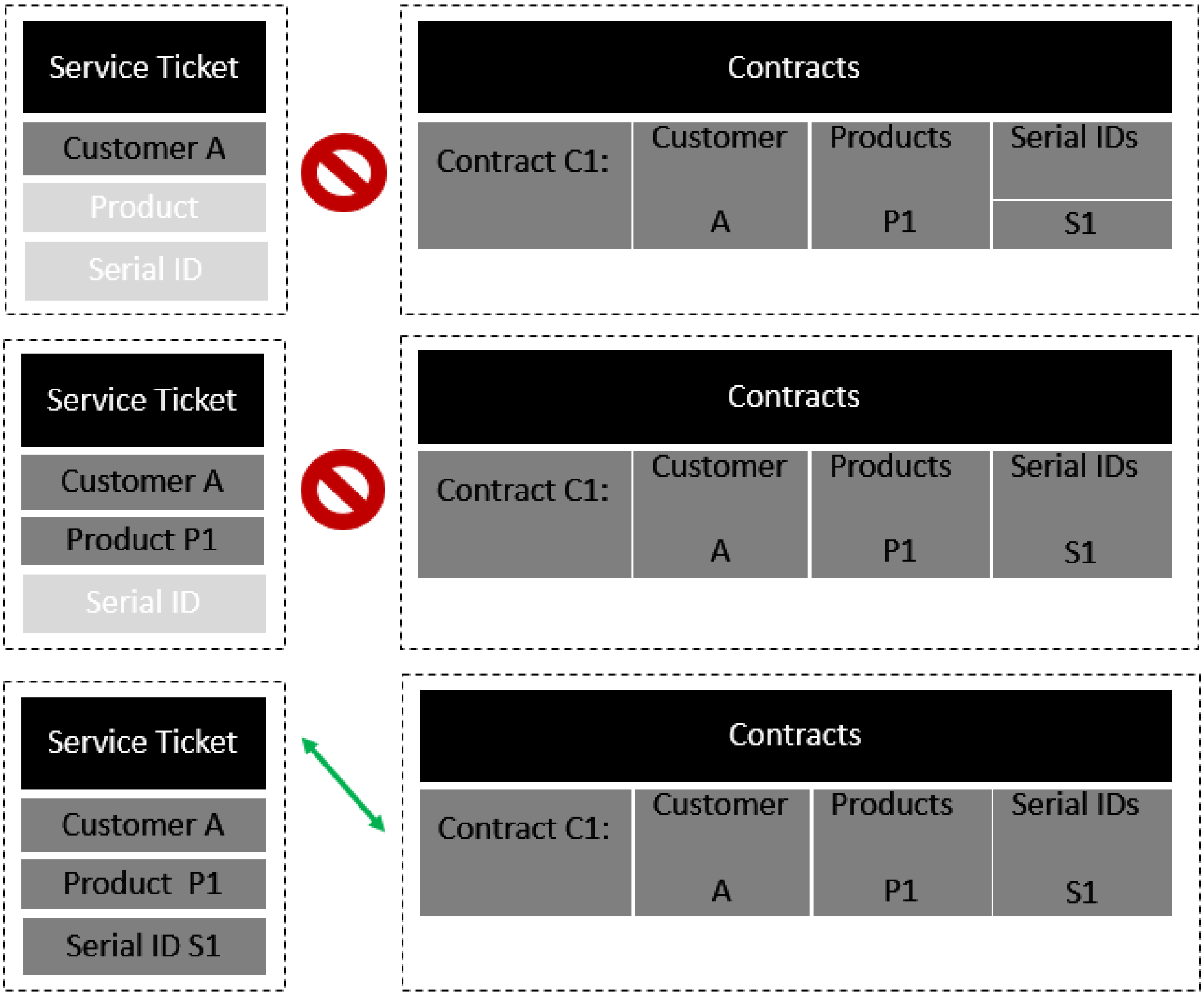
One Contract with Product as Covered Object

The service technician creates a service ticket and adds the customer account details. The contract is not found, because it is too specific. If the product P1 is entered, the contract is found because it matches exactly. The contract is also found if the *Serial ID* is entered, because all Serial IDs are covered.



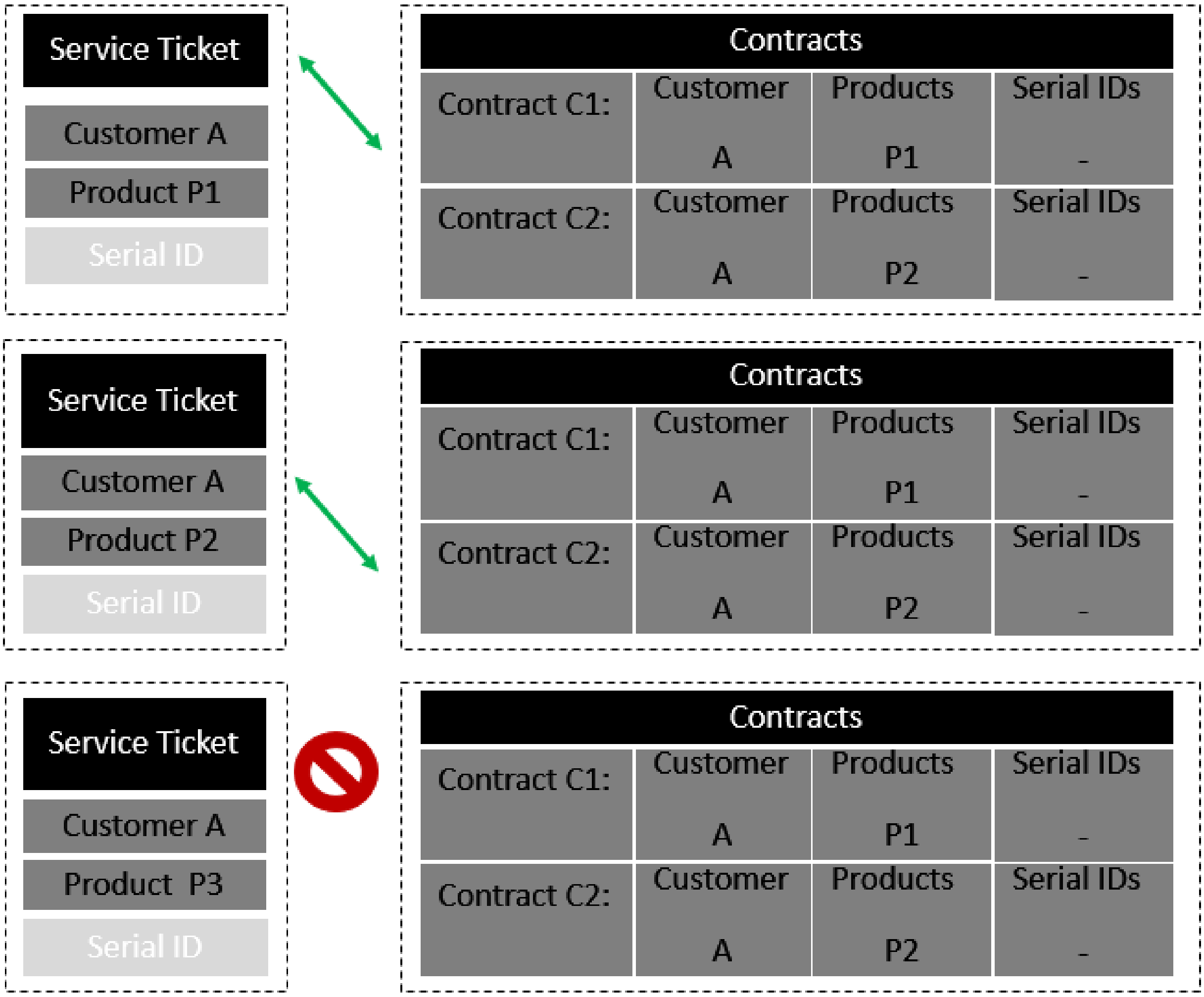
One Contract with Product and Serial ID as Covered Object

The service technician creates a service ticket. If the customer and the product are entered in the ticket, the contract is not found, because it is too specific. If the *Serial ID* S1 is entered in the ticket, the contract is found, because it matches exactly.



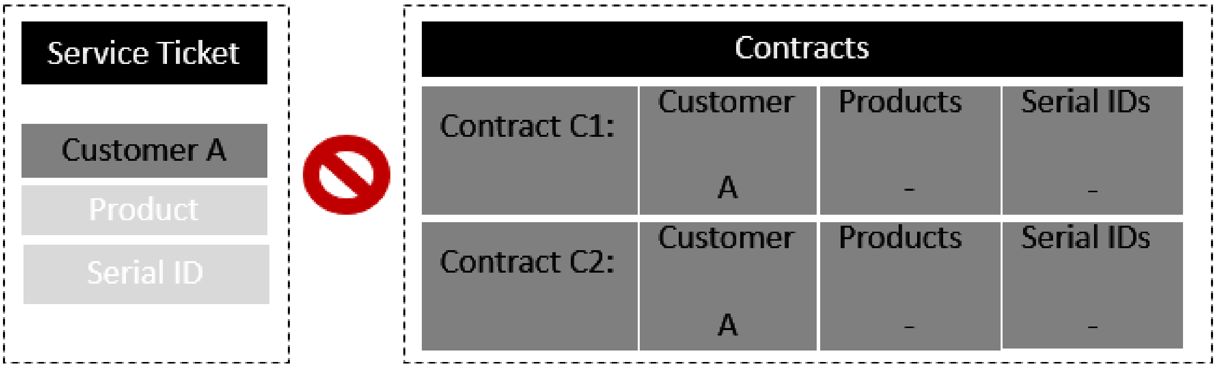
Multiple Contracts with Covered Objects

The service technician enters the customer in the service ticket. The solution logic determines that Product P1 and contract C1 are applicable. For product P2, contract C2 is applicable. For product P3, no contract is determined.



Multiple Contracts without Covered Objects

The service technician enters the customer account in the service ticket. Two contracts are found, both are applicable, and neither one is most applicable. Therefore, no automatic assignment is needed. The service technician receives a message to manually select a contract.



14.7.2 Installation Point Hierarchy Contract Determination

Learn the contract determination logic for Installation Point (service reference objects).

The service technician enters the *Installation Point* ID in the ticket and the solution states no contract exists. A contract does exist with an Installation Point, which is located one hierarchy overhead, meaning this contract is also applicable.

The most applicable contract is the contract of the *Installation Point*t element, which was entered in the ticket. If no contract exists, the most applicable contract is for the *Installation Point* element is located at the next hierarchy level.

14.7.3 Customer-Centric Determination

Learn about the contract determination logic sequences that are relevant for customer-centric.

In a service request header, the contract usage restriction code is considered in the determination logic. The contract has at item level a list of one or more contract usage restriction codes.

> **i Note**
>
> When your business uses customer-centric contract determination, the customer (account) is relevant in the search criteria.

If the contract usage restriction code of the service request header is covered in one of the list of the contract items. Then the contract is the most applicable. If no contract item has a list of contract usage restriction code, then all contract usage restriction codes are covered and this contract is also applicable.

14.7.4 Object-Centric Contract Determination

Learn about the object-centric contract determination logic.

The administrator scoped your system to determine the search strategy.

Enter the installation point and Installed base in the service ticket and the solution first searches for contracts and items

Note: When your business uses object-centric contract determination, the customer (account) is not a relevant search criterion.

Note: The solution locates contracts and items for customers (accounts) which are different from the customer in the service ticket.

The solution analyzes the contracts and items and ranks them in order of significance.

Example

A machine has an incident at customer A at site ABC for product 123 but the applicable contract (with product 123 as covered object) determined was made for customer B. If you create a ticket entering product 123 the relating contract is determined although the customer in the ticket is A.

14.7.5 Account Hierarchy Contract Determination Sequence Logic

Learn the contract determination logic for account hierarchy.

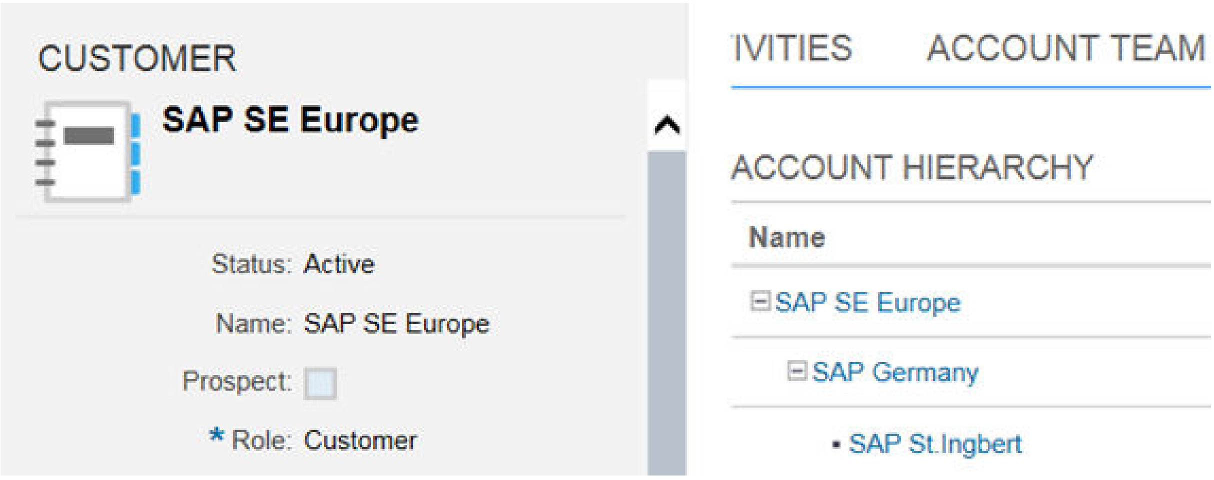
A service ticket is created using the customer ID. The solution does not recommend a contract. The customer does have a contract located in the hierarchy, meaning the contract is also applicable.

The most applicable contract is the contract for the customer entered in the ticket. If no contract exists, the most applicable contract is for the customer at the next hierarchy level.

Each customer from the hierarchy has their own contract. If in the ticket the company St. Ingbert, has been entered, the contract for company St. Ingbert is the most applicable. The two other contracts for company Germany and company Europe are also applicable.

The contract for company St. Ingbert is blocked and the ticket processor enters customer company St. Ingbert. Then, the contract for the company Germany is the most applicable and the contract for company Europe is also valid.

The contract for company St. Ingbert is blocked. The contract for company Germany is also blocked. The ticket processor enters customer company St. Ingbert. Then, the contract for the company Europe is the most applicable contract.



14.7.6 Use Account Hierarchy for Contracts

When working with contracts in accounts, users can set up details that consider *account* hierarchies for contracts.

1. Create a parent *account* with a child hierarchy.
2. From the parent *account*, navigate to *Contracts* and click *New* to create a contract.
3. In the contract, place a check mark in the *Include Account Hierarchy field.*
4. Navigate to the *Contracts* tab of the child *account* .
5. Click *Advanced Search* (*Involved Party* is the *Child account*) and place a check mark in the *Include Parent Accounts* field.

6. Search for and locate additional contracts from parent accounts.

14.8 Contract Integration

14.8.1 SAP ECC Inbound Replication for Contracts

Administrators can define SAP ECC contract transfer behavior in business configuration for contracts.

For each document type an administrator should select one of the following contract replication types:

- *Bi-directional* - Contract changed are transferred to and from SAP ECC.
- *Inbound* - Contract changed are only transferred from SAP ECC.

> → Remember
>
> If none of the replication selections are made (blank selection), contract changes are not transferred to or from SAP ECC.

Administrators can configure contract replication by navigating to *Business Configuration* > *Implementation Projects* > *Open Activity List* > *Contracts (Sales or Service)* > *Document Types* > *Maintain Document Types.*

14.8.2 Define Quote and Contract Document Types for SAP ERP Integration

Administrators can define quote, sales and service contract document types for SAP ERP with SAP Cloud for Customer quotes, sales, and service contracts.

The fine-tuning of *Document Types* allows multiple settings for SAP ERP integration. You can leverage each document type as a special business scenario/use case. Depending on your requirements, you can create multiple document types for your desired business scenarios.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *Activity Name: Sales Contracts, Service Contract, or Sales Quotes* > *Document Types* > *Maintain Document Types.* Select your *Document Type* and modify it to your business solution requirements.

External Pricing – A check in the box enables an external application such as SAP ERP, synchronously requests prices. The transaction simulation determines not only pricing, but sales quotes, free goods, product availability, and credit status based on SAP ERP customizing for this document type. From SAP Cloud for Customer, you trigger the external application, by clicking *Action* › *Request External Pricing.*

Replication – Administrators define the sales quote and the sales and service contract transfer behavior from your SAP on-premise system to your cloud solution by selecting one of the following options:

- *Bi-directional* – Sales quote edits in your cloud solution are replicated to your SAP on-premise system, syncing both quotes.

  → Remember

  Your SAP on-premise system is the leading system for these sales quotes, sales, and, service contracts. Quotes created in your cloud solution can be replicated to your SAP on-premise system from *Action* › *Submit.* Quotes created in SAP ERP can be edited in SAP Cloud for Customer and the changes are replicated in SAP ERP.

- *Inbound* – Quote edits completed in your cloud solution are not replicated to your SAP on-premise system. Those quotes are overwritten if further replications are triggered from your SAP on-premise system.

  i Note

  We recommend that you control editable fields and actions from the page layout and only open extension fields that do not require replication. (Creation of the sales quote is only possible in SAP ERP and changes performed in SAP Cloud for Customer are not sent to SAP ERP).

- *Empty* – Leaving this field blank indicates the sales quote stays in SAP Cloud for Customer, but this option still allows you to request external pricing.

i Note

This configuration only applies to new sales quotes as well as sales and service contracts. Existing sales quotes and sales and service contracts behave using the inherited document type configuration. Existing sales quotes and sales and service contracts behave as specified from the previous active document type configuration.

Asynchronous Pricing – Administrators can modify the settings for external pricing. A synchronous call is required to retrieve the complete pricing result from the SAP on-premise system to your cloud solution. Replicated sales documents also require a synchronous pricing update once the sales document is updated during a save in SAP Cloud for Customer.

With this configuration, if the document was previously replicated, administrators can disable the synchronous pricing call to the external system. In addition, you can disable the synchronous call completely, which is valid for quotes created in your cloud solution. For both configuration options, the pricing status needs to be calculated successfully through the asynchronous call from the external system. Select the option that suits your business needs.

- *Empty* – Leaving this field blank triggers an automatic (once replicated) synchronous pricing call activation (You see pricing-related errors, but configuration has performance impacts.).
- *After replication* – If document was replicated successfully, an automatic synchronous pricing call is deactivated.
- *Always* – An automatic synchronous pricing call is always deactivated (leads to a performance advantage, but possible pricing call error messages are no longer displayed directly in the UI, only asynchronously).

No matter the configuration, you can trigger pricing synchronously by clicking *Action* > *Request External Pricing*. With this configuration, avoid quote approvals that include external pricing elements.

> **Note**
>
> To avoid data inconsistencies between SAP ERP and SAP Cloud for Customer, only replicated contracts are used in tickets.

> **Remember**
>
> Only new and sales and service contracts and sales quotes inherit changes in the document type configuration. Existing contracts and sales quotes behave as specified in past active document type configuration.

14.9 Contracts Offline

Learn about working with service contracts in offline mode.

Offline Service Contract Covered Objects Item Determination [page 501]
Offline service contract features include search and match of ticket parameters to the applicable contract parameters.

Configure Offline Contract Item Determination [page 502]
General availability has been made for administrators to configure contract item determination to use in offline mode. Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Service* > *Customer Care* > *Service Request Management* and select the scoping question: *Do you want to determine contract items for tickets in offline mode?*

Use Offline Contract Deviation Sync Transfer Details [page 502]
Administrators can explore the contract offline sync tranfers details.

14.9.1 Offline Service Contract Covered Objects Item Determination

Offline service contract features include search and match of ticket parameters to the applicable contract parameters.

> **Note**
>
> *Offline Service Contract Covered Objects in Item Determination* is available for both test and productive use. To enable this phased delivery feature, create an incident or contact your SAP Cloud for Customer representative.

Ticket Search Parameters	Covered Object Comparison Parameters	Restriction
Reference Product ID of Ticket Item	Against Product ID (also as category) of Contract Covered Object (Item)	Without Product Category Hierarchy
Reference Serial ID of Ticket Item	Against Serial ID (related Installation Point) of Contract Covered Object (Item)	
Reference Installation Point ID of Ticket Item	Against Installation Point ID of Contract Covered Object (Item)	Without Installation Point Hierarchy

14.9.2 Configure Offline Contract Item Determination

General availability has been made for administrators to configure contract item determination to use in offline mode. Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Service* > *Customer Care* > *Service Request Management* and select the scoping question: *Do you want to determine contract items for tickets in offline mode?*

14.9.3 Use Offline Contract Deviation Sync Transfer Details

Administrators can explore the contract offline sync tranfers details.

No deviation (typical use case) - Proposed [e.g. offline] Contract = ´[online] Contract´ ´Conflict´ constellation:

MOST APPLIBALE CONTRACT: applicable ´ Proposed Contract ´ [= that is the most applicable Contract in online mode] was transferred from offline to online field ´Contract´

APPLICABLE CONTRACT: applicable ´Proposed Contract´ [~ and no most applicable exists in online mode] was transferred from offline to online

NO CONTRACT PROPOSED: (as in online)

Deviation:\u000BRecommendation is to set up Workflow Rules for Tickets with critical Contract Transfer Detail Values (such as ´inapplicable proposed contract...´, ´no contract proposed´) to filter and check final Contract Assigment to these Ticket Items:

TRANSFERRED BUT MOST APPLICABLE EXISTS: applicable ´Proposed Contract´ [~ but most applicable Contract exists in online mode but was not taken] was transferred from offline to online.

INAPPLICABLE CONTRACT NOT TRANSFERRED: inapplicable ´Proposed Contract´ [=in online mode this contract can not (!) be determined] which was not transferred from offline to online.

NO CONTRACT PROPOSED BUT MOST APPLICABLE CONTRACT EXISTS: no ´Proposed Contract´ [~ but most applicable Contract exists in online mode] was transferred from offline to online

NO CONTRACT PROPOSED BUT APPLICABLE CONTRACT EXISTS: no ´Proposed Contract´ [~ but applicable Contract exists in online mode] was transferred from offline to online

Resolution of Deviation: underlying Question is: Should the online or the offline determined contract ´rule´?

If online contract item should be used (normally better since offline is only a proposal) then trigger action Redetermine, select manually the contract item in OVS or use value:

INAPPLICABLE PROPOSED CONTRACT REJECTED

If offline contract item should be used (rare use case) then set the “Contract Transfer Detail”:

PROPOSED CONTRACT MANUALLY ACCEPTED: Accept offline proposal [= a) no ´ Proposed Contract ´ was manually assigned offline (e.g. no contract warranty due to customer fault) nevertheless even if online applicable contracts exist: then no contract should be set online. b) an applicable ´ Proposed Contract ´ was determined offline and this one should be used although other/ most applicable contract(s) online exist(s)]\u000BINAPPLICABLE PROPOSED CONTRACT ENFORCED inapplicable ´Proposed Contract [=in online mode this contract can not (!) be determined] which nevertheless was transferred from offline to online and there enforced to online field ´ Contract ´

14.10 Contract Pricing

Learn how the system uses contract pricing to determine the price of a material based on the contract.

Request External Pricing from SAP ERP [page 503]
The contracts solution retrieves complete price information including tax from the SAP ERP external system.

Check Output Pricing to View All Price Components [page 504]
Administrators can enable the new action *Check Output Pricing* using adaptation mode. This action allows users to view all price components that are available in the output form message as now they are defined as print relevant in the system.

14.10.1 Request External Pricing from SAP ERP

The contracts solution retrieves complete price information including tax from the SAP ERP external system.

Context

Your administrator has set-up external pricing in your solution so that you can retrieve complete price information from SAP ERP for your service contracts.

Complete all of the steps below before you request external pricing from SAP ERP.

Procedure

1. Open the contract which should already include the covered objects and items.
2. Navigate to the *Items*.
3. Select *Billing Plan* to add the customer's desired details, such as how and when they want to billed for the contract services.

   These prices will vary depending on how your administrator has set-up the solution.
4. Navigate to *Pricing* where you can enter various types of discounts per line item.
5. Save your entries.
6. Select *Request External Pricing* in order to retrieve the pricing from the external *SAP ERP* system.

   Now all of the details the customer needs in order to sign the contract are available.
7. Select *Preview* > *Send* and the customer will receive a preview of the contract document.

   Once the customer signs the contract it should be sent back to your company.
8. Select *Activate* and the contract status is changed to *Active* or *Ready* (if the contract is agreed but only valid for a future date).
9. Select *Transfer* and the contract is sent to SAP ERP where all details are stored and a contract is created.

   The solution will provide you with transfer status information and the *External ID* from SAP ERP.

   The contract ID displayed in the contract header is the number created by SAP Service Cloud. The *External Reference* is any number or set of characters the customer desires to use and is entered manually in the header by the contract administrator or associate.

14.10.2 Check Output Pricing to View All Price Components

Administrators can enable the new action *Check Output Pricing* using adaptation mode. This action allows users to view all price components that are available in the output form message as now they are defined as print relevant in the system.

14.11 Contract Reporting

Create reports using the data collected from your contracts to better understand them and make improvements.

Use Item Covered Objects in Reports [page 505]
Administrators can include item covered objects in report by navigating to *Business Analytics* > *Design Data Sources* > *Contract Item Covered Objects*.

Restrict Excel Export for Contracts [page 505]
Administrators can configure a restriction so that business role users cannot perform Excel exports for contracts.

14.11.1 Use Item Covered Objects in Reports

Administrators can include item covered objects in report by navigating to *Business Analytics* > *Design Data Sources* > *Contract Item Covered Objects*.

Once configured, to include item covered objects in reports:

1. Go to *Business Analytics* > *Design Reports* > *New*.
2. From the guided activity, follow the steps beginning by entering a report name.
3. Select the desired characteristics.
4. Define the variables.
5. Review your entries and save your changes.
6. Create a view for your report.

14.11.2 Restrict Excel Export for Contracts

Administrators can configure a restriction so that business role users cannot perform Excel exports for contracts.

Configure Excel export authorization restrictions by navigating to *Administrator* > *Business Roles* > *Select role (that includes the Contracts work center)* > *Fields & Actions* > *Business Actions Restrictions* > *Add row* and search for Microsoft Excel.

14.12 Contract FAQs

Having trouble using contracts? Check this list of questions and answers for help.

14.12.1 Can I use custom fields in a contract?

You can use adapted fields in contracts.

Yes, creation or adaption of customer fields are possible and will be considered for contract template usage.

14.12.2 Is there a contract service level priority before a standard SLO determination?

Learn about contract service level priorities and Service Level Objective (SLO)s.

Example: If arrival at the customer site is guaranteed by a standard service level is eight (8) hours, but the contract service level is one (1) hour, then the contract service level will be used in the ticket.

14.12.3 How do I search for expiring contracts?

Your administrator can set-up work flow solutions to be used for renewal purposes.

These work flows can be set-up using notifications and/or opportunities informing you in advance when contracts are due to expire. In addition, with the *Contracts Expiring Soon* query you can filter for contracts where the *Ends On* date lies between the current date and the current date plus 28 days.

14.12.4 What checks are made during contract activation?

When you activate a contract, the system performs several checks to ensure that the contract is valid.

Listed below are the contract activation checks:

- A contract which must have a start and end date and the end date must be after the start date
- The covered objects you have entered added parties. The system checks whether they exist in the system

14.12.5 Which type of determinations occur during ticket reference object modifications?

Learn what happens to contract determination, when about the service ticket objects are modified.

The service technician creates a ticket and adds the mandatory business objects such as the customer account.

One of the following fields is changed at item level and item service reference objects level of the ticket. The contract item determination starts automatically for the ticket item:

- *Product* (Item product)
- *Usage Restriction*
- *Product* (Referenced product)
- *Serial ID*
- *Installed Base*
- *Installation Point*

14.12.6 Which search criterion is used when matching contract determination for tickets?

Learn about the search criterion used in contract determination for tickets.

The service technician creates a ticket and adds the mandatory business objects such as the customer account.

If one of the following fields is changed at ticket header level, the contract determination is started automatically for the header and service reference objects, including all ticket items:

- *Usage Restriction*
- *Customer*
- *Product*
- *Serial ID*
- *Installed Base* (IBase)
- *Installation Point*

14.12.7 Can users display SAP ECC status for contracts?

Users can view SAP ECC statuses in the *Contracts* overview. The *External Status*, *External Reference Status* (relevant only for sales quantity contracts call-offs), and *External Invoice Status* are available on the header and item level.

15 Common Tasks

Learn how the common tasks such as search, navigation menu, feeds, calendar, side pane, dashboard, and so on, work in the solution.

Knowing how to navigate around the solution with the visible elements that you see and interact with is critical in managing your data in the solution.

Navigation Menu [page 509]
A navigation menu provides easy access to the core functionalities and makes browsing easier by providing a main menu of options.

Recent History [page 511]
Learn to quickly access your recently opened objects with recent history.

Quick View [page 511]
Quick view displays a concise overview of an object, providing a way to get information quickly without needing to navigate away from the current screen.

Library [page 516]
Use the library to organize documents using folders. You can set authorizations for folders and documents and share deep links when referring content.

Attachment Search [page 522]
View and download attachments that have been uploaded to your system.

Attachment Size [page 526]
Lists the limits of attachment file sizes in SAP Cloud for Customer.

Lists [page 527]
Learn how to work with different lists in the solution.

Flags, Tags, and Favorites [page 537]
Learn to work with flags and favorites and use them to keep important items handy.

Feed [page 543]
Learn about using the feed that allows you to quickly communicate and collaborate with your network.

Search [page 550]
Learn about the various search functions in the solution.

Notification [page 559]
Notifications are a way to let you know that something new has happened so you don't miss anything that might be worth your attention.

Map [page 559]
Learn how to use the map feature based on Google maps or alternatively AutoNavi maps, that provides data with an interactive map in different objects.

Support and Help [page 564]
Learn about creating incidents to report issues encountered in the solution.

Side Pane [page 580]
The side pane appears on the right side of the main content.

15.1 Navigation Menu

A navigation menu provides easy access to the core functionalities and makes browsing easier by providing a main menu of options.

By default, the navigation menu has a hierarchical structure with a main level and a sublevel. You can view the navigation menu in a flat design and see all the objects at the same level. With flat design, you can navigate quickly and easily. Please ask your administrator to enable the flat design.

15.1.1 Flat Design Navigation Menu

A flat design navigation menu shows all objects at the same level.

You avoid additional clicks and can quickly find and navigate to the desired object. For example, for a sales user, all the objects such as leads, opportunities, and so on, show up at the same level in the navigation menu.

> **! Restriction**
>
> A semi collapsed view of the navigation menu is available only on tablets.

Your administrator can enable flat navigation menu by selecting the checkbox *Enable Flat List Navigation Menu in Fiori Client* in the Company Settings screen. Once turned on, the setting affects all users.

> **i Note**
>
> Some work center views like Target Group are assigned to multiple work centers and hence might appear twice. Please check the work center view assigned to the business role.

15.1.2 Semi-Collapsed Navigation Menu on Desktop in Fiori Client

Under flat navigation, your administrator can also enable semi-collapsed navigation on desktop.

With semi-collapsed navigation, you can quickly launch object lists without opening or closing the navigation menu.

> **i Note**
>
> Semi-Collapsed navigation for Tablets is already supported.

Semi-collapsed navigation for desktop is enabled by going to *Adapt* > *Company Settings* and selecting the checkbox *Enable Semi-Collapsed Navigation Menu on Desktop in Fiori Client*. Ensure that hide navigation menu setting isn't selected and flat navigation is enabled.

15.1.3 New Navigation Menu

The new navigation menu is the only menu option available in the solution. The old navigation menu has been retired.

The new navigation menu is available in the semicollapsed mode upon sign-in. The new navigation menu provides consistent user experience across all SAP C/4HANA products.

The new navigation menu provides following modes:

- Flat navigation menu in contrast to hierarchy navigation menu.
- Semicollapsed navigation menu in contrast to expanded navigation menu.

The administrator can enable the feature from the user profile menu under *Settings* > *Company Settings*, by turning on the toggle button for the company setting. *Enable Semi-Collapsed Navigation menu upon Sign-in.*

The administrator can also turn on the company setting *Enable Flat List Navigation Menu*. Flat Navigation is useful for business users who don't have too many work centers or views assigned to them. Disabling this company setting turns on hierarchical navigation menu. Hierarchical navigation is recommended for administrators who have many work centers assigned.

Automation IDs Supported in Tab Navigation Bar

The new tab navigation bar supports automation IDs. Automation ID is used to locate an element and uniquely identifies an element or tab from the other tabs. Automation ID is useful when you want to find a specific user interface element among other elements. For example, it's useful when you want to find a specific item in a collection.

⚠ Caution

Any automation scripts that follow the click to navigate action, must be adjusted.

15.2 Recent History

Learn to quickly access your recently opened objects with recent history.

Get a more streamlined experience in finding and retrieving recently accessed objects in the different work centers with the *Recent History* tab in the navigation menu. Recent history records all the recent objects opened by you and displays it in a single list for quick access. Recent history tracks all the standard and custom objects, and objects opened in offline mode. You can choose to see all objects or filter by specific object.

i Note

- Recent history displays up to 20 interactions for each object type.
- Recent history list is not synchronized across devices. For example, the recent history list that you access in your tablet is different from the recent history list on your desktop.
- Recent history objects list is available in offline too. However, if the object is not synchronized for offline access, then you get an exception error if you open it. For example, a ticket in the recent history list, that is not synchronized for offline access, gives an exception error when you try to open it in offline.
- Recent history is stored in the local storage. To delete it, please refer to your specific browser about how to clear the local storage. In case the app is used, uninstalling the app removes all items stored in the recent history.

15.3 Quick View

Quick view displays a concise overview of an object, providing a way to get information quickly without needing to navigate away from the current screen.

Quick View

You can see the quick view by hovering over the hyperlink associated with an object. The quick view is available as default in the application. If you don't like it, you can ask your administrator to disable it under company settings.

The quick view shows the object name and icon, the name of the work center, and the object ID. Actions like, *Favorite*, *Flag*, *Follow*, and *Close* are available. You can see the overview details for the object. You also see the tags belonging to the object. You can add tags and view more tags by clicking on the link. All information on the quick view display is from the information associated with the object itself. If any information/details change, the quick view display also reflects the change.

New Quick View (Desktop only)

You have a new quick view available for objects in Fiori client. In the earlier quick view, you could access the quick view by hovering over the object. You could see the important details and related information without navigating away. Or, quickly switch to a new item from the quick view. The new quick view is available only when enabled by the administrator. When enabled, you can launch the quick view on the side, by clicking the object instead of hovering over the object.

In the new quick view, you can see important details about the object, edit any specific field, or perform object-level actions, without navigating to the detail view. Inline edit is also supported on browsers in desktops and laptops.

The key benefit is improved user experience by reducing the number of clicks and time required to open object detail for quick changes. Your administrator can enable the new quick view under *Settings* > *Company Settings*, by turning on the toggle button for the company setting *Enable New Quick View in Fiori Client*.

- You can see the new quick view on the right when you click an object.
- Action toolbar includes object type, actions, open detail view action, and close action.

> **Note**
>
> - The new quick view level actions are grouped under Actions. And, once the main action is defined, then Actions word gets replaced with "..." and main action is available separately outside the dropdown. Rest of the actions are available under "....".
> - Please keep the following things in mind when you try to either hide or move primary title using KUT-
>   - Don't hide the primary title as the open object detail icon is linked to it. If you hide the primary title, the open object detail icon is also hidden.
>   - If the primary title is moved, another field must be assigned as the primary title. The new field assigned should always be a link.
>   - The navigation from the primary title link and object detail icon opens on the same landing page. For example, if owner is the primary field link and you click on it, it navigates to the employee details page. And, the show object detail icon also leads to the employee details page.

- The header consists of a primary title (navigational link), which when clicked opens the object detail view. You see up to 3 primary field and up to 2 secondary field.
- The New quick view is restricted to show seven tabs on the user interface. SAP or the administrator configures the first seven tabs that show up in the new quick view.
- The Actions button is not visible if all the actions within the action menu are hidden.
- New quick view header doesn't show favicons in the header.
- You can see images for business partners in the new quick view header. If an image is not available for individuals (contact, employee, individual accounts), you see initials. If an image is no available for the organization, you see an object icon.

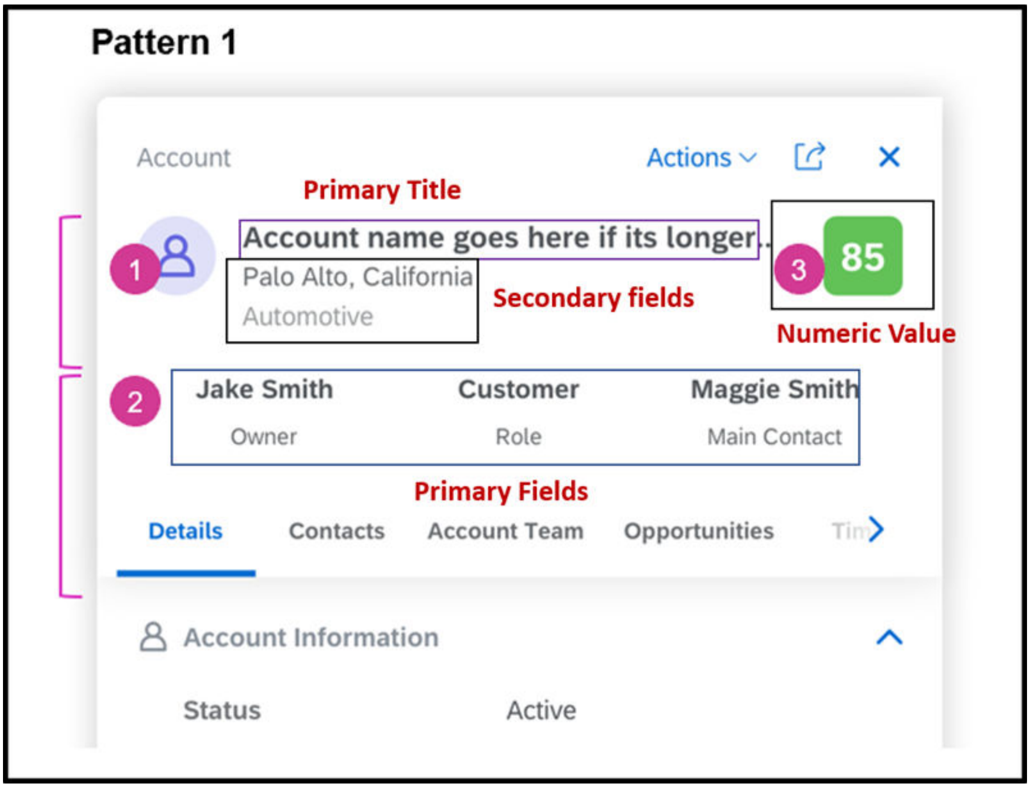
- In the notes tab, you see the initials, name of the person who wrote the note, time when the note was written. Depending on the authorization, you can see the actions icon.

> **i Note**
>
> The note history visualization in the notes tab is different from the note history visualization in object detail view.

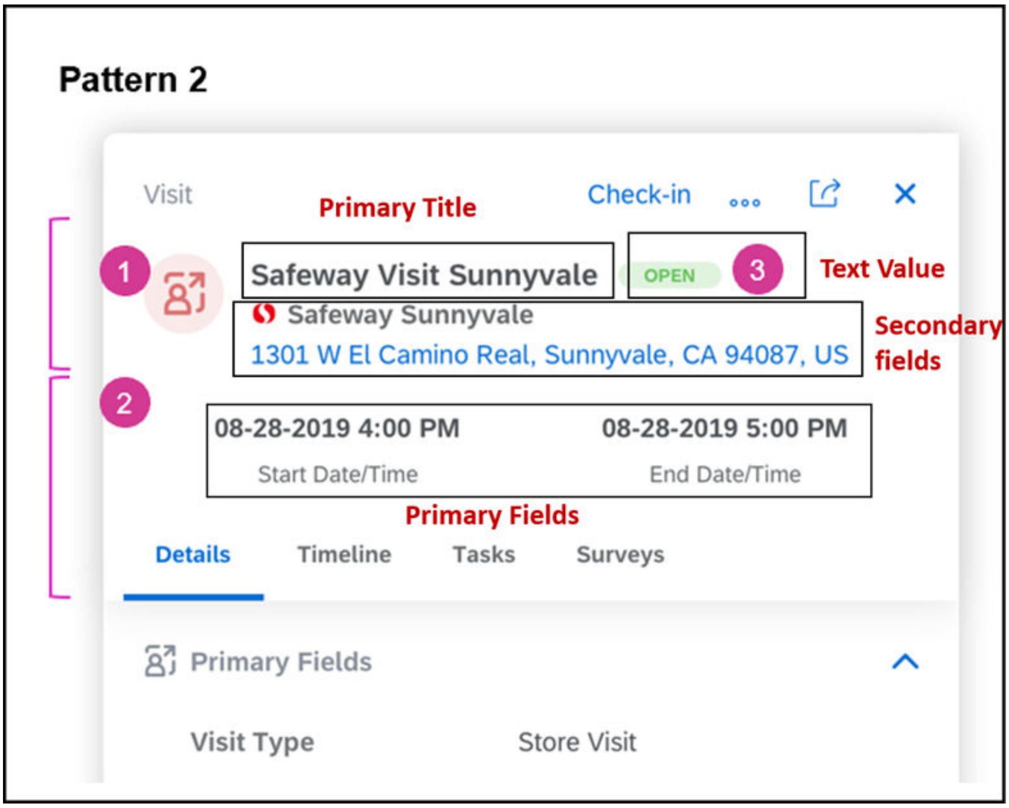
- The section area for each tab is used to show object information, or lists, or notes. Lists are shown only in predelivered chunk view format and don't support tabular visualization.

There are two different visualization patterns available for the new quick view:

- **Pattern 1**- In pattern 1 visualization,
  1. There's a primary title (navigable link) and up to three primary fields (depending on the configuration).
  2. Up to two secondary fields (depending on the configuration)
  3. A numeric value on the right. In the screenshot below, it's the deal score 85



- **Pattern 2** - In pattern 2 visualization,
  1. There's a primary title (navigable link) and up to two primary fields (depending on the configuration).
  2. Up to two secondary fields (depending on the configuration)
  3. An additional text on the right. In the screenshot below, it's the status text **Open**



i Note

- New quick view is available in many objects. However, for objects where it's currently not enabled, the old quick view is available.
- When the new quick view is enabled, then the old quick view isn't available for custom objects. And, clicking on a custom object opens the object detail screen.

! Restriction

- Flag, favorites, and tags aren't supported in the new quick view.
- Embedded Components aren't enabled in the header fields. However, you can see them below the header field list.
- New quick view doesn't support embedded component. It isn't a limitation but intentionally done for an effective UI experience with the quick view. Complex embedded components can destroy the layout, for example, having multiple columns etc. Also, based on the complex nature of the embedded components, there's a high possibility to have an impact on performance.
- Adding mashup and reports is disabled for new quick view.
- New quick view isn't available in offline mode.
- New quick view is not available on tablet and smartphone.

List of Objects That Support the New Quick View

	Object	Path
1	Opportunity	Sales → Opportunity

	Object	Path
2	Sales Quote	Sales → Sales Quotes
3	Sales Order	Sales → Sales Orders
4	Leads	Sales → Leads
5	Employees	People → Employees
6	Accounts	Customer → Accounts
7	Contacts	Customer → Contacts
8	Individual Customers	Customer → Individual Customers
9	Appointments	Activities → Appointments
10	E-Mails	Activities → E-Mails
11	Phone Calls	Activities → Phone Calls
12	Tasks	Activities → Tasks
13	Visits	Visits → Visits
14	Competitors	Competitors → Competitors
15	Competitor Products	Competitors → Competitor Products
16	Products	Products → Product Administration Products → Products
17	Contracts	Contracts → Contracts
18	Tickets	Service → Ticket
19	Chats	Activities → Chats
20	Memo	Activities → Memo
21	Installed Base	Installed Base → Installed Base
22	Installation Points	Installed Base → Installation Points
23	Registered Products	Product → Registered Products Installed Base → Registered Products
24	Assignments	Resource Scheduler → Assignments
25	Maintenance Plans	Installed Base → Maintenance Plans
26	Stock	Stock
27	Time Entry	Time Recording → Time Entries
28	Time Report	Time Recording → Time Reports
29	Social Media Message	Service → Social Media Messages
30	Partner	Partner → Partner
31	Partner Contact	Partner → Partner Contact
32	Product Lists	Product → Product Lists
33	Org Structures	Administrator → General Settings → Org Structures

	Object	Path
34	Premise	Utilities → Premise
35	Contract Account	Utilities → Contract Account
36	Sales POD	Utilities → Sales POD
37	Promotion	Sales Campaign → Promotion

Scope of key user tools for the new quick view-

- Adding new tabs
- Adding new sections to tabs
- Adding extension fields (to sections on the views as well as to the new quick view header)
- Adding PSM fields from underlying main business object (to sections on the views as well as to the new quick view header)
- Adding HTML formatted explanation texts to existing tabs
- Reorder tabs
- Reorder panes of a view
- Reorder fields (in sections of views as well as in the new quick view header)
- Reorder columns (if there are tables or chunk views modeled on a new quick view)
- Move fields across sections and facets
- Move fields from sections to header region and vice versa
- Show/hide fields, columns, buttons
- Set fields and column invisible, read-only, mandatory in master layout, as per key user rule and dependent on a page layout
- Sort and group lists
- Set of visible rows to lists
- Set display mode and sort order of code list fields

15.4 Library

Use the library to organize documents using folders. You can set authorizations for folders and documents and share deep links when referring content.

15.4.1 Enable Library with Folder Structures

Before users can organize documents using folders, administrators must enable the new library and migrate all the content from the existing library.

Procedure

1. Go to *Business Configuration* > *Implementation Projects*.
2. Select your project and navigate to *Edit Project Scope* > *Questions* > *Communication and Information Exchange* > *People Collaboration, Intranet and External Services* > *Communities, Document Management and External Services* and select the scoping question: *Do you want to enable library where you can organize documents using a folder structure?*
3. Assign the *Library* work center view (ID: *COD_LIBRARY_WCVIEW*) to appropriate business users or roles.

   For more details, please check Create Business Roles and Assign Work Centers and Views.
4. Go to the *(New) Library* work center, from the actions at the bottom right, click *Migrate Documents from Library*. A background job is scheduled at the back end to migrate all the documents from the existing library.

   The background job is triggered every four hours. Depending on the volume of the documents to be migrated, the time required to complete the migration varies.

Next Steps

Once the migration completes, you can disable the existing library work center view (ID: *COD_MARKETINGINFO*) for applicable business users or roles.

> → Tip
>
> After the old library is removed from the project scope, it is recommended that you trigger the migration in the new library once again, just in case users might have created new documents in the old library during migration.

15.4.2 Manage Access Restrictions for Library

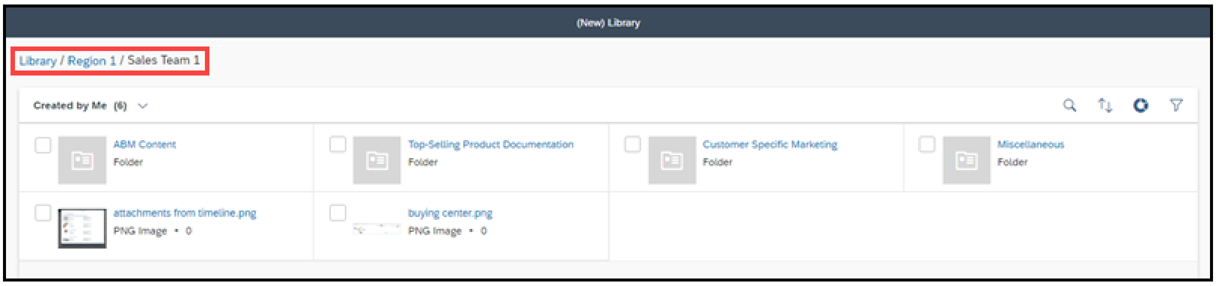
Administrators can provide users with restricted access to the library using access context 2027. With this access context, read and write access to documents can be restricted based on sales organization, territory, and account.

This access restriction also applies to attachments added from the library. For documents added to the library and referenced in a business object such as an account, they are visible to all under the *Attachments* tab.

However, unauthorized users cannot navigate to further details. Restricted documents are not listed in the *Attachments* work center. Attachments from outside of the library are not subject to access restriction.

15.4.3 Organize Documents Using Folders

You can build up to three levels of folders to group documents in the new library. A breadcrumb trail allows you to keep track of your current location and easily navigate back to an upper level of folder in the hierarchy.



! Restriction

Pre-delivered views are only used to filter top-level documents and folders in the library. For example, if you switch the view from *Created by Me* to *Changed by Me* within a folder, you will be directed back to the top level in the library and see a list of top-level documents and folders that have been changed by you.

15.4.4 Manage Access to Folders and Documents

As the owner of a document or folder, you can define whether the document or folder is public or private. Access to a private document or folder can be restricted to specific sales data, accounts, employees, and territories.

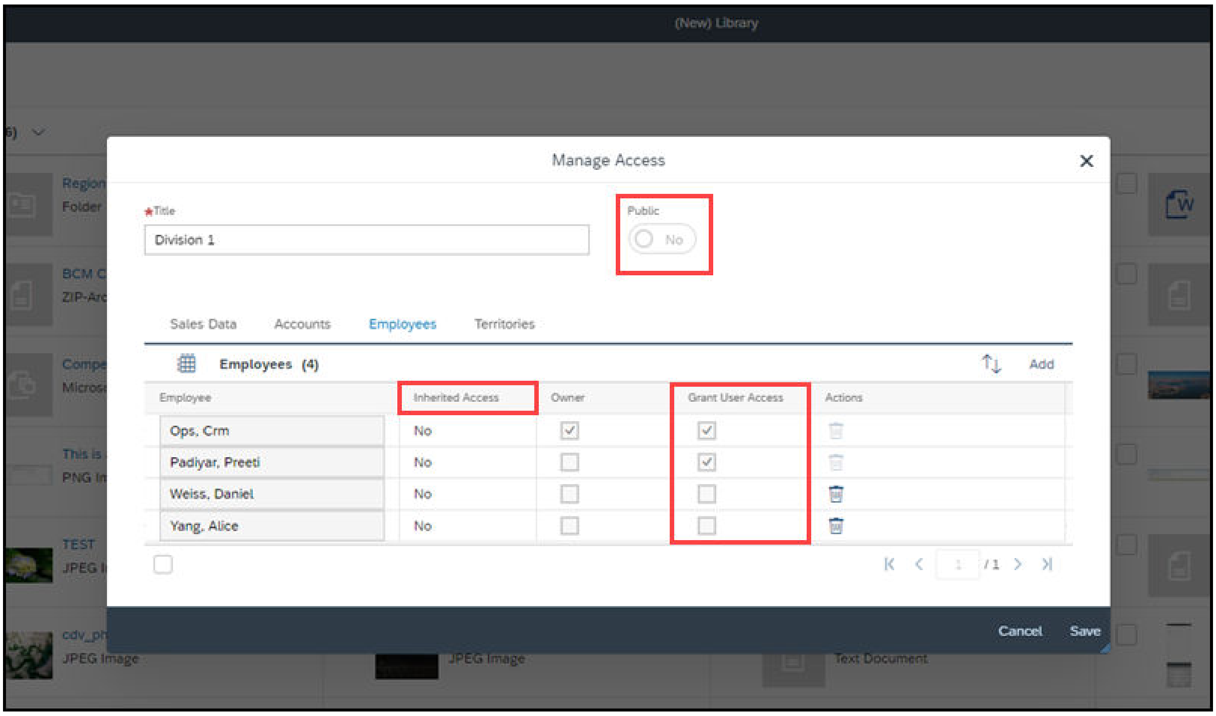
In addition, you can authorize other employees to administer the document or folder by checking their *Grant User Access* fields.

Items that have access to a parent folder can access all the child folders and documents within the folder. Items with such *Inherited Access* cannot be edited or deleted.

i Note

You cannot change the administration right for an employee with inherited access. In a case like this, you must add the employee explicitly for editing.

Inherited access can also be granted due to access control that has been configured by your administrator.



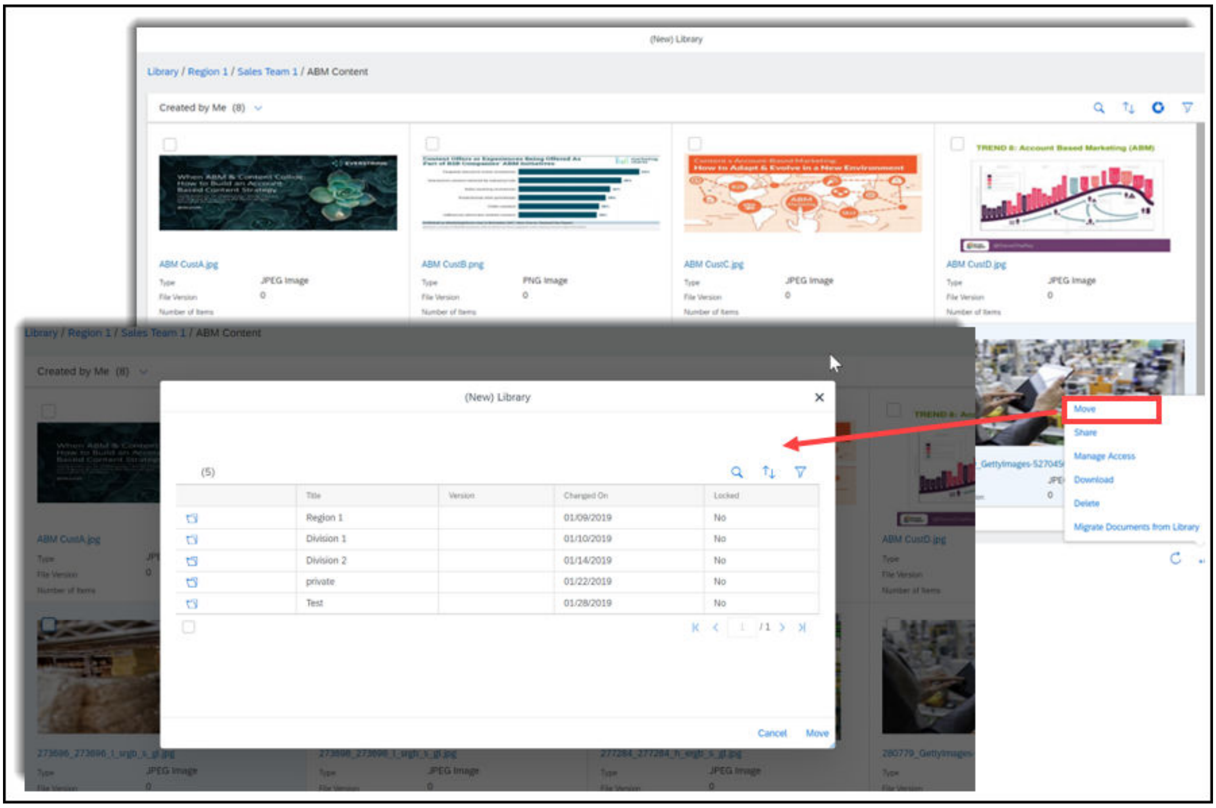
Related Information

Configure Access Control and Restrictions for Business Roles

15.4.5 Relocate Documents into Folders

Within the new library, you can organize documents using the *Move* action to place them into the right folders at any level in the hierarchy.

Context



> **! Restriction**
>
> Only documents can be moved into a folder. You cannot move folders into a folder.

Procedure

1. Select one or multiple documents that you want to relocate.
2. From more actions at the bottom right, choose *Move*.
3. Click the folder icon or the row and navigate to the folder where you want to place the documents. Open that folder.

i Note

The first level that appears is the root level. If you want to move documents to the root level, you do not need to click any folder.

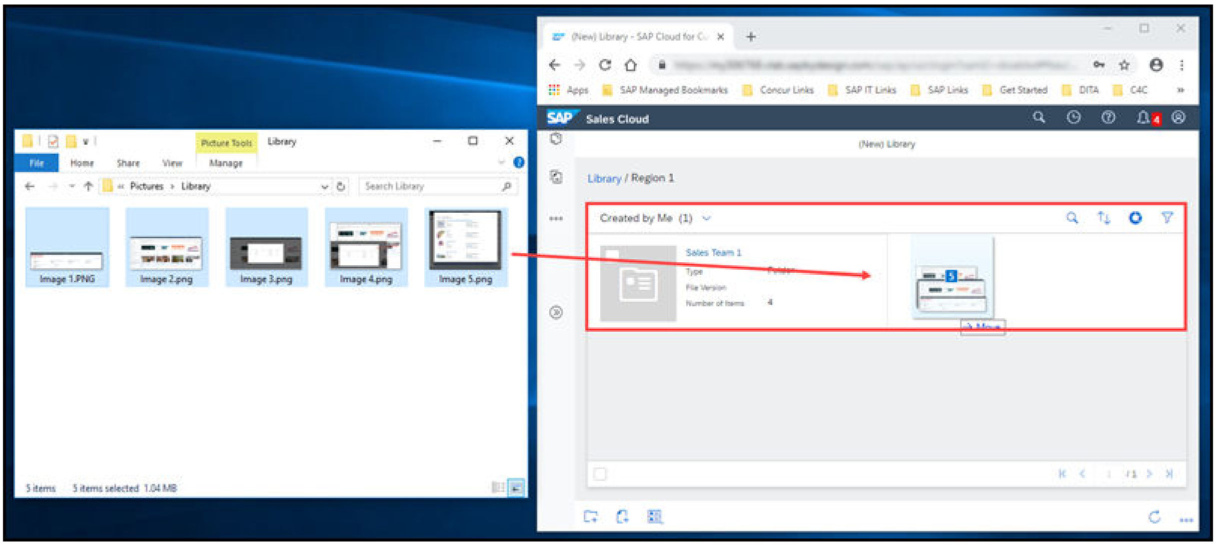
4. Click *Move*.
5. Refresh the list to see the result.

15.4.6 Upload Documents to Folders Using Drag-and-Drop

You can place documents directly into folders from your client device using drag-and-drop. You can only upload documents into a folder that is currently open. Up to five documents can be uploaded in a single drag-and-drop action.

→ Tip

To trigger the upload, you must drop the documents into the list area. The list area is highlighted in red in the screenshot below.



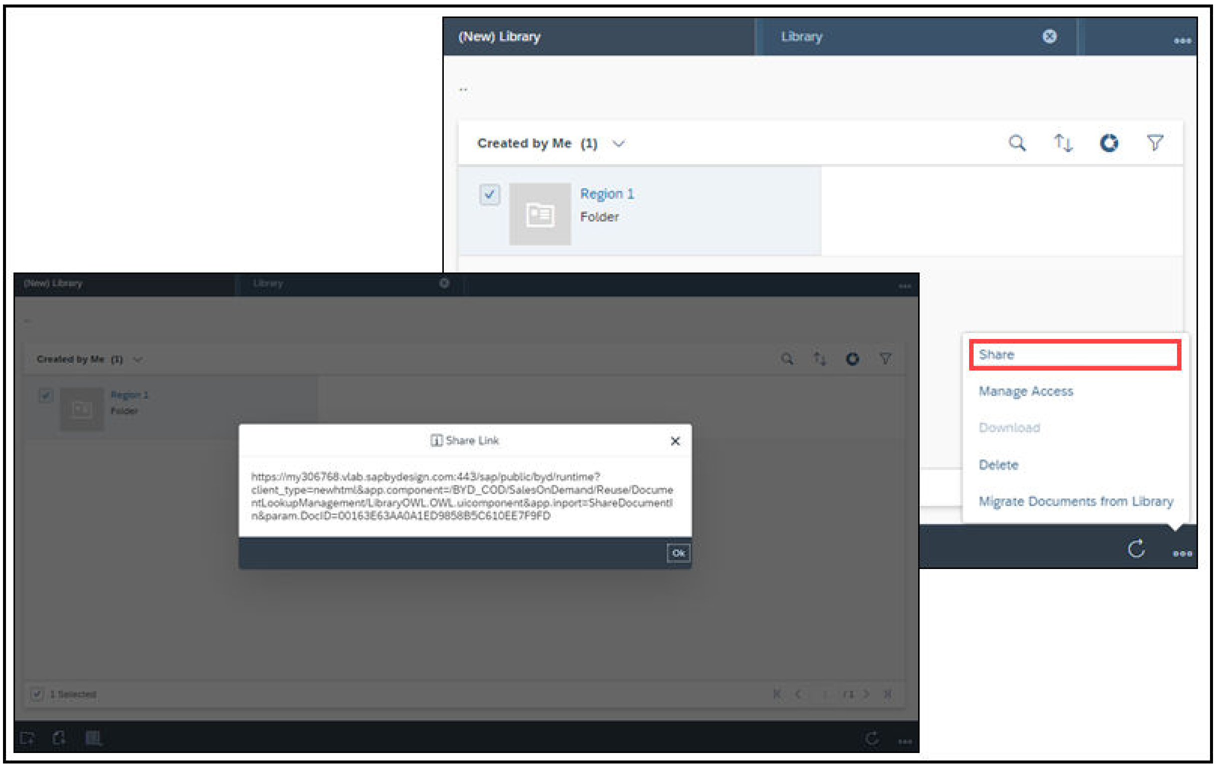
i Note

Due to an internal restriction, you cannot upload a document if another document in the library has the same name. As a work around, you can upload your document with a different name, and later edit the title.

15.4.7 Share Deep Links to Folders and Documents

You can share deep links to folders or documents with colleagues when referring to content.

When you open a shared link to a private folder or document, you must have permission to access the folder or document before you can see the content.



! Restriction

Please be aware of the following known limitations when you open a shared link to a folder:

- You see the action bar located at the top instead of the bottom.
- The content within the shared folder displays under your default view.

15.5 Attachment Search

View and download attachments that have been uploaded to your system.

- Use default query sets for *Last Week's Attachments*, *Last Month's Attachments*, *My Attachments*, *My Teams' Attachments*, and *All* to filter attachments results.
- Users can utilize default sets of Last Month's and Last Week's Attachments to quickly see attachment results.
- Navigate (from the search screen) to the target business object.
- Sort the search results set in ascending or descending by standard criteria and the appropriate data appears in the search results table.
- Use action - *Download* to download a single file. You can also select multiple files for download. This downloads a compressed zip file containing the selected files.
- Use action - *Refresh* to update the *Attachments* work center view with any changes that you have made to the attachments in the business objects.

- Use the same access restrictions maintained for specific business object to allow or restrict access to attachments.
- Delete an attachment from a business object and this also deletes the document from the list in the *Attachments* work center view. Similarly you will find that any corresponding actions that you perform for a business object (such as create or edit) will be updated in the *Attachments* work center view.
- The maximum number of results per result set is restricted to 5000.

Request Bulk Attachment Downloads [page 523]
Request a bulk attachment download and download the attachments from the attachment download monitor.

Search Attachments [page 524]
Search for specific items that have been uploaded to your system.

Use Attachment Search for Custom Objects [page 524]
Search for attachments that are a part of custom business objects.

15.5.1 Request Bulk Attachment Downloads

Request a bulk attachment download and download the attachments from the attachment download monitor.

Context

If you have selected more than 100MB of attachments to download from your attachment search results, the attachments must be grouped into multiple smaller sets that are less than 100MB in size before you can download them. You'll create a bulk attachment download request that gets scheduled for grouping and made available for download. Each bulk attachment download request has its own ID and can be found in the attachment download monitor.

In the attachment download monitor, you can view your download requests, the download request status, view the expiration date and time, and download the requested attachments when they are ready. The attachments are only available to download for 24 hours after the download request is created. You can download and see only the download requests that you have requested.

> **i Note**
>
> You can only create two bulk attachment requests at a time. If you currently have two bulk attachment requests in your attachment download monitor, you must wait until one expires to create a new request.

Procedure

1. Select the attachments you want to download and choose *Actions* > *Download*. If the total size exceeds 100MB, a download request is scheduled.
2. Go to *Library* > *Attachment Download Monitor* and locate the download request ID to view the status of the requested attachments.

3. Once the requested attachments are compressed with the status *Ready for Download*, you can download it. The attachment download monitor shows the expiration date and time at which your attachments are no longer available to download.

15.5.2 Search Attachments

Search for specific items that have been uploaded to your system.

Under *Library* > *Attachments*, search for attachments that are uploaded for various business objects. The current release supports the complete attachments search functionality for sales orders, accounts, sales quotes, opportunities, visits, appointments, activities, leads, sales campaigns, and e-mail business objects.

- Search for all documents for a business object
- Use advanced search to search using *Object ID/Type*, *Name*, *Accounts*, *Sales Organization*, *Distribution Channel*, *Uploaded On* (Attachment Date), *Uploaded By*, and *Attachment Format*.
- Use standard and extension fields for accounts to search using a specific account.
- Create and save personalized search queries with selected search criteria.

In the *Attachments* work center, use the dropdown menu for *Attachment Type* to filter your search results by an attachment type in your system.

15.5.3 Use Attachment Search for Custom Objects

Search for attachments that are a part of custom business objects.

If you have custom business objects in your system that contain attachments, these attachments can be included in the attachment search under *Library* > *Attachments*. Use the advanced filter to search for attachments based on a specific custom business object. Administrators can configure which custom business objects get included in the attachment search.

15.5.3.1 Configure Attachment Search for Custom Objects

Administrators can configure attachment search for customer objects with a fine-tuning activity.

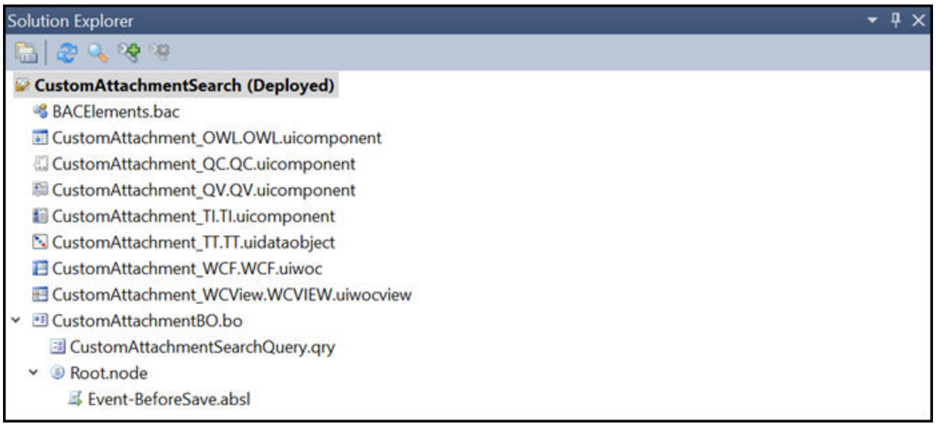
Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine Tune* > *Configure Business Objects for Attachment Search* to activate attachment search for your business objects.

You see the current, default business objects in the list. Use the *Active* checkbox to activate or deactivate the object for attachment search.

To add a custom business object to the list, you'll need to add a row for your custom object and define the following:

- Object Identifier - A unique identifier to identify this configuration. It should start with "Z".

- UI Path for Authorization Context - This Unique ID (taken from UI designer) of the UI component provides the authorization context for search. This OWL component can be a reused standard OWL of SAP if the custom business object derives the authorization context from it.
- Active - Indicator to activate or deactivate the custom business object from search.
- Description - Translatable description of the custom business object. This description appears in object dropdown box, in the advanced search for attachments.
- Properties - Use the Solution Explorer in PDI Studio to set the following properties:
    - Object Name - A valid name of the custom business object. It has a .bo file extension in the Solution Explorer.
    - Object Namespace - A valid namespace where the custom business object is defined. In can be found in the solution properties in the Solution Explorer..
    - Object Query Node Name - A valid node name on which the custom business object's query is defined. In the Solution Explorer, under your custom business object name, double-click the .qry file to retrieve the query node name.
    - Object Query Name - A valid query name defined on the custom business object. In the Solution Explorer, the object query name is under the object query node name.
    - Search Parameter Name Account ID - Optional - A valid data element path to the search parameter account ID defined in query.
    - Search Parameter Name Sales Organization ID - Optional - A valid data element path to the search parameter sales organization ID defined in query.
    - Search Parameter Name Distribution Channel - Optional - A valid data element path to the search parameter distribution channel. In the Solution Explorer, right-click on the .qry file and select Execute Query. In the window that opens, use Parameter dropdown menu.
    - Object Thing Type Name - A valid "Short_ID" value taken from UI designer that represents the thing type name of custom business object. It has a .TT file extension in the Solution Explorer.
    - Search Result Attribute ID - Optional - A valid data element path to the identifier of the business object that can be used to identify the business object in the search results. If this value is not maintained then UUID of the business object is shown in the search result. This attribute is used to help the user to uniquely identify the business object of the corresponding attachment. You can give any element maintained the custom business object. It is recommended to use the alternative key of the business object.



15.6 Attachment Size

Lists the limits of attachment file sizes in SAP Cloud for Customer.

On the Web Interface

Business users can upload a file of the size 100 MB using the SAP Cloud for Customer client. If you try to upload files of size 100 MB, you might face issues during the upload or retrieval. We suggest that you keep the attachments size below 100 MB.

> **i Note**
>
> Overall, the size limitation per user is 10 GB per tenant, however, the overall storage consumption per tenant is checked instead of the limitation per user. For example, If there are two users in a tenant, then overall total storage space available in the tenant is 20 GB and that cumulative limit of 20 GB is checked when files are uploaded.

On the SAP Cloud for Customer Mobile Application

- Online mode: Maximum size limit of attachments per file is 5 MB.
- Offline mode: Maximum size limit of attachments per file is 2 MB.

> **i Note**
>
> The attachment file size on the mobile application is relevant for attachments both from camera and the gallery.

From E-mail Communication Channel

- E-mail communication channels allow total size for outbound e-mail messages up to 35 MB. The size of the entire outbound e-mail message, including the content, inline images (if any), and any attachments can be up to, but not exceed 35 MB. Any single attachment in an e-mail can be up to 20 MB.
- The total size (message content and attachments) for inbound e-mail messages must be much lesser than 35 MB. It's best to limit inbound message and attachment size to 25 MB or less upon sending.

Using ODATA Services

Technical users can upload files using ODATA services. There's no check enforced on the size of the data technical users can upload using ODATA services, however, if the file size is too large, it might time out.

15.6.1 Configure Attachment Sizes

Administrators can configure attachment size limits.

Context

As an administrator, you can now configure attachment size limits for your business users.

Procedure

1. Log in to the SAP Cloud for Customer system.
2. From the user profile, navigate to *Settings* > *Company Settings* > *Attachment Size*.
3. Enter the attachment size limits for both file upload and drag & drop options, and click *Save*.
4. Log off and log in back again to the system for your changes to take effect.

Results

You've now set the attachment size limits for your business users. As an administrator if you don't configure the attachment size limits, the default attachment size limits are considered.

15.7 Lists

Learn how to work with different lists in the solution.

Lists are available in work center view and in detail view. At the work center level, the list is used to locate objects in the system such as accounts, opportunities, and leads. At object detail level, the list is used to locate list of items in an object. For example, the list of items in a sales quote.

> → Remember
>
> You can only open 25 tabs in the solution. However, if you want to open additional tabs, you can do so by closing some of the open tabs, so that the tab count doesn't exceed 25.

The toggle selection mode button to enter into multiselection mode has been removed. Selection checkboxes are always visible in multiselect lists for all table visualizations (table view, chunk view, image view, map view etc.). You can navigate to different objects directly from within the chunk view. With selection checkboxes, the selection of rows in a list becomes easier and you don't have to do an additional click to enable the selection of checkboxes.

> → Remember
>
> Multiselection checkbox isn't available in a single select list.

Auto Adjustment of Table Column Width

You don't have to expand or reduce the column widths in a table to see the complete table. The columns automatically adjust to the table size and shrink to minimize the white space. In case, the table is long, the columns shrink further by wrapping the header text. Thus, maintaining all the values on one screen. Whenever there's paging, sorting, or filtering of the columns, the width of the affected column is recalculated to auto adjusted. You can also manually adjust column widths to your requirement.

You can double-click the right border of a column header cell to resize. The column border expands to fit the longest value and when you click again it reverts to the original width.

→ Remember

- When you are in edit mode, the minimum width of any column with editable controls increases to accommodate editing. However, empty and read-only columns remain to the minimum width size.
- Column width changed made by you isn't saved. When you come back to a table again, you'll see the original column width.
  Even when one column is changed, the complete table is impacted, and all the column sizes are redistributed.
- This feature isn't supported on Microsoft Internet Explorer and Edge browser (version >16).

Dynamic resizing of the table columns can be done under company settings. You can enable the auto adjustment of table column under *Settings* > *Company Settings* and turn on the toggle button option *Enable Auto Adjustment of Table Column Width in Fiori Client*.

Freeze First Column in Table

Column freeze feature allows you to keep the first column visible while scrolling horizontally through the right of the table. The first column is frozen to lock a specific column information in place. So, you can always see the important information without scrolling.

The administrator or end user can move the most important column in the list as a fist column by adaptation or personalization. First column freeze provides significant improvement in the user experience for lists having more than 6 or 7 columns.

i Note

- First column freeze is available only in desktop and tablets.
- Column freeze isn't supported in the Internet Explorer.
- If you are using the grouping feature, the grouping header row doesn't freeze.

As a prerequisite, your administrator must go to *Company Settings* and toggle on the button *Enable Column Freeze in Table*.

Manage List in Work Center View [page 529]
Learn all the different operations and actions you can do with an object worklist to access information quickly and easily.

Manage List in Object Detail View [page 534]
Learn all the different operations and actions you can do with a list in detail view to access information quickly and easily.

15.7.1 Manage List in Work Center View

Learn all the different operations and actions you can do with an object worklist to access information quickly and easily.

- You can quickly create a new object by choosing the (+) icon at the bottom left of the object list. When you select an object in the object worklist, the relevant information of the selected object is displayed in a new tab.
- Basic search by key words, advanced search with more searching criteria, and sorting functions are supported for worklists.
- When enabled, multiselection checkbox is available as a column and always visible. For multiselect lists, checkboxes are always shown. For single select lists no checkboxes are shown. With this setting, you save an additional click to enable the multiselection checkboxes and the toggle action icon isn't available.
- You can resize the columns by dragging the separator line between the two columns in the column header.
- Clicking on the column header on each column opens the column header menu and is used to sort or filter a particular column. This menu contains the following actions:
  - Sort Ascending
  - Sort Descending
  - You have free text filter to do column search for multiple words. You can search list columns for multiple words at once. To do a multiple word search, separate each search word by a semicolon without any space. The search is an exact search when multiple search words are entered. However, if an asterisk (*) is used, it becomes a pattern-based search. For example, if you click the column header 'Name', and enter search words 'Joe*; Stin, it brings up all the records of names that begin with Joe and record that contains Stin. When a single search word is entered, the search is a pattern-based search.
- Worklist can be displayed in different views. Table view is the default view for worklists and each row represents an object. Other views are chunk view, map view, image view, calendar view, and hierarchical table view.

> → Remember
>
> The smartphone doesn't feature the conventional table view. It displays the information in a type of chunk view or condensed chunk view as selected by the user.

Information About Other Views in Worklists

Chunk View:

Chunk view is useful for heterogeneous data types. The chunk view displays two rows of attribute values. Using the chunk view, you can display up to eight attribute values so that you don't scroll horizontally.

Each chunk view entry occupies an entire row. Objects can be further accessed when you click on the title hyperlink. The icon or thumbnail image indicates the type, object, or image of your choice. The title is the name of the corresponding object. It contains a hyperlink that, when clicked, takes you to the object overview.

→ Tip

There are two types of chunk views - Chunk View for worklist and Chunk View for Side Panel (when available and enabled).

Chunk view is available in desktop, tablet & smartphone as an alternative view for the table/list views. For mouse-controlled devices like desktop, chunk view shows all navigation links. Whereas for touch-enabled devices like tablet & smartphone, only the first field is shown as a link. Hence, only one navigation is supported to reduce the number of tap areas and improve touch experience.

- Desktop and Tablet
  - The first nine fields from list view are shown in the new chunk view.
  - If the administrator adapts the list view (add columns, remove columns, or change sequence), the changes are also reflected in Chunk view.
  - If you personalize the list view (add columns, remove columns or change sequence) the changes are also reflected in chunk view.
- Smartphone
  - The first seven fields from list view are shown in the new chunk view.
  - If the administrator adapts the list view (add columns, remove columns, or change sequence), the changes are also reflected in Chunk view.

    i Note

    The administrator can also use smartphone layout to specifically hide some fields in smartphone.
  - If you personalize the list view (add columns, remove columns or change sequence) the changes are also reflected in chunk view.
  - The default view for smartphone is the chunk view for better touch experience. You also have the option of condensed chunk view, showing lesser fields in smartphone.
  - In touch-enabled devices, you can only navigate to the leading object. For example, for accounts you can go to the account name but can't navigate to the contacts under it.
  - List view isn't supported in smartphone.

Image View:

→ Remember

Minimum size of the largest image uploaded and used for image view is 196px196px. The supported image file formats are PNG and JPG.

Image view provides information at a glance about objects where visual information is easier to consume. For example, products, people, and so on. Different image views are supported on any lists, where images are configured. There are three image view sizes supported:

- Large image view
- Medium image view
- Small image view

→ Remember

If the image is missing:

- For people-related items, their initials are used.
- The document type icon is used for documents (if the preview isn't available).
- If no options are available, the object type icon is used.

Map View:

The map view is useful for objects that require geographical or location information. In the map view, you have a list on the left side that contains all the objects. The map covers rest of the screen and expands to the bottom and right of the available window. When you resize the screen, the map also resizes, but it doesn't zoom in or out. A map pin represents an item in the list on the map and when selected, highlights the pin.

- The following work center views are displayed in map view.
  - Accounts
  - Appointments
  - Installed Base
  - Registered Products
  - Route Planning
  - Tickets
  - Visits
  - Work Tickets

Calendar View:

There are different views available in the calendar, namely week view, work week view, day view, month view, and agenda view. With the filter, you can define what kinds of events to see on a calendar. Filters are organized by type (appointment, phone call, visit, and so on.) or by status (open, in process, complete, overdue, and so on).

→ Tip

By default in tablet, the event list is hidden and collapsed in a side menu. One can access the event list by clicking the hamburger menu on the top left of the worklist.

Hierarchical Table View:

The hierarchical table view is similar to the table view but allows for better grouping of related items and categories. A hierarchical table view is available under Territories. Each line in the table represents an object. If the item is collapsed, the arrow in the object points to the right, and its content isn't visible. Clicking the arrow expands the content and clicking the item opens the object.

Row and Lead Selection

You see two different behaviors depending on how you make your selection in the table. There's row selection that is indicated by light blue background color of entire row and lead selection that is indicated when the check box is selected.

When you click anywhere in white space except for checkbox, it triggers the row selection and lead selection. Only one row is selected at a time. If you click again anywhere else, the row and lead selection changes to the row in the selected area. For example, if you have machine learning pane or if master detail configured on the list, you see respective frames getting refreshed with the selection. You always have only one lead selected object.

When you select the checkbox, you explicitly enter the lead selection mode. For example, if you have machine learning pane or if master detail configured on the list, you see respective frames getting refreshed with the selection. In explicit lead selection mode, any further clicks in the white space of other row or on check box leads to additional lead selection, as multiple check boxes get selected. In multiple selections, the machine learning pane and master detail pane aren't refreshed without an explicit action to refresh them. For machine learning pane, the explicit action to refresh is done by clicking the bulb icon under the *Action* column.

Donut Charts in Datasets

Donut chart provides a simple, at a glance presentation of information. With availability of donut charts, you can quickly filter the list based on the predefined criteria. You can create donut charts using predefined dataset columns in Fiori client. In the donut chart, you can see up to eight categories including *Others*. The first seven segments are values for the data and the eighth segment contains the combined remaining values.

> ! Restriction
>
> Donut chart doesn't give an accurate value if the eighth segment exceeds more than 493 unique segments.

When a segment value is selected, the corresponding segment is highlighted in the donut chart. Donut chart color combination has been modified to clearly distinguish the segments. Each segment of the donut chart is in different color for visual clarity.

> i Note
>
> Donut Charts are shown using Belize Theme colors in Blue Crystal theme.

In the donut chart, you can also see the standard and additional (KUT-key user tools) fields defined by the administrator. The administrator can define additional fields under adaptation mode . As a prerequisite, your administrator must go to *Start Adaptation* under the user menu and select the checkbox *Show in Donut Charts* for the standard and administrator-defined fields. When finished, end adaptation to see the added fields in the donut chart.

> ! Restriction
>
> You can't plot the donut chart for the fields that are removed from the list.

Enable Editing Directly in the Worklist View

In many objects, you can edit information directly in the worklist view, without navigating to the detail view.

Directly editing in the worklist view reduces the number of clicks, and the time it takes to navigate to object detail view to make an edit.

The administrator can enable editing in worklist by going to the user profile menu under *Settings* > *Company Settings*, by turning on the toggle button for the company setting *Enable Editing in Dataset*.

Inline Edit in Datasets (Desktop Only)

You can now edit information directly within specific cells of the dataset without having to navigate to the object detail view.

With inline editing, you can change information directly in specific cells, by hovering and selecting any editable element in the table. You can edit an item directly on the same page, without navigating to another view. Inline edit functionality brings significant improvement in the user experience by removing multiple clicks and time taken earlier to open object detail view for quick changes.

The administrator can enable the feature from the user profile menu under *Settings* > *Company Settings*, by turning on the toggle button for two company settings *Enable Editing in Dataset* and *Enable Inline Editing in Browser*. When both settings are switched on, only then you can do inline edit in data set. With the company setting *Enable Editing in Dataset*, only the global editing is enabled.

Mass Edit on Datasets (Desktop Only)

In many datasets, you can edit information for multiple selected row columns simultaneously in one selection. To do a mass edit, switch to the edit mode for the dataset. You see an empty row at the top of the table. The empty row is the mass edit row. When you select two or more rows, then the empty row at the top of the table becomes active. And, only at that time, cells that are enabled for mass edits are active. Select or enter a value you want to change for the specific column of the selected rows. Then, select *Save* to save your changes.

Mass edit functionality brings significant improvement in the user experience by removing multiple clicks and time taken earlier to open object detail view for quick changes.

> → Remember
>
> Not all cells are enabled for mass edit.

As a prerequisite, your administrator must go to *Company Settings* and toggle on the button *Enable Editing in Dataset*.

> ! Restriction
>
> If value help column is active and if one of the values can’t be changed or are different, then mass edit can't be performed. In this case, that column in the empty row at the top, is grayed out. Currently, this behavior is a limitation.

15.7.2 Manage List in Object Detail View

Learn all the different operations and actions you can do with a list in detail view to access information quickly and easily.

- You can easily create a new related item by choosing the create (+) button at the bottom left of the object list.
- You can edit the list in detail view. In the edit mode, you can edit the title, secondary title, and attribute values. The layout and the width are maintained, but the height may expand to allow space for you to type and change information.

  > → Remember
  >
  > - On desktop and tablet devices, the edit mode launches on top of each individual object.
  > - On smartphones, the edit mode launches a full-screen, full-width window.

- When enabled, multiselection checkbox is available as a column and always visible. For multi select lists, checkboxes are always shown. For single select lists no checkboxes are shown. With this setting, you save an additional click to enable the multi selection checkboxes and the toggle action icon isn't available.
- Resizing columns can be performed by dragging the separator line between the two columns in the column header.
- Clicking on the column header on each column opens the column header menu and is used to sort or filter a particular column. This menu contains the following actions:
  - Sort Ascending
  - Sort Descending
  - You have free text filter to do column search for multiple words. You can search list columns for multiple words at once. To do a multiple word search, separate each search word by a semicolon without any space. The search is an exact search when multiple search words are entered. However, if an asterisk (*) is used, it becomes a pattern based search. For example, if you click the column header 'name', and enter search words 'Joe*; Stin, it brings up all the records of names that begin with Joe and record that contains Stin. When a single search word is entered, the search is a pattern-based search.

Copy and Paste from Excel to List in Fiori client

There's a paste icon in the table that pastes large amount of copied data (Excel or data separated by semicolon) into the table.

> i Note
>
> - Only supported in table view.
> - Don't use values containing semicolon, as semicolon is used as a field separator. Using semicolon values cause errors.
> - Supported in all tablets and browsers.

For mass copy paste, do the following steps:

1. Copy the data (Excel or data separated by semicolon) you want to paste into the table.

⚠ Caution

- A column can have multiple fields. If the table is empty, the number of actual fields in a column can be checked by adding a new entry.
- When pasting the records leave the checkbox field empty, if you want the checkbox unselected.
- Any random value added in the checkbox field shows the checkbox selected. To show the checkbox selected correctly, add true or X as the field value.

2. Click the paste icon, an input field shows up. Do CTRL+ V or right-click to paste the external data. In all tablets, do a long press and paste.
3. 3. When the data is pasted, the new rows are added to the table. If there are errors, a message is displayed showing the number of errors in the data. Fields with errors are also highlighted in red.

> **i Note**
>
> When you paste the data in the input field, the table switches to edit mode

4. Correct all the errors by seeing the details and then save the pasted data.

Recommendations:

- You must always enter the object ID in the value selection fields.
- One column can have multiple fields. You enter the values for each field in the column, irrespective of the type of column.
- Make sure that the read only (noneditable) fields are empty. Don't enter incorrect values for these fields as it can't be corrected from the user interface.
- For checkbox, use True, False, X or an empty string. Here empty string and false can be used for unchecking checkboxes. All other values show the checkbox selected.
- For quantity and amount fields, if you enter any special character, it gets defaulted to 1 or as configured.

Limitations:

- The copy paste feature isn't supported in Windows 8.1 app.
- Dropdowns based on context and list ID-based codelist aren't supported.
- You can't navigate to different pages based on the error message. You must manually navigate to the right page to identify the row that has the error.
- The order of records added is based on the sort order defined on the list.
- It isn't possible to only revert the new rows created using the mass copy paste feature. When you select the button,*Cancel* you lose all the changes made on the object.

Search and Add or Edit for Lists

You can quickly add or edit list items without having to search in the list. Adding new line items or finding and editing existing line items in a list is available in the search box, where enabled.

You can search for items in the search box on the list toolbar.

- Add scenario: If the item doesn't exist in the list, then it gets added to the top of the list.
- Edit scenario: If the item exists in the list, then the corresponding row is highlighted and ready for editing.

Enable Inline Editing in Object Detail View (Desktop Only)

Inline editing is available for certain fields in object detail view (desktop only).

→ Tip

When multiple fields have to be edited, it's recommended to use global edit.

With inline editing, you can quickly edit a field without going into the global edit mode. In inline edit mode, when you hover over a field, you see the related icon to edit the field. For example, let's say you want to edit the phone number in inline edit mode. When you hover over the phone number field, you see the pencil icon. Click the pencil icon to change the phone number. After you have made the edit, *Save* and *Cancel* action are available. You can either save or cancel your changes.

The administrator can enable the feature from the user profile menu under *Settings* > *Company Settings*, by turning on the toggle button for the company setting *Enable Inline Editing in Browser*.

→ Remember

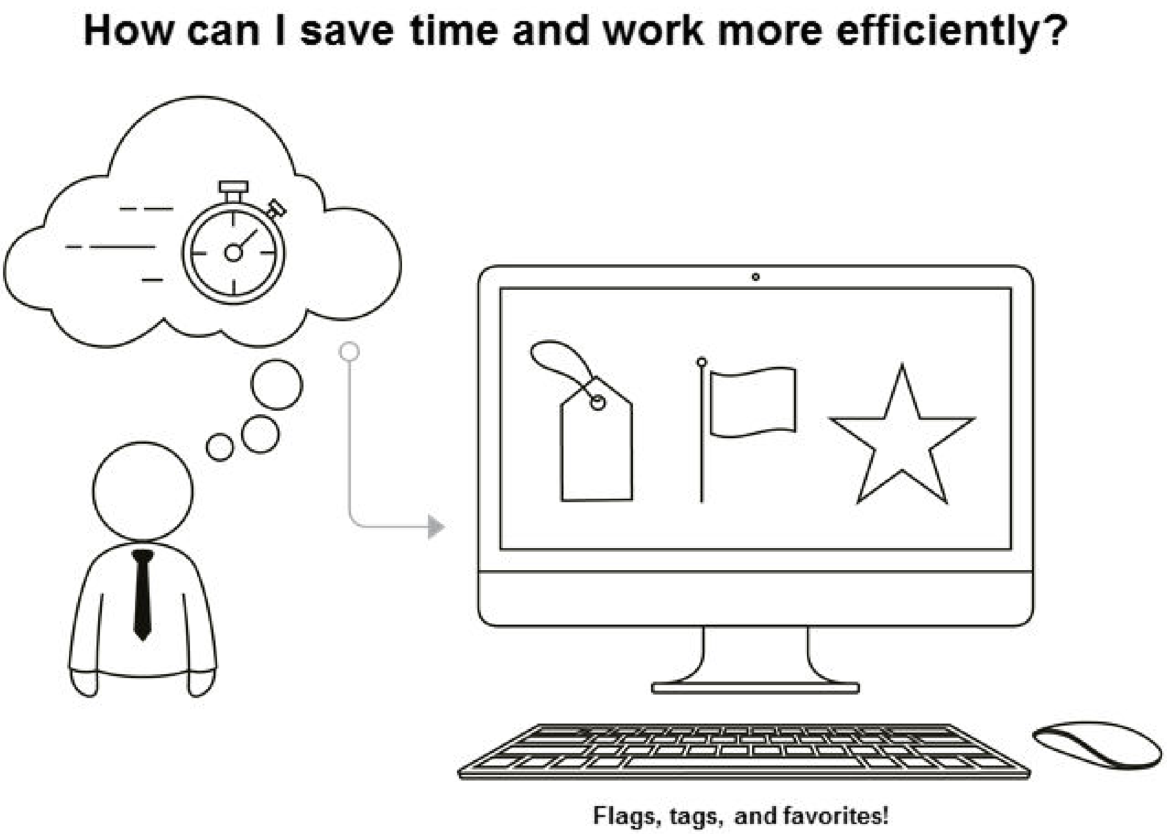
The company setting will be retired with May 2020 release and inline editing will be available as a default.

! Restriction

- The feature is available only on browsers (desktop/laptop).

15.8 Flags, Tags, and Favorites

Learn to work with flags and favorites and use them to keep important items handy.



In SAP Cloud for Customer, you can mark the items for quick access. This marking is useful for items that you access repeatedly, or maybe for reminding yourself to update an item in the near future.

It is just like at home where you may have a favorite coffee mug handy on the shelf for easy access or a purchased item in the front of the closet that needs to be returned. Similarly, in business, you can add items such as accounts, activities, or contacts for quick access. You can find the flag, favorites, and tags under the navigation tab, on the bottom left of the screen.

You can mark items as **Flags** or **Favorites** for quick access and keep them until you don't need them.

Favorites are used to mark items that you frequently use and want to keep handy. Flags are used to mark items that you want to follow up on.

> **i Note**
>
> In SAP Fiori client user-interface, the Flags and Favorites are available under the productivity icon in the shell bar.

Work With Flags and Favorites [page 538]
You can flag objects for follow-up, or mark frequently used objects as Favorites.

Work With Tags [page 540]
Tags are unique identifiers that can be associated with to your items to search, sort, categorize, filter, and segment in an efficient way.

15.8.1 Work With Flags and Favorites

You can flag objects for follow-up, or mark frequently used objects as Favorites.

When an object is flagged or marked as a favorite, the corresponding object marker appears next to it:

- A small flag indicates that the object is flagged.
- A small star indicates that the object is marked as a favorite.

You use the flag option when you flag objects for later reference and follow-up. You use the favorite option when you mark frequently used objects.

15.8.1.1 Add Flag or Favorite

Learn how to flag or mark as favorite an item you frequently use.

Context

Do the following steps:

Procedure

1. Open the item that you want to flag or make as a favorite.
2. Set the flag or favorite icon indicator for the item on the top right-hand corner.

   To access the items you flagged or marked as a favorite, click Flag or Favorite icon at the left bottom of the screen for quick access.

15.8.1.2 Open Items from Flag or Favorite

Learn how you can quickly open items marked as flag or favorite.

Context

Do the following steps:

Procedure

1. To see the list of all items under it, select the flag/favorite icon at the bottom left of the screen.
2. To open an item from either the flag/favorite, select the name of that item, which appears as a link.

15.8.1.3 Remove Items from Flag or Favorites

Items remain under flag and favorites until you remove them.

Context

To do so, you have the following options:

1. Remove the flag and favorite indicators from the item.
2. Remove the item from the flag and favorites list directly. Do the following steps:

Procedure

1. Select the pencil icon in the flags or favorites list. Select the remove (x) icon that appears to the right of your item.
2. Click *Save* to keep the changes. The item disappears from the flag and favorites list, and the flag and favorite indicators are removed from the item.

15.8.2 Work With Tags

Tags are unique identifiers that can be associated with to your items to search, sort, categorize, filter, and segment in an efficient way.

It's similar to adding keywords or any additional information to any item in the solution. For example, if there are a few opportunities in your account that requires high priority. You can tag those opportunities as important, so that you can easily filter them from the other opportunities in your account.

15.8.2.1 Add Tag

Learn how to add a tag and find your items quickly in the solution.

Context

Do the following steps:

Procedure

1. Open the item you want to add a tag to. The tags area is located in the item header.
2. In the tags area, enter a name for your tag then choose SPACEBAR. You have the following options:
    1. - To enter a public tag that everyone can see, enter the tag text in the entry field.
       - To enter a private tag that only you can see, enter an asterisk (*) before the tag name.
         For example, at a sales conference, you talk to five potential customers who are eager to buy your product. You want to follow up on the leads yourself, so you use a private tag, *hot_leads. You can find them easily in the system and call them next week.

         > **i Note**
         >
         > - Tags cannot contain spaces.
         > - Tags are not case-sensitive and always appear as lowercase. For example, the system regards the following tags as the same tag, which appears in the system as "hartford": Hartford, HARTford, or hartford.
3. As you type your tag, the system runs an automatic search, comparing your entry to existing tags. You can accept a suggested tag from the automatic search results. When you accept a suggested tag, the system creates a copy of that tag for you. You can edit, remove, or delete any tag that you assign to an item without affecting this tag in the rest of the system.
4. For additional tag, select the tag icon in the item header and add your tag to the list.
5. Your entry is saved and reflected as an addition in the tag number display.

15.8.2.2 Remove Tag

Learn how you can easily remove tags from items you do not use any more.

Procedure

1. Open the item that contains the tag that you want to remove.
2. In the item header under tags, all the tags for this item appear.
3. Delete the existing tag. Or, select the pencil icon that appears when you hover in the Tags area. A Remove (x) icon appears to the right of your tag. Select it to remove the tag from the item. The tag is removed from this item only. All other items assigned to this tag keep their assignments and the tag displays in the solution as one of your tags.

15.8.2.3 Rename Tag

Learn how to rename and change a tagged item.

Context

Do the following steps:

Procedure

1. Open the item that contains the tag that you want to change. In the item header, under the tags icon, all of the tags for this item appear.
2. Delete the existing tag and replace it with the new tag. Or, select the pencil icon under tags, on the bottom left area of the screen. Select the tag you want to rename and type a new name.

15.8.2.4 Display Items Assigned to Tag

Learn how to see the different tags assigned to items in the solution.

Context

Do the following steps:

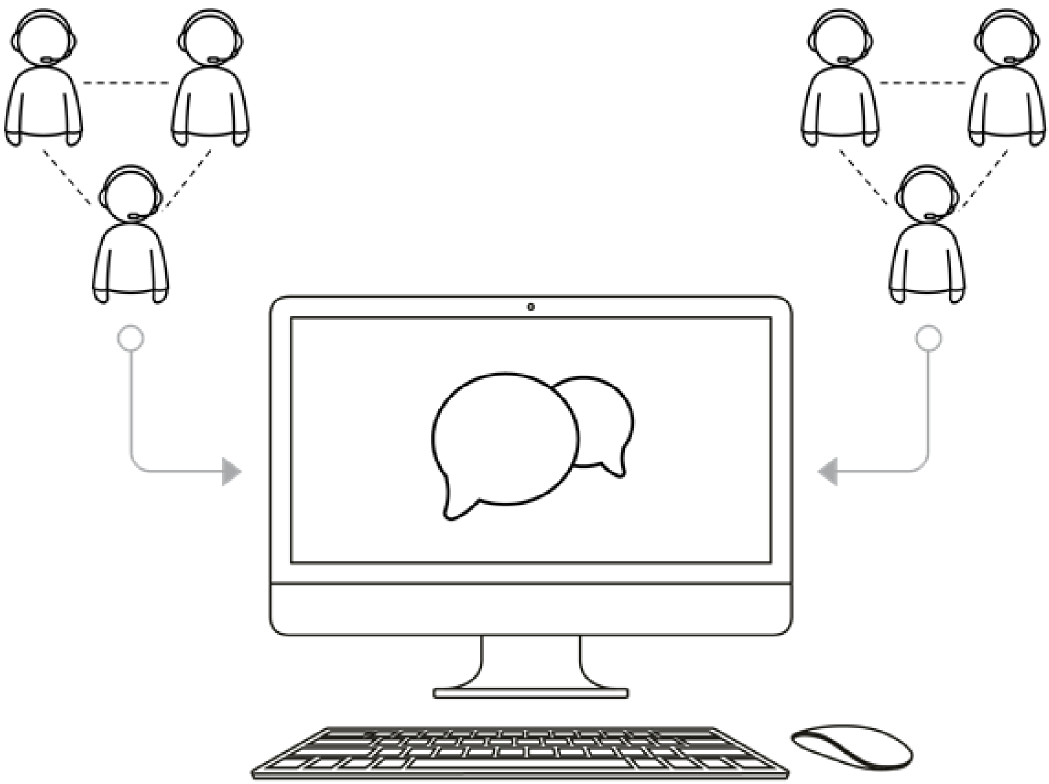
Procedure

1. Open the tag icon on the left bottom of the screen.
2. Search or filter the list.

   To search the list, enter a search term in the search field at the top of the pane. When you click the result of the search, it lists the corresponding items. To filter the list, you can use the following predefined filters:
   - **Recent Tags**: This filter shows the 50 most recently used tags from the last 30 days. This list is sorted chronologically so that the tags that were used most recently appear at the top of the list.
   - **My Private Tags**: This filter shows your most frequently used private tags.
   - **My Public Tags**: This filter shows the most frequently used public tags.
   - **Popular** : This filter shows a ranked list of the most popular tags, including both your private tags and all public tags.
     A tag can be used multiple times. The more frequently a tag is used, the higher it is on the list.
3. Select a tag from the list. The system searches for items assigned to that tag and displays them as search results. You can also run this same search using shortcuts in the global search.

15.9 Feed

Learn about using the feed that allows you to quickly communicate and collaborate with your network.



Feed is where you post updates to your network and receive updates from your feed sources — the information and people you require to complete your work. In the feed, you can post feed updates (using shorthand), comment on feed updates, and delete feed updates. You can also manage your feed sources and feed settings. As with other items in the solution, you can also search feed updates, use filters to view only certain types of updates, flag or tag feed updates, or add them to your Favorites.

For more information about integrating SAP Cloud for Customer with SAP Jam Feeds, see the **Related Links** section.

VIDEO: Using Feed

Find out where feed updates come from, how to post and comment on feed updates, and where to find private updates.

Work With Feed [page 544]

Learn how to use and manage feed to collaborate with team members and speed up the decision process.

Feed FAQ [page 548]

This section answers commonly asked questions about Feed.

Related Information

Prepackaged Integration with SAP Jam

15.9.1 Work With Feed

Learn how to use and manage feed to collaborate with team members and speed up the decision process.

Additionally, get updates on the important items that you follow such as who updated an item, what changes were made to an item, and so on.

With Feeds you can:

- Post messages and share it with all the users in your organization.
- Mention someone or add a tag in your status messages.
- Send private messages to your colleagues.
- Comment on status messages and reply to private messages.
- Follow automatically by creating auto-follow rules.
- Attach an image or document to messages.
- Receive notification for mentions and changes you made and those that you follow.

15.9.1.1 Post Feed Updates

Learn about the basics of posting feed updates so you can stay connected with your network.

To post a feed update, enter a text of up to 500 characters in length, then choose **Submit**. Once you post an update, it appears in your feed. If other employees are following either you or the item you updated, then your update also appears in their feed. Employees you mention in your update (with the shorthand @) also automatically see the update in their feed, even if they are not following you or — when you mention them while posting an update from an item — the associated item.

15.9.1.2 Use Shorthand in Feed Updates

Learn about using shorthand in feed updates.

Within feed updates, you can use shorthand to tag items or mention people, or send private updates, as described below.

Shorthand	Description
@	To mark an item or mention a person in your update, enter an at sign (@) and then choose the item *Type* and the person's *Name* you want to mention. For example, enter *@AccountABC* to mention the account named *AccountABC*, or enter *@Frank Friedman* to mention a customer named Frank Friedman. Items that you mention in an update appear in the feed as links that can be opened for viewing or editing. Employees who receive your update can only open tagged items that they are already following.
*	To send a private update to an employee, enter an asterisk (*) plus the employee name, followed by the private update. For example, to send the private update "Good work!" to the employee Maria Smith, enter **Maria Smith Good work!*, then choose *Post*.
#	To tag a feed, enter the # sign and enter the tag name, followed by the update. If the tag name matches an already existing tag, it can be added automatically. You can add additional tags to this feed update using the tag icon, in the future. i Note Tags are public (once created, can be used by anyone) or private. They help you categorize and search on items.

After you enter shorthand and two characters of the item or person — for example, @Ac, @Fr or *Ma— an automatic search is performed, comparing your entry with existing items or people, and allowing you to select the correct one.

> i Note
>
> If a business document has a single-digit number, enter an asterisk after the number, for example 5*.

15.9.1.3 Comment on Feed Updates

Learn about adding comments in your feed updates.

To comment on a feed update, choose **Reply** within the update. Enter your comment and submit. Within the comment of a feed update, you can also use the shorthand @ to tag items or mention people. If you tag an item in the comment, then your comment also appears in the feed of that item.

> i Note
>
> You cannot use the shorthand * to send private comments to other employees.

15.9.1.4 Delete Feed Updates

Learn how to delete feed updates.

To delete a feed update, choose **Delete** within the update line. The update and its comments are removed from your feed. If you delete one of your own feed updates, then the update and its comments are removed from your feed and from the feed of your followers.

> i Note
>
> You can delete only feeds created by you. Feeds created by other users can't be deleted.

15.9.1.5 Manage Feed Settings

Learn how to manage your feed settings for optimal efficiency.

To manage your feed settings, choose *Feed Settings*, where you can determine the following:

- Feeds Followed: Automatically receive system feeds of the users you are following.
- Follow Requests: This is only applicable for accounts and employees.
  - If this option is not checked, whenever you want to follow an account or employee, the respective account owner or employee gets a notification. Once the follow request is approved, you start following the account or employee.
  - If the option is checked, you can follow the account or employee automatically. No approval is required.
- E-Mail Digests: To receive periodic summaries of all feed updates via e-mail, choose **Send digests of all my feeds**. You can set the frequency of feed e-mails that you want to receive to - Immediately, daily or weekly.

  > → Remember
  >
  > When the frequency is set to immediately, you get an e-mail for each update. By selecting this option, you have to select the events in Feed Sources for which the e-mail has to be sent.

- The date by which feed updates are sorted - Feed updates are sorted, by default, according to the date they were last commented. If you prefer that feed updates be sorted according to the date they were created, then select **According to creation date**.

On this screen, you can also define default event types for the items that trigger feed updates.

VIDEO: Changing Your Feed Settings

Find out how to adjust which updates you receive from the source you're following and how to automatically flag and tag incoming updates.

15.9.1.6 Follow Feed Sources

Learn about following feed sources in the solution.

If you are authorized to receive updates from an item that you have chosen to follow, then updates about that item automatically begin to appear in your feed. If you are not authorized, then a follow request is sent to the person responsible for approval. If you stop following an item or person, then the source is removed from your feed, and updates for that item or person no longer appear there.

15.9.1.7 Manage Feed Sources

Learn about managing feed sources to increase productivity.

To manage your feed sources, choose *Feed Sources*. Here you can see a list of the sources that you're currently following. For each source that you follow, you can specify the source events that will trigger an update. To do so, select a source from the list, then choose the edit icon. A new window *Manage Source Events* opens up. Select the source events for which you want to receive updates and save your entries.

Under feed sources, we have the following queries:

- **Sources I follow automatically**: There's no list maintained as every object in the solution decides this. For example, opportunity object may decide that when opportunity is created, owner of that opportunity should automatically follow it and get all updates. Generally, opportunity, lead, sales order, sales quote work this way.
- **People**: All the employees who are following.
- **Pending Sources**: Employee and account object have special provision where if someone wants to follow them, an approval request goes to employee/account owner and once approved, then only the follow process starts. So, requests that aren't yet approved are shown over here. We have an option in feed settings to invoke such approval process, if that setting isn't active, then follow happens automatically without any approval process.
- **All other sources**: Everything else that doesn't fall under sources I follow automatically, people and pending sources, is part of this option (manual follow is major contributing agent in this case).

All feed sources have an additional option that can be invoked using the pencil icon and opens *Manage Events*. Under manage events, you can set things (generally email digest for immediate updates) at more fine granular level.

15.9.1.8 Manage Feed Duration Settings

Learn about setting the time period to display feed on UI and the time period to retain feed data in the system.

As an administrator, navigate to *Administrator* > *Common Tasks* > *Feed Duration Settings* to set the feed durations. From the *Feed Display Duration* dropdown list, you can select the time period to display feed on UI. From the *Feed Delete Duration* dropdown list, you can select the time period to retain feed data in the system. Any feed older than the defined delete duration is deleted from the system, and the deleted data cannot be recovered.

> **Note**
>
> - For both feed durations, the options of 30 days, 60 days, 90 days, 180 days, and 365 days are available, and the default value is 365 days. All the feeds older than 365 days are automatically deleted from the system during upgrade, and the deleted feeds cannot be recovered.
> - Feed display duration cannot be longer than feed delete duration.
> - If you wish to extend the feed duration to up to 730 days, then you must open a ticket with SAP support.

15.9.2 Feed FAQ

This section answers commonly asked questions about Feed.

15.9.2.1 Why are the native feeds missing after integrating the system with SAP JAM?

You can either have the JAM or native feeds in the system.

Both feed types are not supported simultaneously in the system. This is the expected system behavior. So, when you integrate SAP cloud for Customer with JAM, you can only see the JAM feeds.

15.9.2.2 Why is there no link to a related object in feed notification?

The standard behavior is that when you open the details of a received notification, there is no link for the related object.

If you leave a comment under a system-generated feed, then there is no link in the feed notification details for the notification receiver. However, you can manually add an object link in the feed comment using, for example @ABC (ABC represents the object ID or name).

→ Remember

If you leave a comment under a feed created by a person, then is a related object link in the feed notification details for the notification receiver.

15.9.2.3 Why don't I receive feed notification for a followed business object that I changed?

It could be because you didn't select the related Event of the business object you followed in the feed settings. Under feed settings, select the business object you followed, and then select related option **Address Change**.

Or, you have deactivated the system feed generation for your cloud solution in Business Configuration. To activate the system feed, please ask your administrator to reset the following scoping question:

1. Go to *Business Configuration work center* > *Implementation Projects* > *Edit Project Scope*.
2. Go to *Questions* tab.
3. Go to *Communication and Information Exchange*.
4. Select *People Collaboration, Intranet and External Services* > *Communities, Document Management and External Services*.
5. Uncheck the question *Do you want to deactivate system feed generation for your cloud solution?*

15.9.2.4 Even though I successfully deleted a contact, some related data can still be seen in the respective feed entries. Why?

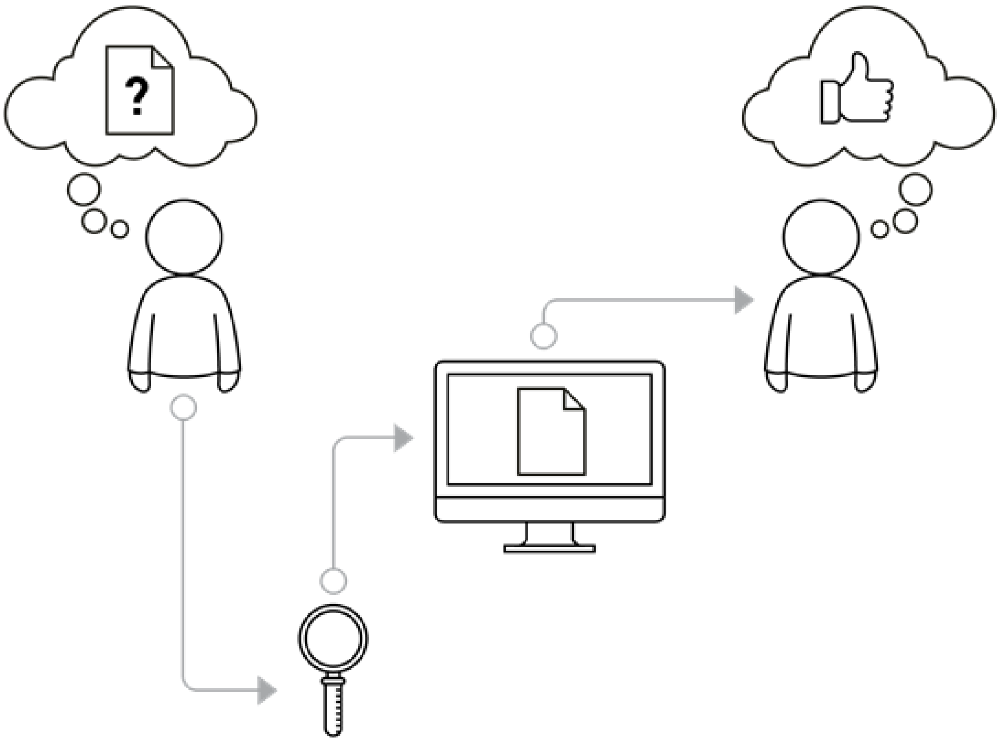
According to GDPR (General Data Protection Regulation), deletion of data is not technically feasible. However, the administrator can set the soft deletion and hard deletion of feeds under *Common Tasks* in the Administrator work center.

15.9.2.5 Why a feed comment referencing a document in a feed post, is not displayed in the document feed tab?

If a document is referenced in a feed update and not a comment, only then the post is displayed in the document Feed tab.

15.10 Search

Learn about the various search functions in the solution.



When you search for business objects in SAP Cloud for Customer, such as accounts, products, activities, or sales orders, there are multiple methods of finding exactly what you are looking for.

When you tend to search for the same items repeatedly, mark the item as a flag or favorite or add a tag to it and save valuable time.

You can sort on the column in ascending or descending order or use the filter to search the column for multiple words.

You can search list columns for multiple words at once. To do a multiple word search, separate each search word by a semi colon without any space. The search is an exact search when multiple search words are entered. However, if an asterisk (*) is used, it becomes a pattern based search. For example, if you click the column header 'Name', and enter search words 'Joe*; Stin, it brings up all the records of names that begin with Joe and record that contains Stin. When a single search word is entered, the search is a pattern based search.

Whether your search is simple or complex, the SAP solution search allows you to work quickly and efficiently by using one of the following search types:

- Simple
- Enterprise

- Advanced

Basic Search [page 551]
    Learn about performing a basic work center view search in the solution.

Enterprise Search [page 552]
    Learn about using the enterprise search in the solution.

Advanced Search [page 555]
    Learn about using advanced search in the solution.

15.10.1 Basic Search

Learn about performing a basic work center view search in the solution.

In addition to the system-wide enterprise search, you can search from within the work center views assigned to your business role. This is ideal since you probably know what you have created and can really hone in on the business object you are searching for.

Let's say you are searching for a phone call in the Activities work center. You navigate to the Phone calls work center view and from there, you can select an item from the **Phone calls** list. The system locates categorized items matching your search criteria belonging to the **Phone calls** list.

Another example is to navigate to a work center view end simply enter a keyword in search field. Any items matching your criteria in that work center view in list view show up.

Basic search shows your recent searches and your recently opened items. You can quickly see your recent searches and recently opened items without having to search for them again.

> i Note
>
> The search suggestions are available only on the device where the searches are done.

The basic search results can be displayed in the **List**, **Card**, **Map**, or **Calendar** view depending on the business object. There is also the possibility to filter the results and display them in a chart view.

> i Note
>
> In Fiori client, you can display the results in *Chunk View* and *Table view*.

The search term in basic search is retained even when you change the query. Therefore, you can search across different queries without typing the search term again.

With basic search, you can search against *All* query with a search term, used for some other query. When a search term is entered, the search box remains open. If the search does not find a match, you can trigger a search on *All* query, without having to change the current query. The search term is now retained even when you change the query and you can quickly find items you are looking for.

> → Remember
>
> When you create your own query via KUT and label it “All” and hide the standard SAP *All Query*, then 'search against all' functionality will not work.

15.10.2 Enterprise Search

Learn about using the enterprise search in the solution.

Context

Enterprise search allows you to search through the entire SAP solution. After selecting the search icon, you can choose to do a simple or advanced search. You can search for a term without specifying any details, search in all categories or you specify a specific category.

Procedure

1. Click the search icon in the Taskbar.
2. Narrow down your search to a specific category by selecting the category in the dropdown list. If you want to search through the entire system, select *All Categories* or if you do not select a category even then all categories are searched.
3. Enter your search terms then click Search or press Enter. Search results are presented in the Search window. You can use the asterisk (*) symbol to perform a wildcard search. For example, searching *ell* returns terms such as well and hello.
4. Click the link of the item you want to view.
    - If you are searching for items you created, select **My items**. For items created by colleagues, select **All Items**. If the search displays several business objects, you can select the appropriate category or use the enterprise search advanced functionality to refine your search.
    - Keep in mind that although an enterprise search does match your term and selected category, it does not search for every field in the system.

15.10.2.1 Configure External Search Sources

Learn how to activate or deactivate several external sources (URL mashups) that are shipped with the solution.

The enterprise search feature can be configured to include external sources. You can also add new external sources by creating a new URL mashup of the *News & Reference* category.

Activate or Deactivate Existing External Search Sources

1. Go to *Administrator* > *Mashup Authoring*.
2. Filter the list to show *URL Mashups*.
3. Sort the list by *Mashup Category*.

All the external search sources are of the category, *News & Reference*.

4. To activate a source, select the table row for that mashup and click *Activate*.
   That URL mashup is now active and available for selection in the enterprise search drop down list.
5. To deactivate a source, select the table row for that mashup and click *Deactivate*.
   That URL mashup is now inactive and is not available for selection in the enterprise search drop down list.

Add a New External Search Source

1. Go to *Administrator* > *Mashup Authoring*.
2. Click *New*, then *URL Mashup*.
3. Complete the required entries and save your new mashup.

> ⚠ Caution
>
> The *Mashup Category* must be *News & Reference*.
>
> The *Port Binding* must be *Search Provider*.
>
> The *Status* must be *Active*.

The new URL mashup is now available for selection in the enterprise search drop down list.

15.10.2.2 Add an Extension Field to the Search

Make an extension field available in the basic and advanced worklist searches. Extension fields are automatically added to the basic and advanced enterprise search depending on the extension field type and the business context. To improve the usability of the advanced enterprise search, you can add the extension field to a search category. This allows users to search for the contents of an extension field within a particular category, such as sales orders.

The following table shows which type of search can be used for each extension field type:

Search Type by Extension Field Type

Field Type	Basic Worklist Search	Advanced Worklist Search	Basic Enterprise Search	Advanced Enterprise Search
Amount	No	Yes	No	Yes
Date	No	Yes	No	Yes
Decimal Number	No	Yes	No	Yes
E-Mail Address	Yes	Yes	Yes	Yes
Indicator	No	Yes	No	Yes

Field Type	Basic Worklist Search	Advanced Worklist Search	Basic Enterprise Search	Advanced Enterprise Search
List	Yes	Yes	Yes	Yes
Text	Yes	Yes	Yes	Yes
Time	No	No	No	No
Quantity	No	Yes	No	Yes
Web Address	Yes	Yes	Yes	Yes

Prerequisites

You have created the extension field and have made it visible on the required screens.

Procedure

1. **Add an extension field to the basic and advanced enterprise search**
    1. Navigate to a screen on which the extension field is available and open the *Further Usage* screen for the extension field.
    To do this, enter adaptation mode and edit the screen. In the adaptation side panel, under *Extension Fields*, select the extension field from the list and, under *Field Properties*, click the *Further Usage* link.
    2. On the *Enterprise Search* tab, you can view all enterprise search categories to which you can add the field. This is determined by the business context in which you created the field.
    3. To add a field to an enterprise search category, select it from the list and click *Add Field*.
    The enterprise search category determines in which category users will be able to search for the contents of this field using the basic enterprise search. They can then refine their search by clicking on *Advanced* and using the extension field as a search parameter.
    4. Close the further usage screen and publish your changes.
2. **Make an extension field available in the basic worklist search**
To enable the basic worklist search you must have completed step **1. Add an extension field to the basic and advanced enterprise search**. You then have to make the extension field visible in the worklist.
    1. Navigate to the work center view in which the worklist appears. For example, the *Sales Order* view in the *Sales Order* work center.
    2. From the *Adapt* menu, select *Enter Adaptation Mode* . In adaptation mode, select *Edit Screen* from the *Adapt* menu.
    3. In the adaptation panel under *Extension Fields*, select the section corresponding to the worklist table and select the *Visible* check box next to the extension field.
    4. Save and publish your changes.
    The extension field is added to the table as a column. Users will now be able to search for the content of the extension field using the basic worklist search.

3. **Make an extension field available in the advanced worklist search**
   To enable the advanced worklist search, you must have completed step **1. Add an extension field to the basic and advanced enterprise search**. You then have to make the extension field visible on the advanced search find form.
   1. In adaptation mode, navigate to the advanced search find form by clicking the *Advanced* link at the top right of the table.
   2. Select a query from the *Show* dropdown list.
      Note that when you add an extension field to the advanced worklist search it will only be available for the selected query. If you want the extension field to be available for multiple queries, you must add it to each query individually.
   3. From the *Adapt* menu, select *Edit Screen*.
   4. In the adaptation panel under *Extension Fields*, select the section corresponding to the advanced search find form and select the *Visible* check box next to the extension field.
   5. Save and publish your changes.
      The extension field is added to the selected query. Users will now be able to search the content of the extension field using the advanced worklist search and the selected query.

15.10.3 Advanced Search

Learn about using advanced search in the solution.

Context

Advanced Search is used for narrowing down the results by using multiple criteria at a time. The filter icon () represents the advanced search and clicking the icon reveals all of the fields that can be used to narrow down search results. The filter attributes change depending on the type of object or work center you are reviewing.

Restore and *Go* are used to reset and apply the filters respectively. All the filtered results are seen in the table.

The other actions available are to save and organize the filtered queries so that you can use it again later. Click *Save Query* to save a filtered query. You are prompted to create a name for this query. Once it is saved, it appears in the object dropdown. You apply the same filters by finding the same query in the dropdown.

You can add or remove search parameters in an existing query and save it as a new personal query. We have the 'save query as' functionality in Fiori client. In Fiori client, an existing saved query can be saved with a different name with the button *Save Query As*.

Save Query As feature allows you to create a new personal query from an existing query without having to redefine parameters again.

You can also manage all the saved search queries by clicking *Organize Queries*. Clicking *Organize Queries* opens a pop-up where you can organize and remove the saved queries. The removed queries are also removed from object dropdown option.

→ Remember

If a query is set as the default query, you cannot select the *Remove* checkbox. To delete this query, you first select some other query as default query from the list. Then, mark the *Remove* checkbox for the query to be removed.

Advanced search option is available to search within the results of a simple enterprise search or search on specific fields names.

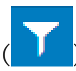
Procedure

1. Click *Advanced Search* icon.
2. Narrow down your search to a specific category by selecting the category in the dropdown list. If you want to search through the entire system, select *All Categories*.
3. To narrow your search results, enter more values in the input fields. The table shows how each field affects your search:

Field Name*	Search Effect
Changed On: ... To:	Displays items edited between the specified dates.
Owner:	Displays items that belong to the specified owner.
ID:	Displays items with the specified ID, for example, Product ID or employee ID.
Description:	Displays items that match the specified item description.

   * - These fields exist when you chose *All Categories*. However, the fields vary when different categories are chosen.

4. To initiate the search, click *Search*. The solution returns a list of items based on your search criteria.
5. Click *Reset* to clear your search criteria.

- To apply a filter, choose the filter icon ().
- To load more items, scroll to the bottom of the list, and then choose *more*.
- To view complete item details, tap the item in the list.

Next Steps

The way you search in the solution is unique depending on your needs and so is the way items are displayed.

When viewing objects, you notice the **worklists**, which are tables that contain documents and tasks. The worklist provides a summarized view of all your data records. You can use the search and filter options to locate the records you need, and an advanced search indicator ( ) is shown when a query with search parameters is executed. You can also perform actions such as open, edit, create, delete, or release.

Once you have searched and located the correct business object, you can quickly preview the main contents or make edits.

When you locate business objects, they are displayed as worklist in various views, and you can decide which view is best for your needs. For example, a table view is a classical list, a chunk view shows the data in four columns, and the Map View displays Google Maps® or AutoNavi Map® view for the address in the data record.

You also have image view with different image sizes for any lists, where images are configured. Image view provides information at a glance about objects where visual information is easier to consume. For example, products, people.

There are three image view sizes supported:

- Large Image view
- Medium Image view
- Small Image view

15.10.3.1 Add an Extension Field to the Search

Make an extension field available in the basic and advanced worklist searches. Extension fields are automatically added to the basic and advanced enterprise search depending on the extension field type and the business context. To improve the usability of the advanced enterprise search, you can add the extension field to a search category. This allows users to search for the contents of an extension field within a particular category, such as sales orders.

The following table shows which type of search can be used for each extension field type:

Search Type by Extension Field Type

Field Type	Basic Worklist Search	Advanced Worklist Search	Basic Enterprise Search	Advanced Enterprise Search
Amount	No	Yes	No	Yes
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Decimal Number	No	Yes	No	Yes
E-Mail Address	Yes	Yes	Yes	Yes
Indicator	No	Yes	No	Yes
List	Yes	Yes	Yes	Yes
Text	Yes	Yes	Yes	Yes
Time	No	No	No	No

Field Type	Basic Worklist Search	Advanced Worklist Search	Basic Enterprise Search	Advanced Enterprise Search
Quantity	No	Yes	No	Yes
Web Address	Yes	Yes	Yes	Yes

Prerequisites

You have created the extension field and have made it visible on the required screens.

Procedure

1. **Add an extension field to the basic and advanced enterprise search**
    1. Navigate to a screen on which the extension field is available and open the *Further Usage* screen for the extension field.
       To do this, enter adaptation mode and edit the screen. In the adaptation side panel, under *Extension Fields*, select the extension field from the list and, under *Field Properties*, click the *Further Usage* link.
    2. On the *Enterprise Search* tab, you can view all enterprise search categories to which you can add the field. This is determined by the business context in which you created the field.
    3. To add a field to an enterprise search category, select it from the list and click *Add Field*.
       The enterprise search category determines in which category users will be able to search for the contents of this field using the basic enterprise search. They can then refine their search by clicking on *Advanced* and using the extension field as a search parameter.
    4. Close the further usage screen and publish your changes.
2. **Make an extension field available in the basic worklist search**
   To enable the basic worklist search you must have completed step **1. Add an extension field to the basic and advanced enterprise search**. You then have to make the extension field visible in the worklist.
    1. Navigate to the work center view in which the worklist appears. For example, the *Sales Order* view in the *Sales Order* work center.
    2. From the *Adapt* menu, select *Enter Adaptation Mode* . In adaptation mode, select *Edit Screen* from the *Adapt* menu.
    3. In the adaptation panel under *Extension Fields*, select the section corresponding to the worklist table and select the *Visible* check box next to the extension field.
    4. Save and publish your changes.
       The extension field is added to the table as a column. Users will now be able to search for the content of the extension field using the basic worklist search.
3. **Make an extension field available in the advanced worklist search**
   To enable the advanced worklist search, you must have completed step **1. Add an extension field to the basic and advanced enterprise search**. You then have to make the extension field visible on the advanced search find form.
    1. In adaptation mode, navigate to the advanced search find form by clicking the *Advanced* link at the top right of the table.

2. Select a query from the *Show* dropdown list.
   Note that when you add an extension field to the advanced worklist search it will only be available for the selected query. If you want the extension field to be available for multiple queries, you must add it to each query individually.
3. From the *Adapt* menu, select *Edit Screen*.
4. In the adaptation panel under *Extension Fields*, select the section corresponding to the advanced search find form and select the *Visible* check box next to the extension field.
5. Save and publish your changes.
   The extension field is added to the selected query. Users will now be able to search the content of the extension field using the advanced worklist search and the selected query.

15.11 Notification

Notifications are a way to let you know that something new has happened so you don't miss anything that might be worth your attention.

The notification is located on the top right, next to the search icon. It displays the category of actions, the time occurred, unsubscribe from the e-mail, and more details. Clicking or tapping the icon **!**, opens a dropdown list that has the recent notifications with the object type information, actions, and option to view the entire detail about a particular notification. The dropdown displays maximum five items in the list.

Each category of notification has its own set of actions. Subscribe, Unsubscribe, Undo, Approve, Decline, Dismiss are few of the common actions. When you click,*View All* you're directed to the notification center where you can see the entire list of notifications in a separate tab.

In the notification center, you can select what kind of notification you want to see from the variant dropdown or search for a particular notification. Notification category indicates the type of object and is differentiated by the icon used in front of each notification item. You click or tap the *More* link to navigate to a particular object in a separate tab.

By enabling a company setting, you can hide the notifications and the notifications icon. As a prerequisite, your administrator must go to *Company Settings* and toggle on the button *Hide Notification*. Seeing notifications can be disruptive, and also takes space on the screen.

15.12 Map

Learn how to use the map feature based on Google maps or alternatively AutoNavi maps, that provides data with an interactive map in different objects.

Scope and Configure [page 560]
Administrators can configure Google Maps or AutoNavi Maps for different accounts.

Work with Maps [page 561]
Sales representatives are constantly on the go, and the ability to pull up an interactive map in your solution and find which leads, companies, and contacts are nearby is invaluable.

15.12.1 Scope and Configure

Administrators can configure Google Maps or AutoNavi Maps for different accounts.

Context

Learn how to configure the maps mashup to enable map view.

To enable map view via mashup, proceed as follows:

Procedure

1. Choose *Administrator* > *Mashup Authoring*.
2. On the *Mashup Authoring* screen, select *Custom Mashups* from the dropdown menu.
3. Perform a search for the mashup ID.

   The mashup IDs for the available maps are as follows:
   - Google - **SM00078**
   - AutoNavi - **SM00079**: For use in the countries/regions such as China where Google Maps are not supported.
4. Select the mashup and click *Enter API Keys*. The *Enter API Keys* dialog box opens.
5. Click *Show API Key* and, in the *API Key Value* column, enter the API key that you received from the service provider.
6. Save your changes.
   - The use of the Google Maps Service is subject to Google Terms of Service, which are written in http://www.google.com/intl/en/policies/terms/ . If you do not accept such Terms of Service, including but not limited to all limitations and restrictions therein, you may not be able to use Google Maps Service in SAP Cloud for Customer. The use of Google Maps Service in or through SAP Cloud for Customer constitutes your acceptance of Google Terms of Service, and it can be terminated by SAP without reason at any time and SAP is not required to provide an equivalent service via another provider.
     As a prerequisite, please create a support ticket to obtain and use the SAP API key for Google Maps.
   - The use of AutoNavi Maps Service is subject to AutoNavi Terms of Service, which are written in http://lbs.amap.com/home/terms/ . If you do not accept such Terms of Service, including but not limited to all limitations and restrictions therein, you may not be able to use AutoNavi Maps Service in SAP Cloud for Customer. The use of AutoNavi Maps Service in or through SAP Cloud for Customer constitutes your acceptance of AutoNavi Terms of Service, and it can be terminated by SAP without reason at any time and SAP is not required to provide an equivalent service via another provider.

     > **Note**
     >
     > As of the August 2022 release, SAP doesn't provide any API keys to the customers for AutoNavi Maps configuration.

15.12.2 Work with Maps

Sales representatives are constantly on the go, and the ability to pull up an interactive map in your solution and find which leads, companies, and contacts are nearby is invaluable.

Selecting the Map view displays the addresses from the solution as pins on the map based on the business object you choose for the map view, and is fully navigable. The map view results are displayed with pagination.

> **Note**
>
> In the Fiori client, you use Google maps.

The following objects are supported for map view:

- Accounts
- Visits
- Tours
- Route Planning
- Activity List
- Appointments
- Tickets
- Work Tickets
- Ticket Hierarchy
- Target Groups
- Assignments
- Installed Base
- Registered Products
- Utilities Premise (object and tab)

Activate Map

You can activate the map by selecting *Google* or *AutoNavi* in *Settings*. This setting is maintained the next time you use the map.

> **Note**
>
> - Configure Google Maps or AutoNavi Maps before activating it. For more information on configuring map, see the **Related Links** section. If both Google Maps and AutoNavi Maps are configured, Google Maps is loaded by default. However, in the countries/regions where Google Maps isn't supported, such as China, AutoNavi Map is loaded.
> - Addresses must be maintained in Chinese or using Latitude and Longitude for pins to be displayed on AutoNavi Map.
> - For AutoNavi maps, it is recommended to use the Microsoft Edge browser to avoid location tracking issues.

Map Settings

You launch the map settings by selecting the map icon on the right bottom corner of the map. Here you can define the *Map Style* and enable or disable different controls on the map with *Map Buttons*.

Map Style

Map style allows you to choose a map type to display. Default view is selected and you can see the elevation of the landscape, like mountains and canyons by enabling terrain. Contour lines overlaid on the map show elevation and gray numbers show altitude. The other view is the Satellite view with aerial imagery of landscape. You can turn on the label to see the tagged areas in the aerial view.

Map Buttons

The Map contains user interface elements to allow user interaction with the map. These elements are known as controls and you can enable or disable these controls in your application. Alternatively, you can do nothing and leave it to the defaults.

See the list of controls you can use in your maps:

- **Zoom in/Out** control displays as icons (+ and -) in the top-right corner of the map and is used for changing the zoom level of the map.
- **Current location** icon displays your existing position.
- **Street View** control can be enabled for street view.
- **Search Nearby** is available when you select the *Search Nearby* button. You can cancel the search by selecting the *Nearby X* button. Search nearby captures a radius of 25 miles around your current location.
- **Search Map Area** is available when you pan or zoom the map. You can turn on the search by selecting *Search Map Area* button on the map and cancel by selecting *Map Area Search X* button. Search map area takes the visible area of the map and finds objects within the area.

→ Tip

You can see the *Search Map Area* button on the map after you turn on *Search Map Area* in *Settings*.

i Note

Search nearby and search by area functionality is available in map and is supported in the following map views:

- Accounts
- Visits
- Route Planning
- Appointment
- Installed Base
- Registered Product

Nearby Search and Search by Area feature is not enabled by default and requires the administrator to enable it under *Adapt* > *Company Settings* > *General* and select the checkbox *Enable Nearby Search and Search by Area on the Map*.

> **i Note**
>
> Maintain the latitude and longitude information for objects to see the map pins in search nearby and search by area mode. For more details on the topic, see the **Related Links** section.

Map Pins

> **i Note**
>
> Maintain the latitude and longitude information for objects. Otherwise, the map pins don't show up in the search nearby and search by area mode. For more information, see the **Related Links** section.

Map pins are shown in two different colors based on the account role. A blue color map pin represents a customer and a purple color map pin represents a prospect. With this color coding feature, you can quickly identify and distinguish between a customer and a prospect account on the account map.

> **i Note**
>
> This feature is available only on the account map view for the account roles customer and prospect. Any other roles maintained show up in the default blue pin color.

Show Region-Based Map

> **→ Remember**
>
> The display of international boundaries based on geolocation tracking is currently supported only in Google Map.

You can enable the region-based map setting to show regional international boundaries for your country/region. When you use the map feature in the app, your country/region's boundaries may not be clearly demarcated, if they are under territorial dispute. That is, when you log on from your country/region, you can view all the borders of your country/region marked with a solid black line. However, if you log on from a different country/region you will notice that the areas under territorial dispute are marked in dotted lines.

You can enable how the map shows up based on the company setting *Enable Geolocation Tracking*. When the company setting is enabled by the administrator, you see a localized version of the map as in the web. With the setting enabled, you see a pop-up from the system asking to know your current location. If you allow the system to track your location, you see a region-specific display of the map. In future, if you don’t want to allow the geolocation tracking, you can block the geolocation tracking from under your browser settings. When you block the geolocation tracking, then Google map API of default country/region, United States of America is displayed.

> **→ Remember**
>
> Geolocation tracking is only used to show regional international boundaries for your country/region.

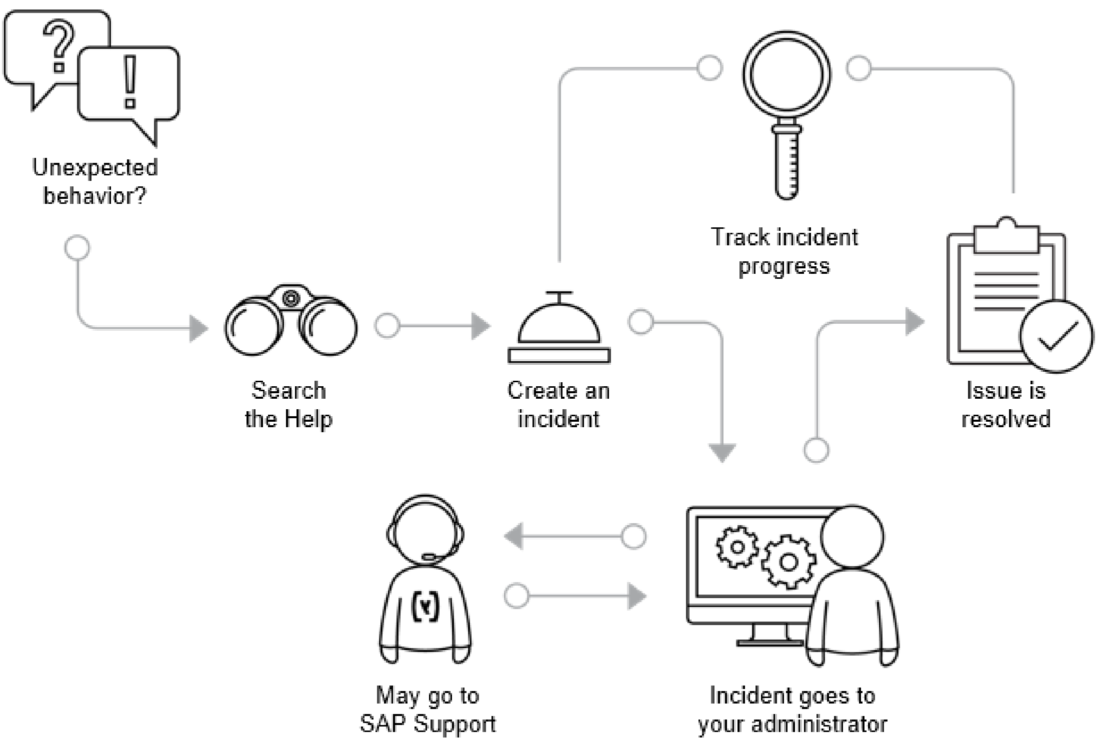
Related Information

Configure Maps [page 652]
Administrators can configure Google Maps or AutoNavi Maps for different accounts.

Configure Address Validation for Geo Tracking [page 652]
Administrators can configure address validation for geo tracking using standard microservices from SAP Cloud Platform.

15.13 Support and Help

Learn about creating incidents to report issues encountered in the solution.



As you're working, if you encounter unexpected behavior in the solution that interrupts your work or reduces the quality of the service, you can search the *Help* under the user menu for more information or create an incident that is sent to your system administrator. *Help* launches the *Help Center*. You find company-specific help information plus links to the SAP standard documentation, channels, and community in the Help Center.

Company-specific help can be authored in Fiori client. You can define company-specific help for current screen or all screens.

Report Incident and Process Incident links are available in the Help Center. You can report incidents via the link. And, the administrator can also process incidents in Fiori client. However, Direct Forward of incidents is not available to administrators in Fiori client.

You can create an incident by going to the user menu and selecting the menu option *Report Incident*. Your administrator is the first line of support but if they can't solve the issue for you, they can send the incident to SAP for further investigation.

When creating an incident, be sure to create it from the screen where you're experiencing the issue because the system takes a screenshot and automatically attaches it to the incident. You can also add highlights or callouts on the screen to help support better understand what happened.

To help support process your incident more quickly, always include step-by-step instructions on how to re-create the behavior you're reporting.

Direct Forward button is available under incident reporting for administrators. The administrator can directly forward the incident to SAP by selecting the button. The new button reduces the number of clicks required to send the incident to SAP.

After you submit an incident, you can track it for updates via the menu option *Track my Incidents* under your user menu.

We have two real-time support features for the administrators in Fiori client- SAP Expert Chat and Schedule An Expert.

Prerequisite: One time S-User registration is required to use the real-time support features. For more information, please contact our Customer Interaction Center.

SAP Expert Chat and Schedule An Expert in the SAP Cloud for Customer app can be accessed from the User menu> *Help* > *Help Center* > *Other Helpful Links* .

> **Note**
>
> *SAP Expert Chat* link is available in Fiori Client. Both features require S-User registration to access it and are available as a secure link via launchpad.

- **Expert Chat:**:
  You can now access the launchpad SAP Expert Chat directly from your tenant. The new link opens the SAP launchpad chat tool and gives you access to additional support channels to report a new or an existing issue.
  You can chat with product support specialists as well as with our customer interaction teams for updates on existing incidents. Each chat generates an incident that you can view and edit from the SAP Support launchpad. The incident contains the chat transcript and can be used to follow up on the reported issue. However, the chat incidents aren't visible in the tenant built-in support. Find more details on the new SAP Expert Chat channel.

  > → **Remember**
  >
  > One time S-User registration is required to access chat. For more information, please contact our Customer Interaction Center.

  .
- **Schedule An Expert:**:
  With Schedule an Expert, you can book an online session and reduce the number of delayed messages and information requests that you get from support. You can speak with a support engineer and discuss the technical details of your open incident by scheduling a 30-minute Skype call. Find more details, refer to SAP Expert Chat channel. For more information, refer to the Schedule an Expert user guide user guide.

→ Remember

One time S-User registration is required to access and use the chat. For more information, contact our Customer Interaction Center.

If you require more help than just product support, contact the consulting services.

Incident Management [page 566]
: An operator or administrator is responsible for managing incidents reported by users in the company and, in some cases, for those reported automatically as a result of health checks.

Scope and Configure [page 568]
: The administrator can maintain settings of the task types for tasks, alerts, and notifications under *Administrator* > *Business Task Management*.

Tasks in Incident Processing [page 569]
: When a new incident is reported or changes are made to an incident you are working on, you receive a task or notification.

15.13.1 Incident Management

An operator or administrator is responsible for managing incidents reported by users in the company and, in some cases, for those reported automatically as a result of health checks.

As an operator or administrator, you are responsible for managing incidents reported by users in your company and, in some cases, for those reported automatically as a result of health checks. If you are unable to solve an incident yourself, you can forward it to your provider to request assistance. Since the provider and requester cannot communicate directly with one another, you as the processor of the incident are responsible for information flow, for example, for forwarding a solution proposed by the provider to the requester of the incident.

The *Incidents* view provides all the tools you require to manage incidents.

- Incident Overview:
  An incident is a non-standard occurrence in the system that interrupts the operation of a service, or may reduce the quality of a service immediately or in the near future. An incident appears to the user as unexpected system behavior, such as:
  - An unexpected or unclear error message on the screen
  - Incorrect or missing data
  - System performance problems

  If you encounter a problem in the application, you can search existing knowledge bases for a solution. If no solution is available, you can report an incident to your key user to request help in solving the problem.
- Incident Priorities:
  When a user reports an incident, he or she must assign it a category and priority so that you as the processor can see at a glance what kind of problem has occurred and what impact it has on business productivity.

The following priorities are available:

Business Impact for Incident Priorities

Priority	Business Impact
Very High	Critical business processes are affected and crucial tasks cannot be carried out. The incident requires immediate attention because it could result in business downtime for the organization. Security-related incidents must always be assigned this priority.
High	Key business processes are affected and important tasks cannot be carried out. The incident requires prompt attention because it could delay business processes.
Medium	Business processes are affected, but the incident has only a minor impact on business productivity.
Low	The issue has little or no effect on business processes.

- Incident Statuses:
  The status of an incident changes depending on the actions performed on it by the requester, you as the processor, and your provider if you forward the incident to him or her. The statuses visible to you differ slightly from those visible to the requester. The following statuses are visible to you as the processor of the incident:

Incident Status Descriptions

Status	Description
New	The incident has recently been reported and has not yet been taken over for processing.
In Process	The incident is being processed.
In Process – Provider Action	The processor has forwarded the incident to the provider, from whom action is now required.
In Process – Requester Action	Action is required on the part of the requester of the incident.
In Process – Solution Proposed	A solution has been proposed to the requester, from whom action is now required.
In Process – Reopened	The requester has rejected a proposed solution and the incident requires further action on the part of the processor.
Completed – Solution Accepted	The requester has accepted a proposed solution and the incident is resolved from his or her point of view.

Status	Description
Completed – Solution Rejected	The requester has rejected a proposed solution, but has canceled the incident because it is no longer valid or has been solved by other means, or the processor has completed the incident on behalf of the requester after the requester rejected the proposed solution.
Completed	The requester has canceled the incident, the processor has completed the incident on behalf of the requester, or no changes have been made to the incident for 90 days and it has been completed automatically.
Closed	The processor has closed the incident after the requester canceled it or after the incident was completed automatically because no changes were made to it for 90 days.
Closed – Solution Accepted	The processor has closed the incident after the requester accepted a proposed solution.

- Health Check Incidents:
  The system can report incidents as a result of health checks. Health checks are automated tests that proactively monitor the system and alert administrators or providers when a problem is detected. Most health check incidents are routed directly to the provider for processing. When a health check detects a problem that requires the attention of the administrator, the incident appears in the *Incidents* view.
- General Information on Support:
  Support is available 24 hours a day, 7 days a week for all administrators and is offered in the local language during business hours (9:00 a.m. – 5:00 p.m. local customer time). Outside of business hours, support is provided in English for *Very High* priority incidents only.

15.13.2 Scope and Configure

The administrator can maintain settings of the task types for tasks, alerts, and notifications under *Administrator* > *Business Task Management*.

It is possible to configure certain elements of some of the notifications in the *Business Task Management for Incident Management* business configuration activity. To find this activity, go to the activity list of your project from the *Implementation Projects* view.

If the activity is not part of your project, you must add it.

15.13.3 Tasks in Incident Processing

When a new incident is reported or changes are made to an incident you are working on, you receive a task or notification.

The different tasks in incident processing are:

15.13.3.1 Track Incidents

All incidents reported by users, and some health check incidents, are forwarded to the *Incidents* view where you can view them in detail.

You can control which incidents are displayed in the *Incidents* view by selecting one of the following values from the *Show* dropdown list:

Incident Status Descriptions

Status	Description
New Incidents	Incidents that have not yet been taken over for processing.
My Open Incidents	Open incidents for which you are specified as the processor.
Incidents Where Provider Needs More Information	Incidents that the provider has returned to the processor with a request for additional information to help resolve the issue.
Incidents with Solution Proposal from Provider	Incidents for which the provider has proposed a solution to the issue reported but that the processor has not yet proposed to the requester.
Incidents in Process	Incidents that require action on the part of the processor, that is, incidents that the processor has taken over for processing and those that have been returned to the processor by the requester.
My Team's Open Incidents	Incidents for which your team is responsible. (The team is based on your organizational assignment.)
Incidents in Process by Provider	Incidents that have been forwarded to your provider, who is currently attempting to find a solution to the issue reported.
Incidents Requiring Action by Requester	Incidents that have been returned to the requester with a proposed solution or a request for additional information.

Status	Description
Completed Incidents	Incidents that are resolved from the requester's point of view, that is, incidents that the requester has canceled because they are no longer relevant or have been solved by some other means, or for which the requester has accepted a proposed solution. Incidents that the processor has completed on behalf of the requester or that have been completed automatically because no changes were made to them for 90 days are also displayed in this list.
Closed Incidents	Incidents that are resolved from the processor's point of view, that is, incidents that the processor has closed. Once an incident has been closed, it can no longer be edited in any way.
All Incidents	All incidents, regardless of their current status.

If you select *Incidents with Solution Proposal from Provider*, you can further refine the incidents displayed by filtering the *Provider Solution* field. The following statuses are available:

Status	Description
Blank	The provider has not proposed a solution.
Proposed	The provider has proposed a solution.
Rejected	The processor has rejected the provider's solution and returned the incident to the provider for further analysis.
More Info Needed	Your provider requires more information from you (or the requester) to resolve the incident.

To view the details of an incident, click its ID.

15.13.3.2 Assign an Incident to Another User

Learn how to assign an incident to another user.

Context

If, for example, you are going on vacation and need to ensure that incidents you are currently working on or new incidents you would normally process yourself are processed by one of your colleagues, you can assign a specific processor to an incident. You can also use this option if you are unable to solve an incident you are working on and want to assign it to a colleague for further analysis.

Procedure

1. Open the incident for editing by selecting it from the list on the *Incidents* view and clicking *Edit*.
2. In the *Processor* field, enter the name of the colleague to whom you want to assign the incident.
3. In the *Processor* field, enter the name of the colleague to whom you want to assign the incident.
4. Click *Save*. The key user to whom you have assigned the incident is informed that he or she must start processing the incident.

15.13.3.3 Take Over a New Incident for Processing

Learn how an administrator takes over a new incident to process it.

Procedure

1. From the *Show* dropdown list, select *New Incidents*.
2. Select the incident you want to process, and click *Edit*.
3. From the *Action* dropdown list, select *Start Processing*.
4. Click *Save*. Your name appears in the *Processor* field and the status of the incident changes from `New` to `In Process`.

   The administrator can also take over an incident with any status for processing. If, for example, one of your colleagues is ill and you need to take on his or her tasks at short notice, you can take over an incident that your colleague has already started processing.

   From the list on the *Incidents* view, select the incident you want to process and click *Take Over*.

   Your name appears in the *Processor* field but the status of the incident does not change.

15.13.3.4 Process an Incident

The following steps are involved in processing an incident.

15.13.3.4.1 Search for a Solution

Steps to search for a solution for a new incident in the solution.

Procedure

1. Take over the incident and open it for editing. If you want to search for a solution without first taking it over for processing, for example, to scan through a list of new incidents to see which ones you can solve quickly and which ones require more effort and may need to be distributed among other administrators, click the ID of an incident to view its details and then click *Start Solution Search*. You can then search for a solution as described below.
2. Look at the incident details and determine whether you can solve the incident immediately. Especially helpful is the information on the *Screenshot* tab, which shows a screenshot of the system at the time at which the problem occurred. The requester can annotate this screenshot to further illustrate the problem and help you to understand it more quickly.

   The *Screenshot* tab is only displayed if a screenshot has been attached to the incident. A screenshot is attached automatically to each incident when it is reported unless:

   - The requester deselected the *Screenshot Relevant* checkbox in the *Enter Incident Information* step when reporting the incident.
   - The requester reported the incident from the **Add-In for Microsoft Excel**.
   - The system could not take a screenshot for technical reasons.
3. If you cannot solve the incident immediately, click *Solution Search* to search existing knowledge bases for a solution to the problem.
4. On the *Search* tab, in the *Find* field, enter key terms relating to the incident (for example, **`sales order`**). To refine your search, you can click *Advanced* and define additional search criteria such as the work center and work center view on which the problem occurred. It is possible that the system has prefilled some of the additional search criteria fields that are displayed when you click *Advanced*. To increase the number of hits your search returns, clear the values in these fields.
5. Click *Go*. The system searches the following repositories for solutions to the problem:

Repository	Description
Community Resources	Discussion forums in which users can post questions and discuss topics
Troubleshooting	A collection of common problems, along with their solutions or workarounds
Built-In Help	The documents and learning content delivered with the solution

   - The system displays the documents that match your key terms. The solution search is not language-specific, which means that the results list may contain documents in languages other than your application language if your key terms were found in these documents.

- The display language of your Web browser determines the language in which the documents are displayed. This means that if you click a document in the results list that has an English title, but your Web browser language is German, when you open the document it is displayed in German if the document is available in German. To change the language in which documents are displayed, change the language of your Web browser.
- To group the search results by repository type, from the *Group By* dropdown list, choose *Repository Type*.

> → Tip
>
> - If you enter keywords in a language other than English and you receive too few hits, repeat your search using English keywords to increase the chance of receiving a larger number of hits.
> - Another reason for which you may receive too few hits is that the system has prefilled some of the additional search criteria fields that are displayed when you click *Advanced*. To increase the number of hits your search returns, clear the values in these fields.

6. Click the title of the document you want to read and determine whether it solves the problem.
7. If you find a document that solves the problem, add it to the incident by selecting the *In Collection* checkbox. Documents that you attach to the incident as solution proposals are listed on the *Solution Collection* tab. If you cannot find a document that resolves the incident, forward the incident to your provider with a request for assistance as described below under **Forward an Incident to the Provider**.

15.13.3.4.2 Ask the Requester for More Information

If you have a question about the issue, you can return the incident to the requester asking for more information.

Procedure

1. Open the incident for editing.
2. From the *Action* dropdown list, select *Send to Requester*.
3. Click *Add*, then choose *Note for Requester* and enter your question in the text field. If you require a record of the exact steps the requester carried out immediately prior to the issue occurring, enter a note in the text field asking the requester to use the trace function to reproduce the issue. An explanation of this function is provided as a rollover explanation for the *Start Trace* button on the screen for editing the incident.
4. Click *Save*. The status of the incident changes to `In Process – Requester Action` and the requester is informed that action is required on his or her part.

15.13.3.4.3 Edit an Incident Without Changing Its Status

If you have already started to process an incident, you can add information to it without changing its status.

Procedure

1. Open the incident for editing.
2. Click *Add*, then choose *Note for Provider*, *Internal Comment*, or *Note for Requester* as appropriate, and enter your comment in the text field.
3. Click *Save*.
    - If you choose *Note for Provider*, the provider is informed that you have added information to the incident, and can open the incident to view the information you have added.
    - If you choose *Internal Comment*, only you can see the information you add. If you then return the incident to the requester or forward it to another key user, however, the information is also visible to this user. This option is also useful, for example, if the status of an incident is `Completed`, `Completed – Solution Accepted`, or `Completed – Solution Rejected` and you want to add a note for yourself with information that helped you to solve the incident.
    - If you choose *Note for Requester*, the requester is informed that you have added information to the incident, and can open the incident to view the information you have added.

15.13.3.4.4 Forward an Incident to the Provider

If you cannot find a solution to an issue, forward the incident to your provider to request assistance.

Context

If you forward the incident to the provider, he or she may forward it to SAP for further analysis. If SAP's root cause analysis shows that the incident results from a partner product which has been licensed, SAP may forward this incident, including all corresponding context data, to the support organization of the partner responsible.

Prerequisites: You have maintained your contact information. You must provide a telephone number and E-mail address so that the provider can contact you directly.

Procedure

1. Open the incident for editing.
2. From the *Action* dropdown list, select *Send to Provider*.

3. Check that the entry in the *Application Area* field is correct and change it if required.
4. Click *Add*, then choose *Note for Provider*.
5. In the text field, enter information about why you are sending the incident to the provider. If the incident you are forwarding has *Very High* priority, document the business impact in this field so that it is immediately apparent to the provider.

   For security reasons, **never** include your password or that of the requester anywhere in the incident.
6. Click *Save*. The status of the incident changes to `In Process – Provider Action`. Receipt of the incident by the provider is indicated in two ways:
   - A value is displayed in the *External Reference ID* field. This is the ID that has been assigned to the incident in the provider's system.
   - A `Note from Provider` is displayed on the *General* tab to the effect that the incident has arrived at the provider.

15.13.3.4.5 Send Additional Information to the Provider

If you have already forwarded an incident to your provider and want to provide him or her with additional information, perform the following steps:

Procedure

1. Open the incident for editing.
2. Click *Add*, then choose *Note for Provider*.
3. Enter the information you want to provide in the text field. If relevant, add a file or link to the incident as an attachment.
4. Click *Save*. The status of the incident does not change.

15.13.3.4.6 Reply to a Question from the Provider

If the provider has returned the incident to you with a request for more information, reply to the question by performing the following steps:

Procedure

1. Open the incident for editing.
2. From the *Action* dropdown list, select *Send to Provider*.
3. Click *Add*, then choose *Note for Provider*.
4. Enter the information you want to provide in the text field. If relevant, add a file or link to the incident as an attachment.

5. Click *Save*. The status of the incident changes to `In Process – Provider Action`.

15.13.3.4.7 Propose a Solution to the Requester

If you have found a solution to the issue, or your provider has proposed a solution, return the incident to the requester along with this solution.

Procedure

1. Open the incident for editing.
2. From the *Action* dropdown list, select *Propose Solution*.
3. Click *Add*, then choose *Note for Requester* and enter an explanation in the text field. If you have found a document that describes the solution you want to propose, add it to the incident as described above under **Search for a Solution**.
4. Click *Save*. The status of the incident changes to `In Process – Solution Proposed` and the requester is notified that action is required on his or her part.

15.13.3.4.8 Return an Incident to the Provider

If the solution proposed by your provider does not solve the problem, return the incident to him or her.

Procedure

1. Open the incident for editing.
2. From the *Action* dropdown list, select *Send to Provider*.
3. Click *Add*, then choose *Note for Provider*.
4. In the text field, enter the reason for which you are returning the incident.
5. Click *Save*. The status of the incident changes to `In Process – Provider Action`.

15.13.3.4.8.1 Use Application Sharing

The provider can initiate a secure application sharing session with you or any user in your company.

Context

To do this, the provider sends you a session request that includes the session number. When you receive a request, start the session at the appointed time by performing the following steps:

Procedure

1. Open the incident for editing.
2. Click *Start Remote Support*. A new browser session opens and the Netviewer Web page appears.
3. Select the language for your session, then click the icon under *Click to start the Netviewer one2meet participant program*.
4. Click *Run*.

   Depending on your security settings, you might have to click *Run* more than once.
5. Enter the session number that appears in the request from your provider. (You do not need a password to join the session.)
6. Click *Connect*. The Netviewer screen appears.
7. Follow the steps on the screen and agree to share the content of your screen with the provider.
8. If you want to keep a copy of the Netviewer session log file, click *Save*.

   To view the log file, you need the Netviewer NetPlayer, which you can download from the same Web page from which you started the session.

15.13.3.4.8.2 Process a Health Check Incident

When you receive a health check incident, the steps you need to follow to solve the issue are listed in the message. Health checks appear in your application language.

Context

The description appears in English by default. This ensures that the provider can understand it. You can view the information in your application language by clicking *Health Check*.

To resolve the incident, perform the following steps:

Procedure

1. Take over the incident and open it for editing.
2. Read the instructions in the health check message and perform the steps listed there.
3. If completing the steps solves the incident, from the *Action* dropdown list, select *Complete*.
4. Click *Save*. The status of the incident changes to `Completed` and you can then close it.
5. If completing the steps does not solve the incident, from the *Action* dropdown list, select *Send to Provider* to forward the incident to the provider. If you want to include additional information in the health check incident you are forwarding, you can add or update attachments or click *Add*, then choose *Note for All Parties Involved* to enter additional information in the text field.

   If you add text using this feature, everyone involved in processing the incident (the processor and provider) is able to read it.

   If necessary, you can also change the priority of the incident.
6. Click *Save*. The status of the incident changes to `In Process – Provider Action`.

15.13.3.4.9 Close an Incident

Learn how an administrator closes an incident.

Context

If the status of an incident is `Completed`, `Completed – Solution Accepted`, or `Completed – Solution Rejected`, the *Close* option becomes available to you in the *Action* dropdown list so that you can indicate that the incident is resolved from your point of view.

Procedure

1. From the *Show* dropdown list, select *Completed Incidents*.
2. Open the incident for editing.
3. From the *Action* dropdown list, select *Close*.
4. If necessary, click *Add*, then choose *Internal Comment* and enter a note in the text field.
5. Click *Save*.
   - If the status of the incident was `Completed – Solution Accepted`, it now changes to `Closed – Solution Accepted`.

- If the status of the incident was `Completed` or `Completed – Solution Rejected`, it now changes to `Closed`.

6. The incident is now closed and can no longer be edited.

15.13.3.4.10 Escalate an Incident

Incident Escalation Management is an exceptional process for handling critical incidents that cannot be solved satisfactorily or within a reasonable period of time by the Incident Management process.

Prerequisites

You have submitted an incident with *Very High* priority and its initial response time (IRT) has been exceeded.

A *Very High* priority incident is justified in the following situations:

- You cannot access your application at all.
- The go live of your application or an upgrade of your system is endangered.
- Your core business processes are suspended and no alternative processes are available.
- Your incident requires immediate attention because the current issue leads to serious losses for your business.

To request escalation, call the emergency hotline for your country and provide the following information:

- The incident ID
- The business impact of the incident
- The name of at least one contact person and his or her telephone number and E-mail address (ensure that this person can be contacted 24 hours a day, 7 days a week)

15.13.3.4.11 Complete an Incident on Behalf of the Requester

If it is not possible for the requester to complete an incident, for example, because he or she has left the company, you as the processor must complete the incident on the requester's behalf.

Procedure

1. Open the incident for editing.
2. From the *Action* dropdown list, select *Complete*.
3. Click *Save*. The status of the incident changes to `Completed` (or `Completed – Solution Rejected` if the requester has already rejected a proposed solution) and you can then close it.

Next Steps

You can set an incident to complete quickly without opening the incident, by clicking the *Complete* button. The button is also available in the incident edit screen. However, you have to explicitly click *Save* after clicking the *Complete* button.

15.13.3.4.12 Cancel an Incident

Learn how an administrator cancels an incident.

You can only cancel an incident when the incident IDs are generated. You cannot cancel an incident if the ID of the incident is pending in *Help Center* > *Track My Incidents*. The *Cancel Incident* button is disabled for such incidents until the incident IDs are generated.

15.14 Side Pane

The side pane appears on the right side of the main content.

Side pane is seen in three areas on the user interface. It is available in the work center view and in the detailed view. It is also available as a global side pane in the personalization and adaptation mode or in the help center view.

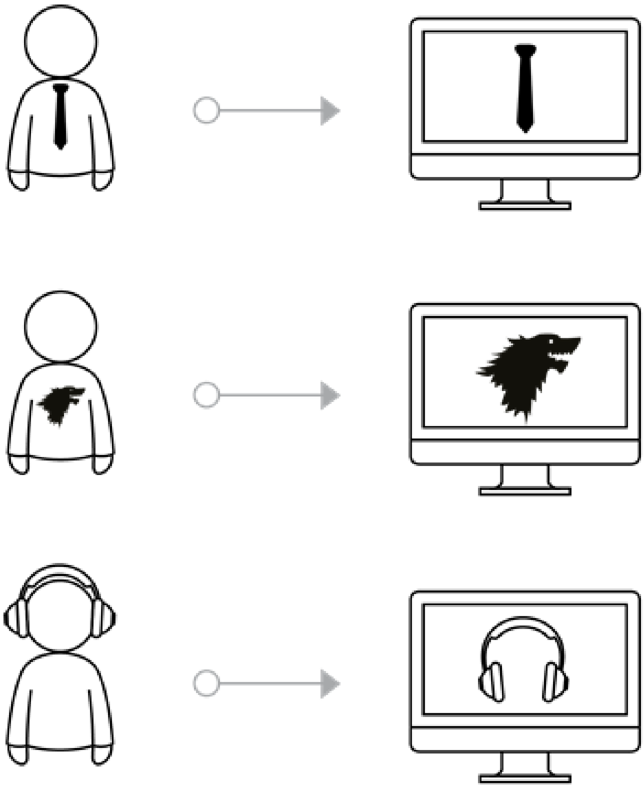
- In the work center view - The pane appears at the right side of the screen. It contains key information pertaining to the selected item in the list. Currently, the side pane in the work center is used for showing machine learning content. The groups are divided sections of the side pane that hold related information together.
- In the detailed view - The pane appears on the right side of the screen. It contains key information pertaining to the item and can be accessed throughout all of the tabs. The pane is mainly for viewing and light editing. It acts as a resource for accomplishing tasks inside the detail view. The side pane is divided into sections with relevant information. These groups are configured by you.

  > **Note**
  >
  > - Expand or Collapse - You can click the active tab to collapse the pane. Clicking on any tabs in the collapsed mode expands the pane again, and the clicked tab is the active tab.
  > - The system remembers last state - The last state of the pane is remembered by system for the next time you sign into your account. For example, if you collapsed the pane the last time you were logged on, then you see that the pane as collapsed when you sign into you account.

- As a global side pane in the personalization and adaptation mode or in the help center- The global side pane appears on the right side of the screen in the personalization or adaptation mode or when the help center is launched.

15.15 Personalization

Learn how to personalize the solution settings to suit your needs.



When SAP Cloud for Customer is implemented by your administrator, they will define the way your system is displayed. Since personalization is all about you, tweak the solution into your solution so that it best suits your working style and uniqueness.

As an end user, you can for example, add your own background image, use drag and drop to easily move screen sections to another location, set the regional time settings, select whether to display additional onscreen explanatory text, and manage passwords and certificates.

Go a step further in your personalization experience by adding, changing or hiding labels and adding mashups. You can also create new queries, change the default queries, and organize the queries in each screen to save time. The personalization settings that you make on the screen take effect immediately. You can go ahead and accomplish your daily activities without having to restart the system. If you ever decide to go back to the original personalization settings, you can set it back to default.

Personalize your SAP Fiori Client [page 582]
Learn how you can personalize the solution with your preferences regarding system setting, navigation settings, content, and layout settings with SAP Fiori client.

15.15.1 Personalize your SAP Fiori Client

Learn how you can personalize the solution with your preferences regarding system setting, navigation settings, content, and layout settings with SAP Fiori client.

15.15.1.1 Personalize Your Screen

You can personalize your screen in the Fiori Client UI.

The following table gives a list of all the UI elements that you can personalize:

Action	UI Elements
Show and Hide	• Fields in Header, Object List, Search Filter • Sections • Panes • Tabs • Buttons, Menu Items
Rearrange	• Fields in Header, Object List, Search Filter • Sections • Panes • Tabs • Menu Items
Sort and Group	Columns

On the Fiori Client UI, click your profile on the top right corner of your screen, and select *Start Personalization*. The system opens the *Personalization Mode* side pane.

In the personalization mode, you can do the following:

- To select an area on the screen, right click (for Windows) and tap with two fingers (for Mac).
- To directly edit an area, use . The selected area is indicated by and a yellow border. The corresponding rows,columns, or buttons appear on the right pane.
- To hide or show fields, use .
- To navigate to the parent section, use .
- To navigate to the child section, use .
- To change the sequence of fields, drag and drop them on the right pane using .

For the changes to take effect, click your profile, and select *End Personalization*. To discard the changes, select *Discard Personalization Changes*.

15.15.1.2 Work with Implicit Personalization of Data Set View, Column Width and Action

The system remembers your behavior as you navigate the data set view, change the column width and the action choice you make and displays the selections made the next time you log in.

- **Data Set view**:
  Whenever you change the data set view /visualization, then the system remembers the change and shows it the next time you log in to the system. For example, when you change from list view to chunk view, the next time you log on to the same device, you will see the data set in chunk view.
- **Column Width**:
  Whenever you change the column width in the data set, the system remembers the change and shows it the next time you log in to the system.
- **Last Performed Save Action on Create**:
  The system remembers the choice of save action selected by you when you create an object on a specific device. For example, in the account creation screen, the default selection is *Save*. If you select the save option as *Save and Open* during account creation, then the next time you create an account (on the same device) you will see *Save and Open* as the default selection.

If last selected action is hidden in certain scenarios, then it does not show as the default selection. Instead the default selection of quick create component is seen. For example, *Save* in account creation screen.

15.15.1.3 Personalize the Home Page Settings

Home page setting is available as a gear icon on the top right.

Select/tap the gear icon to personalize your home page settings.

You can do the following under home page settings:

- Disable home page as start page
  Administrators and business users not actively using the home page, can disable home page from being the default landing page. With this setting, the first work center view defined for the user or role in user interface, becomes the default landing page for the Fiori client.
  In the personalization and adaptation mode on home page, the user and the administrator can uncheck the checkbox *Set home page as the start page* under settings.
- Show cards in groups
  Administrator can provide grouping of cards for a user role by selecting the checkbox *Show cards in Groups* under home page settings.

> **i Note**
>
> Add Group for cards is only available if it is enabled by your administrator.

15.15.1.4 Customize Solution with Your Brand

The Theme Builder is a tool to create a theme to match the branding of your company. Theme builder gives you advanced control over the look and feel of your app.

Context

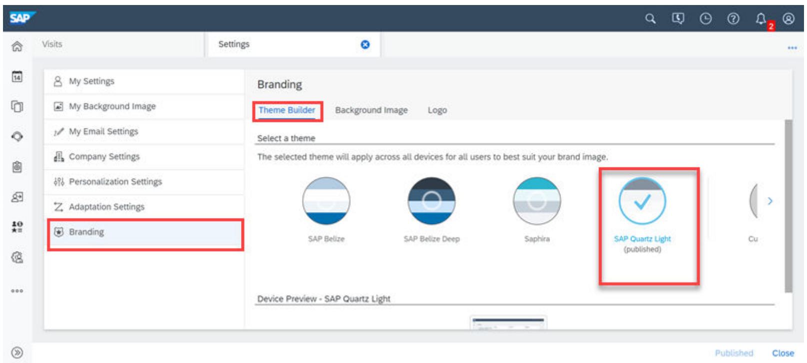
You can customize the look and feel of your solution with your company branding using the Theme Builder. There are four themes available:

- SAP Belize
- SAP Belize Deep
- SAP Quartz Light
- Saphira

SAP Quartz Light theme is the default theme available and provides consistent look-n-feel across all SAP Customer Experience solutions.

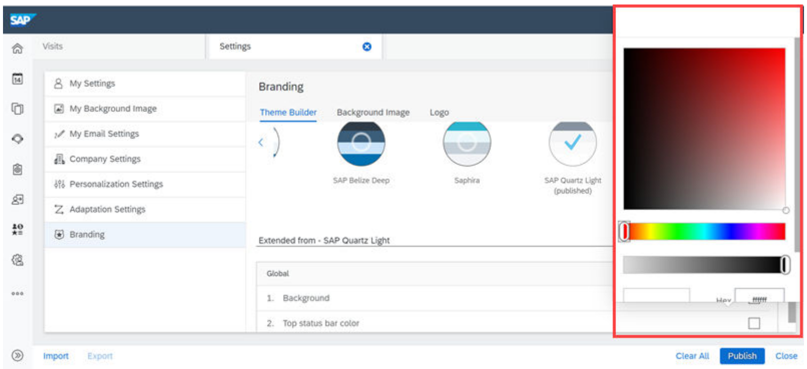
> **i Note**
>
> Only if you're using Blue Crystal theme, you see the transition to SAP Quartz Light, as SAP Blue Crystal Theme is retired and not available for selection. However, if you're using the SAP Belize, SAP Belize Deep or a Custom theme, then you aren't affected by the change.

Your administrator can enable the themes under *User menu*, navigate to *Settings* > *Branding* > *Theme Builder*.



> **i Note**
>
> - SAP Quartz Light theme selection can only be done on desktop and laptop.
> - It's recommended to use SAP Quartz Light theme with the company setting - Enable New Navigation Menu in Fiori Client
> - For the first time user, a theme is selected and published by default and applied for all the end users. However, if you want to define your own custom theme, then click *Custom Theme*.

Under custom theme, you can make finer adjustments to the color in theme builder via the color picker.



To create a custom theme for branding, follow these steps:

Procedure

1. Go to *User menu* and navigate to *Settings* > *Branding* to access the *Theme Builder*.
2. Choose *Custom Theme*. You can see the list of UI elements that you can edit for the company brand. Default values are set to the previously published theme.
3. Select the hex code or the color box. Selecting the color box shows the color picker overlay and you can change any color there for the UI elements listed, to a desired state color. For example, you can choose *Global* > *Background* and change to the background color you want.

   You can view the changes in real time as you change in the UI element.
4. Select *Save* to save the changes.

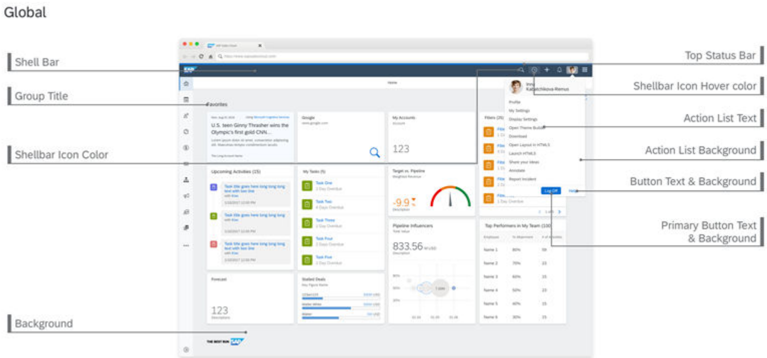
   You have the *Clear All* button to remove all the custom theme selection in one go. You can also see the original theme from which the new custom theme is created. For example, If the published theme is SAP Fiori, and then you chose to select the custom theme, you can see that the custom theme is an extension of the SAP Fiori theme.

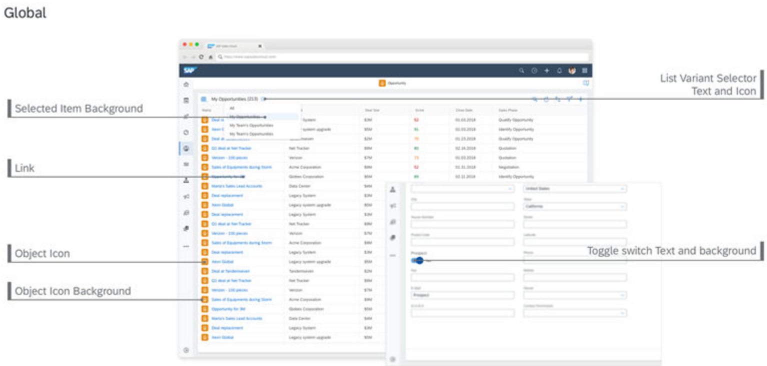
   > ! Restriction
   >
   > Before you select the custom theme from a published theme, you need to refresh the screen to see the correct theme from which the new custom theme is created.
5. Your administrator can then publish the theme for all the user by selecting *Publish*. When the selected theme is published, the check mark appears for custom theme.
6. If you don't like the changes you made, select *Revert* to revert to the previous published theme.
   - You can also export a custom theme from the test system and import it into the production system.
   - Custom theme is available only in the SAP Fiori client (responsive user interface), both in the browser and the extended apps.

Results

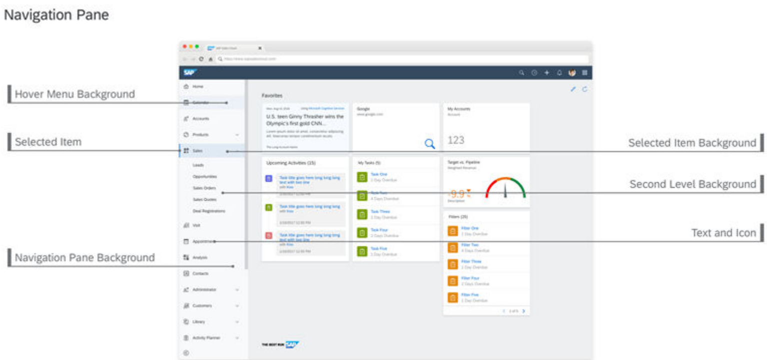
Using this tool, you can create a theme to match the branding of your company. The following solution areas can be customized under custom theme:

- Global



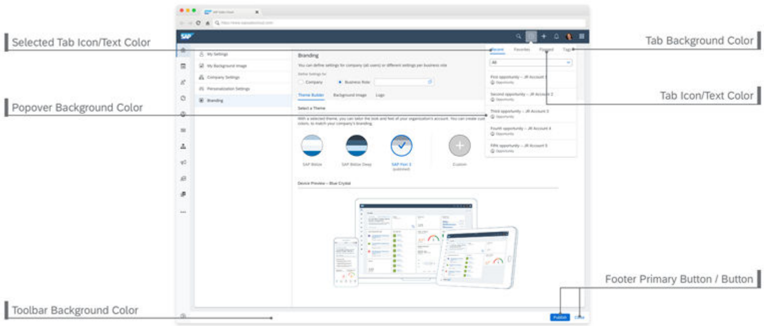


- Navigation Pane



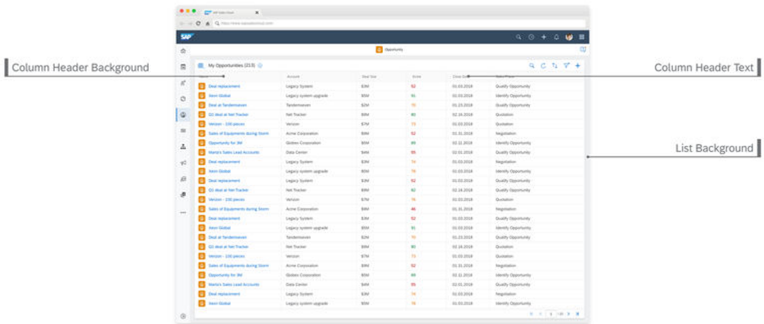
- Flag, Favorite, and toolbar

Flag/Favorite Button Tab & Toolbar



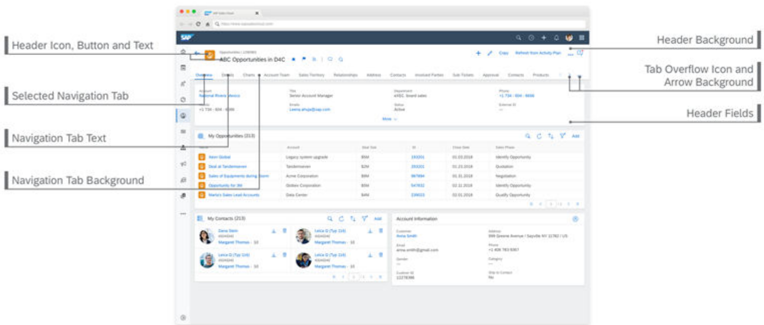
- List and Table view

List & Table



- Detail View

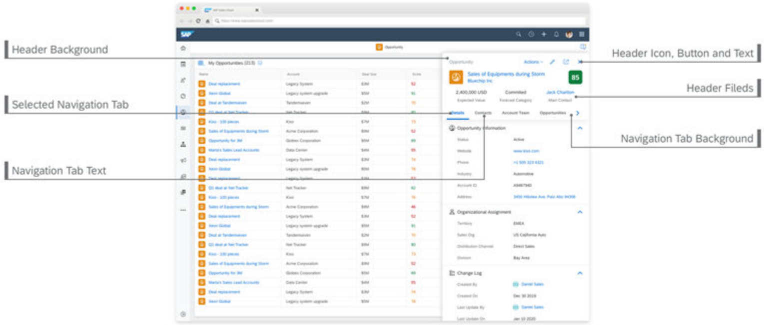
Detail View



> **Note**
>
> All the custom changes made under the detail view section, are reflected in the new quick view and the detail view on the user interface.

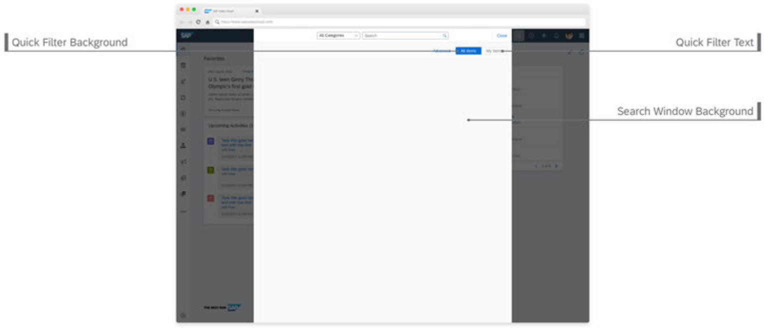
- New Quick View

Quick View



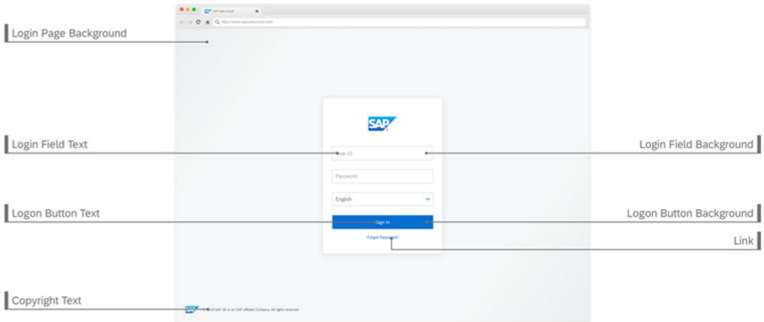
- Global Search

Global Search Window

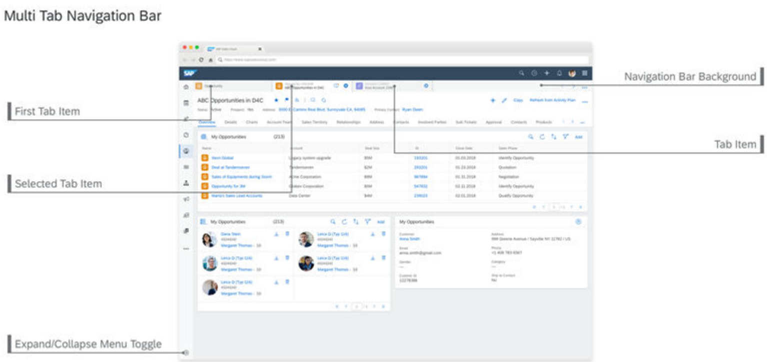


- Logon Page

Login Page



- Multi-Tab Navigation bar



- You can set your own branding on the logon page in browser. Logo and background image on logon page can be customized. This change has been done in Fiori client UI to provide a consistent user experience. Your administrator can set up the customization in the branding section under *Settings* in Fiori client.

> → Remember
>
> The image size must be less than 1 MB.

15.15.1.5 Create and Organize Queries

Learn the different ways you can work with queries on each screen.

15.15.1.5.1 Create New Queries

Learn how to create a new query.

1. Go to the screen where you want to create a new query. Select the filter icon. Enter the parameters for the new query. Select *Save Query As*.
2. In the pop-up box, you can give the query a name, and opt to make it your default query.
3. Select *Save*. A new query is created, and it appears in your default selection drop down list.

15.15.1.5.2 Organize Queries

Learn how to organize the queries you have created for easy access.

1. Go to the screen where you want to organize your queries. Select *(Filter)*. Click *Organize Queries*.
2. In the dialogue box that pops up, you can see all the queries available for the screen. Perform the following actions:
    - To select a query as your default query, click the radio button next to the name of the query. The selected query appears as the default query in your default selection drop down list.

- To remove a query from the list, select the *Remove* checkbox next to the query.

  > **i Note**
  >
  > You can only remove the queries that you have created, and not the ones that are pre configured in the system.

- To turn on auto execution for the *All* query, deselect the *Disable* checkbox next to it. The *All* query is disabled by default in the value help.
  Disabling the auto execution improves the user experience and performance. You don't have to wait till the query is executed, to interact with the UI. For example, if you want to search for a specific term, you can do so.
- To hide a query from the list, select the *Hide* checkbox. To make the query available again, deselect the checkbox.
- To prevent a query from being deleted or renamed by end users, select the *Protected* checkbox. The system disables the options for the end users.

3. Select *Save*.

15.15.1.5.3 Click-to-Load Queries

You can control the queries that take a long time to execute from automatically loading by using advanced search and narrowing down the potential result set, before executing the query.

Open advanced search for data lists and select *Organize Queries*. In the dialog box that opens up, select the queries for which you want to disable auto initial load.

Override contextual values in value help by creating your own query

In many scenarios you may want to override the context with which the value selection on a field opens up, and create your own query. This allows you to search for field values other than the default field value for the business object.

For example, when searching for a serial Id in a ticket, opening the value help for Serial ID field sets the customer's context from the ticket. However, service agent may want to search for a serial Id for US based accounts beginning with 1. Agents can now create a custom query for this, thus overriding the contextual query to a broader result set.

15.16 Calendar

You can create new appointments, visits, and phone calls in the calendar. You can also quickly locate and filter information by work week, day, week, month, and agenda and also by type and by status.

Your calendar shows all of your appointments, visits, and phone calls. Each one is color- coded, based on its status. You can even view another colleague's calendar or the calendar for your team.

Got a minute? Check out all the calendar features in this video!

15.16.1 Scope and Configure Calendar

Administrators can configure tasks in calendar using the scoping qustion.

15.16.1.1 Enable Tasks in Calendar

As an administrator, you can enable tasks in calendar.

Procedure

1. Navigate to *Business Configuration* > *Implementation Projects*.
2. Select your project.
3. Navigate to *Edit Project Scope* > *Questions* > *Sales* > *Account and Activity Management* > *Activity Management*.
4. Select the following scoping question under **Enable Tasks in Calendar**: **Do you want to start using tasks in Calendar?**
5. Save your preferences.

15.16.1.2 Configure Calendar Relevant Task Category

As an administrator, you can create and maintain calendar relevant task categories.

Procedure

1. Navigate to *Administrator* › *General Settings* › *Calendar Relevant Task Category*.
2. Select *Add Row*.
3. Choose the *Task Category* and *Task Description*.
4. Save your changes.

> **Note**
>
> You can edit a task category by selecting the *Edit* icon.
>
> and you can delete a task category by selecting *Remove*.

15.16.1.3 Configure Calendar Color Categorization

You can maintain color categorization for activities and visits in calendar.

Procedure

1. Navigating to *Administrator* › *General Settings* › *Calendar Color Categorization*.
2. Select *Add* from the *Customise Color Coding Configuration* section.
3. Choose the *Color*, *Activity Type*, *Parameter*, and *Parameter Value*.
4. Save your changes.

15.16.2 Use the Calendar

Create appointments, visits, tasks, or phone calls right from your calendar.

Context

You can create appointments, visits, tasks, or phone calls on the fly right from your calendar. Here's how:

Procedure

1. Depending on the device you are using, select or long press on a block of time in your calendar or choose the plus icon (+).
2. Select the item type that you want to create.
3. Enter the details and save your entries.

> **i Note**
>
> All categories are available in category selection during task creation. However, only tasks configured as calendar relevant tasks are displayed in the calendar.

Results

Your appointment, visit, task, or phone call appears in your calendar.

15.16.2.1 View Other User's Calendars

The default view shows your calendar with your activities. Learn how to see the calendar of any of your team members and find out their schedule.

1. Select the user icon at the bottom right and choose *Other Calendars*.
2. Search for and select the name of your colleague. Your calendar is replaced by your colleague's calendar.
3. After you have checked your colleague's schedule, choose *My Calendar* from the user icon to see your calendar view.

> **→ Remember**
>
> It is not possible to display more than one calendar at a time.

15.16.3 Use the Team Calendar

Managers can use the team calendar to get an idea of their team's activities for the day and get coverage in the case of illness or vacation time.

This one-minute video shows you how useful the team calendar can be!

15.16.3.1 Reschedule Activities in the Team Calendar

When a scheduling conflict arises, you can reschedule your team's activities quickly and in one place, on the team calendar.

In the team calendar, you can switch the employee responsible for an activity from one team member to another with drag and drop.

> **i Note**
>
> If you use add-ins to synchronize your e-mail with SAP Cloud for Customer, your e-mail software only defines the organizer of the activity. When you synchronize, your SAP solution uses the name of the organizer as the employee responsible as well. Therefore, if the original employee responsible was also the original organizer of the activity, the new employee responsible becomes the organizer.

All other parties involved in this activity remain unchanged.

Related Information

E-Mail Add-Ins [page 804]
You can leverage tools you use every day, such as your e-mail inbox, to become more productive.

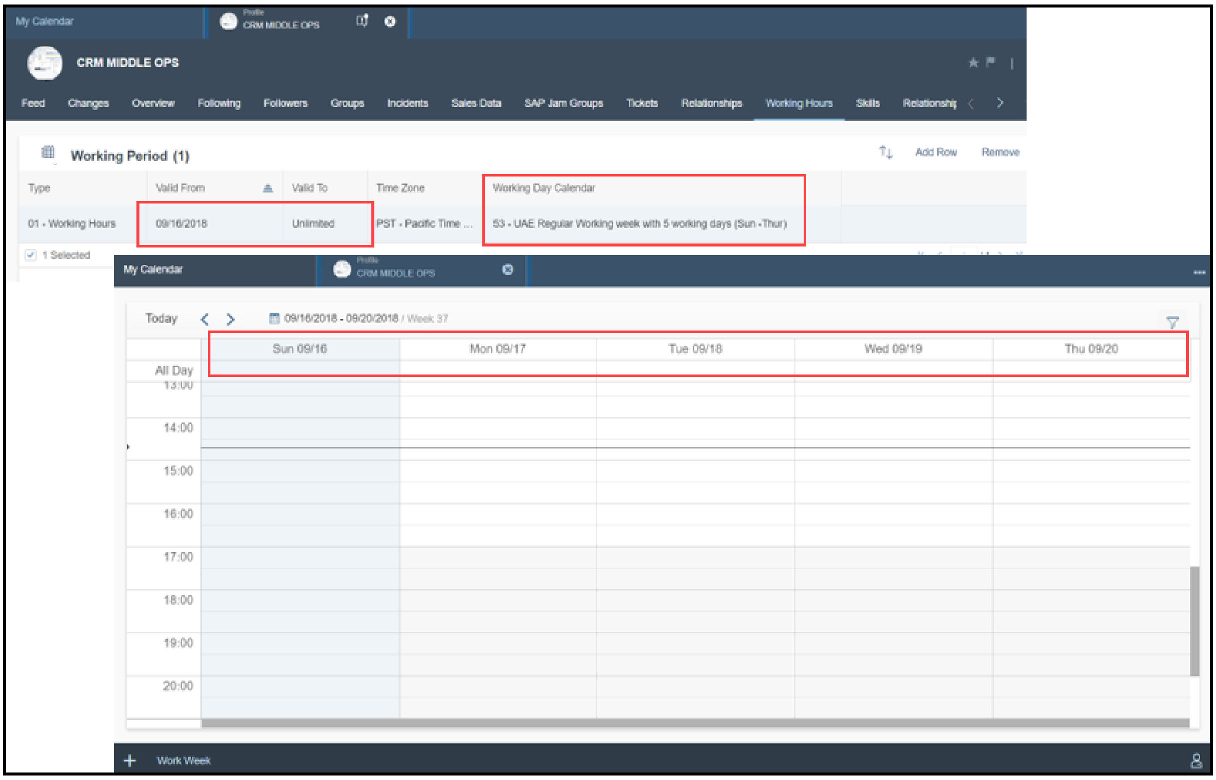
15.16.4 Display Workweek and Start Day in Calendar Based on Locale

For each employee, you can maintain workweek and start day based on their locale. The calendar reflects those preferences accordingly.

Prerequisites

Administrators have enabled the scoping question to scope employee working hours. For more information, see Configure Employee Working Hours [page 774].

Context



Procedure

1. Open the detail view of an employee and go to *Working Hours*.

> **Note**
>
> If the *Working Hours* tab is not visible, you can use *Personalization* or ask your administrator to *Adapt* the master layout.

2. Under *Working Period*, click *Add Row*.
3. Define the validity period for this working period.
4. Choose *Working Day Calendar* based on the employee's location.
5. *Save* your entries.

Results

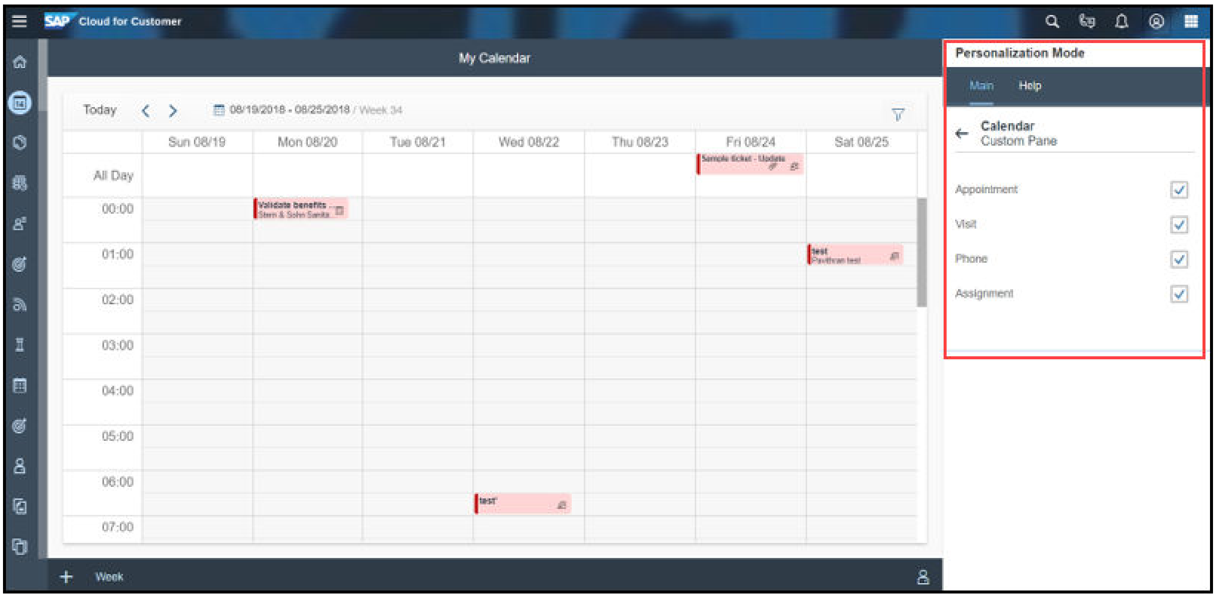
The calendar displays workweek and start day based on the employee's locale that you have defined.

i Note

If the *Working Day Calendar* is not defined, the calendar by default displays Monday as the first day of a five-day workweek.

15.16.5 Personalize Visible Activity Types on Calendar

You can personalize your calendar to filter out activity types that are not relevant for your calendar display. Your preference set through *Personalization* becomes the default every time you access the calendar.

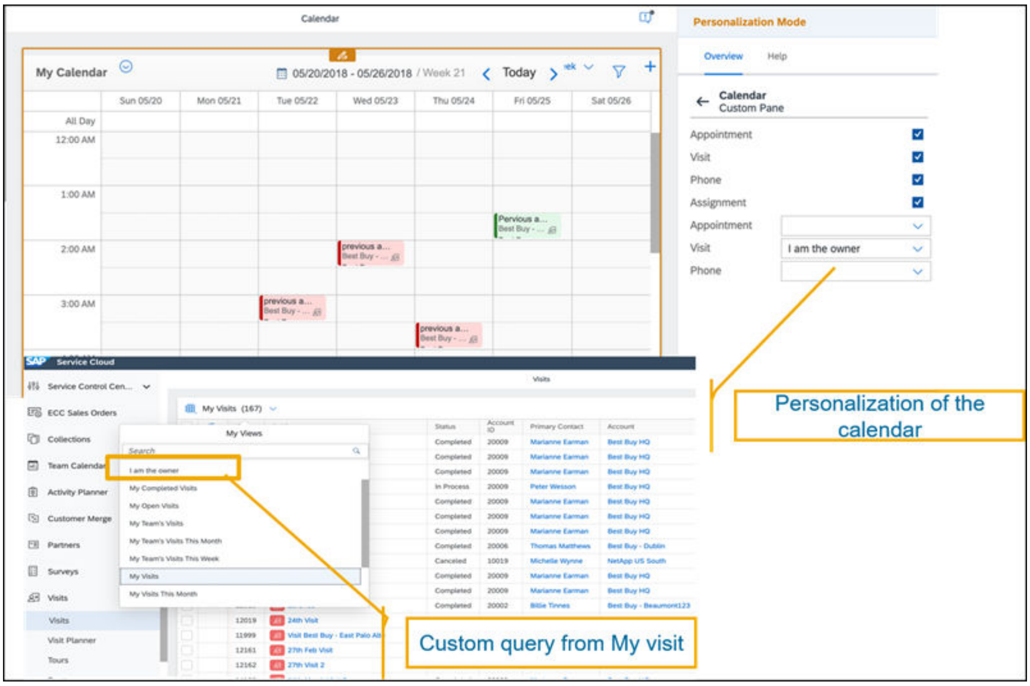


15.16.6 Personalize Calendar

You can personalize your calendar to show calendar information based on your involvement.

Context

Currently, when you create an appointment for another user, the system sets you as an organizer and the other person as the owner. Both the organizer and owner can see the appointment entry in their system calendar. However, the organizer is just setting up the appointment and doesn't attend it. So, if the organizer sets up a series of meetings, then the entire calendar gets blocked and others can't schedule a meeting with the organizer. This blocked calendar is misleading as the organizer is free. To address this issue, the calendar can now be personalized to show only the organizer's calendar entries.



You can create a custom query from the object list. For example, visit, appointment and phone call, and use this query to personalize the calendar. You can personalize your calendar with the following steps -

> **i Note**
>
> Only queries created out of My **activity**, for example My visit is available in the calendar for personalization.

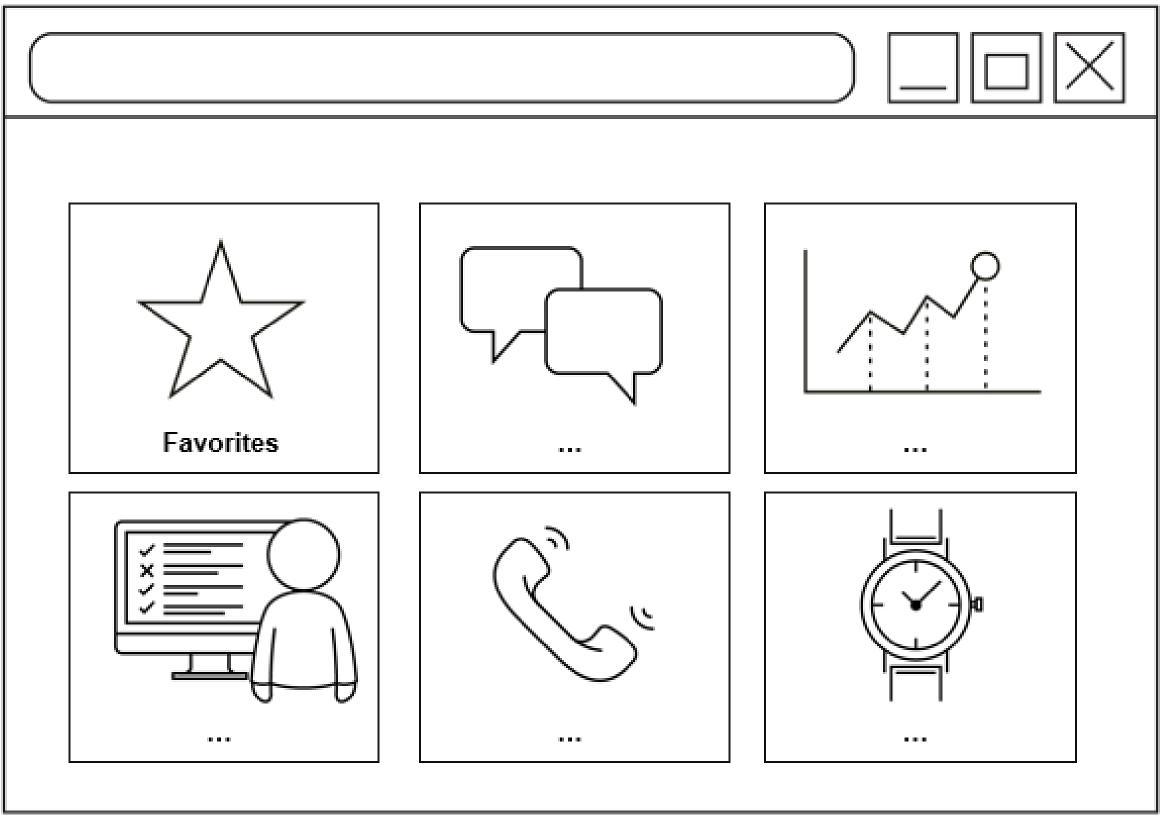
Procedure

1. Create a custom query from the My “activity” query in the list view.
2. Go to the personalization mode for calendar and select the query.

   Calendar personalization isn’t available in the offline mode.

15.17 Home Page

See relevant information and activities, and plan your day with the home page. And get a high-level visual overview of your sales data.



Home page displays preconfigured business cards based on your business role. You can click a card to see its details. For example, you can click *Today's Activities* to see the details of your schedule and activities for today. You can work with the different cards types, view report details, and also personalize the cards you want to see on the Home page.

The news section on the home page helps you prepare for appointments and phone calls, by displaying stories about the accounts related to your scheduled activities. The Feeds card shows the feed updates. Use the dashboard cards to drill down and view details and increase your visibility into transactional data, KPIs, and reports. You can also do mark ups, add notes, and send e-mails right from the home page.

Home page content is cached to improve the sign-in experience. Content caching loads the home page cards faster and retrieves the home page content efficiently, keeping the user experience interactive. You can access the home page cards with no updates immediately and don't have to wait for the home page to load completely before using it. A visual transition shows the information being updated in the background. You can see the cached information in gray. he cached data is shown immediately and any updates to the home page cards automatically occurs in the background. You can see the previous information while the system updates the cards with latest information. This transition takes no more than 5 to 10 seconds.

> i Note
>
> Content caching is only available on sign-in.

15.17.1 Scope and Configure the Home Page

Administrators can configure and adapt the home page for each user and business role.

When you log on as the administrator and go to the home page to manage the make changes, you have two options- *Adapt* and *Personalize*. With *Adapt*, you first choose the user role and then make changes for that user role. *Personalize* allows you to make individual changes that you want for yourself and are also available for every user to personalize their home page.

Log on as the administrator and go to the home page.

Select the pencil icon and then Adapt.

→ Remember

- Adapt feature isn't available in smartphones and in offline mode.
- Card navigation in offline is limited to *Today's Activities*, *Visits*, and *Custom report Floorplan* cards in browser and tablet.
- For an optimal performance experience, you get a warning message when you exceed the recommended number of KPI and Report cards on the home page. The recommended maximum number of KPI cards supported is 10 and the maximum number of Report-based cards (Custom pattern cards like Bar Chart cards) supported is 4. You have the option to add additional cards, but it impacts the performance.
- There's no limit on recommended number of List cards, Tool cards, and Custom cards.
- Scorecard tab while selecting cards isn't available.
- Using *Search*, you can find a report but you can't open that report.

15.17.1.1 Select User Role

The administrator can define the home page for each role.

Context

If the administrator does not define a home page for a role, the default home page layout is maintained. To select a role and start defining the home page for all users with that role, do the following:

Procedure

1. Log on as the administrator and go to the home page.
2. Select the pencil icon and then *Adapt*.
3. The list of roles that appears are the business roles that you created when you set up your system.
4. Select a role whose home page you want to define and select *Go*.

15.17.1.2 Define Home Page Settings

The administrator can access home page setting as a gear icon on the home page.

As an administrator, under home page settings you can enable the users or roles to group cards on their home page. To do so, check the checkbox *Show cards in Groups* under settings. You can also change the home page to show as the default start page when the user logs in. To do so, you can uncheck the checkbox *Set Home page as the Start Page* under settings.

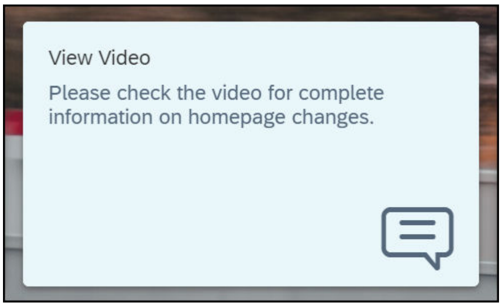
15.17.1.3 Define Cards for a User Role

The administrator can define the cards for each role under adapt mode.

Procedure

1. In adapt mode, select a role and the different card types (KPI, custom, report, filter, and tools card) for the user role.
2. To add cards, click, or tap the+ icon, located at the end of each card. As the administrator you have two options for adding different cards-
    1. **Add Existing card**: Select the different cards you want for the user or business role from the catalog.

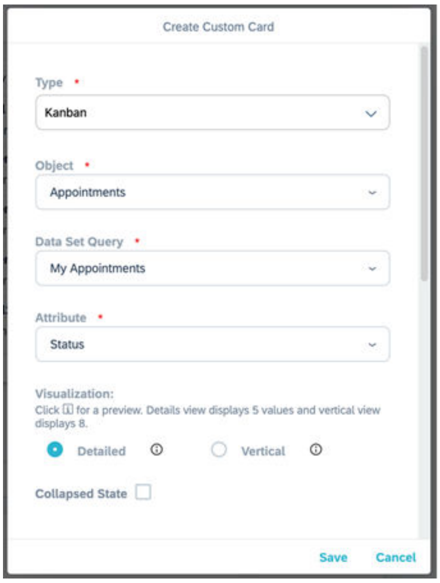
2. **Create Custom card**: You can create the following type of custom cards:
    - **URL card**: You can launch any URL directly from the URL card. The URL opens in a new tab.
    - **Floorplan card**: With floorplan card option, you can create a card that launches any screen for a work center or detail view in the solution that the user wants. Custom card also includes custom screens the user has defined.
    - **Ticket Creation card**: With the ticket creation card, you can create a new service ticket. Clicking the card launches a guided activity floorplan (GAF). Once you've created the ticket, you can view it under *Service* > *Tickets* > worklist.
    - **URL Mashup card**: With the URL mashup card, you can open URL mashups from the home page. While configuring the card, you can choose the mashup to configure from the mashup value help.
    - **HTML Mashup card**: With the HTML mashup card, you can open HTML mashups from the home page. While configuring the card, you can choose the mashup to configure from the mashup value help.
    - **Message card**: The message card can be used by the administrator to publish messages for business users. As a part of the configuration, the administrator can set the message title, message description, informational icon text, and the background color of the message card.

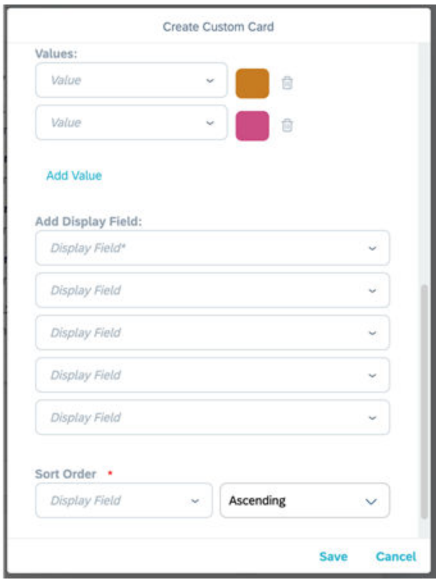


    - **Video card**: Video card can be used by the administrator to configure video links for the users. When you click the video link, it launches in a separate window. As a part of the configuration, the administrator can set the title, description, and time frame for the video card.

> **Note**
>
> Videos aren't stored as part of SAP Sales & Service cloud.

- **Kanban Card**: You can configure Kanban card on the home page via adaptation. As a part of the configuration, the administrator can create a Kanban card for an object. Based on the object selection, the following information can be added sequentially -
  - Data set query.
  - Attribute (used for grouping on Kanban board and is restricted to attributes with only code list).
  - Visualization (Detailed or Vertical view in expanded or collapsed mode).
  - Value (You can add values and set color for each value.)
  - Display field and set the order in which the display fields should show.

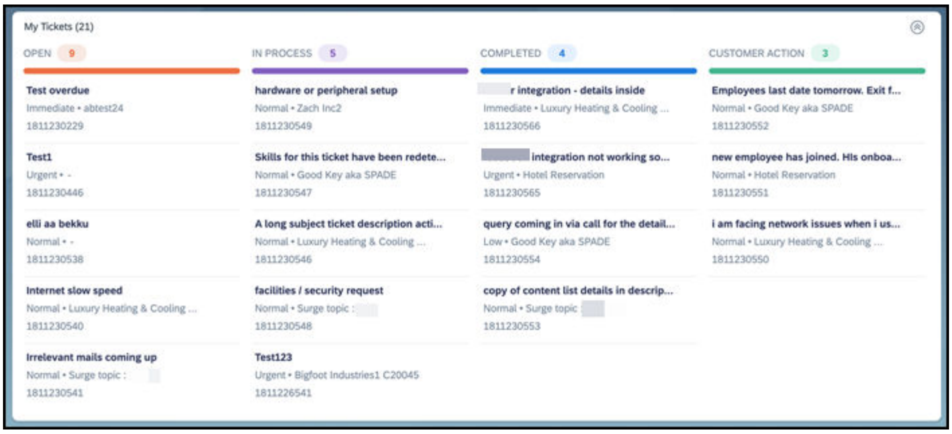




The Kanban card helps teams manage and prioritize workflows effectively. Your administrator can create new Kanban cards as part of creating new custom card.

> **i Note**
>
> Kanban board visualization supports 2 columns, 3 columns, 4 Columns & 5 Columns.

The Kanban card layout on the home page is available only on the desktop. When you click the title, you navigate to the ticket list view for the query. When you click a subheading, you navigate to the list view for the subheading query. For example, if you click Customer Action, you navigate to the list view for the query Customer Action. When you click an object under the subheading, you navigate to the object's detail view. You can view the Kanban card in collapsed and expanded mode.



> **i Note**
>
> - Kanban board can be created only on editable data set queries.
> - You can't edit and delete a Kanban card.

As a prerequisite, the administrator must create the Kanban custom card via adaptation on the home page and publish to make the Kanban card available for the users.

> **i Note**
>
> URL Mashup and HTML Mashup custom cards are only available in Fiori client.

Do the following steps to create a custom card:

- Choose the custom card you want to create.
- Add the required fields and click *Save*. Custom card created is stored in the card Catalog.

3. If you want the changes, select *Publish,* and if you don't like the changes you made, select *Revert*.
4. To go back, select *Leave Adaptation Mode.*

15.17.1.4 Define Settings for Each Card

As an administrator, learn how to define the setting for each card.

When you are in adapt mode, you can change the appearance of a card by selecting it. You can set the following attributes for a card:

- card Visualization
- Available
- Visible
- Specify a group for the card, if grouping is available for the role.

Then, save the changes.

15.17.1.5 Configure News Card

As an administrator, learn how to configure the News card.

Context

Configure the news card by either selecting the news source or by selecting the url for RSS feeds to show up on the user's news card.

The Google News API is deprecated and gives errors on the current news card. See the **Related Links** for more information. Therefore, the administrator can set up Bing News for all users and roles as the news card. You can buy Bing News APIs and enable it in the solution. See the **Related Links** for more information.

> i Note
>
> Bing News has different markets based on country/region and language. Right now, in the solution the market is preset only to US English for Bing news. This means that the business news is in English and from US.

Depending on what is the user's current news source, there are two use cases to change the news card to Bing News-

- If the user currently has Google news set up for the news card.
- If the user currently has URL for RSS Feeds selected for the news card.

> i Note
>
> If you opted for Bing news or opted for RSS feed or already on RSS feed as new source, switching back to Google news isn't possible.

Follow the steps to set Bing News as the news source:

Procedure

1. On the home page, select the edit icon at the bottom-right corner.
2. From the pop-up select *Adapt*.
3. Select the user role.
4. Select the news card.
5. Select the link *Switch to Bing New* under *Select News Source* if Google news is set up as the news card. Select API Key for Bing News if URL for RSS Feeds is set up as the news card.
6. Enter the API key and *Save*.
    - If the news source is Bing News, no news is shown on the news card in offline mode.
    - Bing news V7 is supported.

Related Information

Build anything with Google
Microsoft Azure Cognitive Services

15.17.2 Work with Card Types

You have five different card types (KPI, Report, Tools, Filter, and Custom card) available in the solution.

> **i Note**
>
> Table view isn't supported on the home page.

KPI Card [page 605]
Based on the KPIs defined by your administrator, you can launch an interactive dashboard or KPI overview. KPI cards provide a snapshot of the key metrics. You can select the KPI card, to view additional details.

Report Card [page 609]
A report card displays a graphical representation of a report.

Tools Card [page 615]
Tools card is available online and enhances your daily productivity.

Filter Card [page 618]
Filter card is a place where you can keep your custom queries as a list item to be run by the user on the home page.

Custom Cards [page 618]
You can choose to create personalized cards to launch information from the home page.

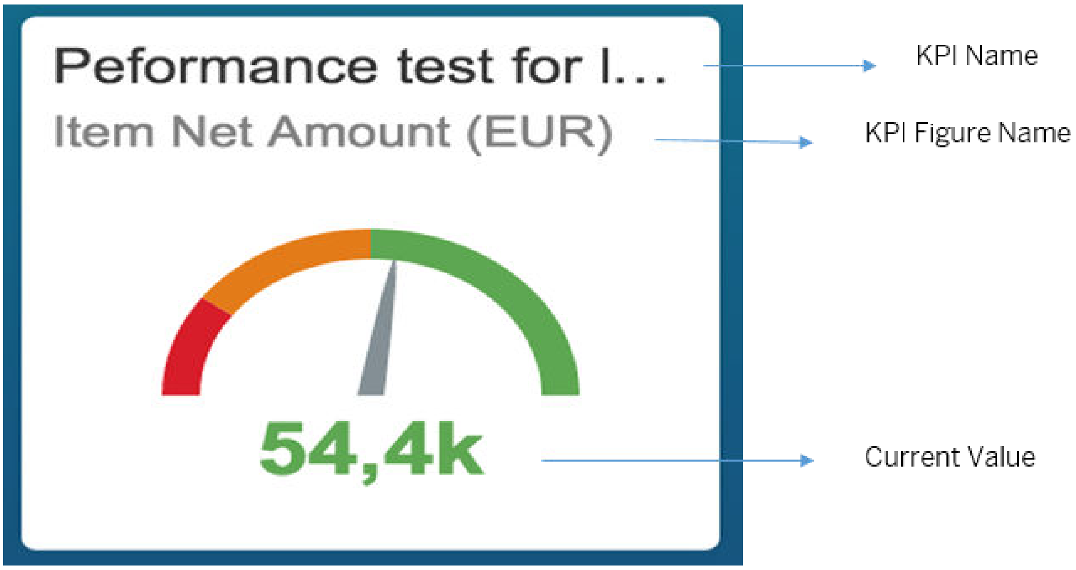
15.17.2.1 KPI Card

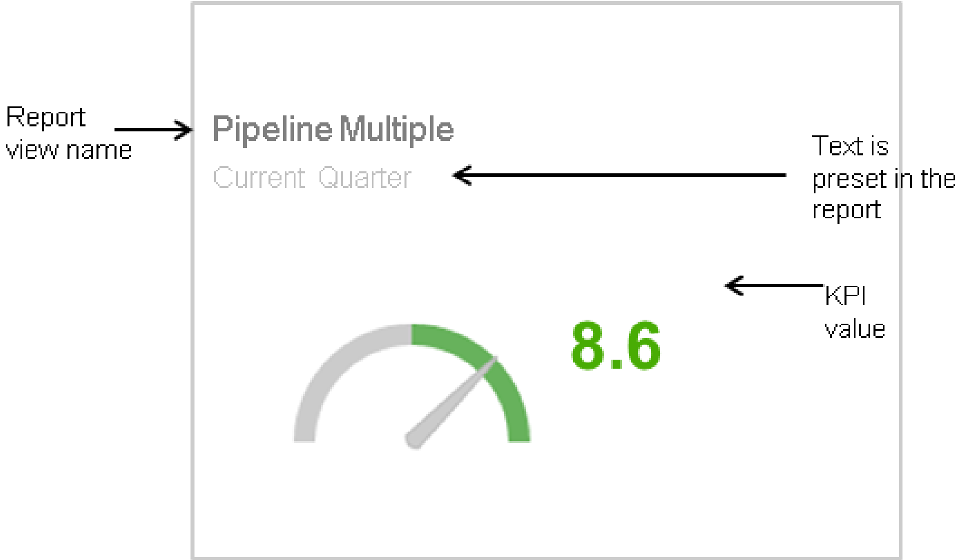
Based on the KPIs defined by your administrator, you can launch an interactive dashboard or KPI overview. KPI cards provide a snapshot of the key metrics. You can select the KPI card, to view additional details.

The system uses this pattern for KPI views with a threshold value defined. The following KPI cards are supported:

- **Gauge Pattern**
  The system uses this pattern for KPI views with a threshold value defined.
  In Fiori Client, gauge helps extract complex information and gives a graphical view of how you're doing towards a goal. It shows KPI views with a threshold value defined and requires either target or threshold or both to be maintained. It requires at least one of the two (Target or Threshold) to be maintained. Odometer shouldn't be used as a pattern for minimize.
  There are three options here:
  1. When the target and thresholds are maintained-

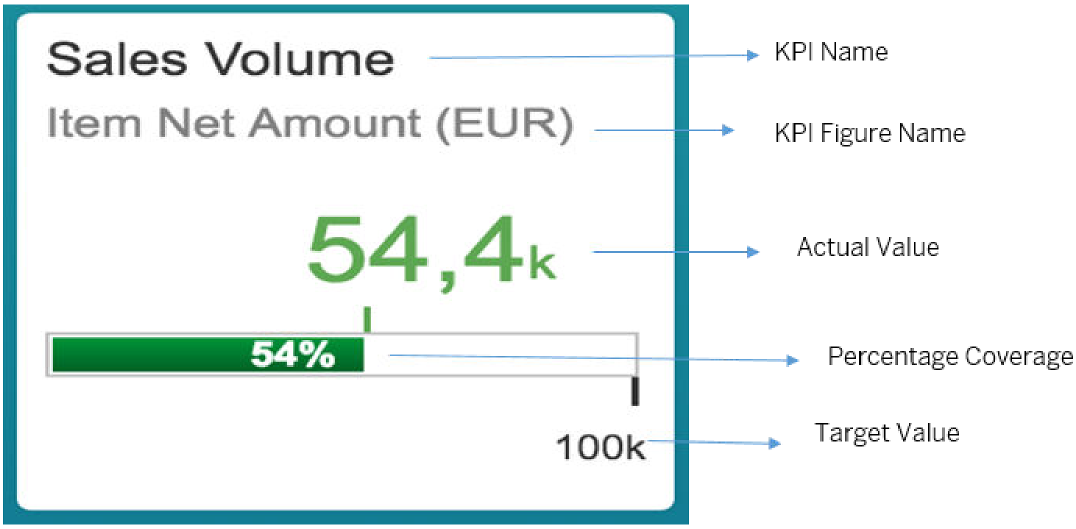
    1. When the current value is less than target value, the odometer split into three sections. Red section indicates alert, yellow section indicates warning, and the green section indicates on track or better.
    2. When the current value is greater than target value, the odometer displays shades of green, indicating on track and exceeded by how much.
2. When the target is maintained but threshold isn't maintained-
    1. When the current value is less than target value, the odometer is split into two sections. Yellow section indicating warning and the green section indicating on track or better. The current value is displayed in the shade of yellow or neutral color.
    2. When the current value is greater than target value, the odometer is split into yellow and green sections. The current value is displayed in green.
3. When the threshold is maintained but the target isn't maintained-
    1. Odometer is split into three equal sections with red, yellow, and green color. The value is displayed in a shade of the color where the current value falls.



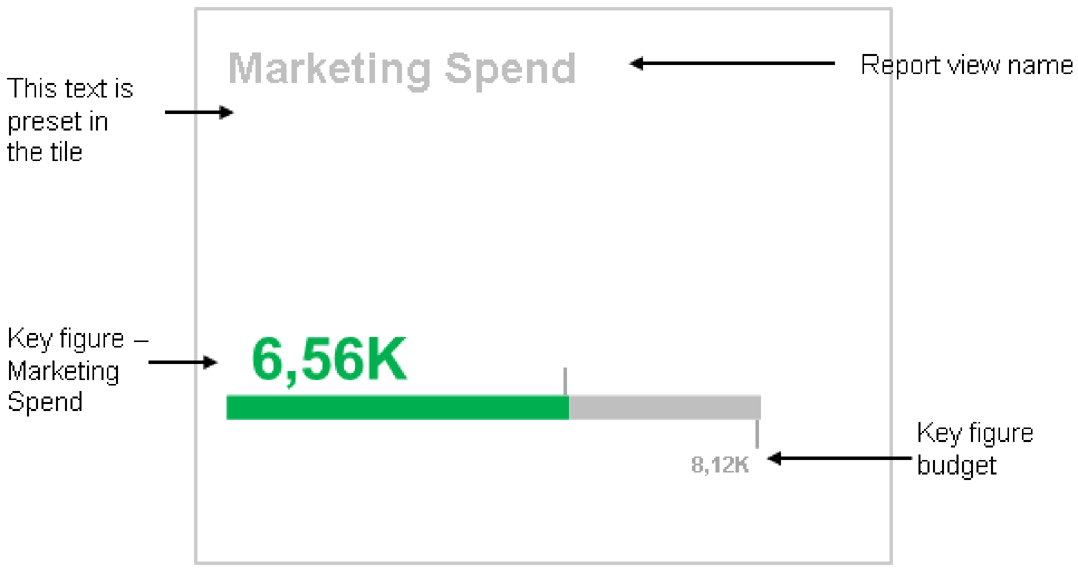


card appearance for gauge report pattern.

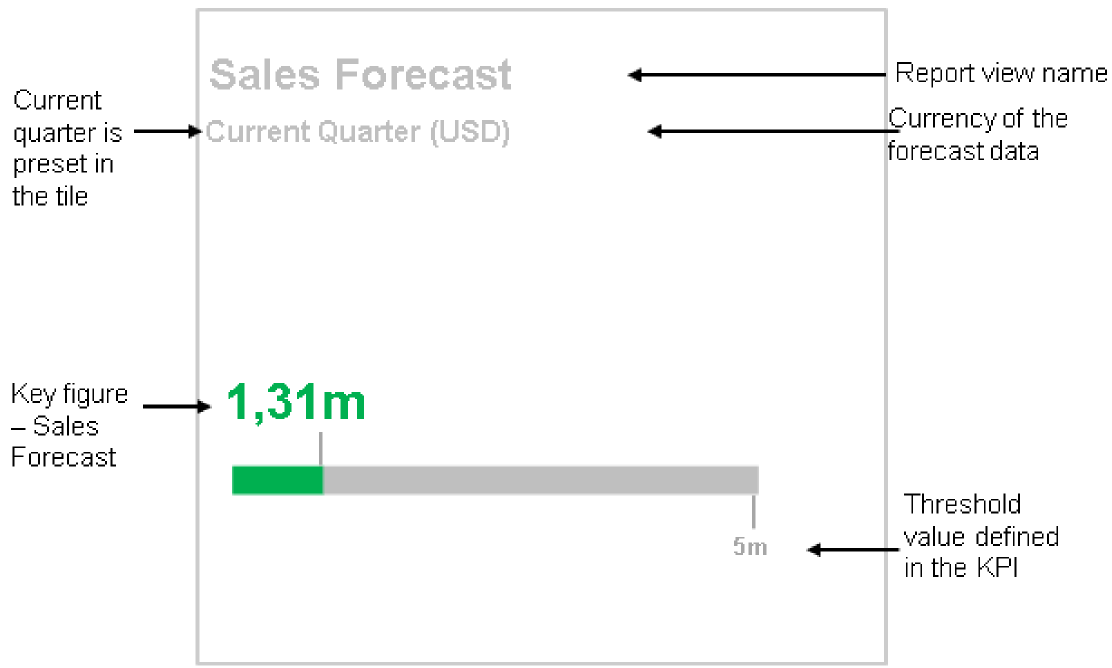
- **Progress Bar Pattern**
  This pattern is valid for KPIs and requires the target to be maintained. Only one color is displayed depending on what the current value is and whether the threshold has been maintained or not.
  In Fiori client, there are two options-
  - No threshold maintained: When the current value is greater than target, you see that the color of the progress bar is green.
  - Threshold maintained: Depending on the current value vs target value, there can be a maximum, minimum and in range value showing the progress bar in green, yellow, or red color.



Card Appearance for Progress bar Report Pattern



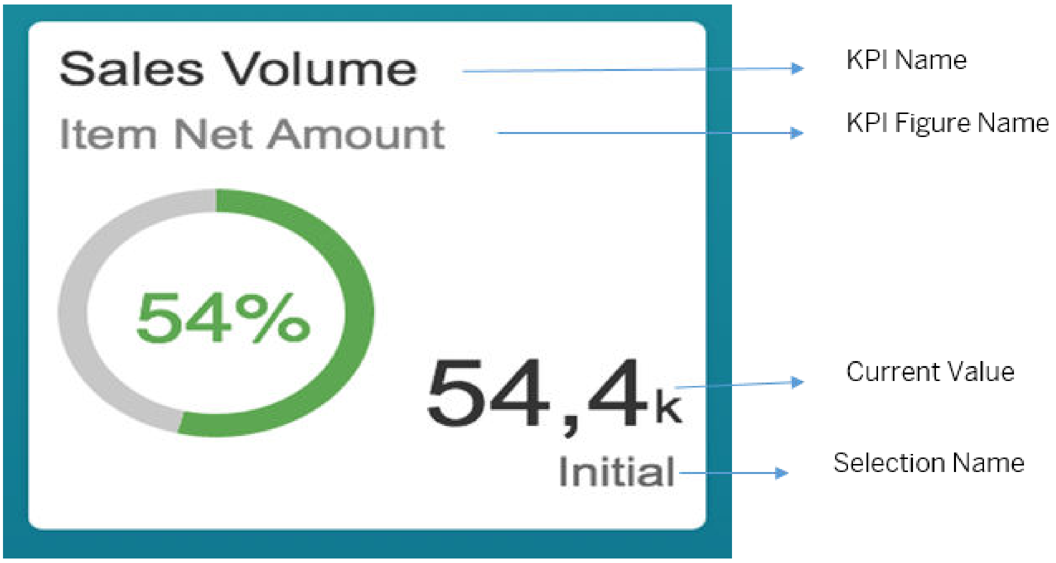
Card Appearance for Progress bar Report Pattern A



Card Appearance for Progress bar Report Pattern B

- **Percentage Coverage Pattern**
  This pattern is applicable for reports and KPIs, where KPI requires the target to be maintained and report should have two key figures.
  In Fiori client, in this card pattern you can see, the percentage deviation that is, how much percentage above or below target.

- In a maximize scenario, when the current value is greater than target, you see the complete circle in light green indicating that the current value exceeds target. The dark green color indicates by how much percentage it exceeds.
- When the current value is lesser than the target value, you see the percentage for the current value in neutral color or based on defined thresholds.
- In the minimum scenario, the color pattern is reversed.



Card Appearance for Percentage Coverage Report Pattern in Fiori Client

Related Information

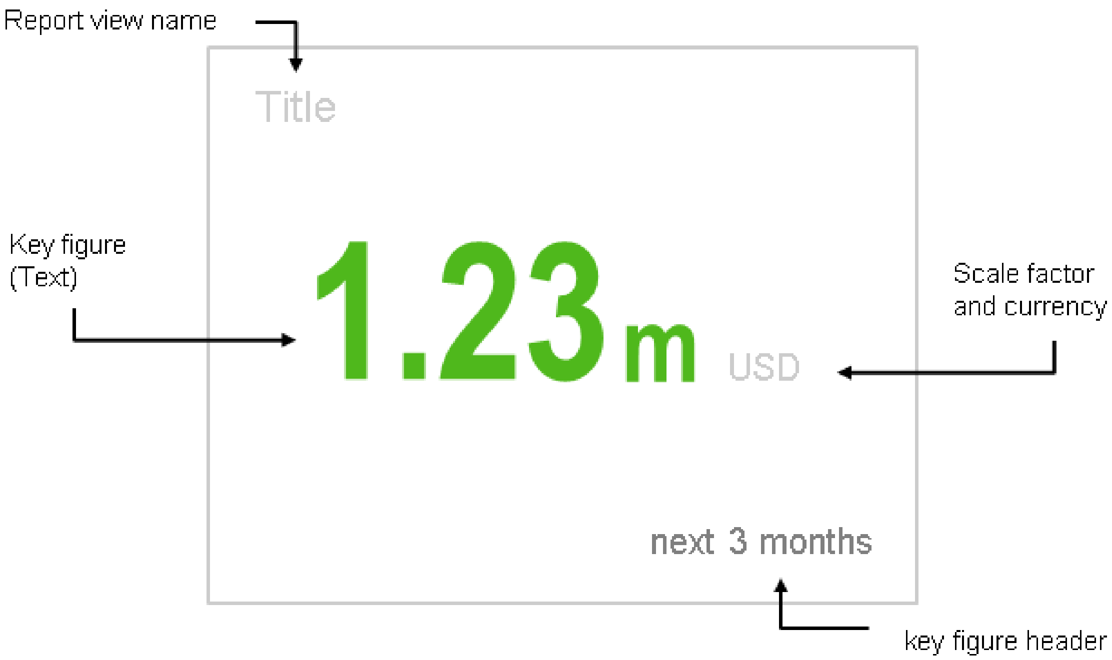
Personalize Your Home Page [page 632]
Learn how you can personalize your home page.

15.17.2.2 Report Card

A report card displays a graphical representation of a report.

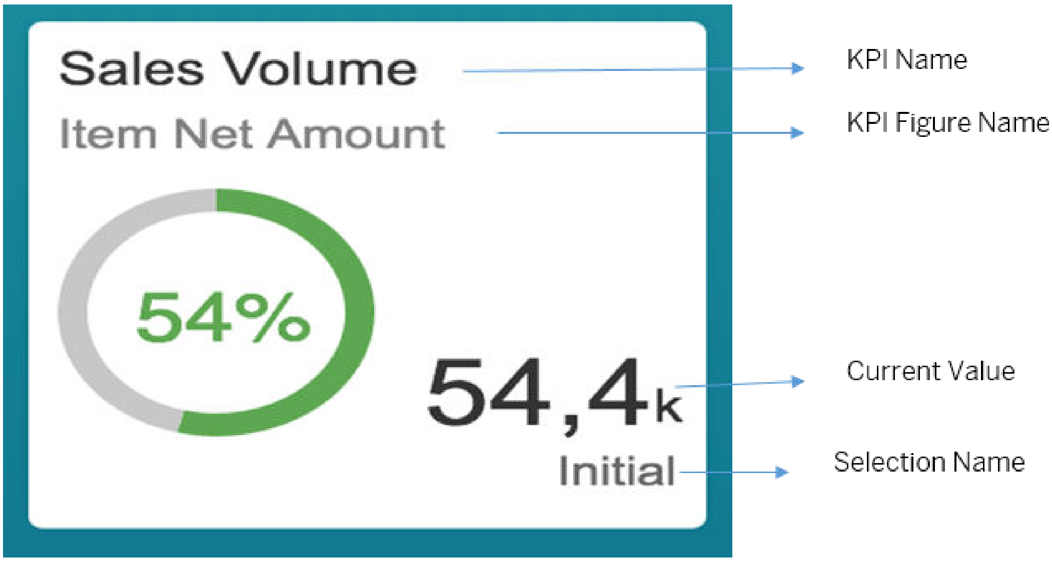
You can select the report card, for detailed analysis of the report. For optimal performance, we recommend not to add more than 4 reports on the home page. Reports with table aren't supported. The following report cards are supported:

- **Absolute Value Pattern**
  The system applies this pattern to report views with one key figure. The key figure header appears as text at the lower right of the card.



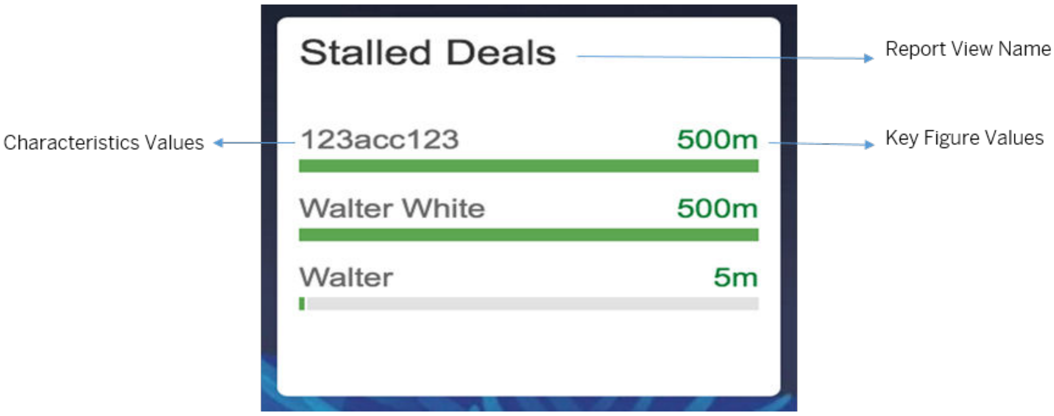
Card Appearance for Absolute Value Report Pattern

- **Percentage Coverage Pattern**
  This pattern is applicable for reports and KPIs, where KPI requires the target to be maintained and report should have 2 key figures.
  In Fiori client, in this card pattern you can see, the percentage deviation that is, how much percentage above or below target.
  - In a maximize scenario, when the current value is greater than target, you see the complete circle in light green indicating that the current value exceeds target. The dark green color indicates by how much percentage it exceeds.
  - When the current value is lesser than the target value, you see the percentage for the current value in neutral color or based on defined thresholds.
  - In the minimum scenario, the color pattern is reversed.

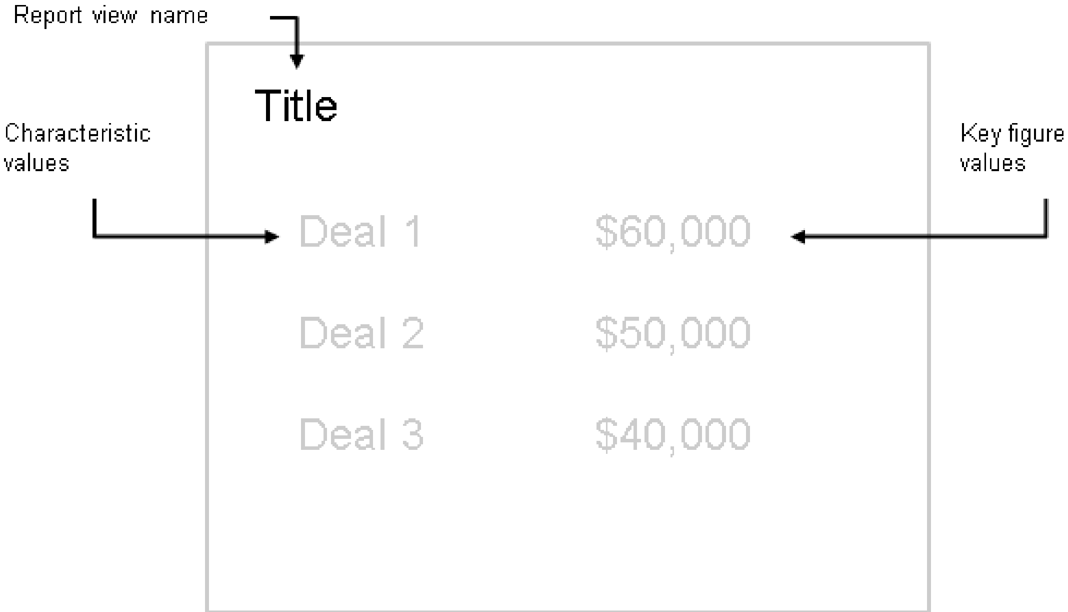


Card Appearance for Percentage Coverage Report Pattern in Fiori Client

- **Top Three Pattern**
  The system applies this pattern to report views with one key figure (without a total) and one characteristic. This pattern shows the top key figure values.
  In Fiori client, the data is represented as a comparison chart.

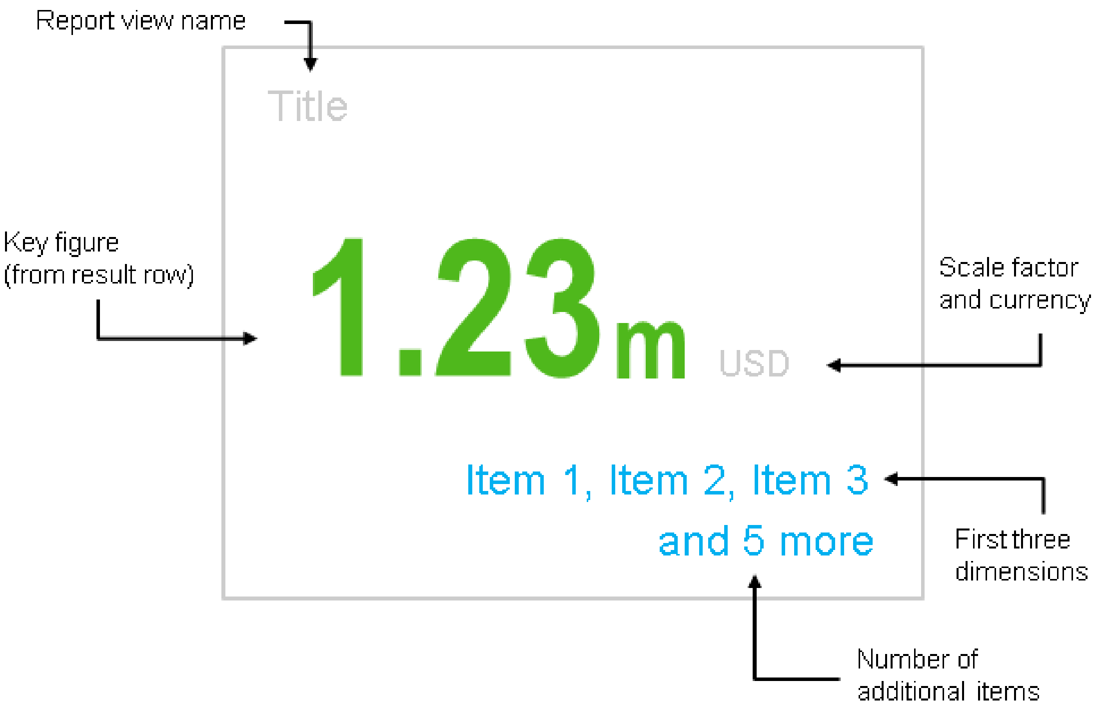


Card Appearance for Top Three Report Pattern



Card Appearance for Top Three Report Pattern

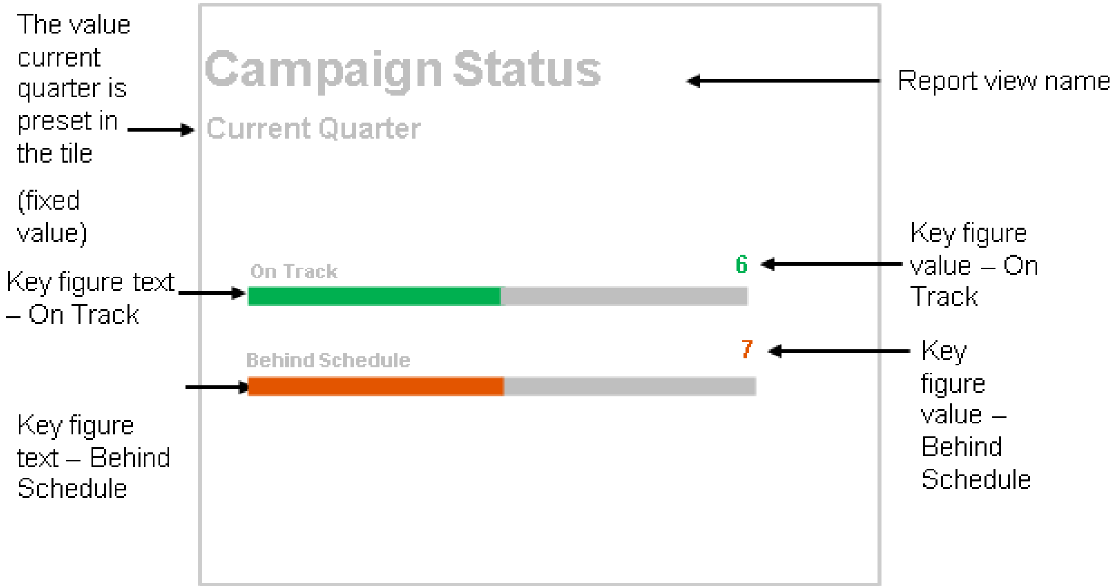
- **Aggregated Value Pattern**
  The system applies pattern four to reports similar to reports represented by pattern 3 (one key figure and one characteristic), which also include a result.



Card Appearance for Aggregated Value Report Pattern

- **Double Progress Bar Pattern**
  The system applies this pattern to report views with two key figures.

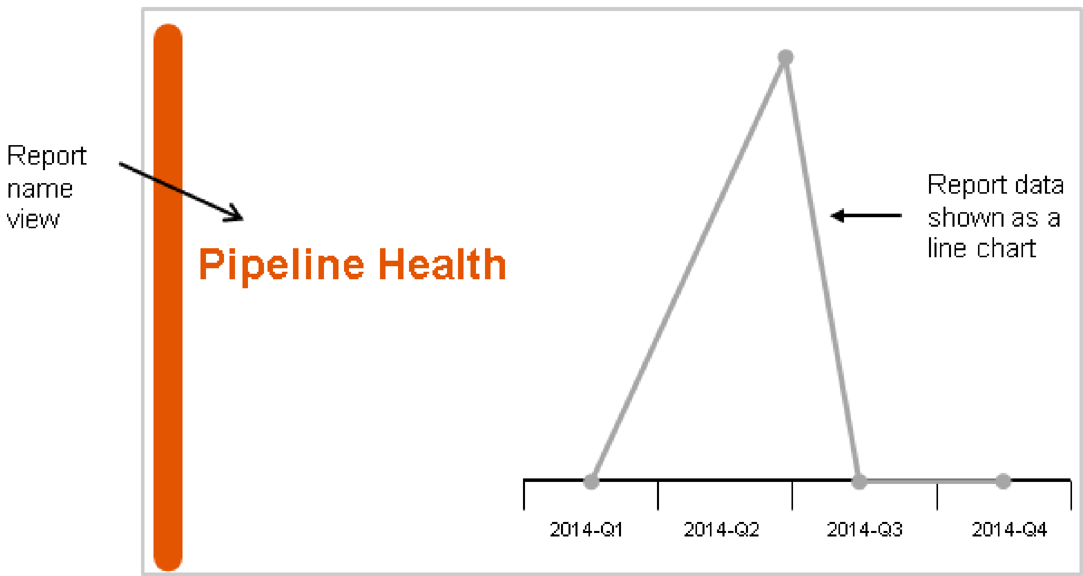
> **i Note**
>
> This pattern isn't available in Fiori client.



Card Appearance for Double Progress bar Report Pattern

- **Headline Pattern**
  The system uses this pattern for highlighting KPIs that have values outside the defined threshold parameters. (If above or below threshold, then text appears highlighted and as header). This card is ideal for use to display exceptional trending metrics.
  You have the option of choosing from any one of the two patterns.

> **i Note**
>
> This pattern isn't available in Fiori client.

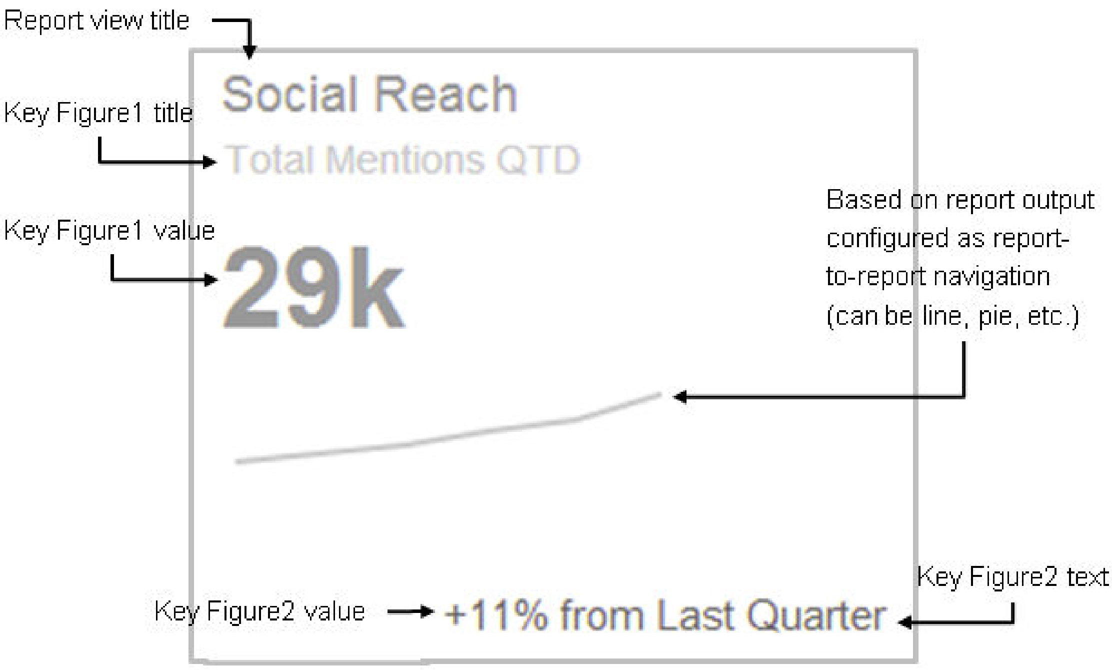


Card Appearance for Headline Report Pattern A

Card Appearance for Headline Report Pattern B

- **Trendline Pattern**
  The Trendline pattern is based on a report with 2 key figures and no dimensions. The system uses this pattern to visualize report output as a trendline.

> i Note
>
> This pattern isn't available in Fiori client.



Card Appearance for Trendline Report Pattern

Related Information

[Personalize Your Home Page [page 632]](#)
Learn how you can personalize your home page.

15.17.2.3 Tools Card

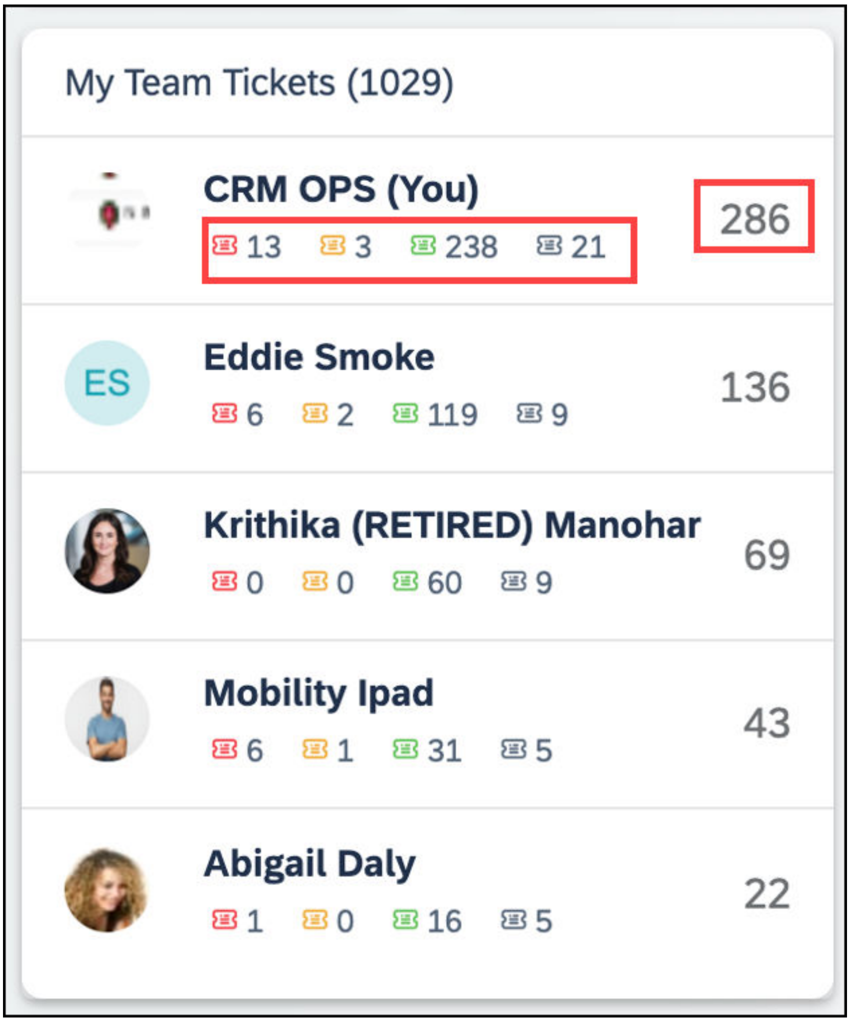
Tools card is available online and enhances your daily productivity.

Tools cards include the following:

- **News card**: News card displays contextual news and RSS feeds.
- **My Upcoming Activities card**: My upcoming activity card displays a live tile with the upcoming events from your calendar. You can manage your events and calendars with the card.
- **My Tasks card**: My task card displays the optimized view of your tasks and clicking on the card allows you to quickly navigate to the task work center. The number of overdue tasks, if present, are displayed in a red font. Otherwise, tasks displayed are prioritized by Today, This Week, This Month, or as Open Tasks.
- **My Team Tickets card**: In my team tickets card, you see the information about your top 5 team members with the maximum number of active tickets, and a priority-based breakdown. When you click *My Team Tickets*, you navigate to the ticket list view for the query *Team Queue*. And, when you click a team member, you again navigate to the ticket list view for the query *Team Queue* but only see tickets for the team member.

i Note

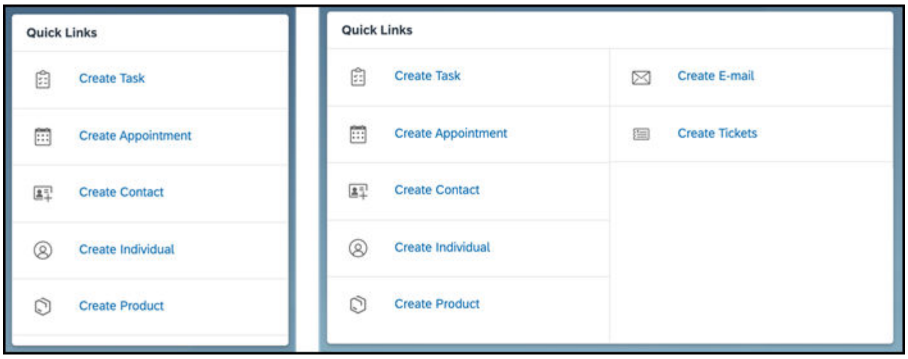
If there are less than 5 assigned agents in the ticket list, then you see the fifth entry in the My Ticket Card as *Others*. *Others* category shows all the unassigned tickets in the ticket list.



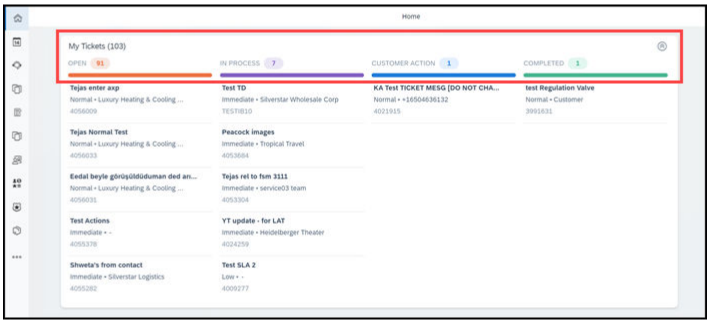
- **Quick Links card**: Quick links card launches the quick create screen for an object. In the 2008 release, the quick links card is predelivered by SAP and not configurable. Based on the number of entries visible in card, quick link card supports two card sizes.

i Note

In upcoming releases, configuration options will be available, and you'll be able to configure different types of links like reports, filters, dashboards, KPI & external links in the quick links card.



- **My Tickets card**: My tickets card displays a summary of your tickets in kanban board layout. In the 2008 release, the kanban board layout is predelivered by SAP and not configurable. The kanban board layout on the home page is available only on the desktop. When you click *My Tickets*, you navigate to the ticket list view for the query *My Tickets*. When you click a subheading under *My Tickets*, you navigate to the list view for the subheading query. For example, if you click *Customer Action*, you navigate to the list view for the query *Customer Action*. When you click an object under the subheading, you navigate to the ticket's object detail view. You can view the *My Tickets* card in collapsed and expanded mode. By default, the ticket card opens in expanded mode, and if there's no data (the All ticket query is 0), then it opens in collapsed mode. You can see a maximum of 4 ticket statuses, and for each status, a maximum of 5 records are available that are sorted based on Last change datetime in descending order.



> **i Note**
>
> - In upcoming releases, configuration options will be available for the kanban board layout.
> - Ticket kanban board layout isn't supported in tablets and smartphones.

The administrator can add the *My Tickets* card to the home page via *Add Existing Card* option under adaptation. Currently, administrator can only control the visibility of kanban board but can't create new kanban boards or change the configuration of the predelivered kanban board.

Prerequisites to add my tickets card:

- The following fields are available in the list view:
  - Subject
  - Priority
  - Status
  - Customer
  - Changed on Field
- The user should be authorized to view *My Tickets* as the default set query.
- The list is always sorted on *Changed on* field in descending order.

- For the kanban board to function properly, and display data, all the standard fields, including status should be available in the ticket list view. Currently, there are 4 standard fields added to the ticket card:
  - Ticket subject that is a link and navigates to ticket new quick view or the ticket detail view
  - Ticket priority
  - Customer name
  - Ticket ID

Limitations

- In the 2008 release, the ticket card isn't configurable. The administrator can't add or remove any field or change the sorting order.
- Kanban board is read-only, and you can't perform actions on the ticket list in kanban board.
- Ticket card is available only on the desktop.

Related Information

Personalize Your Home Page [page 632]
Learn how you can personalize your home page.

15.17.2.4 Filter Card

Filter card is a place where you can keep your custom queries as a list item to be run by the user on the home page.

Filter cards provide quick access to your saved queries. You can select the filter card to go to the saved query. You see the custom queries as list items on the filter card. When you select a query, you directly navigate to the list. Thus, improving the usability and reducing the number of clicks. To see the filter card on the home page, ask your administrator to make the card visible and available for your role. Once you adapt or personalize the home page to show the filter card, the solution adds your saved queries automatically.

Related Information

Personalize Your Home Page [page 632]
Learn how you can personalize your home page.

15.17.2.5 Custom Cards

You can choose to create personalized cards to launch information from the home page.

You can maintain text for multiple languages in the custom cards.

i Note

For custom cards on the home page, English is the default language, and the English text shows up for all the different languages until changed to a specific language. For example, you only see the English text when you log in to German if the language isn't changed. However, the administrator can always change and maintain the German language under adaptation.

Custom cards display an icon, and can be set to launch the following:

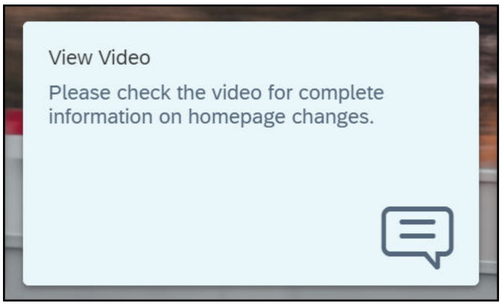
- **URL card**: You can launch any URL directly from the URL card. The URL opens in a new tab.
- **Floor plan card**: With floor plan card option, you can create a card that launches any screen for a work center or detail view in the solution that the user wants. Custom card also includes user-defined custom screens.
- **Ticket creation card**: With the ticket creation card, you can create a new service ticket. Clicking the card launches a guided activity floor plan (GAF). Once you've created the ticket, you can view it under *Service* > *Tickets* > worklist.
- **URL mashup card**: With the URL mashup card, you can open URL mashups from the home page. While configuring the card, you can choose the mashup to configure from the mashup value help.
- **HTML mashup card**: With the HTML mashup card, you can open HTML mashups from the home page. While configuring the card, you can choose the mashup to configure from the mashup value help.
- **Video card**: Video card can be used by the administrator to configure video links for the users. When you click the video link, it launches in a separate window. As a part of the configuration, the administrator can set the title, description, and time frame for the video card. As a prerequisite, your administrator must create the video custom card via adaptation on the home page and publish to make the video card available for the users.

  i Note

  Videos aren't stored as part of SAP Sales & Service cloud.

- **Message card**: The message card can be used by the administrator to publish messages for business users. As a part of the configuration, the administrator can set the message title, message description, informational icon text, and the background color of the message card. As a prerequisite, your administrator must create the message custom card via adaptation on the home page and publish to make the message card available for the users.



- **Quick Links card**: A quick links card serves as a launch pad tile for different source within Cloud for Customer or for external links. Quick links card on home page shows the object icons and the query names that help you to navigate. As a part of configuration, your administrator can create up to 10 links using different link types. Configure quick links card on the home page via adaptation.
- **Kanban card**: A kanban card is a visual representation of work items with the ability to navigate. You can configure kanban card on the home page via adaptation. As a part of configuration, your administrator can create a kanban card for an object for any role.

15.17.2.5.1 Create Custom Cards

Your administrator can create a custom card as follows:

1. Go to home page.
2. Click the pencil icon ( ) on the right side and select *Adapt*.
3. Search and select the user role and click *Go*.
4. Click the add icon ( ) on the right side to open the *Add Cards* window.
5. Select *Create Custom Card* to open a new popup window.
6. Choose one of the following from the *Type* dropdown.
    - URL
    - Floorplan
    - Ticket Creation
    - URL Mashup
    - HTML Mashup
    - Video
    - Message
    - Quick Links
    - Kanban
7. Add the required details and click *Save*.

Create Quick Links Card

1. Follow the steps (1 to 5) in the *Create Custom Cards* topic.
2. From the *Type* dropdown, select *Quick Links*. The corresponding fields for the *Quick Links* configuration show up with the selection.
3. Select the language from the dropdown and enter a name.
4. Go to *Link 1* and select any of the following from the *Link Type* dropdown:
    - Filter
    - Create
    - Report
    - KPI
    - External Link

    > **i Note**
    >
    > You can't customize a *Dashboard* link type.
5. If you choose *Filter* as *Link Type*, you must select an object first, and based on the selection you must select a query.

    > **i Note**
    >
    > - You can't see the hidden queries from the master layout in the dropdown.
    > - You can't see any queries from the page layout.
6. Choose any other *Link Type* and update the necessary fields based on your requirements.
Similarly, you can add up to 10 links.
7. Click *Save* when you finish.

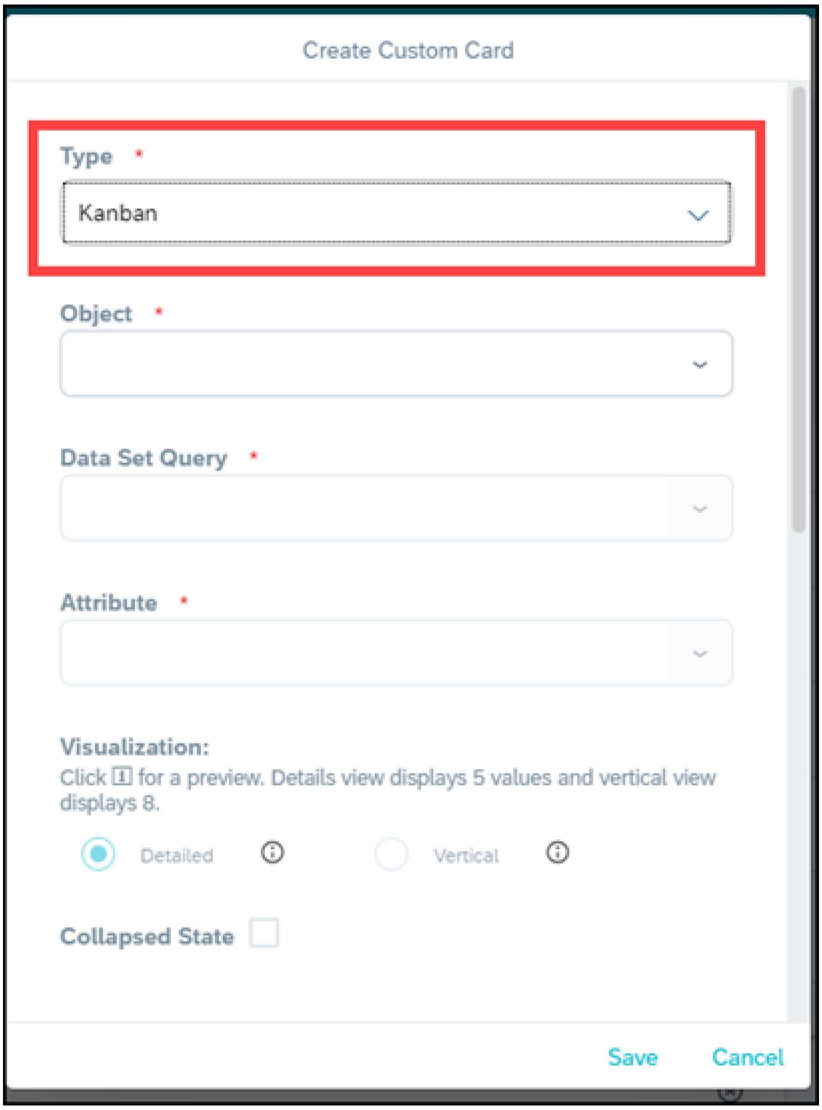
Edit Quick Links Card

1. Go to adaptation mode.
2. Click the quick links card that you want to edit.
A new window opens with the edit functionality.
3. To edit the existing links, you can either reset each links by clicking the icon ( ) or you can choose a different *Link Type*.

    > **i Note**
    >
    > You can’t edit the existing sub fields without changing the *Link Type*.
4. Click *Save* once you finish.

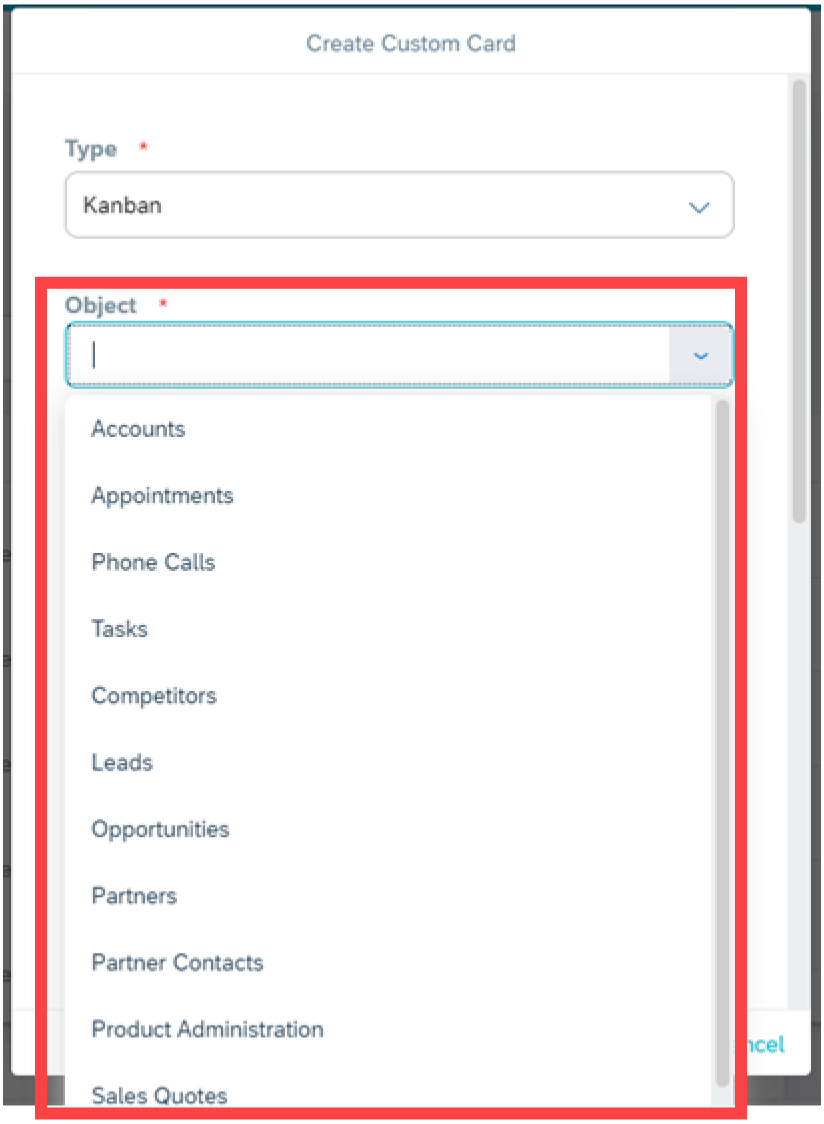
Create Kanban Card

1. Follow the steps (1 to 5) in the *Create Custom Cards* topic.
2. From the *Type* dropdown, select Kanban. The corresponding fields for Kanban card configuration show up with the selection.



3. The administrator can then select an object (like Accounts, Appointments, Tasks, Tickets, and so on) for which Kanban needs to be configured.

> **i Note**
>
> Objects are predefined by SAP. Objects shown in dropdown are based on the role chosen during adapt. For example, if the administrator chooses a role with authorization for only the opportunity work center view, then you see only the opportunity object to create Kanban and not the other objects.



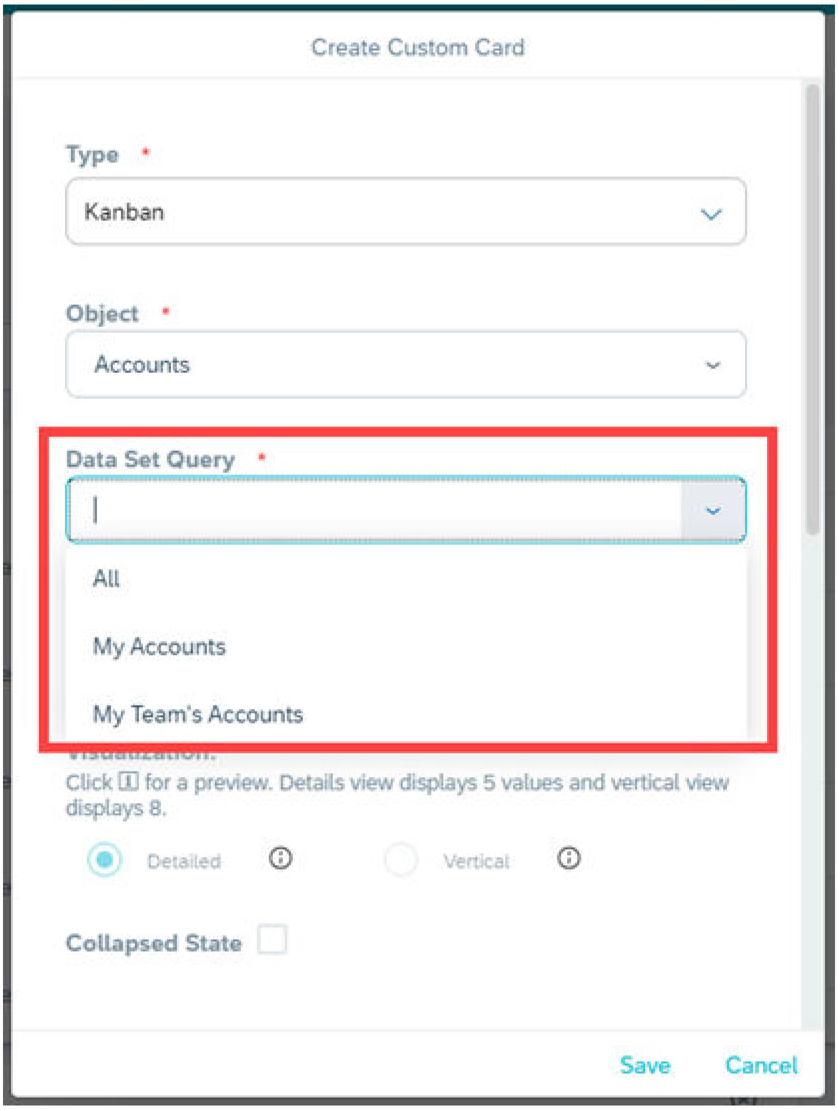
List of objects supported for Kanban card:

- Accounts
- Opportunities
- Phone call
- Tasks
- Competitors
- Competitors Products
- Leads
- Appointments
- Partners
- Partner Contacts
- Product Administration
- Product Lists
- Promotions
- Sales Quotes

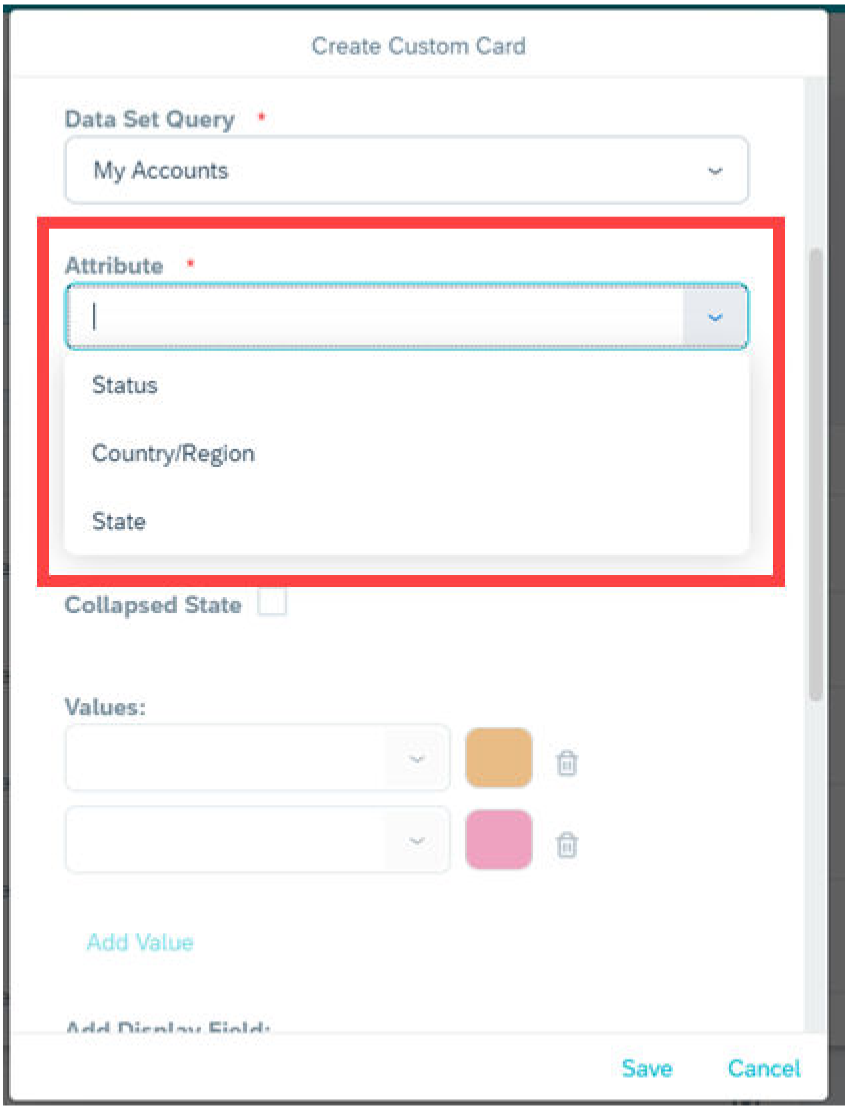
- Sales Orders
- Visits
- Tickets
- Work Tickets
- Contracts
- Installation Points
- Individual Customers
- Registered Products
- Time Entries
- Time Reports

4. Select the Data Set Query.

> **i Note**
>
> Data set query dropdown shows only adaptation mode queries and standard queries. The data set query doesn't check the role-based authorization of any default query set. It doesn't check if the default set query is hidden for the role. Admin selects the relevant query for the role.

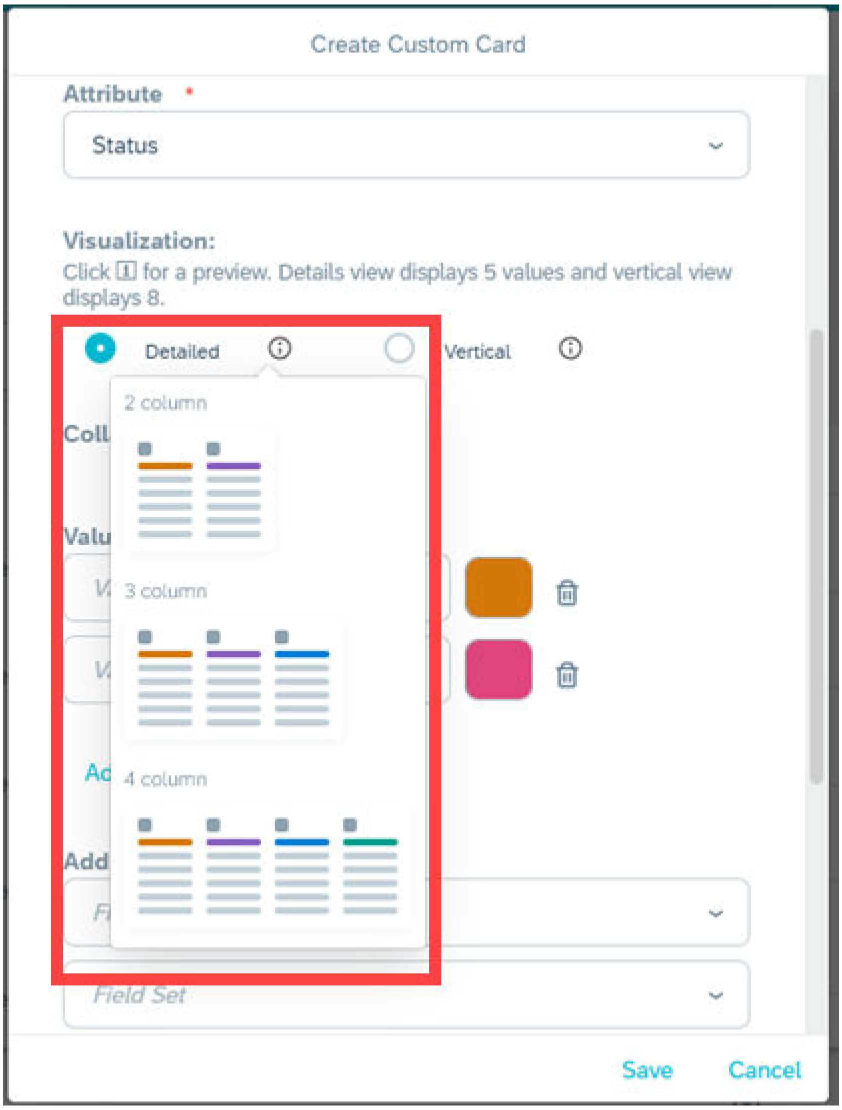


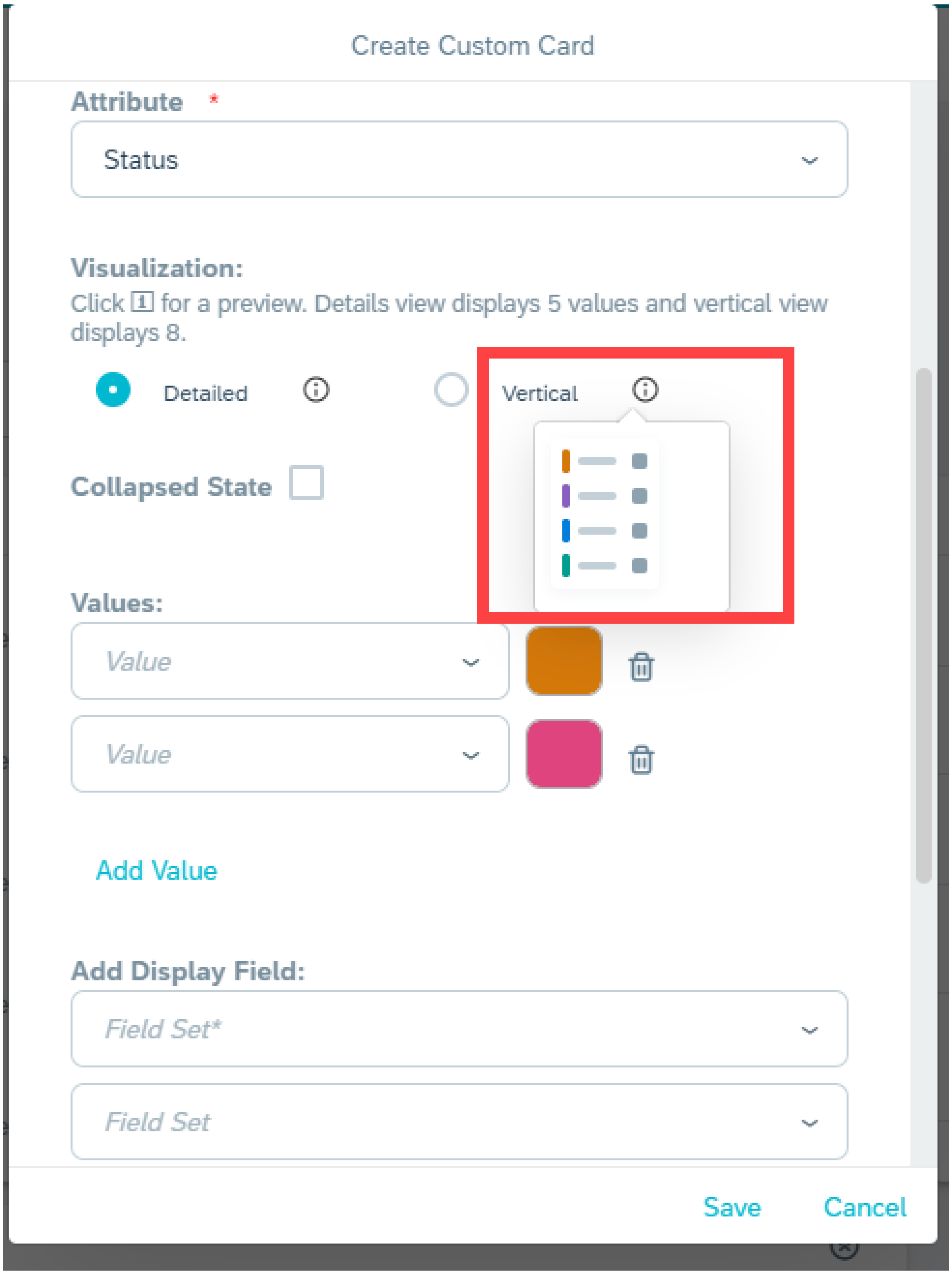
5. Select Attribute. Attributes are the fields seen as columns in a data set. For example, if you have chosen My Tickets as the date set query, the fields that are available in the dataset (status, priority, and so on) are available for selection as attribute.



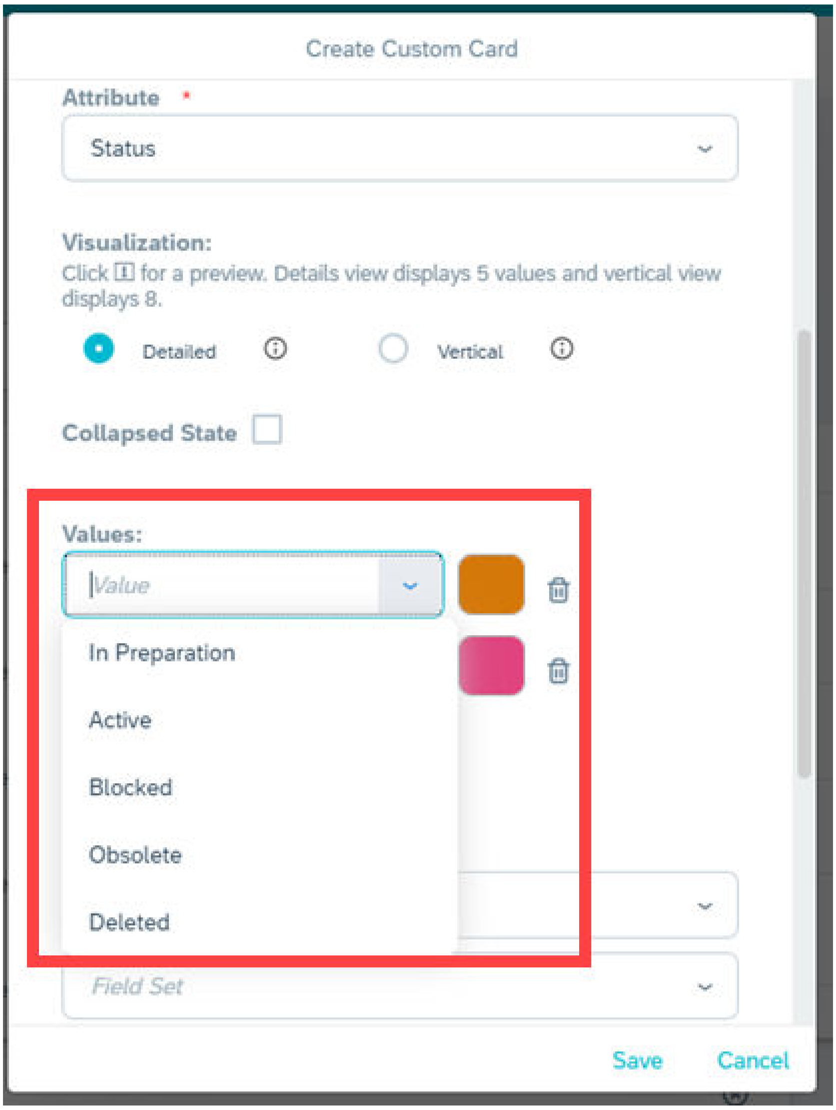
6. Select the visualization option. By default, detailed visualization is selected, and the Kanban card information shows in a collapsed mode on the home page. You can expand it to see full Kanban card. Visualization card size may vary depending on values selected in Kanban configuration.

> **Note**
>
> - In vertical Kanban card visualization, the collapsed state checkbox, display fields and sort order fields are disabled. You can only select values, as vertical Kanban only shows values along with count.
> - In detailed Kanban card, you can select a maximum of 5 values and a minimum 2 values. Add value button will be disabled after adding 5 values.
> - In vertical Kanban card, you can select a maximum of 8 values and minimum of 2 values. Add value button will be disabled after adding 8 values.


Create Custom Card
Attribute *
Status
Visualization:
Click for a preview. Details view displays 5 values and vertical view displays 8.
Detailed
Vertical
2 column
3 column
4 column
Field Set
Save
Cancel

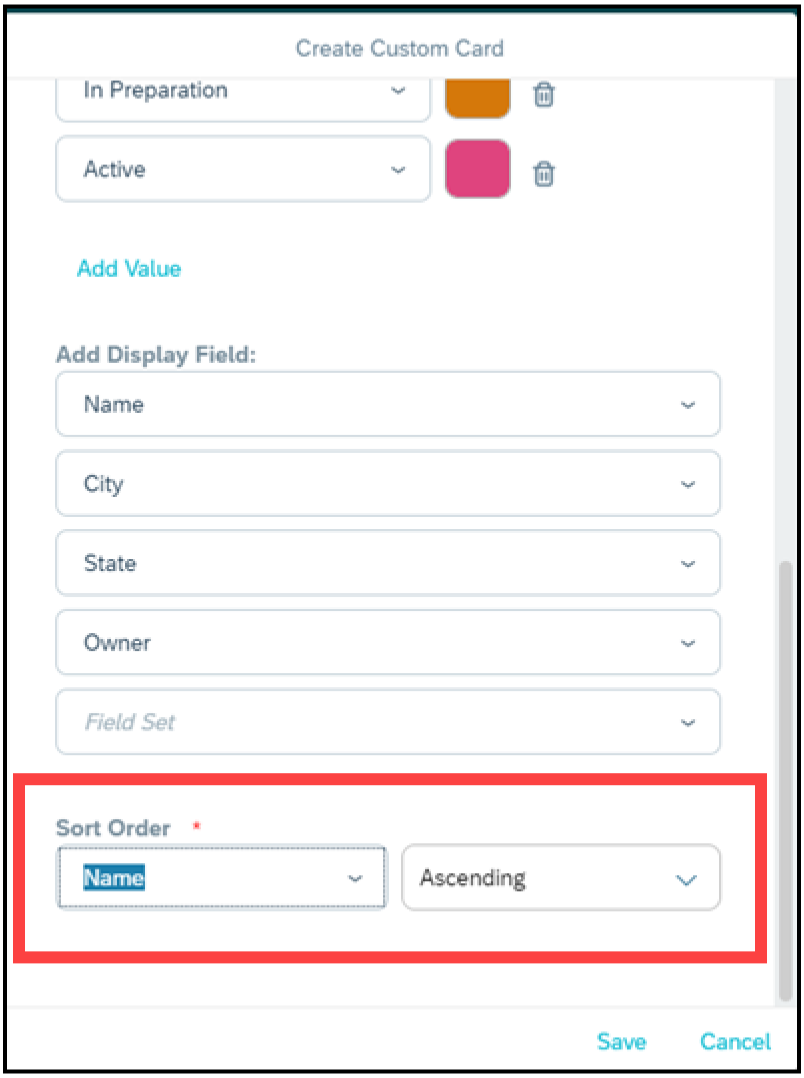


7. Select Value. Values are based on the attribute selection. For example, for the attribute **Status**, the values can be in process, open, complete and so on.



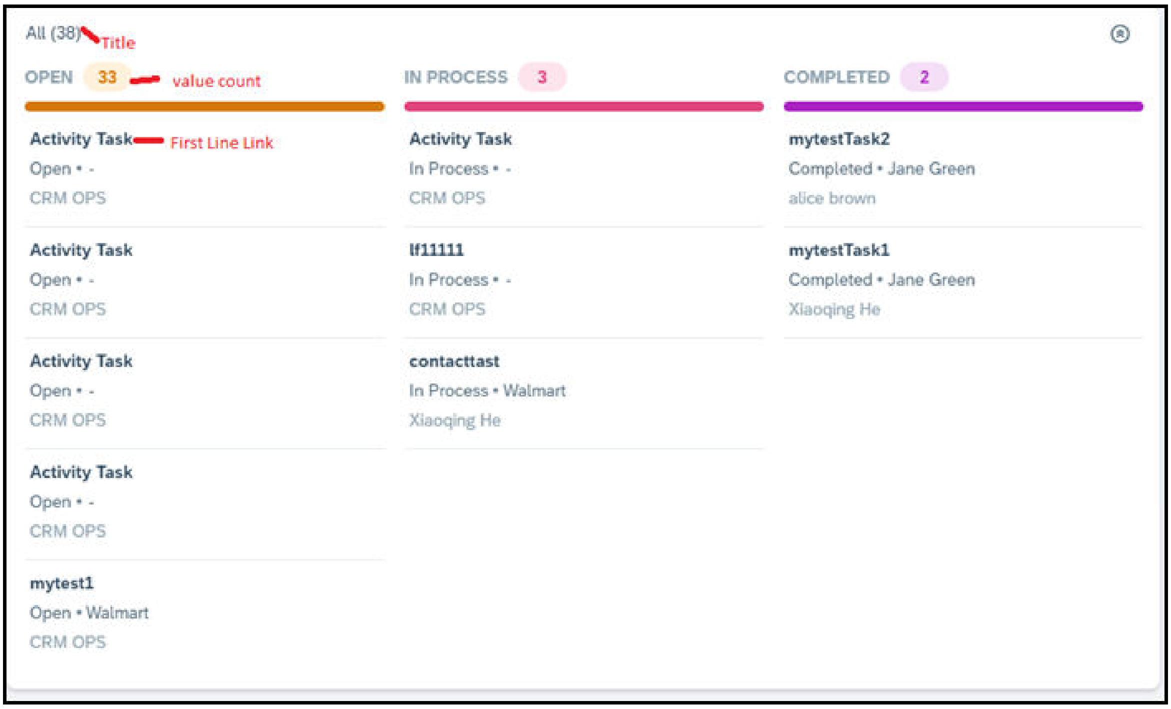
8. Add Display fields, pick the Sort order and then click *Save*.
Display field is the other field of the data set query that you can choose to see in the Kanban card. For example, if **Status** is selected, you can view additional details of a ticket like name, ID, priority, etc. These additional details are the display fields.
Data of display fields in Kanban card is shown based on sort order selection. You can select the sort order based on one of the display fields.

> i Note
>
> By default, a newly created Kanban card is not visible on the home page. To make the Kanban card visible, go to Add Existing Card and select Custom tab in adaptation, to see all the configured Kanban cards. Change the visibility of the created Kanban to see it on the home page. You can set the visibility of up to two Kanban cards on the home page for a role.

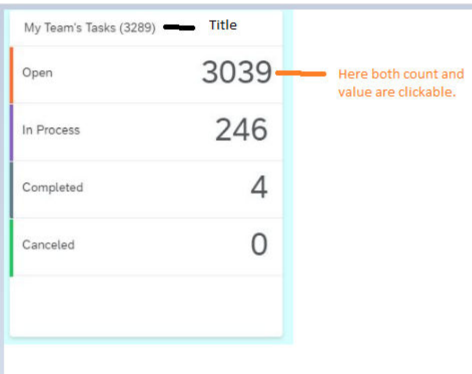


Navigation from Kanban Card:

- **Navigation from title**: By clicking the title, you navigate to the configured object's list view and the configured data set query view is displayed.
- **Navigation from value count**: By clicking the number count, you navigate to the configured object's list view and configured data set query is displayed.
- **Navigation from First Link (applicable for Detailed view)**: By clicking the first link, you navigate to the object's detail view. Navigation is only possible to the object that you have configured the Kanban card on. For example, you choose the object **Task** and configure the field Customer as the first field. Even if you click on the customer field, it opens the **Tasks** object.



- **Navigation from vertical kanban card** - In the vertical Kanban card, both the title and number count are clickable, and you navigate to the configured object's list view and the configured data set query view is displayed.



> **i Note**
>
> You can edit or delete only the custom kanban cards not the SAP-delivered kanban cards.

Limitations to Kanban Card:

- Kanban board card is not available in offline and on mobile devices.
- Only a maximum of 5 values for detailed visualization and a maximum of 8 values for vertical visualization can be added, after that the add button is disabled.
- Context based drop downs are not supported. For example, state (Dependency on Country/Region).
- When the Kanban card is set as visible on home page, it shows as an empty card. Only after publishing, data shows on the Kanban card.
- The administrator can create multiple Kanban cards, but only two Kanban cards are visible for a role.

- In the vertical Kanban card visualization, the collapsed state checkbox, display fields and sort order fields are disabled. You can select only values, as vertical Kanban only shows values along with count.
- If you are assigned to multiple roles and for each role, the administrator had configured one visible custom Kanban card, then only the first created Kanban card is seen on the home page. However, you can make any other Kanban card visible or invisible through personalization.
- If you are assigned to multiple roles, and for one of the roles, for example, the standard My Tickets Kanban card is visible, and for another role any custom Kanban is visible, then preference is given to standard Kanban.
- If you rearrange the existing work center views, you cannot navigate from the kanban card to the work center views.

Related Information

Personalize Your Home Page [page 632]
Learn how you can personalize your home page.

15.17.3 Personalize Your Home Page

Learn how you can personalize your home page.

> i Note
>
> - Personalization capability is not available in smartphones.
> - card Navigation in offline is limited to Today's Activities, Visits, Custom report and Floorplan cards.
> - Personalization is not available in offline mode.

You can personalize your home page screen with your preferences. To personalize your home page, you enter the personalization mode by clicking the edit icon located inside the footer toolbar. Once you are in the personalization mode, you can hover over the content area and see that editable areas are highlighted and marked by a frame. You can select the icons which allows you to make the corresponding personalized changes.

In the personalize mode, you can make various changes to the current screen such as rearranging the cards and groups by dragging and dropping them, adding and deleting card and groups, renaming groups etc. You can make hidden items visible again by turning on the visible switch. All hidden and available items will appear in the list and you can add them again.

After completing the personalization of your home page screen, you can exit the personalization mode by saving the changes you made. Or if you want to remove the changes, press cancel.

15.17.3.1 Disable Home Page as the Default Landing Page

If you are not actively using the home page, you can disable it from being the default landing page.

> → Remember
>
> Home Page Settings icon (gear icon) is located on the top right when you are in personalization mode.

With this setting, the first work center view defined for the user or role in becomes the default landing page for the Fiori client.

In the personalization mode on home page, you can uncheck the checkbox *Set Home page as the Start Page* under settings.

15.17.3.2 Add and Edit Cards

Learn how to add and edit cards on the home page. You can rearranging these cards by dragging and dropping them and also move them to different groups.

> i Note
>
> For an optimal performance experience, you'll get a warning message when you exceed the recommended number of KPI and Report cards on the home page. The recommended maximum number of KPI cards supported is 10 and the maximum number of Report-based cards (Custom pattern cards like Bar Chart cards) supported is 4. You still have the option to add additional cards, but it impacts the performance. There's no limit on recommended number of List cards, Tool cards, and Custom cards.

- **Add card**
  There's a + icon to add a new card at the end of each card. To add cards, click the + icon. You can also remove a card that you don't need by turning off the visible switch and making it invisible. If the card preview shows a card as visible, then card is shown on the home page.
- **Edit Existing cards**
  Click on a card to open the settings screen for the respective card. Turning off the switch removes the card from the home page, and automatically turns off the *Visbile* switch. You can change the group of the card, for example, move the card to a different group and then save your changes. card visualization can also be changed.
- **Edit Custom card**
  Once a custom card is created, it's placed on the user interface as available and visible. To edit custom cards, click the card and open the edit dialog as you would usually edit other cards. The dialog includes details such as Click/ Tap on a card to open the settings screen for the respective card. Turning off the *Title*, *Path*, and *Description* that are editable. However, the type of the card (URL vs. Floorplan can't be changed).

15.17.3.3 Launch Mashups from Home Page cards

Launch a URL or HTML mashup from a home page card.

On the home page, you can view the content of the mashup card. You can also click to launch the same mashup shown in the card or you can launch a different mashup that shows more details of the HTML mashup card.

Note that mashups which do not have a port binding are also allowed in the home page card mashups

15.17.3.4 Add and Delete Group

Based on your requirement and preference, you have the option to cluster the cards into a logical group.

- **Add Group**
  You have the option to cluster cards by creating new groups. There is a + icon to add at the end of each group. To add new groups, click/tap the + icon. You can also rename the supported groups.
- **Delete Group**
  You can also delete groups created by you besides rearranging groups by dragging and dropping them. A group created by you shows a *Delete* button. Delete will simply remove the group permanently so that it will not be visible on the user interface any longer. You will get a warning message before removing the group.

15.17.3.5 Define Home Page Settings

The administrator can access home page setting as a gear icon on the home page.

As an administrator, under home page settings you can enable the users or roles to group cards on their home page. To do so, check the checkbox *Show cards in Groups* under settings. You can also change the home page to show as the default start page when the user logs in. To do so, you can uncheck the checkbox *Set Home page as the Start Page* under settings.

15.18 User Profile Menu

The user profile menu provides the user with access to the user profile, settings, help, and additional settings for account features.

The menu options are found in a dropdown list. You can navigate to your profile, access different settings, and log out. The menu options are contextual to the browser or app. The menu options change depending on the browser or the installed app. For example, sync options and settings are only available via the installed extended app.

> **i Note**
>
> The administrator can hide certain menu options for the users or roles depending on their preference.

Administrator	Business user
Dropdown options • Settings • SAP Support Assistant • Report Incident • Track My Incidents • Switch Display Mode • Download • Annotate • Start Personalization • Start Adaptation • Share Your Ideas • About	**Dropdown options** • Settings • SAP Support Assistant • Report Incident • Track My Incidents • Switch Display Mode • Download • Annotate • Start Personalization • Share Your Ideas • About

Share Your Ideas: It is a single central place for all product improvement request related activities. You can browse improvement requests, submit improvement requests, comment, vote, receive updates, and browse who has voted.

Settings: Selecting *Settings* from your user menu dropdown takes you to the settings page. You have a wide range of customization of themes and C4C platform-specific settings to align with your preferences. You can save or cancel the changes you make.

Various different settings available are all available on one screen on the Fiori client UI:

- *My Settings*: You can maintain your personal preference settings in Fiori Client.
- *My Background Image*: You can maintain your personal preference for home page background image in Fiori Client. The image size should be less than 3 MB. You can change the background image in desktop, tablets, and smartphone apps.

  > **i Note**
  >
  > Home page background image size is now limited to 3 MB. If you have an existing background image larger than 3 MB, it is not affected until you replace it with another image larger than 3 MB.

- *My Email Settings*: You can specify e-mail signatures you want to use for new messages, replies, and forwards. You can also quickly change the e-mail signature you want to use before sending out emails.
- *Company Settings*: You can define settings for company or for a business role.
- *Personalization Settings*: As administrator, you can define the Fiori personalization settings for business users.
- *Adaptation Settings*: As administrator, you can define the Fiori client adaptation settings.
- *Branding* includes all company level branding related setting.
  - Theme Builder: The selected theme applies across all devices for all users to best suit your brand image.
  - Background Image: Customize the background image to match your brand. Ensure that the image size is less than 1 MB.
  - Logo: You have three different branding logos for the solution depending on the type of customer license you purchase.

- SAP Sales Cloud branding logo is for customers with SAP Sales cloud solution.
- SAP Service Cloud branding logo is for customers with SAP Service cloud solution.
- SAP branding logo is for customers with both SAP sales and Service cloud solution.

> **i Note**
>
> - Offline Settings is not part of the settings.
> - Settings options are divided into groups or categories. My Settings are available for all users, whereas Company Settings and Branding sections are visible and available only to the administrators.

Download: Includes links to download the different add-ins (Microsoft Outlook®, Microsoft Excel®, IBM Lotus Notes®, Adobe® LiveCycle® Designer), Adobe® LiveCycle® Designer, CTI Client Adapter and mobile apps for iOS, Android and Windows.

Annotate: Provides tools enabled for free-hand, arrow, rectangle, and call-out texts that you can use on the UI to share and collaborate. You can save the image on the browser or e-mail it in the extended apps.

Track my Incidents: You can check the status of the incidents created by you.

SAP Support Assistant: The optimized support assistant uses tree structures, through a series of questions, helps you narrow down to the problem, and recommends targeted solutions in real time.

Report Incident : When you are facing an issue on your SAP Cloud System, use this dropdown menu to report the issue and get support.

Switch Display Mode: Cozy and compact display modes are available for all types of devices including desktops, tablets, and smartphones. Compact mode provides denser content so that you can see more information on the screen. Cozy mode provides easy touch interaction on touch devices. Both modes optimize white space, therefore presenting more information on the screen. You can switch between these modes based on your individual preference. Cozy and compact modes offer better screen utilization and flexibility to switch between the modes.

Default display mode for desktops is compact mode. Default display mode for tablets and smartphones is cozy mode. You can switch the mode to what suites you from the user menu under *Settings*.

> **i Note**
>
> - Your selection applies for your specific device only.
> - Administrator cannot change the default mode for users.

Start Personalization: You can personalize your screen in the Fiori Client UI under the user menu by selecting *Start Personalization* from the user dropdown menu.

The following table gives a list of all the UI elements that you can personalize:

Action	UI Elements
Show and Hide	• Fields in Header, Lists, and Advanced Search • Sections • Panes • Tabs • Buttons and Menu Items

Action	UI Elements
Rearrange	• Fields in Header, Lists, and Advanced Search • Sections • Panes • Tabs • Menu Items
Sort and Group	Columns

> **i Note**
>
> You cannot personalize value help and pop-up windows.

In the personalization mode, you can do the following:

- To select an area on the screen, right click (for Windows) or tap with two fingers (for Mac). The selected area is indicated by and a yellow border.
- To edit directly an area, use
- To hide or show fields, use .
- To navigate to the parent section, use .
- To navigate to the child section, use .
- To change the sequence of fields, drag and drop them on the right pane using .

For the changes to take effect, click your profile, and select *End Personalization*. To discard the changes, select *Discard Personalization Changes*.

About: You can see the product information page in Fiori Client. It provides you information about the product name and product version.

15.19 Document Flow

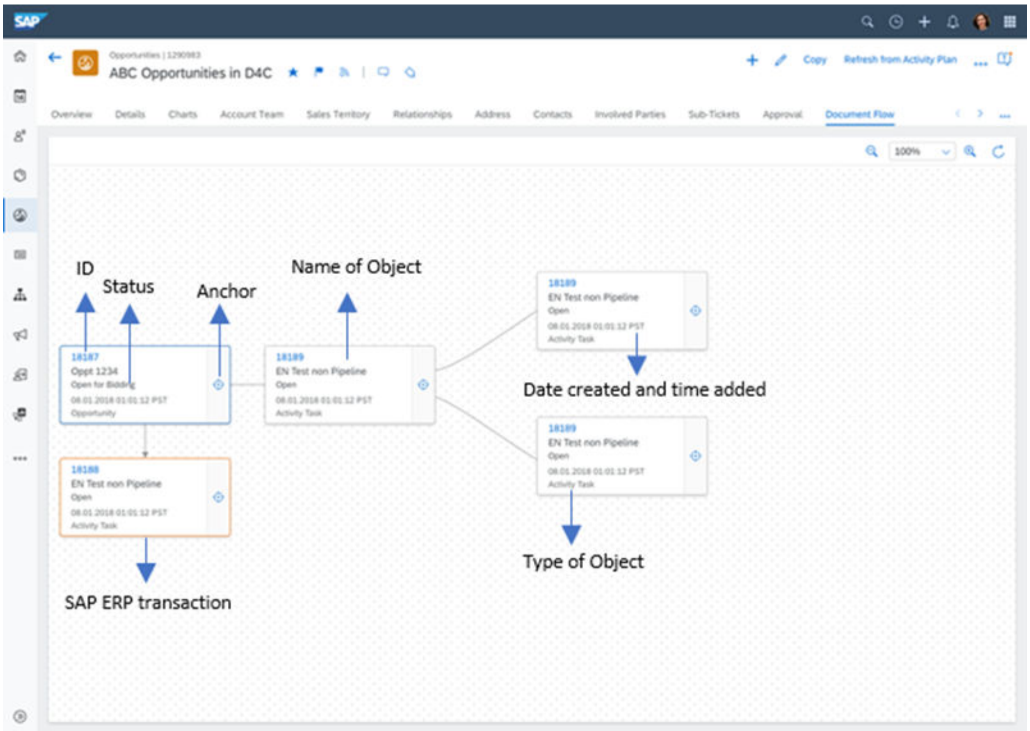
The document flow tracks an object from where it originates to a quote and order. It gives you a pictorial view of the journey.

For example, an object traveling from a campaign, lead, opportunity, sales activities to a quote and order.

Document flow provides:

- **ID**- An ID is used to identify the object.
- Name of object- Each object has its own name.
- Status- This indicates the status of that object. For example, this could indicate whether a lead has been converted or whether a sales quote has been created.
- Date created- Indicates the date when the object was created.

- Time- Indicates the time when the object was created.
- Type of object- This could be a campaign, lead, opportunity, quote, or order.



Each flow has an anchor icon. Clicking/tapping the anchor generates the flow for that selected node. When you tap on the anchor, the document flow loads so that you can see the predecessor's predecessor and also the successor's successor, when the document flow has a large number of interactions. The flow doesn't display the predecessor's successor and the successor's predecessor. Predecessor is an object that led to the creation of another object. Successor is an object that is the outcome of another object. You can zoom in or zoom out to see the details.

If you click on the SAP Cloud for Customer document in the document flow, it opens the details screen or the new quick view, if enabled.

In the Document Flow, you can also view follow-up transactions in SAP ERP. For example, follow up orders, delivery or invoice transactions, including access to the related PDF documents (using the web service). The Document Flow also displays SAP ERP references for sale and quotes and sales orders in SAP Cloud for Customer. Click the triangle in the yellow frame to open and close related SAP ERP transactions.

15.20 Keyboard Shortcuts

View the list of all keyboard shortcuts in the solution to complete some tasks quickly.

Keyboard shortcut to Edit Plain Text Notes in Full Screen on Desktop

You can use the keyboard shortcut - Control+Shift+Z, to edit plain text notes in full-screen mode on desktops. Full screen offers more useable space to see and edit the note, without having to scroll within a small box.

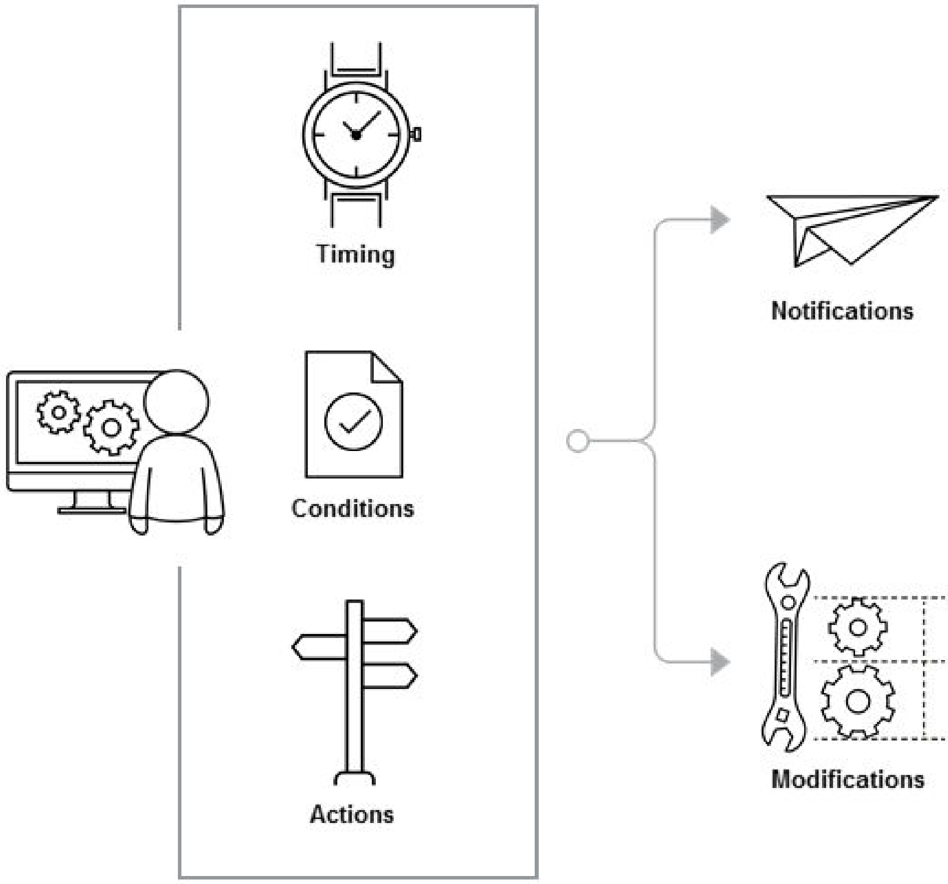
Keyboard Shortcut to Edit Rich Text Fields (RTE) in Full Screen on Desktop

You can use the keyboard shortcut - Control+Shift+Z, to edit rich text fields in full-screen mode on desktops. Full screen offers more useable space to see and edit the note, without having to scroll within a small box.

15.21 Workflows

Learn how you can use workflows to support your business processes.

Automate your business processes using workflows. Configure to send notifications, trigger automatic e-mails and define conditions to update fields or calculated values. Also trigger actions or schedule workflows based on dates, time or other complex conditions. Workflows also allow you to create multi-step approvals.



The framework is driven by the workflow rules that have four main components namely the *Object*, *Timing*, *Conditions* and *Actions*. These components determine how the workflows will be used in the various business processes.

Object

The first step to creating a workflow rule is selecting the business object for which the rule applies.

Timing

The timing determines when the system should evaluate the rule. The three available options are *On Create Only* (when the object is created), *On Every Save* (every time an object is saved) and *Scheduled* (scheduled after an event occurs). You can specify, for example, if a workflow rule be triggered when an object like a sales quote or ticket is created or when saved. There is also an option to schedule the rule for a specific time, for example two days before the due date of an item.

Conditions

Conditions are the criteria which trigger workflow rules. These conditions may be standard fields, extension fields, field value change and so on. For example, if you create a sales quote above a certain value (the condition), the system triggers the associated action. You must maintain conditions in **Groups**. Maintain multiple conditions within a group if you need more than one criteria to be met for the workflow rule. Use separate groups to define **OR** conditions.

Actions

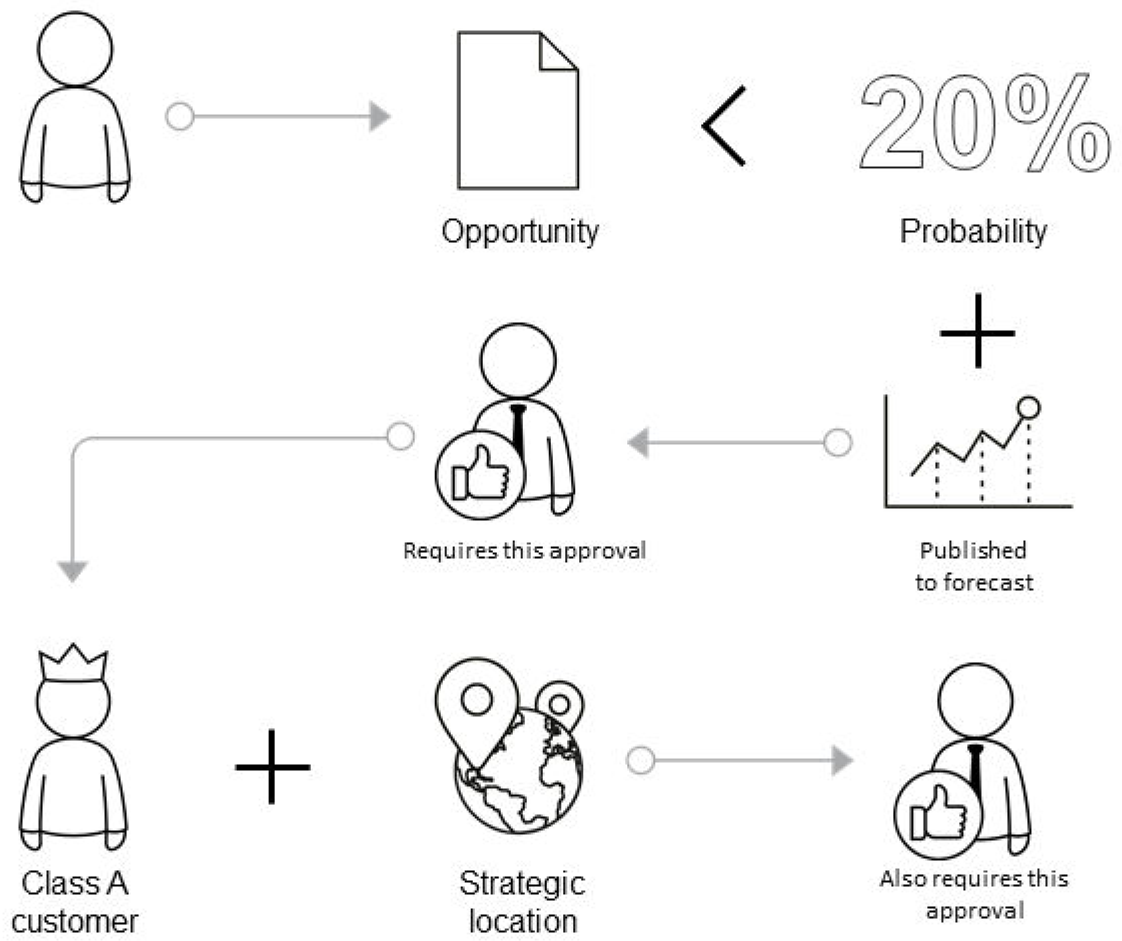
Actions define tasks that must be executed when a workflow rule is triggered. For example, send an e-mail, generate a notification, send a text message or update a field of the object (both standard and extension fields as well as trigger an action). You can define actions using one of the supported rule-types namely the *E-mail*, *Messaging* and *Notifications*. For detailed information, see the references below.

Related Information

Workflows [page 1069]
Learn how you can use workflows to support your business processes.

15.22 Approvals

Learn how approvals work in the solution.



Approval workflows are configured by your solution administrator and help streamline your business processes. Approvals are typically routed to your reporting line manager, though there may be multiple levels of approval required for certain objects or conditions. Your administrator can also incorporate conditions into the approval process itself such as limits to the amount an approver is allowed to approve. And finally, your administrator can configure your solution to include e-mail approval notifications in addition to the default notifications found in the toolbar.

Few important facts about approvals:

- One business transaction can have one active approval process.
- Within an approval process, you can define several approval steps with different approvers and conditions.
- For multiple approval steps, the system checks each step in succession for the defined conditions. If approval for one step is not granted, then the system will not proceed to the next approval step.
- The approval notifications, such as the request and the confirmation, appear in the notification area of the system for the involved employees and managers.

- If the approver finds an unsatisfactory transaction, then the approver can add a comment and return it to the employee for revision. The employee then revises the transaction and submits it again for approval. Once the business transaction is correct, it can be further processed.
- The approval process can be enhanced with e-mail notifications that are sent directly to the applicable employees, as described in the prerequisites below.

Example: Campaign Approvals

> **Example**
>
> For example, you have activated the approvals for campaigns in your system, and now you want to define a two-step approval process. In the first step, campaigns created for the campaign execution type *Direct E-Mail* are to be approved by one of two employees in your company. In the second step, campaigns with target groups greater than 10,000 members are to be approved by the line manager of the employee.
>
> Now suppose that the employee created a campaign with execution type *Direct E-Mail*, with a target group that contains 10,523 members, but neglected to specify the start and end date of the campaign.
>
> In response, the system first confirms that this campaign requires approval, so the employee is only authorized to select *Actions* > *Submit for Approval*. Then, one of the approvers checks the campaign and notices that the campaign start and end dates are missing, so the approver adds a comment to the campaign, and returns it to the employee for revision. The employee corrects the campaign accordingly and submits it again for approval.
>
> The campaign is then initially approved, but the employee must wait until the line manager also provides approval, because the target group has more than 10,000 members. The system determines the line manager from the organizational management hierarchy, upward from the employee, until the first manager is found.

Example: Multi-Step Approval for Opportunity

Let's say your system has been set up with a rule that requires your manager's approval for any opportunity that has a less than a 20% probability of closing but that has already been published to the forecast. In addition, there's another rule that requires the top-level account owner's approval for any opportunity at an "A" category customer within a specific region. When you create an opportunity that fits both of these conditions, you are prompted to submit it for approval. The system then notifies your manager who can either approve the opportunity or send it back to you for revision. Once your manager approves it, the system will send a notification to the top-level account owner who also needs to approve the opportunity before it can move to the next stage in your business process.

Related Information

Approvals [page 1060]

Learn how approvals work in the solution.

15.23 Customer Onboarding

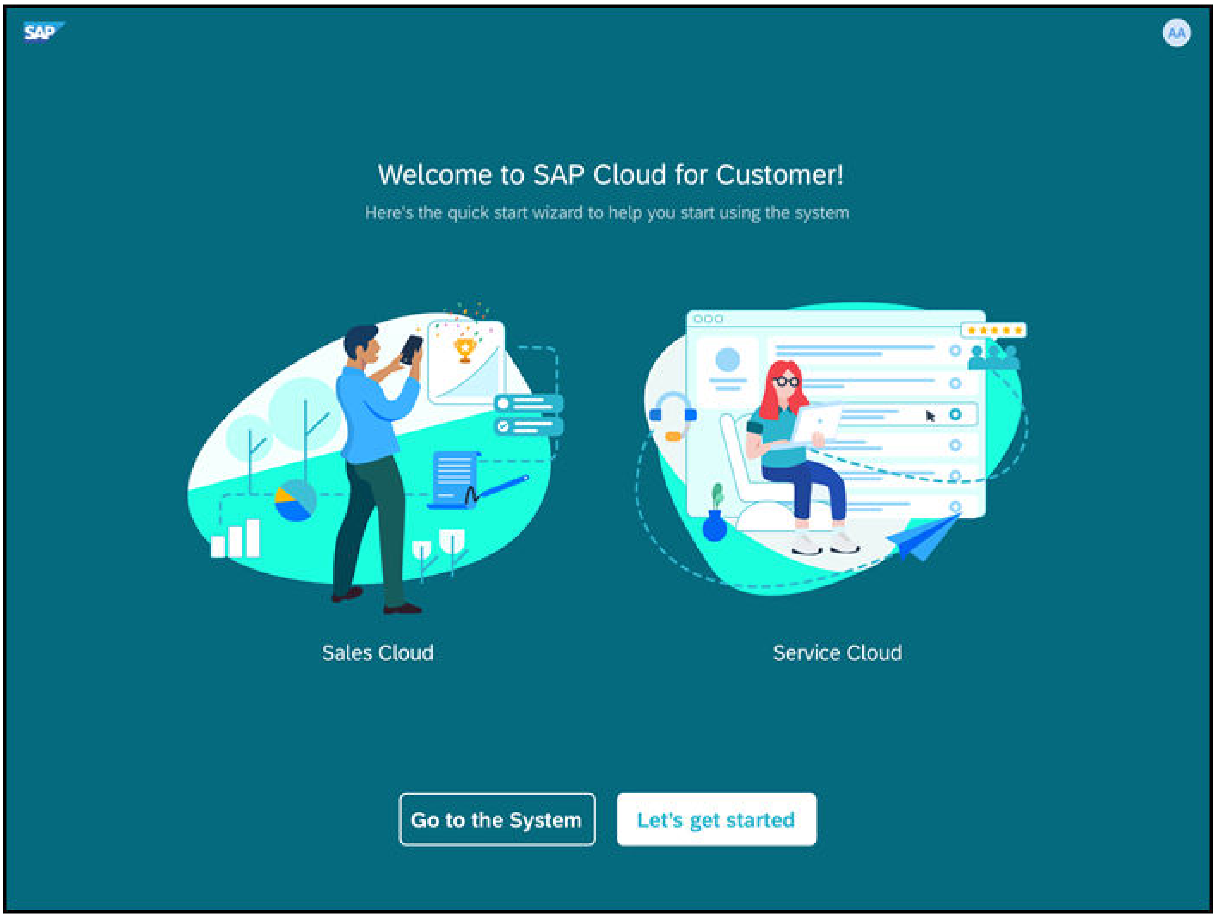
We're introducing an easy, step-by-step simulation flow to improve the new user's experience and ensure their success with the solution.

Why do customers move away from a product? One, they feel that they don't understand the product, and second that they aren't getting any value from it. Both these problems can be addressed by creating a seamless user experience from the first interaction to the final purchase decision.

The simulation flow provides a consistent product experience for each new customer and gets them acquainted with our solution. The new user gets step-by-step guidance as they navigate through the solution.

What's unique about the simulation flow?

- All the complexities of the solution have been hidden behind a clean and simple user interface for the new users to try out the different features.
- We have added personas for the new users to interact and experience the product as a real user. New users can use personas to learn best practices and understand the use cases crafted by SAP Experts. Using personas, the new users can also learn about the latest interactions offered on the UI, extensibility & different features offered.
- Simulation flow provides the hand-holding that a new user needs as they get started. It ensures that they understand the product and how it provides value.

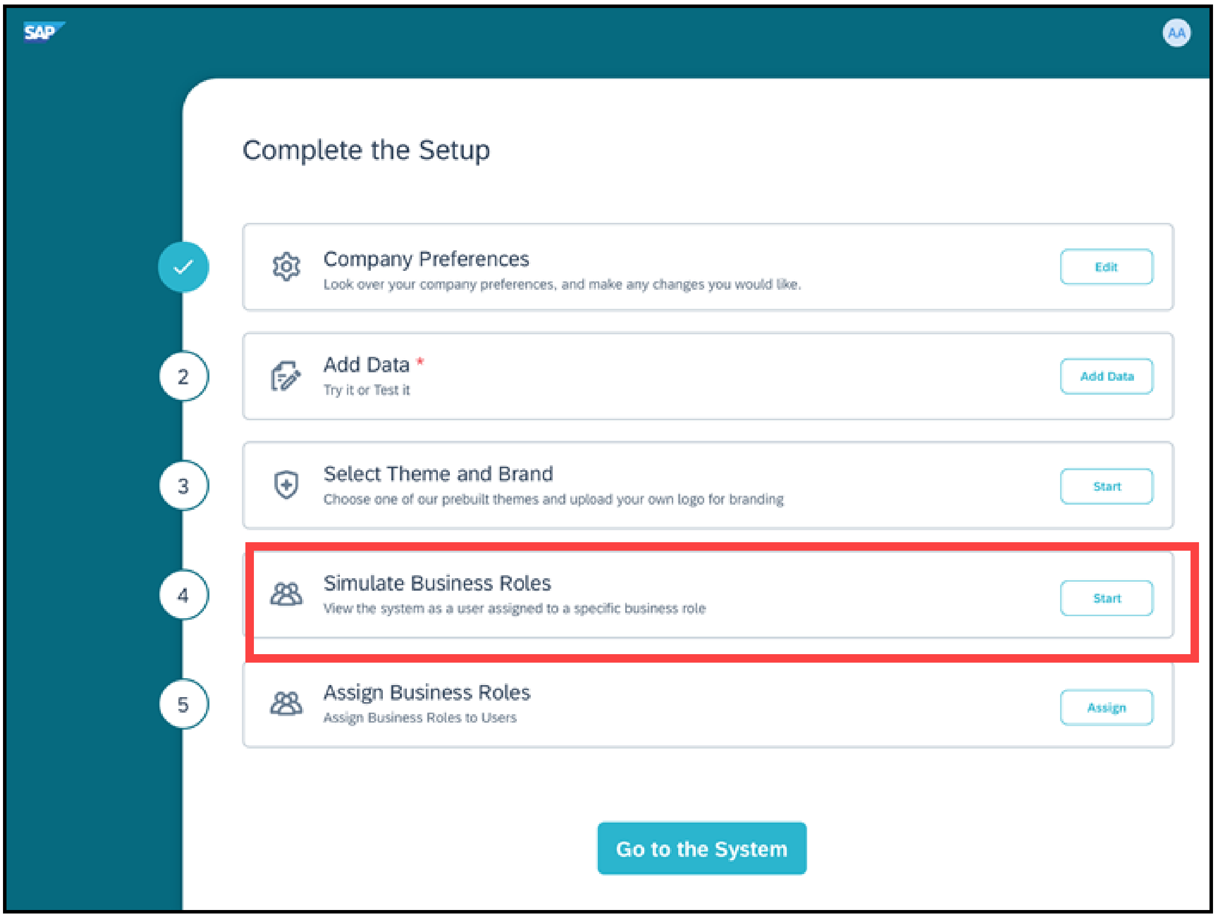


Onboarding experience for each new customer

When the new user logs in for the first time, they're directed to a simulation flow on the UI that provides step-by-step guidance for basic configuration and helps to set up the system and try out the different features in the solution.

You can set the company preferences, add data, select your theme and brand, simulate business roles and assign business roles. You can only use your own personal data (for a more meaningful, contextual experience) to try out the different functionality. As part of simulation experience, you can also simulate different business roles. For example, a sales representative or a service agent business role. When you come to the home page by clicking **Go to System** from the screen, you can access the persona card on the home page. When you select a persona card, the system showcases SAP delivered definition for selected persona.

> → Remember
>
> Once you click, **Go to System** you can't go back to simulation.



Any new tenant that is provisioned by SAP, either test or production tenant comes with the simulation flow. You can choose the step-by-step flow to familiarize yourself with the system or exit and directly go to the system.

i Note

- Once you click **Go to the System**, the simulation flow ends and you can no longer access it.
- Simulation provides sequential steps. But you can also choose to go any step you want.

Steps in the simulation flow:

1. On the first screen, click **Let's get started**. You're directed to **Complete the Setup** screen.
2. **Under Company Preferences**, you can review your company preference. All entries (company, country/region, currency, and time zone) are prefilled based on the initial data provided by the new customer while requesting for a tenant.
3. Under **Add Data**, you can add users, accounts, contacts, and products by downloading the template, filling in user data and uploading. Once you have added the data, you see the information displayed under **Add Data**.
4. Under **Select Theme and Brand**, all the themes available for the tenant are visible. You can also add your own custom logo. By default, SAP logo is provided, but you can change and upload your own logo.
5. Under **Simulate Business Roles**, all the roles available for the tenant are visible. You can click on each role to see the respective simulation for the role.
6. Under **Assign Business Roles**, you can assign roles to the users you've added in the system. Each user can have multiple roles.

Note

You can access help from the user drop down and log out. When you log out, you can log back in into the simulation flow.

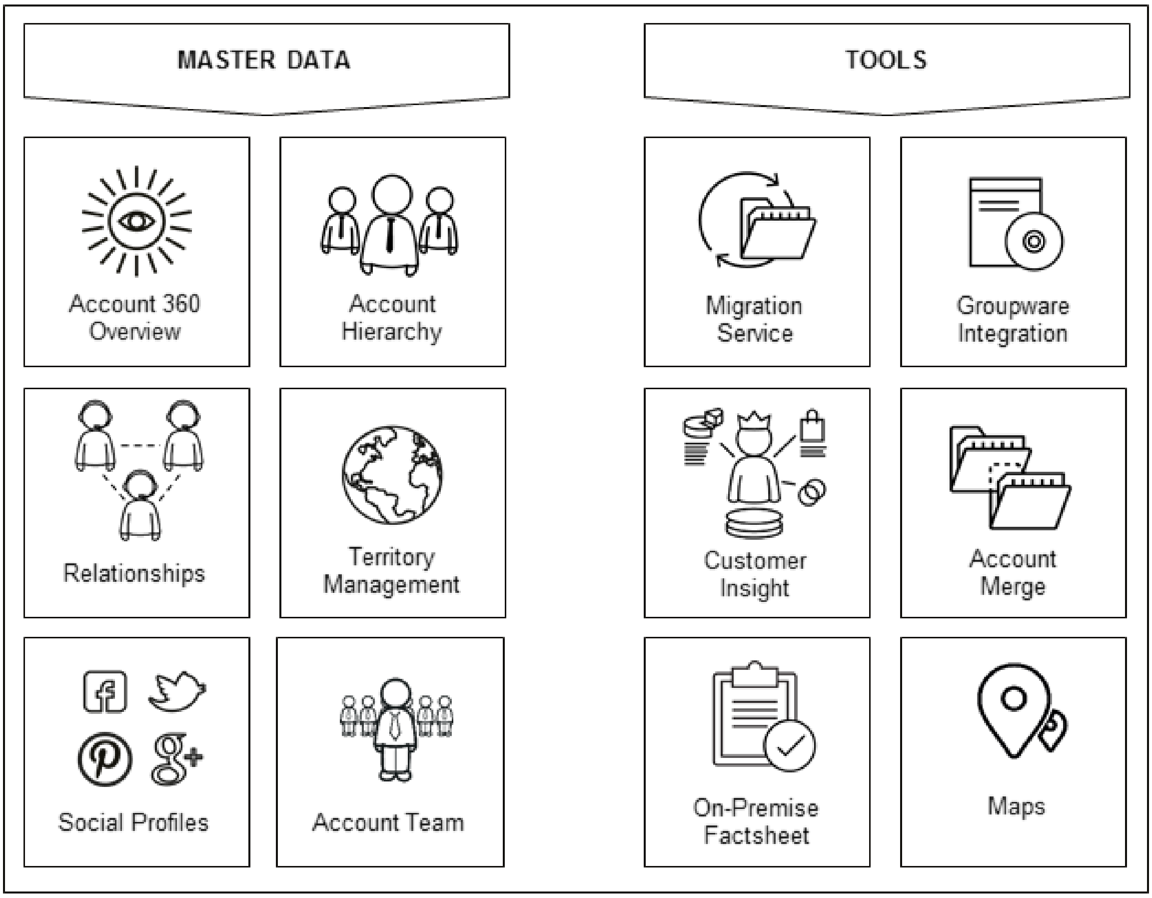
16 Accounts and Individual Customers

Account management capabilities offer a holistic view of the customer, and allow you to capture, monitor, store and track all critical business information about customers, prospects and partners.

Use this information to focus on your most profitable customers, maintain satisfaction and loyalty and consistent interaction across all channels.

> **i Note**
>
> All accounts, individual customers, employees, contacts, partners and competitors are considered as business partners in the system. Therefore all functions that are common to business partners are applicable to them.

> **i Note**
>
> In SAP Cloud for Customer , the *Customers* refers to corporate accounts, individual customer accounts and contacts. *Accounts* represent organizations with which business is done and *Individual Customers* represent persons with whom business is done. Create business accounts to represent your customers in your system. This chapter explains the features around the corporate accounts and individual customer accounts. Most features are common to both accounts and individual customers. However you can maintain contacts only for corporate accounts and not for individual customers. For information on contacts, see **Contacts Management**



16.1 Scope and Configure Accounts

Scoping and configuration for accounts.

Accounts management is comprehensive with a host of features and configuration possibilities. For most of these functional features, you as an administrator, will need to maintain the required configuration. The topics below describe the configuration in detail.

16.1.1 Enable Accounts

Administrators can enable and scope accounts in the business configuration.

To scope and enable accounts, go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Sales* > *Account and Activity Management* > *Account Management*.

16.1.2 Configure Default Customer Roles

Administrators can define customer roles.

To maintain the required configuration, go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Accounts* > *Maintain Customer Roles*.

16.1.3 Configure Basic Business Partner Details

Administrators can maintain the basic business partner attributes such as titles, relationships, name and so on.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *General Business Partners* > *Accounts* to maintain the following configuration. Basic descriptions for these configurations can be found in the system.

- **General Business Partner**
  - Name Formats
  - Number Ranges for Business Partners
  - Industries
  - Legal Forms
  - Marital Status
  - Professions
  - Academic Titles
  - Titles
  - Relationships
  - Tax Number Types

16.1.4 Configure Basic Account Features

Administrators can maintain the basic business configuration for accounts such as roles, classifications, payment terms and so on.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Accounts* to maintain the following configuration. Basic descriptions for this configuration can be found in the system.

- Account ABC Classification
- Payment Terms
- Customer Groups
- Nielson IDs
- Customer Roles
- Delivery Block Reasons

- Billing Block Reasons
- Order Block Reasons
- Sales Document Order Block Assignment

16.1.5 Configure Account Maintenance

Configure parameters for account maintenance.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *General Business Data* > *Handling of Business Partners,* scope the following questions:

- Do you want to sync accounts and contacts in your solution with Microsoft Outlook?
- Do you want to sync accounts and contacts in Microsoft Outlook with your solution?
- Do you want to see the calculated fields like active pipeline and year to date revenue in the header of the account detail?
- Do you want to see the calculated fields like active pipeline and year to date revenue in the account hierarchy facade of the account detail?

16.1.6 Configure International Address Versioning

Administrators can configure International Address Versioning for language maintenance.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *International Address Versions* and select all the languages in the list for which you need to maintain address data. The activated scripts (for languages corresponding to the address versions) can be used to maintain master data such as business partner name and address.

> **i Note**
>
> You must also specify a default address version that will initially be displayed and that must be maintained for every record. After the creation of name or address data for a non-default address version you cannot change the default address version again.

Additionally, you can configure the feature under *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Built-in Services and Support* > *Business Environment* > *Addresses and Languages* > *International Address Versions* and select the scoping question: **Do you want to specify textual master data using international address versions?**

16.1.7 Enable Address Check

Administrators can configure address check that validates addresses maintained in master data for business partners and organizational units, during migration and data replication.

To enable address check, go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Address Checks*. The system checks if address data, such as country/

region, and postal code length, is consistent. Inconsistent data leads to error messages and cannot be saved or activated.

To disable the address check, select the *Allow Saving of Inconsistent Addresses* checkbox. If you select the checkbox below, you allow the saving of inconsistent addresses for master data. The check results will then be shown as warnings, and the data will be saved.

> **i Note**
>
> Checks of address data for business documents are not affected.

16.1.7.1 Turn Off Country/Region Specific Formatting for Phone Numbers

Administrators can turn off the country/region specific formatting for phone numbers to avoid issues during replication of business partner addresses.

To maintain the required configuration, go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Built in Services and Support* > *Business Environment* > *Address and Languages* and select the scoping question: *Do you want to suppress the defaulting of the country dialing code for phone numbers without country dialing code?*

Country/region specific formatting ensures that if the recommended format for a phone (or mobile) number isn't maintained and the dialing code isn't available, then system determines the dialing code from the postal address. However, during migration or replication, if inbound phone numbers do have the dialing code but are prefixed '00' instead of the superior leading '+', this may result in problems with migration. Use the scoping question to suppress country/region formatting for such business needs.

> **i Note**
>
> The recommended format to maintain a phone or mobile number is to start with a leading '+' followed by the dialing code, for example, '+49 (6227) 7-47474'.

16.1.7.2 Maintain Custom Name Prefixes For Country/Region Specific Requirements

Administrators can define custom prefixes for business partner names under *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *General Business Partners* > *Maintain Name Prefixes*.

This configuration allows you to maintain name prefixes that is specific to country/region. Before configuring the prefixes, map them to corresponding values in external systems such as SAP S/4HANA in order to ensure seamless replication of business partner data.

16.1.8 Configure Maps

Administrators can configure Google Maps or AutoNavi Maps for different accounts.

To enable map view, you must configure mashup. Proceed as follows:

1. Choose *Administrator* > *Mashup Authoring*.
2. On the *Mashup Authoring* screen, select *Custom Mashups* from the dropdown menu.
3. Perform a search for the mashup ID. The mashup IDs for the available maps are as follows:
   - Google - **`SM00078`**
   - AutoNavi - **`SM00079`**: For use in the countries/regions such as China where Google Maps aren't supported.
4. Select the mashup and click *Enter API Keys*. The *Enter API Keys* dialog box opens.
5. Click *Show API Key* and, in the *API Key Value* column, enter the API key that you received from the service provider.
6. Save your changes.

> **Note**
>
> - The use of the Google Maps Service is subject to Google Terms of Service, which are written in http://www.google.com/intl/en/policies/terms/ . If you don't accept such Terms of Service, including but not limited to all limitations and restrictions therein, you may not be able to use Google Maps Service in SAP Cloud for Customer. The use of Google Maps Service in or through SAP Cloud for Customer constitutes your acceptance of Google Terms of Service, and it can be terminated by SAP without reason at any time and SAP is not required to provide an equivalent service via another provider.
>   As a prerequisite, please create a support ticket to obtain and use the SAP API key for Google Maps.
> - The use of AutoNavi Maps Service is subject to AutoNavi Terms of Service, which are written in http://map.amap.com/doc/serviceitem.html . If you do not accept such Terms of Service, including but not limited to all limitations and restrictions therein, you may not be able to use AutoNavi Maps Service in SAP Cloud for Customer. The use of AutoNavi Maps Service in or through SAP Cloud for Customer constitutes your acceptance of AutoNavi Terms of Service, and it can be terminated by SAP without reason at any time and SAP is not required to provide an equivalent service via another provider.
>   As of the August 2022 release, SAP doesn't provide any API keys to the customers for AutoNavi Maps configuration.

16.1.9 Configure Address Validation for Geo Tracking

Administrators can configure address validation for geo tracking using standard microservices from SAP Cloud Platform.

Prerequisite

When you purchase a license for the microservice, you are assigned a **Request URL** to access SAP DQM micro services. The URL is unique to your data center on SAP Cloud Platform and is required to activate integration with the SAP Cloud for Customer. You can access this URL under *SCP Cockpit* > *Services* > *Data Quality Services* > *Application URL*. Copy this URL to a notepad on your local machine. You assign this URL when configuring the integration in your cloud for customer system.

Steps for Configuring Microservice for Address Validation in SAP Cloud for Customer

1. Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Built in Services and Support* > *Business Environment* > *Addresses and Languages* and select the scoping question: *Do you want to use the Address Validation service?*
2. Configure Mashup Web Services
   There are two mashup web services that you must configure.
   1. *DQM Address Type Ahead* mashup service:
      1. Go to *Administrator* > *Mashup Web Services*.
      2. Select the pre delivered service (SW00095) and *Copy* the template to create new service.

         > **i Note**
         >
         > Under *General Information*, retain the *Service Name* and *Description* as it is.

      3. Under *Service Information*, update the necessary fields as:
         - *Authorization Method*: OAuth
         - *HTTP Method*: Post
         - *URL*: Maintain the Token Endpoint URL that is provided in OAuth settings from SAP Cloud Platform.
         - Enter the *Consumer Key* and *Consumer Secret* that you have created during OAuth settings.

           > **i Note**
           >
           > Ensure that you retain the other fields as it is.

      4. Click *Save* and *Activate*.
   2. *DQM Address Type Ahead Endpoint* mashup service:
      1. Go to *Administrator* > *Mashup Web Services*.
      2. Select the pre delivered service (SW00094) and *Copy* the template to create new service.

         > **i Note**
         >
         > Under *General Information*, retain the *Service Name* and *Description* as it is.

      3. Under *Service Information*, update the necessary fields:
         - *Authorization Method*: OAuth
         - *HTTP Method*: Post
         - *URL*: Maintain the *Address Cleanse URL* from *Available endpoints* list in SAP Cloud Platform.

> **i Note**
>
> - Do not use the URL from *Available endpoints* when using client certificates list in SAP Cloud Platform.
> - Ensure that you retain the other fields as it is.

4. Click *Save* and *Activate*.

> **i Note**
>
> Maintain only one mashup for Token and Service. Multiple mashups for the same will create inconsistency.

> **i Note**
>
> If you currently use the data quality service using communication arrangement and wish to continue using the same, you can do so. However, SAP recommends that you access DQM via the Cloud Foundry. To switch to the Cloud Foundry, you must first remove the communication arrangement, and then follow the steps described under **Configure Mashup Web Services** step.

Configuration in SAP Cloud Platform

Upload the client certificate (that you have assigned to communication arrangement in Cloud for Customer and downloaded to your local machine) to SAP Cloud Platform. For detailed documentation on importing client certificate to SAP Cloud Platform and configuring client certificate authorization, see Client Certificate Authorization.

Billing for DQM Service for Address Validation

The street address validation along with geo coding is enabled by default for each SAP Cloud for Customer to SAP DQM micro service call. The following considerations apply as part of the address validation service:

- Street address validation and geo coding are considered as two different transactions by DQM service.
- Street and post office box addresses within the same address validation transaction are considered separately.

For detailed information on billing for these API calls, refer to Billing/Usage Information (Per API Call)

Additional Information

For detailed information on enabling and configuring DQM Microservices, see the documentation under Data Quality Management, microservices for location data (DQM microservices).

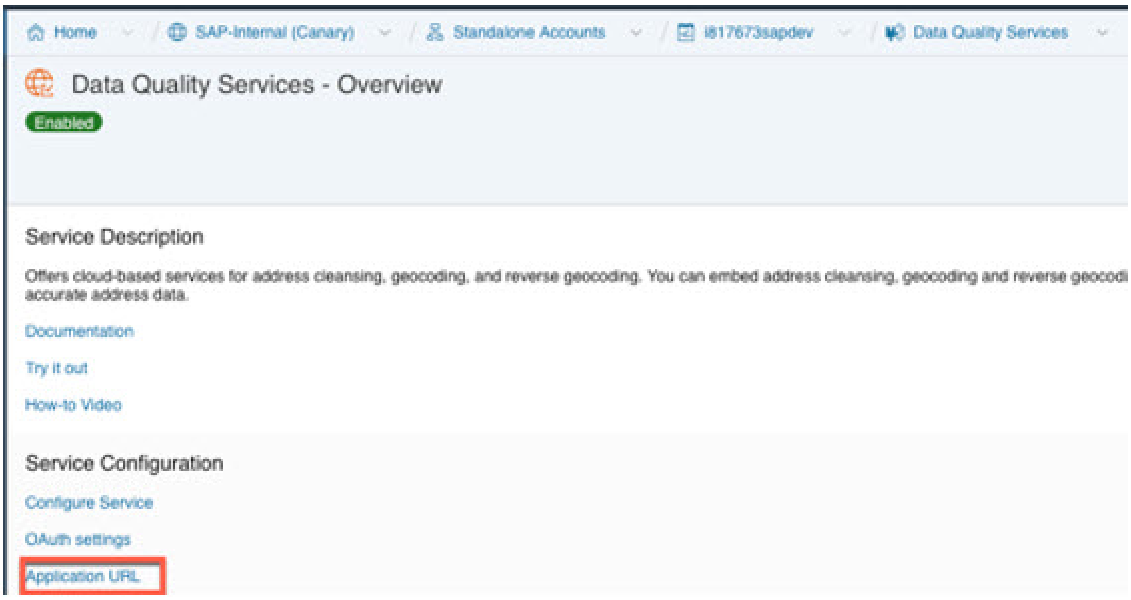
16.1.10 Configure Address Type Ahead Search

Administrators can configure address type ahead search using standard microservices from SAP Cloud Platform.

Prerequisite

When you purchase a license for the microservice, you are assigned a **Request URL** to access SAP DQM micro services. The URL is unique to your data center on SAP Cloud Platform and is required to activate integration with the SAP Cloud for Customer. You can access this URL under *SCP Cockpit* › *Services* › *Data Quality Services* › *Application URL*. Copy *Address Cleanse URL* under *Available endpoints* to a notepad on your local machine. You assign this URL when configuring the integration in your cloud for customer system.

> **Note**
>
> Do not use the URL under *Available endpoint when using client certificates*.



Configuration in SAP Cloud Platform

Generate OAuth 2.0 Client IDs and Token Values to configure in SAP Cloud Platform. For detailed documentation on generating OAuth 2.0 certificate to SAP Cloud Platform, see OAuth 2.0 Authorization.

Steps for Configuring Microservice for Address Type Ahead Search in SAP Cloud for Customer

1. Enable the scoping question as follows:
    1. Go to *Business Configuration* > *Implementation Projects*.
    2. Select your project and navigate to *Edit Project Scope* > *Questions* > *Built in Services and Support* > *Business Environment* > *Addresses and Languages*.
    3. Select the scoping question: *Do you want to use the address type ahead search functionality?*
2. Configure Mashup Web Services
    There are two mashup web services need to be configured.
    1. *DQM Address Type Ahead* mashup service:
        1. Go to *Administrator* > *Mashup Web Services*.
        2. Select the pre delivered service (SW00095) and *Copy* the template to create new service.

            > **Note**
            >
            > Under *General Information*, retain the *Service Name* and *Description* as it is.

        3. Under *Service Information*, update the necessary fields as:
            - *Authorization Method*: OAuth
            - *HTTP Method*: Post
            - *URL*: Maintain the Token Endpoint URL that is provided in OAuth settings from SAP Cloud Platform.
            - Enter the *Consumer Key* and *Consumer Secret* that you have created during OAuth settings.

            > **Note**
            >
            > Ensure that you retain the other fields as it is.

        4. Click *Save* and *Activate*.
    2. *DQM Address Type Ahead Endpoint* mashup service:
        1. Go to *Administrator* > *Mashup Web Services*.
        2. Select the pre delivered service (SW00094) and *Copy* the template to create new service.

            > **Note**
            >
            > Under *General Information*, retain the *Service Name* and *Description* as it is.

        3. Under *Service Information*, update the necessary fields:
            - *Authorization Method*: OAuth
            - *HTTP Method*: Post
            - *URL*: Maintain the *Address Cleanse URL* from *Available endpoints* list in SAP Cloud Platform.

            > **Note**
            >
            > - Do not use the URL from *Available endpoints* when using client certificates list in SAP Cloud Platform.
            > - Ensure that you retain the other fields as it is.

4. Click *Save* and *Activate*.

> **i Note**
>
> Maintain only one mashup for Token and Service. Multiple mashups for the same will create inconsistency.

Billing for DQM Service for Address Type Ahead Search

The street address type ahead search is enabled by scoping question for each SAP Cloud for Customer to SAP DQM micro service call. The following considerations apply as part of the address type ahead search service:

- Street address type ahead search is considered as two different transactions by DQM service.
- Street and post office box addresses within the same address type ahead search transaction are considered separately.

For detailed information on billing for these API calls, refer to Billing/Usage Information (Per API Call).

Additional Information

For detailed information on enabling and configuring DQM Microservices, see the documentation under Data Quality Management, microservices for location data (DQM microservices).

16.1.11 Configure Duplicate Check

Administrators can configure duplicate check by maintaining weightages of parameters for the business partners.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *Duplicate Check Weighting for Business Partners*.

Additionally, you can scope **one** the following questions under *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *General Business Data* > *Business Partners* > *Handling of Business Partners*:

- Do you want to apply a strong check for duplicate business partners?
- Do you want to apply a medium check for duplicate business partners?
- Do you want to apply a weak check for duplicate business partners?
- Do you want to disable the duplicate check for business partners?
- Do you want to include obsolete business partners in the duplicate check?

16.1.12 Configure Custom Identifiers

Administrators can configure custom identifiers for accounts and individual customers and use them in a host of functions. The new tab *Identifiers* displays the identifiers you maintain for an account or individual customer.

Configure identification types under *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *General Business Partners* > *Maintain Identification Types*.

16.1.13 Enable Customer Merge

Administrators can enable customer merge for accounts and contacts.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *General Business Data* > *Business Partners* > *Handling of Business Partners* and select the scoping question: *Do you want to enable accounts merge?*

> **i Note**
>
> SAP does not recommend configuring customer merge if your customer master records are replicated with an external system (that is SAP ERP and SAP CRM integration is scoped). This is because a merge execution does not trigger a corresponding replication in the external system which may give rise to data inconsistency.

In order to initiate merge, you must have the *Data Cleansing* work center view assigned to user. In this work center view, click on *New* to trigger a manual merge. You can select a maximum of three customer records - one master and two duplicate records to be merged. Note that this action can be initiated only if the merge object is in one of the following statuses:

- Not Started
- Merge Failed
- Merge Completed
- Realignment Failed

For detailed troubleshooting information for customer merge, see the section - **Customer Merge FAQs**.

Related Information

Merging Marketing Permissions [page 704]
When you're merging corporate accounts, individual customers or contacts, the system also merges the related marketing permissions. But there are things to keep in mind to interpret the merged data correctly afterwards.

16.1.14 Configure ABC Classification

Administrators can configure ABC Classifications to maintain classification types.

To configure, go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *Accounts*, and choose *Maintain ABC Classifications for Accounts*.

16.1.15 Configure Marketing Permissions

Administrators can configure marketing permissions. With the communication categories, you can specify how often a customer can be contacted during a certain period of time.

In the *Marketing Permissions* fine-tune activity, you maintain your communication categories and the communication channels for countries/regions with an explicit opt-in. These settings are required to track whether your customers opt-in or opt-out for a specific communication channel.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* and then select the *Marketing Permissions* activity from the activity list.

1. Maintain Communication Channels for Countries/Regions with an Explicit Opt-In:

   > ⚠ Caution
   >
   > It's the responsibility of your organization to comply with national legislation regarding data protection and the provision of marketing materials. Therefore, administrators must configure the solution for each country/region in which, or each customer with whom, your organization intends to conduct marketing activities and, to the extent legally required, make use of the option to store documents such as opt-in or opt-outs.

   To add a country/region where an explicit opt-in is required, click *Add Row*, enter the country/region and the corresponding communication channel, such as e-mail, letter or fax, and save your changes.
2. Maintain Communication Categories:
   1. To create a communication category, click *Add Row*
   2. Enter a communication category, a description, a limit, and the time frame. With the limit and time frame, you can specify how often a customer can be contacted during a certain period of time. When adding communication categories, we recommend starting with the letter Z
   3. Save your work.

16.1.16 Configure Attributes

You can define attributes or attribute sets and make them visible for users in the advanced searches for accounts, contacts, and individual customers.

Define Attributes and Attribute Sets

Administrators can configure attributes.

Go to *Administrator* > *Sales and Campaign Settings* > *Attributes* to view and configure attributes or attribute sets.

> **Note**
>
> If your solution is integrated with SAP Customer Relationship Management (SAP CRM), then you can only view, but not create or modify, attributes or attribute sets from this screen.

As you maintain attributes, you can configure their characteristics (for example, whether they are mandatory), their value list and their descriptions in one or more languages. As you maintain attribute sets, which represent combinations of attributes, you can select the *Person-Relevant* checkbox to make the attributes visible in the *Attributes* tab of the *Contacts* work center view. You can also select the *Organization-Relevant* checkbox to make them visible in that tab on the *Accounts* or *Individual Customers* work center views.

Enable Search using Attributes

Provided if you personalize your solution to make it visible, you can enable your users to access the *Attributes* field within the advanced search of accounts, contacts and individual customers and maintain conditions there that influence the corresponding search behavior. Once this field is visible and your users select it to maintain conditions, they can specify a combination of attribute sets, attributes, operators and values – for example, Employee Attributes, Region, Equal, and North America, respectively – to apply to the attributes search. Users can also specify additional attribute conditions with the logical operator OR. Once these parameters have been saved, users can apply the associated conditions as an advanced search query to find business partners with corresponding Attributes, and to display them within the attributes tab of the work center view of the associated business partner.

Display in Account Summary

From the item details of an account, when you choose the [Summary] function, Attributes for the account now appear within the resultant account summary.

i Note

This enhancement only becomes available once you select ▶ *Administrator* ▶ *Form Template Maintenance* ▶ and then choose the *Account Summary* form template and revert to the most recent version.

Access Restrictions

You can configure the business roles in your solution to specify business access restriction BUSINESS_ATTRIBUTE_ASGNM_READ, thereby making attributes read-only for the associated business users

Attribute Data Source

You can use the new report Business Partner with attribute assignment, whose technical name is `CODBUSATTRBPB_Q0001`, to specify search criteria related to Attributes and to find corresponding business partners. Within this report, you can also right-click on the name of a business partner, then choose *Export All Account* and Contacts to New Target Group, to create a target group for the associated accounts and contacts.

Use in Analytics

To drive analytics in relation to attributes, you can use the following new data sources:

Data Sources for Attributes

Data Source ID	Data Source Name	Description
`CODBUSATTRBPB`	*Business Partner with Attribute Assignment*	Shows all Attribute values assigned to the reference business partners.
Example CODBUSATTRGENB	*Attribute Assignment*	Contains all Attributes values assigned to the reference business objects.

16.1.17 Configure Target Groups

Administrators can configure target groups for accounts.

Define the following configuration for target groups:

- **Enable Target Groups**

To configure target groups, go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Sales Campaign* > *Target Groups*.

- **Sales Organization for Target Group**
  If you have used personalization to display the sales organization for a target group, the field is visible in the target group header data. This field defines the sales organization of the target group, such that employees who are assigned to that sales organization can view or edit target groups that belong to it.
- **Access Restrictions**
  To introduce access restrictions for target groups in your solution, choose *Administrator* > *General Settings* > *Users* > *Business Roles* and edit the business role of interest. On the subsequent screen, in the *Access Restrictions* view, select the *Target Groups* work center view and define the read/write access as restricted, then provide the appropriate restrictions at the sales organization level.

Include Employees in Target Groups in E-mail Blasts

In the *E-mail Blasts* dialog, set the flag for *Include Employees* to allow marketing administrators to send e-mail blasts to employees listed in a target group. When you select this flag, the e-mail blast that will be sent out includes target group members (accounts, individual customers, contacts, etc) as well as the employees listed under the *Employees* tab screen

Various Possibilities for Creating Target Groups

You can create and maintain target groups from the following:

- Data Groups
  - **Add Members to Target Group**: A sales campaign administrator can create a target group and share the target group ID with the sales representatives who in turn can add their accounts to the target group. Note that each sales representative can add members without directly accessing the target group. Additionally, you can also use the *Create Target Group* menu option.
- **Target Group work center**: In the Members tab screen under Target Groups work center view, you can directly search for customers, contacts or accounts and then add them to the target group. Use the standard or extension field based search parameters to add members to the target groups. It also possible to search for based on marketing attributes and add them to the target group. You can also mass delete members within a target group using action *Remove from Target Group*.
- **External Sources**: Import target group member assignment from external source using excel add-in (under *Actions* > *New from Microsoft Excel* or web services. A2A services area also available to import segmented target groups into the cloud solution.
- **Analytical Reports**: Use out of the box analytical reports provided in the solution to use strong analytical framework to filter member list and add them directly to a target group in just one single click. The following out of the box standard reports from which account /contacts can be exported to a new target group:
  1. `Accounts contact Data`- Sales Campaign administrator can slice and dice account contact data and create a target group from the report.
  2. `Accounts with Open activities` - Sales Campaign administrator can check for open activities / opportunities and create a target group.

   3. `Campaign Response Details` - This report lists all the responses provided by the members of a previous campaigns. The Contact and Account data can be segmented based on different criteria. The contacts can then be exported into a new target group.
- `Dynamic Target Groups` Define dynamic target groups using conditions within the target group. Based on these conditions, the application determines the members and adds them automatically to the target group.

Creating a Dynamic Target Group

1. In the *Target Groups* work center view under *Sales Campaign* work center, click on *New*.
2. Select the checkbox for *Member Determination* on the target group creation screen. The target group will be created with status *In Preparation*.

> **i Note**
>
> It is currently possible to create dynamic target groups only for accounts, contacts and individual customers.

Configuring Automatic Member Determination

1. **Maintain Conditions**
   1. From the target group worklist, select and open a dynamic target group. Note that the column 'Member Determination' is checked for dynamic target groups.
   2. Under the Member Determination tab, three tables are provided for maintaining the selection conditions for one type of business partner.

      > **i Note**
      >
      > The automatic member determination is currently supported for the following business partner types - *Account*, *Contact* and *Individual Customer*.

   3. Maintain the required conditions for each business partner type.
2. **Maintain the Determination Schedule**
   1. You now need to schedule the member determination process after you have maintained the conditions for business partner types. In the section - *Schedule*, you can schedule immediately or at a particular date and time. Additionally, it is also possible to specify a recurrence for this schedule.
3. **Activate the Member Determination Process**: Finally, you can initiate the member determination process by clicking on *Activate* (under *Actions*). This triggers the member determination process in the background. The member determination happens as a background job. The *Execution Status* displays the progress for activation. On successful activation, the target group status becomes *Active* and the execution status is set to *Scheduled*.

> **i Note**
>
> *Activate* performs a dual function; it activates the target group and schedules the member determination process. While activation is a one-time activity, the *Activate* remains enabled as long as the target group is in status *In Preparation*.

4. **Deactivate Schedule**: Use this feature to adjust the determination conditions any time during the member determination process. This halts the determination process and the *Execution Status* is set to *Not Started*. However, the determination process cannot be halted if the *Execution Status* is set to *Running*. Finally, click on *Activate Schedule* to resume the determination process.

Maintain Conditions for Extension Fields

It is possible to define conditions for extension fields. However, note that the allowed selection criteria for member determination is the same in both dynamic and manual target group. For example, the set of attributes for which you can define conditions in the target group and the set of search fields on a static target group are same.

PREREQUISITE: The user has access to the Key User Tool authorization.

Follow these steps to define conditions for extension fields:

1. Create an extension field on the customer screen
2. Select an appropriate extension scenario. Note that in order to maintain the conditions for extension fields on the target group, the field must be extended in an appropriate extension scenario.
    1. Create an extension field.
    2. Save and open the edit screen for the extension field and navigate to the *Extension Scenarios* tab.
    3. Select the scenario `Account - General Information to Target Group - Account Selection` and add the extension field to this scenario.
3. Add the extension field to the Customer screen. You have created the extension field and now need to add this to the customer screen. To do this, in the *Additional Fields* dialog screen, select the checkbox and click on *Apply*.
4. Follow these steps to add the extension field to the search screen of static target group:
    1. Open a static target group (where the member determination is not configured).
    2. In the *Members* tab, click on *Add Accounts* under the *Add*.
    3. Add the extension field that you created for the account.

    > **i Note**
    >
    > If the extension field is not added to the search dialog, then the member determination will not work for the created extension fields.
5. **Add the extension field to the conditions table**: Open the dynamic target group where you want to maintain conditions for the extension fields. In the *Account Condition* table, select and choose *Apply* to add the extension field.

> **i Note**
>
> The process of configuring conditions for extension fields is similar as described above for other member types (Contacts and Individual Customers).

16.1.18 Configure Blocking Reasons

Administrators can configure blocking reasons.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *Accounts*, and maintain blocking reasons for the following:

- Delivery block reasons
- Billing block reasons
- Order block reasons
- Sales document order block assignment

16.1.19 Configure Blocks for External Follow-up Documents

Administrators can configure blocks for external follow-up documents. You can block external follow-up documents to SAP ERP for accounts marked as prospects

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Communication and Information Exchange* > *Integration with External Applications and Solutions* > *Integration with SAP ERP* and select the scoping question: *Do you want to block prospects created in your cloud solution from being replicated to your SAP ERP solution?*

16.1.20 Configure Relationships Including Buying Center

Administrators can configure relationships including buying center.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *General Business Partners*.Under *General Business Partners*, define the possible relationships between business partners in your system. The standard solution provides relationship codes that you can use. Choose to define new relationship codes or even disable the standard codes. Note that certain standard relationship codes cannot be deactivated.

Enter a code for and the name of the relationship along with a description for both directions of the relationship, such as Has Contact for the relationship of business partner 1 with business partner 2 with business partner 1 being an organization. Depending on the relationship type, choose whether the business partner is a person or an organization, and select the business partner roles that are permitted for each of the business partners in the relationship.

Assign Relationships to Party Role in Party Role Definition

You can also link the relationships you define to party role in involved party. Do this, for example, if you want to automatically determine the party role in documents like lead, opportunity, sales quote, activities based on specific relationship.

Example: define a new custom Party Role “Reseller” that has the relationship “Has an OEM” assigned to it.

Sales Area Based Relationships

Configure sales area dependent relationships that are evaluated during transactions involving the accounts.

16.1.21 Configure Buying Center

Administrators can configure buying center based on business partner and buying center relationships..

Enable Buying Center based on Business Partner Relationships

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Sales* > *Account and Activity Management* > *Account Management* and select the scoping question: *Do you want to enable buying center based on business partner relationships?*

Enable Buying Center based on Buying Center Relationships

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Sales* > *Account and Activity Management* > *Account Management* and select the scoping question: *Do you want to enable buying center based on buying center relationships?*

16.1.22 Configure Account Teams

Administrators can configure account teams.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *Party Role Definition* and create account teams based on roles. Standard roles are shipped in your system; Define custom roles such as Direct Sales, Product Expert, and so on.

16.1.23 Configure Business Add-In to Modify Org Units from MyTeams Employees

With BAdI `OrgUnitEmployeeMyTeamQueryModify` in the SAP Cloud Applications Studio, administrators can add or remove organizational units from which the employees for the *My Team* are derived.

With the *My Team* query for sales scenarios:

- For non-managers: The team is defined as Employees in the organization to which the logged on user is directly assigned, and employees in any organization subordinate to the logged on user's organization
- For managers (considering the reporting line):
  - Employees in any organization which the logged on user is assigned as manager, and employees in any organization subordinate to the organization logged on user is assigned as a manager.
  - Employees in the organization to which the logged on user is directly assigned, and employees in any organization subordinate to the logged on user's organization.
  - If the logged on user is not assigned to any position in any organization, then the team is just the employee.

> **i Note**
>
> You can assign a manager to an org. unit to support the manager's manager determination for approvals or workflows. This organizational assignment can lead to an unwanted *My Team* result for the manager according to the definition above. Another use case for the `OrgUnitEmployeeMyTeamQueryModify` BAdI is if you would like to remove the secondary team assignment in the *My Team* query.

16.1.24 Configure Account Hierarchies

Administrators can configure account hierarchies.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Sales* > *Account and Activity Management* > *Account Management* and select the scoping question: *Do you want to use account hierarchies?* The structure that you create in SAP CRM system is displayed in the *Account Hierarchy* tab of an account. Expand and collapse the account hierarchy at any level to display as many or as few accounts as you like.

> **i Note**
>
> You need to migrate account hierarchies to your cloud solution. For detailed information on how to migrate account hierarchies, see Migrating Account Hierarchies.

16.1.25 Configure Account Merge Without Party Re-determination

Your administrators can configure account merge without party re-determination.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *General Business Data* > *Business Partners* > *Handling of Business Partners* and select the scoping question: *Do you want to disable the party re-determination during account merge for open transactions?*

16.1.26 Configure Involved Party Roles

Administrators can configure involved party roles.

Business partners is a collective term for all the organizations and people you interact with in your business, and includes accounts, contacts, partners, and employees. When you create a document, you can designate a business partner as an involved party and assign them a role.

You can designate roles for sales quotes, leads, opportunities, service tickets, or activities. You can then automatically determine involved parties for these business transactions and documents using determination rules and master data.

The offline party determination is possible independent of the party role category; The following active determinations are supported in offline mode:

- Determine party via assigned relationship from account.
- Copy from account.
- Determine from logon user.

16.1.27 Configure Sales Data

Administrators can configure account sales data that includes distribution channel, division, sales area territory hierarchy level, price lists and price groups.

Administrators can configure account sales data.

Sales Area Distribution Channel

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *Distribution Channel* to maintain distribution channels for your company. Additionally, assign the distribution channel to the org. structure for your company using the work distribution maintenance.

Division

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *Division* to define divisions in your company.

Sales Area Territory Hierarchy Level

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *Sales Territory Hierarchy Level* to create the root sales territory and other territory levels.

Related Information

For more information, see Configuring Divisions.

16.1.28 Configure Business Add-In to Enhance Sales Area Access Context Transactions

With BAdI `CustomAccessControlListWrite` in SAP Cloud Applications Studio administrators can enhance the access context of transactions by an own implementation using the sales area.

In previous releases, the BAdI allowed you to:

- Add all territories from account to the access context.
- Remove territory, sales area, and involved parties with certain party role from the access context, for example based on an extension field, such as an confidential indicator.

In this release, you can also add sales areas (sales organization, distribution channel, division) to the access context.

> **i Note**
>
> The BAdI is available for *Leads*, *Opportunities*, *Sales Quotes*, *Sales Orders*, *Contracts*, *Service Tickets*, and *Activities*.
>
> This BAdI allows administrators to replace the SAP standard access control logic for your business users. You should be very careful when implementing, testing and using this enhancement. Go to *Administrator* > *General Settings* > *Check User's Authorization* to check the access context of a transaction.

> **→ Remember**
>
> The BAdI does not allow control of a different access behavior for write and read access.
>
> The BAdi does not allow you to add additional access context other than context 1015, such as adding the *Document Type* to the access context.

16.1.29 Configure Customer Groups

Administrators can configure customer groups under *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *Accounts* > *Maintain Customer Groups*.

16.1.30 Configure Payment Terms

Administrators can configure payment terms.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *Accounts* > *Maintain Payment Terms* to maintain payment terms.

16.1.31 Configure Delivery Priority

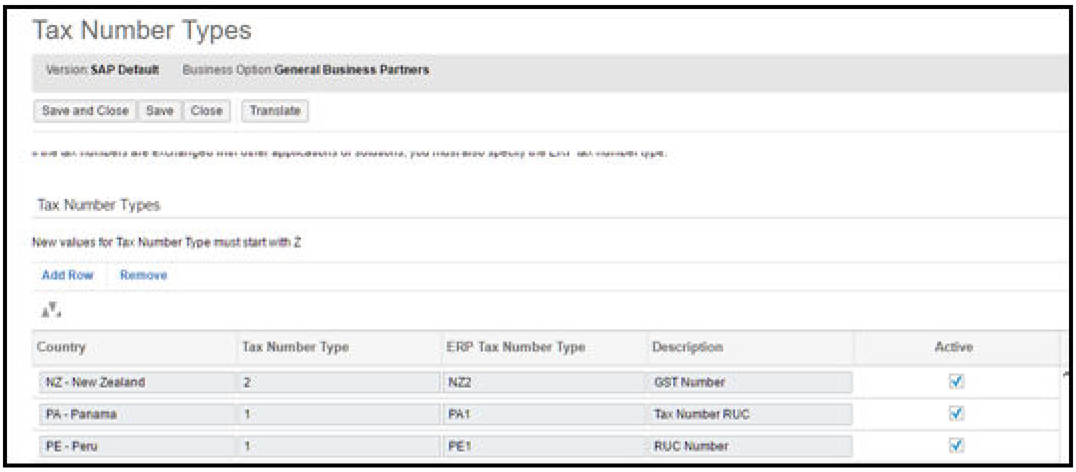
Administrators can configure delivery priorities in your SAP Cloud for Customer system and maintain a mapping to values in SAP ERP system. Prior to this release, it was only possible to map to fixed values from SAP ERP.

Maintain the configuration under *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *General Business Data* > *Business Partners* > *Handling of Business Partners* > *Accounts* > *Maintain Delivery Priority*.

16.1.32 Configure Tax Number Types

Administrators can configure tax number types.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *General Business Partner* > *Maintain Tax Number Types* and add new tax number types and mark them as *Active*.



16.1.33 Configure Territory Based Determination

Administrators can assign territory and create rules for territory based determination.

Go to *Administrator* > *Sales and Campaign Settings*, you can select:

- *Territories* to define new territories and assign accounts to them.
- *Define Rules for Territories Realignment* to define new rules for a realignment run
- *Realignment Run* to define schedule a realignment run and even define new rules for territory based alignment for accounts.

16.1.34 Configure Sales Territory Hierarchy Level

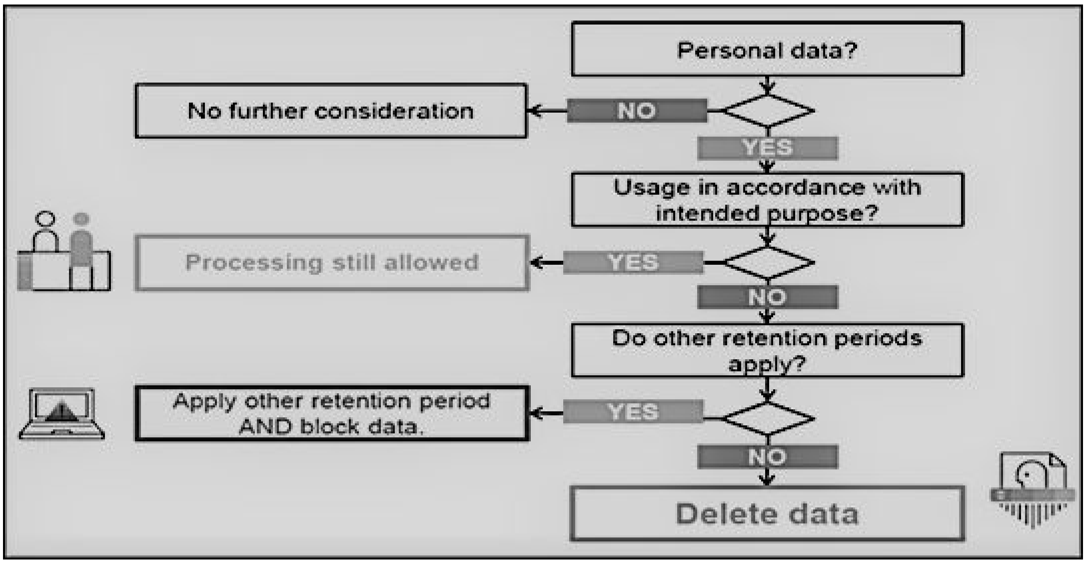
Administrators can configure territory hierarchy levels.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *Territory Hierarchy Level* to maintain territory hierarchy levels.

16.1.35 Web Services for Business Partner End-of-Purpose

Determine if you need to retain business partner data in your system when that data has already been deleted from an integrated external system.

The following graphic describes process flow to determine the End-of-Purpose for your business partner data. You can use web services or manually block such business partners in your system using blocking reasons.



Web service interfaces and enhanced interfaces are enabled to support blocking of business partners. Use these services in scenarios where integrated external systems block or delete business partner data in their system landscape. These interfaces allow the external systems to query and maintain the End-of-Purpose for business partners. Since the definition of what constitutes the end-of-purpose for a business partner is subjective to the external system, these interfaces are empty CHECK interfaces to allow you to create custom queries.

For business partners blocked using the below-mentioned interfaces, data cannot be retrieved in list views in Work Centers, value help in related fields, values selectors, analytics, duplicate checks and web service or oData queries in the application.

Web Services for Business Partner End-of-Purpose

Web Service	Description
`II_BUPA_EOP_CHECK_IN`	This interfaces uses enhancement spot `ES_BUPA_EOP_CHECK` to provide a business add-in hook in SAP Cloud Application Studio. Use this hook to create custom query for setting end-of-purpose information.
`II_BUPA_EOP_MAINTAIN_IN`	Use this interface to set the *End-of-Purpose* flag for business partners. If this flag is set, then the business partner data is hidden in corresponding Work Centers and value helps and is not visible to users. Note that the data can be viewed by administrators in the *Data Protection and Privacy* Work Center.
`II_BUPA_ERP_EOP_CHECK_IN`	This interface uses enhancement spot `ES_BUPA_ERP_EOP_CHECK` to provide a business add-in hook in SAP Cloud Application Studio. Use this hook to create custom query for setting end-of-purpose information.
`II_BUPA_ERP_REPL_IN`	New attribute has been added in element structure for the existing interface. Set the indicator for business completed / End-of-Purpose flag. If this flag is set, then the business partner data is hidden in corresponding Work Centers and value helps and is not visible to users. Note that the data can be viewed by administrators in the *Data Protection and Privacy* Work Center.

16.1.36 Configure Default Mapping ID Batch Job for Business Partners

Your SAP Cloud for Customer solution is integrated with other systems. The customer account, employee, or contact record from each system has its own unique identifier. Administrators can configure ID mapping to assign one account ID to be used for all system account records in a batch job.

Your business works with multiple external systems that exchange data. Customer records are created in each system. Yet each record contains its own unique identifier. SAP Cloud for Customer administrators can map a default ID to work with one identifier to be used, for example, with, accounts, list prices, and print forms. If administrators don't select a default ID, the solution chooses an arbitrary ID as the default.

Example

Your SAP Cloud for Customer (System A) solution is integrated with two other systems (System B, System C). System A, B, and C each have their own IDs for a customer account, employee, or, contact record.

In SAP Cloud for Customer, records receive an ID mapping, which is used by any of the integrated systems to know how they identify the customer record. Here the external system understands the account identifier as 498, but system B uses ID XT6932, and system C uses ID 2754834.

System	ID (Account or Employee)	External System ID	External ID
A	498	XCCInt426	038
B	XT6932		
C	2754834		

Configure a Preferred Account or Employee Default ID

1. Go to *Administrator* > *ID Mapping for Integration* > *Edit Default Configuration*.
2. Click *Add Row*.

> **Note**
>
> The account external ID is the default external ID (Schema Code 918).

3. Click *Add Row*.
4. From the *Object* field, select *Account*.
5. In the *Schema Code* field, select one of the following:
   - *888 - Business Partner ID*
   - *918 - ERP Customer ID*
   - *988 - Business Partner External ID*

> **Note**
>
> For *Employee*, select one of the following *Schema Code* fields:
>
> - *3 - ERP Employee ID*
> - *888 - Business Partner ID*
> - *988 - Business Partner External ID*

6. From the *Remote System* row, enter or search for the system.
7. Save your entries.
8. After configuration, click *Select Object* > *Click Migrate Data*. Depending on your data volume, after approximately 1 hour, the migration batch job is complete. You can view the status from the UI.

> **Note**
>
> There's a migration of 300 kilobytes (kB) `ObjectIdentifierMapping` rows per hour. If the data volume is below 300 kB, the migration occurs o the first execution job. If data volume is above 300 kB, migration spans over several hours since only a 300-kB records migration is possible.

i Note

You set the account external ID default is set to Schema Code 918. If more than one account external ID exists in various integrated systems, the SAP Cloud for Customer solution uses the first one.

i Note

The employee external ID default is set to Schema Code 3. If more than one employee external IDs exist in various integrated systems, the SAP Cloud for Customer solution uses the first one.

Configure a Preferred Contact Default ID

Administrators can configure a preferred contact default ID, that is used in all integrated systems.

1. Go to *Administrator* > *ID Mapping for Integration* > *Edit Default Configuration*.
2. Click *Add Row*. The account external ID is the default external ID (Schema Code 918).
3. Click *Add Row*.

   i Note

   There's only one contact relationship, so the contact external ID is the default external ID (Schema Code 918).

   More than one contact relationship for one contact and one contact relationship is marked as the main relationship. Therefore, the remote external ID is set to the default external ID.
4. From the *Object* field, select *Contact*.
5. In the *Schema Code* field, select one of the following:
   - *888 - Business Partner ID*
   - *927 - ERP Contact Partner ID*
6. Save your entries.
7. After configuration, click *Select Object* > *Click Migrate Data*. Depending on your data volume, after approximately 1 hour, the migration batch job is complete.

i Note

The Contact external ID default is set to schema code 927. More than one Contact external ID exists in various integrated systems and one contact relationship is marked as the *Main* relationship. Then, the SAP Cloud for Customer solution selects an arbitrary ID as the default indicator for one of the existing remote IDs.

If no contact relationship is marked as main, a random relationship is chosen and the remote external ID is set to the default external IDs.

16.2 Maintain Account Data

Account master data is key information that is required for various sales transactions such as leads, opportunities, quotes and orders.

Customer Roles [page 676]
Define default customer roles for a customer type. The role is assigned to customers of that type. Additionally, you can change the description of a standard role provided by SAP to suit your business requirement.

Party Roles [page 676]
Define business partners as involved parties and assign them involved party roles.

Relationships Between Accounts and Buying Center Relationships [page 677]
Account relationships represent relationships between accounts as well as between accounts and persons and other business partners such as partners and partner contacts.

Buying Center [page 678]
Buying center refers to all those members of an organization who are key stakeholders and are involved in the buying process.

Account Teams [page 679]
Define teams within your organization to manage business with customers.

Account Hierarchy [page 679]
An account hierarchy is a collection of accounts linked to each other through a parent-child relationship.

ABC Classification [page 680]
Maintain ABC Classification type to categorize accounts based on their importance within your organization..The standard solution offers four levels of categorization, namely A, B, C and D accounts.

Status [page 680]
Manually set an account status to *Set to Active*, *Obsolete* or *Block an Account*.

Visit Types [page 681]
Create specific visit types such as Business Review, Sales Visit and maintain details such as recommended frequency and duration of visit.

Attributes [page 682]
Attributes can be attached to an object to define additional characteristics of the objects. In the solution, attributes can be associated with different objects like account, contact, individual customer and so on.

Account Blocks [page 685]
Use blocking reasons that you configure to block accounts for specific functions.

Payment Terms [page 686]
Payment terms associated with the sales data of an account.

Tax Numbers [page 686]
Tax numbers associated with the organizational data for an account.

Target Groups [page 688]
Groups of accounts created as a target group for sales campaigns.

Customer Groups [page 691]

Customer groups within an organizational unit.

Identifiers [page 692]
Assign additional identifiers when creating accounts and individual customers and trigger a duplicate check using the identifier. Bi-directional replication of these identifiers between SAP Cloud for Customer and SAP ERP / SAP S/4HANA is also possible.

Competitor and Competitor Product [page 692]
Add *Competitor* and *Competitor Product* information in accounts instead of checking a list of past opportunities.

16.2.1 Customer Roles

Define default customer roles for a customer type. The role is assigned to customers of that type. Additionally, you can change the description of a standard role provided by SAP to suit your business requirement.

16.2.1.1 Configure Default Customer Roles

Administrators can define customer roles.

To maintain the required configuration, go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Accounts* > *Maintain Customer Roles*.

16.2.2 Party Roles

Define business partners as involved parties and assign them involved party roles.

Assign the party roles to account teams, territory teams and as involved parties. You can also asssign multiple involved parties to a business partner (account, contact and individual customer). For example, you can have an involved party assigned to an account, as a ship-to-party, as a partner and a competitor.

You can make multiple role assignments:

- In the account quick create, when you trigger a duplicate check and the system displays accounts with similar names and data that you can select from.
- In the launch screen with business partner datasets, when you select edit and change the role assigned to an account.

Related Information

Involved Parties [page 970]
As an administrator, learn how to configure and use involved parties—the people you interact with in business transactions.

16.2.2.1 Configure Involved Party Roles

Administrators can configure involved party roles.

Business partners is a collective term for all the organizations and people you interact with in your business, and includes accounts, contacts, partners, and employees. When you create a document, you can designate a business partner as an involved party and assign them a role.

You can designate roles for sales quotes, leads, opportunities, service tickets, or activities. You can then automatically determine involved parties for these business transactions and documents using determination rules and master data.

The offline party determination is possible independent of the party role category; The following active determinations are supported in offline mode:

- Determine party via assigned relationship from account.
- Copy from account.
- Determine from logon user.

16.2.3 Relationships Between Accounts and Buying Center Relationships

Account relationships represent relationships between accounts as well as between accounts and persons and other business partners such as partners and partner contacts.

Use the relationships that you have configured to assign relationship between Accounts, Contacts, Partners, Partner Contacts and so on, based on your business needs.

Relationship types are mostly bi-directional, such as *Has a Reseller / Is a Reseller of*. Standard relationship types are configured in the cloud solution; You can also create custom-defined relationship types and maintain them for sales areas.

In the advanced search for accounts, use account relationships to search for accounts. Two fields, *Related-To* and *Relationship Role* enable search based on relationships.

16.2.3.1 Configure Relationships Including Buying Center

Administrators can configure relationships including buying center.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *General Business Partners*.Under *General Business Partners*, define the possible relationships between business partners in your system. The standard solution provides relationship codes that you can use. Choose to define new relationship codes or even disable the standard codes. Note that certain standard relationship codes cannot be deactivated.

Enter a code for and the name of the relationship along with a description for both directions of the relationship, such as Has Contact for the relationship of business partner 1 with business partner 2 with business partner 1 being an organization. Depending on the relationship type, choose whether the business partner is a person or an organization, and select the business partner roles that are permitted for each of the business partners in the relationship.

Assign Relationships to Party Role in Party Role Definition

You can also link the relationships you define to party role in involved party. Do this, for example, if you want to automatically determine the party role in documents like lead, opportunity, sales quote, activities based on specific relationship.

Example: define a new custom Party Role “Reseller” that has the relationship “Has an OEM” assigned to it.

Sales Area Based Relationships

Configure sales area dependent relationships that are evaluated during transactions involving the accounts.

16.2.4 Buying Center

Buying center refers to all those members of an organization who are key stakeholders and are involved in the buying process.

Use buying center to collaborate with accounts and contacts using various channels. In the *Buying Center* tab, map key stakeholders (involved in buying process) along with their relationships. Information that you create here is copied for opportunities. You can update a buying center using data workbench.

16.2.4.1 Configure Buying Center

Administrators can configure buying center based on business partner and buying center relationships..

Enable Buying Center based on Business Partner Relationships

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Sales* > *Account and Activity Management* > *Account Management* and select the scoping question: *Do you want to enable buying center based on business partner relationships?*

Enable Buying Center based on Buying Center Relationships

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Sales* > *Account and Activity Management* > *Account Management* and select the scoping question: *Do you want to enable buying center based on buying center relationships?*

16.2.5 Account Teams

Define teams within your organization to manage business with customers.

Standard solution provides two roles - *Account Team Member* and *Employee Responsible - Sales* (this role corresponds to the account owner and therefore has only one member assigned to this role). Maintain account team members for sales areas and assign them a validity. Additionally, use account teams to:

- Manage accounts and assign activities automatically during various business processes.
- Add employees to account teams (key user authorization required)
- Assign an account to a territory. With this assignment, all users assigned to the territory appear under the *Sales Territory Team* in the *Account Team* tab.
- Define custom roles (such as Direct Sales, Product Expert, and so on) for account team using the **Party Role Definition** fine-tuning activity.

16.2.5.1 Configure Account Teams

Administrators can configure account teams.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *Party Role Definition* and create account teams based on roles. Standard roles are shipped in your system; Define custom roles such as Direct Sales, Product Expert, and so on.

16.2.6 Account Hierarchy

An account hierarchy is a collection of accounts linked to each other through a parent-child relationship.

Account hierarchies are possible only for corporate accounts (and not for individual customer accounts).

Use account hierarchy to:

- Map complex organizational structures of a business partner (for example, buying group, co-operative or chain of retail outlets). In the *Account Hierarchy* tab screen view, you can map account structures in an account.
- Map the complex organizational structure of a large customer with multiple levels of subsidiaries.
- Link an account to a parent account using the *Parent Account* field. Note that a child account can have only one parent account.

- Review the active pipeline for a child account and also the roll-up values for its parent account.

16.2.6.1 Configure Account Hierarchies

Administrators can configure account hierarchies.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Sales* > *Account and Activity Management* > *Account Management* and select the scoping question: *Do you want to use account hierarchies?* The structure that you create in SAP CRM system is displayed in the *Account Hierarchy* tab of an account. Expand and collapse the account hierarchy at any level to display as many or as few accounts as you like.

> **i Note**
>
> You need to migrate account hierarchies to your cloud solution. For detailed information on how to migrate account hierarchies, see Migrating Account Hierarchies.

16.2.7 ABC Classification

Maintain ABC Classification type to categorize accounts based on their importance within your organization..The standard solution offers four levels of categorization, namely A, B, C and D accounts.

16.2.7.1 Configure ABC Classification

Administrators can configure ABC Classifications to maintain classification types.

To configure, go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *Accounts*, and choose *Maintain ABC Classifications for Accounts*.

16.2.8 Status

Manually set an account status to *Set to Active*, *Obsolete* or *Block an Account*.

To set status for multiple accounts at a time, select the accounts in the *Accounts* dataset (*Accounts* work center view launch page) and apply the appropriate actions under *More* menu. Alternatively, apply the status on individual accounts (or individual customers and contacts) using the *Actions* menu in the object detailed view.

> **i Note**
>
> Administrators must enable this feature using *Adaptation* mode.

16.2.8.1 Define Workflows to Copy Account Status to Contacts

Use workflow actions to copy account status to its contacts.

Define workflows to automatically update account status for all its related contacts or use these workflow actions to trigger updates to contact statuses when an account status gets updated. The three workflow actions to support this feature are:

- *Activate Related Contacts*
- *Block Related Contacts*
- *Flag Related Contact as Obsolete*

16.2.8.2 Workflow Actions Supported for Accounts

Extensive workflow support for the accounts business object.

Apart from the standard workflow features, following workflow actions are supported for the accounts business object:

- Activate
- Activate Related Contacts
- Assign Me as Owner
- Block
- Block Related Contacts
- Create Sales Data for My Default Sales Responsibles
- Derive Territories
- Flag As Obsolete
- Flag Related Contact as Obsolete
- Revoke Obsolescence
- Unblock

16.2.9 Visit Types

Create specific visit types such as Business Review, Sales Visit and maintain details such as recommended frequency and duration of visit.

Some example use-case scenarios are:

- Visit type - Stock check once every week for 30 minutes
- Visit type - Monthly business review once every month
- Visit type - Annual target setting, once every year

All visits of a customer must be assigned to a valid visit type that you configure in the business configuration fine-tuning. The *Visit Details* table in the *Visits by Sales Area* tab displays a snapshot of visit type, recommended frequency, visit duration, and so on. Note that these details are not directly dependent on account or individual customer sales data.

> **i Note**
>
> The visit header details continue to be displayed in the *Visits* tab in customers.

> **i Note**
>
> Administrators must enable this feature in your system.

16.2.9.1 Configure Visit Types

Administrators can configure visit types based on your business requirements.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *Maintain Visit Types*. All visits that you maintain must be assigned to a valid visit type.

16.2.10 Attributes

Attributes can be attached to an object to define additional characteristics of the objects. In the solution, attributes can be associated with different objects like account, contact, individual customer and so on.

Attributes can be of different data types and can by grouped together into an attribute set. You can set different properties of an attribute like negative value allowed, intervals allowed, multi-value allowed and so on.

A very common use of attributes is to create target groups. For example, if you are a credit card company and want to create a target group for customers traveling internationally, then you can create an attribute named as International traveler with a value list YES or NO. Every time your customer spends some money outside your country using your card you can automatically update International traveler as YES. Subsequently, you can create a target group of customers where the value of attribute International traveler is YES and send them promotions like low exchange rate for international traveler or low interest rate if they buy ticket through your company using your credit card.

> **i Note**
>
> Attributes are available in HTML and Responsive UI, in both online and offline mode.

16.2.10.1 Configure Attributes

You can define attributes or attribute sets and make them visible for users in the advanced searches for accounts, contacts, and individual customers.

Define Attributes and Attribute Sets

Administrators can configure attributes.

Go to *Administrator* > *Sales and Campaign Settings* > *Attributes* to view and configure attributes or attribute sets.

> **Note**
>
> If your solution is integrated with SAP Customer Relationship Management (SAP CRM), then you can only view, but not create or modify, attributes or attribute sets from this screen.

As you maintain attributes, you can configure their characteristics (for example, whether they are mandatory), their value list and their descriptions in one or more languages. As you maintain attribute sets, which represent combinations of attributes, you can select the *Person-Relevant* checkbox to make the attributes visible in the *Attributes* tab of the *Contacts* work center view. You can also select the *Organization-Relevant* checkbox to make them visible in that tab on the *Accounts* or *Individual Customers* work center views.

Enable Search using Attributes

Provided if you personalize your solution to make it visible, you can enable your users to access the *Attributes* field within the advanced search of accounts, contacts and individual customers and maintain conditions there that influence the corresponding search behavior. Once this field is visible and your users select it to maintain conditions, they can specify a combination of attribute sets, attributes, operators and values – for example, Employee Attributes, Region, Equal, and North America, respectively – to apply to the attributes search. Users can also specify additional attribute conditions with the logical operator OR. Once these parameters have been saved, users can apply the associated conditions as an advanced search query to find business partners with corresponding Attributes, and to display them within the attributes tab of the work center view of the associated business partner.

Display in Account Summary

From the item details of an account, when you choose the [Summary] function, Attributes for the account now appear within the resultant account summary.

> **Note**
>
> This enhancement only becomes available once you select *Administrator* > *Form Template Maintenance* and then choose the *Account Summary* form template and revert to the most recent version.

Access Restrictions

You can configure the business roles in your solution to specify business access restriction BUSINESS_ATTRIBUTE_ASGNM_READ, thereby making attributes read-only for the associated business users

Attribute Data Source

You can use the new report Business Partner with attribute assignment, whose technical name is `CODBUSATTRBPB_Q0001`, to specify search criteria related to Attributes and to find corresponding business partners. Within this report, you can also right-click on the name of a business partner, then choose *Export All Account* and Contacts to New Target Group, to create a target group for the associated accounts and contacts.

Use in Analytics

To drive analytics in relation to attributes, you can use the following new data sources:

Data Sources for Attributes

Data Source ID	Data Source Name	Description
`CODBUSATTRBPB`	*Business Partner with Attribute Assignment*	Shows all Attribute values assigned to the reference business partners.
Example CODBUSATTRGENB	*Attribute Assignment*	Contains all Attributes values assigned to the reference business objects.

16.2.10.2 Configure Marketing Permissions

Administrators can configure marketing permissions. With the communication categories, you can specify how often a customer can be contacted during a certain period of time.

In the *Marketing Permissions* fine-tune activity, you maintain your communication categories and the communication channels for countries/regions with an explicit opt-in. These settings are required to track whether your customers opt-in or opt-out for a specific communication channel.

Go to ▸ *Business Configuration* ▸ *Implementation Projects* ▸. Select your project and navigate to ▸ *Open Activity List* ▸ *Fine-Tune* ▸ and then select the *Marketing Permissions* activity from the activity list.

1. Maintain Communication Channels for Countries/Regions with an Explicit Opt-In:

   > ⚠ Caution
   >
   > It's the responsibility of your organization to comply with national legislation regarding data protection and the provision of marketing materials. Therefore, administrators must configure the solution for each country/region in which, or each customer with whom, your organization intends to conduct marketing activities and, to the extent legally required, make use of the option to store documents such as opt-in or opt-outs.

   To add a country/region where an explicit opt-in is required, click *Add Row*, enter the country/region and the corresponding communication channel, such as e-mail, letter or fax, and save your changes.
2. Maintain Communication Categories:
   1. To create a communication category, click *Add Row*
   2. Enter a communication category, a description, a limit, and the time frame. With the limit and time frame, you can specify how often a customer can be contacted during a certain period of time. When adding communication categories, we recommend starting with the letter Z
   3. Save your work.

16.2.11 Account Blocks

Use blocking reasons that you configure to block accounts for specific functions.

You can configure the following blocking reasons to block accounts:

- Delivery Block Reasons
  Reasons that you would like to use to block delivery for accounts.
- Billing Block Reasons
  Reasons that you would like to use to block billing for specific accounts.
- Order Block Reasons
  Reasons that you would like to use to block sales order creation for accounts.

  > i Note
  >
  > The blocking reasons that you maintain here must be mapped to the blocking reasons configured in ERP system.
- Sales Document Order Block Assignment
  Reasons that you would like to use to block sales document creation for accounts.

16.2.11.1 Configure Blocking Reasons

Administrators can configure blocking reasons.

Go to ▶ *Business Configuration* ▶ *Implementation Projects* ▶. Select your project and navigate to ▶ *Open Activity List* ▶ *Fine-Tune* ▶ *Accounts* ▶, and maintain blocking reasons for the following:

- Delivery block reasons
- Billing block reasons
- Order block reasons
- Sales document order block assignment

16.2.11.2 Configure Blocks for External Follow-up Documents

Administrators can configure blocks for external follow-up documents. You can block external follow-up documents to SAP ERP for accounts marked as prospects

Go to ▶ *Business Configuration* ▶ *Implementation Projects* ▶. Select your project and navigate to ▶ *Edit Project Scope* ▶ *Questions* ▶ *Communication and Information Exchange* ▶ *Integration with External Applications and Solutions* ▶ *Integration with SAP ERP* ▶ and select the scoping question: *Do you want to block prospects created in your cloud solution from being replicated to your SAP ERP solution?*

16.2.12 Payment Terms

Payment terms associated with the sales data of an account.

Maintain payment terms for an account to specify when an invoice has to be paid and whether a discount is applicable if payment is made before the due date.

16.2.12.1 Configure Payment Terms

Administrators can configure payment terms.

Go to ▶ *Business Configuration* ▶ *Implementation Projects* ▶. Select your project and navigate to ▶ *Open Activity List* ▶ *Fine-Tune* ▶ *Accounts* ▶ *Maintain Payment Terms* ▶ to maintain payment terms.

16.2.13 Tax Numbers

Tax numbers associated with the organizational data for an account.

Improve compliance for accounts and customers using tax numbers. You can:

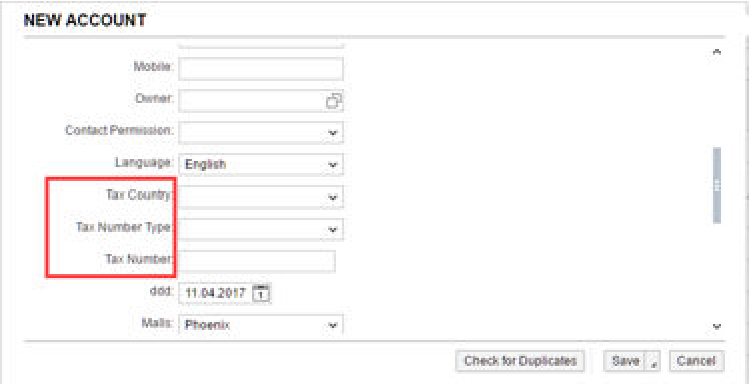
- Add new tax number types, activate, or deactivate from the list delivered in the standard system.

i Note

Tax number types are used as Social Security Numbers in some countries/regions. However, in, SAP Cloud for Customer the number types are used for duplication check and data capture. For compliance reasons, you can deactivate specific tax number types (such as the ones used as Social Security Numbers) for compliance reasons. For detailed information on this topic, refer to the Security Guide for SAP Cloud for Customer.

.

- Leverage the complete list of tax number types available from your on-premise systems
- Search for a business partner using tax number in the advanced search of the enterprise-wide search. Example scenarios include tax numbers that are also used as social security numbers.
- Use tax numbers as additional identifiers for business partners. The additional identifiers are used when duplicate check is triggered for accounts.



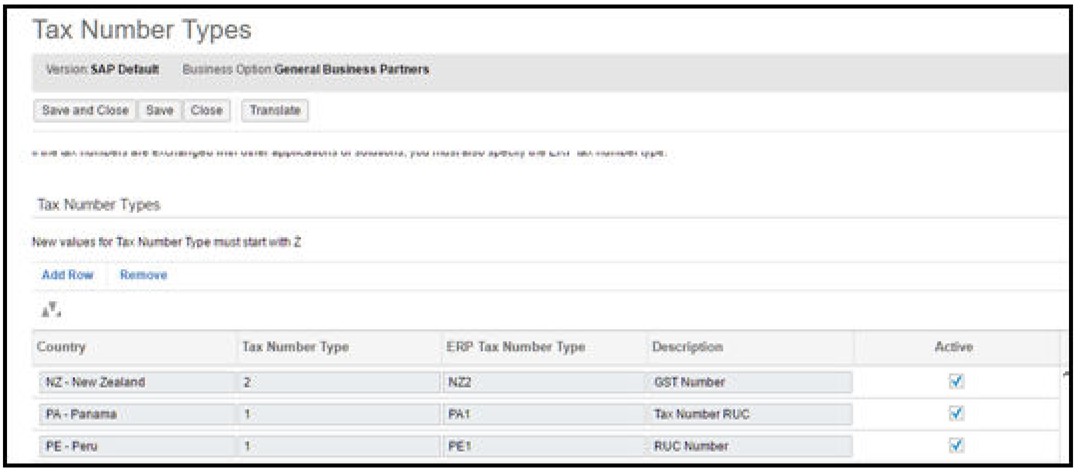
i Note

No validations are available for tax numbers in the cloud solution. You can add validations using the SAP Cloud Applications Studio. Appropriate validations are however available in the ERP on-premise system.

16.2.13.1 Configure Tax Number Types

Administrators can configure tax number types.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *General Business Partner* > *Maintain Tax Number Types* and add new tax number types and mark them as *Active*.



16.2.14 Target Groups

Groups of accounts created as a target group for sales campaigns.

Create target groups and export your accounts and contacts to these target groups. Standard out-of-the-box reports are provided to create and segment account data.

16.2.14.1 Configure Target Groups

Administrators can configure target groups for accounts.

Define the following configuration for target groups:

- **Enable Target Groups**
  To configure target groups, go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Sales Campaign* > *Target Groups*.
- **Sales Organization for Target Group**
  If you have used personalization to display the sales organization for a target group, the field is visible in the target group header data. This field defines the sales organization of the target group, such that employees who are assigned to that sales organization can view or edit target groups that belong to it.
- **Access Restrictions**
  To introduce access restrictions for target groups in your solution, choose *Administrator* > *General Settings* > *Users* > *Business Roles* and edit the business role of interest. On the subsequent screen, in the *Access Restrictions* view, select the *Target Groups* work center view and define the read/write access as restricted, then provide the appropriate restrictions at the sales organization level.

Include Employees in Target Groups in E-mail Blasts

In the *E-mail Blasts* dialog, set the flag for *Include Employees* to allow marketing administrators to send e-mail blasts to employees listed in a target group. When you select this flag, the e-mail blast that will be sent out includes target group members (accounts, individual customers, contacts, etc) as well as the employees listed under the *Employees* tab screen

Various Possibilities for Creating Target Groups

You can create and maintain target groups from the following:

- Data Groups
  - **Add Members to Target Group**: A sales campaign administrator can create a target group and share the target group ID with the sales representatives who in turn can add their accounts to the target group. Note that each sales representative can add members without directly accessing the target group. Additionally, you can also use the *Create Target Group* menu option.
- **Target Group work center**: In the Members tab screen under Target Groups work center view, you can directly search for customers, contacts or accounts and then add them to the target group. Use the standard or extension field based search parameters to add members to the target groups. It also possible to search for based on marketing attributes and add them to the target group. You can also mass delete members within a target group using action *Remove from Target Group*.
- **External Sources**: Import target group member assignment from external source using excel add-in (under *Actions* > *New from Microsoft Excel* or web services. A2A services area also available to import segmented target groups into the cloud solution.
- **Analytical Reports**: Use out of the box analytical reports provided in the solution to use strong analytical framework to filter member list and add them directly to a target group in just one single click. The following out of the box standard reports from which account /contacts can be exported to a new target group:
  1. `Accounts contact Data`- Sales Campaign administrator can slice and dice account contact data and create a target group from the report.
  2. `Accounts with Open activities` - Sales Campaign administrator can check for open activities / opportunities and create a target group.
  3. `Campaign Response Details` - This report lists all the responses provided by the members of a previous campaigns. The Contact and Account data can be segmented based on different criteria. The contacts can then be exported into a new target group.
- `Dynamic Target Groups` Define dynamic target groups using conditions within the target group. Based on these conditions, the application determines the members and adds them automatically to the target group.

Creating a Dynamic Target Group

1. In the *Target Groups* work center view under *Sales Campaign* work center, click on *New*.
2. Select the checkbox for *Member Determination* on the target group creation screen. The target group will be created with status *In Preparation*.

> **Note**
>
> It is currently possible to create dynamic target groups only for accounts, contacts and individual customers.

Configuring Automatic Member Determination

1. **Maintain Conditions**
    1. From the target group worklist, select and open a dynamic target group. Note that the column 'Member Determination' is checked for dynamic target groups.
    2. Under the Member Determination tab, three tables are provided for maintaining the selection conditions for one type of business partner.

        > **i Note**
        >
        > The automatic member determination is currently supported for the following business partner types - *Account*, *Contact* and *Individual Customer*.

    3. Maintain the required conditions for each business partner type.
2. **Maintain the Determination Schedule**
    1. You now need to schedule the member determination process after you have maintained the conditions for business partner types. In the section - *Schedule*, you can schedule immediately or at a particular date and time. Additionally, it is also possible to specify a recurrence for this schedule.
3. **Activate the Member Determination Process**: Finally, you can initiate the member determination process by clicking on *Activate* (under *Actions*). This triggers the member determination process in the background. The member determination happens as a background job. The *Execution Status* displays the progress for activation. On successful activation, the target group status becomes *Active* and the execution status is set to *Scheduled*.

    > **i Note**
    >
    > *Activate* performs a dual function; it activates the target group and schedules the member determination process. While activation is a one-time activity, the *Activate* remains enabled as long as the target group is in status *In Preparation*.

4. **Deactivate Schedule**: Use this feature to adjust the determination conditions any time during the member determination process. This halts the determination process and the *Execution Status* is set to *Not Started*. However, the determination process cannot be halted if the *Execution Status* is set to *Running*. Finally, click on *Activate Schedule* to resume the determination process.

Maintain Conditions for Extension Fields

It is possible to define conditions for extension fields. However, note that the allowed selection criteria for member determination is the same in both dynamic and manual target group. For example, the set of attributes for which you can define conditions in the target group and the set of search fields on a static target group are same.

PREREQUISITE: The user has access to the Key User Tool authorization.

Follow these steps to define conditions for extension fields:

1. Create an extension field on the customer screen
2. Select an appropriate extension scenario. Note that in order to maintain the conditions for extension fields on the target group, the field must be extended in an appropriate extension scenario.

    1. Create an extension field.
    2. Save and open the edit screen for the extension field and navigate to the *Extension Scenarios* tab.
    3. Select the scenario `Account - General Information to Target Group - Account Selection` and add the extension field to this scenario.
3. Add the extension field to the Customer screen. You have created the extension field and now need to add this to the customer screen. To do this, in the *Additional Fields* dialog screen, select the checkbox and click on *Apply*.
4. Follow these steps to add the extension field to the search screen of static target group:
    1. Open a static target group (where the member determination is not configured).
    2. In the *Members* tab, click on *Add Accounts* under the *Add*.
    3. Add the extension field that you created for the account.

    > **i Note**
    >
    > If the extension field is not added to the search dialog, then the member determination will not work for the created extension fields.
5. **Add the extension field to the conditions table**: Open the dynamic target group where you want to maintain conditions for the extension fields. In the *Account Condition* table, select and choose *Apply* to add the extension field.

> **i Note**
>
> The process of configuring conditions for extension fields is similar as described above for other member types (Contacts and Individual Customers).

16.2.15 Customer Groups

Customer groups within an organizational unit.

You can specify the customer groups to which an account belongs. You can maintain the customer group for each organizational assignment in the sales data of the account master record.

Use customer groups for internal and external collaboration. In the *Groups* tab under *Accounts*, create public, private or external groups within an account to enable collaboration, to share data and other information. You can use the in-built integration with SAP Jam to enable collaboration within the groups.

16.2.15.1 Configure Customer Groups

Administrators can configure customer groups under *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *Accounts* > *Maintain Customer Groups*.

16.2.16 Identifiers

Assign additional identifiers when creating accounts and individual customers and trigger a duplicate check using the identifier. Bi-directional replication of these identifiers between SAP Cloud for Customer and SAP ERP / SAP S/4HANA is also possible.

16.2.16.1 Configure Custom Identifiers

Administrators can configure custom identifiers for accounts and individual customers and use them in a host of functions. The new tab *Identifiers* displays the identifiers you maintain for an account or individual customer.

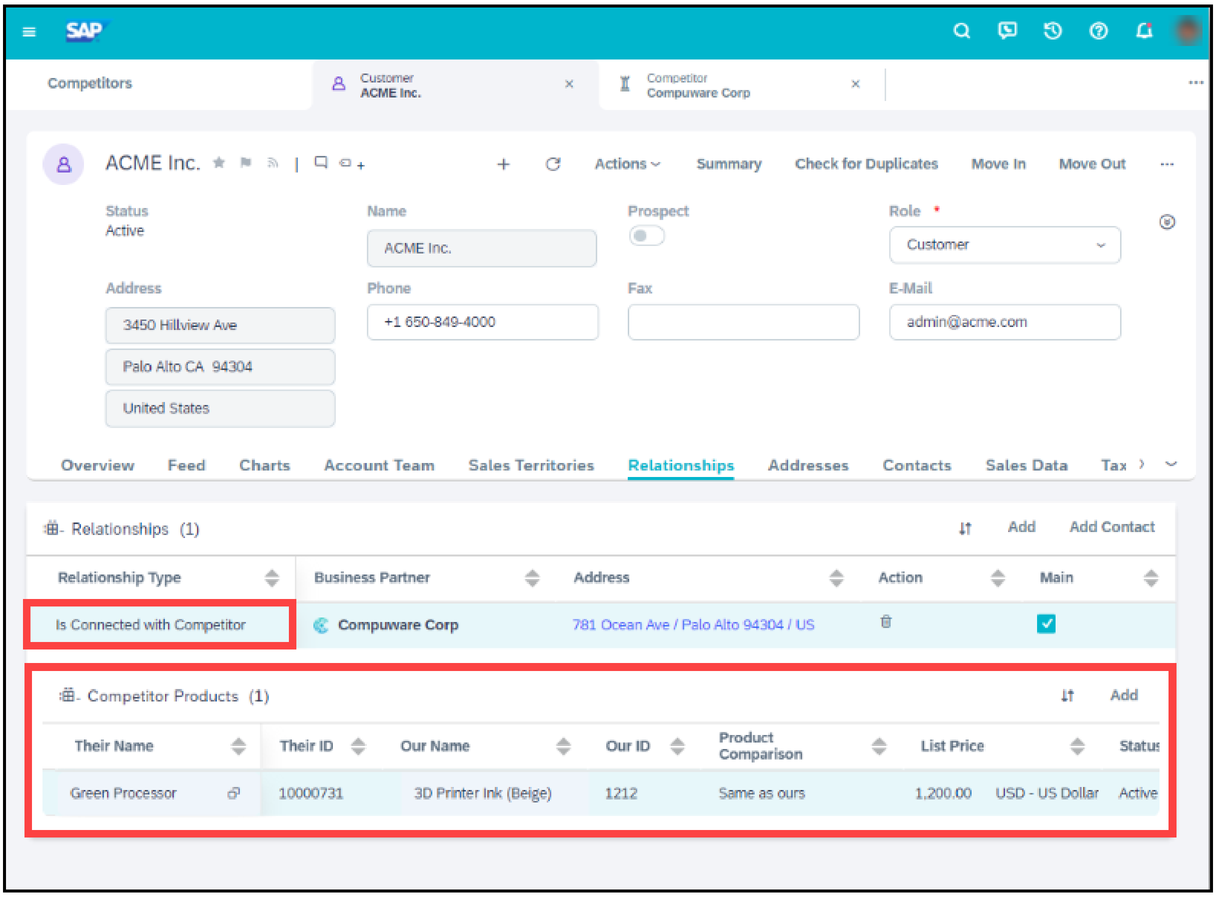
Configure identification types under *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *General Business Partners* > *Maintain Identification Types*.

16.2.17 Competitor and Competitor Product

Add *Competitor* and *Competitor Product* information in accounts instead of checking a list of past opportunities.

As a sales representative, you can use this information to plan your activities. Your administrator can enable this feature via adaptation.

> **i Note**
>
> Ensure that the *Competitor Products* are maintained for the *Competitor* to show them in accounts.



16.3 Account Duplicate Check

Validation for duplicate records for accounts.

Multiple duplicate records for the same customer may lead to inconsistencies in the system. On triggering a duplicate check, the system identifies a master record and duplicate records (if any) for an account. You can then initiate an account merge between the master and duplicate records. As part of merge, the master record is retained and duplicate records are set to obsolete status and a relationship of 'replaces' and 'Is replaced by' is created between the master and duplicate records respectively. Duplicate check allows you to:

- Configure a duplication check.
- Assign weightage to each parameters.
- Determine system recommended duplicates during account creation.
- View and use the similarity scores for each duplicate record.

Use action *Check for Duplicates* in the toolbar for *Customers* to initiate a duplicate check for existing accounts, individual customers, and contacts. When you check for duplicates, the system displays a list of potential duplicate records. Select a maximum of two records from the list, and click *Merge* to trigger a merge process.

You can also trigger a duplicate check when creating new accounts, customers, or contacts.

16.3.1 Identifiers

Assign additional identifiers when creating accounts and individual customers and trigger a duplicate check using the identifier. Bi-directional replication of these identifiers between SAP Cloud for Customer and SAP ERP / SAP S/4HANA is also possible.

16.3.2 Configure Duplicate Check

Administrators can configure duplicate check by maintaining weightages of parameters for the business partners.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *Duplicate Check Weighting for Business Partners*.

Additionally, you can scope **one** the following questions under *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *General Business Data* > *Business Partners* > *Handling of Business Partners*:

- Do you want to apply a strong check for duplicate business partners?
- Do you want to apply a medium check for duplicate business partners?
- Do you want to apply a weak check for duplicate business partners?
- Do you want to disable the duplicate check for business partners?
- Do you want to include obsolete business partners in the duplicate check?

16.3.3 Configure Duplicate Check to Include Obsolete Accounts

Administrators can configure duplicate check to include obsolete accounts. With this configuration, the duplicate check will fetch all obsolete accounts along with the active accounts.

Use this feature to re-activate obsolete customers and avoid re-creating new duplicate customers.

Administrators must configure this feature under *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *General Business Data* > *Handling of Business Partners* and select the scoping question: *Do you want to include obsolete business partners in the duplicate check?*

16.3.4 Calculate and Identify Duplicates Using Custom Logic

You can now call custom logic to calculate duplicates for accounts and individual customers.

Implement `CheckForDuplicateAccounts` (Name: **PDI BADI DUPLICATE CHECK FOR ACCOUNTS**) Business Add-In (BAdI) in the SAP Cloud Application Studio to add the custom logic.

> i Note
>
> Prior to this release, a similar BAdI was available for contacts.

16.4 Customer Merge

Customer merge function is available for corporate accounts, individual customers and contacts. This feature allows master data teams to merge duplicate records into a single golden record.

Customer merge helps you to:

- Manage multiple duplicate records for the same customer that may result in inconsistencies in the system.
- Create a golden master record from duplicate records for a single account.
- Re-assign open transactions and closed transactions related to the duplicate record to the golden record (in case there are any open leads or opportunities.

16.4.1 Rules for Transaction Reassignment During Merge

During customer merge, system also reassigns transactions for the accounts. The rules determined for transasction reassignment are listed here.

Transaction Reassignment in Account Merge

Transactions	Description
Tickets	All the tickets where duplicate account is an involved party should be reparented to the master account .Tickets which could not be re-parented (because of status or due to any other technical reason) to master should be logged in the Merge BO with appropriated error log entry in the application log so that the user can evaluate the issue
Sales Orders	All the Order where duplicate account is an involved party should be re-parented to the master account .Orders which could not be re-parented (because of status or due to any other technical reason) to master should be logged in the Merge BO with appropriated error log entry in the application log so that the user can evaluate the issue

Transactions	Description
Leads	All the leads where duplicate account is an involved party should be re-parented (because of status or due to any other technical reason) to the master account .leads which could not be re-parented to master should be logged in the Merge BO with appropriated error log entry in the application log so that the user can evaluate the issue
Activities (Phone Call, Appointments, Tasks and Emails.	All activities where duplicate account is an involved party should be re-parented (because of status or due to any other technical reason)to the master account .appointments which could not be re-parented to master should be logged in the Merge BO with appropriated error log entry in the application log so that the user can evaluate the issue
Social Media Messages	All social media messages attached to social profile of duplicate record will also move from duplicate Record to Master post Merge
Visits	All the visits where duplicate account is an involved party should be reparented (because of status or due to any other technical reason) to the master account .Visits which could not be reparented to master should
Opportunities	All the opportunities where duplicate account is an involved party should be reparented (because of status or due to any other technical reason) to the master account .Opportunities which could not be reparented to master should be logged in the Merge BO with appropriated error log entry in the application log so that the user can evaluate the issue
Sales Quotes	All the sales quotes where duplicate account is an involved party should be reparented (because of status or due to any other technical reason) to the master account .Quotes which could not be reparented to master should be logged in the Merge business object with appropriated error log entry in the application log so that you can evaluate the issue

16.4.2 Merge Criteria for Tab Screens

Find detailed information on the criteria that needs to be fulfilled for merging tabs account details displayed in the respective tabs in the UI.

Node Handling during Merge

Nodes	Description
Relationships	• The system will merge the account team and relationship records from the duplicate account into master account. • If a relationship is marked as unique and exists in the master record, the system will ignore the same record in duplicate records. For unique relationships master account will always take precedence. • All non-unique relationships will be copied over from duplicate reccord to the master record. • All relationships copied from duplicate to master will be deleted from the duplicate record. • A new relationship 'Is Replaced' /'Replaces' will be created between golden and duplicate record.
Territory	• When tenant is configured to have Single territory per account, territory maintained on the duplicate account shall not be copied to master. Territory on the master will remain as is; territory maintained on the duplicate account will not be copied. • When tenant is configured to have multiple territory per account, all territories assigned to duplicate account will be merged into the dedicated sales territory section of the master account. All territories assigned to duplicate account will be merged into the dedicated sales territory section of the master account. System determined sales territories of the master record will not be modified. The newly merged account (master account) will also have all of the territories of the duplicate account.

Nodes	Description
Address	• All addresses of the duplicate account will be copied over to the master account. This can be deactivated via Custom Extension, see below • The main address in the master account will remain the main address post merge. • Any selections of address data made on the Attribute Selection tab will be applied to the main address. • In case no address information is maintained in the master record, the main address of the duplicate account will be marked as the main address in the master account post merge.
Notes	The Notes added to duplicate Account will be copied over to Master.
Attachments	All attachments from the duplicate account will be copied over to the master account.
Account Team	The system will merge the account team and relationship records from the duplicate account into master account. If a party role in unique and exists in the master record, the system will ignore the same party role from the duplicate record. For unique party roles master account will always take precedence. Uniqueness check for a party role in account team will consider the sales area and the validity dates check. For example, an account can have 2 owners with the same sales area information but with different validity dates. Though owner is a unique role, the uniqueness check will also consider the sales area and validity dates.
Sales Area	All sales area information from the duplicate will be copied over to the master account. If the sales area (Sales org, distribution channel, division) information of the master account also exist in the duplicate account, then the sales area record will not be overwritten, the sales area details maintained for the master record will take precedence.

Nodes	Description
Social Profiles	If both master and duplicate record have social profile , then copy the social profile from duplicate to master EXAMPLE: • Customer A (Master) has FB Social profile assigned FB_1. • Customer B (duplicate) has Twitter Social profile assigned TW_1 • After the merge A will have a new user profile TW_1. • Social profile linked with customer A will have two User profiles one for FB, and one for TW. • If master record does not have a social profile then the social profile from duplicate will be copied to master record
Marketing Permissions	In general the final result after account merge will be a union of values from all the accounts. In case of conflict the master account wins. • **Case 1:** When all accounts have different marketing permissions assigned for different channels -The master account will have a union of all . • **Case 2** : In case of conflict , the permission value maintained in master account will be retained. The system will also copy notes and attachments
Communication Category	In general the final result after account merge will be a union of values from all the accounts. In case of conflict the master account wins. • **Case 1**: When all accounts have different assignments for different channels -The master account will have a union of all . • **Case 2** : In case of conflict , the permission value maintained in master account will be retained

Nodes	Description
Marketing Attributes	In general the final result after account merge will be a union of values from all the accounts. In case of conflict the master account wins. • **Case 1:** When all accounts have different marketing attributes assigned The resultant account will have a union of all the marketing attributes • **Case 2**: When marketing attributes allows multiple values, there are common marketing attributes but different/common values. The master account will have a union of values. • **Case 3** : In case of conflict , the attribute value maintained in master account will be retained

16.4.3 Status Management in Account Merge

Accounts assume various statuses during customer merge. Find detailed information on these statuses in this topic.

Statuses and Descriptions

Status	Description
Not Started	This is the initial status and is set when the Merge object is created and Merge process has not yet been triggered.
Merge In Process	This is the status when the merge has been triggered either from the web service call or manually from the UI. This status indicates that merge process has started.
Merge Failed	This is the status when the merge operation of merging source and replica record has failed. The system will not attempt any transaction reassignment in case the merging of duplicate records has failed.
Merge Completed - Realignment In Process	This is the status when the merge of two customers has been successfully completed and the re-parenting of transactions assigned to the duplicate record to source record has started.
Merge Completed - Realignment Failed	This is the status when the merge of two customers has been completed and the reassignment of transactions has failed.

Status	Description
Realignment Completed – Enhanced Realignment In Process	This is the status when the merge of two customers has been successfully completed and the enhanced re-parenting of transactions assigned to the duplicate record to source record has started (only available if 'Realignment of Closed Transactions of Merged Records' is configured – see below).
Realignment Completed – Enhanced Realignment Failed	This is the status when the merge of two customers has been completed and the enhanced reassignment of transactions has failed (only available if 'Realignment of Closed Transactions of Merged Records' is configured – see below).
Completed	This status signifies that customer merge and reassignment of transactions has been completed without any errors.

16.4.4 View Result Log

The *Result Log* screen displays the application logs that are created by the system for each merge transaction.

The logs are displayed in a hierarchy. Click on the hyperlinked *Application Log ID* to see if the merge execution resulted in errors, warnings or other information messages.

The Results section of the application log also displays for the errors, the reason why the transaction reassignment failed. Re-trigger the merge using the *Initiate* action available on the customer merge list view.

16.4.5 Fix Issues with Incorrect Master Data of Duplicate or Obsolete Records

Fix issues with errors in master data in the duplicate or obsolete business partner records. For example multiple contracts appear with spelling errors in account name.

1. From Customer Merge, nominate one business partner as the *Master*.

   > **i Note**
   >
   > Prospects cannot be nominated.

2. Define the properties of the other duplicate business partners that should be used by the *Master*.
3. Initiate the merge.

> **i Note**
>
> View business partner merge details in the business object *Changes* tab.

> **i Note**
>
> View Business Partner merge for an *account* in the *Relationships* tab of the revised (duplicate) *account*.

16.4.6 Enable Customer Merge

Administrators can enable customer merge for accounts and contacts.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *General Business Data* > *Business Partners* > *Handling of Business Partners* and select the scoping question: *Do you want to enable accounts merge?*

> **Note**
>
> SAP does not recommend configuring customer merge if your customer master records are replicated with an external system (that is SAP ERP and SAP CRM integration is scoped). This is because a merge execution does not trigger a corresponding replication in the external system which may give rise to data inconsistency.

In order to initiate merge, you must have the *Data Cleansing* work center view assigned to user. In this work center view, click on *New* to trigger a manual merge. You can select a maximum of three customer records - one master and two duplicate records to be merged. Note that this action can be initiated only if the merge object is in one of the following statuses:

- Not Started
- Merge Failed
- Merge Completed
- Realignment Failed

For detailed troubleshooting information for customer merge, see the section - **Customer Merge FAQs**.

Related Information

Merging Marketing Permissions [page 704]
When you're merging corporate accounts, individual customers or contacts, the system also merges the related marketing permissions. But there are things to keep in mind to interpret the merged data correctly afterwards.

16.4.6.1 Configure Realignment of Closed Transactions of Merged Records

By default, the account merge fetches all open transactions of merged or obsolete records. If you need to also fetch closed transactions, you must maintain the required configuration.

Administrators can maintain the configuration to include or exclude closed transactions of obsolete records in account merge.

To enable this feature, go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *General Business Data* > *Business Partners* > *Handling* *of Business Partners* ❯ *Business Partner Merge* ❯ and select the scoping question: *Do you want to enable enhanced document realignment during account merge?*

16.4.6.2 Map Obsolete Records to Primary Record For More Insights

Use insights from closed transaction history of obsolete records event without including closed transaction history in account merge. This way you can leverage reporting to show complete picture of primary account.

The new datasource - *Account Merge Master Link* allows you to map primary record to obsolete records and thus allows closed transaction history to be reported along with all other activities of primary record.

16.4.6.3 Differentiate Between Standard Change and Merge Context

Administrators can now differentiate between updates to an account triggered by merge or by standard change process. This differentiation can be implemented using custom logic such that the custom logic is executed only for change instances occuring due to merge.

Use business partner utility - `AP.FO.BusinessPartner.Globalnamespace BusinessPartnerUtilities.IsBusinessPartnerMerge`o implement this custom logic. This utility is provided for the standard Business Partner business object provided by SAP and is available in SAP reuse library.

Extension Fields

The Customer Merge includes extension fields. Extension fields at the ‘General’ and ‘Address’ (only for the main address of accounts and individual customers) segment of the customer will be offered on the Attribute selection tab in the Customer Merge UI if their content differs between the involved records. They will be treated exactly like non extension fields. The content of all extension fields not of the ‘General’ segment will be moved to the master whenever their node is moved.

16.4.6.4 Extension Fields

Customer merge feature includes extension fields.

Extension fields at the *General* and *Address* (only for the main address of accounts and individual customers) segment of the customer will be offered on the *Attribute* selection tab in the customer merge UI if their content differs between the involved records. They will be treated exactly like non extension fields.

ℹ Note

The content of all extension fields not of the *General* segment will be moved to the master whenever their node is moved.

16.4.6.5 Merging Marketing Permissions

When you're merging corporate accounts, individual customers or contacts, the system also merges the related marketing permissions. But there are things to keep in mind to interpret the merged data correctly afterwards.

The following table shows you which permission is taken depending on the permissions given in the leading or subordinate contact or individual customer:

Leading Instance	Subordinate Instance	Merged Instance (now leading)	Last Modified Timestamp
Undefined	Undefined	Undefined	No change
Undefined	Opt-In	Opt-In	Changed – *Last Modified* timestamp updated with the date and time when the merge happened.
Undefined	Opt-Out	Opt-Out	Changed – *Last Modified* timestamp updated with the date and time when the merge happened.
Opt-In	Undefined	Opt-In	No change
Opt-In	Opt-In	Opt-In	No change
Opt-In	Opt-Out	Opt-Out	Changed – *Last Modified* timestamp updated with the date and time when the merge happened.
Opt-Out	Undefined	Opt-Out	No change
Opt-Out	Opt-In	Opt-Out	No change
Opt-Out	Opt-Out	Opt-Out	No change

ℹ Note

- The *Last Modified* timestamp reflects only the time point of the last change and doesn't reflect the date when the consent was given by the customer.
- Opt-out is always taken, even though the opt-in is more recent.
- The system merges also notes and attachments. The merged notes are separated with a comma.

For more information about customer merge, see Enable Customer Merge [page 702].

16.4.7 Custom Extensions to Customer Merge Using BAdI

An SAP Cloud Application Studio enabled business add-in - `ControlCustomerMerge` with method CONTROL_MERGE_LOGIC is provided for custom extensions to the customer merge feature.

The method CONTROL_MERGE_LOGIC is included in the enhancement option - CustomerMergeControl. Itincludes the following import and export parameters:

- Import Parameter: InputData of type BadiCustomerMergeControlInput
- Export Parameter: BadiCustomerMergeControlResult

This method can be implemented to control the following:

- If addresses of the duplicate records must not be copied to the master record during Phase 1 of the business partner merge.

  ```
  import AP.FO.BusinessPartner.Global;
  var result : BadiCustomerMergeControlResult;
  result.SkipAddressCopyToMaster = true;
  return result;
  ```

- If the contact person relationship must be retained with the duplicate record during phase 1 of the business partner merge.
  import AP.FO.BusinessPartner.Global; var result : BadiCustomerMergeControlResult;
  result.KeeepContactPersonRelationshipToNonMaster = true; result.SkipAddressCopyToMaster = true;
  return result;

  > Sample Code
  >
  > ```
  > ```

16.5 Maintain Address and Use Maps and Geo-Tracking

Geo-tracking using address validation and address maintenance.

The address data format is supported for most internationally accepted formats. Use maps and geo-tracking using address validation to view and track accounts for sales transactions such as visits.

International Address Versions [page 706]
Support for address maintenance in internationally accepted formats.

Map View for Accounts [page 708]
Track location of accounts using maps.

Address Validation [page 710]
Geo-coding for addresses.

Address Type Ahead Search [page 712]

16.5.1 International Address Versions

Support for address maintenance in internationally accepted formats.

In the SAP Cloud for Customer standard system you can maintain addresses of customers in different scripts like Arabic or Simplified Chinese along with Latin characters (Latin characters are used in international system). You maintain address in the *Address* tab under *Customers*. Click on the **Edit** icon under *Action* in the *Addresses* table to maintain address data.

> **Note**
>
> It is strongly recommended to use Latin as the default script. To use address versions that are not linked to any scripts, use the address version - *Any*. This enables you to use any scripts in your system. Also use this code to map and replicate address versions in SAP ERP, that are not linked to standard language scripts.
>
> **Example**: To use this code, set the relevant local language or the chosen company language as the version indicator *Any* and use it as the default address version.

Facts About Address Maintenance

- The address version is independent of the logon language (and vice-versa). The default character version maintained in the business configuration is displayed in the customers.
- The international address is replicated to the on-premise systems as part of standard customer replication from SAP Cloud for Customer.
- The international address version is derived (subject to conditions) for print forms.

Facts About Integration with On-Premise System

Address Version Configuration Cloud for Customer and On-Premise

Cloud for Customer	On-Premise
Default as well as alternative versions to be configured	Defaulted by system to *International*; Only alternative versions need to be configured. **Note** In the on-premise system, the value *International* corresponds to *Latin* in the cloud for customer system. This is because Latin characters are default for an international system.

16.5.1.1 Configure International Address Versioning

Administrators can configure International Address Versioning for language maintenance.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *International Address Versions* and select all the languages in the list for which you need to maintain address data. The activated scripts (for languages corresponding to the address versions) can be used to maintain master data such as business partner name and address.

> **Note**
>
> You must also specify a default address version that will initially be displayed and that must be maintained for every record. After the creation of name or address data for a non-default address version you cannot change the default address version again.

Additionally, you can configure the feature under *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Built-in Services and Support* > *Business Environment* > *Addresses and Languages* > *International Address Versions* and select the scoping question: **Do you want to specify textual master data using international address versions?**

16.5.1.2 Enable Address Check

Administrators can configure address check that validates addresses maintained in master data for business partners and organizational units, during migration and data replication.

To enable address check, go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Address Checks*. The system checks if address data, such as country/region, and postal code length, is consistent. Inconsistent data leads to error messages and cannot be saved or activated.

To disable the address check, select the *Allow Saving of Inconsistent Addresses* checkbox. If you select the checkbox below, you allow the saving of inconsistent addresses for master data. The check results will then be shown as warnings, and the data will be saved.

> **Note**
>
> Checks of address data for business documents are not affected.

16.5.1.3 Turn Off Country/Region Specific Formatting for Phone Numbers

Administrators can turn off the country/region specific formatting for phone numbers to avoid issues during replication of business partner addresses.

To maintain the required configuration, go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Built in Services and Support* > *Business*

Environment ▸ *Address and Languages* ▸ and select the scoping question: *Do you want to suppress the defaulting of the country dialing code for phone numbers without country dialing code?*

Country/region specific formatting ensures that if the recommended format for a phone (or mobile) number isn't maintained and the dialing code isn't available, then system determines the dialing code from the postal address. However, during migration or replication, if inbound phone numbers do have the dialing code but are prefixed '00' instead of the superior leading '+', this may result in problems with migration. Use the scoping question to suppress country/region formatting for such business needs.

> i Note
>
> The recommended format to maintain a phone or mobile number is to start with a leading '+' followed by the dialing code, for example, '+49 (6227) 7-47474'.

16.5.2 Map View for Accounts

Track location of accounts using maps.

Under ▸ *Customers* ▸ *Accounts* ▸ and ▸ *Visits* ▸ *Visit Planner* ▸, choose *Map View* to see the geographical location of each of the addresses of the displayed accounts — both individually, and in relation to one another. You can also zoom in, zoom out, and pan in any direction.

> i Note
>
> In autonavi maps for accounts, pin color on the maps is determined using account role (customers and prospects). Use this to identify and differentiate between customers and prospects in the map. Only two account roles - Customer and Prospect are shown in colors. All other roles are represented using the default pin color - blue.

> i Note
>
> You can keep only one set of map active in the system. You can configure each map individually, or configure a combination of Google and AutoNavi map. In the former case, the system will display only the configured map. In the latter case, a toggle button will be available for you to switch to the map of your choice. Note that you cannot combine a Bing Map with any other map. If both maps are active by accident, mapping functionality in the HTML5 or the Fiori client, may not function properly.

Search Nearby or Search Map Area

Search for accounts or individual customers located nearby or within a map area. You can therefore search within a map using the following options:

- *Search Map Area* - Within a selected map area, triggers a search for and pins on the map, all customers that match search criteria.
- *Search Nearby* - Pins your current map location and triggers a search for customers nearby that match search criteria.

i Note

The *Search Nearby* and *Search Map Area* features work only for the accounts that are mapped using geo-coordinate addresses (latitude and longitude). These features are not available for accounts that utilize only address information (without geo-coordinates).

i Note

An example for the format for latitude and longitude is given as follows: Latitude: **49,293393** and **- Within a selected map area,Longitude: 8,641981**.

16.5.2.1 Configure Maps

Administrators can configure Google Maps or AutoNavi Maps for different accounts.

To enable map view, you must configure mashup. Proceed as follows:

1. Choose *Administrator* > *Mashup Authoring*.
2. On the *Mashup Authoring* screen, select *Custom Mashups* from the dropdown menu.
3. Perform a search for the mashup ID. The mashup IDs for the available maps are as follows:
    - Google - `SM00078`
    - AutoNavi - `SM00079`: For use in the countries/regions such as China where Google Maps aren't supported.
4. Select the mashup and click *Enter API Keys*. The *Enter API Keys* dialog box opens.
5. Click *Show API Key* and, in the *API Key Value* column, enter the API key that you received from the service provider.
6. Save your changes.

i Note

- The use of the Google Maps Service is subject to Google Terms of Service, which are written in http://www.google.com/intl/en/policies/terms/ . If you don't accept such Terms of Service, including but not limited to all limitations and restrictions therein, you may not be able to use Google Maps Service in SAP Cloud for Customer. The use of Google Maps Service in or through SAP Cloud for Customer constitutes your acceptance of Google Terms of Service, and it can be terminated by SAP without reason at any time and SAP is not required to provide an equivalent service via another provider.
  As a prerequisite, please create a support ticket to obtain and use the SAP API key for Google Maps.
- The use of AutoNavi Maps Service is subject to AutoNavi Terms of Service, which are written in http://map.amap.com/doc/serviceitem.html . If you do not accept such Terms of Service, including but not limited to all limitations and restrictions therein, you may not be able to use AutoNavi Maps Service in SAP Cloud for Customer. The use of AutoNavi Maps Service in or through SAP Cloud for Customer constitutes your acceptance of AutoNavi Terms of Service, and it can be terminated by SAP without reason at any time and SAP is not required to provide an equivalent service via another provider.
  As of the August 2022 release, SAP doesn't provide any API keys to the customers for AutoNavi Maps configuration.

16.5.3 Address Validation

Geo-coding for addresses.

Address checks determine if address data such as country/region, region and postal code length is consistent. If you enter inconsistent data, the system displays an appropriate error message disabling you from saving or activating the address data.

Address validation services help validate, normalize, and geo-code addresses maintained for accounts and individual customers. These services are licensed separately by SAP Data Quality Management (SAP DQM) micro service that is hosted on SAP Cloud Platform. Implement this http based microservice (also known as Data Quality as a Service), to integrate address validation feature within your SAP Cloud for Customer system.

Use

> **i Note**
>
> Before implementing address validation service, you need to be aware of DQM billing for the API calls from SAP Cloud for Customer . See the section **Billing for DQM Service for Address Validation** further below in this topic.

You can validate addresses for accounts and individual customers in the following screens:

1. **Account / Individual Customers Quick Create Screen**: When you click *Validate Address* in the quick create screen, the service displays a dialog with both the original as well as the proposed addresses. You can choose to accept the proposal or further refine the address. The service also performs a duplicate address check for the proposed address.
2. In the account *Overview* tab, use the actions menu to validate address data maintained in the account header.
3. In the *Address* tab, select an address and click *Validate Address* icon in the table.

16.5.3.1 Configure Address Validation for Geo Tracking

Administrators can configure address validation for geo tracking using standard microservices from SAP Cloud Platform.

Prerequisite

When you purchase a license for the microservice, you are assigned a **Request URL** to access SAP DQM micro services. The URL is unique to your data center on SAP Cloud Platform and is required to activate integration with the SAP Cloud for Customer. You can access this URL under *SCP Cockpit* > *Services* > *Data Quality Services* > *Application URL*. Copy this URL to a notepad on your local machine. You assign this URL when configuring the integration in your cloud for customer system.

Steps for Configuring Microservice for Address Validation in SAP Cloud for Customer

1. Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Built in Services and Support* > *Business Environment* > *Addresses and Languages* and select the scoping question: *Do you want to use the Address Validation service?*
2. Configure Mashup Web Services
   There are two mashup web services that you must configure.
   1. *DQM Address Type Ahead* mashup service:
      1. Go to *Administrator* > *Mashup Web Services*.
      2. Select the pre delivered service (SW00095) and *Copy* the template to create new service.

         > i Note
         >
         > Under *General Information*, retain the *Service Name* and *Description* as it is.

      3. Under *Service Information*, update the necessary fields as:
         - *Authorization Method*: OAuth
         - *HTTP Method*: Post
         - *URL*: Maintain the Token Endpoint URL that is provided in OAuth settings from SAP Cloud Platform.
         - Enter the *Consumer Key* and *Consumer Secret* that you have created during OAuth settings.

         > i Note
         >
         > Ensure that you retain the other fields as it is.

      4. Click *Save* and *Activate*.
   2. *DQM Address Type Ahead Endpoint* mashup service:
      1. Go to *Administrator* > *Mashup Web Services*.
      2. Select the pre delivered service (SW00094) and *Copy* the template to create new service.

         > i Note
         >
         > Under *General Information*, retain the *Service Name* and *Description* as it is.

      3. Under *Service Information*, update the necessary fields:
         - *Authorization Method*: OAuth
         - *HTTP Method*: Post
         - *URL*: Maintain the *Address Cleanse URL* from *Available endpoints* list in SAP Cloud Platform.

         > i Note
         >
         > - Do not use the URL from *Available endpoints* when using client certificates list in SAP Cloud Platform.
         > - Ensure that you retain the other fields as it is.

      4. Click *Save* and *Activate*.

i Note

Maintain only one mashup for Token and Service. Multiple mashups for the same will create inconsistency.

i Note

If you currently use the data quality service using communication arrangement and wish to continue using the same, you can do so. However, SAP recommends that you access DQM via the Cloud Foundry. To switch to the Cloud Foundry, you must first remove the communication arrangement, and then follow the steps described under **Configure Mashup Web Services** step.

Configuration in SAP Cloud Platform

Upload the client certificate (that you have assigned to communication arrangement in Cloud for Customer and downloaded to your local machine) to SAP Cloud Platform. For detailed documentation on importing client certificate to SAP Cloud Platform and configuring client certificate authorization, see Client Certificate Authorization.

Billing for DQM Service for Address Validation

The street address validation along with geo coding is enabled by default for each SAP Cloud for Customer to SAP DQM micro service call. The following considerations apply as part of the address validation service:

- Street address validation and geo coding are considered as two different transactions by DQM service.
- Street and post office box addresses within the same address validation transaction are considered separately.

For detailed information on billing for these API calls, refer to Billing/Usage Information (Per API Call)

Additional Information

For detailed information on enabling and configuring DQM Microservices, see the documentation under Data Quality Management, microservices for location data (DQM microservices).

16.5.4 Address Type Ahead Search

Use type ahead suggestions to select a complete address after typing only a portion of it (minimum of 5 characters). While you are typing, the application sends frequent requests to the microservice, and displays a list of suggestions. Once you select an address from the list, all the address fields are updated automatically.

! Restriction

If the *State* address field is not updated as per the latest search, you may need to click on the field to get updated.

These services are licensed separately by SAP Data Quality Management (SAP DQM) micro service that is hosted on SAP Cloud Platform. Implement this http based microservice also called Data Quality Service, to integrate address type ahead search feature within your SAP Cloud for Customer system.

Use

i Note

Before implementing address type ahead search service, you need to be aware of DQM billing for the API calls from SAP Cloud for Customer . See the section **Billing for DQM Service for Address Type ahead Search** further in this topic.

16.5.4.1 Configure Address Type Ahead Search

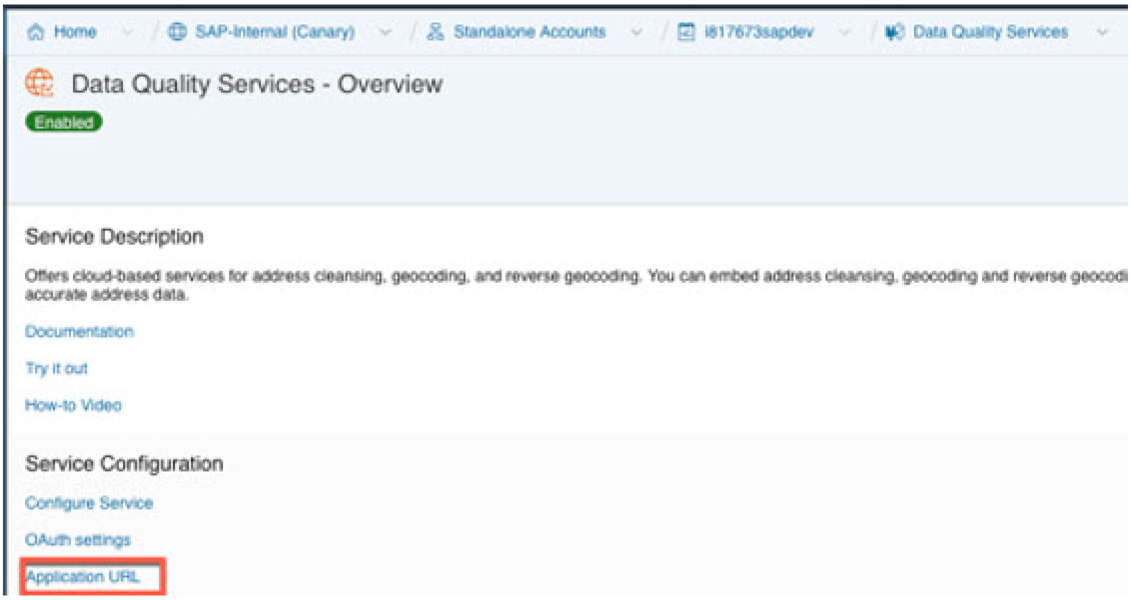
Administrators can configure address type ahead search using standard microservices from SAP Cloud Platform.

Prerequisite

When you purchase a license for the microservice, you are assigned a **Request URL** to access SAP DQM micro services. The URL is unique to your data center on SAP Cloud Platform and is required to activate integration with the SAP Cloud for Customer. You can access this URL under *SCP Cockpit* > *Services* > *Data Quality Services* > *Application URL*. Copy *Address Cleanse URL* under *Available endpoints* to a notepad on your local machine. You assign this URL when configuring the integration in your cloud for customer system.

i Note

Do not use the URL under *Available endpoint when using client certificates*.



Configuration in SAP Cloud Platform

Generate OAuth 2.0 Client IDs and Token Values to configure in SAP Cloud Platform. For detailed documentation on generating OAuth 2.0 certificate to SAP Cloud Platform, see OAuth 2.0 Authorization.

Steps for Configuring Microservice for Address Type Ahead Search in SAP Cloud for Customer

1. Enable the scoping question as follows:
    1. Go to *Business Configuration* > *Implementation Projects*.
    2. Select your project and navigate to *Edit Project Scope* > *Questions* > *Built in Services and Support* > *Business Environment* > *Addresses and Languages*.
    3. Select the scoping question: *Do you want to use the address type ahead search functionality?*
2. Configure Mashup Web Services
   There are two mashup web services need to be configured.
    1. *DQM Address Type Ahead* mashup service:
        1. Go to *Administrator* > *Mashup Web Services*.
        2. Select the pre delivered service (SW00095) and *Copy* the template to create new service.

           > **Note**
           >
           > Under *General Information*, retain the *Service Name* and *Description* as it is.

        3. Under *Service Information*, update the necessary fields as:
            - *Authorization Method*: OAuth

- *HTTP Method*: Post
- *URL*: Maintain the Token Endpoint URL that is provided in OAuth settings from SAP Cloud Platform.
- Enter the *Consumer Key* and *Consumer Secret* that you have created during OAuth settings.

> **i Note**
>
> Ensure that you retain the other fields as it is.

4. Click *Save* and *Activate*.

2. *DQM Address Type Ahead Endpoint* mashup service:
   1. Go to *Administrator* > *Mashup Web Services*.
   2. Select the pre delivered service (SW00094) and *Copy* the template to create new service.

   > **i Note**
   >
   > Under *General Information*, retain the *Service Name* and *Description* as it is.

   3. Under *Service Information*, update the necessary fields:
      - *Authorization Method*: OAuth
      - *HTTP Method*: Post
      - *URL*: Maintain the *Address Cleanse URL* from *Available endpoints* list in SAP Cloud Platform.

   > **i Note**
   >
   > - Do not use the URL from *Available endpoints* when using client certificates list in SAP Cloud Platform.
   > - Ensure that you retain the other fields as it is.

   4. Click *Save* and *Activate*.

> **i Note**
>
> Maintain only one mashup for Token and Service. Multiple mashups for the same will create inconsistency.

Billing for DQM Service for Address Type Ahead Search

The street address type ahead search is enabled by scoping question for each SAP Cloud for Customer to SAP DQM micro service call. The following considerations apply as part of the address type ahead search service:

- Street address type ahead search is considered as two different transactions by DQM service.
- Street and post office box addresses within the same address type ahead search transaction are considered separately.

For detailed information on billing for these API calls, refer to Billing/Usage Information (Per API Call).

Additional Information

For detailed information on enabling and configuring DQM Microservices, see the documentation under Data Quality Management, microservices for location data (DQM microservices).

16.6 Organization and Territory Assignments

Alignment to org. units helps to cluster accounts within your sales organization. Further, use territories to further distribute accounts within specific sales territories.

Account Sales Data [page 716]
Sales data maintenance for accounts.

Territories for Accounts [page 718]
Enable sales analysis based on sales territories.

16.6.1 Account Sales Data

Sales data maintenance for accounts.

Accounts are often used within the purview of an org. structure. Therefore, create the necessary sales data required for accounts within the org. structure of your company. Use territories, distribution channels and divisions for accounts.

- Assign one or more sales organizations, distribution channels and divisions to an account.
- Use the sales area assignment to determine sales data in business transactions.
- Configure access restrictions based on sales area.

Sales Arrangement Data: In addition to the sales data, assign attributes for to an account, attributes for sales arrangement in the account quick create dialog screen. SAP ERP offers sales arrangement data as mandatory for account creation. This feature in your cloud solution allows for a seamless replication of account details to your SAP ERP system. Also, since sales arrangement data is available during account creation, this data is available for you to manage account restrictions too.

16.6.1.1 Configure Sales Data

Administrators can configure account sales data that includes distribution channel, division, sales area territory hierarchy level, price lists and price groups.

Administrators can configure account sales data.

Sales Area Distribution Channel

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *Distribution Channel* to maintain distribution channels for your company. Additionally, assign the distribution channel to the org. structure for your company using the work distribution maintenance.

Division

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *Division* to define divisions in your company.

Sales Area Territory Hierarchy Level

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *Sales Territory Hierarchy Level* to create the root sales territory and other territory levels.

Related Information

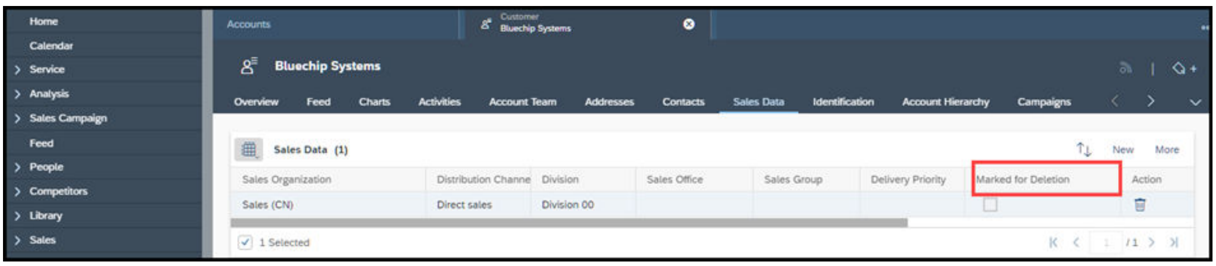
For more information, see Configuring Divisions.

16.6.1.2 Configure Workflows to Notify on Changes to Sales Data

Administrators can use the new workflow object for *Sales Data* to trigger workflows when modifications are done to sales data of an account. For example, an account is assigned to a new sales area and you need to inform users about this change. Create workflow rule to trigger a notification or send an e-mail to the account owner or the territory team.

16.6.1.3 Sales Areas Marked for Deletion

If a sales area from SAP ERP is set as *Marked for Deletion* and the same sales area is assigned to a transaction in SAP Cloud for Customer, then the system displays a warning message to that effect.



16.6.1.4 Restrict Sales Data Maintenance for Account and Employee Records

Restrict sales data maintenance for accounts and employees using divisions. The field *Distribution Channel* has been changed to *Sales Data Restriction*.

The tab *Distribution Channel* is renamed to *Sales Data Restriction*. The tab is only visible for org. units with the Sales Organization function.

If values are entered in the *Distribution Channel* field, the system restricts the assignment of a distribution channel and division to the sales organization in the sales data of an account or employee. The restrictions are maintained in OrgUnit, in the *Sales Data Restriction* tab.

> i Note
>
> You can still modify sales data in transactions.

> i Note
>
> In the past release, only the *Distribution Channel* was supported.

16.6.1.5 Restrict Sales Data Maintenance for Sales Organizations

Maintain sales data restrictions for your sales organization by restricting division and distribution channel values. If the restrictions are maintained, the applicable to customer and employee sales data maintenance.

16.6.2 Territories for Accounts

Enable sales analysis based on sales territories.

Following possibilities exist to define accounts based on territories:

- Assign accounts to sales territories to define responsibilities and grant authorizations.
- Assign an account to more than one sales territory.
- Realign territory structure to adjust to changing sales markets.
- Maintain rules based on account attributes for rule based determination of territory in accounts and in business documents such as leads and opportunities.
- Analyze sales on territory dimension.

16.6.2.1 Configure Territory Based Determination

Administrators can assign territory and create rules for territory based determination.

Go to *Administrator* › *Sales and Campaign Settings*, you can select:

- *Territories* to define new territories and assign accounts to them.
- *Define Rules for Territories Realignment* to define new rules for a realignment run
- *Realignment Run* to define schedule a realignment run and even define new rules for territory based alignment for accounts.

16.6.2.2 Configure Sales Territory Hierarchy Level

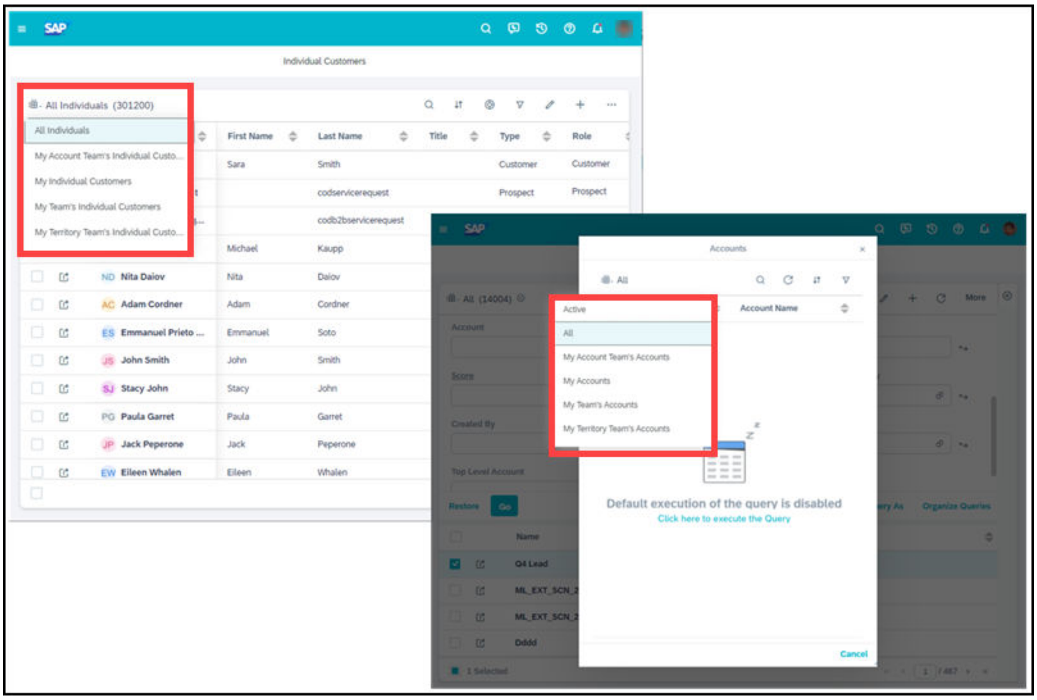
Administrators can configure territory hierarchy levels.

Go to *Business Configuration* › *Implementation Projects*. Select your project and navigate to *Open Activity List* › *Fine-Tune* › *Territory Hierarchy Level* to maintain territory hierarchy levels.

16.7 Search Accounts

Account and *Individual Customer* dataset queries are available on Value helps.

Your administrator can enable this feature via adaptation.



16.8 Embed Direct Links to Object Instances of Customers

Embed direct links to instances of accounts, contacts or individual customers in workflow e-mail templates to enable users to directly access the object instead of navigating in the system.

For detailed information on the feature, see Predetermining URLs for Direct Navigation.

16.9 SAP ERP Customer Cockpit

The customer cockpit is a central point of information for sales-relevant data about a customer, such as address and communication data, key figures, and contact persons.

If your cloud system is integrated with SAP ERP system, you can launch the ERP cockpit (*Accounts* > *Sales Data* > *ERP Cockpit*) directly from an account sales area view and edit transactions in ERP.

16.9.1 Configure SAP ERP Customer Cockpit

Administrators can configure SAP ERP customer cockpit.

Perform the following steps to configure the customer cockpit:

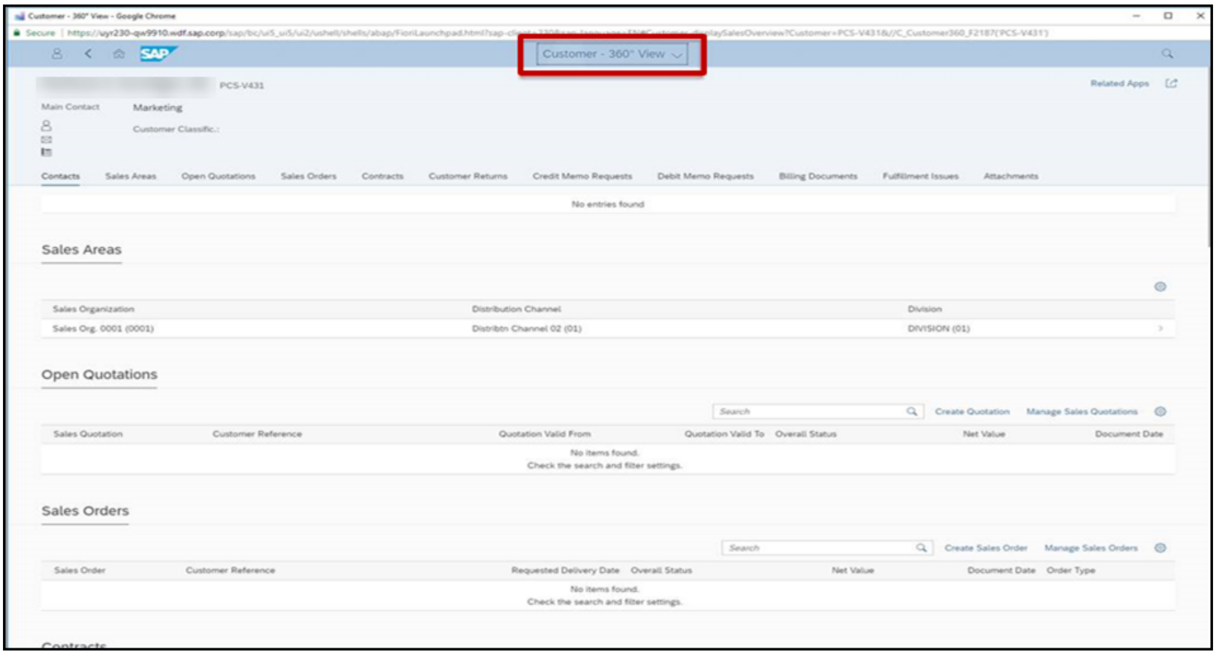
1. Search for ERP Account cockpit - *SM00105* under *Administrator* > *Mash-up Authoring*
2. Update the URL to connect to the SAP ERP system.
    1. Log in to ERP system SICF and execute *ldai2q5e.wdf.sap.corp* .
    2. Launch the ERP customer cockpit from your cloud for customer account to quickly edit transactions in SAP ERP system.

16.10 Account 360 Overview of Customer in SAP S/4HANA

Launch the SAP S/4HANA Customer 360 app from your system and get a complete overview of your customers in S/4HANA backend system.

Launch this app in the *Overview* tab for customers under *Actions* > *Customer 360 Overview* . Use this connection to your S/4HANA system to:

- Review aggregated sales data over a period of time.
- Navigate to application areas such as Manage Sales Orders, Quotations, Sales Contracts, and Resolve Sales Order Issues and use these features
- View customer returns, credit memos, debit memos, and billing documents.



16.10.1 Configure Account 360 Overview

Administrators can configure the connection to launch 360 overview for customers in your SAP S/4HANA system.

Under *Administrator* > *Mashup Authoring*, look for URL mashup with description *S/4 HANA 360 Object Page* and replace the dummy URL with the URL for your SAP S/4HANA system.

See the following examples of the URL that you must enter:

1. URL with Fiori (If you want to access Account 360 using Fiori Launchpad)
   `https://uyr230-qw9910.wdf.sap.corp/sap/bc/ui5_ui5/ui2/ushell/shells/abap/FioriLaunchpad.html?sap-client=230`
2. URL with Client (If you want to access Account 360 using a client)
   `https://cc2-715.wdf.sap.corp/ui?sap-client=715`
3. URL without client (If you want to access Account 360 without using a client)
   `https://vsldev.vslhana.com:9001/sap/bc/ui2/flp`

Once you update the URL in the mashup, the implementation generates the FINAL_URL to access the Customer 360 overview by adding the LANGUAGE and CUSTOMER instance details based on the information in Cloud for Customer.

16.11 Social Media Profiles

Maintain social media profiles for your accounts and contacts.

- Create social profiles of individual customers and contacts.
- Track both inbound and outbound social media interactions from the *Social Media Message* tab.
- In **Cloud for Service**, use social media channels to work with customers.

For more information, see Enabling Social Media Features.

16.11.1 Configure Social Media Features

Administrators can configure social media to enable collaboration with customers and partners.

Your SAP Cloud for Social Engagement solution is delivered with the social media features available but hidden. As an administrator, you need to enable the social media features of the solution using *Adaptation Mode*.

1. To enter adaptation mode click *Adapt*, then choose *Enter Adaptation Mode*.
2. Navigate to each of the screens listed below and make the screen edits indicated for each.
    1. When you're on the screen you want to edit, click *Adapt*, then choose *Edit Screen*.
    2. Add or remove elements on the *Screen Layout* tab.
    3. Save your changes.
       You can test your changes before publishing.
    4. When you're finished with your changes you can publish them to make them visible to all users.

Screens to Edit for Enabling Social Media Features

Screen	Navigation	Edits	Notes
Service and Social Settings	*Administrator* > *Service and Social Settings*	Under *Sections*, check the box for *Social Media* to make it visible.	You need to make this change before you can set up any social media channels in your system.
Individual Customers	*Customers* > *Individual Customers*	Under *Fields*, check the box for *Social Media Profile* to make that column visible in the list.	

Screen	Navigation	Edits	Notes
Individual Customer	*Customers* > *Individual Customers* then choose a customer to open the details screen	• Under *Sections*, check the box for *Social Information* to make it visible. With *Social Information* selected, under *Fields*, ensure the boxes are checked for *Facebook* and *Twitter*. • Under *Sections*, select *Tabs*, then in the lower list, select *Social Media Messages* and *Social Profiles*.	You need to have at least one customer record in the system before you'll be able to adapt the details screen.

Related Information

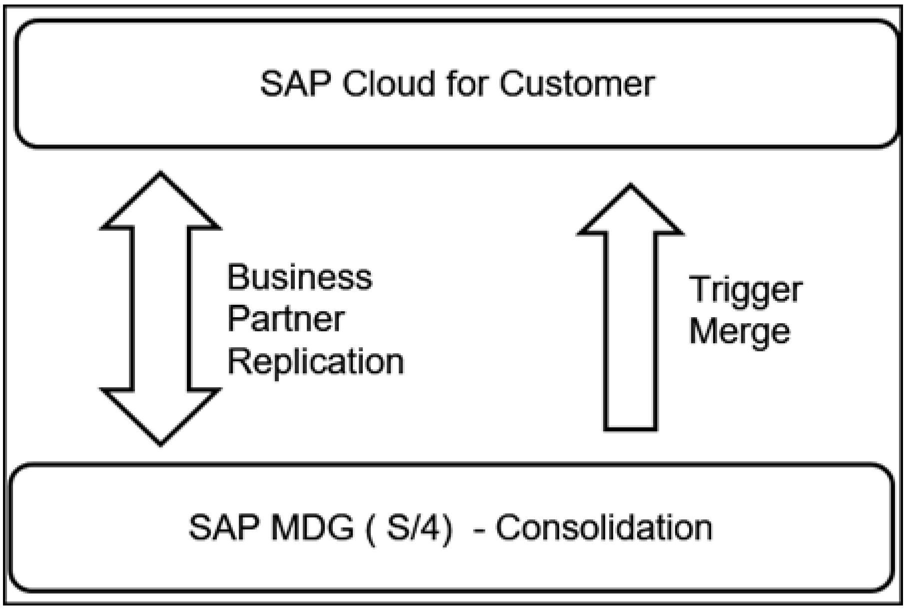
Adapting the User Interface

16.12 Prepackaged Integration with SAP MDG

An out-of-the box bi-directional replication with SAP Master Data Governance (MDG) is now available for use in business partner merge scenarios.

Following scenarios are supported:

- In the event of a business partner cleansing and consolidation process in SAP MDG, a merge case is created in SAP Cloud for Customer.
- SAP Cloud for Customer executes merge process and automatically marks the oldest available record (using creation date) as golden record.



16.13 Integration with LinkedIn Sales Navigator to Access Relationships and Key Contacts

Find a new section - *LinkedIn Sales Navigator* in the *Overview* tab and *Contacts* tab for accounts and contacts and in the buying center. Click *Sign-In* in this section to navigate to linkedIn to find relationships and key contacts. Use the rich LinkedIn profile data to record activities with prospects and customers, view recent activities of your contacts and find a topic of interest to help you start a conversation with your prospects.

The LinkedIn Sales Navigator uses basic information such as first name, last name, email address, job title, and company name to find the correct company or person on LinkedIn. You can also perform a search if you are unable to find appropriate contacts or customers. For your contacts, the *Save as Lead* option in the widget allows you to save the person as a lead in the LinkedIn Sales Navigator. Such leads are not recorded in SAP Cloud for Customer. In addition to basic information mentioned above, there is no further data exchange between SAP Cloud for Customer and LinkedIn.

To use this feature, you need to:

- Use a standard LinkedIn account.

> **i Note**
>
> If you have signed in to LinkedIn with a different account, you are automatically signed in with that account. To re-login with the standard account, first clear your previous browsing cookies.

- Enable browser cookies:
  - For Google Chrome, go to *Settings* > *Advanced* > *Privacy and security* > *Content settings* > *Cookies* > *Allow* and add **`[*.]linkedin.com`**
  - For Internet Explorer, go to *Internet Options* > *Security* > *Trusted sites* > *Sites* and add **`http://linkedin.com`**

- Select the relevant mashup using personalization.

16.13.1 Configure LinkedIn's Sales Navigator

Administrators can enable Sales Navigator to allow users to look up LinkedIn information of an account or a contact.

> **Note**
>
> Sales Navigator Enterprise licenses are required from LinkedIn to use this feature.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Communication and Information Exchange* > *Integration with External Applications and Solutions* > *Integration with LinkedIn Sales Navigator* to find the corresponding scoping question.

16.14 Accounts Offline

This topic presents an overview of features supported for accounts in offline mode. Accounts create, edit and display is supported in the offline mode.

> **Note**
>
> - All Related Activities of Accounts are not downloaded.
> - In offline mode, newly created accounts show up with their temporary IDs when used in other transactions. The details are resolved properly once you synchronize and the entries are created online.

CONTACTS

Offline Scope

			Create Screen		Detailed View	
Tab	**Section**	**Field**	**Create**	**Default**	**Display**	**Edit (directly/ via actions/via navigation)**
Overview	Header Fields	Status			Y	Y
		Role	Y	Y	Y	N
		Name	Y	N	Y	Y
		Additional Name	Y	N	Y	Y

			Create Screen		Detailed View	
Tab	Section	Field	Create	Default	Display	Edit (directly/ via actions/via navigation)
		Additional Name 2			Y	Y
		Additional Name 3			Y	Y
		Prospect			Y	Y
		Role	Y	Y	Y	Y
		Country/ Region	Y	N	Y	Y
		PO Box			Y	Y
		PO Box ad-dress			Y	Y
		PO Postal Code			Y	Y
		Time Zone			Y	Y
		C/O			Y	Y
		address Line 1			Y	Y
		address Line 2			Y	Y
		House Num-ber	Y	N	Y	Y
		Street	Y	N	Y	Y
		address Line 4			Y	Y
		address Line 5			Y	Y
		City	Y	N	Y	Y
		State	Y	N	Y	Y

			Create Screen		Detailed View	
Tab	**Section**	**Field**	**Create**	**Default**	**Display**	**Edit (directly/ via actions/via navigation)**
		Postal Code	Y	N	Y	Y
		Primary Contact			Y	Y
		Phone	Y	N	Y	Y
		ABC Classi-fication	Y	N	Y	Y
		Fax	Y	N	Y	Y
		Email	Y	N	Y	Y
		WebSite	Y	N	Y	Y
		Owner	Y	N	Y	Y
		Language	Y	N	Y	Y
		Mobile	Y	N	Y	Y
		Top Level Owner			Y	N
		Legal Form			Y	
		Industry	Y	N	Y	Y
		Active Pipe-line			Y	N
		Permission			Y	N
		YTD Reveue			Y	N
		Account ID	Y	N	Y	N
		External ID			Y	N
		External System			Y	N
		Created on			Y	N
		Created By			Y	N

			Create Screen		Detailed View	
Tab	Section	Field	Create	Default	Display	Edit (directly/ via actions/via navigation)
		Changed on			Y	N
		Changed by			Y	N
		Duns			Y	N
		Order Block			Y	N
		Delivery Block			Y	N
		Billing Block			Y	N
		Sales Su-port Block			Y	Y
		Notes			N	N
		Prospect In-dicator	Y	Y		
		Parent Ac-count	Y	N		
		Country/ Region	Y	N		
		Mobile	Y	N		
		Duns Num-ber	Y	N		
		Contact Per-mission	Y	N		
		Language	Y	N		
		Extension Fields	Y	N		
Sales Data	Sales Data	Sales org			Y	NA
		Distribution Channel			Y	NA
		Division			Y	NA

			Create Screen		Detailed View	
Tab	Section	Field	Create	Default	Display	Edit (directly/ via actions/via navigation)
		Sales Office			Y	NA
		Sales Group			Y	NA
	Details	Sales Organization			Y	N
		Distribution Channel			Y	N
		Division			Y	N
		Sales office			Y	Y
		Customer Group			Y	Y
		Delivery Priority			Y	Y
		Order Block			Y	Y
		Delivery Block			Y	Y
		Billing Block			Y	Y
		Sales Support Block			Y	Y
		Sales Group			Y	Y
		Incoterms			Y	Y
		Incoterm Location			Y	Y
		Currency			Y	Y
Activities	Appointment	Subject			Y	Y
		Status			Y	Y
		Start Date/ Time			Y	Y

			Create Screen		Detailed View	
Tab	Section	Field	Create	Default	Display	Edit (directly/ via actions/via navigation)
		Owner			Y	Y
		Primary Contacts			Y	Y
	Tasks	Subject			Y	Y
		Status			Y	Y
		Start Date/ Time			Y	Y
		Owner			Y	Y
		Primary Contacts			Y	Y
	Phone Calls	Subject			Y	Y
		Status			Y	Y
		Start Date/ Time			Y	Y
		Owner			Y	Y
		Primary Contacts			Y	Y
	E-Mails	Subject			N	N
		Status			N	N
		Start Date/ Time			N	N
		Owner			N	N
		Primary Contacts			N	N
Opportuni-ties	Opportuni-ties	Name			Y	Y
		Close Date			Y	Y

			Create Screen		Detailed View	
Tab	Section	Field	Create	Default	Display	Edit (directly/ via actions/via navigation)
		Sales Phase			Y	Y
		Owner			Y	Y
		Status			Y	Y
		Progress			Y	Y
Contacts	Contacts	Name			Y	Y
		Job Title			Y	Y
		Function			Y	Y
		Department			Y	Y
		Phone			Y	Y
		Fax			Y	Y
Addresses	Addresses	Address			Y	Y
		Phone			Y	Y
		Fax			Y	Y
		Main			Y	Y
		Action			Y	Y
Relation-ships	Relation-ships	Relationship Type			Y	Y
		Business Partner			Y	Y
		Address			Y	Y
		Action			Y	Y
Visits	Visits	Subject			Y	Y
		Status			Y	Y
		Owner			Y	Y

			Create Screen		Detailed View	
Tab	Section	Field	Create	Default	Display	Edit (directly/ via actions/via navigation)
		Primary Contacts			Y	Y
		Phone			Y	Y
Promotions					N	NA
Sales Orders					N	N
Product List					N	NA
Charts					N	NA
Service Requests					N	N
Attachments					N	NA
Account Team					N	N
Account Hierarchies					N	NA
Leads					N	N
Campaign					N	NA
Sales Quotes					N	N
Visit Hours					N	NA
Installed Base			N		Y	N
Marketing Attributes					N	N
Service contracts						NA
Sales Territory					NA	NA

			Create Screen		Detailed View	
Tab	Section	Field	Create	Default	Display	Edit (directly/ via actions/via navigation)
Feed					NA	NA
Target Group					NA	NA
Sales leads					NA	NA
Registered Products			N		Y	NA
Recent Orders					NA	NA
Groups					NA	NA
Survey results					NA	NA
External Followup Document					NA	NA

Offline Action

Object	Global / Tab	Actions	Offline Availability
Accounts	Activities (Appointments, Tasks, Phone Calls)	New	Y
	Opportunities	New	Y
	Contacts	New	Y (currently not supported.)
	Addresses	New	Y (currently not supported.)
	Relationships	New	Y (currently not supported.)
	Visits	New	Y
	Global	Block	N
		Set to Obsolete	N
		Derive Territory	N
		International Version	N

16.15 Accounts FAQs

16.15.1 What are the conditions under which the customer merge can fails?

Customer merge can fail under very few conditions, primarily in case of the customer being open in edit mode by another user (locked for editing) or in case there are any PDI validations that result in failure.

16.15.2 What are the conditions under which transaction re-parenting can fail?

Transaction re-parenting from duplicate to master record can fail for many reasons. The primary reasons can be as follows:-

1. Transaction status does not allow any modification, for example, a service ticket that is in status *Confirmed* or *Completed* cannot be modified on the user interface. Hence a confirmed service ticket cannot be re-parented during merge process.
2. Another case could be that the transaction is in-approval status like sales quote in approval.
3. Validation in SAP Cloud Applications Studio fails and results in error.
4. Transaction was locked by another user during the merge process and hence could not be modified.

16.15.3 Where can I find the list of transactions which could not be re-parented, if merge status is 'Merge Completed - Realignment Failed'?

Navigate to the merge details view and click on the *Transactions* screen. This lists the transactions along with transaction type which could not be re-parented.

16.15.4 Where can I see the reason why the merge has failed for a particular transaction?

Navigate to the merge details view and click on the *Result Log* screen. You will see a *Results* table. Select the entry with the status *Error* and click on *Application log ID*. In the application log view , click on *Results Log* screen. This view lists all the errors which prevented the customer merge or transaction re-parenting.

16.15.5 What should I do when the merge has failed (status as 'Merge Failed’ or ‘Merge Completed - Realignment Failed’.

Navigate to the *Data Cleansing* work center and customer merge data set. Select the merge instance that has failed and then click on *Initiate*. You will observe that the status will change to *Merge In Process*. The system will retry merging the customer instances.

17 Contacts

Use contacts to represent the relationship between contacts and accounts. Contacts can be maintained only for corporate accounts.

> **i Note**
>
> All accounts, customers, employees, contacts, partners and competitors are considered as business partners in the system. Therefore, all functions that are common to business partners are applicable to them.

Contacts are persons that have a relationship with a corporate account and may be involved in business processes like activities, orders, opportunities, and so on. You can maintain the details for contacts by creating a contact or using the relation between a contact and an account. You can define a contact as sales area dependent and assign them to multiple accounts. You can also configure custom relationships between accounts and contacts in your SAP Cloud for Customer system.

Additionally, use contacts to:

- Present a 360° view of the relationship that your organization has with a specific contact
- Create the following for contacts:
  - Phone calls
  - Appointments
  - Tasks

- E-mails
- Social media messages

- Set a status for a contact. For example, you can set a contact to *Active* or you can *Block* a contact.

17.1 Scope and Configure Contacts

Business configuration fine tuning for contacts

17.1.1 Enable Contacts

Administrators can enable contacts by scoping **Account Management**.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Sales* > *Account and Activity Management* and select *Account Management*.

17.1.2 Enable Customer Merge

Administrators can enable customer merge for accounts and contacts.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *General Business Data* > *Business Partners* > *Handling of Business Partners* and select the scoping question: *Do you want to enable accounts merge?*

> i Note
>
> SAP does not recommend configuring customer merge if your customer master records are replicated with an external system (that is SAP ERP and SAP CRM integration is scoped). This is because a merge execution does not trigger a corresponding replication in the external system which may give rise to data inconsistency.

In order to initiate merge, you must have the *Data Cleansing* work center view assigned to user. In this work center view, click on *New* to trigger a manual merge. You can select a maximum of three customer records - one master and two duplicate records to be merged. Note that this action can be initiated only if the merge object is in one of the following statuses:

- Not Started
- Merge Failed
- Merge Completed
- Realignment Failed

For detailed troubleshooting information for customer merge, see the section - **Customer Merge FAQs**.

Related Information

Merging Marketing Permissions [page 704]
When you're merging corporate accounts, individual customers or contacts, the system also merges the related marketing permissions. But there are things to keep in mind to interpret the merged data correctly afterwards.

17.1.3 Configure Realignment of Closed Transactions of Merged Records

By default, the account merge fetches all open transactions of merged or obsolete records. If you need to also fetch closed transactions, you must maintain the required configuration.

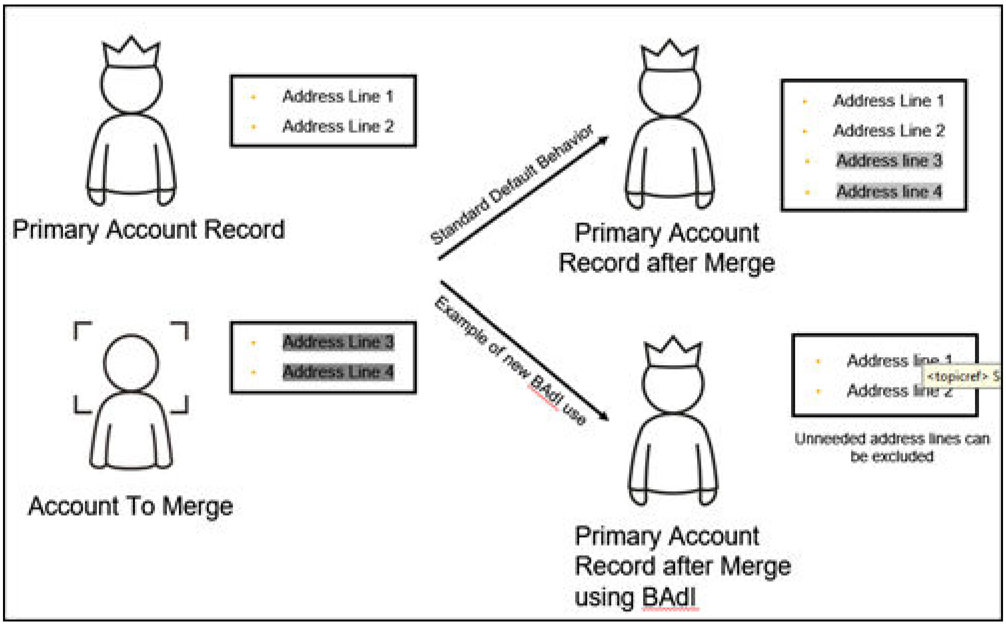
Administrators can maintain the configuration to include or exclude closed transactions of obsolete records in account merge. To do this, go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *General Business Data* > *Business Partners* > *Handling of Business Partners* > *Business Partner Merge* and select the scoping question: *Do you want to enable enhanced document realignment during account merge?*

17.1.4 Implement Business Add-In To Control Copying Address Lines During Merge

Use the new business add-in in SAP Cloud Application Studio to turn off address copy from duplicate to the master record during the merge process. With this BAdI, you can also control what address lines of obsolete records be copied to or excluded from the primary record.

The method `CONTROL_MERGE_LOGIC` is included in the enhancement option - `CustomerMergeControl` In this method, set the `SkipAddressCopyToMaster` = *True*.

- Import Parameter: InputData of type BadiCustomerMergeControlInput
- Export Parameter: BadiCustomerMergeControlResult



17.1.5 Differentiate Between Standard Change and Merge Context

Administrators can now differentiate between updates to an account triggered by merge or by standard change process. This differentiation can be implemented using custom logic such that the custom logic is executed only for change instances occuring due to merge.

Use business partner utility - `AP.FO.BusinessPartner.Globalnamespace BusinessPartnerUtilities.IsBusinessPartnerMerge`o implement this custom logic. This utility is provided for the standard Business Partner business object provided by SAP and is available in SAP reuse library.

17.1.6 Configure Contact Duplicate Check

Administrators can configure duplicate check for contacts.

Use datasource `CONTACT_DUPLICATE_CHECK` (service name - contactduplicatecheck) to check for duplicates before creating contacts from an external system.

17.1.7 Configure Basic Contact Data

Administrators can configure basic contact data.

Go to *Business Configuration* › *Implementation Projects*. Select your project and navigate to *Open Activity List* › *Fine-Tune* › *Contacts*, and maintain the following for your business requirements:

- **Departments** (name of department of a contact in the business partner's company)
- **Functions** (that the contact is responsible for)
- **VIP Contacts** (Mark contacts as VIP Contacts)

17.1.8 Configure Migration of Contact Addresses

Administrators can migrate contact addresses.

Go to *Business Configuration* › *Implementation Projects*. Select your project and navigate to *Open Activity List* › *Fine-Tune* › *Migration of Personal Addresses for Contacts*, to migrate personal addresses for contacts. For detailed information, see the documentation in the system.

17.1.9 Configure Contact to Employee Assignment

Administrators can configure contact to employee assignment. Directly assign contacts to employees in the *Contacts* detailed view. You can also assign a main employee responsible for the contact. The standard query *My Contact* has been enhanced to consider the direct contact-employee assignment.

The following configuration must be maintained to enable the employee - contact assignment:

- To enable access restrictions based on contact employee assignment, go to *Business Configuration* › *Implementation Projects*. Select your project and navigate to *Edit Project Scope* › *Questions* › *Built-In Services and Support* › *User and Access Management* and select the scoping question: *Do you want to restrict access rights for contacts using Contact Team Relationship?*
- If the above scoping question is enabled and if the business role is configured to have access restrictions for contacts, then all the access rules with employee reference will always refer to contact team assignment for contact employee restrictions.
- All other access rule references will be derived from the account assigned to the contact (for example territory, sales area and so on.).

17.1.10 Configure Relationships Including Buying Center

Administrators can configure relationships including buying center.

Go to *Business Configuration* › *Implementation Projects*. Select your project and navigate to *Open Activity List* › *Fine-Tune* › *General Business Partners*.Under *General Business Partners*, define the possible relationships between business partners in your system. The standard solution provides relationship codes that you can use. Choose to define new relationship codes or even disable the standard codes. Note that certain standard relationship codes cannot be deactivated.

Enter a code for and the name of the relationship along with a description for both directions of the relationship, such as Has Contact for the relationship of business partner 1 with business partner 2 with business partner 1 being an organization. Depending on the relationship type, choose whether the business partner is a person or an organization, and select the business partner roles that are permitted for each of the business partners in the relationship.

Assign Relationships to Party Role in Party Role Definition

You can also link the relationships you define to party role in involved party. Do this, for example, if you want to automatically determine the party role in documents like lead, opportunity, sales quote, activities based on specific relationship.

Example: define a new custom Party Role “Reseller” that has the relationship “Has an OEM” assigned to it.

Sales Area Based Relationships

Configure sales area dependent relationships that are evaluated during transactions involving the accounts.

17.1.11 Configure Buying Center

Administrators can configure buying center based on business partner and buying center relationships..

Enable Buying Center based on Business Partner Relationships

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Sales* > *Account and Activity Management* > *Account Management* and select the scoping question: *Do you want to enable buying center based on business partner relationships?*

Enable Buying Center based on Buying Center Relationships

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Sales* > *Account and Activity Management* > *Account Management* and select the scoping question: *Do you want to enable buying center based on buying center relationships?*

17.1.12 Configure Attributes

You can define attributes or attribute sets and make them visible for users in the advanced searches for accounts, contacts, and individual customers.

Define Attributes and Attribute Sets

Administrators can configure attributes.

Go to *Administrator* > *Sales and Campaign Settings* > *Attributes* to view and configure attributes or attribute sets.

> **Note**
>
> If your solution is integrated with SAP Customer Relationship Management (SAP CRM), then you can only view, but not create or modify, attributes or attribute sets from this screen.

As you maintain attributes, you can configure their characteristics (for example, whether they are mandatory), their value list and their descriptions in one or more languages. As you maintain attribute sets, which represent combinations of attributes, you can select the *Person-Relevant* checkbox to make the attributes visible in the *Attributes* tab of the *Contacts* work center view. You can also select the *Organization-Relevant* checkbox to make them visible in that tab on the *Accounts* or *Individual Customers* work center views.

Enable Search using Attributes

Provided if you personalize your solution to make it visible, you can enable your users to access the *Attributes* field within the advanced search of accounts, contacts and individual customers and maintain conditions there that influence the corresponding search behavior. Once this field is visible and your users select it to maintain conditions, they can specify a combination of attribute sets, attributes, operators and values – for example, Employee Attributes, Region, Equal, and North America, respectively – to apply to the attributes search. Users can also specify additional attribute conditions with the logical operator OR. Once these parameters have been saved, users can apply the associated conditions as an advanced search query to find business partners with corresponding Attributes, and to display them within the attributes tab of the work center view of the associated business partner.

Display in Account Summary

From the item details of an account, when you choose the [Summary] function, Attributes for the account now appear within the resultant account summary.

i Note

This enhancement only becomes available once you select *Administrator* > *Form Template Maintenance* and then choose the *Account Summary* form template and revert to the most recent version.

Access Restrictions

You can configure the business roles in your solution to specify business access restriction BUSINESS_ATTRIBUTE_ASGNM_READ, thereby making attributes read-only for the associated business users

Attribute Data Source

You can use the new report Business Partner with attribute assignment, whose technical name is `CODBUSATTRBPB_Q0001`, to specify search criteria related to Attributes and to find corresponding business partners. Within this report, you can also right-click on the name of a business partner, then choose *Export All Account* and Contacts to New Target Group, to create a target group for the associated accounts and contacts.

Use in Analytics

To drive analytics in relation to attributes, you can use the following new data sources:

Data Sources for Attributes

Data Source ID	Data Source Name	Description
`CODBUSATTRBPB`	*Business Partner with Attribute Assignment*	Shows all Attribute values assigned to the reference business partners.
Example CODBUSATTRGENB	*Attribute Assignment*	Contains all Attributes values assigned to the reference business objects.

17.1.13 Configure Marketing Permissions

Administrators can configure marketing permissions. With the communication categories, you can specify how often a customer can be contacted during a certain period of time.

In the *Marketing Permissions* fine-tune activity, you maintain your communication categories and the communication channels for countries/regions with an explicit opt-in. These settings are required to track whether your customers opt-in or opt-out for a specific communication channel.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* and then select the *Marketing Permissions* activity from the activity list.

1. Maintain Communication Channels for Countries/Regions with an Explicit Opt-In:

   > ⚠ Caution
   >
   > It's the responsibility of your organization to comply with national legislation regarding data protection and the provision of marketing materials. Therefore, administrators must configure the solution for each country/region in which, or each customer with whom, your organization intends to conduct marketing activities and, to the extent legally required, make use of the option to store documents such as opt-in or opt-outs.

   To add a country/region where an explicit opt-in is required, click *Add Row*, enter the country/region and the corresponding communication channel, such as e-mail, letter or fax, and save your changes.
2. Maintain Communication Categories:
   1. To create a communication category, click *Add Row*
   2. Enter a communication category, a description, a limit, and the time frame. With the limit and time frame, you can specify how often a customer can be contacted during a certain period of time. When adding communication categories, we recommend starting with the letter Z
   3. Save your work.

17.1.14 Enable Social Media Features

Expose the hidden social media features available in your solution.

Your SAP Cloud for Social Engagementsolution is delivered with the social media features available but hidden. As an administrator, you need to enable the social media features of the solution using *Adaptation Mode*.

1. To enter adaptation mode click *Adapt*, then choose *Enter Adaptation Mode*.
2. Navigate to each of the screens listed below and make the screen edits indicated for each.
   1. When you're on the screen you want to edit, click *Adapt*, then choose *Edit Screen*.
   2. Add or remove elements on the *Screen Layout* tab.
   3. Save your changes.
      You can test your changes before publishing.
   4. When you're finished with your changes you can publish them to make them visible to all users.

Screens to Edit for Enabling Social Media Features

Screen	Navigation	Edits	Notes
Service and Social Settings	*Administrator* > *Service and Social Settings*	Under *Sections*, check the box for *Social Media* to make it visible.	You need to make this change before you can set up any social media channels in your system.

Screen	Navigation	Edits	Notes
Individual Customers	*Customers* > *Individual Customers*	Under *Fields*, check the box for *Social Media Profile* to make that column visible in the list.	
Individual Customer	*Customers* > *Individual Customers* then choose a customer to open the details screen	• Under *Sections*, check the box for *Social Information* to make it visible. With *Social Information* selected, under *Fields*, ensure the boxes are checked for *Facebook* and *Twitter*. • Under *Sections*, select *Tabs*, then in the lower list, select *Social Media Messages* and *Social Profiles*.	You need to have at least one customer record in the system before you'll be able to adapt the details screen.

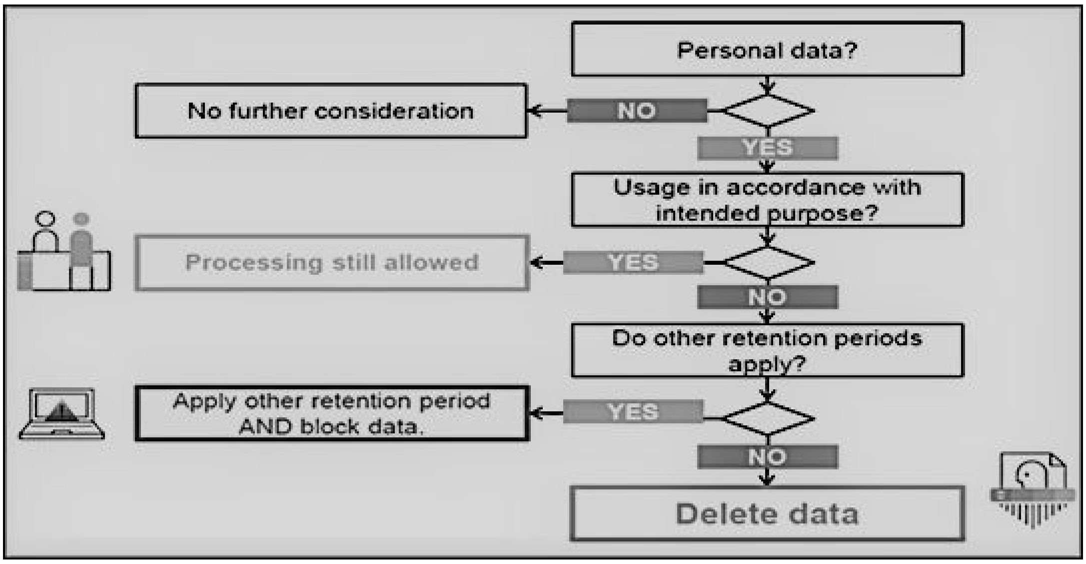
Related Information

Adapting the User Interface

17.1.15 Web Services for Business Partner End-of-Purpose

Determine if you need to retain business partner data in your system when that data has already been deleted from an integrated external system.

The following graphic describes process flow to determine the End-of-Purpose for your business partner data. You can use web services or manually block such business partners in your system using blocking reasons.



Web service interfaces and enhanced interfaces are enabled to support blocking of business partners. Use these services in scenarios where integrated external systems block or delete business partner data in their system landscape. These interfaces allow the external systems to query and maintain the End-of-Purpose for business partners. Since the definition of what constitutes the end-of-purpose for a business partner is subjective to the external system, these interfaces are empty CHECK interfaces to allow you to create custom queries.

For business partners blocked using the below-mentioned interfaces, data cannot be retrieved in list views in Work Centers, value help in related fields, values selectors, analytics, duplicate checks and web service or oData queries in the application.

Web Services for Business Partner End-of-Purpose

Web Service	Description
`II_BUPA_EOP_CHECK_IN`	This interfaces uses enhancement spot `ES_BUPA_EOP_CHECK` to provide a business add-in hook in SAP Cloud Application Studio. Use this hook to create custom query for setting end-of-purpose information.
`II_BUPA_EOP_MAINTAIN_IN`	Use this interface to set the *End-of-Purpose* flag for business partners. If this flag is set, then the business partner data is hidden in corresponding Work Centers and value helps and is not visible to users. Note that the data can be viewed by administrators in the *Data Protection and Privacy* Work Center.

Web Service	Description
`II_BUPA_ERP_EOP_CHECK_IN`	This interface uses enhancement spot `ES_BUPA_ERP_EOP_CHECK` to provide a business add-in hook in SAP Cloud Application Studio. Use this hook to create custom query for setting end-of-purpose information.
`II_BUPA_ERP_REPL_IN`	New attribute has been added in element structure for the existing interface. Set the indicator for business completed / End-of-Purpose flag. If this flag is set, then the business partner data is hidden in corresponding Work Centers and value helps and is not visible to users. Note that the data can be viewed by administrators in the *Data Protection and Privacy* Work Center.

17.1.16 Create Event Notifications for Employee and Partner Contacts

Create an event notification for enabled employee and partner contacts.

Administrators add the event under *Administrator* > *General Settings* > *Event Notification* > *Business object: Employee* > *Create* > *Add* or modify existing events as necessary.

17.1.17 Configure Single Contact Assignment for Account

Assign only one contact per account using the *Is Contact Person For* relationship.

> **i Note**
>
> You can enable this system-wide setting only when your business scenario requires such configuration.

Administrators can configure single contact assignment for account as follows:

1. Go to *Business Configuration* > *Implementation Projects*.
2. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *General Business Partners* > *Maintain Relationships*.
3. Toggle on the *Only One Relationship* option.

17.2 Customer Merge

Customer merge function is available for corporate accounts, individual customers and contacts. This feature allows master data teams to merge duplicate records into a single golden record.

Customer merge helps you to:

- Manage multiple duplicate records for the same customer that may result in inconsistencies in the system.
- Create a golden master record from duplicate records for a single account.
- Re-assign open transactions and closed transactions related to the duplicate record to the golden record (in case there are any open leads or opportunities.

Rules for Transaction Reassignment During Merge [page 749]
During customer merge, system also reassigns transactions for the accounts. The rules determined for transasction reassignment are listed here.

Merge Criteria for Tab Screens [page 750]
Find detailed information on the criteria that needs to be fulfilled for merging tabs account details displayed in the respective tabs in the UI.

Differentiate Between Standard Change and Merge Context [page 755]
Administrators can now differentiate between updates to an account triggered by merge or by standard change process. This differentiation can be implemented using custom logic such that the custom logic is executed only for change instances occuring due to merge.

Status Management in Account Merge [page 700]
Accounts assume various statuses during customer merge. Find detailed information on these statuses in this topic.

Map Obsolete Records to Primary Record For More Insights [page 756]
Use insights from closed transaction history of obsolete records event without including closed transaction history in account merge. This way you can leverage reporting to show complete picture of primary account.

View Result Log [page 756]
The *Result Log* screen displays the application logs that are created by the system for each merge transaction.

17.2.1 Rules for Transaction Reassignment During Merge

During customer merge, system also reassigns transactions for the accounts. The rules determined for transasction reassignment are listed here.

Transaction Reassignment in Account Merge

Transactions	Description
Tickets	All the tickets where duplicate account is an involved party should be reparented to the master account .Tickets which could not be re-parented (because of status or due to any other technical reason) to master should be logged in the Merge BO with appropriated error log entry in the application log so that the user can evaluate the issue
Sales Orders	All the Order where duplicate account is an involved party should be re-parented to the master account .Orders which could not be re-parented (because of status or due to any other technical reason) to master should be logged in the Merge BO with appropriated error log entry in the application log so that the user can evaluate the issue
Leads	All the leads where duplicate account is an involved party should be re-parented (because of status or due to any other technical reason) to the master account .leads which could not be re-parented to master should be logged in the Merge BO with appropriated error log entry in the application log so that the user can evaluate the issue
Activities (Phone Call, Appointments, Tasks and Emails.	All activities where duplicate account is an involved party should be re-parented (because of status or due to any other technical reason)to the master account .appointments which could not be re-parented to master should be logged in the Merge BO with appropriated error log entry in the application log so that the user can evaluate the issue
Social Media Messages	All social media messages attached to social profile of duplicate record will also move from duplicate Record to Master post Merge
Visits	All the visits where duplicate account is an involved party should be reparented (because of status or due to any other technical reason) to the master account .Visits which could not be reparented to master should

Transactions	Description
Opportunities	All the opportunities where duplicate account is an involved party should be reparented (because of status or due to any other technical reason) to the master account .Opportunities which could not be reparented to master should be logged in the Merge BO with appropriated error log entry in the application log so that the user can evaluate the issue
Sales Quotes	All the sales quotes where duplicate account is an involved party should be reparented (because of status or due to any other technical reason) to the master account .Quotes which could not be reparented to master should be logged in the Merge business object with appropriated error log entry in the application log so that you can evaluate the issue

17.2.2 Merge Criteria for Tab Screens

Find detailed information on the criteria that needs to be fulfilled for merging tabs account details displayed in the respective tabs in the UI.

Node Handling during Merge

Nodes	Description
Relationships	• The system will merge the account team and relationship records from the duplicate account into master account. • If a relationship is marked as unique and exists in the master record, the system will ignore the same record in duplicate records. For unique relationships master account will always take precedence. • All non-unique relationships will be copied over from duplicate reccord to the master record. • All relationships copied from duplicate to master will be deleted from the duplicate record. • A new relationship 'Is Replaced' /'Replaces' will be created between golden and duplicate record.

Nodes	Description
Territory	• When tenant is configured to have Single territory per account, territory maintained on the duplicate account shall not be copied to master. Territory on the master will remain as is; territory maintained on the duplicate account will not be copied. • When tenant is configured to have multiple territory per account, all territories assigned to duplicate account will be merged into the dedicated sales territory section of the master account. All territories assigned to duplicate account will be merged into the dedicated sales territory section of the master account. System determined sales territories of the master record will not be modified. The newly merged account (master account) will also have all of the territories of the duplicate account.
Address	• All addresses of the duplicate account will be copied over to the master account. This can be deactivated via Custom Extension, see below • The main address in the master account will remain the main address post merge. • Any selections of address data made on the Attribute Selection tab will be applied to the main address. • In case no address information is maintained in the master record, the main address of the duplicate account will be marked as the main address in the master account post merge.
Notes	The Notes added to duplicate Account will be copied over to Master.
Attachments	All attachments from the duplicate account will be copied over to the master account.
Account Team	The system will merge the account team and relationship records from the duplicate account into master account. If a party role in unique and exists in the master record, the system will ignore the same party role from the duplicate record. For unique party roles master account will always take precedence. Uniqueness check for a party role in account team will consider the sales area and the validity dates check. For example, an account can have 2 owners with the same sales area information but with different validity dates. Though owner is a unique role, the uniqueness check will also consider the sales area and validity dates.

Nodes	Description
Sales Area	All sales area information from the duplicate will be copied over to the master account. If the sales area (Sales org, distribution channel, division) information of the master account also exist in the duplicate account, then the sales area record will not be overwritten, the sales area details maintained for the master record will take precedence.
Social Profiles	If both master and duplicate record have social profile , then copy the social profile from duplicate to master EXAMPLE: • Customer A (Master) has FB Social profile assigned FB_1. • Customer B (duplicate) has Twitter Social profile assigned TW_1 • After the merge A will have a new user profile TW_1. • Social profile linked with customer A will have two User profiles one for FB, and one for TW. • If master record does not have a social profile then the social profile from duplicate will be copied to master record
Marketing Permissions	In general the final result after account merge will be a union of values from all the accounts. In case of conflict the master account wins. • **Case 1:** When all accounts have different marketing permissions assigned for different channels -The master account will have a union of all . • **Case 2** : In case of conflict , the permission value maintained in master account will be retained. The system will also copy notes and attachments
Communication Category	In general the final result after account merge will be a union of values from all the accounts. In case of conflict the master account wins. • **Case 1**: When all accounts have different assignments for different channels -The master account will have a union of all . • **Case 2** : In case of conflict , the permission value maintained in master account will be retained

Nodes	Description
Marketing Attributes	In general the final result after account merge will be a union of values from all the accounts. In case of conflict the master account wins. • **Case 1:** When all accounts have different marketing attributes assigned The resultant account will have a union of all the marketing attributes • **Case 2**: When marketing attributes allows multiple values, there are common marketing attributes but different/common values. The master account will have a union of values. • **Case 3** : In case of conflict , the attribute value maintained in master account will be retained

17.2.2.1 Enable Customer Merge

Administrators can enable customer merge for accounts and contacts.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *General Business Data* > *Business Partners* > *Handling of Business Partners* and select the scoping question: *Do you want to enable accounts merge?*

> **Note**
>
> SAP does not recommend configuring customer merge if your customer master records are replicated with an external system (that is SAP ERP and SAP CRM integration is scoped). This is because a merge execution does not trigger a corresponding replication in the external system which may give rise to data inconsistency.

In order to initiate merge, you must have the *Data Cleansing* work center view assigned to user. In this work center view, click on *New* to trigger a manual merge. You can select a maximum of three customer records - one master and two duplicate records to be merged. Note that this action can be initiated only if the merge object is in one of the following statuses:

- Not Started
- Merge Failed
- Merge Completed
- Realignment Failed

For detailed troubleshooting information for customer merge, see the section - **Customer Merge FAQs**.

Related Information

Merging Marketing Permissions [page 704]

When you're merging corporate accounts, individual customers or contacts, the system also merges the related marketing permissions. But there are things to keep in mind to interpret the merged data correctly afterwards.

17.2.2.2 Configure Realignment of Closed Transactions of Merged Records

By default, the account merge fetches all open transactions of merged or obsolete records. If you need to also fetch closed transactions, you must maintain the required configuration.

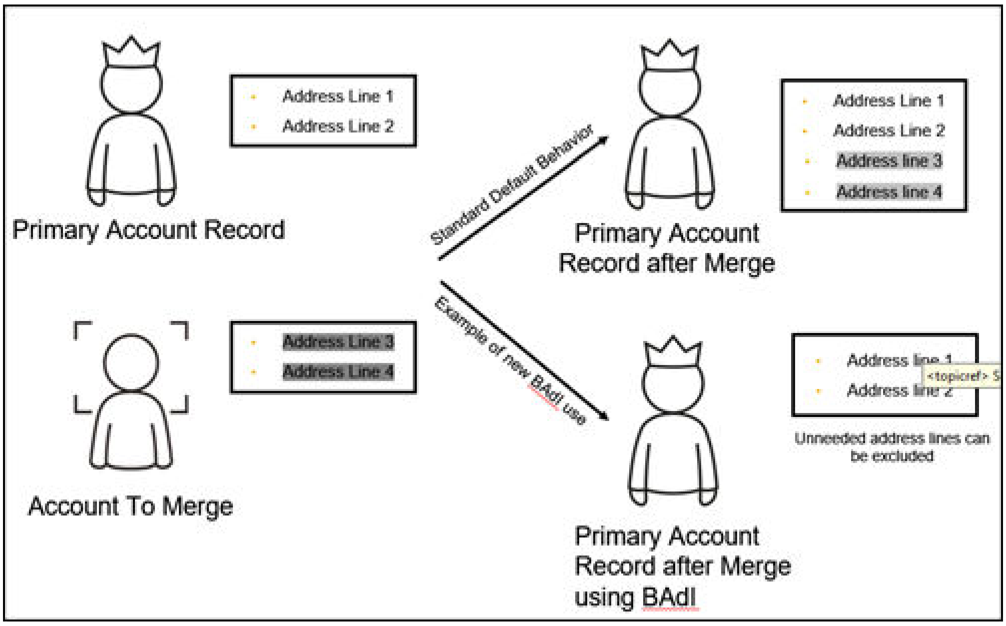
Administrators can maintain the configuration to include or exclude closed transactions of obsolete records in account merge. To do this, go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *General Business Data* > *Business Partners* > *Handling of Business Partners* > *Business Partner Merge* and select the scoping question: *Do you want to enable enhanced document realignment during account merge?*

17.2.2.3 Implement Business Add-In To Control Copying Address Lines During Merge

Use the new business add-in in SAP Cloud Application Studio to turn off address copy from duplicate to the master record during the merge process. With this BAdI, you can also control what address lines of obsolete records be copied to or excluded from the primary record.

The method `CONTROL_MERGE_LOGIC` is included in the enhancement option - `CustomerMergeControl` In this method, set the `SkipAddressCopyToMaster` = *True*.

- Import Parameter: InputData of type BadiCustomerMergeControlInput
- Export Parameter: BadiCustomerMergeControlResult



17.2.3 Differentiate Between Standard Change and Merge Context

Administrators can now differentiate between updates to an account triggered by merge or by standard change process. This differentiation can be implemented using custom logic such that the custom logic is executed only for change instances occuring due to merge.

Use business partner utility - `AP.FO.BusinessPartner.Globalnamespace BusinessPartnerUtilities.IsBusinessPartnerMerge`o implement this custom logic. This utility is provided for the standard Business Partner business object provided by SAP and is available in SAP reuse library.

17.2.4 Status Management in Account Merge

Accounts assume various statuses during customer merge. Find detailed information on these statuses in this topic.

Statuses and Descriptions

Status	Description
Not Started	This is the initial status and is set when the Merge object is created and Merge process has not yet been triggered.
Merge In Process	This is the status when the merge has been triggered either from the web service call or manually from the UI. This status indicates that merge process has started.
Merge Failed	This is the status when the merge operation of merging source and replica record has failed. The system will not attempt any transaction reassignment in case the merging of duplicate records has failed.
Merge Completed - Realignment In Process	This is the status when the merge of two customers has been successfully completed and the re-parenting of transactions assigned to the duplicate record to source record has started.
Merge Completed - Realignment Failed	This is the status when the merge of two customers has been completed and the reassignment of transactions has failed.
Realignment Completed – Enhanced Realignment In Process	This is the status when the merge of two customers has been successfully completed and the enhanced re-parenting of transactions assigned to the duplicate record to source record has started (only available if 'Realignment of Closed Transactions of Merged Records' is configured – see below).

Status	Description
Realignment Completed – Enhanced Realignment Failed	This is the status when the merge of two customers has been completed and the enhanced reassignment of transactions has failed (only available if 'Realignment of Closed Transactions of Merged Records' is configured – see below).
Completed	This status signifies that customer merge and reassignment of transactions has been completed without any errors.

17.2.5 Map Obsolete Records to Primary Record For More Insights

Use insights from closed transaction history of obsolete records event without including closed transaction history in account merge. This way you can leverage reporting to show complete picture of primary account.

The new datasource - *Account Merge Master Link* allows you to map primary record to obsolete records and thus allows closed transaction history to be reported along with all other activities of primary record.

17.2.6 View Result Log

The *Result Log* screen displays the application logs that are created by the system for each merge transaction.

The logs are displayed in a hierarchy. Click on the hyperlinked *Application Log ID* to see if the merge execution resulted in errors, warnings or other information messages.

The Results section of the application log also displays for the errors, the reason why the transaction reassignment failed. Re-trigger the merge using the *Initiate* action available on the customer merge list view.

17.3 Contact Team

Maintain a contact team and assign employees to a contact team.

You can maintain a contact team for a contact. As a sales representative, you can also upload your contacts. Your contacts can be secure because all users can only access their contacts. You can also assign employees to a contact in the *Contact Team* screen and assign an employee as the main contact in the team. (this feature is subject to available authorizations). Your administrator can use the standard business partner migration template object to migrate contact team members.

17.3.1 Configure Contact to Employee Assignment

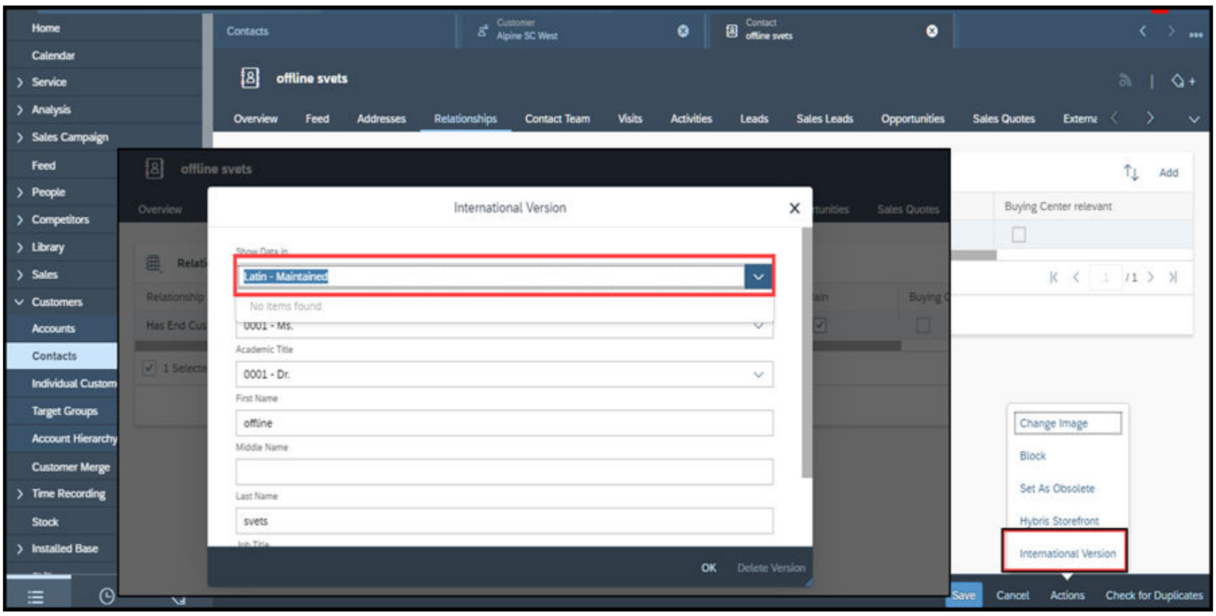
Administrators can configure contact to employee assignment. Directly assign contacts to employees in the *Contacts* detailed view. You can also assign a main employee responsible for the contact. The standard query *My Contact* has been enhanced to consider the direct contact-employee assignment.

The following configuration must be maintained to enable the employee - contact assignment:

- To enable access restrictions based on contact employee assignment, go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Built-In Services and Support* > *User and Access Management* and select the scoping question: *Do you want to restrict access rights for contacts using Contact Team Relationship?*
- If the above scoping question is enabled and if the business role is configured to have access restrictions for contacts, then all the access rules with employee reference will always refer to contact team assignment for contact employee restrictions.
- All other access rule references will be derived from the account assigned to the contact (for example territory, sales area and so on.).

17.4 Maintain International Address Versions for Contact-Account Relationships

Maintain international address versions for contact-account relationship attributes. It is also possible to replicate them from / to SAP ERP and SAP S/4HANA. In the *Relationships* tab for contacts, select the row and use the toolbar action *Maintain International Version* to maintain the address version.



> **i Note**
>
> The scripts for these address versions must already be maintained for the related account. For example, to add Hebrew address versions for a contact-account relationship, the Hebrew version must already be maintained for the account.

17.5 Contact Relationships and Buying Center Relationships

Maintain different relationships that contacts may have with your accounts.

Each contact may have different relationships with accounts. You can create different contacts to represent these different relationships using the relationship types. Further, you can also maintain buying center relevant information for contacts. Your administrator must have maintained the buying center configuration. The administrator can use the configuration to define hierarchical or non-hierarchical relationships contact-to-contact or contact-to-employee relationships.

Contact relationships define the nature of a contact. They represent relationships between contacts, accounts as well as with other business partners such as partners and partner contacts. Use the relationships that you have configured to assign relationship between Accounts, Contacts, Partners, Partner Contacts and so on based on your business needs.

Usually, relationship types are bi-directional, such as *Is a Contact* and so on. Standard relationship types are configured in the cloud solution; You can also create custom-defined relationship types and maintain them for sales areas.

17.5.1 Configure Relationships Including Buying Center

Administrators can configure relationships including buying center.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *General Business Partners*.Under *General Business Partners*, define the possible relationships between business partners in your system. The standard solution provides relationship codes that you can use. Choose to define new relationship codes or even disable the standard codes. Note that certain standard relationship codes cannot be deactivated.

Enter a code for and the name of the relationship along with a description for both directions of the relationship, such as Has Contact for the relationship of business partner 1 with business partner 2 with business partner 1 being an organization. Depending on the relationship type, choose whether the business partner is a person or an organization, and select the business partner roles that are permitted for each of the business partners in the relationship.

Assign Relationships to Party Role in Party Role Definition

You can also link the relationships you define to party role in involved party. Do this, for example, if you want to automatically determine the party role in documents like lead, opportunity, sales quote, activities based on specific relationship.

Example: define a new custom Party Role “Reseller” that has the relationship “Has an OEM” assigned to it.

Sales Area Based Relationships

Configure sales area dependent relationships that are evaluated during transactions involving the accounts.

17.6 Buying Center

Buying center refers to all those members of an organization who are key stakeholders and are involved in the buying process.

Use buying center to collaborate with accounts and contacts using various channels. In the *Buying Center* tab, map key stakeholders (involved in buying process) along with their relationships. Information that you create here is copied for opportunities. You can update a buying center using data workbench.

17.6.1 Configure Buying Center

Administrators can configure buying center based on business partner and buying center relationships..

Enable Buying Center based on Business Partner Relationships

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Sales* > *Account and Activity Management* > *Account Management* and select the scoping question: *Do you want to enable buying center based on business partner relationships?*

Enable Buying Center based on Buying Center Relationships

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Sales* > *Account and Activity Management* > *Account Management* and select the scoping question: *Do you want to enable buying center based on buying center relationships?*

17.7 Attributes

Attributes can be attached to an object to define additional characteristics of the objects. In the solution, attributes can be associated with different objects like account, contact, individual customer and so on.

Attributes can be of different data types and can by grouped together into an attribute set. You can set different properties of an attribute like negative value allowed, intervals allowed, multi-value allowed and so on.

A very common use of attributes is to create target groups. For example, if you are a credit card company and want to create a target group for customers traveling internationally, then you can create an attribute named as International traveler with a value list YES or NO. Every time your customer spends some money outside your country using your card you can automatically update International traveler as YES. Subsequently, you can create a target group of customers where the value of attribute International traveler is YES and send them promotions like low exchange rate for international traveler or low interest rate if they buy ticket through your company using your credit card.

> **i Note**
>
> Attributes are available in HTML and Responsive UI, in both online and offline mode.

17.7.1 Configure Attributes

You can define attributes or attribute sets and make them visible for users in the advanced searches for accounts, contacts, and individual customers.

Define Attributes and Attribute Sets

Administrators can configure attributes.

Go to *Administrator* > *Sales and Campaign Settings* > *Attributes* to view and configure attributes or attribute sets.

> **i Note**
>
> If your solution is integrated with SAP Customer Relationship Management (SAP CRM), then you can only view, but not create or modify, attributes or attribute sets from this screen.

As you maintain attributes, you can configure their characteristics (for example, whether they are mandatory), their value list and their descriptions in one or more languages. As you maintain attribute sets, which represent combinations of attributes, you can select the *Person-Relevant* checkbox to make the attributes visible in the *Attributes* tab of the *Contacts* work center view. You can also select the *Organization-Relevant* checkbox to make them visible in that tab on the *Accounts* or *Individual Customers* work center views.

Enable Search using Attributes

Provided if you personalize your solution to make it visible, you can enable your users to access the *Attributes* field within the advanced search of accounts, contacts and individual customers and maintain conditions there that influence the corresponding search behavior. Once this field is visible and your users select it to maintain conditions, they can specify a combination of attribute sets, attributes, operators and values – for example, Employee Attributes, Region, Equal, and North America, respectively – to apply to the attributes search. Users can also specify additional attribute conditions with the logical operator OR. Once these parameters have been saved, users can apply the associated conditions as an advanced search query to find business partners with corresponding Attributes, and to display them within the attributes tab of the work center view of the associated business partner.

Display in Account Summary

From the item details of an account, when you choose the [Summary] function, Attributes for the account now appear within the resultant account summary.

> **i Note**
>
> This enhancement only becomes available once you select *Administrator* > *Form Template Maintenance* and then choose the *Account Summary* form template and revert to the most recent version.

Access Restrictions

You can configure the business roles in your solution to specify business access restriction BUSINESS_ATTRIBUTE_ASGNM_READ, thereby making attributes read-only for the associated business users

Attribute Data Source

You can use the new report Business Partner with attribute assignment, whose technical name is `CODBUSATTRBPB_Q0001`, to specify search criteria related to Attributes and to find corresponding business partners. Within this report, you can also right-click on the name of a business partner, then choose *Export All Account* and Contacts to New Target Group, to create a target group for the associated accounts and contacts.

Use in Analytics

To drive analytics in relation to attributes, you can use the following new data sources:

Data Sources for Attributes

Data Source ID	Data Source Name	Description
CODBUSATTRBPB	*Business Partner with Attribute Assignment*	Shows all Attribute values assigned to the reference business partners.
Example CODBUSATTRGENB	*Attribute Assignment*	Contains all Attributes values assigned to the reference business objects.

17.7.2 Configure Marketing Permissions

Administrators can configure marketing permissions. With the communication categories, you can specify how often a customer can be contacted during a certain period of time.

In the *Marketing Permissions* fine-tune activity, you maintain your communication categories and the communication channels for countries/regions with an explicit opt-in. These settings are required to track whether your customers opt-in or opt-out for a specific communication channel.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* and then select the *Marketing Permissions* activity from the activity list.

1. Maintain Communication Channels for Countries/Regions with an Explicit Opt-In:

   > ⚠ Caution
   >
   > It's the responsibility of your organization to comply with national legislation regarding data protection and the provision of marketing materials. Therefore, administrators must configure the solution for each country/region in which, or each customer with whom, your organization intends to conduct marketing activities and, to the extent legally required, make use of the option to store documents such as opt-in or opt-outs.

   To add a country/region where an explicit opt-in is required, click *Add Row*, enter the country/region and the corresponding communication channel, such as e-mail, letter or fax, and save your changes.
2. Maintain Communication Categories:
   1. To create a communication category, click *Add Row*
   2. Enter a communication category, a description, a limit, and the time frame. With the limit and time frame, you can specify how often a customer can be contacted during a certain period of time. When adding communication categories, we recommend starting with the letter Z
   3. Save your work.

17.8 Social Media Profiles

Maintain social media profiles for individual customers.

Use social media for your individual customers to:

- Create social profiles of individual customers.
- Track both inbound and outbound social media interactions from the *Social Media Message* tab.
- In **Cloud for Service**, use social media channels to work with customers.

For more information, see Enabling Social Media Features.

17.8.1 Enable Social Media Features

Expose the hidden social media features available in your solution.

Your SAP Cloud for Social Engagementsolution is delivered with the social media features available but hidden. As an administrator, you need to enable the social media features of the solution using *Adaptation Mode*.

1. To enter adaptation mode click *Adapt*, then choose *Enter Adaptation Mode*.
2. Navigate to each of the screens listed below and make the screen edits indicated for each.
    1. When you're on the screen you want to edit, click *Adapt*, then choose *Edit Screen*.
    2. Add or remove elements on the *Screen Layout* tab.
    3. Save your changes.
       You can test your changes before publishing.
    4. When you're finished with your changes you can publish them to make them visible to all users.

Screens to Edit for Enabling Social Media Features

Screen	Navigation	Edits	Notes
Service and Social Settings	*Administrator* › *Service and Social Settings*	Under *Sections*, check the box for *Social Media* to make it visible.	You need to make this change before you can set up any social media channels in your system.
Individual Customers	*Customers* › *Individual Customers*	Under *Fields*, check the box for *Social Media Profile* to make that column visible in the list.	

Screen	Navigation	Edits	Notes
Individual Customer	*Customers* > *Individual Customers* then choose a customer to open the details screen	• Under *Sections*, check the box for *Social Information* to make it visible. With *Social Information* selected, under *Fields*, ensure the boxes are checked for *Facebook* and *Twitter*. • Under *Sections*, select *Tabs*, then in the lower list, select *Social Media Messages* and *Social Profiles*.	You need to have at least one customer record in the system before you'll be able to adapt the details screen.

Related Information

Adapting the User Interface

17.9 Integration with LinkedIn Sales Navigator to Access Relationships and Key Contacts

Find a new section - *LinkedIn Sales Navigator* in the *Overview* tab and *Contacts* tab for accounts and contacts and in the buying center. Click *Sign-In* in this section to navigate to linkedIn to find relationships and key contacts. Use the rich LinkedIn profile data to record activities with prospects and customers, view recent activities of your contacts and find a topic of interest to help you start a conversation with your prospects.

The LinkedIn Sales Navigator uses basic information such as first name, last name, email address, job title, and company name to find the correct company or person on LinkedIn. You can also perform a search if you are unable to find appropriate contacts or customers. For your contacts, the *Save as Lead* option in the widget allows you to save the person as a lead in the LinkedIn Sales Navigator. Such leads are not recorded in SAP Cloud for Customer. In addition to basic information mentioned above, there is no further data exchange between SAP Cloud for Customer and LinkedIn.

To use this feature, you need to:

- Use a standard LinkedIn account.

> **i Note**
>
> If you have signed in to LinkedIn with a different account, you are automatically signed in with that account. To re-login with the standard account, first clear your previous browsing cookies.

- Enable browser cookies:
    - For Google Chrome, go to *Settings* > *Advanced* > *Privacy and security* > *Content settings* > *Cookies* > *Allow* and add **`[*.]linkedin.com`**
    - For Internet Explorer, go to *Internet Options* > *Security* > *Trusted sites* > *Sites* and add **`http://linkedin.com`**
- Select the relevant mashup using personalization.

17.9.1 Configure LinkedIn's Sales Navigator

Administrators can enable Sales Navigator to allow users to look up LinkedIn information of an account or a contact.

> **i Note**
>
> Sales Navigator Enterprise licenses are required from LinkedIn to use this feature.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Communication and Information Exchange* > *Integration with External Applications and Solutions* > *Integration with LinkedIn Sales Navigator* to find the corresponding scoping question.

18 Employees

Create employees as business users in your system.

Employee is a separate entity. However, for business configuration within your system, employees are also represented as business users in the system. Therefore, for every employee record that you create, a corresponding business user is automatically created in the system.

> **i Note**
>
> All accounts, customers, employees, contacts, partners and competitors are considered as business partners in the system. Therefore, all functions that are common to business partners are applicable to them.

18.1 Scope and Configure Employees

Accurate employee data is essential to keep your business running smoothly — whether to make job titles, organizational assignments and reporting lines transparent to your workforce, or simply to ensure that your colleagues' contact information is always up-to-date.

Go to *Administrator* > *Users* > *Employees* , to view, create and edit employee data.

You have decided whether you want to create employee records manually, or upload employee data via the migration tool in the implementation project activity *Migration of Employee Data*.

18.1.1 Enable Employees

Scope employees in your solution.

Administrators can activate employees in the scoping.

Go to *Business Configuration* > *Implementation Projects* . Select your project and navigate to *Edit Project Scope* > *Questions* > *General Business Data* > *Employee and Service Agents* > *Employees* to scope employees.

In addition, in order to create and maintain employee data, go to *Business Configuration* > *Implementation Projects* . Select your project and navigate to *Edit Project Scope* > *Questions* > *General Business Data* > *Business Partners* > *Employees and Service Agents* > *Employees* > *Employee Maintenance* and select the scoping question: *Do you want to create and edit employee records in your cloud solution?*

18.1.2 Configure Employee Data Replication

Administrators can configure replication of employee data from an external system. To replicate your employees, maintain the configuration described in this topic.

If you have integrated your solution with an SAP Customer Relationship Management (SAP CRM) or SAP ERP system, then you can replicate employee master data changes within those systems to SAP Cloud for Customer.

To configure employee data replication, go to *Administrator* work center and then choose *Employee Staging Area*, to obtain an overview of all employees that require replication, and to determine the status of your replication requests. In this view, you can also perform the following associated actions:

- Schedule jobs to replicate employee master data between systems
- Monitor the replication status of employee data within associated requests
- Amend employee data in replication requests that remain to be processed
- Manually edit and submit failed replication requests that were not automatically uploaded, due to errors in data

> i Note
>
> If you encounter replication requests with errors, then we strongly recommend that you correct them in the external system from which the data originated, unless you perform code mapping corrections within SAP Cloud for Customer. For more information, see Configuring Automatic Code List Mapping.

In the *Complete Employee Master Data Replication* view of the *Data Integration* work center, administrators can schedule jobs to replicate the changes made to the employees in the SAP CRM or SAP ERP system into the SAP Cloud for Customer solution.

During the initial load, the complete set of employees is replicated to the Cloud solution. After the initial upload from the external system, all the changes made in these systems are replicated to the Cloud solution by scheduling jobs. This view provides an overview of employees that needs to be replicated and the status of the replication request. It also allows you to manually edit and submit failed replication requests that were not automatically uploaded due to errors in data.

> i Note
>
> If there are replication requests with errors, we strongly recommend you correct them in the external system from which the data originates. An exception to this will be to make any code mapping corrections in the Cloud system.

You can view all the successfully replicated employees under *People* > *Employees* view.

The Employee Master Data Replication View

This view provides you with an overview of all employee replication requests. By default, only the unsuccessful or not yet started replication requests are displayed. You can view detailed information for every replicated employee listed in the table, when you select the **Remote Employee ID** and select **Edit**.

- The **General Data** section displays information such as the system from which the data is being replicated, basic information about the replication request, and if the replication is relevant. If the selected employee should not be replicated or if further information needs to be added but is currently unavailable, you can click **Mark as Irrelevant** to indicate that you do not want the entry to be processed. Once the entry becomes relevant for replication, you can click **Mark as Relevant** to make it part of the replication process again.
- The **Personal Data** section displays all the details of the employee that are going to be replicated.
- The **Organizational Assignments** section displays the organization the employee is assigned to, and the validity period of the assignment. You can individually select if an assignment is relevant or not relevant to be processed. If you want a change that should be left out of replication, click **Remove**, and to update the assignment with additional changes click **Add Row**.
- The **Business Role** section displays the role ID of the employee.
- The **Sales Responsibility** section displays the sales organization details to which the employee is assigned.

Edit and monitor employee replication data

By default, only replication requests that are unsuccessful or that have not yet started are displayed. To view detailed information for every replicated employee listed in the table, select the *Remote Employee ID*, then choose *Edit*.

- If the selected employee should not be replicated, or if additional information is required but unavailable, then choose *Mark as Irrelevant* to exclude that entry from processing. To include the entry at a later date in the replication process, choose *Mark as Relevant*.
- Review the *Personal Data* section for information about the employee to be replicated.
- The *Organizational Assignments* section displays the organization to which the employee is assigned, and the validity period of the assignment. You can individually select whether an assignment is relevant or not relevant for processing. If you want to exclude a change from replication, choose *Remove*. To update the assignment with additional changes, choose *Add Row*.

Assign Business Roles to Employees During Employee Replication

1. Go to *Business Configuration* > *Implementation Projects*, choose your implementation project and choose *Open Activity List*.
2. Show all activities and search for "migration".
3. Choose *Prepare for Data Migration* > *Download Migration Templates*.
4. Download the *Employee Complete Data* migration template.
5. In the *Business Role* column, enter a role that you have already defined in the system.

Result: When you migrate the information in this template, the roles will be assigned to the employees.

Replicate Employees

The system has scheduled daily jobs to replicate the employees. If however, you want to replicate employees manually:

- Select a replication request in the table, and choose **Edit**. Review the information and choose **Replicate**.
- To schedule all replication requests, click **Replicate All**.

The status of the replication request(s) is updated and the request is added to the run.

18.1.3 Configure Number Ranges

Administrators can maintain number ranges for employee records in your system. The internal identification for each employee record is randomly assigned from the specified number range.

To maintain number ranges for employees, go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *Number Ranges for Employees and Service Agents*.

Number ranges for employees control how the number of newly created employee and service agent master data records is determined with. With manual number assignment you can enter the Employee number during first data entry. With automatic number assignment, the system automatically increments the number of the next employee by one, starting with the *Start Number*.

> **i Note**
>
> Automatic number D does not apply to the Employee data migration. The Total Length determines the length of the number displayed in the application including the prefix.

18.1.4 Enable Job Definitions

Administrators can enable job scheduling for employees.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Built-in Services and Support* > *System Management*, and enable *Job Scheduling*.

Next, go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *Integrate and Extend* to manually enter job definitions or migrate using the migration tool.

18.1.5 Configure Job Definitions

Administrations can configure new job definitions.

Steps to configure a new job definition are listed here:

1. Select *Administrator* > *General Settings* > *Company* > *Job Definition* or choose *Business Configuration* > *Activity List* > *Integrate and Extend* to manually create a job definition.
2. Choose *New*. The *Define Job* screen appears.
3. Enter a *Job Name* and a *Job ID*.

    > **Note**
    >
    > You cannot change the Job ID once the job has been saved.

4. Attach a *Job Description*, if required. To do this, click *Add*, and then attach your file or link.
    You can replace a job description later, by editing the job and clicking *Replace*.
5. Click *Save* or *Save and Close* to save the new job.

    > **Note**
    >
    > You can also create the next new job directly from this screen by clicking *New*.

    The new job has been saved to the system and added to the *Job Definition* overview list that appears when you first access the work center view. Whether the job is *Active*, *Inactive*, or *Deprecated* depends on the expiry date.

18.1.6 Import Job Definitions

Administrators can import job definitions with the migration tool. If you have created jobs in a test system (manually or with the migration tool), you can simply upload them to your production system using the migration tool instead of creating them all again manually.

- **Migrate job definitions to your system**
    1. To start with data migration, you must transmit source data to the migration staging area. You can do this in two ways:
        - **Upload Text Files**
          This allows you to upload data for each tab separately, using one or more text files.
            1. Select *Upload*, then *Data from Text File*.
               In the window that appears, select the appropriate settings for the text file you want to upload.
               Click *Upload*.
            2. In the *Import Data from Text File* window, you can define individual column mappings. If you save your mappings, you can reuse them for other text files as well.
               Click *Import Data*.
            3. In the *Edit Source File* window, you can make changes to the data you are importing. You can navigate to the different tabs, but only data of the tab that you have uploaded is visible.
               Click *Save and Close*.
               A window appears allowing you to enter a name and description for the uploaded file and the file is added to the list of source files.

You can now execute the migration of the file by clicking *Execute Migration*.

- **Create a Valid Source File Using a Migration Template**
  Enter legacy data in the migration template to create a valid source file. You can download the migration template using the *Prepare for Data Migration* activity in the *Prepare* phase, or using the *Perform Data Extraction* activity in the *Fine-Tune* phase of the activity list.

For detailed information on how to enter legacy data into migration templates, see the *Introduction* sheet and the *Field List* sheet of the template.

2. Access the Data Migration Tool:
   Process your source file with legacy data as follows:
   1. Make sure you have created a valid source file using a current migration template filled with legacy data.
   2. Access the *Business Configuration* work center and choose the *Implementation Projects* view. Select your implementation project and click *Open Activity List*. Select the *Integrate and Extend* phase, then select the *Job Definitions* activity.
      Note that data migration requires special user authorization. Your administrator can grant the required authorization (*Business Configuration* including the *Data Migration* view) in the *Application and User Management* work center.
   3. Process the work steps in the migration tool. For more information, click the Help link within the migration tool.
   4. When you have imported the source file successfully, set the migration activity in the activity list to *Completed*.

- **Import job definitions from test system to production system:**
  If you originally created basic data in a test system, you can import it to your production system with minimum effort. Proceed as follows:
  1. The system automatically extracted the data from your test system into a spreadsheet and uploaded it to the migration tool.
  2. In the *Job Definition* activity in the *Integrate and Extend* phase, choose *Migrate job definitions using the migration tool*.
  3. Under *Source Files*, select this spreadsheet and choose *Execute Migration*.
  4. Process the file until you have successfully imported the data to the system.
- **Copy basic data from production system to migration test system:**
  If you created basic data in a production system and are working in a migration test system now, the data was copied to the migration test system **automatically** already. In this case, you do not have to import it to the migration test system.
  To reduce the effort, do not create basic data in the migration test system (this is a specific test system for migration only) initially. In this case, you would have to repeat creation in the production system.

You can verify migrated records in the *Job Definition* view of the *Organizational Management* work center. Compare the data in your legacy system with the data that has been migrated to your SAP solution.

18.1.7 Configure Employee Sales and Organizational Data

Administrators can configure employee sales and organizational data.

Employee Organizational Data

You can assign an employee to multiple org units. When you create an employee, specify the manager to represent the employee reporting line and assign the employee to a **Primary** org unit. Additionally, you can assign an employee to multiple org. units once you remove the primary flag for an employee from other org. units where employee is assigned.

Employee Sales Data

Maintain sales data such as the sales organization, distribution channel, and division if the employee you're creating belongs to a sales unit.

Related Information

Create Your Org. Structure

18.1.8 Configure Delegate Access to a Sales Unit

Administrators can configure to add a secondary manager to a sales unit. Once configured, the secondary managers get access to Intelligent Sales Execution from the perspective of the particular sales unit.

Go to *Administrator* > *General Settings* > *Org Structures*, and under *Org Structures* select an organization. In the selected unit, go to *Employees* > *Managers* > *Add*, then uncheck the *Primary* checkbox, and choose *Save*.

As a result, the secondary manager is treated like the primary manager of a reporting line, related to data access, and the secondary manager gets the same results when using the *My Team* queries.

To remove a secondary manager from the list, simply click the delete icon under *Actions* column, and then choose *Save*.

18.1.9 Configure Employee Work Distribution

Administrators can configure employee work distribution.

Create a Work Distribution Rule

1. Go to *Administrator* > *General Settings* > *Work Distribution* and choose *Employee Work Distribution*.
2. In the *Employee Work Distribution* view, select a work category.
3. Click *Edit*.

> **Note**
>
> You cannot change work distribution for past dates. If the *Edit* button is disabled, check the *Effective Date* and ensure that you have not entered a date that occurs in the past.

4. Choose *Work Distribution Rules*, then click *Add*.
   If you want to copy an existing rule, click *Copy*.
   By adding a rule, you are creating a new rule that is added to the bottom of the list. If you wish to insert a rule of a higher priority, then change priority by moving the rules up and down in the table.
5. Enter the name of the rule.
6. Enter the ID of the responsible employee.
7. Enter the validity period of the rule.

> **Note**
>
> If you change or delete a work distribution rule that begins before the effective date, the rule is only valid to the date before the effective date. If you only change the rule, the system creates a new rule based on the existing rule and includes the changes you make. The new rule is valid as of the effective date.

8. Go to the *Rule Details* section and specify the parameters for the rule.
   Each parameter appears as a tab, for example, *Company*. Using the parameters, you can specify exactly both which parameter is to be included in the rule or excluded from the rule.
9. Click *Check* to verify whether your rule is consistent.
10. Click *Save* or *Save and Close*.

Delete a Work Distribution Rule

1. Go to *Administrator* > *General Settings* > *Work Distribution* and choose *Employee Work Distribution*.
2. In the *Employee Work Distribution* view, select a work category.
3. Click *Edit*.

> **Note**
>
> You cannot change work distribution for past dates. If the *Edit* button is disabled, check the *Effective Date* and ensure that you have not entered a date that occurs in the past.

4. Choose *Work Distribution Rules*.
5. Select the work distribution rule you want to delete and click *Delete*.
6. Click *Save* or *Save and Close*.

Set a Work Category to Undefined

1. Go to *Administrator* > *General Settings* > *Work Distribution* and choose *Employee Work Distribution*.
2. In the *Employee Work Distribution* view, select a work category that has the status *Defined Work Distribution*.
3. Click *Action* and select the option *Set to Undefined*.

18.1.10 Configure Employee Working Hours

As an administrator, you can enable employee working hours in business configuration without scoping resource planning.

Procedure

1. Go to *Navigation Menu* > *Business Configuration* > *Implementation Projects*.
2. Select the project and choose *Edit Project Scope*.
3. In the carousel, go to *Questions*, choose *General Business Data* > *Employees and Service Agents* > *Employees*.
4. Scope the question "*Do you want to enable employee working hours?*".
5. Click *Next* and *Finish*.

18.1.11 Configure Approval Process for Employee Time Recording

Administrators can configure approval process for employee time recording using the standard multistep approval process for time reports and time recording. To do this, follow these steps:

1. Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *General Business Data* > *Employees and Service Agents* > *Employees* and select the scoping element **Employees**.
2. Next, go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *General Business Data* > *Employees and Service Agents* > *Employees* and in the *Enable Time Recording* group, select the sccoping question: *Do you wish to enable time recording feature?*
3. Next, go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *General Business Data* > *Employees and Service Agents* > *Employees* and in the *Approval for Time Recording* group, select the scoping question: *Do you want to use a multi-step approval for Time Recording?*

For more information, see Working with Time Recording.

18.1.12 Configure Notifications for Employee Delegates

Administrators can define notifications for delegates, where the delegate receives notifications of tasks to be completed, or general notifications for the employee who is absent. Follow the steps given below to create a delegate notification:

> **i Note**
>
> When you or the employee activates delegate, the system automatically provides copies of notifications to the delegate without the administrator having to manually maintain this view.

1. Go to *Administrator* > *Notification of Delegates*.
2. Select the employee for whom you want to create or edit delegates, and choose *Edit Delegates*.

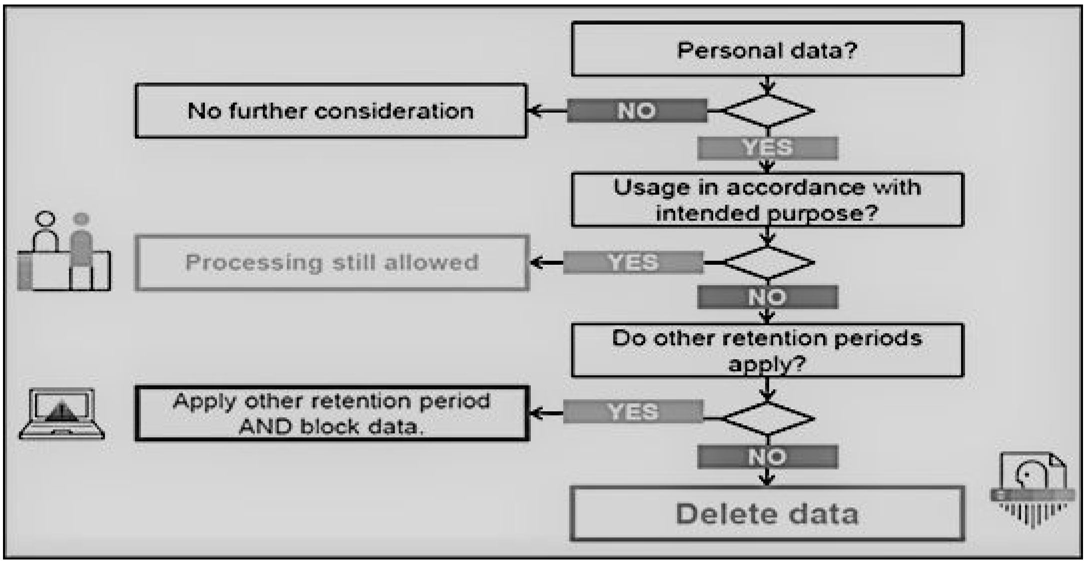
   > **i Note**
   >
   > You will see a list of existing delegates, if any. You can activate them by selecting *Activate*.
3. To create a new delegate, select *Add Row* and enter:
   1. The *Relationship Type* depending on whether the employee you selected is the employee who will be absent or the employee who will become the delegate.
   2. The *Related Employee* who will either be a delegate for or have work delegated to him or her by the former employee, depending on what you select in the previous column.

      > **i Note**
      >
      > To activate this delegate immediately, select *Activate*.
4. Save your changes.

18.1.13 Web Services for Business Partner End-of-Purpose

Determine if you need to retain business partner data in your system when that data has already been deleted from an integrated external system.

The following graphic describes process flow to determine the End-of-Purpose for your business partner data. You can use web services or manually block such business partners in your system using blocking reasons.



Web service interfaces and enhanced interfaces are enabled to support blocking of business partners. Use these services in scenarios where integrated external systems block or delete business partner data in their system landscape. These interfaces allow the external systems to query and maintain the End-of-Purpose for business partners. Since the definition of what constitutes the end-of-purpose for a business partner is subjective to the external system, these interfaces are empty CHECK interfaces to allow you to create custom queries.

For business partners blocked using the below-mentioned interfaces, data cannot be retrieved in list views in Work Centers, value help in related fields, values selectors, analytics, duplicate checks and web service or oData queries in the application.

Web Services for Business Partner End-of-Purpose

Web Service	Description
`II_BUPA_EOP_CHECK_IN`	This interfaces uses enhancement spot `ES_BUPA_EOP_CHECK` to provide a business add-in hook in SAP Cloud Application Studio. Use this hook to create custom query for setting end-of-purpose information.
`II_BUPA_EOP_MAINTAIN_IN`	Use this interface to set the *End-of-Purpose* flag for business partners. If this flag is set, then the business partner data is hidden in corresponding Work Centers and value helps and is not visible to users. Note that the data can be viewed by administrators in the *Data Protection and Privacy* Work Center.

Web Service	Description
`II_BUPA_ERP_EOP_CHECK_IN`	This interface uses enhancement spot `ES_BUPA_ERP_EOP_CHECK` to provide a business add-in hook in SAP Cloud Application Studio. Use this hook to create custom query for setting end-of-purpose information.
`II_BUPA_ERP_REPL_IN`	New attribute has been added in element structure for the existing interface. Set the indicator for business completed / End-of-Purpose flag. If this flag is set, then the business partner data is hidden in corresponding Work Centers and value helps and is not visible to users. Note that the data can be viewed by administrators in the *Data Protection and Privacy* Work Center.

18.1.14 Create Event Notifications for Employee and Partner Contacts

Create an event notification for enabled employee and partner contacts.

Administrators add the event under *Administrator* › *General Settings* › *Event Notification* › *Business object: Employee* › *Create* › *Add* or modify existing events as necessary.

18.2 Employee Sales Data

Employees are always created with an assignment to an organizational unit. Therefore, you must create the necessary sales data required to use employees for various business needs within the org. structure of your company. You can also use territories, distribution channels and divisions for your employees.

How Employee Sales Data is Used

An employee sales data is used for the following:

- In **My Team** queries and relative selects in reports will consider primary and secondary employee assignments.
- **Data access** based on org. unit also considers secondary employee assignments.
- **Reporting line manager** determination in Notifications and Approvals will consider primary employee assignment.
- For **Access Restrictions** with business context 1015 (Sales Documents, Accounts). If an employee is assigned to an organizational unit without an assigned distribution channel or division, that employee is not restricted from accounts or sales documents based on his or her sales data.

Related Information

Configure Access Restrictions Using Employee Sales Data

18.2.1 Configure Employee Sales and Organizational Data

Administrators can configure employee sales and organizational data.

Employee Organizational Data

You can assign an employee to multiple org units. When you create an employee, specify the manager to represent the employee reporting line and assign the employee to a **Primary** org unit. Additionally, you can assign an employee to multiple org. units once you remove the primary flag for an employee from other org. units where employee is assigned.

Employee Sales Data

Maintain sales data such as the sales organization, distribution channel, and division if the employee you're creating belongs to a sales unit.

Related Information

Create Your Org. Structure

18.2.2 Configure Access Restriction Based on Employee Sales Data

The Access Restriction rule *1015 - Employee, Territory, Account, Sales Data* provides access based on employee sales data only.

The following additional restrictions apply.

- Sales data for an employee is used for access restriction with business context 1015 (Sales Documents, Accounts). If an employee is assigned to an organizational unit without an assigned distribution channel or division, that employee will not be restricted from accounts or sales documents based on his or her sales data.

- If an employee is a manager, access is granted to documents or accounts with assigned employees who are in the manager's organizational units (including sub-units), not considering any territory restrictions. The rule applies equally to functional and reporting line managers.

> **i Note**
>
> A relationship change triggers a corresponding update for access restrictions. For any changes made to the *Works for* relationship for employees, an update is triggered for the identity restrictions for access restriction rule 6 - *My Workforce*. However the corresponding update of access restrictions happens with a time lag of 24 hours.

18.3 Edit or Delimit Employees

Limit the validity of an employee record.

1. In the worklist of the *Employees* view, select an employee record, then choose *Edit*.
2. Edit as much information as you require.
3. If you want to delimit the validity of an employee record, enter the appropriate date in the *Valid To* field. From this date onward, this employee record cannot be used for new business processes.
4. Choose *Save*.

18.4 External ID Visible in Employee Details View

When working in the *Employee* tab, the *Mapping for Integration* section displays all *External IDs* for employee records.

18.5 Maintain Employee Job Definitions

A job is a description of the duties of an employee as you would find it in the employment contract.

The job consists of an ID and a name. It also has an expiry date, which initially is set to unlimited, but can be set to a specific date if a job should no longer be used. To create a list of the jobs required within your company, you can either enter job definitions manually or import them using the migration tool.

When employees are assigned or hired to an org unit, they require an association with a job in the system. The job then characterizes the employee assignment and is also used in to fulfill service-related tasks. In the *Show* dropdown in this view, you can display jobs according to the following criteria:

- *Active (Unlimited Validity)*: Shows jobs that have no expiry date.
- *Active (Limited Validity)*: Shows jobs that have an expiry date in the future.

- *Inactive*: Shows jobs that are outside their validity period.
- *All*: Shows all jobs.

18.5.1 Enable Job Definitions

Administrators can enable job scheduling for employees.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Built-in Services and Support* > *System Management*, and enable *Job Scheduling*.

Next, go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *Integrate and Extend* to manually enter job definitions or migrate using the migration tool.

18.5.2 Configure Job Definitions

Administrations can configure new job definitions.

Steps to configure a new job definition are listed here:

1. Select *Administrator* > *General Settings* > *Company* > *Job Definition* or choose *Business Configuration* > *Activity List* > *Integrate and Extend* to manually create a job definition.
2. Choose *New*. The *Define Job* screen appears.
3. Enter a *Job Name* and a *Job ID*.

   > i Note
   >
   > You cannot change the Job ID once the job has been saved.
4. Attach a *Job Description*, if required. To do this, click *Add*, and then attach your file or link.
   You can replace a job description later, by editing the job and clicking *Replace*.
5. Click *Save* or *Save and Close* to save the new job.

   > i Note
   >
   > You can also create the next new job directly from this screen by clicking *New*.

   The new job has been saved to the system and added to the *Job Definition* overview list that appears when you first access the work center view. Whether the job is *Active*, *Inactive*, or *Deprecated* depends on the expiry date.

18.5.3 Import Job Definitions

Administrators can import job definitions with the migration tool. If you have created jobs in a test system (manually or with the migration tool), you can simply upload them to your production system using the migration tool instead of creating them all again manually.

- **Migrate job definitions to your system**
    1. To start with data migration, you must transmit source data to the migration staging area. You can do this in two ways:
        - **Upload Text Files**
          This allows you to upload data for each tab separately, using one or more text files.
            1. Select *Upload*, then *Data from Text File*.
               In the window that appears, select the appropriate settings for the text file you want to upload.
               Click *Upload*.
            2. In the *Import Data from Text File* window, you can define individual column mappings. If you save your mappings, you can reuse them for other text files as well.
               Click *Import Data*.
            3. In the *Edit Source File* window, you can make changes to the data you are importing. You can navigate to the different tabs, but only data of the tab that you have uploaded is visible.
               Click *Save and Close*.
               A window appears allowing you to enter a name and description for the uploaded file and the file is added to the list of source files.
               You can now execute the migration of the file by clicking *Execute Migration*.
        - **Create a Valid Source File Using a Migration Template**
          Enter legacy data in the migration template to create a valid source file. You can download the migration template using the *Prepare for Data Migration* activity in the *Prepare* phase, or using the *Perform Data Extraction* activity in the *Fine-Tune* phase of the activity list.

       For detailed information on how to enter legacy data into migration templates, see the *Introduction* sheet and the *Field List* sheet of the template.
    2. Access the Data Migration Tool:
       Process your source file with legacy data as follows:
        1. Make sure you have created a valid source file using a current migration template filled with legacy data.
        2. Access the *Business Configuration* work center and choose the *Implementation Projects* view. Select your implementation project and click *Open Activity List*. Select the *Integrate and Extend* phase, then select the *Job Definitions* activity.
           Note that data migration requires special user authorization. Your administrator can grant the required authorization (*Business Configuration* including the *Data Migration* view) in the *Application and User Management* work center.
        3. Process the work steps in the migration tool. For more information, click the Help link within the migration tool.
        4. When you have imported the source file successfully, set the migration activity in the activity list to *Completed*.
- **Import job definitions from test system to production system:**
  If you originally created basic data in a test system, you can import it to your production system with minimum effort. Proceed as follows:
    1. The system automatically extracted the data from your test system into a spreadsheet and uploaded it to the migration tool.

2. In the *Job Definition* activity in the *Integrate and Extend* phase, choose *Migrate job definitions using the migration tool*.
3. Under *Source Files*, select this spreadsheet and choose *Execute Migration*.
4. Process the file until you have successfully imported the data to the system.

- **Copy basic data from production system to migration test system:**
  If you created basic data in a production system and are working in a migration test system now, the data was copied to the migration test system **automatically** already. In this case, you do not have to import it to the migration test system.
  To reduce the effort, do not create basic data in the migration test system (this is a specific test system for migration only) initially. In this case, you would have to repeat creation in the production system.

You can verify migrated records in the *Job Definition* view of the *Organizational Management* work center. Compare the data in your legacy system with the data that has been migrated to your SAP solution.

18.6 Create Employee Delegates

Employee delegates as substitutes for employees on vacation.

If an employee is on vacation or temporarily absent, employees can define delegates for themselves, defining relevant access rights by area. Administrators can create delegates for all employees. You can create delegates for yourself, or administrators can create delegates for employees who are away from the office, either for a short period or long period of time. The delegated employee gains certain access rights of the substituted employee for the specified period of time.

Follow these steps to create employee delegates:

1. Depending on your role, follow the appropriate path:

   Where Can I Define Delegates?

Role	Where?
User	*People* > *Delegates*
Administrator	*Administrator* > *Users* > *Delegates*

2. Select *New* and define the following:
   1. The employee who will be away temporarily.

      > **i Note**
      >
      > Users can only define delegates for themselves. Administrators can define delegates for all employees.

      Once the employee is selected, the system displays all the work centers assigned to him or her.
   2. A delegate to replace the employee.
   3. The start date and end date during which you want the delegate to take over responsibilities.

> **i Note**
>
> If you enter the start date of a substitution in the future, then the system saves the delegate with the status *Not Started*. By default, only **active delegates** are displayed. If you want to see future delegate assignments, use the filter *Planned Delegates*.

4. Define which *Access Rights* that you want to grant to the delegate.

> **i Note**
>
> You can create either a full substitution or a partial substitution. In full substitution, you grant the delegate access to all the work centers assigned to the employee. In partial substitution, you create multiple delegates, granting access to only selected work centers to each of the delegates.

3. *Save* the delegate.

> **i Note**
>
> If you want to end a substitution before the specified end date, choose *Actions* > *Delete*.

18.6.1 Configure Notifications for Employee Delegates

Administrators can define notifications for delegates, where the delegate receives notifications of tasks to be completed, or general notifications for the employee who is absent. Follow the steps given below to create a delegate notification:

> **i Note**
>
> When you or the employee activates delegate, the system automatically provides copies of notifications to the delegate without the administrator having to manually maintain this view.

1. Go to *Administrator* > *Notification of Delegates*.
2. Select the employee for whom you want to create or edit delegates, and choose *Edit Delegates*.

> **i Note**
>
> You will see a list of existing delegates, if any. You can activate them by selecting *Activate*.

3. To create a new delegate, select *Add Row* and enter:
    1. The *Relationship Type* depending on whether the employee you selected is the employee who will be absent or the employee who will become the delegate.
    2. The *Related Employee* who will either be a delegate for or have work delegated to him or her by the former employee, depending on what you select in the previous column.

    > **i Note**
    >
    > To activate this delegate immediately, select *Activate*.

4. Save your changes.

18.6.2 Configure Workflows to Send E-Mail Notifications to Active Delegates

Administrators can configure workflows to allow active delegates in your system can receive e-mail notifications.

Use this feature to ensure information channeled for employees is received by their delegates or substitutes in the absence of the employees. You can configure this feature under *Administrator* > *Workflow Rules* > *Workflow Settings* > *Recipient Determination* > *Determine the active delegates for an employee in the system, as a recipient in workflow rules*.

18.7 Employee Work Distribution

Create and configure rules to distribute work items to employees.

Create and configure rules to distribute work items to employees. The system uses these rules to determine the employee responsible for work items. Depending on the work category, the system directs the work items to the determined employee, or provides the employee as a proposal in the relevant business document.

Work distribution defines the process of assigning work to an org unit or employee. By default, work items in the solution are visible to all users that have the corresponding access rights. However, for some business processes the org unit or employee responsible for a work item has to be determined. For these areas, you can define work distribution rules that enable you to automatically assign business documents and tasks to dedicated org units or employees.

The work category is the central element for work distribution. A work category represents a specific part of work in a business area and is related to one or more business documents. Each work category provides parameters that you can use to define work distribution rules, according to which the system determines the responsible org unit or employee for a business document.

18.7.1 Configure Employee Work Distribution

Administrators can configure employee work distribution.

Create a Work Distribution Rule

1. Go to *Administrator* > *General Settings* > *Work Distribution* and choose *Employee Work Distribution*.
2. In the *Employee Work Distribution* view, select a work category.
3. Click *Edit*.

> **Note**
>
> You cannot change work distribution for past dates. If the *Edit* button is disabled, check the *Effective Date* and ensure that you have not entered a date that occurs in the past.

4. Choose *Work Distribution Rules*, then click *Add*.
   If you want to copy an existing rule, click *Copy*.
   By adding a rule, you are creating a new rule that is added to the bottom of the list. If you wish to insert a rule of a higher priority, then change priority by moving the rules up and down in the table.
5. Enter the name of the rule.
6. Enter the ID of the responsible employee.
7. Enter the validity period of the rule.

> **Note**
>
> If you change or delete a work distribution rule that begins before the effective date, the rule is only valid to the date before the effective date. If you only change the rule, the system creates a new rule based on the existing rule and includes the changes you make. The new rule is valid as of the effective date.

8. Go to the *Rule Details* section and specify the parameters for the rule.
   Each parameter appears as a tab, for example, *Company*. Using the parameters, you can specify exactly both which parameter is to be included in the rule or excluded from the rule.
9. Click *Check* to verify whether your rule is consistent.
10. Click *Save* or *Save and Close*.

Delete a Work Distribution Rule

1. Go to *Administrator* > *General Settings* > *Work Distribution* and choose *Employee Work Distribution*.
2. In the *Employee Work Distribution* view, select a work category.
3. Click *Edit*.

> **Note**
>
> You cannot change work distribution for past dates. If the *Edit* button is disabled, check the *Effective Date* and ensure that you have not entered a date that occurs in the past.

4. Choose *Work Distribution Rules*.
5. Select the work distribution rule you want to delete and click *Delete*.
6. Click *Save* or *Save and Close*.

Set a Work Category to Undefined

1. Go to *Administrator* > *General Settings* > *Work Distribution* and choose *Employee Work Distribution*.
2. In the *Employee Work Distribution* view, select a work category that has the status *Defined Work Distribution*.

3. Click *Action* and select the option *Set to Undefined*.

19 Microsoft Teams Integration

An embedded in-app integration of SAP Sales Cloud with Microsoft Teams.

With this integration, you can create SAP Sales Cloud appointments and visits, create deal rooms, make outbound calls, and share workspaces with Microsoft Teams. The real-time and automated data updates ensure transparency, consistency, and collaboration of opportunities for the sales teams.

19.1 Scope and Configure Microsoft Teams Integration

Administrators can enable Microsoft Teams integration using scoping questions.

19.1.1 Enable Microsoft Teams Integration

Administrators must include Microsoft Teams integration in the project scope and grant consent for the integration.

Procedure

1. Enable Microsoft Teams integration via scoping
    a. Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Sales* > *Account and Activity Management* > *Activity Management*.
    b. Select the scoping question: **Do you want to enable Microsoft Teams integration?**
2. Add *SAP Sales and Service Core* app in the Teams app store
    1. Log in to Microsoft Teams admin center.
    2. From the home page, expand the navigation menu and go to *Teams apps* > *Manage apps*.
    3. Search and select the *SAP Sales and Service Core* app from the list.
    4. Click *Allow*. A new window opens
    5. Click *Allow* again
3. Grant consent for Microsoft Teams integration

> **Note**
>
> Ensure that you have the Microsoft Office 365 exchange online license.

1. Navigate to *Administrator* > *General Settings*.
2. Under *Microsoft Teams*, click *Enable Microsoft Teams integration*.
3. Choose any of the following permission types and click *Confirm*.
   - *Application Delegation*: Your administrator must consent on behalf of all the users.
   - *User Delegation*: Your administrator must consent on behalf of your organization.
     If you're using the features such as Appointments, Visits, Share Workspace, and Deal Rooms with user delegated permission, the system shows a window where you must allow the permissions and login to your Microsoft Teams account. The system doesn't show the window for permission if you try to edit Appoitment or Visit from dataset view. The validity of this permission is 30 days. Hence, you must allow the permissions and login to Microsoft Teams again when the permission expires.

     > i Note
     >
     > If you want to change the selected permission type after enabling the Microsoft Teams integration, you must raise a ticket.

   This redirects to the Microsoft Teams authentication page.
4. Sign in with your Microsoft 365 username and password.
   A new window opens for consent.
5. In the case of User Delegation permission type, your administrator has to select the check box *Consent on behalf of your organization* available at the end of all the permissions listed.
6. Click *Accept*.

19.1.2 Configure Microsoft Teams Collaboration for Appointments by Default

Administrators can enable appointments for Microsoft Teams collaboration by default.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Sales* > *Account and Activity Management* > *Activity Management*, and select the scoping question: **Do you want to enable appointment for the Microsoft Teams collaboration by default?**

> i Note
>
> You have the flexibility to switch off the Teams collaboration while creating an appointment even after enabling this scoping question.

19.1.3 Configure Microsoft Teams Collaboration for Visits by Default

Administrators can enable visits for Microsoft Teams collaboration by default.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Sales* > *Account and Activity Management* > *Activity Management*, and select the scoping question: **Do you want to enable visits for the Microsoft Teams collaboration by default?**

> **Note**
>
> You have the flexibility to switch off the Teams collaboration while creating a visit even after enabling this scoping question.

19.1.4 Configure Addition of Reference Object in Meeting Requests

Administrators can enable addition of reference object as part of the Microsoft Teams meeting request.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Sales* > *Account and Activity Management* > *Activity Management*, and select the scoping question: **Do you want to add reference object as part of the Microsoft Teams meeting request?**

If you select this scoping question, SAP Cloud for Customer application is added to all the appointments enabled for Teams collaboration and you can see the reference object as part of the meeting.

19.1.5 Configure Rescheduling of Appointments and Visits Only by Organizer and Owner

Administrators can enable this feature to restrict rescheduling of visits and appointments only by organizer and owner.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Sales* > *Account and Activity Management* > *Activity Management*, and select the scoping question: **Do you want to restrict rescheduling of visits and appointments only by Organizer and Owner?**

19.1.6 Configure Notes Synchronization with Teams Meeting

Administrators can enable this feature to synchronize your notes with the email invites as part of the Microsoft Teams meeting.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Sales* > *Account and Activity Management* > *Activity Management*, and select the scoping question: **Do you want to sync notes as part of the Microsoft Teams meeting?**

Once you enable this scoping question, the notes will be included in the meeting invites as the agenda.

> **i Note**
>
> - If this scoping question is not enabled, and both Teams and Outlook plugins are enabled, then the Outlook data overwrites the notes created by the solution.
> - The delimiter line in the Teams meeting detail part should not be modified.

19.2 Use Microsoft Teams Integration

Learn how you can use the features using MS Teams integration.

> **i Note**
>
> - Ensure that your administrator enables Microsoft Teams integration by following the steps in Scope and Configure Microsoft Teams Integration [page 787] to use the features.
> - If you're using the features such as Appointments, Visits, Share Workspace, and Deal rooms with user delegated permission, the system shows a window where you must allow the permissions and login to your Microsoft Teams account once in 30 days.

Create Appointments [page 791]
Create an appointment with Teams integration in your SAP Cloud for Customer.

Create Visits [page 796]
Create a visit with Teams integration in your SAP Cloud for Customer.

Share Workspaces [page 798]
Share lists or objects of SAP Cloud for Customer with Microsoft Teams.

Create Deal Rooms [page 800]
Share high value opportunities and accounts with Microsoft Teams.

Create Resolution Rooms [page 801]
Share tickets on Microsoft Teams.

Make Outbound Calls [page 801]
Use Microsoft Teams to make your outbound calls.

19.2.1 Create Appointments

Create an appointment with Teams integration in your SAP Cloud for Customer.

→ Remember

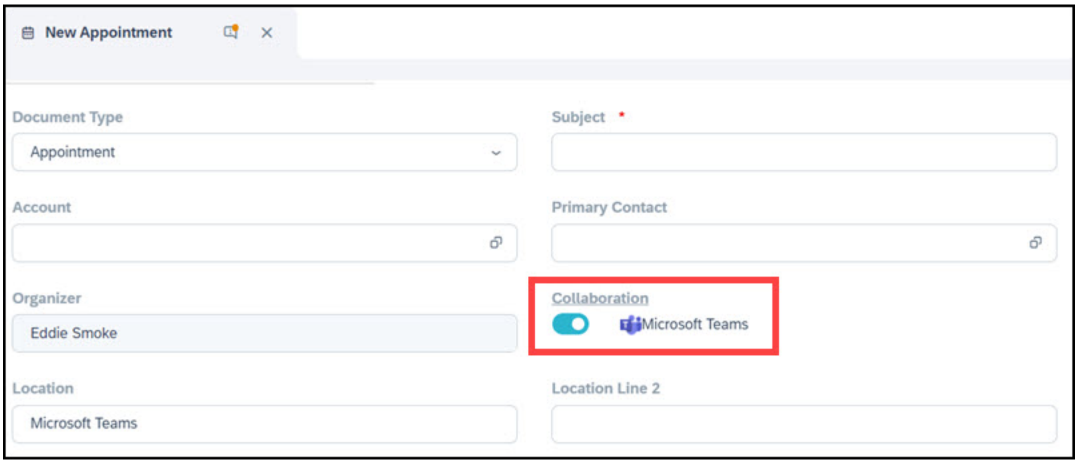
Ensure that your administrator has maintained your Microsoft Teams e-mail address in the employee details.

If not, add the email address by performing the following steps.

1. Go to *Administrator* > *Employees*.
2. Select an employee and click *Edit*.
3. Update the email address and click *Save*.

The same email ID must also be a part of your Microsoft Azure active directory.

Follow these steps to create an appointment with Teams collaboration:

1. Navigate to *Activities* > *Appointments*.
2. Click the *Create* icon (+) to create a new appointment.
3. If you're using this feature for the first time or the user delegation permission expires, the system shows a pop-up window where you must allow the permissions and login to your Microsoft Teams account. If you haven't enabled the scoping question for Microsoft Teams collaboration, the same pop-up window opens only when you enable the Microsoft Teams collaboration in step 5.
This permission allows you to use all the Microsoft Teams integrated features until the validity expires.
4. Update the necessary fields such as *Subject*, *Account*, *Start Date/Time*, *Category*, and so on.
5. Check whether the Microsoft Teams collaboration is enabled or not. If not, turn on the *Collaboration* toggle button.


6. Go to *Attendees* and click *Add* to search and select the required attendees with a valid e-mail address.

i Note

You must add at least one attendee to create a Microsoft Teams meeting.

7. Click *Save*.

> **i Note**
>
> You can't remove Microsoft Teams collaboration from the appointment once it is saved.

19.2.1.1 Manage Appointments

Edit, delete, and cancel your Microsoft Teams collaborated appointments.

If you have the *Application Delegation* permission, you can edit, delete, or cancel any Microsoft Teams collaborated appointments. To perform the same actions with the *User Delegation* permission, you must be the organizer of the appointment.

The following table gives you different scenarios and its results when you try to edit, delete, or cancel the appointments based on the user delegation permission:

Appointment Type	Are you the organizer?	Do you have the User Delegation permission?	What are the actions	Results
Microsoft Teams Appointments	Yes	Yes	Edit, Delete, or Cancel	*Success*
	No	No	Edit, Delete, or Cancel	*Failure* You can't edit, delete, or cancel appointments without permission. To grant consent, follow step 3 in Scope and Configure Microsoft Teams Integration [page 787].
	Yes	No		
	No	Yes	Edit, Delete, or Cancel	*Failure* You must be the organizer to edit, delete, or cancel an appointment.
Normal Appointments	Yes	Yes	Enable Microsoft Teams collaboration	*Success*
	No	Yes	Enable Microsoft Teams collaboration	*Failure* You must be the organizer to enable Microsoft Teams collaboration.

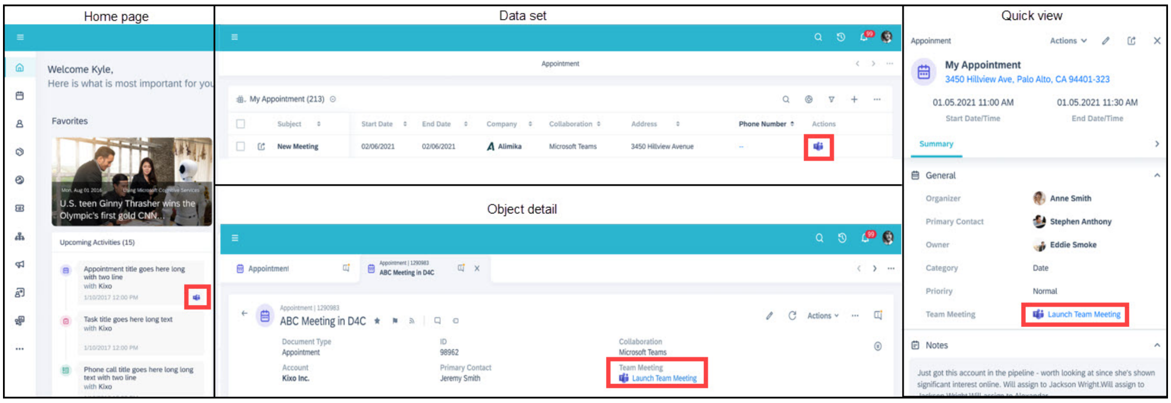
19.2.1.2 Join Microsoft Teams Meeting

You can join a Microsoft Teams meeting either from SAP Cloud for Customer or from Microsoft Teams.

From SAP Cloud for Customer

Join a Teams meeting by clicking the Teams icon () using the following options:

- Upcoming activities in home page
- Appointment dataset
- Appointment object detail
- Appointment quick view



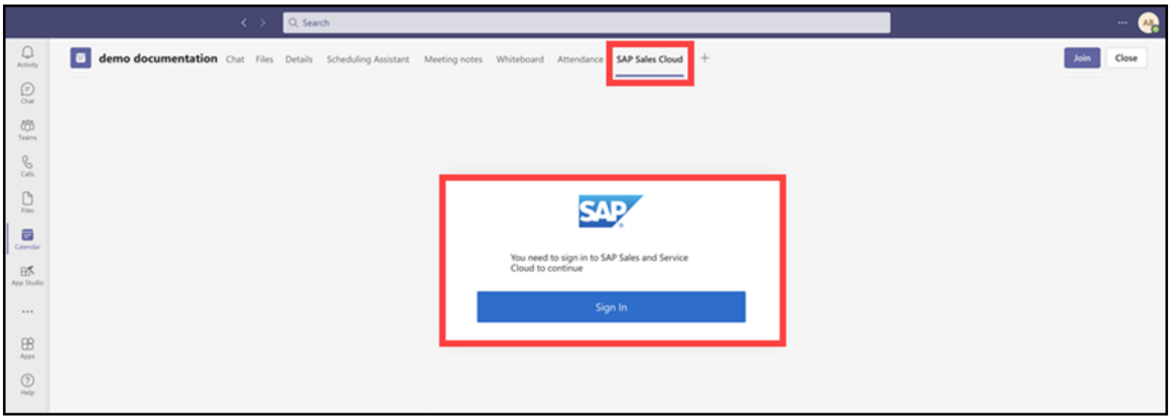
From Microsoft Teams

1. Go to *Calendar*, select an appointment and then click *Join* to enter a meeting before it's started, or one that's in-progress.
2. Select *Join now*.

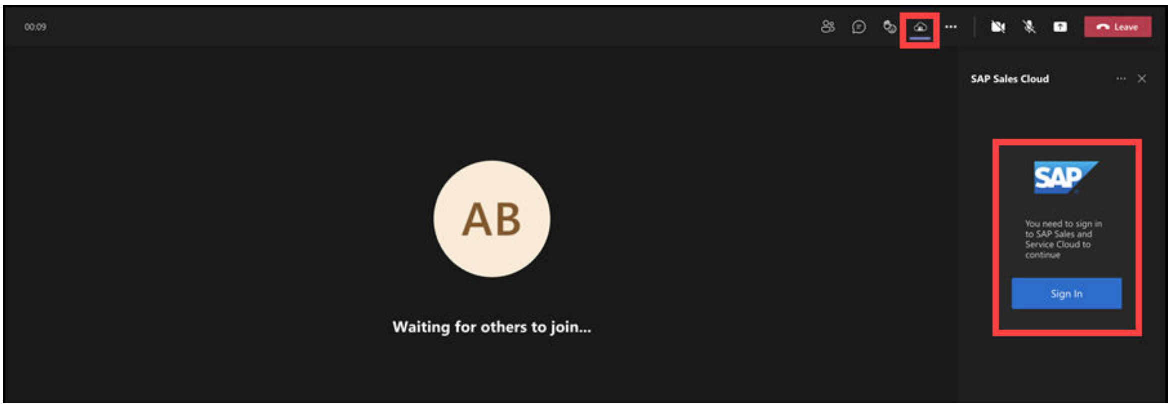
19.2.1.3 Access SAP Cloud for Customer Application in Microsoft Teams

Follow these steps to access SAP Cloud for Customer application in Microsoft Teams:

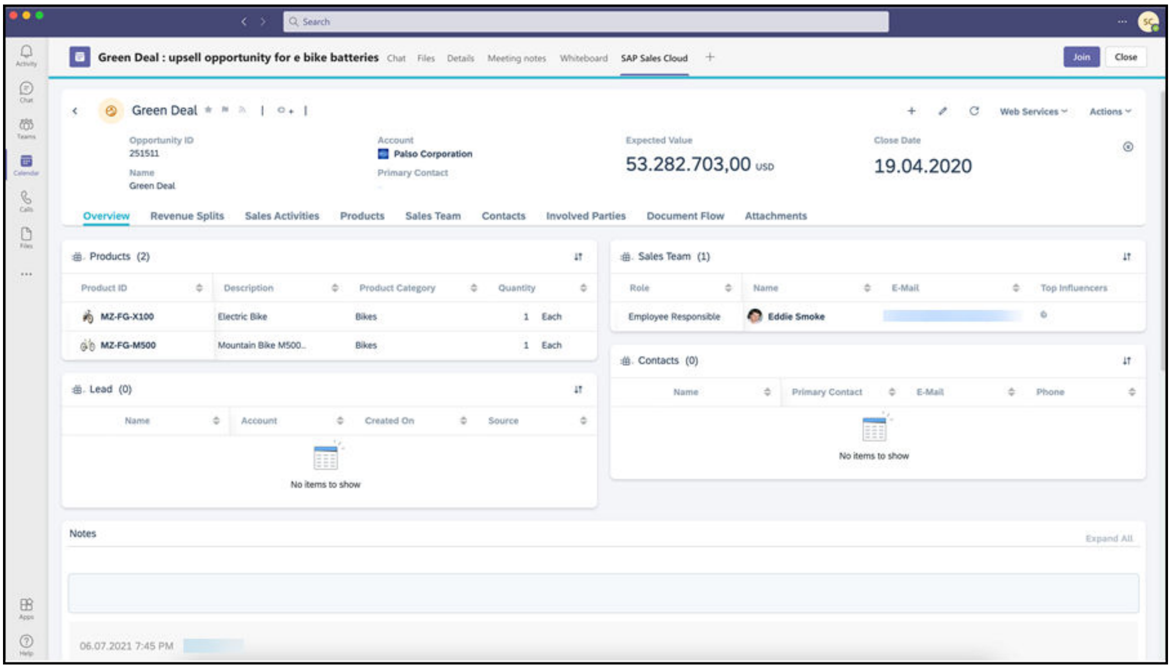
1. From the *Calendar*, double click the meeting and go to the *SAP Sales Cloud* tab.



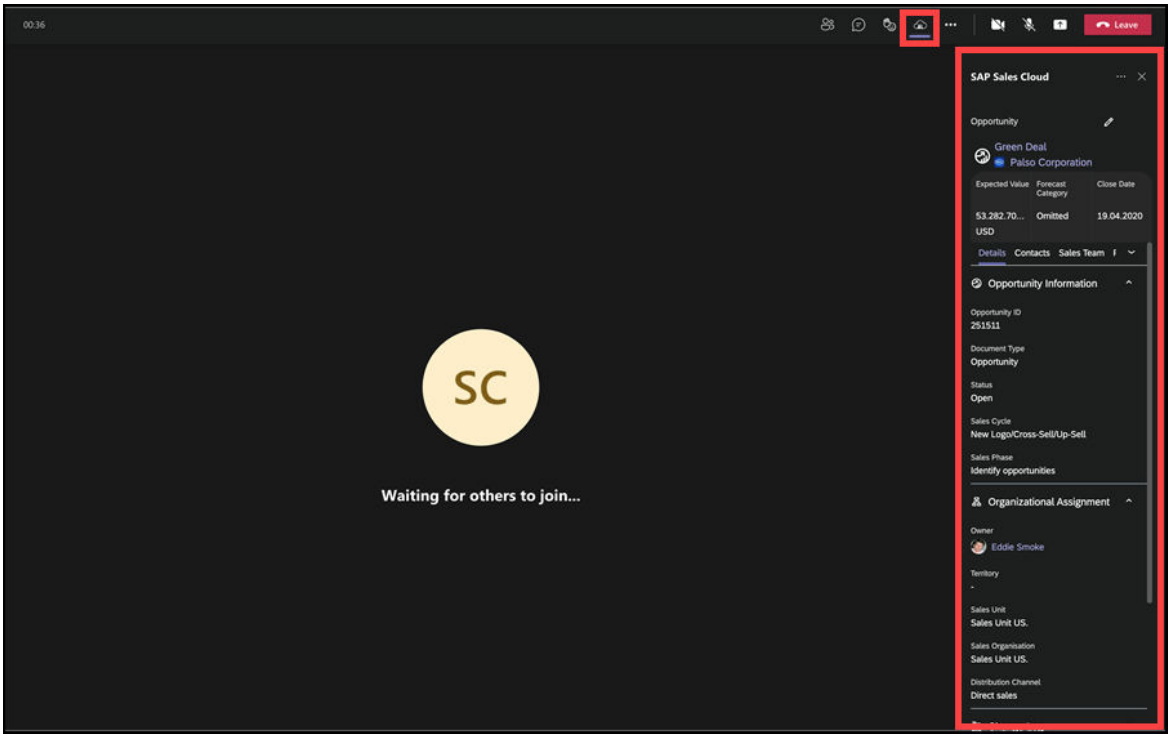
If you are already joined to a meeting, click on *SAP Sales Cloud* icon ( ) to open the application in the side panel.



2. Click *Sign In* to start the authentication and sign in to your SAP Sales Cloud.
   You can view and edit the embedded reference object when the authentication ends.
   Application in the *SAP Sales Cloud* tab:



Application in the side panel during a meeting:



19.2.1.4 Additional Notes for Microsoft Teams Integration

- SAP Cloud for Customer application in Teams side panel is available only in the dark mode.
- The application in Teams (desktop version) doesn't identify any location-based functionality.
- Recurring activities aren't supported.
- Login duration of a user doesn't support the *Auto-LogOff* period flag.
  If an unexpected termination of the session via server happened and it is not communicated to Teams, then you may need to relogin to Teams (desktop version) to attend the meeting created from SAP Cloud for Customer.
- During a Teams meeting on tablets, the application in Teams is displayed in full screen instead of side panel.
- Context objects are added to the appointments based on these scenarios:
  - If an appointment is created from any of the objects supported in quick view, then the object becomes the context object for the meeting.
  - If an appointment is created directly, then the appointment becomes the context object.
  - If you edit an existing appointment for Teams collaboration and this appointment:
    - Contains only one related item, then the related item becomes the context object.
    - Contains zero or more than one related item, then the appointment becomes the context object.
- Teams integration is available in the following quick views:
  - Accounts
  - Appointments

    - Competitor Products
    - Competitors
    - Contacts
    - Contracts
    - E-Mails
    - Employees
    - Individuals
    - Leads
    - Opportunities
    - Partner Contacts
    - Partners
    - Phone Calls
    - Products
    - Promotions
    - Registered Products
    - Sales Orders
    - Sales Quotes
    - Tasks
    - Tickets
    - Visits
- If you remove an attendee after creating an appointment, the removed attendee gets a cancellation e-mail.
- SAP Cloud for Customer Outlook client-side add-in or server-side add-in supports Teams integration.
- Update the add-in to the latest version to use the Teams integration along with client-side add-in.
- The language configured in SAP Cloud for Customer is only recommended in Teams. If the language is different, it considers the language configured in SAP Cloud for Customer.
- Organizers and Owners are only recommended to reschedule the meetings. You can enable the scoping question to restrict the rescheduling of visits and appointments only by organizer and owner. For more information, see Configure Rescheduling of Appointments and Visits Only by Organizer and Owner [page 789].
- As an attendee, if you make any changes to the appointments in SAP Cloud for Customer with user delegated permission, the changes are not reflected in Microsoft Teams.
- Notes and attachments with respect to appointments and visits available in SAP Cloud for Customer are not reflected in Microsoft Teams.
- The user delegated permission isn't supported on mobiles.

19.2.2 Create Visits

Create a visit with Teams integration in your SAP Cloud for Customer.

> → Remember
>
> Ensure that your administrator has maintained your Microsoft Teams e-mail address in the employee details.

If not, add the email address by performing the following steps.

1. Go to *Administrator* > *Employees*.
2. Select an employee and click *Edit*.
3. Update the email address and click *Save*.

The same email ID must also be a part of your Microsoft Azure active directory.

Follow these steps to create a visit with Teams collaboration:

1. Navigate to *Visits*.
2. Click the *Create* icon (+) to create a new visit.
3. If you're using this feature for the first time or the user delegation permission expires, the system shows a pop-up window where you must allow the permissions and login to your Microsoft Teams account. If you haven't enabled the scoping question for Microsoft Teams collaboration, the same pop-up window opens only when you enable the Microsoft Teams collaboration in step 5.
   This permission allows you to use all the Microsoft Teams integrated features until the validity expires.
4. Update necessary fields such as *Subject*, *Account*, *Start Date/Time*, and *Primary Contact*.
5. Turn on the Microsoft Teams *Collaboration* toggle button to enable Microsoft Teams collaboration.
6. In the *Attendees* tab, click *Add* to search and select the required attendees with a valid e-mail address.

   ! Restriction

   While creating a visit from the Visit Object Work List (OWL), if you first enter the account details and then turn on the Microsoft Teams *Collaboration* toggle button, the *Location* field is set as Microsoft Teams. However, if the Microsoft Teams *Collaboration* toggle button is already on, the location is set to the address of the account.

   i Note

   You must add at least one attendee to create a Microsoft Teams meeting.
7. Click *Save*.

19.2.2.1 Manage Visits

Edit, delete, and cancel your Microsoft Teams collaborated visits.

If you have the *Application Delegation* permission, you can edit, delete, or cancel any Microsoft Teams collaborated visits. To perform the same actions with the *User Delegation* permission, you must be the organizer of the visit.

The following table gives you different scenarios and its results when you try to edit, delete, or cancel the visits based on the user delegation permission:

Visit Type	Are you the organizer?	Do you have the User Delegation permission?	What are the actions	Results
Microsoft Teams Visits	Yes	Yes	Edit, Delete, or Cancel	*Success*
	No	No	Edit, Delete, or Cancel	*Failure* You can't edit, delete, or cancel visits without permission. To grant consent, follow step 3 in Scope and Configure Microsoft Teams Integration [page 787].
	Yes	No		
	No	Yes	Edit, Delete, or Cancel	*Failure* You must be the organizer to edit, delete, or cancel a visit.
Normal Visits	Yes	Yes	Enable Microsoft Teams collaboration	*Success*
	No	Yes	Enable Microsoft Teams collaboration	*Failure* You must be the organizer to enable Microsoft Teams collaboration.

19.2.3 Share Workspaces

Share lists or objects of SAP Cloud for Customer with Microsoft Teams.

To use this feature, your administrator must navigate to *User Menu* > *Settings* > *Company Settings* and switch on the *Enable sharing workspaces in Microsoft Teams* toggle button. You must also enable the following company settings to create new teams and channels in Microsoft Teams.

- Enable creating teams in Microsoft Teams
- Enable creating channels for a team in Microsoft Teams

Follow these steps to use the share workspace feature either from SAP Cloud for Customer or from Microsoft Teams.

From SAP Cloud for Customer

1. Navigate to lists or objects that you want to share with Microsoft Teams.
2. Click the *Share Workspaces* ( ) icon.

> → Remember
>
> If you're using this feature for the first time or the user delegation permission expires, the system shows a pop-up window where you must allow the permissions and login to your Microsoft Teams account.
>
> This permission allows you to use all the Microsoft Teams integrated features until the permission expires.

3. If the workspace is already shared, you can see the list of existing teams where you can join directly, or you can create a new team and proceed.

> **! Restriction**
>
> You can't see these details if you have user delegation permission.

4. In the *Team* tab, you can either select an existing team from the dropdown or select *Create a team* and enter a name. The system generates the *Tab Name* depending on the object that you select. You can edit it if required.
5. Click *Next*.
6. In the *Channel* tab, you can either select an existing channel from the dropdown or select *Create a channel* and enter a name.
7. Click *Next* to move to the *Members* tab.
8. To add members to the team, enter their email ID and press *Enter*.

> **i Note**
>
> If you are adding guest users, it may take up to 24 hours to reflect in Microsoft Teams.

9. Click *Preview* to review the updated information.
10. Click *Save*. The system generates a link with the team name.
11. Click the link to open the existing or new team in Microsoft Teams.

From Microsoft Teams

1. Sign in to Microsoft Teams.
2. Click *Apps* and select *SAP Sales and Service Core* application.

> **i Note**
>
> You can also navigate to a team in Microsoft Teams and click the plus (+) icon. Search for *SAP Sales and Service Core* and click *Add*. Follow these steps (6 to 11) to continue.

3. Choose one of the following options:
   - Add to a team
   - Add to a meeting
4. Search and select a team or meeting from the dropdown.
5. Click *Set up a tab*.
   The *Tab Configuration* window opens.
6. Enter *Tenant URL*, *User ID*, and *Password*.
7. Choose one of the following options:
   - Filter
   - Business Object Instance

> **i Note**
>
> You can't see the *Filter* option if you have selected the *Add to a meeting* option.

8. Choose an object using the dropdown.
9. Search and select the business object instances using the object name or ID.
10. Click *Save* to move to the sign in page.

11. Click *Sign in* to view the object from SAP Cloud for Customer.

> **! Restriction**
>
> If you try to include users outside the team to a private channel of Microsoft Teams, they may not be added.

19.2.4 Create Deal Rooms

Share high value opportunities and accounts with Microsoft Teams.

You can create multiple deal rooms with internal and external members for collaboration. While creating a deal room, you can use the toggle button to include all the related team members and the contacts instantly.

Your administrator can enable this feature via adaptation.

Follow these steps to create a deal room.

1. Navigate to the object detail view of any of your *Opportunities* or *Accounts*.
2. Click the down arrow icon on the right and select *Deal Rooms*.
3. Click *New*.
4. If you're using this feature for the first time or the user delegation permission expires, the system shows a pop-up window where you must allow the permissions and login to your Microsoft Teams account.
   This permission allows you to use all the Microsoft Teams integrated features until the permission expires.
5. From the *New Deal Room* tab, enter a name and other necessary fields.
6. Use the toggle buttons to include all team members of the *Sales Team* or *Account Team*, and *Contacts* instantly.
7. To add the members who are not part of the team or contacts, enter their user email IDs in the *Invite Others* field.

   > **i Note**
   >
   > This may take up to 24 hours to reflect in Microsoft Teams.
8. Click *Save*.

   > **i Note**
   >
   > - You can launch Microsoft Teams directly by clicking the items in the list of deal rooms.
   > - If you're a member of a Public Deal Room, you can add new members. If you're a member of a Private Deal Room, you're only allowed to view the members.
   >   Only the owners are allowed to delete the members or the deal room in both private and public deal rooms.

19.2.5 Create Resolution Rooms

Share tickets on Microsoft Teams.

You can create multiple *Resolution Rooms* with internal and external members for collaboration. While creating a resolution room, you can use the toggle button to include all the internal and external involved parties instantly.

Your administrator can enable this feature via adaptation.

Follow these steps to create a resolution room.

1. Navigate to the object detail view of any of your *Tickets*.
2. Click the down arrow icon on the right and select *Resolution Rooms*.
3. Click *New*.
4. If you're using this feature for the first time or the user delegation permission expires, the system shows a pop-up window where you must allow the permissions and login to your Microsoft Teams account.
   This permission allows you to use all the Microsoft Teams integrated features until the permission expires.
5. From the *New Resolution Room* tab, enter a name and other necessary fields.
6. Use the toggle buttons to include all team members of the *Internal Involved Parties* and *External Involved Parties* instantly.
7. To add the members who are not part of the internal or external involved parties, enter their user email IDs in the *Invite Others* field.

   > i Note
   >
   > This may take up to 24 hours to reflect in Microsoft Teams.
8. Click *Save*.

   > i Note
   >
   > - You can launch Microsoft Teams directly by clicking the items in the list of resolution rooms.
   > - If you're a member of a Public Resolution Room, you can add new members. If you're a member of a Private Resolution Room, you're only allowed to view the members.
   >   Only the owners are allowed to delete the members or the resolution room in both private and public resolution rooms.

19.2.6 Make Outbound Calls

Use Microsoft Teams to make your outbound calls.

> i Note
>
> Ensure that you've the required Microsoft Teams license for outbound calls.

To enable this feature, go to *User Menu* > *Settings* > *Company Settings* and switch on the *Enable outbound calls in Microsoft Teams* toggle button. Once you enable this setting, any configuration for the business communicators such as Skype, Computer Telephony Integration (CTI) and so on, will be ignored. Note that your phone call activities aren't recorded.

> **! Restriction**
>
> This feature isn't supported on smartphones.

19.3 Microsoft Teams Integration FAQ

This section answers commonly asked questions about Microsoft Teams integration in SAP Cloud for Customer.

19.3.1 Does the Teams collaboration feature only work with the appointments that are created from SAP Cloud from Customer?

No, Teams collaboration feature also works in Microsoft Outlook if you're using the groupware integration.

19.3.2 What happens if an appointment is created in Microsoft Outlook with Teams meeting embedded and synced via a client-side plugin?

If a Teams meeting is embedded as part of a meeting request created via Outlook, the appointment is marked for Teams collaboration.

If the appointment is tagged for SAP Cloud for Customer, during the sync process, it identifies that the appointment is enabled for Teams collaboration and the flag is set automatically.

19.3.3 What happens if you invite a non-SAP Cloud for Customer user to a Teams meeting?

Non-SAP Cloud for Customer users can see a meeting request in their calendar.

If you are part of the same Microsoft Office 365 account, you can see the application. However, you must have a user account in SAP Could for Customer and the required authorizations to access the application. If you are not part of the same Microsoft Office 365 account, you cannot see the application.

19.3.4 How is access to the side panel in Teams defined when a meeting is in progress?

If you are part of the same Microsoft Office 365 account, you can see the side panel during a Teams meeting. To access the application, you must have a user account in SAP Could for Customer and the required authorizations.

19.3.5 Does the Sales tab work in the Teams mobile app?

Yes, it works.

19.3.6 What licenses are required for Teams integration?

You should have a Microsoft Office 365 Exchange Online license for Teams integration.

19.3.7 Does Microsoft Teams integration support single sign-on?

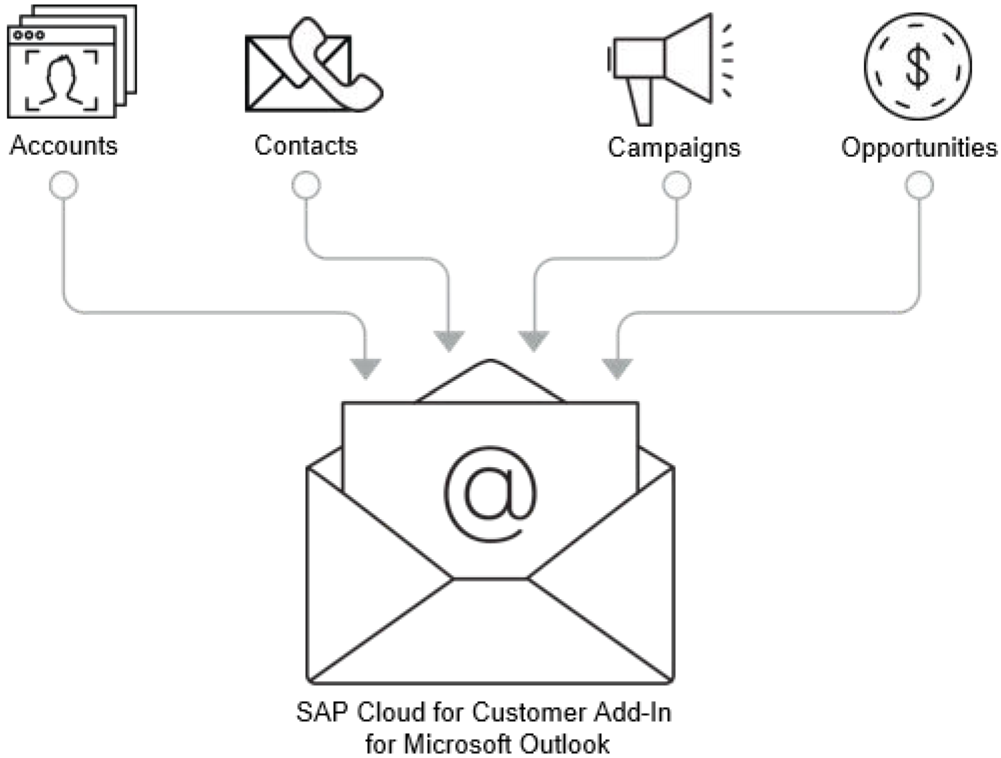
You can use Single Sign-On (SSO) if you are performing any actions from the Cloud for Customer web UI.

When you use any feature in the Cloud for Customer web UI that creates a tab on Microsoft Teams. You can log in to this tab using SSO.

The process of adding any objects from Teams using the SAP Sales and Service app doesn't support SSO. You can log in using SSO once the tab is added.

20 E-Mail Add-Ins

You can leverage tools you use every day, such as your e-mail inbox, to become more productive.



We all know the feeling: You're looking through your inbox and realize that you have to open another program to record – and sometimes even retype – customer interactions. Wouldn't it be convenient to enter information into your solution without leaving your inbox? Well, you can! If your company uses e-mail groupware such as Microsoft Outlook, IBM Notes, or Gmail as its company e-mail software, you can use some SAP Cloud for Customer features right from your inbox.

As an example, you can do the following in the Add-In for Microsoft Outlook:

After you install the appropriate add-in for your groupware application, you can log on to the solution right from your inbox. When you select a contact in your groupware, you can easily see leads, opportunities, sales quotes, campaigns, and activities.

When you select an e-mail, any information in SAP Cloud for Customer about the sender also appears in your inbox. There is a bi-directional synchronization that includes contacts, e-mail, appointments, tasks, and visits. If you update any of those items in your e-mail client, they are also updated in your solution, and if you update them in your solution directly, they are also updated in your e-mail client.

You can also search through accounts and contacts in your SAP solution right from your e-mail inbox. Easily download contacts from your SAP solution and synchronize them to your Microsoft Outlook inbox.

Working in your solution from your groupware improves your productivity. For example, from your inbox, you can link contacts with accounts, and you can drag and drop e-mail messages onto existing accounts, opportunities, campaigns, and leads. These associations are reflected in your solution too, eliminating repetitive steps. You can also collaborate with colleagues, see notifications, and use your shelf right from your inbox.

Even when you're offline, you can create or update contacts and activities in your inbox. The next time you connect to the system, the data that you entered offline is synchronized with your solution.

> **i Note**
>
> Microsoft Internet Explorer 11 is no longer supported.

Related Information

https://docs.microsoft.com/en-us/lifecycle/faq/internet-explorer-microsoft-edge

20.1 Available E-Mail Add-Ins

Depending on the e-mail program that your company uses, choose the e-mail add-in that makes the most sense for you.

Add-Ins for Server-Side Integration

If you use..	Available E-Mail Add-Ins	Premium Features Available	Link to Documentation
Microsoft Outlook	SAP Cloud for Customer, server-side integration for Microsoft Outlook	Premium Features of Server-Side Groupware Integration for Intelligent Sales Add-On Users [page 806]	SAP Cloud for Customer, Server-Side Integration for Microsoft Outlook [page 864]
Google Workspace	SAP Cloud for Customer, server-side integration for Gmail	Premium Features of Server-Side Groupware Integration for Intelligent Sales Add-On Users [page 806]	SAP Cloud for Customer, Server-Side Integration for Gmail [page 933]

Add-Ins for Client-Side Integration

If you use..	Available E-Mail Add-Ins	Premium Features Available	Link to Documentation
Microsoft Outlook	SAP Cloud for Customer Add-In for Microsoft Outlook	None	SAP Cloud for Customer Add-In for Microsoft Outlook [page 809]

20.2 Premium Features for Groupware Integration

Premium Features of Server-Side Groupware Integration for Intelligent Sales Add-On Users [page 806]

If you're an Intelligent sales add-on licensed user, you can access the premium features of server-side groupware integration.

20.2.1 Premium Features of Server-Side Groupware Integration for Intelligent Sales Add-On Users

If you're an Intelligent sales add-on licensed user, you can access the premium features of server-side groupware integration.

Your administrators must activate one or more of the following before you can use the feature:

- E-mail auto sync
  - Without your intervention, the emails will be auto-synced to SAP Cloud for Customer within 30 minutes (in the next sync cycle).
  - Your administrator can enable this feature from groupware settings.
- Calendar auto sync
  - Without your intervention, the calendar events will be auto-synced to SAP Cloud for Customer within 30 mins (in the next sync cycle).
  - Any updates in calendar events get synchronized within 30 mins (in the next sync cycle) back to SAP Cloud for Customer without your intervention.

    > **i Note**
    >
    > For this to occur the category in the appointment/visits must not be changed.

  - Your administrator can enable this feature from groupware settings.
- Instant calendar sync/update.
  - If in addition to auto sync, instant sync is switched on then without your intervention, the calendar events will be auto-synced to SAP Cloud for Customer instantly (within 1-3 minutes).
  - Your administrator must raise a support ticket to enable this feature.

> **i Note**
>
> All other features will continue to exist in the sales and service core.

The following table has a detailed comparison between standard features in sales and service core and the premium features available with the intelligent sales add-on.

Synchronization from Groupware System (Outlook/Gmail) to SAP Cloud for Customer

Activity	Standard Features in Sales and Service Core	Premium Features with Intelligent Sales Add-On
Synchronization of emails and attachments	**Manual save:** you can save manually from the add-in. The sync to SAP Cloud for Customer occurs instantly (within 1-3 mins).	**Email auto-sync (1):** the emails are saved to SAP Cloud for Customer within 30 mins (in the next sync cycle) without your intervention.

Activity	Standard Features in Sales and Service Core	Premium Features with Intelligent Sales Add-On
	Manual sync using category: the sync to SAP Cloud for Customer occurs within 30 mins (in the next sync cycle).	
Synchronization of calendar events and attachment (including recurring events)	Event creation	
	Manual sync using category: the sync to SAP Cloud for Customer as appointment or visit occurs within 30 mins (inin the next sync cycle).	**Calendar auto sync (2):** without your tervention, the calendar events will be auto-synced to SAP Cloud for Customer within 30 mins (in the next sync cycle).
	Manual save: you can save manually from the add-in. The sync to SAP Cloud for Customer as an appointment or visit occurs within 30 mins (in the next sync cycle).	
		Calendar instant sync (3): without your intervention, the calendar events will be auto-synced to SAP Cloud for Customer instantly (within 1-3 minutes). **Note** For this to work, the calendar auto sync feature (2) must be switched on in the groupware settings. **Note** New calendar events cannot be synced instantly if created during the running sync session or within 2 minutes after it finishes. Instead, they will be scheduled to sync according to 30 minutes sync interval.
	Event Update	

Activity	Standard Features in Sales and Service Core	Premium Features with Intelligent Sales Add-On
	Updates to existing calendar events: Once the event is created manually, the updates to the calendar events get automatically synchronized within 30 mins (in the next sync cycle) back to SAP Cloud for Customer. i Note For this to occur, the category in the appointment/visits must not be changed.	**Updates to existing calendar events:** The updates to the calendar events get synchronized within 30 mins (in the next sync cycle) back to SAP Cloud for Customer automatically. i Note For this to occur, the category in the appointment/visits must not be changed.
		Calendar instant sync update (3): any updates in the calendar events getin synchronized stantly (within 1-3 minutes) back to SAP Cloud for Customer without your interaction. i Note For this to occur, the category in the appointment/visits must not be changed. i Note All day events synchronize as per auto-sync cycle within 30 mins. But are excluded from instant sync cycle. i Note Calendar events cannot be synced instantly if updated during the running sync session or within 2 minutes after it finishes. Instead, they will be scheduled to sync according to 30 minutes sync interval.
Synchronization of tasks, contacts, accounts, and individual customer	These are synced to SAP Cloud for Customer within 30 mins (in the next sync cycle) after being created or updated.	

Synchronization from SAP Cloud for Customer to Groupware System (Outlook/Gmail)

Activity	Standard Features in Sales and Service Core	Premium Features with Intelligent Sales Add-On
Synchronization of emails and attachments	Automatic synchronization within 30 mins (in the next sync cycle)	
Synchronization of calendar events and attachment (including recurring events)	Automatic synchronization within 30 mins (in the next sync cycle)	**Calendar auto sync update (2):** Any updates in the calendar events get synchronized instantly (within 1-3 minutes) back to groupware system (Outlook/Gmail). **Note** For this to occur, the category in the appointment/visits must not be changed.
Synchronization of tasks, contacts, accounts, and individual customer	Automatic synchronization within 30 mins (in the next sync cycle)	

20.3 SAP Cloud for Customer Add-In for Microsoft Outlook

The SAP Cloud for Customer Add-In for Microsoft Outlook allows you to exchange information between Microsoft Outlook and SAP Cloud for Customer.

Requirements for SAP Cloud for Customer Add-In for Microsoft Outlook (Version 4.0 or Higher) [page 810]
Microsoft Outlook versions supported by the add-in and required frameworks and packages.

Scope and Configure SAP Cloud for Customer Add-In for Microsoft Outlook [page 811]
Administrators can configure this add-in using scoping, scoping questions, fine-tuning, and settings in the add-in itself.

Set Up SAP Cloud for Customer Add-In for Microsoft Outlook [page 816]
Each user who wants to use SAP Cloud for Customer functions from Microsoft Outlook must install the add-in on his or her computer. In some companies, administrators install it centrally for all users.

Get Started [page 821]
The SAP Cloud for Customer Add-In for Microsoft Outlook allows you to exchange information between Microsoft Outlook and SAP Cloud for Customer. After installing the add-in, you can do the tasks listed below right from Microsoft Outlook.

Manage Contacts [page 826]
With SAP Cloud for Customer Add-In for Microsoft Outlook, you can create contacts, associate them with other objects in your SAP system, pin them, and even add contacts from your SAP solution into Microsoft Outlook.

Manage E-Mails [page 831]
If you use SAP Cloud for Customer Add-In for Microsoft Outlook, you can add e-mails to your SAP solution or add e-mails with reference to other objects right from your inbox.

20.3.1 Requirements for SAP Cloud for Customer Add-In for Microsoft Outlook (Version 4.0 or Higher)

Microsoft Outlook versions supported by the add-in and required frameworks and packages.

> **i Note**
>
> Don't use both the client-side and the server-side add-in for Microsoft Outlook. If you decide to use SAP Cloud for Customer, server-side integration for Microsoft Outlook, uninstall the SAP Cloud for Customer Add-In for Microsoft Outlook.

- Microsoft Office support:

Outlook Version	Types Supported
Outlook 2019	• Office 365 • Office 2019
Outlook 2016	• Office Professional Plus • Office 365 ProPlus
Outlook 2013 (32 Bit or 64 Bit)	• Office Professional Plus • Office 365 ProPlus

> **i Note**
>
> Microsoft Exchange 2010 and 2013 are supported.

- Microsoft .Net Framework 4.6.2 (Web Installer)

- Microsoft Visual Studio 2010 Tools for Office Runtime (VSTOR 2010) Redistributable (x86)
- Microsoft Visual Studio 2010 Tools for Office Runtime (VSTOR 2010) Redistributable (x64)

20.3.2 Scope and Configure SAP Cloud for Customer Add-In for Microsoft Outlook

Administrators can configure this add-in using scoping, scoping questions, fine-tuning, and settings in the add-in itself.

20.3.2.1 Enable Microsoft Outlook

Administrators can add *Microsoft Outlook* to your project scope.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Sales* > *Account and Activity Management* > *Activity Management* and check the box next to the scoping question for integration of local e-mail applications.

20.3.2.2 Configure Download of Individual Customers to Microsoft Outlook

To allow download of individual customers from SAP Cloud for Customer to Microsoft Outlook, administrators must maintain the required configuration in SAP Cloud for Customer as well as in Microsoft Outlook. After defining these settings, add your contacts to Microsoft Outlook to ensure that they are synchronized.

Context

> ⚠ Caution
>
> The employee (user) must belong to the account team of an individual customer for the individual customer to be downloaded to the outlook client. However, this condition does not apply when individual customers are downloaded by looking-up and using e-mail address.

Procedure

1. Make settings in SAP Cloud for Customer.

The following controls are provided in the system to enable or disable download of individual customers to Microsoft Outlook. Note that these settings are controlled by an administrator business role and override the settings made in Microsoft Outlook.

1. Log on as an administrator and choose *Administrator* > *General Settings* > *Users* > *Business Roles*.
2. Set the filter to show all active business roles.
3. Select and edit the role for which you want to provide access. In the *FIELDS & ACTIONS* tab for the role, verify if the following fields are set to *Unrestricted*:
   `GW_INDIVIDUAL_CUSTOMERS` - If you select this checkbox, a new folder for *SAP Cloud for Customer: Individual Customers* is displayed in the *Contacts* dashboard of Microsoft Outlook.
4. Save your settings.

2. In Microsoft Outlook, in the toolbar for SAP Cloud for Customer Microsoft Outlook Add-In, click *Settings* and select the checkbox for *Enable Individual Customers*.

> **Note**
>
> If you disable this setting, the individual customer contacts from SAP Cloud for Customer are no longer available in Microsoft Outlook. However, all data created for this user can be accessed whenever the download of individual customers is enabled again.

20.3.2.3 Configure a Default Profile for Microsoft Outlook

Administrators can define a default profile for all users who use the SAP Cloud for Customer Add-In for Microsoft Outlook.

Context

You can send around guidelines for users to set up their profiles for the add-in. However, it may be easier to simply define a default profile for your company. Users can then adapt it to their own workstyle later, if they choose.

Procedure

1. Go to *Administrator* > *Groupware Add-In Settings*.

   The settings you see are the same ones that can be made directly in the add-in.
2. Make the settings to define the default profile for the add-in for all users at your company.
3. Save your settings.

   When your company upgrades to the next release and as each user logs on, your default profile overwrites any settings they may have made previously.

20.3.2.4 Configure - Prevent Synchronization of E-Mail Marked as Private or Confidential

As an administrator, you can set up your system to exclude e-mail marked as either private or e-mail marked as confidential from being synchronized to SAP Cloud for Customer.

Context

To make this setting, do the following:

Procedure

1. Log on as an administrator and go to *Administrator* > *General Settings* > *Groupware Add-In Settings* > *Microsoft Outlook* > *General Settings* > *Sync Settings* and choose whether you want to exclude confidential e-mail, private e-mail, or both from synchronization.
2. Choose whether you want to exclude confidential e-mail, private e-mail, or both from synchronization.

20.3.2.5 Configure - Prevent Synchronization of Notes and Attachments for Visits and Appointments

As an administrator, you can set up your system to prevent notes and attachments from being synchronized to and from SAP Cloud for Customer for appointments and visits.

Context

> **i Note**
>
> These settings always affect both appointments and visits. For example, it is not possible to prevent synchronization for appointments and not for visits.

To make this setting, do the following:

Procedure

1. Log on as an administrator and choose *Administrator* > *General Settings* > *Users* > *Business Roles*.

2. Use the filter to show all active business roles.
3. Select and edit the role for which you want to prevent synchronization of notes and attachments.
4. In the user role, add the appropriate business action restriction:
    - To prevent synchronization of attachments for appointments and visits (GW_APPT_ATTACH_UPLOAD_DOWNLOAD)
    - To prevent synchronization of notes for appointments and visits (GW_APPT_NOTES_UPLOAD_DOWNLOAD)

20.3.2.6 Configure - Create Visits by Default

If you are using the SAP Cloud for Customer Add-In for Microsoft Outlook, as the administrator, you can set your system to select the *Visit* indicator by default for all new appointments that are created from Microsoft Outlook.

If your users primarily create visits instead of appointments, as the administrator, you can enable the default *Visit* checkbox by logging on as an administrator and choosing *Administrator* > *Groupware Add-In Settings* > *Microsoft Outlook* > *General Settings* > *Create appointments in Microsoft Outlook as visits by default (users can change as necessary)*.

> **Note**
>
> Users can change this setting manually, so if they create visits often and only create appointments occasionally, they can just deselect this indicator to create an appointment.

20.3.2.7 Configure SAP System URL for All Users at Initial Logon

As the administrator, you can push the SAP solution URL to all users for initial logon. Predefining the URL streamlines the process and eliminates confusion and errors due to typos as users enter the URL manually.

Context

When users have logged on to the SAP Cloud for Customer Add-In for Microsoft Outlook before, URLs that were used previously appear for selection. However, for users who are logging on for the first time, there is no history. Pushing the URL for the SAP solution to all users provides a default URL for users at initial logon.

Procedure

1. Predefine the URL in one of the following ways:
    - In the *Microsoft Windows Registry Editor*, create a new registry entry for the server URL:
        1. Go to `HKEY_CURRENT_USER\SOFTWARE\SAP\Business ByDesign FrontEnd\CD\ServerConfig`.
        2. Insert a new string value with name *ServerAddress* and data containing the domain URL.
    - On your local machine, add the following line to *config.properties*: **`ServerUrl=<your server's url>`**

      > **i Note**
      >
      > The *config.properties* file is found under `C:\Users\<your user>\AppData\Local\SAP\C4C\config`.
      >
      > You can copy your server's URL from the *Microsoft Windows Registry Editor* under *SAP* > *Business ByDesign Front End* > *CD* > *ServerConfig*. The address appears in the *ServerAddress* row in the *Data* column and ends in `ondemand.com`.
2. Save your changes.

Results

When users log on to the add-in from Microsoft Outlook for the first time, your tenant's URL appears by default.

20.3.2.8 Configure Remote Installation of Add-In with MSI File

In addition to each end user being able to install the add-in manually, administrators can use an MSI file to install the add-in on multiple clients remotely.

Context

To download the MSI file, do the following:

Procedure

1. As an administrator, you can download the MSI file from the SAP Software Download Center at https://support.sap.com/software/installations.html.

2. Search for `C4C_OUTLK_ADDIN_MSI` and download it.

Example

For example, you could use the following command line for silent installation:

```
>> msiexec  /i   <path to msi>  /quiet
```

20.3.2.9 Configure - Synchronize Phone Calls in Microsoft Outlook

As an administrator, you can make settings so that phone calls are synchronized from the SAP solution to users' calendars in Microsoft Outlook.

Log on as an administrator and enable this feature under *Administrator* › *General Settings* › *Groupware Add-In Settings* › *Microsoft Outlook* › *General Settings*.

20.3.3 Set Up SAP Cloud for Customer Add-In for Microsoft Outlook

Each user who wants to use SAP Cloud for Customer functions from Microsoft Outlook must install the add-in on his or her computer. In some companies, administrators install it centrally for all users.

20.3.3.1 Install or Update the Add-In for Microsoft Outlook Integration

If your administrator has not installed the add-in centrally, you'll need to install it manually on your computer. To update the add-in, follow the same procedure. To download the add-in, you must have administrative rights on the computer.

Prerequisites

To avoid compatibility issues with previous releases, make sure that you have installed the latest version of the add-in.

Procedure

1. In SAP Cloud for Customer, choose *Download*.
2. Choose the download link for the add-in for Microsoft Outlook.
3. Install the add-in.

   Follow the instructions in the installation wizard.
4. Restart Microsoft Outlook to activate the add-in.

   When you restart Microsoft Outlook, SAP Cloud for Customer appears on your Microsoft Outlook screen as a separate tab in the ribbon.

20.3.3.2 Configure Remote Installation of Add-In with MSI File

In addition to each end user being able to install the add-in manually, administrators can use an MSI file to install the add-in on multiple clients remotely.

Context

To download the MSI file, do the following:

Procedure

1. As an administrator, you can download the MSI file from the SAP Software Download Center at https://support.sap.com/software/installations.html.
2. Search for `C4C_OUTLK_ADDIN_MSI` and download it.

Example

For example, you could use the following command line for silent installation:

```
>> msiexec  /i  <path to msi>  /quiet
```

20.3.3.3 Configure SAP System URL for All Users at Initial Logon

As the administrator, you can push the SAP solution URL to all users for initial logon. Predefining the URL streamlines the process and eliminates confusion and errors due to typos as users enter the URL manually.

Context

When users have logged on to the SAP Cloud for Customer Add-In for Microsoft Outlook before, URLs that were used previously appear for selection. However, for users who are logging on for the first time, there is no history. Pushing the URL for the SAP solution to all users provides a default URL for users at initial logon.

Procedure

1. Predefine the URL in one of the following ways:
   - In the *Microsoft Windows Registry Editor*, create a new registry entry for the server URL:
     1. Go to `HKEY_CURRENT_USER\SOFTWARE\SAP\Business ByDesign FrontEnd\CD\ServerConfig`.
     2. Insert a new string value with name *ServerAddress* and data containing the domain URL.
   - On your local machine, add the following line to *config.properties*: **`ServerUrl=<your server's url>`**

   > **Note**
   >
   > The *config.properties* file is found under `C:\Users\<your user>\AppData\Local\SAP\C4C\config`.
   >
   > You can copy your server's URL from the *Microsoft Windows Registry Editor* under *SAP* > *Business ByDesign Front End* > *CD* > *ServerConfig*. The address appears in the *ServerAddress* row in the *Data* column and ends in `ondemand.com`.
2. Save your changes.

Results

When users log on to the add-in from Microsoft Outlook for the first time, your tenant's URL appears by default.

20.3.3.4 Make Settings for SAP Cloud for Customer Add-In for Microsoft Outlook

Customize the add-in to your working style by using the settings.

Procedure

1. Enable the side pane in Microsoft Outlook by enabling the add-in SAP Cloud for Customer.
2. As a user, you can make these settings locally from Microsoft Outlook. In the SAP Cloud for Customer section of the ribbon, choose *Settings*.

   > **Note**
   >
   > As an administrator, you can make some of these settings globally and cascade them to all users. To do so, log on to your system as an administrator and choose *Administrator* > *General Settings* > *Groupware Add-In Settings* > *Microsoft Outlook*.

3. Under *Side Panel Options*, define the statuses of each item that you want to appear in the side pane.

   By default, the add-in shows activities from the past 30 days. On this tab, you can adjust this setting to display activities up to one year (365 days) in the past.
4. Check the SAP Cloud for Customer folder locations in Microsoft Outlook by choosing *Synchronization Folders*.

   The add-in automatically creates the synchronization folders, including the following:
   - *Default Folder*
     This folder is the main folder where error and conflict information is stored.
   - *Accounts Folder (only necessary for sales users)*
     This folder contains the accounts downloaded from SAP Cloud for Customer.
   - *Contacts Folder (only necessary for sales users)*
     This folder contains the contacts downloaded from SAP Cloud for Customer.

   To change any of these folders, click the folder link, select a new folder, and choose OK.
5. In the *Notifications/Errors* section, define how and in which cases the system should notify you.
6. If you are a service agent using Microsoft Outlook to reply to tickets, under *Service*, you can enable the service scenario. Additionally, you can define a default account to use when you reply to tickets.
7. Under *Proxy Settings*, define the default proxy settings that the system should use.

20.3.3.5 Configure a Default Profile for Microsoft Outlook

Administrators can define a default profile for all users who use the SAP Cloud for Customer Add-In for Microsoft Outlook.

Context

You can send around guidelines for users to set up their profiles for the add-in. However, it may be easier to simply define a default profile for your company. Users can then adapt it to their own workstyle later, if they choose.

Procedure

1. Go to *Administrator* > *Groupware Add-In Settings*.

   The settings you see are the same ones that can be made directly in the add-in.
2. Make the settings to define the default profile for the add-in for all users at your company.
3. Save your settings.

   When your company upgrades to the next release and as each user logs on, your default profile overwrites any settings they may have made previously.

20.3.3.6 Uninstall the Add-In for Microsoft Outlook Integration

If you no longer want to use the SAP Cloud for Customer Add-In for Microsoft Outlook, you can uninstall it.

Context

> **Note**
>
> If you want to update your add-in, there is no need to uninstall it. Just update the add-in.

Procedure

1. On your computer, from your list of installed programs, uninstall the add-in for Microsoft Outlook.

2. In Microsoft Outlook, find the folder that has the same title as the SAP solution and delete it.

Related Information

[Install or Update the Add-In for Microsoft Outlook Integration [page 816]]
If your administrator has not installed the add-in centrally, you'll need to install it manually on your computer. To update the add-in, follow the same procedure. To download the add-in, you must have administrative rights on the computer.

20.3.4 Get Started

The SAP Cloud for Customer Add-In for Microsoft Outlook allows you to exchange information between Microsoft Outlook and SAP Cloud for Customer. After installing the add-in, you can do the tasks listed below right from Microsoft Outlook.

Prerequisites

You have installed the SAP Cloud for Customer Add-In for Microsoft Outlook locally on your computer and made the appropriate settings.

Related Information

[Set Up SAP Cloud for Customer Add-In for Microsoft Outlook [page 816]]
Each user who wants to use SAP Cloud for Customer functions from Microsoft Outlook must install the add-in on his or her computer. In some companies, administrators install it centrally for all users.

20.3.4.1 Requirements for SAP Cloud for Customer Add-In for Microsoft Outlook (Version 4.0 or Higher)

Microsoft Outlook versions supported by the add-in and required frameworks and packages.

> **i Note**
>
> Don’t use both the client-side and the server-side add-in for Microsoft Outlook. If you decide to use SAP Cloud for Customer, server-side integration for Microsoft Outlook, uninstall the SAP Cloud for Customer Add-In for Microsoft Outlook.

- Microsoft Office support:

Outlook Version	Types Supported
Outlook 2019	• Office 365 • Office 2019
Outlook 2016	• Office Professional Plus • Office 365 ProPlus
Outlook 2013 (32 Bit or 64 Bit)	• Office Professional Plus • Office 365 ProPlus

> **i Note**
>
> Microsoft Exchange 2010 and 2013 are supported.

- Microsoft .Net Framework 4.6.2 (Web Installer)
- Microsoft Visual Studio 2010 Tools for Office Runtime (VSTOR 2010) Redistributable (x86)
- Microsoft Visual Studio 2010 Tools for Office Runtime (VSTOR 2010) Redistributable (x64)

20.3.4.2 Log On to SAP Cloud for Customer From Microsoft Outlook

If single sign-on (SSO) is not enabled, log on manually.

Context

If your administrator has set up single sign-on (SSO), you are logged on automatically and the SAP Cloud for Customer sidebar appears. If you don't see the SAP Cloud for Customer sidebar in Microsoft Outlook, log on manually like this:

Procedure

1. In Microsoft Outlook, under SAP Cloud for Customer, click the button to log on to SAP Cloud for Customer.
2. If your administrator has predefined the system, it appears in field *SAP System URL*. If the field is blank, select or manually type in the URL for your SAP Cloud for Customer system and choose *OK*.

   The logon is certificate-based and runs automatically in the background.

   Your Microsoft Outlook is now connected with the SAP Cloud for Customer system that you selected.
3. If there is a problem with the certificate for your user, or if you are not working with certificates, the solution requires you to enter your user ID and password.

> **i Note**
>
> Under *Settings*, if you choose the option for remembering your password and automatic logon, you stay logged on automatically with the same user name and password in the system. If the logon fails, for example if you change your password, automatic logon is disabled to avoid locking you out. In that case, simply log on with your new password and set the automatic logon option again.

You can confirm that you have logged on to the system by checking the title of the button that you used to log on. If the text has switched to *Log Off*, you have logged on successfully.

> **→ Recommendation**
>
> If you are logged on to SAP Cloud for Customer with the add-in for many hours without any action, you may receive an authorization error when trying to use a Microsoft Outlook integration function. In this case, your user cookies may have expired. Simply log off and log on again.

4. Enter your URL in the *SAP System* field, leaving out the path or directory information at the end of the URL.

   For example, you log on with URL `http://Test.sap.corp:7000`, and not `http://Test.sap.corp:7000/irj/portal`.

> **i Note**
>
> When you are working offline and cannot log on to the system, any changes to relevant e-mails, appointments, and tasks, or new items for synchronization to SAP Cloud for Customer are kept in a pool in Microsoft Outlook. Actual synchronization of these items occurs automatically as soon as you log on to SAP Cloud for Customer using the add-in.

20.3.4.3 View Information from SAP Cloud for Customer

When you select an e-mail, the add-in automatically recognizes e-mails from customers defined as contacts in your SAP solution, based on e-mail address. Information related to that contact and account appears in the side pane. You can access contact and account information, as well as related opportunities, leads, sales orders, tickets, and activities for the current week, and you can personalize how you would like to view the content.

20.3.4.4 Pagination and Sorting

In the SAP Cloud for Customer Add-In for Microsoft Outlook, items that appear in the side pane are organized into pages that contain 100 items.

Page numbers appear in the footer of each list. To navigate between pages, use the arrows.

When you click a column header, the system sorts the contents of one page.

On the *Shelf*, items are sorted by name in ascending order. Use the (*Sort*) button to define a different default sort order for your shelf.

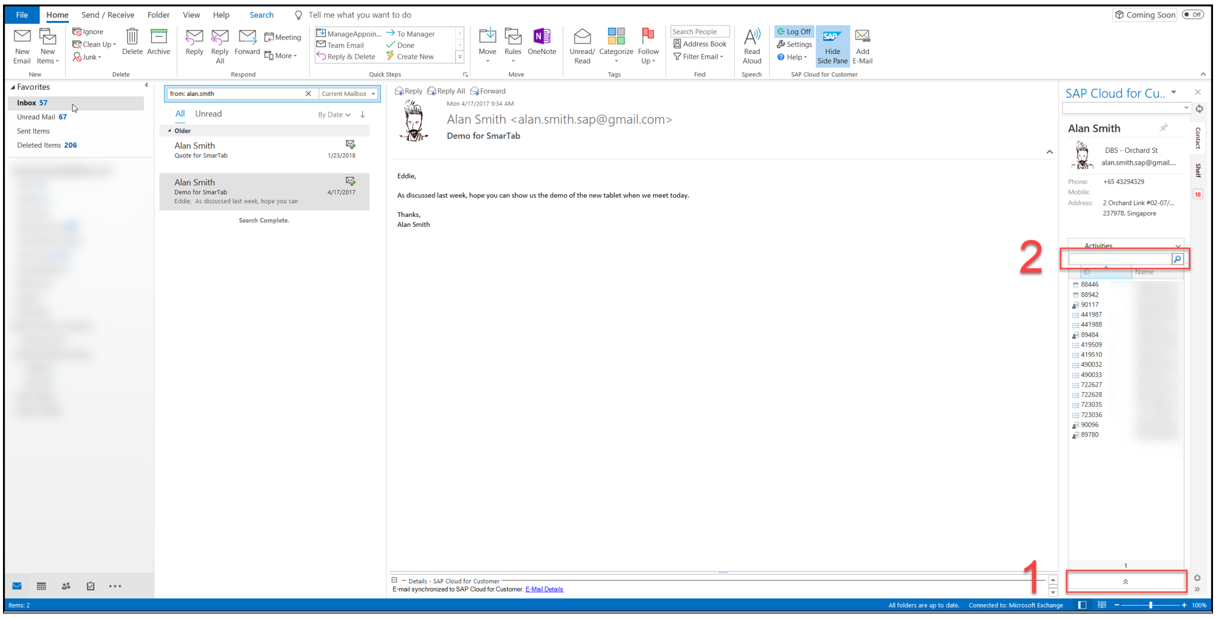
20.3.4.5 Search in the Side Pane

Use the search field to find objects that were added as references to the contact that appears in the side pane.

Procedure

1. Open Microsoft Outlook, log on to the add-in, and expand the side pane.
2. Enter the ID of the object in the search field.

Results



20.3.4.6 Work with Feed Updates

If you use the native feed, you can see and work with feed posts right from your inbox.

> **i Note**
>
> If you enable SAP Jam in SAP Cloud for Customer, the feed tab in the Microsoft Outlook side pane displays the last feeds before you switched to SAP Jam. It is not possible to see feed posts from SAP Jam in the side pane at this time.

When you select *Feed* in the side pane, you can do the following:

- Display the feed updates that are in SAP Cloud for Customer for the relevant contact and account.
- Enter a new feed update just like you would in the SAP solution.
  Feed updates are synchronized automatically, so your feed update also appears in SAP Cloud for Customer.

  > **i Note**
  >
  > A feed update entered for an account references the account, and a feed update entered for a contact references the contact, similar to entering a feed update in the account or contact item view.

- Enter comments on a feed update.
- Repost a feed update.
- Accept or decline a follow request.
- Click a link to go to SAP Cloud for Customer.

20.3.4.7 Display Synchronization Details for an Item

If you want to know the status of the synchronization process, you can display the details from your inbox.

Procedure

1. Open the item in Microsoft Outlook.
2. In the lower frame of the item, in the *Details — SAP Cloud for Customer* section, click the link.

20.3.4.8 Capture HTTP Traces

To provide more information during incident handling, you can enable HTTP tracing.

You can find this option in Microsoft Outlook in the add-in bar under *Help* > *Enable HTTP Tracing*.

> **→ Recommendation**
>
> We recommend using this feature only if you are directed to do so by an administrator or support personnel. Leaving it activated during normal use may affect performance.

20.3.5 Manage Contacts

With SAP Cloud for Customer Add-In for Microsoft Outlook, you can create contacts, associate them with other objects in your SAP system, pin them, and even add contacts from your SAP solution into Microsoft Outlook.

20.3.5.1 Create Accounts and Contacts

You can create accounts and contacts right from your inbox. At the next synchronization, they appear in your SAP solution.

Context

To separate personal data from business data in Microsoft Outlook, the add-in creates separate folders for accounts and contacts in SAP Cloud for Customer.

> **i Note**
>
> The user who creates and synchronizes a new account from Microsoft Outlook is automatically the owner for that account.

> **i Note**
>
> The ability to create and synchronize accounts and contacts depends on your system authorizations, as well as your synchronization settings. If you have any questions or difficulties, contact your administrator.

Procedure

1. In Microsoft Outlook, go to your contacts and select the contacts folder for SAP Cloud for Customer.

    > **i Note**
    >
    > Creating contacts from the SAP Cloud for Customer folder ensures that your business and personal contacts stay separate.

2. Choose *New Contact*.
3. Enter the information for the contact person.
4. As you enter a new contact, you can check for duplicates.

    If a contact with a similar name, e-mail, or address is found in your system, you can download it into Outlook.
5. Under SAP Cloud for Customer, choose *Add Contact*. In the screen that appears, search for and select an existing account.

6. If the account that you need does not exist, create a new account by entering information in the required fields.

   You cannot edit accounts in Microsoft Outlook. If you must update an account, open your SAP solution and update it there.
7. Assign the account to the contact and save your entries.

   > **i Note**
   >
   > Accounts created directly in the *Accounts from SAP Cloud for Customer* folder cannot be synchronized. Accounts can only be created from the contact area. However, once the account is created in the system, after the next synchronization, it appears in the accounts folder.
8. To synchronize this contact and its associated account with SAP Cloud for Customer, choose *Add Contact* > *Submit*.

Related Information

Add Contacts from SAP Cloud for Customer into Microsoft Outlook [page 829]
You can download all of your contacts from the SAP solution into Microsoft Outlook at once, or one at a time.

20.3.5.2 Improved Address Handling

Confirm Microsoft Outlook exchange street and house number data.

In SAP Cloud for Customer, you enter data in two fields; one for the street name and the other for the house number. In Groupware, there is only one field for street address (includes the street name and house number). Modify the Groupware street address to avoid an empty street number in SAP Cloud for Customer.

20.3.5.3 View Contact Data

The details for a linked e-mail include contact information.

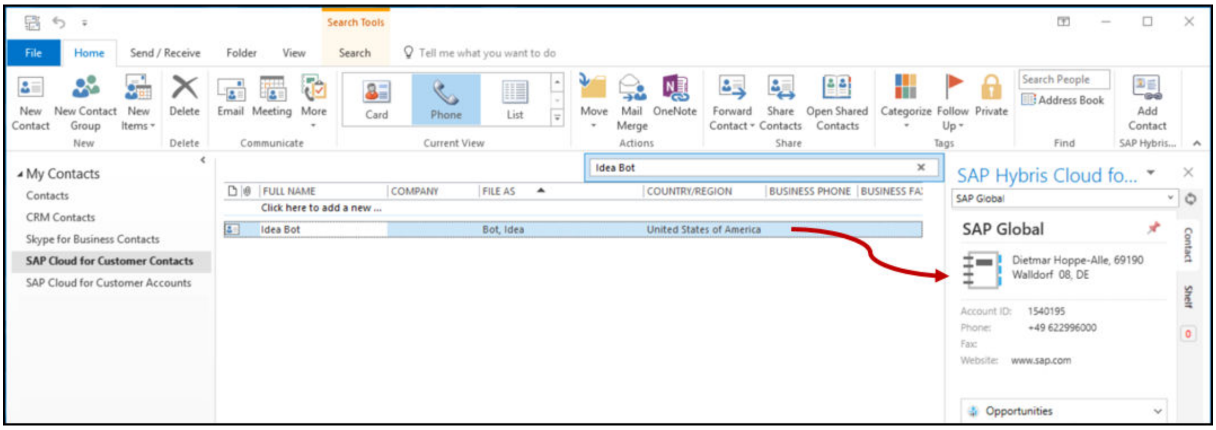
In the message that appears at the bottom of the screen after an e-mail was synchronized with your SAP solution, there is a link to details. The information behind this link now includes contact information. If the contact was synchronized with your local Microsoft Outlook client, the contact's name also appears in the dialog box.

To see all available contact information in the SAP solution, click the link.

20.3.5.4 Easily Associate Contacts and Accounts with Drag and Drop

If you are using the SAP Cloud for Customer Add-In for Microsoft Outlook, you can drag and drop contacts into accounts.

In Microsoft Outlook under *Contacts*, when you open the contacts folder for SAP Cloud for Customer in any view other than *People* view, the add-in side panel appears. From the side panel, you can search for an account and then associate a contact with that account by using drag and drop. Your association of the contact to an account is synchronized with the SAP solution.



20.3.5.5 Pin Contact Information in the Side Pane

You can keep information appearing in the side pane, even when you select another object, by pinning it.

Context

When you select an e-mail in your inbox from an SAP Cloud for Customer contact, the information for that contact appears in the side pane. Selecting a message from a different SAP Cloud for Customer contact updates the information in the side pane.

If you want the information for a specific contact to remain available in the side pane, pin that information as follows:

Procedure

1. When the information that you want to stay in the side pane appears in the side pane, click the pin icon at the top of the side pane to keep this contact information available while you select other e-mail messages.
2. Click the pin icon again to unpin the information, allowing the side pane to dynamically update contact information based on the message that you select.

20.3.5.6 Save a Visit or an Appointment to Contacts From Search

You can save a visit or appointment to contacts from outlook add-in search results.

If the visit or appointment attendees in outlook aren't recognized by the add-on, you can manually look up a contact within the side-pane and save the visit or appointment.

> **i Note**
>
> You can't add emails to contacts from search.

20.3.5.7 Add Contacts from SAP Cloud for Customer into Microsoft Outlook

You can download all of your contacts from the SAP solution into Microsoft Outlook at once, or one at a time.

Context

There are a few different ways to download your contact information from your SAP solution into Microsoft Outlook. Here they are:

- Download all your contacts from the system to Microsoft Outlook at once like this:
  1. In the SAP Cloud for Customer Add-In toolbar, choose *Settings*.
  2. If you want the contacts that you download to be updated if changes are made, choose *Keep Contacts Synchronized*.
     If you skip this setting, the contacts are downloaded but not updated.

     > **i Note**
     >
     > Contacts without accounts and new contacts and accounts may not be updated to Microsoft Outlook automatically, even if you made this setting. To ensure that these types of contacts are also updated, repeat this step periodically.
  3. Make the appropriate selections for initial synchronization, and choose *Download Contacts*.

  By default, the add-in looks up all accounts under *My Accounts* and downloads all contacts listed for those accounts.

  > **i Note**
  >
  > If you only want to download contacts that you have added on the *Relationships* tab, use checkbox *Download only the contacts with whom I have established relationships*.
- Download individual contacts manually like this:
  1. In Microsoft Outlook, on the SAP Cloud for Customer side pane, on the *Contacts* tab, search for a contact name.

A list of contacts found in SAP Cloud for Customer appears in the side pane.
2. Select the contact that you want to add to your contacts in Microsoft Outlook and choose ➕.

- Download individual contacts automatically like this:
  1. In the SAP Cloud for Customer Add-In toolbar, choose *Settings* > *Always Copy Contacts*.
  2. When you select an e-mail in your inbox, the SAP solution searches for a match to the e-mail address. If it finds a match, it automatically downloads the contact information to your Microsoft Outlook contacts.

Results

The contact information is transferred from SAP Cloud for Customer and appears in your contacts in Microsoft Outlook.

Related Information

Create Accounts and Contacts [page 826]
You can create accounts and contacts right from your inbox. At the next synchronization, they appear in your SAP solution.

20.3.5.8 Configure Download of Individual Customers to Microsoft Outlook

To allow download of individual customers from SAP Cloud for Customer to Microsoft Outlook, administrators must maintain the required configuration in SAP Cloud for Customer as well as in Microsoft Outlook. After defining these settings, add your contacts to Microsoft Outlook to ensure that they are synchronized.

Context

⚠ Caution

The employee (user) must belong to the account team of an individual customer for the individual customer to be downloaded to the outlook client. However, this condition does not apply when individual customers are downloaded by looking-up and using e-mail address.

Procedure

1. Make settings in SAP Cloud for Customer.

   The following controls are provided in the system to enable or disable download of individual customers to Microsoft Outlook. Note that these settings are controlled by an administrator business role and override the settings made in Microsoft Outlook.

   1. Log on as an administrator and choose *Administrator* > *General Settings* > *Users* > *Business Roles*.
   2. Set the filter to show all active business roles.
   3. Select and edit the role for which you want to provide access. In the *FIELDS & ACTIONS* tab for the role, verify if the following fields are set to *Unrestricted*:
      `GW_INDIVIDUAL_CUSTOMERS` - If you select this checkbox, a new folder for *SAP Cloud for Customer: Individual Customers* is displayed in the *Contacts* dashboard of Microsoft Outlook.
   4. Save your settings.
2. In Microsoft Outlook, in the toolbar for SAP Cloud for Customer Microsoft Outlook Add-In, click *Settings* and select the checkbox for *Enable Individual Customers*.

   > **i Note**
   >
   > If you disable this setting, the individual customer contacts from SAP Cloud for Customer are no longer available in Microsoft Outlook. However, all data created for this user can be accessed whenever the download of individual customers is enabled again.

20.3.6 Manage E-Mails

If you use SAP Cloud for Customer Add-In for Microsoft Outlook, you can add e-mails to your SAP solution or add e-mails with reference to other objects right from your inbox.

20.3.6.1 Add E-Mails for Synchronization

Contact information may be associated automatically with another object. However, you can also associate contact information from an e-mail manually.

Context

If you have contact information showing in the SAP Cloud for Customer side pane, you can associate a formatted or unformatted e-mail with an opportunity, lead, sales quote, campaign, or account listed under that contact. Simply drag and drop the e-mail onto the SAP item in the side pane to which you want to associate it.

If you wish to add an e-mail for synchronization and do not have relevant contact information visible in the side pane, proceed as follows:

Procedure

1. In Microsoft Outlook, open an existing e-mail, and under SAP Cloud for Customer, choose *Add E-Mail*.

   > **i Note**
   >
   > You can add one or more e-mails directly, without opening them, by right-clicking on them in your inbox, and choosing *Add E-Mail*.

   > **i Note**
   >
   > When you create an e-mail, you can synchronize and send it by choosing *Send and Add E-Mail*. This step combines the synchronize and send steps, saving you time.

2. Add a reference to an account, if desired.
3. Choose *Submit*.

   An e-mail activity is created in SAP Cloud for Customer, based on information in the Microsoft Outlook e-mail.

Results

The e-mail that you synchronized from Microsoft Outlook appears in SAP Cloud for Customer on the *Activities* tab.

If you added an account, opportunity, contact, or lead as a reference, it also appears in the item view for that item.

Any images in the body of the e-mail appear as attachments in your SAP solution.

20.3.6.2 Add Visits, Appointments, Tasks, and E-Mails with Reference

You can add e-mails, appointments, visits, and tasks with reference to any of your SAP Cloud for Customer accounts, opportunities, or leads.

Context

Visits are technically similar to appointments, and the SAP solution handles them in the same way.

In the following steps, an e-mail activity is used as an example, but the steps are similar for all activity types.

If you have contact information showing in the SAP Cloud for Customer side pane, you can associate an e-mail, visit, appointment, or task to an opportunity, lead, activity, sales quote, sales order, campaign, ticket, or account listed under that contact simply by using drag and drop.

> **Note**
>
> If you add e-mails from the *Sent* folder, the system uses the recipient from the "TO" line as the reference. If there are multiple recipients, the solution uses the first recipient as account/contact of reference, which you can confirm by using *Get Details*.

If you wish to add an e-mail, appointment, or task for synchronization and don't have relevant contact information visible in the side pane, proceed as follows:

Procedure

1. Add an activity **with reference to an account, campaign, sales order, or sales quote** like this:
    a. In Microsoft Outlook, to synchronize an e-mail to SAP Cloud for Customer, open an e-mail and choose *SAP Cloud for Customer* > *Add E-Mail*.

    > **Note**
    >
    > When you use *Add E-Mail*, the system adds the e-mail to the object directly, without referencing an account. If you drag and drop the e-mail onto the object, the system also adds the account reference.

    b. Choose *Add Reference* and select the object to which you want to add the e-mail.

    You can also search for another account and add the e-mail with that account as a reference.

    When you add an e-mail with reference to an account, you can filter the search results by type (account or individual customer). Your filter settings persist until you change them.

    An e-mail activity is created automatically in SAP Cloud for Customer under the account that you chose.
2. Add an activity **with reference to an opportunity or lead** like this:

    > **Note**
    >
    > To add a reference to an opportunity or lead, add a reference to an account first.

    a. In Microsoft Outlook, to synchronize an e-mail to SAP Cloud for Customer, open an e-mail and choose *SAP Cloud for Customer* > *Add E-Mail*.
    a. Choose *Add Reference* > *Account*.
    a. Add a reference to an opportunity or lead.
    When you search for the opportunity or lead, the results list displays the opportunities or leads that are associated with the referenced account.
    a. Select the relevant item from the resulting list.

    The e-mail is copied automatically into SAP Cloud for Customer and appears in the opportunity or lead that you selected.

20.3.6.3 Link Email Appointments to a Sales Order or Sales Quote

You can link email appointments to a sales order or sales quote.

You can search for a sales order or sales quote and link an activity (email, visit or, appointment) to that sales order or sales quote using the groupware add-in. You don't have to open the SAP Cloud for Customer to manually add activity to a sales quote or sales order.

20.3.6.4 Drag and Drop Attachments

In the SAP Cloud for Customer Add-In for Microsoft Outlook, you can drag and drop attachments from an e-mail directly onto an object in the side pane, such as an opportunity or lead. When you open the object in your SAP solution, the attachment appears in the object directly.

20.3.6.5 Remove E-Mails from SAP Cloud for Customer

You can remove an e-mail message from the SAP solution (browser only) if you linked it to the SAP system originally.

When you remove an e-mail from your SAP solution, the e-mail is not deleted: it still exists in Microsoft Outlook. The link to that e-mail is simply removed from SAP Cloud for Customer.

To remove e-mails from SAP Cloud for Customer, under *Activities*, hover over an e-mail and choose *Remove*.

20.3.6.6 Configure - Prevent Synchronization of E-Mail Marked as Private or Confidential

As an administrator, you can set up your system to exclude e-mail marked as either private or e-mail marked as confidential from being synchronized to SAP Cloud for Customer.

Context

To make this setting, do the following:

Procedure

1. Log on as an administrator and go to *Administrator* > *General Settings* > *Groupware Add-In Settings* > *Microsoft Outlook* > *General Settings* > *Sync Settings* and choose whether you want to exclude confidential e-mail, private e-mail, or both from synchronization.
2. Choose whether you want to exclude confidential e-mail, private e-mail, or both from synchronization.

20.3.7 Manage Appointments and Visits

If you use the SAP Cloud for Customer Add-In for Microsoft Outlook, you can synchronize appointments and visits so that updates in your SAP solution appear in Microsoft Outlook, and the other way around.

20.3.7.1 Add Visits and Appointments for Synchronization

Appointment information may be associated automatically with other objects. However, you can also associate appointment information manually.

Context

Visits are technically similar to appointments, and the SAP solution handles them in the same way.

> **Note**
>
> The following is specific to sales:
>
> If you have contact information showing in the SAP Cloud for Customer side pane, you can associate an appointment with an opportunity, lead, activity, sales order, or account listed under that contact simply by

using drag and drop. The appointment is associated automatically with the lead, opportunity, activity, sales order, or account.

> **i Note**
>
> You can only synchronize appointments for which you are the organizer. If you are a participant, you receive any updates from the organizer's Outlook appointment.

> **i Note**
>
> It is not possible to synchronize recurring appointments.

If you wish to add an appointment for synchronization and do not have relevant contact information visible in the side pane, proceed as follows:

Procedure

1. In Microsoft Outlook, open an appointment, and under SAP Cloud for Customer, choose *Add Appointment*.

   > **i Note**
   >
   > You can add an appointment directly, without opening it, by right-clicking on the appointment in your calendar, and choosing *Add Appointment*.

   > **i Note**
   >
   > When you create a new appointment, you can synchronize and send it by choosing *Save, Send, and Sync Appointment*. This step combines multiple steps, saving you time.
2. If you want this item to be a visit, select the *Visit* indicator. Otherwise, you are creating an appointment.
3. Add a reference to an account, if desired.
4. Choose *Submit*.

   An appointment activity is created in SAP Cloud for Customer, based on information in the Microsoft Outlook appointment.
5. You can open, create, or edit an appointment in SAP Cloud for Customer as well. To synchronize any future changes to the appointment in SAP Cloud for Customer or in Microsoft Outlook, repeat the preceding steps.

   > **→ Recommendation**
   >
   > If you add or change attendees in an SAP Cloud for Customer appointment, you can send the meeting request as follows:
   > 1. Ensure that the appointment is synchronized, by repeating the preceding steps.
   > 2. Open the appointment in Microsoft Outlook and send the meeting request.

Results

The appointment that you synchronized from Microsoft Outlook appears in SAP Cloud for Customer on the *Activities* tab.

> **i Note**
>
> The following is specific to sales:
>
> If you added an account, opportunity, contact, or lead as a reference, it also appears in the item view for that item.

20.3.7.2 Configure Synchronization of Visits Only

As an administrator, you can define for certain users that only visits (and not appointments) are synchronized with their SAP solution.

Context

If you have a group of users who only need visits to be updated in their SAP solution, you can define business action restrictions for their business role.

> **i Note**
>
> This setting is only valid for appointments that are created after this setting is made. Any appointments that were synchronized previously are still synchronized.

Procedure

1. Log on as an administrator and go to *Administrator* > *General Settings* > *Business Roles*.
2. Select the business role in which you want to limit synchronization to visits only and choose *View All*.
3. Under *Business Action Restrictions*, add a row and add one or both of the following restrictions:
   - `GW_APPT_ONLY_UPLOAD`
     To sync only visits from the SAP solution to Microsoft Outlook, you must block the solution from uploading appointments. To do so, add this restriction and disable it.
   - `GW_APPT_ONLY_DOWNLOAD`

20.3.7.3 Configure - Prevent Synchronization of Notes and Attachments for Visits and Appointments

As an administrator, you can set up your system to prevent notes and attachments from being synchronized to and from SAP Cloud for Customer for appointments and visits.

Context

> **i Note**
>
> These settings always affect both appointments and visits. For example, it is not possible to prevent synchronization for appointments and not for visits.

To make this setting, do the following:

Procedure

1. Log on as an administrator and choose *Administrator* > *General Settings* > *Users* > *Business Roles*.
2. Use the filter to show all active business roles.
3. Select and edit the role for which you want to prevent synchronization of notes and attachments.
4. In the user role, add the appropriate business action restriction:
    - To prevent synchronization of attachments for appointments and visits (GW_APPT_ATTACH_UPLOAD_DOWNLOAD)
    - To prevent synchronization of notes for appointments and visits (GW_APPT_NOTES_UPLOAD_DOWNLOAD)

20.3.7.4 Configure - Create Visits by Default

If you are using the SAP Cloud for Customer Add-In for Microsoft Outlook, as the administrator, you can set your system to select the *Visit* indicator by default for all new appointments that are created from Microsoft Outlook.

If your users primarily create visits instead of appointments, as the administrator, you can enable the default *Visit* checkbox by logging on as an administrator and choosing *Administrator* > *Groupware Add-In Settings* > *Microsoft Outlook* > *General Settings* > *Create appointments in Microsoft Outlook as visits by default (users can change as necessary)*.

> **i Note**
>
> Users can change this setting manually, so if they create visits often and only create appointments occasionally, they can just deselect this indicator to create an appointment.

20.3.7.5 Add Visits, Appointments, Tasks, and E-Mails with Reference

You can add e-mails, appointments, visits, and tasks with reference to any of your SAP Cloud for Customer accounts, opportunities, or leads.

Context

Visits are technically similar to appointments, and the SAP solution handles them in the same way.

In the following steps, an e-mail activity is used as an example, but the steps are similar for all activity types.

If you have contact information showing in the SAP Cloud for Customer side pane, you can associate an e-mail, visit, appointment, or task to an opportunity, lead, activity, sales quote, sales order, campaign, ticket, or account listed under that contact simply by using drag and drop.

> **Note**
>
> If you add e-mails from the *Sent* folder, the system uses the recipient from the "TO" line as the reference. If there are multiple recipients, the solution uses the first recipient as account/contact of reference, which you can confirm by using *Get Details*.

If you wish to add an e-mail, appointment, or task for synchronization and don't have relevant contact information visible in the side pane, proceed as follows:

Procedure

1. Add an activity **with reference to an account, campaign, sales order, or sales quote** like this:
    a. In Microsoft Outlook, to synchronize an e-mail to SAP Cloud for Customer, open an e-mail and choose *SAP Cloud for Customer* > *Add E-Mail*.

    > **Note**
    >
    > When you use *Add E-Mail*, the system adds the e-mail to the object directly, without referencing an account. If you drag and drop the e-mail onto the object, the system also adds the account reference.

    b. Choose *Add Reference* and select the object to which you want to add the e-mail.

    You can also search for another account and add the e-mail with that account as a reference.

    When you add an e-mail with reference to an account, you can filter the search results by type (account or individual customer). Your filter settings persist until you change them.

    An e-mail activity is created automatically in SAP Cloud for Customer under the account that you chose.
2. Add an activity **with reference to an opportunity or lead** like this:

i Note

To add a reference to an opportunity or lead, add a reference to an account first.

a. In Microsoft Outlook, to synchronize an e-mail to SAP Cloud for Customer, open an e-mail and choose *SAP Cloud for Customer* > *Add E-Mail*.

a. Choose *Add Reference* > *Account*.

a. Add a reference to an opportunity or lead.

When you search for the opportunity or lead, the results list displays the opportunities or leads that are associated with the referenced account.

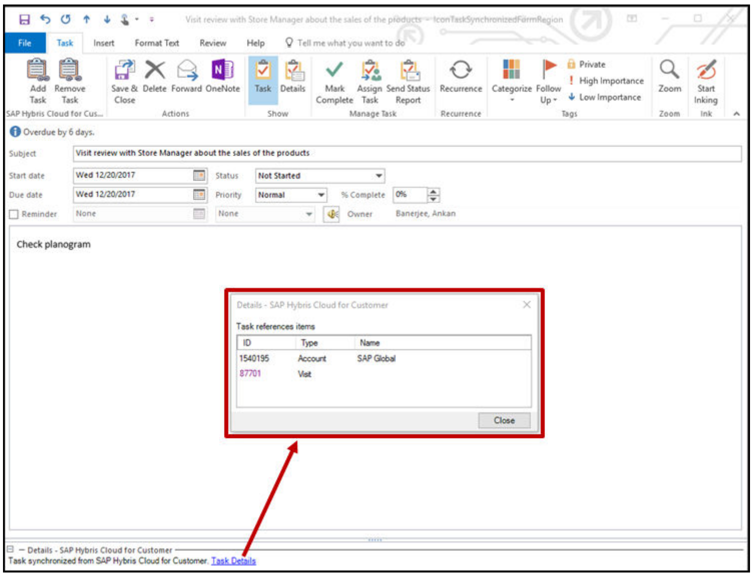
a. Select the relevant item from the resulting list.

The e-mail is copied automatically into SAP Cloud for Customer and appears in the opportunity or lead that you selected.

20.3.7.6 See Visits Linked with Tasks

For tasks in SAP Cloud for Customer Add-In for Microsoft Outlook, you can see details about associated visits after the task is synchronized.

Following synchronization, click the *Task Details* link. Details about the associated visits appear. The visit ID is a link that allows you to navigate to the visit directly in SAP Cloud for Customer.



20.3.7.7 Notification of Canceled Appointment Appears in Microsoft Outlook

If you are the owner of an appointment and the appointment is canceled in the SAP solution, a notification appears in your Microsoft Outlook.

20.3.7.8 Status Sync of Canceled Meetings in Microsoft Outlook

When you cancel meetings in Microsoft Outlook, the canceled status is synchronized with SAP Cloud for Customer.

Unlike deleted visits or appointments, canceled visits or appointments still appear in the SAP solution, which means you can use them to track visits or appointments that were originally scheduled but not completed.

The synchronization and status vary slightly, depending on the situation:

- Organizer cancels a synchronized meeting in Microsoft Outlook
  As the organizer of the meeting, open the meeting request in Microsoft Outlook and choose *Cancel Meeting* > *Send Cancellation*.
  Result: The status of the meeting in the SAP system is *Canceled*.

  > **i Note**
  >
  > For meetings that happened in the past, there is no need to send a cancellation, so only choose *Cancel Meeting*.

- Someone other than the organizer deletes a synchronized meeting in SAP Cloud for Customer

  > **i Note**
  >
  > **Prerequisites**
  >
  > - All attendees have e-mail addresses mapped to their contacts in the SAP system
  > - Meeting request has been sent to all attendees previously

  1. If you are someone other than the organizer, open the appointment in the SAP system and choose *Actions* > *Set as Canceled*.
  2. Following synchronization, in Microsoft Outlook, in the system tray, the organizer must click the SAP icon and choose *Send Meeting Requests to Attendees*.
  3. Select the meeting that you want to cancel and choose *Send*.

> **i Note**
>
> In SAP Cloud for Customer, you can edit a meeting that has already been canceled. However, if the cancellation was already sent to attendees in Outlook, the changes cannot be synchronized to Microsoft Outlook.

20.3.7.9 Delete Visits, Appointments, or Tasks

When you delete visits, appointments, or tasks, there is no longer a record of them in the SAP solution.

Context

Visits are technically similar to appointments, and the SAP solution handles them in the same way.

> **i Note**
>
> Unlike deleted visits or appointments, canceled visits or appointments still appear in the SAP solution. As a result, you can use canceled visits or appointments to track visits or appointments that were originally scheduled but not completed.

In the steps listed below, an appointment is used as an example, but the steps are similar for visits, appointments, and tasks.

Procedure

1. In Microsoft Outlook, open the appointment you want to delete.

   > **i Note**
   >
   > You can only synchronize appointments for which you are the organizer. If you are a participant, you receive any updates from the organizer's Microsoft Outlook appointment.

2. Choose *SAP Cloud for Customer* > *Delete Appointment*.
   You can only delete appointments or tasks that have been synchronized.

Results

For appointments and tasks that were previously synchronized, the deletion is synchronized in both Microsoft Outlook and SAP Cloud for Customer. There is no longer a record of them in the SAP solution.

20.3.8 Manage Tasks

If you use the SAP Cloud for Customer Add-In for Microsoft Outlook, you can add tasks, see visits that are linked with tasks, and delete tasks.

20.3.8.1 Add Tasks for Synchronization

Task information may be associated automatically with another object. However, you can also associate task information manually.

Context

All of your tasks are bi-directionally synchronized between Microsoft Outlook and your SAP solution.

Tasks are synchronized for the **processor only** (defined in your SAP solution).

> → Recommendation
>
> After a task is synchronized with Microsoft Outlook, we recommend that you avoid changing the processor in your SAP solution and in Microsoft Outlook. If you change the processor at this point, the task appears in the calendars of both users, but any updates only appear in the current processor's calendar.

> i Note
>
> Advanced features of task management in Microsoft Outlook, such as assigning tasks to others, are not supported and lead to problems.

> i Note
>
> The following is specific to sales:
>
> If you have contact information showing in the SAP Cloud for Customer side pane, you can associate a task with an opportunity, lead, sales order, activity, or account listed under that contact simply by using drag and drop. The task is associated automatically with the lead, opportunity, sales order, activity, or account.

> i Note
>
> Future tasks and tasks within the last 30 days are synchronized and appear in Microsoft Outlook. Tasks older than 30 days are no longer synchronized.

If you wish to add a task for synchronization and do not have relevant contact information visible in the side pane, proceed as follows:

Procedure

1. In Microsoft Outlook, open a task in your *To-Do List* and choose *SAP Cloud for Customer* > *Add Task*.

   In the task details, if you enter a name in the *Company Name* field, it is used as the account name in the system. Similarly, if you create a task in the system and synchronize it to Microsoft Outlook, the account name appears in the task details as the company name.
2. Add a reference to an account, lead, or opportunity, if desired.
3. Choose *Submit*.

   A task activity is created in SAP Cloud for Customer, based on information in the Microsoft Outlook task.
4. You can open, create, or edit a task in SAP Cloud for Customer as well.

   > i Note
   >
   > If you change a task in SAP Cloud for Customer, the changes are automatically synchronized to Microsoft Outlook within 5 minutes. However, if you change a task in Microsoft Outlook that has already been synchronized, there is no automatic synchronization. In this case, open the task in Microsoft Outlook, make your changes, and then choose *Add Task* to trigger synchronization to SAP Cloud for Customer.

Results

The task that you synchronized from Microsoft Outlook appears in SAP Cloud for Customer on the *Activities* tab.

If you added an account, opportunity, contact, sales order, activity, or lead as a reference, it also appears in the item view for that item.

20.3.8.2 Add Visits, Appointments, Tasks, and E-Mails with Reference

You can add e-mails, appointments, visits, and tasks with reference to any of your SAP Cloud for Customer accounts, opportunities, or leads.

Context

Visits are technically similar to appointments, and the SAP solution handles them in the same way.

In the following steps, an e-mail activity is used as an example, but the steps are similar for all activity types.

If you have contact information showing in the SAP Cloud for Customer side pane, you can associate an e-mail, visit, appointment, or task to an opportunity, lead, activity, sales quote, sales order, campaign, ticket, or account listed under that contact simply by using drag and drop.

> **i Note**
>
> If you add e-mails from the *Sent* folder, the system uses the recipient from the "TO" line as the reference. If there are multiple recipients, the solution uses the first recipient as account/contact of reference, which you can confirm by using *Get Details*.

If you wish to add an e-mail, appointment, or task for synchronization and don't have relevant contact information visible in the side pane, proceed as follows:

Procedure

1. Add an activity **with reference to an account, campaign, sales order, or sales quote** like this:
   a. In Microsoft Outlook, to synchronize an e-mail to SAP Cloud for Customer, open an e-mail and choose *SAP Cloud for Customer* > *Add E-Mail*.

   > **i Note**
   >
   > When you use *Add E-Mail*, the system adds the e-mail to the object directly, without referencing an account. If you drag and drop the e-mail onto the object, the system also adds the account reference.

   b. Choose *Add Reference* and select the object to which you want to add the e-mail.

   You can also search for another account and add the e-mail with that account as a reference.

   When you add an e-mail with reference to an account, you can filter the search results by type (account or individual customer). Your filter settings persist until you change them.

   An e-mail activity is created automatically in SAP Cloud for Customer under the account that you chose.
2. Add an activity **with reference to an opportunity or lead** like this:

   > **i Note**
   >
   > To add a reference to an opportunity or lead, add a reference to an account first.

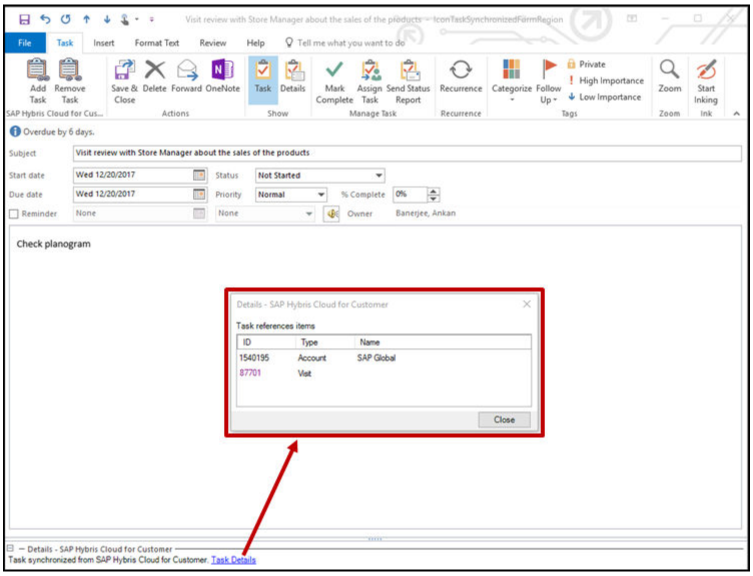
   a. In Microsoft Outlook, to synchronize an e-mail to SAP Cloud for Customer, open an e-mail and choose *SAP Cloud for Customer* > *Add E-Mail*.
   a. Choose *Add Reference* > *Account*.
   a. Add a reference to an opportunity or lead.
   When you search for the opportunity or lead, the results list displays the opportunities or leads that are associated with the referenced account.
   a. Select the relevant item from the resulting list.

   The e-mail is copied automatically into SAP Cloud for Customer and appears in the opportunity or lead that you selected.

20.3.8.3 See Visits Linked with Tasks

For tasks in SAP Cloud for Customer Add-In for Microsoft Outlook, you can see details about associated visits after the task is synchronized.

Following synchronization, click the *Task Details* link. Details about the associated visits appear. The visit ID is a link that allows you to navigate to the visit directly in SAP Cloud for Customer.



20.3.8.4 Delete Visits, Appointments, or Tasks

When you delete visits, appointments, or tasks, there is no longer a record of them in the SAP solution.

Context

Visits are technically similar to appointments, and the SAP solution handles them in the same way.

> **i Note**
>
> Unlike deleted visits or appointments, canceled visits or appointments still appear in the SAP solution. As a result, you can use canceled visits or appointments to track visits or appointments that were originally scheduled but not completed.

In the steps listed below, an appointment is used as an example, but the steps are similar for visits, appointments, and tasks.

Procedure

1. In Microsoft Outlook, open the appointment you want to delete.

   > **i Note**
   >
   > You can only synchronize appointments for which you are the organizer. If you are a participant, you receive any updates from the organizer's Microsoft Outlook appointment.

2. Choose *SAP Cloud for Customer* > *Delete Appointment*.
   You can only delete appointments or tasks that have been synchronized.

Results

For appointments and tasks that were previously synchronized, the deletion is synchronized in both Microsoft Outlook and SAP Cloud for Customer. There is no longer a record of them in the SAP solution.

20.3.9 Manage Phone Calls

Phone calls that you enter and edit in your SAP solution or your Microsoft Outlook calendar are synchronized in both directions. In other words, if you change a phone call in either your SAP solution or the calendar, the change is reflected in both places, following synchronization.

> **i Note**
>
> If you want to **delete or cancel** a phone call, it is not synchronized in both directions. If you cancel the phone call in your SAP solution, it is cancelled in Microsoft Outlook after synchronization. However, if you cancel the phone call in Microsoft Outlook, you must delete it manually in your SAP solution.

20.3.9.1 Add Phone Calls for Synchronization

You can create a phone call in your calendar in Microsoft Outlook and it appears in your SAP solution after synchronization.

Procedure

1. In your Microsoft Outlook calendar, create an appointment.
2. Open the appointment, and under *SAP Sales Cloud*, use the checkbox to indicate that you're creating a phone call.

3. Choose *Add Appointment*.
4. If desired, add a reference.
5. Choose *Submit*.
   In the SAP details that appear near the bottom of the appointment, you can see the synchronization status.

Results

A phone call activity is created in your SAP solution, based on information in the Microsoft Outlook phone call.

20.3.9.2 Synchronize Phone Calls with the Calendar in Microsoft Outlook

If your administrator has made the necessary settings, changes that you make to a phone call in your SAP solution are synchronized to your calendar in Microsoft Outlook.

All of your phone calls are bi-directionally synchronized between Microsoft Outlook and your SAP solution.

> **Note**
>
> If you want to **delete or cancel** a phone call, it is not synchronized in both directions. If you cancel the phone call in your SAP solution, it is cancelled in Microsoft Outlook after synchronization. However, if you cancel the phone call in Microsoft Outlook, you must delete it manually in your SAP solution.

20.3.9.3 Configure - Synchronize Phone Calls in Microsoft Outlook

As an administrator, you can make settings so that phone calls are synchronized from the SAP solution to users' calendars in Microsoft Outlook.

Log on as an administrator and enable this feature under *Administrator* > *General Settings* > *Groupware Add-In Settings* > *Microsoft Outlook* > *General Settings*.

20.3.10 For Service Agents

As a service agent, you can use the SAP Cloud for Customer Add-In for Microsoft Outlook to respond to tickets right from your inbox. Make a few quick settings to activate the service-specific features.

20.3.10.1 Set Up Microsoft Outlook Integration for Service

Make a couple service-specific settings to allow you to respond to service tickets using Microsoft Outlook.

Prerequisites

Ensure that you have access to the shared e-mail account in your company used to respond to tickets. Make sure that you use this account when replying to your customers. You may need to select the correct account manually when you compose e-mails.

Procedure

1. In the SAP Cloud for Customer Add-In for Microsoft Outlook toolbar, choose *Settings* > *Service*.
2. Enable service agent responses to tickets and auto synchronization of tickets.

Related Information

Set Up SAP Cloud for Customer Add-In for Microsoft Outlook [page 816]
Each user who wants to use SAP Cloud for Customer functions from Microsoft Outlook must install the add-in on his or her computer. In some companies, administrators install it centrally for all users.

Get Started [page 821]
The SAP Cloud for Customer Add-In for Microsoft Outlook allows you to exchange information between Microsoft Outlook and SAP Cloud for Customer. After installing the add-in, you can do the tasks listed below right from Microsoft Outlook.

20.3.10.2 Respond to Tickets

If you use the SAP Cloud for Customer Add-In for Microsoft Outlook, you can respond to tickets from the agent workspace using Microsoft Outlook.

Procedure

1. In the agent workspace, ensure that the *Use Microsoft Outlook* checkbox is selected.
2. To respond to the last e-mail, choose *Reply*. This action copies the previous e-mail in the response, and also includes other recipients of the previous e-mail.
   To respond without replying to the last e-mail, choose *Compose New E-Mail*.
   Choosing either response option opens a Microsoft Outlook window prepopulated with the customer's e-mail address.
3. Compose your response.

   > **i Note**
   >
   > Make sure that you are replying from the correct e-mail account.
   >
   > Keep the ticket number in the subject line of the e-mail so that it stays associated with the ticket.

4. Send your response.

Results

The e-mail is associated with the ticket and appears in the interactions.

20.3.10.3 Create New Tickets from E-Mail Inbox

You can create a ticket associated to an e-mail right from your e-mail inbox.

Context

You receive an e-mail from a customer, and you realize it requires action.

If there are any open tickets related to the e-mail, your SAP solution displays them in the side pane. If the e-mail relates to one of the open tickets, just drag and drop the e-mail onto the relevant open ticket.

If the e-mail describes a new issue, open a new ticket right from your inbox:

Procedure

1. Right-click on the e-mail in your inbox and choose *Create Ticket*.
2. In the dialog box that appears, select the relevant account.
3. Choose *Create Ticket*.

Results

The SAP solution creates an e-mail activity and a ticket and associates them to one another. A message that appears in the footer of the e-mail contains a link to open the new ticket for further processing.

20.3.11 SAP Cloud for Customer Add-In for Microsoft Outlook FAQ

Having trouble using SAP Cloud for Customer Add-In for Microsoft Outlook? Check this list of questions and answers for help.

20.3.11.1 Where can I find the MSI installer?

The download page of your SAP solution only contains the EXE installer. Administrators can download the MSI installer from the SAP Software Download Center.

Related Information

Configure Remote Installation of Add-In with MSI File [page 359]
In addition to each end user being able to install the add-in manually, administrators can use an MSI file to install the add-in on multiple clients remotely.

20.3.11.2 Why can´t I associate an e-mail with a contact?

The SAP Cloud for Customer Add-In for Microsoft Outlook does not allow you to associate an e-mail, appointment, or task directly to a contact. The association can only be done to account, opportunity, or lead.

When associating an e-mail with an account, the SAP solution tries to determine the contacts that may be related to the e-mail. To do so, it checks the sender or recipients in the e-mail and then looks them up in the SAP solution to see if a contact exists with the e-mail ID. In some cases, it also tries to make a best guess using the name.

If the SAP solution cannot determine a contact, then the e-mail is not associated to the contact, even though this contact is displayed in side pane as a result of the search.

20.3.11.3 Sync is successful, but my contacts or accounts folder is missing.

Problems with the accounts or contacts folders may be caused by both contacts and accounts pointing to the same folder.

Context

The following steps should resolve issues related to the contact and accounts folders:

Procedure

1. Under *Settings*, change the path of the *Accounts* folder to *SAP Cloud for Customer Accounts*.

   If such a folder does not exist, create it manually.
2. If step 1 does not work, try this:
   1. Delete the *SAP Cloud for Customer Contacts* and *SAP Cloud for Customer Accounts* folders. Also remove these folders from the deleted items in Microsoft Outlook.
   2. Close Microsoft Outlook.
   3. Delete the config folders in `%LOCALAPPDATA%\SAP\C4C\config\Groupware`.
   4. Open `%LOCALAPPDATA%\SAP\C4C\config\config.properties`.
   5. In file `%LOCALAPPDATA%\SAP\C4C\config\config.properties`, add the following line as the last line and save it **`_ResetRecoveryConfig=TRUE`**.
   6. Restart Microsoft Outlook from the run dialog using the following command: **`Outlook.exe /resetfolders`**.
   7. If this procedure resolves the problem, remove the line that you added.

20.3.11.4 Why is my logon status always "In Progress"?

For some users, if you have enabled automatic logon, the *In Progress* status appears and the logon button is grayed out.

Context

You can resolve this issue with one of the following options:

Procedure

1. Increase AutologonTimer value.
   1. In the registry, navigate to the following key: `HKEY_CURRENT_USER\SOFTWARE\SAP\Business ByDesign FrontEnd\CD\ClientConfig`.
   2. Modify the string value `AutologonTimer`.
      If the value does not exist, create it. The value is maintained in milliseconds. The default value is 20000, which corresponds to 20 seconds.
   3. Increase the timer value to 30000 or in some cases to 60000. Note that this value is applied in all cases, which results in a longer delay when you launch Microsoft Outlook.
2. Disable automatic logon.
   1. In the registry, navigate to the following key: `HKEY_CURRENT_USER\SOFTWARE\SAP\Business ByDesign FrontEnd\CD\ClientConfig`.
   2. Delete all values related to automatic logon:
      - Autologon
      - AutologonTimer
      - CertLogon
      - LoginDetails
      - SSOLogon
   3. Restart Microsoft Outlook.

Related Information

Log On to SAP Cloud for Customer From Microsoft Outlook [page 822]
If single sign-on (SSO) is not enabled, log on manually.

20.3.11.5 In a meeting that I've organized, I cannot accept a new time proposal from an attendee.

The accept button is grayed out for the organizer when attendees send new time proposals.

Try one of the following approaches:

- Disable the add-in and see if the issue is resolved.
- Follow the suggestions from Microsoft at https://support.microsoft.com/en-us/kb/3054850 .

20.3.11.6 Why are some of the buttons grayed out?

Sometimes although the add-in loads successfully, the functions are disabled. In this case, the buttons are visible but grayed out.

Context

This problem may be caused by the user downgrading their Microsoft Outlook version, or a corrupt or blank config file. Depending on the suspected cause, use one of the following fixes:

Procedure

1. (Recommended) Run a repair for your Microsoft Office.
2. Modify some of the registry keys related to Microsoft Office.

   Since these registry keys can destabilize the Microsoft Office application if they are not modified correctly, we do not recommend this option. The keys are not related to the SAP add-in but related to Microsoft Office. Nevertheless, the procedure is outlined here.

   In this example, Microsoft Outlook 2016 was installed earlier and the customer downgraded to Microsoft Outlook 2013.

   1. Close any open instances of Microsoft Outlook.
   2. Open the registry editor (Windows `Run command > regedit.exe`).
   3. Navigate to `HKEY_CLASSES_ROOT\Interface\{00063001-0000-0000-C000-000000000046}\TypeLib` or `HKEY_CLASSES_ROOT\Wow6432Node\Interface\{00063001-0000-0000-C000-000000000046}\TypeLib`.
   4. Check the value for *Version*.
      Since the customer has downgraded from Microsoft Office 2016 to Microsoft Office 2013, the value should be 9.5 and not 9.6.

      > **Note**
      >
      > Version keys for Microsoft Outlook:

- Microsoft Outlook 2013 : 9.5
- Microsoft Outlook 2016 : 9.6

5. In the registry editor, navigate to `HKEY_CLASSES_ROOT\TypeLib\{00062FFF-0000-0000-C000-000000000046}`.
6. Retain 9.5 (Microsoft Office 2013) and delete keys for other versions that are not installed on the system.

3. In the case of a blank config file (With whitespaces) you may see the following error in the log:

```
'.', hexadecimal value 0x00, is an invalid character. Line 1, position 1.
```

Stack trace:

```
at
SAP.BYD.Office.Outlook.Core.Configurations.Configuration.Initialize(ConfigurationStoreType configurationStoreType) at
SAP.BYD.Office.Outlook.Core.Configurations.Configuration..ctor() at
SAP.BYD.Office.Outlook.Core.Configurations.Configuration.GetInstance() at
SAP.BYD.Office.Outlook.Core.Configurations.FolderManager.LoadExistingConfiguration() at SAP.BYD.Office.Outlook.Addin.Controller.MainController.Initialize() at
SAP.BYD.Office.Outlook.Addin.AddInManager.<Application_Startup>b__0()
```

In this case, your only options are to delete the corresponding config file or delete the entire config folder. The config folder is under `%LOCALAPPDATA%\SAP\C4C`.

20.3.11.7 In the log, I see message "You do not have sufficient permission to perform this operation".

In some cases, if synchronization fails or information does not appear in the side pane, the add-in responds with the message "You do not have sufficient permission to perform this operation."

Context

You can try one or both of the following fixes:

Procedure

1. Reset the navigation panes.

   In some instances, the Microsoft Outlook profile is corrupted and does not recognize the offline folders necessary for the add-in to work properly. When the folders are not recognized, the add-in enters a state where functioning is prevented, resulting in this error. Try this:
   1. Close Microsoft Outlook.
   2. Use the run command window to open Microsoft Outlook with the command > **`Outlook.exe /resetnavpane`**.

2. Check whether you are prevented from adding new content to the .PST file.

   The user may be prevented from adding new content (includes folder creation). In such a case, the folders are not created and the add-in can behave incorrectly. Try this:

   1. Open Registry Editor.
   2. Locate and then click the following registry subkey:
      `HKEY_CURRENT_USER\Software\Policies\Microsoft\Office\<x>.0\Outlook\PST`.

      > **i Note**
      >
      > The <x>.0 placeholder represents the version of Microsoft Outlook: for example, 16.0 is Microsoft Outlook 2016, and 15.0 is Microsoft Outlook 2013.

   3. Check if the following DWORD exists: `PSTDisableGrow`.
   4. If DWORD `PSTDisableGrow` exists, change the value to "0".
      For more information about this key, see https://support.microsoft.com/en-us/kb/3058474 .

20.3.11.8 Microsoft Outlook has disabled the add-in. How can I enable it again?

Microsoft Outlook imposes strict time limits for add-ins. These time limits include 1000 ms for loading, 500 ms for folder switches and for shutdown. If the add-in exceeds this time limit, then Microsoft Outlook disables the add-in.

Prerequisites

You have administration permissions to modify the registry.

Context

When you reactivate the add-in, if it works without further issues, try the following approaches to resolve the issue.

> **i Note**
>
> Microsoft Outlook Versions
>
> | Microsoft Outlook Name | Version Number |
> | --- | --- |
> | Microsoft Outlook 2013 | 15.0 |
> | Microsoft Outlook 2016 | 16.0 |

Procedure

1. Use policy attributes in the registry.

   Policy attributes can also be used by the IT admin as part of their group policy object (GPO).

   1. Close Microsoft Outlook.
   2. Copy this script into Notepad and save the file as `registry_policy_script.reg`.

      > **i Note**
      >
      > The extension should be .reg and not .txt.

      ```
      Windows Registry Editor Version
      5.00[HKEY_CURRENT_USER\SOFTWARE\Policies\Microsoft\Office\15.0\outlook\resili
      ency\addinlist]olicies\Microsoft\Office\15.0\outlook\resiliency\addinlist]"SA
      PBusinessByDesignOutlookAddin"=dword:00000001
      ```
2. Force Microsoft Outlook to load the add-in by clearing existing resiliency values.
   1. Close Microsoft Outlook.
   2. Copy this script into Notepad and save the file as `registry_policy_script.reg`.

      > **i Note**
      >
      > The extension should be .reg and not .txt.

      ```
      Windows Registry Editor Version 5.00
      [-
      HKEY_CURRENT_USER\SOFTWARE\Microsoft\Office\Outlook\Addins\SAPBusinessByDes
      ignOutlookAddIn]
      [-HKEY_CURRENT_USER\SOFTWARE\Microsoft\Office\15.0\Outlook\Resiliency]
      [HKEY_CURRENT_USER\SOFTWARE\Microsoft\Office\15.0\Outlook\Resiliency\DoNotD
      isableAddinList]
      "SAPBusinessByDesignOutlookAddin"=dword:00000001
      ```

Related Information

Why are some of the buttons grayed out? [page 854]
Sometimes although the add-in loads successfully, the functions are disabled. In this case, the buttons are visible but grayed out.

20.3.11.9 When I create a new appointment, the visit indicator is disabled.

If you have all the necessary roles and access rights assigned to you, but the visit indicator is still disabled, ask your administrator to delete and then re-create your profile in the SAP solution.

The visit indicator is enabled only when:

- User is the organizer for the appointment. This is the case for new appointments.
- The e-mail ID of the organizer matches the mail ID of the Microsoft Outlook profile (default e-mail ID).

The e-mail IDs not matching is the culprit in most cases and it can happen due to many reasons. For example:

- Name change: The e-mail ID had also changed. Though the user could receive e-mails with both old and new e-mail IDs and all synchronization worked, the visit indicator was disabled.
- Multiple e-mail IDs: User chooses a calendar with a different default e-mail ID. This is a complex case and does not happen often with business users.

The add-in tries to resolve the primary e-mail ID of the user and checks the primary e-mail ID against the default e-mail ID. When this check fails, the indicator is disabled.

Ask your administrator to remove and then replace your profile.

Related Information

Microsoft Support - Remove a Profile
Microsoft Support - Create New Profile
Microsoft Support - Profile Actions

20.3.11.10 The side pane does not open. How can I fix it?

Even when the add-in is enabled and users click the *Show Side Pane* button, the side pane does not appear. Causes could include: having multiple inbox windows open, using third-party add-ins with conflicting views, or the Microsoft Outlook profile may be corrupt.

Depending on which case you suspect is causing the problem, try one of the following fixes:

- If you have multiple inboxes open, try to limit yourself to having only one inbox open at a time.
- In the case of third-party add-in interference, try one of the following options:
  - Disable any third party add-ins that are not in use.
  - Open Microsoft Outlook with the following switch from the Microsoft Windows run command: **`outlook.exe /cleanviews`**.
- If you suspect that the Microsoft Outlook profile is corrupt, delete and re-create your Microsoft Outlook profile.

Related Information

Microsoft Support - Remove a Profile
Microsoft Support - Create New Profile
Microsoft Support - Profile Actions

20.3.11.11 I see the following error in the log: "'.', hexadecimal value 0x00, is an invalid character. Line 1, position 1."

This error is caused by corrupt config files.

Context

To resolve the issue, do the following:

Procedure

1. Close Microsoft Outlook.
2. Delete the config files in `%LOCALAPPDATA%\SAP\C4C`.
3. Restart Microsoft Outlook.

20.3.11.12 Microsoft Outlook does not open, takes too long to open, or I cannot create offline folders.

In the August 2016 release, the add-in was modified to load in the shortest time possible. However there are couple of factors that might still slow down the performance of Microsoft Outlook.

Depending on the symptoms, try one of these fixes:

- Corrupt Microsoft Outlook profile
  If the Microsoft Outlook profile has become corrupt, then the add-in initialization either takes some time or may not happen at all. This error could impact the launch of Microsoft Outlook.
  To resolve this issue, create a new Microsoft Outlook profile.
- Unable to create offline folders
  This could happen if Microsoft Outlook is in online mode. You can verify this issue by opening the add-in settings in the following folders and checking if the offline folders are defined. A proper path for all folders indicates a successful creation (if launching add-in for first time):
  - May 2016 version: `%APPDATA%\SAP\CRMOnDemand\Groupware\Settings\Profile_<profilename>\settings.xml`
    August 2016 version and later: `%LOCALAPPDATA%\SAP\C4C\Config\Groupware\Settings\Profile_<profilename>\settings.xml`

Related Information

Microsoft Support - Remove a Profile
Microsoft Support - Create New Profile
Microsoft Support - Profile Actions

20.3.11.13 What does a message in the conflict folder mean?

When synchronizing activities from your SAP solution to Microsoft Outlook, the SAP Cloud for Customer Add-In for Microsoft Outlook might raise a message in the conflict folder. This indicates a conflict in the user information between the activity and user profile.

Each activity type affected by this user mismatch has a different consequence.

Activities, Error Causes, and Consequences

Activity Type	Cause	Consequence
E-mail	The from e-mail ID of an activity in the SAP solution does not match the current e-mail ID of the Microsoft Outlook profile.	E-mail is saved in the sent items of Microsoft Outlook with the from value matching the current user's Microsoft Outlook profile (default). Conflict information is logged in the *Conflicts* folder.
Appointment	Organizer's e-mail ID of appointment in the SAP solution does not match the current user's e-mail ID in the Microsoft Outlook profile.	If the appointment end date is within the past 1 month, the appointment is saved. If the appointment end date is more than one month in the past, the appointment is not saved and a conflict is raised.
Task	Owner's e-mail ID of task in the SAP solution does not match the current user e-mail ID of the Microsoft Outlook profile.	Message is saved in the default task folder with the owner matching the current Microsoft Outlook profile user (default). **Note** If the task due date is more than one month in the past, the task is not created and a conflict message is **not** raised.
Contact and account	During synchronization to the SAP solution from Microsoft Outlook, the e-mail ID of the current user does not match the e-mail ID of the current Microsoft Outlook profile.	Contact is saved if it is subscribed to. Otherwise, the contact is unsubscribed from synchronization. If unsubscription happens, the conflict is still raised though the contact is not saved.

Activity Type	Cause	Consequence
Users created using Service Agent	If a conflict message is raised with a message where the system user e-mail ID is blank, it means that the current user was created using the service agent option.	For Outlook add-in to function properly, create users as proper employees in the system and not via the service agent option. During the initial logon, the add-in retrieves some information from the employee objects and uses it for validation during the synchronization process. If validation fails, a conflict is raised though the process itself does not stop.

20.3.11.14 Why can't I see the add-in in Microsoft Outlook?

You've installed the SAP Cloud for Customer Add-In for Microsoft Outlook, but it doesn't appear when you open your inbox.

Context

Sometimes Microsoft Outlook disables the SAP Cloud for Customer Add-In for Microsoft Outlook, so end users cannot see it. You can fix this issue like this:

Procedure

1. In Microsoft Outlook, go to *File* > *Options* > *Add-Ins*.
   A list of add-ins appears, sorted by status (active, inactive, disabled).
2. Depending on the status of SAP Cloud for Customer Add-In for Microsoft Outlook, proceed like this:
   - Inactive
     1. At the bottom of the page, under *Manage*, choose *COM Add-ins* > *Go*
     2. Enable the add-in.
   - Disabled
     1. At the bottom of the page, under *Manage*, choose *Disabled Items* > *Go*
     2. Enable the add-in.

20.3.11.15 Why are all the add-in buttons disabled in Microsoft Outlook?

In rare cases, the SAP Cloud for Customer Add-In for Microsoft Outlook loads properly, but all buttons are disabled.

Context

Downgrading Microsoft Outlook to a previous version, such as downgrading Microsoft Outlook 2016 to the 2013 version, creates an inconsistency that causes this problem.

Someone who is aware of the registry editor and the consequences of incorrect operation, such as your system administrator, can check the cause of the problem like this:

Procedure

1. Open the registry editor.
2. Depending on the Microsoft Outlook and Microsoft Windows version, do one of the following:
    - If the system is running a 32-bit Microsoft Outlook application on a 64-bit Microsoft Windows system, go to registry key `HKEY_CLASSES_ROOT\Wow6432Node\Interface\{00063001-0000-0000-C000-000000000046}\TypeLib`.
    - In all other cases, go to `HKEY_CLASSES_ROOT\Interface\{00063001-0000-0000-C000-000000000046}\TypeLib`.
3. Check that the version corresponds with your version of Microsoft Outlook.
4. Go to `HKEY_CLASSES_ROOT\TypeLib\{00062FFF-0000-0000-C000-000000000046}`. Check the key. Only the key for your version of Microsoft Outlook should be present. A mismatch is the cause of this issue.
    - Microsoft Outlook 2010: 9.4
    - Microsoft Outlook 2013: 9.5
    - Microsoft Outlook 2016: 9.6

Results

If you have found a mismatch, resolve this issue by performing a repair installation of Microsoft Outlook.

20.3.11.16 Why is the "Save and Send E-Mail" button disabled?

When you compose an e-mail, all other buttons work properly, but the *Save and Send E-Mail* button is the only one that is disabled. This happens when the service scenario is enabled.

Context

If your add-in is used by service agents, this behavior is correct. If you only use the feature for sales, simply disable the service scenario like this:

Procedure

1. In Microsoft Outlook, choose *Settings* and go to the *Service* tab.
2. Disable the service scenario and save your changes.

20.3.11.17 Can I sync recurring appointments from Microsoft Outlook?

No, the SAP Cloud for Customer Add-In for Microsoft Outlook does not support synchronization of recurring appointments.

Add-in functions are not displayed when you select a recurring appointment.

Related Information

Add Visits and Appointments for Synchronization [page 835]
Appointment information may be associated automatically with other objects. However, you can also associate appointment information manually.

20.3.11.18 Are visits handled the same way as appointments?

Yes. In the SAP Cloud for Customer Add-In for Microsoft Outlook, visits are technically similar to appointments, and the SAP solution handles them in the same way.

20.3.11.19 What is the difference between meetings and appointments?

The definitions of meetings and appointments are slightly different, depending on whether you're looking at it from the perspective of Microsoft Outlook or your SAP solution.

Microsoft Outlook considers appointments and meeting requests to be two different entities:

- An appointment is has no attendees.
- A meeting request is an appointment that has attendees.

In SAP Cloud for Customer, appointments are considered appointments, regardless of whether they contain attendees.

20.4 SAP Cloud for Customer, Server-Side Integration for Microsoft Outlook

SAP Cloud for Customer, server-side integration for Microsoft Outlook is a cloud application that performs two-way synchronization of data between your SAP Cloud for Customer account and mailbox server. In addition, it provides access to SAP Cloud for Customer data right from your e-mail inbox.

Scope and Configure SAP Cloud for Customer, Server-Side Integration for Microsoft Outlook [page 865]
As an administrator, you must define and set up the server-side integration for Microsoft Outlook.

Get Started [page 910]
The SAP Cloud for Customer, server-side integration for Microsoft Outlook allows you to exchange information between Microsoft Outlook and SAP Cloud for Customer.

Manage E-Mails [page 914]
If you use the SAP Cloud for Customer, server-side integration for Microsoft Outlook, you can do a lot right from your inbox. For example, you can add e-mails to your SAP solution or add e-mails with reference to other objects.

Manage Contacts [page 917]
If you use SAP Cloud for Customer, server-side integration for Microsoft Outlook, you can create contacts, associate them with other objects in your SAP system, pin them, and even add contacts from your SAP solution into Microsoft Outlook.

Manage Individual Customer [page 920]
If you use SAP Cloud for Customer, server-side integration for Microsoft Outlook, you can create individual cCustomers directly from Microsoft Outlook.

Manage Leads [page 920]
If you use SAP Cloud for Customer, server-side integration for Microsoft Outlook, you can create leads directly from Microsoft Outlook.

Manage Opportunities [page 921]
If you use SAP Cloud for Customer, server-side integration for Microsoft Outlook, you can create opportunities directly from Microsoft Outlook.

Manage Appointments and Visits [page 921]
If you use SAP Cloud for Customer, server-side integration for Microsoft Outlook, you can synchronize appointments and visits so that updates in your SAP solution appear in Microsoft Outlook, and the other way around.

Manage Tasks [page 927]
If you use the SAP Cloud for Customer, server-side integration for Microsoft Outlook, you can add, share, and open tasks.

Manage Tickets [page 929]
SAP Cloud for Customer, server-side integration for Microsoft Outlook allows you to access the ticket directly from outlook and do the following actions:

Use SAP Cloud for Customer, server-side integration for Microsoft Outlook on Mobile Devices [page 929]
You can use some of the features of SAP Cloud for Customer, server-side integration for Microsoft Outlook on Android and IOS mobile devices.

FAQ for SAP Cloud for Customer, Server-Side Integration for Microsoft Outlook [page 929]
Having trouble using this add-in? Check this list of questions and answers for help.

20.4.1 Scope and Configure SAP Cloud for Customer, Server-Side Integration for Microsoft Outlook

As an administrator, you must define and set up the server-side integration for Microsoft Outlook.

SAP Cloud for Customer, server-side integration for Microsoft Outlook is a service that performs two-way synchronization of data between SAP Cloud for Customer and the Microsoft Exchange mailbox. It allows users to interact with SAP Cloud for Customer directly from an e-mail application. This interaction can happen in the following ways:

- By placing contacts, appointments, visits, tasks, or e-mails into special folders or by assigning these items to the SAP category in Microsoft Outlook.
- By providing Microsoft Outlook users (on Microsoft Windows, OS X, Web-based, or mobile) with the add-in that can interact with SAP Cloud for Customer.

Administrators must set up this integration for users by provisioning users, managing provisioned users, creating organizations and assigning users to them, and creating and managing profiles with configuration settings.

Access the Groupware Settings [page 866]
Only SAP Cloud for Customer administrators can access the groupware settings. Ordinary users (SAP Cloud for Customer tenants without administrative rights) do not have access to the groupware settings. Therefore, before proceeding to the groupware settings, make sure that you have an appropriate user in SAP Cloud for Customer that has administration permissions.

Enable Add-In for Mobile [page 868]

More and more business happens when people are away from their desks, out in the field. Administrators can make a few settings to enable their company to work right from mobile devices.

20.4.1.1 Access the Groupware Settings

Only SAP Cloud for Customer administrators can access the groupware settings. Ordinary users (SAP Cloud for Customer tenants without administrative rights) do not have access to the groupware settings. Therefore, before proceeding to the groupware settings, make sure that you have an appropriate user in SAP Cloud for Customer that has administration permissions.

To access the groupware settings, in SAP Cloud for Customer, go to *E-Mail Integration* > *Groupware Settings*.

When you access the *Groupware Settings* tab for the first time as an administrator, you are automatically provisioned to the SAP Cloud for Customer, server-side integration for groupware. Specifically, this means that you are automatically:

- Added to the default organization
- Assigned a default profile
- Provided with the access to the *E-Mail Integration* tab, where you can configure SAP Cloud for Customer, server-side integration for groupware from an end-user perspective using the dashboard. For more information, see the reference in the related information section.

When you are provisioned by the system, you also receive a notification e-mail in your inbox. The solution uses the e-mail address that was configured in SAP Cloud for Customer.

After you are provisioned, you can perform other administrative tasks, such as provisioning other users, creating new organizations or profiles, or configuring settings for SAP Cloud for Customer, server-side integration for groupware.

Related Information

Manage Organizations [page 875]
To make user management easier, administrators can divide users into groups called organizations. An organization can be configured to provide its users with specific common configuration.

Manage Profiles [page 868]
A profile is a collection of configuration settings and parameters. When administrators provision users, a profile is assigned to each user. To be provisioned, users must be assigned to a profile.

20.4.1.1.1 How SAP Cloud for Customer, Server-Side Integration for Groupware Reacts When a User Role Changes

Since the SAP solution allows the user roles to be changed, an administrator can become an ordinary user or vice versa.

When such a change in roles occurs, SAP Cloud for Customer, server-side integration for groupware adapts to the situation – when a user logs on to SAP Cloud for Customer, server-side integration for groupware, the user permissions are automatically adjusted based on the new user’s role in the SAP solution.

Note that no notification appears in this case.

20.4.1.2 Enable Add-In for Mobile

More and more business happens when people are away from their desks, out in the field. Administrators can make a few settings to enable their company to work right from mobile devices.

20.4.1.2.1 Enable Add-In for Mobile

As an administrator, you can enable SAP Cloud for Customer, server-side integration for Microsoft Outlook to work in the Microsoft Outlook mobile app.

Log on as an administrator to SAP Cloud for Customer and go to *E-Mail Integration* > *Groupware Settings* > *Users*. In the row of the user you want to enable, in the *Actions* column, choose *Install SAP, server-side integration for Microsoft Outlook*. Reinstalling the add-in enables the add-in to work on supported mobile platforms and reactivates the users that you selected.

20.4.1.3 Manage Profiles

A profile is a collection of configuration settings and parameters. When administrators provision users, a profile is assigned to each user. To be provisioned, users must be assigned to a profile.

A profile specifies the following:

- Filtering rules for objects and records
- Restrictions for business actions
- Custom read-only fields to be displayed for the records of various types (smart descriptions)
- Customization of the Microsoft Outlook add-in or Gmail add-in
- Configuration of reminders
- Rules for sharing e-mail messages

To see a list of available profiles, log on to the application as an administrator and choose *E-Mail Integration* > *Groupware Settings* > *Profiles*.

> **Note**
>
> Server-side integration uses OData V2 APIs for synchronization. For add-in, server-side integration uses OData V1 APIs.

20.4.1.3.1 Types of Profiles

Administrators can create profiles, which are collections of configuration settings and parameters. During provisioning, administrators must assign users to profiles.

Profile Types

Profile	Description
Default profile template	After provisioning, users are automatically assigned a default profile template. This profile contains the default configuration for SAP Cloud for Customer, server-side integration for groupware. The default profile template is provided by the Professional Services team and cannot be edited by an administrator or an ordinary user. However, the default profile template can be used for creating other profile templates.
Profile template	Profile that can be created and edited by administrators. The profile template can either be created from a default profile template or from scratch, and it can be assigned to either ordinary users or administrators. Ordinary users cannot edit profile templates, but they can switch between available profiles using the dashboard in SAP Cloud for Customer, server-side integration for groupware. A profile template can also be specified instead of the default profile when administrators create new organizations.
Customized profile	If an ordinary user changes the settings that are defined by the selected profile template (for example, changes the synchronization settings on the dashboard), this profile template becomes a customized profile. The customized profile is only effective for the user who created it, but such a profile can be saved as a profile template by an administrator. When converted to a profile template, it can be shared among other users.

20.4.1.3.2 Configure: Create a New Profile Template

Administrators can create new profile templates from either a default profile or from another profile template. Profle templates cannot be created from scratch.

Context

To see a list of available profiles, log on to the HTLML5 client as an administrator and choose *E-Mail Integration* > *Groupware Settings* > *Profiles*.

To create a new profile template, do the following:

Procedure

1. Log on to the HTLML5 client as an administrator and go to *E-Mail Integration* › *Groupware Settings* › *Profiles*.
2. Find the profile that you want to base your new profile on. You can use both the default profile template and user-created profile templates.
   To identify a default profile, look in the *Actions* column for a profile for which the trash icon is disabled (since the default profile cannot be deleted).
3. In the *Actions* column, click the copy icon.
4. On the screen that appears, enter the appropriate information.
5. Save your changes.

20.4.1.3.3 Configure Strict Search

Administrators can configure the search so that it only returns exact matches.

By default, the add-in adds wildcards (*) automatically before and after search terms that users enter. If you do not want the wildcards to be added automatically, use the strict search, which only returns exact matches.

> **i Note**
>
> Users may still add wildcards (*) manually.

Log on to the HTLML5 client as an administrator and go to *E-Mail Integration* › *Groupware Settings* and make the setting to use the strict search. The setting applies to all users and all searches.

20.4.1.3.4 Configure Synchronization Filters

SAP Cloud for Customer, server-side integration for groupware uses synchronization filters to determine which records to synchronize between the user's mailbox and SAP Cloud for Customer. Administrators can configure different filters for each record type.

Context

When you configure the profile's synchronization filters, for each record type, you can choose from the following options:

- *My Records*

Synchronizes records where the user is an owner. For contacts – synchronize records where the user is an owner of the associated account.

- *My Team's Records*
  Only applicable for contacts and accounts. For contacts – synchronizes records where the user or the members of the user's team are the owners of the associated account; for accounts – synchronizes records where the user or the members of the user's team are owners.
- *Favourite Contacts*
  Only synchronize the contacts marked as favourite.
- *Do Not Synchronize*

To configure synchronization filters, do the following:

Procedure

1. Log on to the HTLML5 client as an administrator and go to *E-Mail Integration* > *Groupware Settings* > *Profiles* and open the profile that you want to edit.
2. On the *Sync Settings* tab, go to the card for the type or record you want to edit.
3. Under *Settings*, select the synchronization filter that you need.
4. Save your entries.

20.4.1.3.5 Maximum Number of Synchronized Records

For better performance, the total number of records that SAP Cloud for Customer, server-side integration for groupware can synchronize is limited to 9,000. This limit is predefined and cannot be changed, even by an administrator.

SAP Cloud for Customer, server-side integration for groupware plans have a limit on the maximum number of synchronized records. Once the limit is reached, SAP Cloud for Customer, server-side integration for groupware may limit the number of records retrieved from SAP to your Microsoft Exchange.

> Example
>
> Suppose you have 15,000 contacts in SAP, and your plan allows for a maximum of 9,000 records. If you synchronize only the contacts, then only 9,000 of those 15,000 will be synchronized between your SAP solution and Microsoft Exchange. SAP Cloud for Customer, server-side integration for groupware will retrieve the newest 9,000 contacts based on the contact creation date.

> Note
>
> The number of e-mail messages that users can synchronize with SAP Cloud for Customer is unlimited.

The limit of 9,000 records is distributed across account , contact, individual customers and tasks. So if you want to increase the limit for one record type, you must reduce the limit for the other record type so that the total does not exceed 9,000.

Note

SAP Cloud for Customer, server-side integration for groupware synchronizes the newest records first. When a number of records exceeds the specified limit, older records beyond this limit are skipped.

20.4.1.3.6 Configure Restrictions

Administrators can restrict ordinary users from performing certain actions. These restrictions can be set for individual record types and can apply to both the SAP Cloud for Customer, server-side integration for groupware and synchronization settings.

Context

Note

An ordinary user is not allowed to change restrictions even in the context of a customized profile.

To set restrictions, do the following:

Procedure

1. Log on to the HTLML5 client as an administrator, go to *E-Mail Integration* > *Groupware Settings* > *Profiles*, and open the profile that you want to edit.
2. On the *Sync Settings* tab, go to the card for the type or record you want to edit.
3. Under *Settings*, set the restrictions that you need.
   For more information about each restriction, choose the information ("i") button near the restriction.

   The administrator can set the following restrictions:
   - *Do Not Synchronize*: The corresponding object will not synchronize between the SAP Cloud for Customer and the Microsoft Outlook.
   - Keep read only (for contacts, individual customers, accounts, and tasks): The user can create and update the corresponding object only from SAP Cloud for Customer.

     Caution

     When the administrator enables this restriction, all objects that are assigned with corresponding SAP category or are at this time in corresponding SAP folder, will be deleted from Outlook. If a user tries adding any object to a corresponding SAP folder or assigning a corresponding category on it, changes won't be passed to SAP Cloud for Customer and this object will be deleted from Outlook.
   - Synchronize attachments (only for e-mail, appointment, visit, phone call, and task): The user can save attachments for the corresponding object to the SAP Cloud for Customer.

> **i Note**
>
> Setting Restrictions for Attachments
>
> The administrator can allow or block the specific file name extensions. Go to *Sync Settings* › *General Sync Settings*, in the *Allowed File Extensions for Attachments* or *Prohibited File Extensions for Attachments* box, either select the extensions from a list or type a list of such extensions separated by commas or spaces. Note that, when you add extensions, the leading dot is optional. In other words, both .docx and docx are allowed.

20.4.1.3.7 Configure Smart Descriptions

Administrators can edit smart descriptions, which allow fields that are not mapped to native mail server fields to be displayed for the user.

Context

Depending on the type of a record, these fields are represented differently:

- For contacts, individual customers, and accounts, the values of the specified fields appear in the notes section.
- For tasks, field values appear in the body of the task.

> **i Note**
>
> A set of SAP Cloud for Customer fields that are available for selection is defined by the user's metainfo. Service fields are omitted.

To specify the fields that are to be shown as smart descriptions, do the following:

Procedure

1. Log on to the HTLML5 client as an administrator, go to *E-Mail Integration* › *Groupware Settings* › *Profiles*, and open the profile that you want to edit.
2. On the *Sync Settings* tab, go to the card for the type or record you want to edit.
3. Under *Smart Description*, choose *Add Smart Description Field*.
4. Select a field that you want to display from the list.

   You can add as many fields as you need by repeating the last two steps.

Results

If, for some reason, the content of the fields specified as smart descriptions cannot be displayed, these fields are omitted. For example, if the user does not have permission to view the content, the field does not appear.

20.4.1.3.8 Configure Mass Rollout of Profile Changes

Administrators can apply profile updates to all users quickly and at the same time.

Context

As an administrator, when you change a profile that is the default profile for an organization, you can apply the profile changes to all users in that organization.

Procedure

1. Log on to your SAP solution as an administrator and make the profile changes in the default profile for an organization.
2. Go to *E-Mail Integration* > *Groupware Settings* > *Organizations*.
3. Select the organization and the updated profile and choose *Settings (⚙)* > *Save and Apply Profile for All Users*.

Results

The profile changes that you made are reflected for all users of the organization that you selected.

20.4.1.3.9 Configure: Auto Sync Recurring Events

To allow automatic synchronization of recurring events from MS Outlook to SAP Cloud for Customer, follow these steps:

1. Navigate to *E-Mail Integration* > *Groupware Settings* > *Profiles* and select your profile.
2. Open the tab *SYNC SETTINGS* and under *Calendar Sync Options*, click the checkbox *Include recurring events*.

20.4.1.3.10 Configure Recurring Events

To manage recurring events, follow these steps

1. Navigate to *E-Mail Integration* > *Groupware Settings* > *Profiles* and select your profile.
2. Open the tab *ADD-IN SETTINGS* and under *RECURRING ACTIVITY* card, use the following options:
    - *Detailed View*: You can select the fields to be displayed in groupware for the detailed view of recurring appointments and visits.
    - *Basic View*: You can select the fields to be displayed in groupware for the basic view of recurring appointments and visits.
    - *Settings*: You can select sort method, days in past to display, and filter status (e.g. open, canceled etc.).

20.4.1.4 Manage Organizations

To make user management easier, administrators can divide users into groups called organizations. An organization can be configured to provide its users with specific common configuration.

When a new user is provisioned, administrators must assign the new user to an organization, either default or newly created; otherwise, the user cannot be provisioned. Unprovisioned users are not assigned to any organization.

Users in the same organization share common, organization-specific synchronization settings. By adding users to or removing them from the organization, an administrator can manage which configurations are used by which users.

When a new SAP Cloud for Customer tenant is provisioned to SAP Cloud for Customer, server-side integration for groupware, a new default organization is created. This default organization cannot be deleted; however, administrators can edit its name and settings.

A new or default organization is also assigned a template profile (a collection of specific configuration settings and parameters), which administrators can change later. This template profile is automatically applied to all users in the organization.

At the level of organization, you can define the following settings for its users:

- Type of the mailbox access
- Synchronization status (enabled or disabled)
- Profile with the specific configuration for SAP Cloud for Customer, server-side integration for groupware

You can view a list of organizations by logging on to the HTLML5 client as an administrator and choosing *E-Mail Integration* > *Groupware Settings* > *Organizations*.

You can show or hide columns in the list by using the ☰ *hamburger icon*.

Related Information

Configure: Delete (Unprovision) Users [page 886]

As an administrator, when you delete a user, it means that this user can no longer use SAP Cloud for Customer, server-side integration for groupware and synchronize data. In other words, a deleted user becomes an unprovisioned user. Such users appear on the *Provisioning* tab, and, if required, can be provisioned again.

Configure: Assign Users to Other Organizations [page 890]
As an administrator, you can specify the organization each user is assigned to during the provisioning process. Otherwise, users are automatically assigned to the default organization. After provisioning, you can change the organization to which users are assigned.

20.4.1.4.1 Configure How Users in an Organization Access Their Mailboxes

At the organization level, administrators can control how users access their mailboxes.

Context

When a new organization is created, specify the type of mailbox access to be used for the organization's users. When the access type is selected and configured, it is applied to all users in the organization. Users can only use the defined access type to access their mailboxes.

Possible options are as follows:

- *Microsoft Exchange Direct Logon*
  If the users in the organization access their Microsoft Exchange mailboxes directly, specify the direct logon access type for the organization.
- *Microsoft Exchange Impersonation*
  Microsoft Exchange Impersonation is used in scenarios in which a single account must access many accounts. Before setting up an Exchange Impersonation access type, the Microsoft Exchange administrator must configure the impersonation as follows:
  1. Create a service account.
  2. Create a group for scoping purpose to allow only impersonation on mailboxes for CRM users.
  3. Assign impersonation rights to a new exchange admin role that is scoped to the above group.
  4. The service account must be excepted for MFA/Conditional Access to connect to the Exchange Web Service (EWS).

     > **i Note**
     >
     > List of IP addresses used by server-side integration is available from SAP support and can be provided to limit access from only IPs used by server-side integration.

  Microsoft Exchange administrator must provide an SAP Cloud for Customer administrator with both the Microsoft Exchange service account details and a list of users whose accounts are impersonated.
- *Office 365 OAuth*
  If Office 365 is used, then server-side integration already supports per-user MFA. This mode requires each provisioned user to grant access to mailboxes via Server-side integration.
  This mode supports all MFA configuration.

Passwords aren't stored by Server-side integration. Only OAuth2 refresh tokens that are scoped to Server-side integration can be revoked by O365 admin.
Tokens normally don't expire with password change, and this policy is fully configured in Azure AD of customer Office 365 tenant.

- *Google Direct Logon*
  If the users in the organization access their Gmail inboxes directly, specify the direct logon access type for the organization.

As an administrator, you can change the mailbox access type at any time. To change the mailbox access type for the organization, do the following:

Procedure

1. Log on to the HTLML5 client as an administrator, go to *E-Mail Integration* > *Groupware Settings* > *Organizations*, and open an organization.
2. On the *E-Mail Configuration* tab, select the required mailbox access type.

   Configure the access type by entering appropriate information in the fields that appear.

   If you select Microsoft Exchange Impersonation, note the following:
   - The account logon and password are the e-mail address and password of the impersonating user.
   - In the *Exchange Web Services (EWS) URL* field, specify the Exchange Web Services endpoint URL.
     To trigger SAP Cloud for Customer, server-side integration for groupware to find the required EWS endpoint URL automatically, click the magic wand icon ( ).

   You can verify whether the impersonating account specified for the organization can access accounts of the users added to this organization. To do so, on the *Organizations* tab, under *Actions*, choose the key icon ( ).
3. Save your changes.

Results

⚠ Caution

If the change of the mailbox access type isn't accompanied by corresponding changes in the organization users' settings, it can affect the ability of those users to access their mailboxes.

20.4.1.4.2 Configure: Create a New Organization

Organizations allow administrators to streamline user setup.

Context

To create a new organization, do the following:

Procedure

1. Log on to the HTLML5 client as an administrator, go to *E-Mail Integration* > *Groupware Settings* > *Organizations*, and click *New*.
2. Enter the appropriate information in the fields that appear.
    - Profile
      Specify the profile that is assigned to the users in the organization by default.
    - Mailbox access type
      Select how the users in the organization access their mailboxes and then specify the required parameters.
3. Save your entries.

Results

You can add provisioned users to this organization.

Related Information

Manage Profiles [page 868]
A profile is a collection of configuration settings and parameters. When administrators provision users, a profile is assigned to each user. To be provisioned, users must be assigned to a profile.

Configure How Users in an Organization Access Their Mailboxes [page 876]
At the organization level, administrators can control how users access their mailboxes.

Configure: Assign Profiles to Organizations [page 879]
All organizations must be associated with a profile template. The profile template is assigned automatically to all users in this organization. As an administrator, when you create a new organization, you must specify the profile template that the system uses by default.

20.4.1.4.3 Configure: Assign Profiles to Organizations

All organizations must be associated with a profile template. The profile template is assigned automatically to all users in this organization. As an administrator, when you create a new organization, you must specify the profile template that the system uses by default.

Context

Administrators can change the default profile template to any other profile after the organization is created; however, if that profile gets deleted or renamed, the organization reverts automatically to the profile that was specified as default.

To assign the organization a new profile, do the following:

Procedure

1. Log on to the HTLML5 client as an administrator, go to *E-Mail Integration* > *Groupware Settings* > *Organizations* , open the organization for which you want to assign a new profile.
2. Select the new profile.
3. Save your changes.

20.4.1.4.4 View Organization Statistics

Administrators can view statistics about the last synchronization session for each user in the organization.

Context

To view user statistics, do the following:

Procedure

1. Log on to the HTLML5 client as an administrator, go to *E-Mail Integration* > *Groupware Settings* > *Organizations* , open the organization for which you want to view statistics.
2. To see a list of user statistics, go to the *Statistics* tab .
3. To see more details, under *Actions*, choose the icon to open the job.

4. To download a session-related log, under *Actions*, choose the icon to download the log.

   You can show or hide columns in the list by using the ☰ icon.

20.4.1.4.5 View Organization Related Activity History

Administrators can view activities related to the current organization.

Context

Activities related to the current organization can be of the following types:

- The organization was added
- Synchronization was enabled
- Synchronization was disabled

For each activity, you can see the following information:

- Date and time when the activity occurred
- E-mail address of the user that initiated the activity
- Activity type

To view a list of activities, do the following:

Procedure

1. Log on to the HTLML5 client as an administrator, go to *E-Mail Integration* > *Groupware Settings* > *Organizations*, and open the organization for which you want to view activities.
2. Go to the *Activities* tab.
3. To download a session-related log, under *Actions*, choose the icon to download the log.

20.4.1.4.6 Configure: Delete an Organization

Administrators can delete an organization only if all users in this organization are reset. Once the organization is deleted, all users in the organizations are deleted too.

Context

> **Note**
>
> The default organization cannot be deleted.

To delete an organization, do the following:

Procedure

1. Log on to the HTLML5 client as an administrator, go to *E-Mail Integration* > *Groupware Settings* > *Organizations*, and open the organization that you want to delete.
2. Ensure that the synchronization is disabled for all users in the organization.
3. Choose *Settings* > *Delete*.

   > **Note**
   >
   > If a user in the organization cannot be reset (for example, SAP Cloud for Customer, server-side integration for groupware can no longer access the user's mailbox), but you still must delete the organization, you can force deletion of the user without resetting it. Note that any changes that were made by SAP Cloud for Customer, server-side integration for groupware to the user's mailbox (such as adding extra folders) are not removed.
   >
   > To force the deletion of an organization that contains users that could not be reset, on the *Organizations* tab, open the organization that you want to force-delete and choose *Settings* > *Force Delete*

20.4.1.5 Provision Users

As an administrator, you must create users in SAP Cloud for Customer and provision them to SAP Cloud for Customer, server-side integration for groupware. At that point, users can access and use SAP Cloud for Customer, server-side integration for groupware.

20.4.1.5.1 Configure: Provision Users

Provisioning is the process for administrators to create and activate users, and manage user access to SAP Cloud for Customer, server-side integration for groupware. Provisioning also starts the synchronization between the e-mail inbox and the SAP solution for provisioned users.

Context

> i Note
>
> You must have active profiles and active organizations in the system before you start profiling users.

> → Recommendation
>
> Using the same e-mail address across different tenants and for both testing and productive use may cause problems.
>
> We recommend using different e-mail addresses for:
>
> - Testing
> - Productive use
> - Each tenant

Provisioning of users can only be performed by an administrator in SAP Cloud for Customer, server-side integration for groupware, who belongs to an SAP Cloud for Customer tenant and has administrative rights. Administrators are provisioned automatically the first time they access the *Groupware Settings* tab.

To see a list of users that can be provisioned, log on to the HTLML5 client as an administrator, go to *E-Mail Integration* > *Groupware Settings* > *Provisioning*.

You can show or hide columns in the list by using the ≡ icon.

To provision a user, do the following:

Procedure

1. Choose *E-Mail Integration* > *Groupware Settings* > *Provisioning*.

2. Click the plus sign at the far right for the user you want to provision.

   You can filter users by business role and provision the entire list at the same time.

   You can also provision several users at once by selecting them with the check mark to the left of their names and choosing *Activate Selected*.
3. On the next screen, the default organization is selected. Check and change it as necessary.
4. Specify the profile that is assigned to all users in the organization by default.
5. (Optional) Select the checkbox to send a welcome e-mail to the user.

   An e-mail with instructions on how to proceed with SAP Cloud for Customer, server-side integration for Microsoft Outlook or SAP Cloud for Customer, server-side integration for Gmail is sent to the user following provisioning.
6. Click *Provision*.

Results

When an administrator provisions another user, the following happens:

- This user is added to the organization, either default or specified.
- This user is assigned the template profile, either default or specified.
- Optionally, a welcome e-mail is sent to the user with instructions on how to complete registration in SAP Cloud for Customer, server-side integration for groupware.

> **i Note**
>
> If an administrator provisions a user without this user receiving a welcome e-mail, then the provisioned user is not informed of this action and does receive instructions on how to proceed with or configure SAP Cloud for Customer, server-side integration for groupware.

The SAP Cloud for Customer, server-side integration for Microsoft Outlook or SAP Cloud for Customer, server-side integration for Gmail is installed automatically for provisioned users after they successfully sign in to the appropriate mail server (Microsoft Exchange or Gmail).

If the following requirements are met, no further actions are required for provisioned users:

- The organization that the user is assigned to uses the mailbox access type *Microsoft Exchange Impersonation*.
- The user's SAP Cloud for Customer e-mail address is the same as the user's address in the exchange server.
- The user's e-mail address is added to the list of addresses of users who are impersonated.

Otherwise, a provisioned user must either follow instructions in the welcome e-mail, or an administrator must manually configure SAP Cloud for Customer, server-side integration for groupware for that user.

Related Information

Access the Groupware Settings [page 866]

Only SAP Cloud for Customer administrators can access the groupware settings. Ordinary users (SAP Cloud for Customer tenants without administrative rights) do not have access to the groupware settings. Therefore, before proceeding to the groupware settings, make sure that you have an appropriate user in SAP Cloud for Customer that has administration permissions.

Manage Provisioned Users [page 887]

As an administrator, after you provision users to SAP Cloud for Customer, server-side integration for groupware, you can manage various user-related settings like disabling synchronization for users or assigning them to another organization. You can also delete provisioned users, transitioning them back to an unprovisioned state and preventing them from using SAP Cloud for Customer, server-side integration for groupware.

20.4.1.5.2 Configure: Auto-Provison Users

Administrators can use this feature to automatically provision users to the SAP Cloud for Customer, server-side integration for groupware based on configured eligibility criteria.

Context

To use this feature, administrators must raise a service request.

Administrators must raise a service request to configure the eligibility criteria for auto-provisioning. Once the feature is configured, do the following:

Procedure

1. Choose *E-Mail Integration* > *Groupware Settings* > *Provisioning*.
2. Switch-on the *Auto-provisioning* toggle.

Results

Once the Auto-provisioning is enabled, eligible users based on configured eligibility criteria are provisioned after every 24 hours.

> **Note**
>
> Users unprovisioned earlier are not considered for auto-provisioning.

Administrators can check the following status from *AUTO-PROVISIONING* section in the *Dashboard* tab:

- *Eligible Users*: Number of users that match the eligibility criteria.

- *Provisioned*: Number of users that were automatically provisioned.
- *Pending*: Number of users to be provisioned in the next session.

20.4.1.5.3 Configure Mass Deployment of SAP Cloud for Customer, server-side integration for Microsoft Outlook

As with any other add-in for Microsoft Outlook, administrators can mass-deploy the SAP Cloud for Customer, server-side integration for Microsoft Outlook to provisioned users.

Context

For mass deployment, you need the add-in manifest. To download the manifest, do the following:

Procedure

1. Log on to the HTLML5 client as an administrator, go to *E-Mail Integration* > *Groupware Settings* > *Settings*, and click *Show Manifest*.
2. Copy this manifest to a file.

Results

After you have downloaded the manifest, for information on how to mass-deploy add-ins, see the documentation for Microsoft Exchange Server and Microsoft Outlook.

20.4.1.5.4 Configure: Resend Welcome E-Mail

Administrators can trigger SAP Cloud for Customer, server-side integration for groupware to resend a welcome e-mail to users.

Context

To resend a welcome e-mail, do the following:

Procedure

1. Log on to the HTLML5 client as an administrator, go to *E-Mail Integration* > *Groupware Settings* > *Users*, and select one or more users for whom you want to resend the welcome e-mail.
2. Choose *Settings* > *Send Welcome E-Mail*.

20.4.1.5.5 Configure: Delete (Unprovision) Users

As an administrator, when you delete a user, it means that this user can no longer use SAP Cloud for Customer, server-side integration for groupware and synchronize data. In other words, a deleted user becomes an unprovisioned user. Such users appear on the *Provisioning* tab, and, if required, can be provisioned again.

Context

> ⚠ Caution
>
> If an SAP Cloud for Customer user is deactivated or deleted, the corresponding SAP Cloud for Customer, server-side integration for groupware user still remains active and billable. For such user to be completely unprovisioned and deleted from SAP Cloud for Customer, server-side integration for groupware, he or she must be explicitly deleted by an administrator.

To delete a user, do the following:

Procedure

1. Reset the user's mailbox.

> **i Note**
>
> If for some reason, a user cannot be reset (for example, SAP Cloud for Customer, server-side integration for groupware can no longer access the user's mailbox), but you still must delete the user, you can force the deletion of the user without resetting it. Note that any changes that were made by SAP Cloud for Customer, server-side integration for groupware to the user's mailbox (such as adding additional folders) are not removed.
>
> To force the deletion of a user, log on to the HTLML5 client as an administrator, go to *E-Mail Integration* > *Groupware Settings* > *Users*, open the user that you want to force-delete and choose *Settings* > *Force Delete*.

2. Log on as an administrator to SAP Cloud for Customer HTML client, go to *E-Mail Integration* > *Groupware Settings* > *Users*, and do one of the following:
    - On the *Users* tab, under *Actions*, choose the appropriate icon.
    - On the *Users* tab, open the user that you want to delete and choose *Settings* > *Delete*.

Related Information

Configure: Reset Mailboxes and Disable Synchronization [page 892]
Administrators can reset a user's mailbox and disable synchronization for that user. For example, this operation is required when preparing an organization for deletion, since the organization cannot be removed until all of its users are reset in this manner.

20.4.1.6 Manage Provisioned Users

As an administrator, after you provision users to SAP Cloud for Customer, server-side integration for groupware, you can manage various user-related settings like disabling synchronization for users or assigning them to another organization. You can also delete provisioned users, transitioning them back to an unprovisioned state and preventing them from using SAP Cloud for Customer, server-side integration for groupware.

You can show or hide columns in the list by using the ☰ icon.

> **i Note**
>
> On the *Users* tab, users for whom the mailbox is initialized appear in bold font.

Related Information

Configure: Reinitialize Mailboxes [page 891]
When an initial synchronization is started, SAP Cloud for Customer, server-side integration for groupware performs the initialization of the user's mailbox. It adds new folders and categories. However, if an error

occurs that may affect the integrity of synchronized data, administrators may need to reinitialize the user's mailbox.

20.4.1.6.1 Configure the Synchronization Status of Users

Administrators can enable or suspend synchronization for individual users.

By default, synchronization is disabled for a newly provisioned user until that user completes an initial configuration for SAP Cloud for Customer, server-side integration for groupware, using the welcome wizard. In the list on the *Users* tab, the users for which synchronization is enabled are shown in black, while the users for which it is suspended are shown in red.

> **i Note**
>
> Synchronization may also be disabled automatically due to errors.

To change synchronization for a user, on the *Users* tab, under *Actions*, choose the synchronization icon.

You can change the synchronization status for several users at the same time by selecting them, choosing *Settings*, and clicking *Enable Synchronization* or *Disable Synchronization*.

There can be differences between the organization's synchronization status and an individual user's synchronization status. SAP Cloud for Customer, server-side integration for groupware compares these statuses when determining the effective status. The organization's status always overrides the individual user's status except when synchronization is disabled for the user that belongs to the organization for which the synchronization is enabled – in this situation, the user's status overrides the organization's status.

20.4.1.6.2 Configure: Force Synchronization

By default, SAP Cloud for Customer, server-side integration for groupware automatically synchronizes data every 30 minutes, but administrators can synchronize manually at any time. You cannot force synchronization more than once per minute.

Context

To force synchronization for a user, do the following:

Procedure

1. Log on to the HTLML5 client as an administrator, and go to *E-Mail Integration* > *Groupware Settings* > *Users*.

2. Under *Actions*, choose the appropriate icon.

   You can force synchronization for several users at the same time by selecting them, choosing *Settings*, and clicking *Force Sync*.

20.4.1.6.3 Configure Which Visits to Synchronize

In SAP Cloud for Customer, when associated with visits, users can be either visit organizers or visit owners. As an administrator, you must configure which visits are synchronized for users.

Context

You can define which visits must be synchronized for the user – where the user is an owner or organizer – as follows:

Procedure

1. Log on to the HTLML5 client as an administrator, go to *E-Mail Integration* > *Groupware Settings* > *Settings*.
2. In the *Sync Visit To* field, select whether you want to sync visits to the owner or the organizer.

20.4.1.6.4 Configure: Assign Other Profiles for Users

During the provisioning process, as the administrator, you assign users to a template profile (either specified or default for the organization). After provisioning, you can change the profile that is assigned to the user.

Context

To change the template profile assigned to a user, do the following:

Procedure

1. Log on to the HTLML5 client as an administrator, go to *E-Mail Integration* > *Groupware Settings* > *Users*, and open the user for whom you want to change a profile.

2. In the *Profile* field, select the profile that you want for this user.

   To go to the selected profile, click *Navigate*. You can also customize the selected profile by clicking *Customize*.
3. Save your entries.

Related Information

Manage Profiles [page 868]

A profile is a collection of configuration settings and parameters. When administrators provision users, a profile is assigned to each user. To be provisioned, users must be assigned to a profile.

20.4.1.6.5 Configure: Assign Users to Other Organizations

As an administrator, you can specify the organization each user is assigned to during the provisioning process. Otherwise, users are automatically assigned to the default organization. After provisioning, you can change the organization to which users are assigned.

Context

> **i Note**
>
> When assigning users to other organizations, be aware that the new organization may use different mailbox access types or Microsoft Exchange Server impersonation settings. As a result, it may affect the ability of SAP Cloud for Customer, server-side integration for groupware to access the user's mailbox.

To assign a user to another organization, do the following:

Procedure

1. Log on to the HTLML5 client as an administrator, go to *E-Mail Integration* > *Groupware Settings* > *Users*, and open the user for whom you want to change an organization.
2. In the *Organization* field, select the organization that you want for this user.

   To go to the selected profile, click *Navigate*.
3. Save your entries.

20.4.1.6.6 Configure: Reinitialize Mailboxes

When an initial synchronization is started, SAP Cloud for Customer, server-side integration for groupware performs the initialization of the user's mailbox. It adds new folders and categories. However, if an error occurs that may affect the integrity of synchronized data, administrators may need to reinitialize the user's mailbox.

Context

> ⚠ Caution
>
> When reinitializing a user's mailbox, all previously synchronized data is removed from the mailbox. Therefore, make sure that the user has backed up his or her data before performing this operation.

To reinitialize a user's mailbox, do the following:

Procedure

1. Log on to the HTLML5 client as an administrator, go to *E-Mail Integration* > *Groupware Settings* > *Users*, and open the user whose mailbox you want to re-initialize.
2. Choose *Settings* > *Re-Initialize User's Mailbox*.

Results

The mailbox will be re-initialized during the next synchronization session.

20.4.1.6.7 Configure: Reset Mailboxes and Disable Synchronization

Administrators can reset a user's mailbox and disable synchronization for that user. For example, this operation is required when preparing an organization for deletion, since the organization cannot be removed until all of its users are reset in this manner.

Context

To reset a user's mailbox, do the following:

Procedure

1. Log on to the HTLML5 client as an administrator, go to *E-Mail Integration* > *Groupware Settings* > *Users*, and open the user whose mailbox you want to reset.
2. Choose *Settings* > *Reset Mailbox*.

   > **Note**
   >
   > If synchronization is re-enabled for the user, the user's mailbox is automatically initialized during the next synchronization session.

20.4.1.6.8 Configure User Name and Mailbox Access Settings

As an administrator, you can edit the user name and mailbox settings that were specified during the provisioning process or defined by the organization to which the user belongs.

Context

You can either change the user's general settings or the mailbox access settings.

Procedure

1. Log on to the HTLML5 client as an administrator, go to *E-Mail Integration* > *Groupware Settings* > *Users*, and open the user whose settings you want to change.

2. To change the general settings, edit the necessary information and save your changes.
3. On the *E-Mail Configuration* tab, change the mailbox access settings as follows:
   - If the *Microsoft Exchange Direct Logon* access type is used, you can modify any of the fields that appear.
     For Microsoft Office 365: If the user uses the OAUTH2 authentication, you can switch back to the basic authentication method (access via the logon and password) and delete the refresh token (click *Invalidate Password*).
   - If the *Microsoft Exchange Impersonation* access type is used, you can modify the e-mail address only.

20.4.1.6.9 Check Mail Server Connection Status

For troubleshooting purposes, it is possible for administrators to verify a connection status between SAP Cloud for Customer, server-side integration for groupware and the user's mail server. If the connection is not available, the most likely cause is that the password has expired or some of the settings are not correct.

Context

To check connectivity between SAP Cloud for Customer, server-side integration for groupware and Microsoft Exchange or Gmail, do the following:

Procedure

1. Log on to the HTLML5 client as an administrator, go to ▶ *E-Mail Integration* ▶ *Groupware Settings* ▶ *Users* ◀, and open a user.
2. Choose ▶ *Settings* ▶ *Check Mailbox Connectivity* ◀.

20.4.1.6.10 View Synchronization Issues

Administrators can use information about synchronization issues for troubleshooting purposes.

Context

SAP Cloud for Customer, server-side integration for groupware tracks all the synchronization issues that occur for users.

To view synchronization issues for users, do the following:

Procedure

1. Log on to the HTLML5 client as an administrator, go to *E-Mail Integration* › *Groupware Settings* › *Users*, and open the user whose issues you want to view.
2. Go to the *Issues* tab.

> **Note**
>
> If due to a synchronization issue, SAP Cloud for Customer, server-side integration for groupware automatically disables synchronization for the user, this user receives a notification e-mail with instructions on how to proceed. As the administrator, if you also want to be notified of these issues, you can specify one or more e-mail addresses to which the copies of these notification e-mails are sent. To do so, on the *Settings* tab, enter the e-mail addresses in the *E-Mails for Notifications* field.

20.4.1.6.11 Configure Share E-Mails Automatically

As an administrator, you can enable SAP Cloud for Customer, server-side integration for Microsoft Outlook to share e-mails automatically by changing settings in the user profiles.

Procedure

1. Log on as an administrator to SAP Cloud for Customer HTML client and go to *E-Mail Integration* › *Groupware Settings* › *Profile*, open a profile, enable auto-sharing for e-mail, and choose *Save*.
2. Assign the updated profile to the appropriate users.

Related Information

Configure: Assign Other Profiles for Users [page 889]
During the provisioning process, as the administrator, you assign users to a template profile (either specified or default for the organization). After provisioning, you can change the profile that is assigned to the user.

20.4.1.6.12 Configure the Language of the User Interface

If a user wants to use the solution in a language that is different from their initial logon language, administrators must apply localization for another language.

During the provisioning process, SAP Cloud for Customer, server-side integration for groupware detects the current SAP Cloud for Customer UI language and uses this language for user mailbox customization.

The language that SAP Cloud for Customer, server-side integration for groupware uses is the language of the user interface (UI) of SAP Cloud for Customer. To change the language of the add-in, you or your administrator must change the logon language of SAP Cloud for Customer.

> **! Restriction**
>
> SAP Cloud for Customer, server-side integration for groupware only supports the following languages: English, German, French, Japanese, Portuguese, Russian, Simplified Chinese, and Spanish.

The following user interface elements belonging to SAP Cloud for Customer, server-side integration for groupware can be localized:

- Folder names
- Category names
- Information messages

Following their initial logon, if a user logs on to SAP Cloud for Customer in a different language, the UI language for the add-in isn't updated for provisioned users. Users can change their SAP Cloud for Customer, server-side integration for groupware UI language themselves on the dashboard under *Sync Settings* > *Detailed Settings* > *Localization*.

> **→ Remember**
>
> When a new localization is applied to the user, the user's mailbox is reinitialized and all previously synchronized data is removed from the mailbox. Therefore, make sure that the user has backed up all data before performing this operation.

Administrators can apply the localization to users as follows:

1. Log on to the HTLML5 client as an administrator, go to *E-Mail Integration* > *Groupware Settings* > *Users*, and select the user who wants to use the solution in another language.
2. Choose *Actions* > *Apply Localization*.

20.4.1.6.13 View User Statistics

To find out more information about a user's synchronization sessions, administrators can view user statistics.

Context

To view user statistics, do the following:

Procedure

1. Log on to the HTLML5 client as an administrator, go to *E-Mail Integration* > *Groupware Settings* > *Users*, and open the user whose statistics you want to see.
   A list of synchronization sessions appears in the list on the *Statistics* tab.
2. To see more details, under *Actions*, choose the icon to open the job.
   A session description and details open in a new page.
3. To download a session-related log, under *Actions*, choose the icon to download the log.

   You can show or hide columns in the list by using the ☰ icon.

20.4.1.6.14 View User-Related Activity History

As an administrator, you can view activities related to any user.

Context

For each activity, you can see the following information:

- Date and time when the activity occurred
- An e-mail address of the user that initiated the activity
- Type of the activity

To view a user's activities, do the following:

Procedure

1. Log on to the HTLML5 client as an administrator, go to *E-Mail Integration* > *Groupware Settings* > *Users*, and open the user whose activities you want to see.

2. Go to the *Activity* tab.
   A session description and details open in a new page.
3. To download an activity-related log, under *Actions*, choose the appropriate icon.

20.4.1.7 User Settings

Once your administrator has provisioned you and you have received the email confirmation, you can start with the following steps.

20.4.1.7.1 Configure: Install SAP Cloud for Customer, server-side integration for Microsoft Outlook

If the SAP Cloud for Customer, server-side integration for Microsoft Outlook was not installed for a provisioned user, an administrator can install it manually for that user.

Context

To install the add-in manually for users, do the following:

Procedure

1. Log on to the HTLML5 client as an administrator, go to *E-Mail Integration* > *Groupware Settings* > *Users*, and select one or more users for whom you want to install the add-in.
2. Choose *Settings* > *Install Add-In*.

20.4.1.7.2 Personalize SAP Cloud for Customer, Server-Side Integration for Microsoft Outlook

You can personalize the settings if you like.

After your administrator has set up the server-side integration, you will notice the following changes in your e-mail application:

- SAP folders in the e-mail, contacts, and tasks
- Add-in sidebar and ribbon group
  In e-mail clients that support add-ins (Microsoft Outlook 2013 or later, or Microsoft Office 365), you will see a sidebar inline next to the e-mail message. In Microsoft Outlook 2013 or later, a new ribbon group appears

in the *Home* tab in the main window or in the *Message* tab in the message window. This group provides access to the add-in commands.

To personalize your settings, in your SAP solution under *E-Mail Integration* > *User Settings* > *Sync Settings*, change your profile accordingly.

20.4.1.7.3 Use Filters to Define Objects to Synchronize

Filters from your SAP solution appear in the synchronization settings for accounts, individual customers, as well as contacts.

When you set up synchronization for accounts, individual customers, and contacts under *E-mail Integration* > *User Settings* > *Sync Settings* > *Detailed Settings* > *Customize*, the filters that appear include filters from your SAP solution. You can see filters that your administrator created as well as any filters that you defined in personalization. You can use these filters to define which objects to synchronize.

20.4.1.7.4 Set the Language

When you log on to SAP Cloud for Customer the first time, the add-in uses the logon language as the default language for SAP Cloud for Customer, server-side integration for groupware. If you want to log on later in a different language, trigger the language update for the add-in manually.

Context

> → Remember
>
> When a new localization is applied, your mailbox is reinitialized and all previously synchronized data is removed from the mailbox. Therefore, make sure that you have backed up all of your data before performing this operation.

To update the language of the add-in to match the language with which you are currently logged on to SAP Cloud for Customer, do the following:

Procedure

1. Log on to your SAP solution in the HTML client.
2. Go to *E-Mail Integration* > *User Settings* > *Sync Settings* > *Detailed Settings* and choose *Localization*.

Your administrator can also apply localization for your user. The following localization is available for SAP Cloud for Customer, server-side integration for groupware:

- English
- German
- French
- Japanese
- Portuguese
- Russian
- Simplified Chinese
- Spanish
- Czech
- Dutch
- Italian
- Polish

Results

The language in which you are logged on to SAP Cloud for Customer and your add-in now appear in the same language.

20.4.1.8 Manage Installation of SAP Cloud for Customer, server-side integration for Microsoft Outlook

As an administrator, you can mass-deploy the add-in, check installation status for a user, or install the add-in manually.

The SAP Cloud for Customer, server-side integration for Microsoft Outlook is an optional but essential part of SAP Cloud for Customer, server-side integration for groupware. The user provisioning process does not imply the automatic installation of the add-in for the user.

Open this video in a new window

Depending on the user's mailbox access type, you can install SAP Cloud for Customer, server-side integration for Microsoft Outlook in one of the following ways:

- If the Microsoft Exchange Direct Logon access type is used, you install the SAP Cloud for Customer, server-side integration for Microsoft Outlook after you change the user's e-mail address.
- If the Microsoft Exchange Impersonation access type is used, you install the SAP Cloud for Customer, server-side integration for Microsoft Outlook after you enable synchronization for the user.

20.4.1.8.1 Check Add-In Installation

As an administrator, you can remotely verify whether the SAP Cloud for Customer, server-side integration for Microsoft Outlook is installed for the user.

Context

To verify the installation status, do the following:

Procedure

1. Log on to the HTLML5 client as an administrator, go to *E-Mail Integration* > *Groupware Settings* > *Users*, and open a user.
2. Choose *Settings* > *Check Add-In Status*.

20.4.1.8.2 Configure: Install SAP Cloud for Customer, server-side integration for Microsoft Outlook

If the SAP Cloud for Customer, server-side integration for Microsoft Outlook was not installed for a provisioned user, an administrator can install it manually for that user.

Context

To install the add-in manually for users, do the following:

Procedure

1. Log on to the HTLML5 client as an administrator, go to *E-Mail Integration* > *Groupware Settings* > *Users*, and select one or more users for whom you want to install the add-in.
2. Choose *Settings* > *Install Add-In*.

20.4.1.8.3 Configure Freeze Description for Appointments, Visits, and Meetings in Microsoft Outlook

Administrators can make settings to freeze the description for appointments, visits, and meetings in their SAP solution after initial synchronization.

Log on to your SAP solution as an administrator and go to *E-Mail Integration* > *Groupware Settings* > *Settings* > *Calendar Configuration*. Select the checkbox to freeze the contents of the description field after initial synchronization.

20.4.1.8.4 Configure Auto-Sharing of Appointments and Meetings in Microsoft Outlook

Administrators can set up auto-sharing for appointments and meetings in the SAP solution.

Log on to your SAP solution as an administrator and go to *E-Mail Integration* > *Groupware Settings* > *Profiles* and select a profile. Under *Sync Settings* > *Calendar Sync Options*, select the appropriate checkboxes to enable auto-sharing according to your company's needs. Then apply these settings to the respective users.

20.4.1.8.5 Configure: Remove the SAP Cloud for Customer, server-side integration for Microsoft Outlook

Administrators can remotely remove the SAP Cloud for Customer, server-side integration for Microsoft Outlook that was installed for the user.

Context

To remove the add-in for users, do the following:

Procedure

1. Log on to the HTLML5 client as an administrator, go to *E-Mail Integration* > *Groupware Settings* > *Users*, and select one or more users for whom you want to remove the add-in.
2. Choose *Settings* > *Remove Add-In*.

20.4.1.8.6 Add Public IP Address to Allowlist

Administrators must add the following public IP address to allowlist.

WDCProd/Test	40.89.246.90, 40.89.246.91 52.186.90.126, 52.186.90.127 20.81.29.60, 20.81.29.61 20.84.212.112, 20.84.212.113 20.121.86.250, 20.121.86.251 52.228.162.70, 52.228.162.71
FRAProd/Test	20.79.94.108, 20.79.94.109, 20.79.94.110, 20.79.94.111 20.79.101.104, 20.79.101.105, 20.79.101.106, 20.79.101.107 20.52.203.122, 20.52.203.123, 20.52.203.124, 20.52.203.125 20.50.236.104, 20.50.236.105, 20.50.236.106, 20.50.236.107 20.54.192.120, 20.54.192.121, 20.54.192.122, 20.54.192.123 51.105.215.150, 51.105.215.151, 51.105.215.152, 51.105.215.153 20.52.203.122, 20.52.203.123 51.105.215.150, 51.105.215.151 20.79.89.96, 20.79.89.97, 20.79.89.98, 20.79.89.99 20.113.195.212, 20.113.195.213, 20.113.195.214, 20.113.195.215
PERProd/Test	40.115.90.12, 40.115.90.13 20.53.187.192, 20.53.187.193 20.193.1.176, 20.193.1.177 13.70.173.238, 13.70.173.239 20.70.88.90, 20.70.88.91 20.248.144.52, 20.248.144.53

20.4.1.9 Customize SAP Cloud for Customer, Server-Side Integration for Groupware

As an administrator, you can customize the default appearance and behavior of the SAP Cloud for Customer, server-side integration for groupware.

You can customize:

- Which record types to show or hide in SAP Cloud for Customer, server-side integration for Microsoft Outlook or SAP Cloud for Customer, server-side integration for Gmail
- Which fields to show in both the record card (basic view) or in the detailed record view
- The sort order for record cards
- Criteria to use for searching the records
- How data should be retrieved for opened e-mails or events and how e-mail tracking should behave

20.4.1.9.1 Configure Record Types

Administrators can customize the fields that are available for all record types.

Context

Your company may not need to track certain information, or may use different terms than the terms in the add-in. You can customize each record type to fit your company's needs.

Procedure

1. Log on to the HTLML5 client as an administrator, go to *E-Mail Integration* > *Groupware Settings* > *Profiles*, and open the profile that you want to edit.
2. Under *Add-In Settings*, choose the record types that you want to appear in the add-in.

   As you select record types, their record cards appear in the *Add-In Settings* tab, where you can further customize them.

20.4.1.9.2 Configure General Settings for Record Types

Administrators can configure fields for sorting and searching for each record type.

Context

To configure general settings for a record type, do the following:

Procedure

1. Log on to the HTLML5 client as an administrator, go to *E-Mail Integration* > *Groupware Settings* > *Profiles* > *Add-In Settings*, on the record type you want to edit, choose *Settings*.
2. Configure the following settings:
   - Under *Sort By*, select the fields by which the record cards are sorted by when they appear in the main add-in window or in search results.
   - Under *Search By*, specify one or more fields to search by when users run a search.

20.4.1.9.3 Configure the Basic View

Administrators can define up to four fields to show in the basic view of each record type.

Context

To select which record fields to show in the record card, do the following:

Procedure

1. Log on to the HTLML5 client as an administrator, go to *E-Mail Integration* > *Groupware Settings* > *Profiles* > *Add-In Settings*, and on the record type you want to edit, choose *Basic View*.
2. In the *Fields in Basic View* list, select the field to show.

   Up to four fields can be shown at a time.

20.4.1.9.4 Configure the Detailed View

Administrators can define which fields to show and hide in the details view for records.

Context

To select which record field to show in the detailed view, do the following:

Procedure

1. Log on to the HTLML5 client as an administrator, go to *E-Mail Integration* > *Groupware Settings* > *Profiles* > *Add-In Settings*, and on the record type you want to edit, choose *Detailed View*.
2. Choose *Add field to detailed view* and select a field to add.
   You can add as many fields as you need.

20.4.1.9.5 Configure Reminders

Since SAP Cloud for Customer does not support reminders, SAP Cloud for Customer, server-side integration for groupware allows administrators to set a default reminder time for tasks, appointments, and visits retrieved from SAP Cloud for Customer.

Context

To set the default reminder time, do the following:

Procedure

1. Log on to your SAP solution as an administrator, go to *E-Mail Integration* > *Groupware Settings* > *Profiles*, and open the profile that you want to edit.
2. Under *Sync Settings* > *General Sync Settings*, for tasks, appointments, or visits, set the reminder time in the *Remind About...* fields. If you want to disable a reminder, choose *Reminder is OFF*.

20.4.1.10 Switch from SAP Cloud for Customer Add-In for Microsoft Outlook to SAP Cloud for Customer, Server-Side Integration for Microsoft Outlook

In addition to uninstalling SAP Cloud for Customer Add-In for Microsoft Outlook, there are a few steps you should take to preserve any SAP data that is in your Microsoft Outlook e-mail client.

Context

> **Note**
>
> The same user should not use both the client-side and the server-side add-in for Microsoft Outlook. Using the two solutions together or modifying appointments during the migration period will lead to duplicates. If you decide to use SAP Cloud for Customer, server-side integration for Microsoft Outlook, uninstall the SAP Cloud for Customer Add-In for Microsoft Outlook.

> **Caution**
>
> We do not support a migration from server-side back to client-side.

When you uninstall SAP Cloud for Customer Add-In for Microsoft Outlook, SAP-specific folders in the contacts, tasks, and e-mail areas remain. To prevent data loss and confusion, do the following:

Procedure

1. In Microsoft Outlook, in the contacts area, under the SAP-specific folder, copy all account and contact information you want to keep.

   You can copy your accounts and contacts into new, separate folders or into temporary folders.
2. Repeat step 1 for tasks and any other SAP-specific folders you may have in Microsoft Outlook.
3. When you have all data that you want to back-up copied into other folders, delete the SAP-specific folders.
4. For calendar synchronization:
   1. Ensure that the client-side add-in is disabled.
   2. Do not change appointments during the migration period when the client-side add-in is turned off and the server-side add-in does the initial sync.
      In particular, the *Subject* and *Start Date/Time* fields should not be changed during the migration period.

   When you install the SAP Cloud for Customer, server-side integration for Microsoft Outlook, new SAP folders are created.

Related Information

Uninstall the Add-In for Microsoft Outlook Integration [page 820]

If you no longer want to use the SAP Cloud for Customer Add-In for Microsoft Outlook, you can uninstall it.

20.4.1.11 Main Concepts

A list of the main concepts the administrator should be familiar with when managing SAP Cloud for Customer, server-side integration for groupware for Microsoft Outlook or Gmail.

20.4.1.11.1 Main Concepts

Main concepts for administrators

Main Concepts for SAP Cloud for Customer, server-side integration for groupware

Term	Description
SAP Cloud for Customer - Administrator	A user that belongs to an SAP Cloud for Customer tenant and has administrative rights. Only an administrator can access the *Groupware Settings* tab and manage other administrators or ordinary users of SAP Cloud for Customer, server-side integration for Microsoft Outlook or SAP Cloud for Customer, server-side integration for Gmail.
SAP Cloud for Customer - User	A user in an SAP Cloud for Customer tenant that does not have administrative rights. A user has no access to the *Groupware Settings* tab and cannot manage other users.
profile	A collection of configuration settings and parameters that control how SAP Cloud for Customer, server-side integration for Microsoft Outlook or SAP Cloud for Customer, server-side integration for Gmail behaves for a specific set of users to better fit their needs.
profile template	A profile that serves as a template for a user. A profile template provides some predefined configuration settings that can later be customized by a user. When a user changes settings in the profile template, such profile template becomes a customized profile.
default profile template	A profile that provides users with the default SAP Cloud for Customer, server-side integration for Microsoft Outlook or SAP Cloud for Customer, server-side integration for Gmail configuration. A default profile template is created automatically and cannot be edited. It can also be used as a basis for creating new or customized profiles.

Term	Description
customized profile	A profile that is created automatically as soon as the user changes any settings in the profile assigned to that user. Both administrators and users can edit their profiles, thus creating customized profiles. Customized profiles do not appear in the list of profiles and cannot be assigned to other users. Customized profiles can only be used by the user who created them.
organization	A collection of users that share a common set of general settings. The name of the organization together with the organization settings can be changed by an administrator.
default organization	An organization that the administrator is automatically assigned to during the provisioning process. For ordinary users, a default organization is used if no other organization is explicitly specified by the administrator. The default organization cannot be deleted, but both the organization name and the organization settings can be changed by an administrator.

20.4.1.12 Stages of Migration to OData V2

SAP plans to encourage and then enforce users to switch to Open Data Protocol, version 2 (OData V2).

OData API V2 offers improved performance and an expanded set of main business objects and collections (data points).

We want to ensure that all our users have migrated to OData V2 by August 2020. We've scheduled the following steps toward this goal:

Encourage Mode

Activated first week of June 2020 in the production system through 14 July 2020.

- Users can still use the server-side add-in, but error messages appear encouraging them to contact their administrator to make the switch to OData V2.
- For administrators, on the *Profile* and *Users* tabs, columns appear that show the OData status (V1 or V2) for the add-in and sync. Any rows that aren't yet in V2 appear in red.

Enforce Mode

Activated 15 July 2020 in the production system.

- Users can't use the SAP solution. Error messages appear, explaining why the service isn't accessible.

- For administrators, on the *Profile* and *Users* tab, columns appear that show the OData status (V1 or V2) for the add-in and sync. Any rows that aren't yet in V2 appear in red.

Extensions

If you have concerns with this process or schedule, please raise an incident with detailed information and reasons for your extension request.

> i Note
>
> Extensions are only available until the August 2020 release upgrade.

Related Information

Configure: Switch to OData V2 [page 909]
Administrators must switch all profiles in their organizations to Open Data Protocol, version 2 (OData V2).

SAP Cloud for Customer OData API

20.4.1.13 Configure: Switch to OData V2

Administrators must switch all profiles in their organizations to Open Data Protocol, version 2 (OData V2).

Context

OData API V2 offers improved performance and an expanded set of main business objects and collections (data points).

> i Note
>
> The last date to switch to OData V2 is 15 July 2020.Administrators can view the OData status (V1 or V2) for the add-in and sync on the *Profile* and *Users* tab. Any rows that are not switched to V2 appear red.

Switch each profile to OData V2 data manually.

> → Recommendation
>
> When you have switched add-in settings or sync settings in a profile to OData V2, it's only possible to go back to OData V1 with assistance from support.
>
> Before switching all profiles to OData V2, we suggest that administrators:
>
> 1. Copy one profile to create a new one and convert it to OData V2.

After the conversion is done, delete the original profile.
2. Review conversion notes and address and then dismiss them.
3. Apply the profile only to yourself and verify that it works correctly.
4. Apply the profile to other users who had it previously.

Procedure

1. Log on to your SAP solution as an administrator and go to *E-Mail Integration* > *Groupware Settings* > *Profiles*.
2. Open the profile that you want to switch to OData V2.
3. Under *Sync Settings* > *OData API V2*, toggle the switch on.
4. Under *Add-In Settings* > *OData API V2*, toggle the switch on.
5. Save your changes.
   If you have tested OData V2 change as outlined in the note, save your changes and apply them to all users in the profile.
6. Repeat these steps for each profile in your organization.

Related Information

SAP Cloud for Customer OData API
Stages of Migration to OData V2 [page 908]
SAP plans to encourage and then enforce users to switch to Open Data Protocol, version 2 (OData V2).

20.4.2 Get Started

The SAP Cloud for Customer, server-side integration for Microsoft Outlook allows you to exchange information between Microsoft Outlook and SAP Cloud for Customer.

20.4.2.1 Confirm Exchange Credentials and Start Synchronization

To start using SAP Cloud for Customer, server-side integration for groupware, you need to provide some information about you and your configuration by signing up for an account in SAP Cloud for Customer, server-side integration for groupware. Your administrator may complete the sign-up process for you.

Context

> → Tip
>
> If you try to complete the steps below, but the fields are grayed out, it means that your system administrator has already completed these steps for you.

Procedure

1. Specify your e-mail account.

   Specify your Microsoft Office 365 or Microsoft Exchange account that will be used with SAP Cloud for Customer, server-side integration for groupware. Under *Sync Settings* › *E-Mail Configuration* › *Change*, do one of the following:

   - To log in to your Microsoft Office 365 account, click the Microsoft Office 365 logo. In the window that appears, specify your account e-mail and password.
   - If you use an on-premise installation of Microsoft Exchange, your exchange server is hosted by some third-party provider, or you use Outlook.com Mail (Outlook.com), choose the button containing the Microsoft Exchange logo, click the advanced setup link, and do the following:
     1. Enter your e-mail address.
     2. Enter your password.
     3. In some configurations, you may be asked to provide your exchange user name. In this case, specify it in the *User Name* box. This name is usually your domain name followed by a backslash and your account ID. For example, if your domain is "work" and your Windows account ID is "johndoe," enter work\johndoe.
     4. In most cases, SAP Cloud for Customer, server-side integration for groupware automatically finds the required EWS endpoint URL, but if the solution did not find it or you need to specify it manually, select the *Specify Exchange Web Services URL Manually* check box and enter the Exchange Web Services endpoint URL.
     5. Choose *Next*.
2. Select the data that you want to synchronize.

   Select what types of records you want to synchronize – appointments, tasks, or contacts – by activating or deactivating the corresponding button:

   - Appointments and Tasks
     SAP Cloud for Customer, server-side integration for groupware synchronizes appointments and tasks that meet the following criteria:
     - Of which you are the owner
     - Which are not complete
     - Which are from the past two weeks and are up to four weeks in the future
   - Contacts
     For contacts, you can click *Customize* and define the contacts you want to be synchronized:
     - All available contacts
     - Only my contacts

- Only contacts from the specified SAP set
  Sets are views you can create in SAP that contain a specific set of contacts. SAP Cloud for Customer, server-side integration for groupware automatically retrieves a list of sets available for your contacts so that you can pick the one that matches your preference.

  > **i Note**
  >
  > When using a custom SAP set, select the set that includes contacts owned by you. Otherwise, new contacts that you add from Microsoft Exchange to SAP may be removed from Microsoft Exchange at a later time because they are not the part of the selected set.

3. To complete the configuration process, choose *Finish*.

   SAP Cloud for Customer, server-side integration for groupware triggers the initial synchronization in the background and installs the SAP Cloud for Customer, server-side integration for Microsoft Outlook for compatible e-mail clients.

Related Information

Maximum Number of Synchronized Records [page 871]
For better performance, the total number of records that SAP Cloud for Customer, server-side integration for groupware can synchronize is limited to 9,000. This limit is predefined and cannot be changed, even by an administrator.

20.4.2.2 Use SAP Cloud for Customer Server-Side Integration for Microsoft Outlook on Mobile Devices

If your administrator has made the necessary settings, you can use SAP Cloud for Customer, server-side integration for Microsoft Outlook on the Microsoft Outlook app.

> **i Note**
>
> Due to restrictions in the Microsoft Outlook for mobile app, the add-in is only available in the e-mail read mode.

20.4.2.3 Open the Add-In

The add-in works in the context of your e-mail or appointment, and provides you with rich contextual information from your SAP solution and powerful actions to process e-mail efficiently.

Procedure

To open the add-in, do one the following:

- In Microsoft Outlook on Windows, under *Home* > *SAP* choose *Open*.
- In Microsoft Outlook for Mac, or Outlook for Web, click the *SAP Cloud for Customer, server-side integration* tab located right above your e-mail message or appointment.
- When composing a response to someone, click the *Add-Ins* button above the message, and select *SAP Cloud for Customer, server-side integration* from the list.

20.4.2.4 View Information from SAP Cloud for Customer

When you select an e-mail, the add-in automatically recognizes e-mails from customers defined as contacts in your SAP solution, based on the e-mail address. Information related to that contact and account appears in the side pane. You can access contact and account information, as well as related opportunities, leads, sales orders, and activities for the current week, and you can personalize how you would like to view the content.

20.4.2.5 Pin Information in the Side Pane

You can pin information in the side pane so that it persists even when you click another item in Microsoft Outlook.

> **i Note**
>
> Pinning is currently supported in Outlook 2016 for Windows (build 7668.2000 or later for users in the **Current** or **Office Insider Channels**, build 7900.xxxx or later for users in **Deferred** channels). For more information, see the Microsoft Outlook documentation.

20.4.3 Manage E-Mails

If you use the SAP Cloud for Customer, server-side integration for Microsoft Outlook, you can do a lot right from your inbox. For example, you can add e-mails to your SAP solution or add e-mails with reference to other objects.

20.4.3.1 Share E-Mails with the SAP Solution

You can share formatted or unformatted e-mail messages with your SAP solution. As the e-mail has been shared, it appears as a completed task in SAP. This task is associated automatically with other relevant SAP records that were mentioned in the e-mail.

Context

> **i Note**
>
> If you skipped the registration of SAP Cloud for Customer, server-side integration for groupware or did not complete the registration wizard, you cannot share your e-mails with the SAP solution via the *SAP E-Mails* folder or by assigning them to the SAP Cloud for Customer category.

Procedure

To share an e-mail, do one of the following:

- You can assign e-mails to the SAP category by using *Categorize* in Microsoft Outlook.

  > **i Note**
  >
  > In Microsoft Outlook, when you create a new e-mail, the e-mail category is assigned automatically, before synchronization.

- Move new or existing items to the appropriate SAP-specific folder in Microsoft Outlook: *SAP Contacts*, *SAP E-Mail*, or *SAP Tasks*.
  You can also use these SAP-specific folders in Outlook to access activities stored in the SAP solution.

  > **i Note**
  >
  > After an e-mail is synchronized, the solution moves it back to the *Inbox* or *Sent Items* folder, depending on whether it was sent or received.

- In the corresponding item card, click *Add to Activity History*.
  In Microsoft Outlook, you can also save this e-mail for all related SAP records by using *Save this E-Mail*.

> **i Note**
>
> Any images in the body of the e-mail appear as attachments in your SAP solution.

20.4.3.2 Share E-Mails Automatically

Your administrator can set SAP Cloud for Customer, server-side integration for Microsoft Outlook to synchronize all e-mails automatically.

If the sync setting is enabled, all new incoming/outgoing emails from/to addresses already registered in SAP Cloud for Customer is shared with SAP Cloud for Customer automatically. The emails are auto-linked to a single relevant contact, account, or individual customer. Related objects to be linked are retrieved as follows:

1. The senders and recipients addresses are retrieved from the *To*, *CC*, and *From* fields of the email.
2. The addresses are matched with the contact and individual customer records available in your SAP Cloud for Customer.
3. The saved email gets linked to the first matching record found (a single one).
4. Email addresses with no matching records are registered in the unlinked email objects.

20.4.3.3 Configure Share E-Mails Automatically

As an administrator, you can enable SAP Cloud for Customer, server-side integration for Microsoft Outlook to share e-mails automatically by changing settings in the user profiles.

Procedure

1. Log on as an administrator to SAP Cloud for Customer HTML client and go to *E-Mail Integration* > *Groupware Settings* > *Profile*, open a profile, enable auto-sharing for e-mail, and choose *Save*.
2. Assign the updated profile to the appropriate users.

Related Information

Configure: Assign Other Profiles for Users [page 889]
During the provisioning process, as the administrator, you assign users to a template profile (either specified or default for the organization). After provisioning, you can change the profile that is assigned to the user.

20.4.3.4 Select Contacts Related to an Account

When you create an e-mail, appointment, visit, or task from your inbox, you can see contacts that are related to the account that you defined for the activity. Select the appropriate contacts to include in the activity.

If you want to add other contacts, click the header to see other filters from your SAP solution, such as *My Contacts* or *All Contacts*.

20.4.3.5 Link Emails and Events with Opportunity

Your administrator can configure the SAP Cloud for Customer, server-side integration for Microsoft Outlook to link emails and events with opportunity automatically.

This feature automates the opportunity workflow using algorithm to define which contact or account are linked to the opportunity.

> ! Restriction
>
> Opportunities can only link with email or events set to save automatically. Your administrator must enable auto-sharing for emails. This feature requires intelligent sales add-on purchase.

Related Information

https://help.sap.com/docs/SAP_CLOUD_FOR_CUSTOMER/24765b551a014b779b95c7b07d8e9079/21f186cf30ca40c3b617cc33aa208a4f.html

20.4.3.6 Save E-Mail Attachments

If your e-mail contains contacts that exist in the SAP solution, you can save e-mail attachments directly to this contact.

Procedure

To save the e-mail attachment, do one of the following:

- In the add-in on the contact card, click *Attach*.
  In the dialog box that appears, select the documents you want to attach and click *Attach*.
- You can assign e-mails to the SAP category by using *Categorize* in Microsoft Outlook.

> **i Note**
>
> In Microsoft Outlook, when you create a new e-mail, the e-mail category is assigned automatically, before synchronization.

- Move new or existing items to the appropriate SAP-specific folder in Microsoft Outlook: *SAP Contacts*, *SAP E-Mail*, or *SAP Tasks*.
  You can also use these SAP-specific folders in Outlook to access activities stored in the SAP solution.

> **i Note**
>
> After an e-mail is synchronized, the solution moves it back to the *Inbox* or *Sent Items* folder, depending on whether it was sent or received.

20.4.4 Manage Contacts

If you use SAP Cloud for Customer, server-side integration for Microsoft Outlook, you can create contacts, associate them with other objects in your SAP system, pin them, and even add contacts from your SAP solution into Microsoft Outlook.

20.4.4.1 Share a Contact with the SAP Solution

You can assign contacts to different items in your SAP solution, right from your e-mail application.

Procedure

1. Share a contact with the SAP solution by doing one of the following:
   - Move new or existing items to the appropriate SAP-specific folder in Microsoft Outlook: *SAP Contacts*, *SAP E-Mail*, or *SAP Tasks*.
     You can also use these SAP-specific folders in Outlook to access activities stored in the SAP solution.

     > **i Note**
     >
     > After an e-mail is synchronized, the solution moves it back to the *Inbox* or *Sent Items* folder, depending on whether it was sent or received.

   - You can assign items to the SAP category in the same way: by using *Categorize* in Microsoft Outlook.
     The item is added to your SAP solution at the next synchronization session.

     > **i Note**
     >
     > **Apple Mac users:** Be aware that, by default, when you assign a contact to a category, all messages that you receive from that contact are automatically assigned to the same category. Since contacts shared with the add-in are automatically assigned to the SAP category, messages received from a shared contact will also be assigned to the SAP category and, as a result, will be

> automatically shared with the SAP solution during the next synchronization session. To turn off this preference, on the Outlook menu, choose *Preferences* > *Categories*, and then deselect the *Assign categories to messages from categorized contacts* check box.

- If a new person is referenced in your e-mail, you can add this person to your SAP solution as a contact from the *Not Found in SAP* card by clicking the *Contact* icon.

2. To access existing contacts in your SAP solution, do one of the following:
    - If the contact mentioned in your e-mail is also available in your SAP solution, the corresponding contact card appears in the add-in.
    - SAP contacts that match the synchronization filters can be found in the *SAP Contacts* folder in Microsoft Outlook. You can change these settings in your SAP solution under *E-Mail Integration* > *User Settings* > *Dashboard* > *Customize*.

20.4.4.2 Edit a Shared Contact

Changes you make in your e-mail application are transferred to your SAP solution.

Procedure

To edit contact details, do one of the following:

- In the contact card in the add-in, click *Details*.
- Open the contact, appointment, or visit in Microsoft Outlook and edit the details as needed. If this contact, appointment, or visit is assigned to the SAP category or (in the case of contacts) located in the appropriate SAP folder, your changes are automatically synchronized with your SAP solution.

Results

Changes that were made to the contact in the add-in appear immediately in the SAP solution, while changes made in Microsoft Outlook will appear in the SAP solution only after the next synchronization.

20.4.4.3 Display Account ID on New Account Create Form

Your administrator can configure to display the account id on new account create form.

Your administrator can configure to display account id as follows:

1. Navigate to *E-Mail Integration* > *Groupware Settings* > *PROFILES*.
2. Open *ADD-IN SETTINGS*.

3. Go to *ACCOUNT* section and open *Detailed View* tab.
4. Click the checkbox *Display on Create* under *Account ID* .

20.4.4.4 Add an E-Mail to the Contact's Activity History

You can track interactions with a contact by adding e-mails to the activity history.

Procedure

To add an email to the contact's activity history (as a completed task), do one of the following:

- In the corresponding item card, click *Add to Activity History*.
- You can assign items to the SAP category in the same way: by using *Categorize* in Microsoft Outlook. The item is added to your SAP solution at the next synchronization session.
- Move new or existing items to the appropriate SAP-specific folder in Microsoft Outlook: *SAP Contacts*, *SAP E-Mail*, or *SAP Tasks*.
  You can also use these SAP-specific folders in Outlook to access activities stored in the SAP solution.

> **Note**
>
> After an e-mail is synchronized, the solution moves it back to the *Inbox* or *Sent Items* folder, depending on whether it was sent or received.

20.4.4.5 Open a Contact in the SAP Solution

You can save time by accessing contact information right from your e-mail application.

Procedure

To open a contact in the SAP solution right from your e-mail application, do one of the following:

- On the corresponding card, depending on the activity type, do one of the following:
  - For contacts:
    Choose ••• › *Open in CRM* .
  - For tasks, appointments, or visits:
    Click the activity type (task, appointment, or visit) and choose ••• › *Open in CRM* .
- In Microsoft Outlook , open the contact and click the URL specified in the *Web page address* box.

20.4.4.6 Assign Other Activities to a Contact

For tracking, you can assign items in the SAP solution to a contact.

Procedure

To assign an activity or associate a contact with other records, on the contact card, click ••• and choose the option you need.

20.4.5 Manage Individual Customer

If you use SAP Cloud for Customer, server-side integration for Microsoft Outlook, you can create individual cCustomers directly from Microsoft Outlook.

20.4.5.1 Create Individual Customer from Groupware Add-In

You can create individual customer directly from your Outlook or Gmail application using SAP Cloud for Customer, server-side integration for groupware.

To create the individual customer, open your Outlook or Gmail application and follow these steps:

1. Click *View Context of SAP Cloud for Customer* to open the groupware add-in.
2. Click the *Create New* button and select *Individual Customer* from the dropdown.
3. Fill in the details in all the fields and click *Save*.

20.4.6 Manage Leads

If you use SAP Cloud for Customer, server-side integration for Microsoft Outlook, you can create leads directly from Microsoft Outlook.

20.4.6.1 Create Lead from Groupware Add-In

You can create lead directly from your Outlook or Gmail application using SAP Cloud for Customer, server-side integration for groupware.

You can create a lead from the selected email or meeting as follows:

1. Select the email or meeting and click *View Context of SAP Cloud for Customer* to open the groupware add-in.

2. Click the *Lead* button.
3. Fill in the details in all the fields and click *Save*.

20.4.7 Manage Opportunities

If you use SAP Cloud for Customer, server-side integration for Microsoft Outlook, you can create opportunities directly from Microsoft Outlook.

20.4.7.1 Create Opportunity from Groupware Add-In

You can create opportunity directly from your Outlook or Gmail application using SAP Cloud for Customer, server-side integration for groupware.

To create the opportunity, open your Outlook or Gmail application and follow these steps:

1. Click *View Context of SAP Cloud for Customer* to open the groupware add-in.
2. Click the *Create New* button and select *Opportunity* from the dropdown.
3. Fill in the details in all the fields and click *Save*.

20.4.8 Manage Appointments and Visits

If you use SAP Cloud for Customer, server-side integration for Microsoft Outlook, you can synchronize appointments and visits so that updates in your SAP solution appear in Microsoft Outlook, and the other way around.

20.4.8.1 Auto-Sharing for Appointments and Meetings in Microsoft Exchange

If you use Microsoft Outlook and your administrator has made the required settings, your system automatically synchronizes appointments and meetings.

Your administrator can set up your SAP solution to synchronize appointments and meetings according to one of these sets of criteria:

- Any appointments or meetings that include at least one attendee whose e-mail address is defined as a contact in your SAP solution
- All appointments or meetings, even if the attendees are not defined in your SAP solution

> **i Note**
>
> Auto-sharing does not work retroactively. It is only valid for appointments and meetings that are created after your administrator has set up this feature.

20.4.8.2 Configure Auto-Sharing of Appointments and Meetings in Microsoft Outlook

Administrators can set up auto-sharing for appointments and meetings in the SAP solution.

Log on to your SAP solution as an administrator and go to *E-Mail Integration* > *Groupware Settings* > *Profiles* and select a profile. Under *Sync Settings* > *Calendar Sync Options*, select the appropriate checkboxes to enable auto-sharing according to your company's needs. Then apply these settings to the respective users.

20.4.8.3 Freeze Description for Appointments, Visits, and Meetings in Microsoft Outlook

If your administrator has made the necessary settings, the description of appointments, visits, and meetings stays the same, even if other details are updated and synchronized.

This feature can be useful if you want to include company-internal information in the notes for an appointment, visit, or meeting.

When this feature is enabled and you create an appointment, visit, or meeting in Microsoft Outlook:

- The description is synchronized initially and saved as a note in the SAP solution.
- If you update the appointment, visit, or meeting in your SAP solution, any changes to the description are not synchronized.

When this feature is enabled and you create an appointment, visit, or meeting in your SAP solution:

- The description is synchronized initially and added to the body in Microsoft Exchange.
- If you update the appointment, visit, or meeting in Microsoft Outlook, any changes to the description are not synchronized.

20.4.8.4 Configure Freeze Description for Appointments, Visits, and Meetings in Microsoft Outlook

Administrators can make settings to freeze the description for appointments, visits, and meetings in their SAP solution after initial synchronization.

Log on to your SAP solution as an administrator and go to *E-Mail Integration* > *Groupware Settings* > *Settings* > *Calendar Configuration*. Select the checkbox to freeze the contents of the description field after initial synchronization.

20.4.8.5 Synchronize Appointments or Visits with the SAP Solution

Manage your schedule by sharing your appointments and visits with your SAP solution.

Context

> **i Note**
>
> For calendar events, all future appointments and visits are synchronized. For visits or appointments in the past, only those from the past 30 days are synchronized to the SAP solution. Appointments and visits that don't fall within this range still appear in your calendar, but are skipped during synchronization.

Procedure

To share an appointment or visit with your SAP solution, do one of the following:

- You can assign items to the SAP category in the same way: by using *Categorize* in Microsoft Outlook. The item is added to your SAP solution at the next synchronization session.
- In the corresponding item card, click *Add to Activity History*.
- In the add-in, choose *+* > *<activity type>*.
  After you create the activity this way, it appears in the appropriate SAP-specific folder in Microsoft Outlook and is assigned immediately to the SAP category in Microsoft Outlook. As a result, it's automatically shared with the SAP solution.

Results

- Appointments or visits for which you **are** the organizer or owner are synchronized in both directions. In other words, if you change the appointment or visit in either your inbox or your SAP solution, the change is reflected in the other location too.
- Appointments or visits for which you **aren't** the organizer or owner are synchronized in one direction only - from your inbox to your SAP solution.

20.4.8.6 Configure Which Visits to Synchronize

In SAP Cloud for Customer, when associated with visits, users can be either visit organizers or visit owners. As an administrator, you must configure which visits are synchronized for users.

Context

You can define which visits must be synchronized for the user – where the user is an owner or organizer – as follows:

Procedure

1. Log on to the HTLML5 client as an administrator, go to *E-Mail Integration* > *Groupware Settings* > *Settings*.
2. In the *Sync Visit To* field, select whether you want to sync visits to the owner or the organizer.

20.4.8.7 Edit an Appointment or Visit

Need to edit an appointment or visit? No problem!

Procedure

To edit details of an appointment or visit, do one of the following:

- In the add-in on the appointment or visit card, choose *Details*.
  To edit an appointment or visit that is associated with another item such as a contact:
  1. In the record card for that contact, choose the appointments or visits bar.
  2. Click the appointment or visit that you want to edit.
  3. To edit a field, click the pencil icon.
- Open the contact, appointment, or visit in Microsoft Outlook and edit the details as needed. If this contact, appointment, or visit is assigned to the SAP category or (in the case of contacts) located in the appropriate SAP folder, your changes are automatically synchronized with your SAP solution.

20.4.8.8 Recurring Appointment Support for Outlook Integration

You can sync recurring events and updates to these events from MS Outlook to SAP Cloud for Customer for *Visits* and *Appointments*. You can also update separate occurrences in both directions. The appointment frequency can be daily, weekly, and monthly.

Appointments and *Visits* are created in SAP Cloud for Customer and the instances have a reference link to the parent appointment. Note the parent appointment is not visible in SAP Cloud for Customer. An occurrence deleted in MS Outlook is considered cancelled in SAP Cloud for Customer on sync. If you delete an entire series in MS Outlook, all instances with a parent appointment will be deleted/cancelled in SAP Cloud for Customer.

Note that you cannot delete an occurrence from SAP Cloud for Customer. You can only cancel it. This is not valid for visits.

The limit on occurrences that are visible in SAP Cloud for Customer are as follows:

- Daily and weekly frequency: two months
- Monthly frequency: six months

> **i Note**
>
> While saving the recurring event from MS Outlook using an add-in, only account and contact fields are available for linkage. Also, in MS Outlook you cannot share a separate occurrence. You can only share the whole series.

The following features are not supported:

- Google calendar
- Attachments sync for recurring events
- Share of recurring events by attendees, only organizers can share recurring events
- Yearly pattern. Sync issue occurs if synchronization is attempted
- Safe description mode for recurring event is not supported (*Freeze Description Fields* option in tenant settings)
- Sharing of individual occurrences
- Private recurring events synchronization is not supported. Sync issue occurs if synchronization is attempted.
- Sync for all-day recurring events. Sync issue occurs if synchronization is attempted.
- Daylight time saving not automatically supported. Time for occurrences can be inaccurate for period when daylight saving time rules for MS Outlook time zone and SAP Cloud for Customer time zone are different.
- Changes in past occurrences on SAP Cloud for Customer side are not synced to MS Outlook.
- Updates in SAP Cloud for Customer after 60 days of the occurrence WILL NOT be reflected in MS Outlook on the next synchronizations.

20.4.8.9 Select Contacts Related to an Account

When you create an e-mail, appointment, visit, or task from your inbox, you can see contacts that are related to the account that you defined for the activity. Select the appropriate contacts to include in the activity.

If you want to add other contacts, click the header to see other filters from your SAP solution, such as *My Contacts* or *All Contacts*.

20.4.8.10 Open an Appointment or Visit in the SAP Solution

If you're working in your e-mail in box but need to access an appointment or visit in your SAP solution, you can open it right from your inbox.

Procedure

1. To open an appointment or visit, on the item or contact card click *Appointment* or *Visit*.
2. Choose *...* > *Open in CRM*.

20.4.8.11 Delete, Cancel, or Reassign a Meeting or Appointment

In both your SAP solution and your calendar (in Google or Microsoft Exchange), you can cancel or delete meetings, or reassign a meeting to another organizer.

Here's how the system responds:

> **Note**
>
> When appointments are changed, attendees are notified automatically.

Your Actions and System Results

Your Action	Result
In your calendar, you remove an attendee of a meeting.	After synchronization, the attendee is also removed from the meeting in your SAP solution.
You're the organizer or owner of a meeting or appointment and you cancel it in your SAP solution.	After synchronization, the appointment is also canceled in your calendar.
In your SAP solution, you delete or cancel a meeting or reassign it to a new meeting owner.	At synchronization, the meeting is deleted from the calendar of the original organizer or owner.
In your SAP solution, you delete a meeting only (without canceling it or reassigning it to another owner).	At synchronization, the meeting is no longer shared, but it remains in the calendar of the original organizer or owner.

20.4.9 Manage Tasks

If you use the SAP Cloud for Customer, server-side integration for Microsoft Outlook, you can add, share, and open tasks.

20.4.9.1 Share a Task with the SAP Solution

Sharing your tasks with the SAP solution helps you stay organized.

Procedure

Share a task with the SAP solution by doing one of the following:

- You can assign items to the SAP category in the same way: by using *Categorize* in Microsoft Outlook. The item is added to your SAP solution at the next synchronization session.
- Move new or existing items to the appropriate SAP-specific folder in Microsoft Outlook: *SAP Contacts*, *SAP E-Mail*, or *SAP Tasks*.
  You can also use these SAP-specific folders in Outlook to access activities stored in the SAP solution.

  > **Note**
  >
  > After an e-mail is synchronized, the solution moves it back to the *Inbox* or *Sent Items* folder, depending on whether it was sent or received.

- In the add-in, choose + <activity type>.
  After you create the activity this way, it appears in the appropriate SAP-specific folder in Microsoft Outlook and is assigned immediately to the SAP category in Microsoft Outlook. As a result, it’s automatically shared with the SAP solution.

20.4.9.2 Edit a Task

Need to update a task? No problem!

Procedure

You can edit task details by doing one of the following:

- Open the task in Microsoft Outlook and edit the task details.

> **i Note**
>
> Changes that you make with this method appear in the SAP solution only after the next synchronization.

If this task is assigned to the SAP category or located in the *SAP Tasks* folder, your changes will be automatically synchronized with the SAP solution.

- In the add-in on the record card, click *Tasks* and then select the task you want to edit.

> **i Note**
>
> Changes that you make with this method appear immediately in the SAP solution.

20.4.9.3 Select Contacts Related to an Account

When you create an e-mail, appointment, visit, or task from your inbox, you can see contacts that are related to the account that you defined for the activity. Select the appropriate contacts to include in the activity.

If you want to add other contacts, click the header to see other filters from your SAP solution, such as *My Contacts* or *All Contacts*.

20.4.9.4 Open a Task in the SAP Solution

You can save time by accessing contact information right from your e-mail application.

Context

To open a task in the SAP solution right from your e-mail application, do the following:

Procedure

1. On the item or contact card, click *Task*.
2. Choose *...* > *Open in CRM*.

20.4.10 Manage Tickets

SAP Cloud for Customer, server-side integration for Microsoft Outlook allows you to access the ticket directly from outlook and do the following actions:

- Manually convert email to ticket in one click.
- Manually save emails and attachments to tickets.
- Reopen closed ticket upon reply.
- View related tickets with open status.

You can associate sales-related customer queries with corresponding service tickets. You can also involve parallel workflows for users who use tickets outside sales scenarios.

20.4.11 Use SAP Cloud for Customer, server-side integration for Microsoft Outlook on Mobile Devices

You can use some of the features of SAP Cloud for Customer, server-side integration for Microsoft Outlook on Android and IOS mobile devices.

To access the add-in from Microsoft Outlook mobile app:

1. Open the Microsoft Outlook mobile app.
2. Open any email from inbox or sent items.
3. Tap *More* button select SAP icon to open the add-in.

20.4.12 FAQ for SAP Cloud for Customer, Server-Side Integration for Microsoft Outlook

Having trouble using this add-in? Check this list of questions and answers for help.

In the dashboard, you can find more information about many questions you may have. Additionally, when SAP Cloud for Customer, server-side integration for Microsoft Outlook cannot access your SAP or Microsoft Exchange data, or when synchronization fails ten consecutive times, you receive an e-mail notification of the problem.

20.4.12.1 How can I resolve synchronization issues?

A synchronization issue occurs when SAP Cloud for Customer, server-side integration for groupware is unable to synchronize data between your SAP solution and Microsoft Exchange due to some reason.

Context

Synchronization issues are caused by incomplete data in your e-mail application (like missing contact's last name) or by rules in your SAP solution that may prevent users from editing or deleting records of certain types. Another cause of synchronization problem is Microsoft exchange misconfiguration. When Microsoft exchange is not configured correctly, the actual exchange metadata URL does not match the URL Microsoft exchange embeds into the identity token. Server-side integration uses the following basic steps to validate the exchange identity token:

1. Retrieve exchange identity token from Microsoft exchange.
2. Parse exchange identity token and extract amurl parameter (this is the exchange metadata URL).
3. Send HTTP GET request to exchange metadata URL to retrieve the keys and confirm the token validity.
4. Use retrieved information for validating token signature.

For detailed information on how exchange metadata URL is used, see: https://docs.microsoft.com/en-us/office/dev/add-ins/outlook/validate-an-identity-token . To resolve the microsoft exchange misconfiguration, please contact your system administrator.

If a synchronization issue occurs, SAP Cloud for Customer, server-side integration for groupware uses one of the methods to notify the user about the situation:

- The item for which an issue occurred is assigned to two categories – the *Sync Error* category and the status category that provides more details about the issue.
- Information about the synchronization issue appears on the *Issues* page in the dashboard of SAP Cloud for Customer, server-side integration for groupware. To view issues for a certain item type, under *Issues*, select the item type.

> → Tip
>
> You can easily open the SAP (or Microsoft Exchange, depending in the cause) item that caused the issue by clicking the corresponding icon in the issue description.

To resolve a synchronization issue, do the following:

Procedure

1. If the issue occurred because the required field is empty, fill in the missing data.
2. If you do not know how to resolve the issue, contact your system administrator.

20.4.12.2 How can I renew account credentials?

If your Microsoft Exchange or SAP credentials become outdated, SAP Cloud for Customer, server-side integration for groupware can no longer synchronize your data. You receive a notification e-mail informing you of the problem; the corresponding message also appears in the dashboard.

Context

To renew your Microsoft Exchange or SAP credentials, do the following:

Procedure

1. In the dashboard of SAP Cloud for Customer, server-side integration for groupware, in the connection status section, click *Change Settings*.
2. Enter your new credentials.
3. (Optional) Force synchronization to ensure that the status of your items is updated.

20.4.12.3 How do I, as an administrator, grant access to the mailbox used with server-side integration?

When you try to authenticate the Office365 mailbox into server-side integration, an error message *Need admin approval* is displayed.

Context

The issue occurs because the option *Users can consent to apps accessing company data on their behalf* is set to *No*. This option is available in customer Azure active directory through *Enterprise applications* > *User settings*. You can use the following methods to grant access to the mailbox:

- Grant admin consent for server-side integration
- Allow Office 365 administrator to give consent during initial login.
- Allow users to provide consent to third-party applications.

For more information, see:

- Azure Active Directory consent framework
- Understanding Azure AD application consent experiences

20.4.12.3.1 How can I grant admin consent for server-side integration?

You, as an administrator can grant admin consent for server-side integration as follows:

Procedure

1. Log on to Azure AD.
2. Go to *Enterprise Applications* and find *SAP Cloud for Customer, server-side integration* in the list.

   Application may not be present in the list if none of the users previously consented the application on their behalf.
3. Go to *Permissions* > *Grant Admin consent for %CompanyName%*.
4. Log in with Office 365 admin credentials and click *Accept*.

Results

A *Signed In successfully* message appears. A list of consented permissions is displayed in the *Admin Consent* tab on the application page. You can go to *User Settings* in SAP Cloud for Customer and grant access to the mailbox.

20.4.12.3.2 How can I allow Office 365 administrator to give consent during initial login?

Make sure that the Office 365 administrator is an SAP Cloud for Customer user and provisioned as a server-side integration user.

Procedure

1. Log on into SAP Cloud for Customer as an Office 365 administrator.
2. Go to *User Settings* > *Change settings* in *MAIL SERVER CONNECTION STATUS*.
3. In the *Permissions Required* dialog box, click the checkbox *Consent on behalf of your organization* and click *Accept*.

Results

A *Signed in successfully* message appears. A consent has been provided for the application for your organization and you are able to authenticate successfully. If the Office 365 administrator does not need server-side integration, start a *Reset mailbox* procedure in the *Groupware Settings* tab. You can also deprovision from server-side integration.

20.4.12.3.3 How can I allow users to provide consent to third-party applications?

As an administrator, you can allow users to provide consent to third-party applications.

Procedure

1. Log on to Azure AD.
2. Go to *Enterprise applications* > *User settings*.
3. Switch *Users can consent to apps accessing company data on their behalf* to *Yes*.

   When this setting is enabled, you can provide consent to any third-party applications, which may not meet company's security policies.

20.5 SAP Cloud for Customer, Server-Side Integration for Gmail

Like the client-side solution, the server-side integration powers your inbox with contextual insights from SAP Cloud for Customer. It also adds intelligent features that make it easy to get things done right from your Gmail inbox.

SAP Cloud for Customer, server-side integration for Gmail synchronizes your information at server level, so client-level setup is minimized.

> **i Note**
>
> SAP Cloud for Customer, server-side integration for Gmail is available:
>
> - As part of SAP Sales Cloud, enterprise edition
> - In English only

Scope and Configure SAP Cloud for Customer, Server-Side Integration for Gmail [page 934]
As an administrator, you must define and set up the server-side integration for Gmail.

Set Up SAP Cloud for Customer, Server-Side Integration for Gmail [page 960]

SAP Cloud for Customer, server-side integration for Gmail allows you to exchange information between Google applications and SAP Cloud for Customer. To use this feature, you'll need to complete a couple one-time setup steps.

Get Started [page 964]

With SAP Cloud for Customer, server-side integration for Gmail, you can see and use information from your SAP solution right from your inbox.

20.5.1 Scope and Configure SAP Cloud for Customer, Server-Side Integration for Gmail

As an administrator, you must define and set up the server-side integration for Gmail.

SAP Cloud for Customer, server-side integration for Gmail is a service that performs two-way synchronization of data between SAP Cloud for Customer and Gmail. It allows users to interact with SAP Cloud for Customer directly from an e-mail application.

Administrators must set up this integration for users by provisioning users, managing provisioned users, creating organizations and assigning users to them, and creating and managing profiles with configuration settings.

20.5.1.1 Access the Groupware Settings

Only SAP Cloud for Customer administrators can access the groupware settings. Ordinary users (SAP Cloud for Customer tenants without administrative rights) do not have access to the groupware settings. Therefore, before proceeding to the groupware settings, make sure that you have an appropriate user in SAP Cloud for Customer that has administration permissions.

To access the groupware settings, in SAP Cloud for Customer, go to *E-Mail Integration* > *Groupware Settings*.

When you access the *Groupware Settings* tab for the first time as an administrator, you are automatically provisioned to the SAP Cloud for Customer, server-side integration for groupware. Specifically, this means that you are automatically:

- Added to the default organization
- Assigned a default profile
- Provided with the access to the *E-Mail Integration* tab, where you can configure SAP Cloud for Customer, server-side integration for groupware from an end-user perspective using the dashboard. For more information, see the reference in the related information section.

When you are provisioned by the system, you also receive a notification e-mail in your inbox. The solution uses the e-mail address that was configured in SAP Cloud for Customer.

After you are provisioned, you can perform other administrative tasks, such as provisioning other users, creating new organizations or profiles, or configuring settings for SAP Cloud for Customer, server-side integration for groupware.

Related Information

[Manage Organizations [page 875]](#)

To make user management easier, administrators can divide users into groups called organizations. An organization can be configured to provide its users with specific common configuration.

[Manage Profiles [page 868]](#)

A profile is a collection of configuration settings and parameters. When administrators provision users, a profile is assigned to each user. To be provisioned, users must be assigned to a profile.

20.5.1.1.1 How SAP Cloud for Customer, Server-Side Integration for Groupware Reacts When a User Role Changes

Since the SAP solution allows the user roles to be changed, an administrator can become an ordinary user or vice versa.

When such a change in roles occurs, SAP Cloud for Customer, server-side integration for groupware adapts to the situation – when a user logs on to SAP Cloud for Customer, server-side integration for groupware, the user permissions are automatically adjusted based on the new user's role in the SAP solution.

Note that no notification appears in this case.

20.5.1.2 Manage Profiles

A profile is a collection of configuration settings and parameters. When administrators provision users, a profile is assigned to each user. To be provisioned, users must be assigned to a profile.

A profile specifies the following:

- Filtering rules for objects and records
- Restrictions for business actions
- Custom read-only fields to be displayed for the records of various types (smart descriptions)
- Customization of the Microsoft Outlook add-in or Gmail add-in
- Configuration of reminders
- Rules for sharing e-mail messages

To see a list of available profiles, log on to the application as an administrator and choose *E-Mail Integration* > *Groupware Settings* > *Profiles*.

> **i Note**
>
> Server-side integration uses OData V2 APIs for synchronization. For add-in, server-side integration uses OData V1 APIs.

20.5.1.2.1 Types of Profiles

Administrators can create profiles, which are collections of configuration settings and parameters. During provisioning, administrators must assign users to profiles.

Profile Types

Profile	Description
Default profile template	After provisioning, users are automatically assigned a default profile template. This profile contains the default configuration for SAP Cloud for Customer, server-side integration for groupware. The default profile template is provided by the Professional Services team and cannot be edited by an administrator or an ordinary user. However, the default profile template can be used for creating other profile templates.
Profile template	Profile that can be created and edited by administrators. The profile template can either be created from a default profile template or from scratch, and it can be assigned to either ordinary users or administrators. Ordinary users cannot edit profile templates, but they can switch between available profiles using the dashboard in SAP Cloud for Customer, server-side integration for groupware. A profile template can also be specified instead of the default profile when administrators create new organizations.
Customized profile	If an ordinary user changes the settings that are defined by the selected profile template (for example, changes the synchronization settings on the dashboard), this profile template becomes a customized profile. The customized profile is only effective for the user who created it, but such a profile can be saved as a profile template by an administrator. When converted to a profile template, it can be shared among other users.

20.5.1.2.2 Configure: Create a New Profile Template

Administrators can create new profile templates from either a default profile or from another profile template. Profle templates cannot be created from scratch.

Context

To see a list of available profiles, log on to the HTLML5 client as an administrator and choose *E-Mail Integration* > *Groupware Settings* > *Profiles*.

To create a new profile template, do the following:

Procedure

1. Log on to the HTLML5 client as an administrator and go to *E-Mail Integration* > *Groupware Settings* > *Profiles*.
2. Find the profile that you want to base your new profile on. You can use both the default profile template and user-created profile templates.
   To identify a default profile, look in the *Actions* column for a profile for which the trash icon is disabled (since the default profile cannot be deleted).
3. In the *Actions* column, click the copy icon.
4. On the screen that appears, enter the appropriate information.
5. Save your changes.

20.5.1.2.3 Configure Strict Search

Administrators can configure the search so that it only returns exact matches.

By default, the add-in adds wildcards (*) automatically before and after search terms that users enter. If you do not want the wildcards to be added automatically, use the strict search, which only returns exact matches.

> **i Note**
>
> Users may still add wildcards (*) manually.

Log on to the HTLML5 client as an administrator and go to *E-Mail Integration* > *Groupware Settings* and make the setting to use the strict search. The setting applies to all users and all searches.

20.5.1.2.4 Configure Synchronization Filters

SAP Cloud for Customer, server-side integration for groupware uses synchronization filters to determine which records to synchronize between the user's mailbox and SAP Cloud for Customer. Administrators can configure different filters for each record type.

Context

When you configure the profile's synchronization filters, for each record type, you can choose from the following options:

- *My Records*

Synchronizes records where the user is an owner. For contacts – synchronize records where the user is an owner of the associated account.

- *My Team's Records*
  Only applicable for contacts and accounts. For contacts – synchronizes records where the user or the members of the user's team are the owners of the associated account; for accounts – synchronizes records where the user or the members of the user's team are owners.
- *Favourite Contacts*
  Only synchronize the contacts marked as favourite.
- *Do Not Synchronize*

To configure synchronization filters, do the following:

Procedure

1. Log on to the HTLML5 client as an administrator and go to *E-Mail Integration* > *Groupware Settings* > *Profiles* and open the profile that you want to edit.
2. On the *Sync Settings* tab, go to the card for the type or record you want to edit.
3. Under *Settings*, select the synchronization filter that you need.
4. Save your entries.

20.5.1.2.5 Configure Restrictions

Administrators can restrict ordinary users from performing certain actions. These restrictions can be set for individual record types and can apply to both the SAP Cloud for Customer, server-side integration for groupware and synchronization settings.

Context

> **i Note**
>
> An ordinary user is not allowed to change restrictions even in the context of a customized profile.

To set restrictions, do the following:

Procedure

1. Log on to the HTLML5 client as an administrator, go to *E-Mail Integration* > *Groupware Settings* > *Profiles*, and open the profile that you want to edit.

2. On the *Sync Settings* tab, go to the card for the type or record you want to edit.
3. Under *Settings*, set the restrictions that you need.

   For more information about each restriction, choose the information ("i") button near the restriction.

   The administrator can set the following restrictions:

   - *Do Not Synchronize*: The corresponding object will not synchronize between the SAP Cloud for Customer and the Microsoft Outlook.
   - Keep read only (for contacts, individual customers, accounts, and tasks): The user can create and update the corresponding object only from SAP Cloud for Customer.

     > ⚠ Caution
     >
     > When the administrator enables this restriction, all objects that are assigned with corresponding SAP category or are at this time in corresponding SAP folder, will be deleted from Outlook. If a user tries adding any object to a corresponding SAP folder or assigning a corresponding category on it, changes won't be passed to SAP Cloud for Customer and this object will be deleted from Outlook.

   - Synchronize attachments (only for e-mail, appointment, visit, phone call, and task): The user can save attachments for the corresponding object to the SAP Cloud for Customer.

     > i Note
     >
     > Setting Restrictions for Attachments
     >
     > The administrator can allow or block the specific file name extensions. Go to *Sync Settings* > *General Sync Settings*, in the *Allowed File Extensions for Attachments* or *Prohibited File Extensions for Attachments* box, either select the extensions from a list or type a list of such extensions separated by commas or spaces. Note that, when you add extensions, the leading dot is optional. In other words, both .docx and docx are allowed.

20.5.1.2.6 Configure Smart Descriptions

Administrators can edit smart descriptions, which allow fields that are not mapped to native mail server fields to be displayed for the user.

Context

Depending on the type of a record, these fields are represented differently:

- For contacts, individual customers, and accounts, the values of the specified fields appear in the notes section.
- For tasks, field values appear in the body of the task.

> i Note
>
> A set of SAP Cloud for Customer fields that are available for selection is defined by the user's metainfo. Service fields are omitted.

To specify the fields that are to be shown as smart descriptions, do the following:

Procedure

1. Log on to the HTLML5 client as an administrator, go to *E-Mail Integration* > *Groupware Settings* > *Profiles*, and open the profile that you want to edit.
2. On the *Sync Settings* tab, go to the card for the type or record you want to edit.
3. Under *Smart Description*, choose *Add Smart Description Field*.
4. Select a field that you want to display from the list.

   You can add as many fields as you need by repeating the last two steps.

Results

If, for some reason, the content of the fields specified as smart descriptions cannot be displayed, these fields are omitted. For example, if the user does not have permission to view the content, the field does not appear.

20.5.1.2.7 Configure: Apply Profile Changes to All Users

Administrators can apply any profile changes they make to all users, even if the profile is already in use.

To push a profile change to all users at once, log on to the HTML client as an administrator and go to *E-Mail Integration* > *Groupware Settings* > *Organizations*. Open an organization, choose the profile you want to apply, and choose *Settings* > *Save and Apply Profile for All Users*.

20.5.1.3 Manage Organizations

To make user management easier, administrators can divide users into groups called organizations. An organization can be configured to provide its users with specific common configuration.

When a new user is provisioned, administrators must assign the new user to an organization, either default or newly created; otherwise, the user cannot be provisioned. Unprovisioned users are not assigned to any organization.

Users in the same organization share common, organization-specific synchronization settings. By adding users to or removing them from the organization, an administrator can manage which configurations are used by which users.

When a new SAP Cloud for Customer tenant is provisioned to SAP Cloud for Customer, server-side integration for groupware, a new default organization is created. This default organization cannot be deleted; however, administrators can edit its name and settings.

A new or default organization is also assigned a template profile (a collection of specific configuration settings and parameters), which administrators can change later. This template profile is automatically applied to all users in the organization.

At the level of organization, you can define the following settings for its users:

- Type of the mailbox access
- Synchronization status (enabled or disabled)
- Profile with the specific configuration for SAP Cloud for Customer, server-side integration for groupware

You can view a list of organizations by logging on to the HTLML5 client as an administrator and choosing *E-Mail Integration* > *Groupware Settings* > *Organizations*.

You can show or hide columns in the list by using the ≡ *hamburger icon*.

Related Information

Configure: Delete (Unprovision) Users [page 886]

As an administrator, when you delete a user, it means that this user can no longer use SAP Cloud for Customer, server-side integration for groupware and synchronize data. In other words, a deleted user becomes an unprovisioned user. Such users appear on the *Provisioning* tab, and, if required, can be provisioned again.

Configure: Assign Users to Other Organizations [page 890]

As an administrator, you can specify the organization each user is assigned to during the provisioning process. Otherwise, users are automatically assigned to the default organization. After provisioning, you can change the organization to which users are assigned.

20.5.1.3.1 Configure How Gmail Users in an Organization Access Their Mailboxes

At the organization level, administrators can control how users access their mailboxes.

Context

When a new organization is created, specify the type of mailbox access to be used for the organization's users. When the access type is selected and configured, it is applied to all users in the organization. Users can only use the defined access type to access their mailboxes.

Gmail users must use the *Google Direct Logon*. If the users in the organization access their Gmail inboxes directly, specify the direct logon access type for the organization.

As an administrator, you can change the mailbox access type at any time. To change the mailbox access type for the organization, do the following:

Procedure

1. Log on to the HTLML5 client as an administrator, go to *E-Mail Integration* > *Groupware Settings* > *Organizations*, and open an organization.
2. On the *E-Mail Configuration* tab, select the required mailbox access type.

   Configure the access type by entering appropriate information in the fields that appear.
3. Save your changes.

Results

> ⚠ Caution
>
> If the change of the mailbox access type is not accompanied by corresponding changes in the organization users' settings, it may affect the ability of those users to access their mailboxes.

20.5.1.3.2 Configure: Create a New Organization

Organizations allow administrators to streamline user setup.

Context

To create a new organization, do the following:

Procedure

1. Log on to the HTLML5 client as an administrator, go to *E-Mail Integration* > *Groupware Settings* > *Organizations*, and click *New*.
2. Enter the appropriate information in the fields that appear.
   - Profile
     Specify the profile that is assigned to the users in the organization by default.
   - Mailbox access type

Select how the users in the organization access their mailboxes and then specify the required parameters.

3. Save your entries.

Results

You can add provisioned users to this organization.

Related Information

Manage Profiles [page 868]
A profile is a collection of configuration settings and parameters. When administrators provision users, a profile is assigned to each user. To be provisioned, users must be assigned to a profile.

Configure How Users in an Organization Access Their Mailboxes [page 876]
At the organization level, administrators can control how users access their mailboxes.

Configure: Assign Profiles to Organizations [page 879]
All organizations must be associated with a profile template. The profile template is assigned automatically to all users in this organization. As an administrator, when you create a new organization, you must specify the profile template that the system uses by default.

20.5.1.3.3 Configure: Assign Profiles to Organizations

All organizations must be associated with a profile template. The profile template is assigned automatically to all users in this organization. As an administrator, when you create a new organization, you must specify the profile template that the system uses by default.

Context

Administrators can change the default profile template to any other profile after the organization is created; however, if that profile gets deleted or renamed, the organization reverts automatically to the profile that was specified as default.

To assign the organization a new profile, do the following:

Procedure

1. Log on to the HTLML5 client as an administrator, go to *E-Mail Integration* > *Groupware Settings* > *Organizations*, open the organization for which you want to assign a new profile.
2. Select the new profile.
3. Save your changes.

20.5.1.3.4 View Organization Statistics

Administrators can view statistics about the last synchronization session for each user in the organization.

Context

To view user statistics, do the following:

Procedure

1. Log on to the HTLML5 client as an administrator, go to *E-Mail Integration* > *Groupware Settings* > *Organizations*, open the organization for which you want to view statistics.
2. To see a list of user statistics, go to the *Statistics* tab .
3. To see more details, under *Actions*, choose the icon to open the job.
4. To download a session-related log, under *Actions*, choose the icon to download the log.

   You can show or hide columns in the list by using the ☰ icon.

20.5.1.3.5 View Organization Related Activity History

Administrators can view activities related to the current organization.

Context

Activities related to the current organization can be of the following types:

- The organization was added
- Synchronization was enabled
- Synchronization was disabled

For each activity, you can see the following information:

- Date and time when the activity occurred
- E-mail address of the user that initiated the activity
- Activity type

To view a list of activities, do the following:

Procedure

1. Log on to the HTLML5 client as an administrator, go to *E-Mail Integration* > *Groupware Settings* > *Organizations*, and open the organization for which you want to view activities.
2. Go to the *Activities* tab.
3. To download a session-related log, under *Actions*, choose the icon to download the log.

20.5.1.3.6 Configure: Delete an Organization

Administrators can delete an organization only if all users in this organization are reset. Once the organization is deleted, all users in the organizations are deleted too.

Context

> **Note**
>
> The default organization cannot be deleted.

To delete an organization, do the following:

Procedure

1. Log on to the HTLML5 client as an administrator, go to *E-Mail Integration* > *Groupware Settings* > *Organizations*, and open the organization that you want to delete.
2. Ensure that the synchronization is disabled for all users in the organization.
3. Choose *Settings* > *Delete*.

i Note

If a user in the organization cannot be reset (for example, SAP Cloud for Customer, server-side integration for groupware can no longer access the user's mailbox), but you still must delete the organization, you can force deletion of the user without resetting it. Note that any changes that were made by SAP Cloud for Customer, server-side integration for groupware to the user's mailbox (such as adding extra folders) are not removed.

To force the deletion of an organization that contains users that could not be reset, on the *Organizations* tab, open the organization that you want to force-delete and choose *Settings* > *Force Delete*

20.5.1.4 Provision Users

As an administrator, you must create users in SAP Cloud for Customer and provision them to SAP Cloud for Customer, server-side integration for groupware. At that point, users can access and use SAP Cloud for Customer, server-side integration for groupware.

20.5.1.4.1 Configure – Provision Users for Gmail

Provisioning is the process for administrators to create and activate users, and manage user access to SAP Cloud for Customer, server-side integration for groupware. Provisioning also starts the synchronization between the e-mail inbox and the SAP solution for provisioned users.

Context

i Note

You must have active profiles and active organizations in the system before you start profiling users.

→ Recommendation

Using the same e-mail address across different tenants and for both testing and productive use may cause problems.

We recommend using different e-mail addresses for:

- Testing
- Productive use
- Each tenant

Provisioning of users can only be performed by an administrator in SAP Cloud for Customer, server-side integration for groupware, who belongs to an SAP Cloud for Customer tenant and has administrative rights. Administrators are provisioned automatically the first time they access the *Groupware Settings* tab.

To see a list of users that can be provisioned, log on to the HTLML5 client as an administrator, go to *E-Mail Integration* > *Groupware Settings* > *Provisioning*.

You can show or hide columns in the list by using the ≡ icon.

To provision a user, do the following:

Procedure

1. Choose *E-Mail Integration* > *Groupware Settings* > *Provisioning*.
2. Click the plus sign at the far right for the user you want to provision.

   You can filter users by business role and provision the entire list at the same time.

   You can also provision several users at once by selecting them with the check mark to the left of their names and choosing *Activate Selected*.
3. On the next screen, the default organization is selected. Check and change it as necessary.
4. Specify the profile that is assigned to all users in the organization by default.
5. (Optional) Select the checkbox to send a welcome e-mail to the user.

   An e-mail with instructions on how to proceed with SAP Cloud for Customer, server-side integration for Gmail is sent to the user following provisioning.
6. Click *Provision*.

Results

When an administrator provisions another user, the following happens:

- This user is added to the organization, either default or specified.
- This user is assigned the template profile, either default or specified.
- Optionally, a welcome e-mail is sent to the user with instructions on how to complete registration in SAP Cloud for Customer, server-side integration for groupware.

> **i Note**
>
> If an administrator provisions a user without this user receiving a welcome e-mail, then the administrator must be aware that the provisioned user is not informed of this action and cannot receive instructions on how to proceed with or configure SAP Cloud for Customer, server-side integration for groupware.

The SAP Cloud for Customer, server-side integration for Gmail is installed automatically for provisioned users after they successfully sign in to the Gmail server.

Otherwise, a provisioned user must either follow instructions in the welcome e-mail, or an administrator must manually configure SAP Cloud for Customer, server-side integration for groupware for that user.

Related Information

Access the Groupware Settings [page 866]
Only SAP Cloud for Customer administrators can access the groupware settings. Ordinary users (SAP Cloud for Customer tenants without administrative rights) do not have access to the groupware settings. Therefore, before proceeding to the groupware settings, make sure that you have an appropriate user in SAP Cloud for Customer that has administration permissions.

Manage Provisioned Users [page 887]
As an administrator, after you provision users to SAP Cloud for Customer, server-side integration for groupware, you can manage various user-related settings like disabling synchronization for users or assigning them to another organization. You can also delete provisioned users, transitioning them back to an unprovisioned state and preventing them from using SAP Cloud for Customer, server-side integration for groupware.

20.5.1.4.2 Configure: Delete (Unprovision) Users

As an administrator, when you delete a user, it means that this user can no longer use SAP Cloud for Customer, server-side integration for groupware and synchronize data. In other words, a deleted user becomes an unprovisioned user. Such users appear on the *Provisioning* tab, and, if required, can be provisioned again.

Context

> ⚠ Caution
>
> If an SAP Cloud for Customer user is deactivated or deleted, the corresponding SAP Cloud for Customer, server-side integration for groupware user still remains active and billable. For such user to be completely unprovisioned and deleted from SAP Cloud for Customer, server-side integration for groupware, he or she must be explicitly deleted by an administrator.

To delete a user, do the following:

Procedure

1. Reset the user's mailbox.

   > ℹ Note
   >
   > If for some reason, a user cannot be reset (for example, SAP Cloud for Customer, server-side integration for groupware can no longer access the user's mailbox), but you still must delete the user, you can force the deletion of the user without resetting it. Note that any changes that were made by SAP Cloud for Customer, server-side integration for groupware to the user's mailbox (such as adding additional folders) are not removed.

To force the deletion of a user, log on to the HTLML5 client as an administrator, go to ▶ *E-Mail Integration* ▶ *Groupware Settings* ▶ *Users* ▶, open the user that you want to force-delete and choose ▶ *Settings* ▶ *Force Delete* ▶.

2. Log on as an administrator to SAP Cloud for Customer HTML client, go to ▶ *E-Mail Integration* ▶ *Groupware Settings* ▶ *Users* ▶, and do one of the following:
   - On the *Users* tab, under *Actions*, choose the appropriate icon.
   - On the *Users* tab, open the user that you want to delete and choose ▶ *Settings* ▶ *Delete* ▶.

Related Information

Configure: Reset Mailboxes and Disable Synchronization [page 892]
Administrators can reset a user's mailbox and disable synchronization for that user. For example, this operation is required when preparing an organization for deletion, since the organization cannot be removed until all of its users are reset in this manner.

20.5.1.5 Manage Provisioned Users

As an administrator, after you provision users to SAP Cloud for Customer, server-side integration for groupware, you can manage various user-related settings like disabling synchronization for users or assigning them to another organization. You can also delete provisioned users, transitioning them back to an unprovisioned state and preventing them from using SAP Cloud for Customer, server-side integration for groupware.

You can show or hide columns in the list by using the ☰ icon.

> **i Note**
>
> On the *Users* tab, users for whom the mailbox is initialized appear in bold font.

Related Information

Configure: Reinitialize Mailboxes [page 891]
When an initial synchronization is started, SAP Cloud for Customer, server-side integration for groupware performs the initialization of the user's mailbox. It adds new folders and categories. However, if an error occurs that may affect the integrity of synchronized data, administrators may need to reinitialize the user's mailbox.

20.5.1.5.1 Configure the Synchronization Status of Users

Administrators can enable or suspend synchronization for individual users.

By default, synchronization is disabled for a newly provisioned user until that user completes an initial configuration for SAP Cloud for Customer, server-side integration for groupware, using the welcome wizard. In the list on the *Users* tab, the users for which synchronization is enabled are shown in black, while the users for which it is suspended are shown in red.

> **i Note**
>
> Synchronization may also be disabled automatically due to errors.

To change synchronization for a user, on the *Users* tab, under *Actions*, choose the synchronization icon.

You can change the synchronization status for several users at the same time by selecting them, choosing *Settings*, and clicking *Enable Synchronization* or *Disable Synchronization*.

There can be differences between the organization's synchronization status and an individual user's synchronization status. SAP Cloud for Customer, server-side integration for groupware compares these statuses when determining the effective status. The organization's status always overrides the individual user's status except when synchronization is disabled for the user that belongs to the organization for which the synchronization is enabled – in this situation, the user's status overrides the organization's status.

20.5.1.5.2 Configure: Force Synchronization

By default, SAP Cloud for Customer, server-side integration for groupware automatically synchronizes data every 30 minutes, but administrators can synchronize manually at any time. You cannot force synchronization more than once per minute.

Context

To force synchronization for a user, do the following:

Procedure

1. Log on to the HTLML5 client as an administrator, and go to *E-Mail Integration* › *Groupware Settings* › *Users*.
2. Under *Actions*, choose the appropriate icon.

   You can force synchronization for several users at the same time by selecting them, choosing *Settings*, and clicking *Force Sync*.

20.5.1.5.3 Configure Which Visits to Synchronize

In SAP Cloud for Customer, when associated with visits, users can be either visit organizers or visit owners. As an administrator, you must configure which visits are synchronized for users.

Context

You can define which visits must be synchronized for the user – where the user is an owner or organizer – as follows:

Procedure

1. Log on to the HTLML5 client as an administrator, go to *E-Mail Integration* > *Groupware Settings* > *Settings*.
2. In the *Sync Visit To* field, select whether you want to sync visits to the owner or the organizer.

20.5.1.5.4 Configure: Assign Other Profiles for Users

During the provisioning process, as the administrator, you assign users to a template profile (either specified or default for the organization). After provisioning, you can change the profile that is assigned to the user.

Context

To change the template profile assigned to a user, do the following:

Procedure

1. Log on to the HTLML5 client as an administrator, go to *E-Mail Integration* > *Groupware Settings* > *Users*, and open the user for whom you want to change a profile.
2. In the *Profile* field, select the profile that you want for this user.

   To go to the selected profile, click *Navigate*. You can also customize the selected profile by clicking *Customize*.
3. Save your entries.

Related Information

Manage Profiles [page 868]
A profile is a collection of configuration settings and parameters. When administrators provision users, a profile is assigned to each user. To be provisioned, users must be assigned to a profile.

20.5.1.5.5 Configure: Assign Users to Other Organizations

As an administrator, you can specify the organization each user is assigned to during the provisioning process. Otherwise, users are automatically assigned to the default organization. After provisioning, you can change the organization to which users are assigned.

Context

> **i Note**
>
> When assigning users to other organizations, be aware that the new organization may use different mailbox access types or Microsoft Exchange Server impersonation settings. As a result, it may affect the ability of SAP Cloud for Customer, server-side integration for groupware to access the user's mailbox.

To assign a user to another organization, do the following:

Procedure

1. Log on to the HTLML5 client as an administrator, go to *E-Mail Integration* > *Groupware Settings* > *Users*, and open the user for whom you want to change an organization.
2. In the *Organization* field, select the organization that you want for this user.

   To go to the selected profile, click *Navigate*.
3. Save your entries.

20.5.1.5.6 Configure: Reinitialize Mailboxes

When an initial synchronization is started, SAP Cloud for Customer, server-side integration for groupware performs the initialization of the user's mailbox. It adds new folders and categories. However, if an error occurs that may affect the integrity of synchronized data, administrators may need to reinitialize the user's mailbox.

Context

⚠ Caution

When reinitializing a user's mailbox, all previously synchronized data is removed from the mailbox. Therefore, make sure that the user has backed up his or her data before performing this operation.

To reinitialize a user's mailbox, do the following:

Procedure

1. Log on to the HTLML5 client as an administrator, go to *E-Mail Integration* > *Groupware Settings* > *Users*, and open the user whose mailbox you want to re-initialize.
2. Choose *Settings* > *Re-Initialize User's Mailbox*.

Results

The mailbox will be re-initialized during the next synchronization session.

20.5.1.5.7 Configure: Reset Mailboxes and Disable Synchronization

Administrators can reset a user's mailbox and disable synchronization for that user. For example, this operation is required when preparing an organization for deletion, since the organization cannot be removed until all of its users are reset in this manner.

Context

To reset a user's mailbox, do the following:

Procedure

1. Log on to the HTLML5 client as an administrator, go to *E-Mail Integration* > *Groupware Settings* > *Users*, and open the user whose mailbox you want to reset.
2. Choose *Settings* > *Reset Mailbox*.

i Note

If synchronization is re-enabled for the user, the user's mailbox is automatically initialized during the next synchronization session.

20.5.1.5.8 Check Mail Server Connection Status

For troubleshooting purposes, it is possible for administrators to verify a connection status between SAP Cloud for Customer, server-side integration for groupware and the user's mail server. If the connection is not available, the most likely cause is that the password has expired or some of the settings are not correct.

Context

To check connectivity between SAP Cloud for Customer, server-side integration for groupware and Microsoft Exchange or Gmail, do the following:

Procedure

1. Log on to the HTLML5 client as an administrator, go to *E-Mail Integration* > *Groupware Settings* > *Users*, and open a user.
2. Choose *Settings* > *Check Mailbox Connectivity*.

20.5.1.5.9 Configure Auto-Sharing for Gmail

Administrators can set up auto-sharing for Gmail in their SAP solution.

Log on to your SAP solution as an administrator and go to *E-Mail Integration* > *Groupware Settings* > *Profiles* and select a profile. Under *Sync Settings* > *E-Mail Sync Options*, select the checkbox to enable auto-sharing.

20.5.1.5.10 View User Statistics

To find out more information about a user's synchronization sessions, administrators can view user statistics.

Context

To view user statistics, do the following:

Procedure

1. Log on to the HTLML5 client as an administrator, go to *E-Mail Integration* > *Groupware Settings* > *Users*, and open the user whose statistics you want to see.
   A list of synchronization sessions appears in the list on the *Statistics* tab.
2. To see more details, under *Actions*, choose the icon to open the job.
   A session description and details open in a new page.
3. To download a session-related log, under *Actions*, choose the icon to download the log.

   You can show or hide columns in the list by using the ≡ icon.

20.5.1.5.11 View User-Related Activity History

As an administrator, you can view activities related to any user.

Context

For each activity, you can see the following information:

- Date and time when the activity occurred
- An e-mail address of the user that initiated the activity
- Type of the activity

To view a user's activities, do the following:

Procedure

1. Log on to the HTLML5 client as an administrator, go to *E-Mail Integration* > *Groupware Settings* > *Users*, and open the user whose activities you want to see.

2. Go to the *Activity* tab.
   A session description and details open in a new page.
3. To download an activity-related log, under *Actions*, choose the appropriate icon.

20.5.1.6 Customize SAP Cloud for Customer, Server-Side Integration for Groupware

As an administrator, you can customize the default appearance and behavior of the SAP Cloud for Customer, server-side integration for groupware.

You can customize:

- Which record types to show or hide in SAP Cloud for Customer, server-side integration for Microsoft Outlook or SAP Cloud for Customer, server-side integration for Gmail
- Which fields to show in both the record card (basic view) or in the detailed record view
- The sort order for record cards
- Criteria to use for searching the records
- How data should be retrieved for opened e-mails or events and how e-mail tracking should behave

20.5.1.6.1 Configure Record Types

Administrators can customize the fields that are available for all record types.

Context

Your company may not need to track certain information, or may use different terms than the terms in the add-in. You can customize each record type to fit your company's needs.

Procedure

1. Log on to the HTLML5 client as an administrator, go to *E-Mail Integration* > *Groupware Settings* > *Profiles*, and open the profile that you want to edit.
2. Under *Add-In Settings*, choose the record types that you want to appear in the add-in.
   As you select record types, their record cards appear in the *Add-In Settings* tab, where you can further customize them.

20.5.1.6.2 Configure General Settings for Record Types

Administrators can configure fields for sorting and searching for each record type.

Context

To configure general settings for a record type, do the following:

Procedure

1. Log on to the HTLML5 client as an administrator, go to *E-Mail Integration* > *Groupware Settings* > *Profiles* > *Add-In Settings*, on the record type you want to edit, choose *Settings*.
2. Configure the following settings:
   - Under *Sort By*, select the fields by which the record cards are sorted by when they appear in the main add-in window or in search results.
   - Under *Search By*, specify one or more fields to search by when users run a search.

20.5.1.6.3 Configure the Basic View

Administrators can define up to four fields to show in the basic view of each record type.

Context

To select which record fields to show in the record card, do the following:

Procedure

1. Log on to the HTLML5 client as an administrator, go to *E-Mail Integration* > *Groupware Settings* > *Profiles* > *Add-In Settings*, and on the record type you want to edit, choose *Basic View*.
2. In the *Fields in Basic View* list, select the field to show.

   Up to four fields can be shown at a time.

20.5.1.6.4 Configure the Detailed View

Administrators can define which fields to show and hide in the details view for records.

Context

To select which record field to show in the detailed view, do the following:

Procedure

1. Log on to the HTLML5 client as an administrator, go to *E-Mail Integration* > *Groupware Settings* > *Profiles* > *Add-In Settings*, and on the record type you want to edit, choose *Detailed View*.
2. Choose *Add field to detailed view* and select a field to add.
   You can add as many fields as you need.

20.5.1.6.5 Configure Reminders

Since SAP Cloud for Customer does not support reminders, SAP Cloud for Customer, server-side integration for groupware allows administrators to set a default reminder time for tasks, appointments, and visits retrieved from SAP Cloud for Customer.

Context

To set the default reminder time, do the following:

Procedure

1. Log on to your SAP solution as an administrator, go to *E-Mail Integration* > *Groupware Settings* > *Profiles*, and open the profile that you want to edit.
2. Under *Sync Settings* > *General Sync Settings*, for tasks, appointments, or visits, set the reminder time in the *Remind About...* fields. If you want to disable a reminder, choose *Reminder is OFF*.

20.5.1.7 Main Concepts

A list of the main concepts the administrator should be familiar with when managing SAP Cloud for Customer, server-side integration for groupware for Microsoft Outlook or Gmail.

20.5.1.7.1 Main Concepts

Main concepts for administrators

Main Concepts for SAP Cloud for Customer, server-side integration for groupware

Term	Description
SAP Cloud for Customer - Administrator	A user that belongs to an SAP Cloud for Customer tenant and has administrative rights. Only an administrator can access the *Groupware Settings* tab and manage other administrators or ordinary users of SAP Cloud for Customer, server-side integration for Microsoft Outlook or SAP Cloud for Customer, server-side integration for Gmail.
SAP Cloud for Customer - User	A user in an SAP Cloud for Customer tenant that does not have administrative rights. A user has no access to the *Groupware Settings* tab and cannot manage other users.
profile	A collection of configuration settings and parameters that control how SAP Cloud for Customer, server-side integration for Microsoft Outlook or SAP Cloud for Customer, server-side integration for Gmail behaves for a specific set of users to better fit their needs.
profile template	A profile that serves as a template for a user. A profile template provides some predefined configuration settings that can later be customized by a user. When a user changes settings in the profile template, such profile template becomes a customized profile.
default profile template	A profile that provides users with the default SAP Cloud for Customer, server-side integration for Microsoft Outlook or SAP Cloud for Customer, server-side integration for Gmail configuration. A default profile template is created automatically and cannot be edited. It can also be used as a basis for creating new or customized profiles.
customized profile	A profile that is created automatically as soon as the user changes any settings in the profile assigned to that user. Both administrators and users can edit their profiles, thus creating customized profiles. Customized profiles do not appear in the list of profiles and cannot be assigned to other users. Customized profiles can only be used by the user who created them.

Term	Description
organization	A collection of users that share a common set of general settings. The name of the organization together with the organization settings can be changed by an administrator.
default organization	An organization that the administrator is automatically assigned to during the provisioning process. For ordinary users, a default organization is used if no other organization is explicitly specified by the administrator. The default organization cannot be deleted, but both the organization name and the organization settings can be changed by an administrator.

20.5.2 Set Up SAP Cloud for Customer, Server-Side Integration for Gmail

SAP Cloud for Customer, server-side integration for Gmail allows you to exchange information between Google applications and SAP Cloud for Customer. To use this feature, you'll need to complete a couple one-time setup steps.

→ Tip

If you try to complete these steps, but you see any of the following, it means that your system administrator has already added the extension to Gmail and enabled it:

- You log on to Gmail and see the sidebar.
- You try to complete these steps, but the fields are grayed out.

In either of these cases, you still need to synchronize your SAP data with Google and configure the Google Chrome extension.

20.5.2.1 Synchronize SAP Data with Google

To synchronize data from your SAP solution with your Google applications, define the URL for your SAP solution.

Procedure

1. Log on to the HTLML5 client of your SAP solution and go to *E-Mail Integration* > *User Settings* > *Sync Settings* > *E-Mail Configuration* > *Change*.
2. Choose *Google*.
3. In the window that appears, log on to your Google account and allow access.

Results

Your SAP solution is linked to your Gmail applications. E-mails, appointments, contacts, and tasks from your SAP solution appear in your Gmail applications.

20.5.2.2 Use Filters to Define Objects to Synchronize

Filters from your SAP solution appear in the synchronization settings for accounts, individual customers, as well as contacts.

When you set up synchronization for accounts, individual customers, and contacts under *E-mail Integration* > *User Settings* > *Sync Settings* > *Detailed Settings* > *Customize*, the filters that appear include filters from your SAP solution. You can see filters that your administrator created as well as any filters that you defined in personalization. You can use these filters to define which objects to synchronize.

20.5.2.3 Add the Extension to Google Chrome

If you want to use the sidebar as a window into your SAP solution, add the extension to Google Chrome.

Procedure

1. Add the extension to your Google Chrome browser in one of the following ways:
    - From your SAP solution
        1. Open your SAP solution in Google Chrome.
        2. Log on to the HTLML5 client of your SAP solution and under *E-Mail Integration* > *User Settings*, install the extension.
           The Google Chrome Web Store opens to the correct extension.
        3. Add the extension.
    - Manually
      In a Google Chrome browser, go to the Google Chrome Web Store, search for "SAP Cloud for Customer for Gmail," and add it to Google Chrome.
2. In your Chrome browser, choose ⋮ > *More tools* > *Extensions*.
3. Enable the extension that you just added.

   Your tenant URL is automatically mapped to the SAP Cloud for Customer for Gmail extension.

20.5.2.4 Configure Mass Rollout of Profile Changes

Administrators can apply profile updates to all users quickly and at the same time.

Context

As an administrator, when you change a profile that is the default profile for an organization, you can apply the profile changes to all users in that organization.

Procedure

1. Log on to your SAP solution as an administrator and make the profile changes in the default profile for an organization.
2. Go to *E-Mail Integration* > *Groupware Settings* > *Organizations*.
3. Select the organization and the updated profile and choose *Settings (⚙)* > *Save and Apply Profile for All Users*.

Results

The profile changes that you made are reflected for all users of the organization that you selected.

20.5.2.5 Stages of Migration to OData V2

SAP plans to encourage and then enforce users to switch to Open Data Protocol, version 2 (OData V2).

OData API V2 offers improved performance and an expanded set of main business objects and collections (data points).

We want to ensure that all our users have migrated to OData V2 by August 2020. We've scheduled the following steps toward this goal:

Encourage Mode

Activated first week of June 2020 in the production system through 14 July 2020.

- Users can still use the server-side add-in, but error messages appear encouraging them to contact their administrator to make the switch to OData V2.

- For administrators, on the *Profile* and *Users* tabs, columns appear that show the OData status (V1 or V2) for the add-in and sync. Any rows that aren't yet in V2 appear in red.

Enforce Mode

Activated 15 July 2020 in the production system.

- Users can't use the SAP solution. Error messages appear, explaining why the service isn't accessible.
- For administrators, on the *Profile* and *Users* tab, columns appear that show the OData status (V1 or V2) for the add-in and sync. Any rows that aren't yet in V2 appear in red.

Extensions

If you have concerns with this process or schedule, please raise an incident with detailed information and reasons for your extension request.

> i Note
>
> Extensions are only available until the August 2020 release upgrade.

Related Information

Configure: Switch to OData V2 [page 909]
Administrators must switch all profiles in their organizations to Open Data Protocol, version 2 (OData V2).

SAP Cloud for Customer OData API

20.5.2.6 Configure: Switch to OData V2

Administrators must switch all profiles in their organizations to Open Data Protocol, version 2 (OData V2).

Context

OData API V2 offers improved performance and an expanded set of main business objects and collections (data points).

> i Note
>
> The last date to switch to OData V2 is 15 July 2020.Administrators can view the OData status (V1 or V2) for the add-in and sync on the *Profile* and *Users* tab. Any rows that are not switched to V2 appear red.

Switch each profile to OData V2 data manually.

> → Recommendation
>
> When you have switched add-in settings or sync settings in a profile to OData V2, it's only possible to go back to OData V1 with assistance from support.
>
> Before switching all profiles to OData V2, we suggest that administrators:
>
> 1. Copy one profile to create a new one and convert it to OData V2.
>   After the conversion is done, delete the original profile.
> 2. Review conversion notes and address and then dismiss them.
> 3. Apply the profile only to yourself and verify that it works correctly.
> 4. Apply the profile to other users who had it previously.

Procedure

1. Log on to your SAP solution as an administrator and go to *E-Mail Integration* > *Groupware Settings* > *Profiles*.
2. Open the profile that you want to switch to OData V2.
3. Under *Sync Settings* > *OData API V2*, toggle the switch on.
4. Under *Add-In Settings* > *OData API V2*, toggle the switch on.
5. Save your changes.
   If you have tested OData V2 change as outlined in the note, save your changes and apply them to all users in the profile.
6. Repeat these steps for each profile in your organization.

Related Information

SAP Cloud for Customer OData API
Stages of Migration to OData V2 [page 908]
SAP plans to encourage and then enforce users to switch to Open Data Protocol, version 2 (OData V2).

20.5.3 Get Started

With SAP Cloud for Customer, server-side integration for Gmail, you can see and use information from your SAP solution right from your inbox.

If your company uses Gmail, this add-in could be just what you're looking for!

When you map your SAP solution to Google, all your SAP appointments, contacts, and accounts are synchronized with Google. If you use the sidebar, you can also get business insights and create many types of

SAP items right from your Gmail inbox. Additionally, the sidebar allows you to save e-mails and appointments to many SAP Cloud for Customer items without leaving your inbox.

Related Information

Set Up SAP Cloud for Customer, Server-Side Integration for Gmail [page 960]
SAP Cloud for Customer, server-side integration for Gmail allows you to exchange information between Google applications and SAP Cloud for Customer. To use this feature, you'll need to complete a couple one-time setup steps.

20.5.3.1 Log On to SAP Cloud for Customer from Gmail

Log on to see and use the Gmail features.

Procedure

1. In the Google Chrome browser, log on to your Gmail account.
2. If you've entered your company-specific URL for SAP Cloud for Customer in the setup steps, the sidebar appears on the right side of your browser.

   In the following cases, you may need a few more clicks to see the sidebar:

   - If you do not see the sidebar at all, in your Google Chrome browser, choose SAP and check that you defined the SAP tenant. If not, repeat the step to configure the Google Chrome extension.
   - If the sidebar appears but requires further action from you, such as granting access to your Google account, follow the instructions provided on the screen to grant access.

   > **Note**
   >
   > As a security measure, the sidebar requires you to grant access periodically. It's the equivalent of confirming your logon information periodically for a bank or other secured site.

Results

Your appointments, tasks, contacts, and formatted or unformatted e-mail from SAP Cloud for Customer are synchronized. They appear in the Google applications.

Any images in the body of e-mails appear as attachments in your SAP solution.

If you are using the sidebar, when you click an e-mail in your inbox, the extension searches in your SAP solution and displays any existing information about the sender.

Related Information

20.5.3.2 Add or Remove Items from Synchronization

When you set up your SAP Cloud for Customer, server-side integration for Gmail, all e-mails, appointments, contacts, and tasks were synchronized with Google. Afterwards, the synchronization takes place periodically. You can add new items to the synchronization or remove items from synchronization.

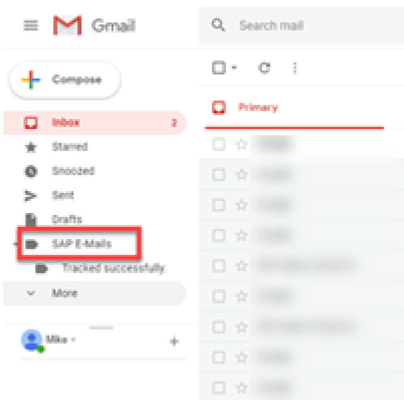
Context

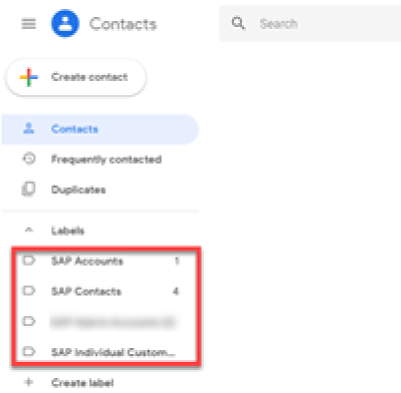
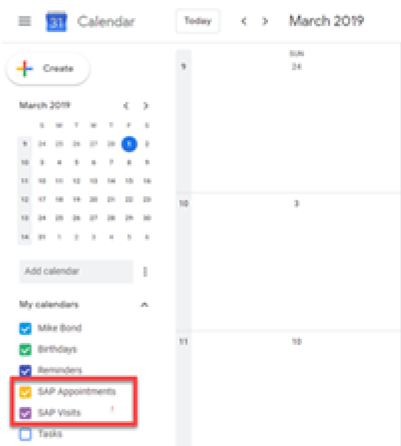
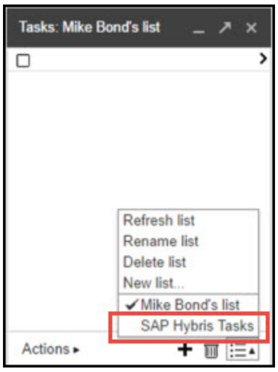
Add or remove items from synchronization with Google by adding or removing those items from the following predelivered SAP folders, categories, or calendars in Google.

For calendar events, all future appointments and visits are synchronized. For visits or appointments in the past, only those from the past 30 days are synchronized to the SAP solution. Appointments and visits that don't fall within this range still appear in your calendar, but are skipped during synchronization.

> **i Note**
>
> You can synchronize any meeting with your SAP solution, even if you aren't the organizer or owner. Meeting requests that you receive in your inbox are synchronized in one direction only: from Gmail to your SAP solution.

SAP Folders, Calendars, and Categories in Google

Google Application	SAP Folder, Calendar, or Category
Gmail	

Google Application	SAP Folder, Calendar, or Category
Contacts	
Calendar	
Tasks	

20.5.3.3 Create Appointments from Google Calendar in Gmail

You can use the updated Google Calendar view in SAP Cloud for Customer, server-side integration for Gmail.

Procedure

1. In the Google Calendar, select a time slot, and choose calendar type *SAP Cloud for Customer*.
2. Choose *More Options*.

   Add a title, guests, and other details.
3. Choose *Save and Send*.

20.5.3.4 Delete, Cancel, or Reassign a Meeting or Appointment

In both your SAP solution and your calendar (in Google or Microsoft Exchange), you can cancel or delete meetings, or reassign a meeting to another organizer.

Here's how the system responds:

> **i Note**
>
> When appointments are changed, attendees are notified automatically.

Your Actions and System Results

Your Action	Result
In your calendar, you remove an attendee of a meeting.	After synchronization, the attendee is also removed from the meeting in your SAP solution.
You're the organizer or owner of a meeting or appointment and you cancel it in your SAP solution.	After synchronization, the appointment is also canceled in your calendar.
In your SAP solution, you delete or cancel a meeting or reassign it to a new meeting owner.	At synchronization, the meeting is deleted from the calendar of the original organizer or owner.
In your SAP solution, you delete a meeting only (without canceling it or reassigning it to another owner).	At synchronization, the meeting is no longer shared, but it remains in the calendar of the original organizer or owner.

20.5.3.5 Associate Objects from the Google Calendar

You can associate appointments and visits with SAP Cloud for Customer, right from your Gmail calendar.

Procedure

1. In the Google calendar, open an SAP Cloud for Customer appointment.
2. In the side pane, search for an account, contact, or individual customer that contains objects with which you want to associate this appointment.
3. Click *Save Appointment or Visit*.

Results

The appointment or visit is associated with the object and business partner.

20.5.3.6 Auto-Sharing for Gmail

If you use Gmail and your administrator has made the required settings, your system automatically synchronizes e-mails. Your SAP solution automatically synchronizes any e-mail sent to or received from an e-mail address that is defined as a contact in your SAP solution.

> i Note
>
> Auto-sharing does not work retroactively. It is only valid for e-mails that are sent or received after your administrator has set up this feature.

20.5.3.7 Select Contacts Related to an Account

When you create an e-mail, appointment, visit, or task from your inbox, you can see contacts that are related to the account that you defined for the activity. Select the appropriate contacts to include in the activity.

If you want to add other contacts, click the header to see other filters from your SAP solution, such as *My Contacts* or *All Contacts*.

21 Involved Parties

As an administrator, learn how to configure and use involved parties—the people you interact with in business transactions.

You can determine involved parties for business transactions using party roles and the connected determination rules. This determination allows you to streamline team assignments. It also ensures that business partners are correctly assigned to business documents in a way that matches your company process.

Business partner is the collective term for all the companies and people you interact with in your business, and includes accounts, contacts, partners, and employees. When you create a document, you can designate a business partner as an involved party and assign them a role.

You can designate roles for sales quotes, leads, opportunities, service tickets, or activities. You can then automatically determine involved parties for these business transactions using determination rules and master data.

Example

You can create a sales quote and add the employee as the *Ship-to party*. In this case, the employee is the business partner, and *Ship-to* is the party role.

21.1 Scope and Configure Involved Parties

Administrators can configure involved parties using scoping, scoping questions, and fine-tuning activities.

Scoping questions and fine-tuning activities that are self-explanatory may not be included in this list.

Involved Parties Prerequisites

> **i Note**
>
> If you use determination from relationships for custom parties, ensure you apply the following prerequisites in your system.

- You have already maintained relationships in the *General Business Partners* fine-tuning activity. Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *General Business Partners* to create and adapt any custom relationships you plan to use in your involved party determination.
- You have assigned these relationships between accounts, contacts, partners, and partner contacts from the appropriate details screen on the *Involved Party Relationships* tab.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* and search for the desired business transaction activity such as, *Involved Parties for Registered Product*, *Leads*, *Sales Quotes*, *Opportunities*, and click *Maintain Involved Parties.*

21.1.1 Define Involved Party Roles

As an administrator, you can configure which party roles you want to use in your application.

Context

Some party roles have been set to mandatory by default and cannot be deactivated. You will notice these since the fields are grayed out.

If you use involved parties for opportunities, place a checkmark in the *Internal* field. The *Internal* checkmark allows the system to control if the party can only be added to the opportunity *Sales Team* section

Procedure

1. Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* and search for the desired business transaction activity.
2. Click *Maintain Involved Parties.*
3. Ensure that the roles that are used in your business are activated.

   The *Party Role* selection can be controlled from *Code List Restrictions*. This is helpful in cases where a party role depends on the document type. The party schema itself is not document type dependent.
4. Click *Add Row* and enter the details for your new custom party role.

   First, navigate to *Fine Tune* > *Party Role Definition* to define new party roles. Standard party roles cannot be assigned to the party schema by the administrator or key user, but the predelivered one should fulfill most requirements.
5. Click in the *Mandatory* checkbox to define if a party role is mandatory for a document.

   If you define a role as mandatory, users cannot save transactions in the document. The error message prevents users from saving the transaction.

   The defined system behavior benefits the user because they can still completely save their current data entry in the document. If a mandatory party is missing which for example, prevents the creation of a follow-up sales order from a sales quote, the document contains inconsistent details.

   Preventing save on errors in party processing can only be achieved using custom coding in the SAP Cloud Applications Studio.
6. Select the *Unique* checkbox and only one party role can exist once in a document.

   If parties are determined from an account relationship, the system copies only the main relationship into the document.

If you try to add more than one party role, an error message is displayed, but the system allows users to save the inconsistent transaction.

7. Select the *Forbid Manual Changes* checkbox.

   As a recommendation, you can restrict the party role from the selection using *Code List Restrictions*. Party roles that are not automatically determined can still be deleted. The *Forbid Manual Changes* flag also restricts the maintenance of document addresses in the transaction of the effected party role.
8. In the *Inbound Integration* field, select *Exclude* to replicate documents with SAP ERP/SAP CRM. By selecting *Exclude*, your system avoids party redetermination in SAP Cloud for Customer during inbound processing. In this case, the party ownership belongs to the on-premise system. When changes are performed afterwards in SAP Cloud for Customer, party redetermination is still be executed.

21.1.2 Define Party Roles

Administrators can create new party roles to add to the company party schema. By defining party roles, you can assign employees to specific accounts. When creating new party role entries, the *Party Role Code* must begin with the letter **Z**.

Procedure

1. Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune*.
2. Search for and select *Party Role Definition*.
3. In the *Description* field, you can rename existing party roles. A change of description is valid for all assigned business objects.

   You can also use *Language Adaptation* tool to rename a party role.

   Since the following terms are used in transactions, rename the standard party roles *39- Employee Responsible* and *142- Employee Responsible - Sales to Owner*. *142- Employee Responsible - Sales* is used in account sales and territory teams and mapped to *39- Employee Responsible* in transactions. The *Party Category* field allows you to control certain business logic such as:
   - *Party Category Competitor Party* control, for example, the role selection on the opportunities *Competitor* tab.
   - *Party Category Approver Party* allows you to use this party role for work distribution in approval processes
   - *Category Other Org Unit Party* filter is only on organizational units for the party selection and allows determination via rules.
4. You can also define new relationship types in fine-tuning activity *General Business Partner*. This allows you to use party determination based on the account’s relationship maintained in *Account* master record. The *Main* relationship to an account can be copied to the transaction, if the party role is part of the party schema and corresponding determination step is active.
5. If you select the *Responsibility Role* checkbox, you can add this party role to the *Account Team* and or *Territory Team*. If required, you can add this party role for party determination in the party schema.

6. Select *Sales Data* as required.
7. Select *Unique in Account Team* as required.

21.1.3 Configure - Take Over Party Determination for Standard Parties

Administrators can configure the determinations of standard party roles that allow you to differentiate if only the main party or all parties should be determined from the account team (territory team or an account relationship).

Context

In the solution, administrators can configure *Take Over* options in *Determination of Involved Parties* The configuration is not applicable for offline determination..

Procedure

1. Navigate to *Business Configuration* > *Implementation Project* > *Open Activity List* > *Fine-Tune* > *Sales Quotes (or the desired object)* > *Involved Parties* > *Maintain Involved Parties*
2. Select the desired party role row such as *Ship-to*.
3. Click *Maintain Determinations* to open the *Determination of Involved Parties* window.
4. In the *Take Over* column select from the following drop down menu choices:
   - All parties.
   - Main party, otherwise arbitrary one.
   - Only main party.
5. Click *Ok* and save your entries.

21.1.4 Disable Party Determination When Merging Accounts

Administrators must scope the feature before you can use it.

To disable party determination when merging accounts, follow these steps:

1. Navigate to *Business Configuration* > *Implementation Projects* and select your project.
2. Go to *Edit Project Scope* > *Questions* > *General Business Data* > *Business Partners* > *Handling of Business Partner* and select following scoping question: *Do you want to disable the party redetermination during account merge for open transactions?*

21.2 Determine Involved Parties

Administrators can add, delete, activate, or deactivate predelivered determination steps for the selected party role. The determination steps appearing for the selected party roles depend on the configuration of the party role completed in fine-tuning activity *Party Role Definition*.

21.2.1 Define Involved Party Roles

As an administrator, you can configure which party roles you want to use in your application.

Context

Some party roles have been set to mandatory by default and cannot be deactivated. You will notice these since the fields are grayed out.

If you use involved parties for opportunities, place a checkmark in the *Internal* field. The *Internal* checkmark allows the system to control if the party can only be added to the opportunity *Sales Team* section

Procedure

1. Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* and search for the desired business transaction activity.
2. Click *Maintain Involved Parties.*
3. Ensure that the roles that are used in your business are activated.

   The *Party Role* selection can be controlled from *Code List Restrictions*. This is helpful in cases where a party role depends on the document type. The party schema itself is not document type dependent.
4. Click *Add Row* and enter the details for your new custom party role.

   First, navigate to *Fine Tune* > *Party Role Definition* to define new party roles. Standard party roles cannot be assigned to the party schema by the administrator or key user, but the predelivered one should fulfill most requirements.
5. Click in the *Mandatory* checkbox to define if a party role is mandatory for a document.

   If you define a role as mandatory, users cannot save transactions in the document. The error message prevents users from saving the transaction.

   The defined system behavior benefits the user because they can still completely save their current data entry in the document. If a mandatory party is missing which for example, prevents the creation of a follow-up sales order from a sales quote, the document contains inconsistent details.

   Preventing save on errors in party processing can only be achieved using custom coding in the SAP Cloud Applications Studio.

6. Select the *Unique* checkbox and only one party role can exist once in a document.

   If parties are determined from an account relationship, the system copies only the main relationship into the document.

   If you try to add more than one party role, an error message is displayed, but the system allows users to save the inconsistent transaction.
7. Select the *Forbid Manual Changes* checkbox.

   As a recommendation, you can restrict the party role from the selection using *Code List Restrictions*. Party roles that are not automatically determined can still be deleted. The *Forbid Manual Changes* flag also restricts the maintenance of document addresses in the transaction of the effected party role.
8. In the *Inbound Integration* field, select *Exclude* to replicate documents with SAP ERP/SAP CRM. By selecting *Exclude*, your system avoids party redetermination in SAP Cloud for Customer during inbound processing. In this case, the party ownership belongs to the on-premise system. When changes are performed afterwards in SAP Cloud for Customer, party redetermination is still be executed.

21.2.2 Configure - Take Over Party Determination for Standard Parties

Administrators can configure the determinations of standard party roles that allow you to differentiate if only the main party or all parties should be determined from the account team (territory team or an account relationship).

Context

In the solution, administrators can configure *Take Over* options in *Determination of Involved Parties* The configuration is not applicable for offline determination..

Procedure

1. Navigate to *Business Configuration* > *Implementation Project* > *Open Activity List* > *Fine-Tune* > *Sales Quotes (or the desired object)* > *Involved Parties* > *Maintain Involved Parties*
2. Select the desired party role row such as *Ship-to*.
3. Click *Maintain Determinations* to open the *Determination of Involved Parties* window.
4. In the *Take Over* column select from the following drop down menu choices:
   - All parties.
   - Main party, otherwise arbitrary one.
   - Only main party.
5. Click *Ok* and save your entries.

21.2.3 Activate or Deactivate Determinations Steps for Involved Parties

Administrators can activate or deactivate predelivered determination steps for the selected party role.

> **Note**
>
> We recommend deactivating determination steps not needed for your business.

1. Navigate to the *Fine-Tune* party role such as *Sales Quotes*, *Leads*, *Opportunities* > *Maintain Involved Party* > *Party Role Assignment.*
2. Click *Add Row.*
3. Add custom party roles to a party schema.
4. If you no longer require specific party roles, delete them.

    > **Note**
    >
    > You can only remove custom party roles from your party schema. As an alternative, you can deactivate them.

    > **Note**
    >
    > Only active party roles appear in the *Involved Parties* value help.

5. Click *Maintain Determinations* > *Activate* or *Deactivate* the desired party roles.

21.3 Predelivered Combinations of Involved Parties and Business Partners

Learn about the predelivered party roles and recommendations for assigning business partners to party roles combinations.

Party Role	Description	Business Partner
Account	A party that purchases goods or services.	Account or Individual Customer
Competitor	A party that competes for sales in the same target market.	Account or Individual Customer
Contact	A party that is the contact in a document.	Contact or Partner Contact
Ship-to	A party to which goods or services are supplied.	Account or Individual Customer

Party Role	Description	Business Partner
Bill-to	A party that receives the bill for the goods or services supplied.	Account or Individual Customer
Sender	A party from whom the message originates.	Employee, Contact, Partner Contact, or Individual Customer
Recipient	A party that is to receive a message.	Employee, Contact, Partner Contact, or Individual Customer
Recipient (CC)	A party that is to receive a copy of a message.	Employee, Contact, Partner Contact, or Individual Customer
Recipient (BCC)	A party that is to receive a copy of a message without the other recipients' knowledge.	Employee, Contact, Partner Contact, or Individual Customer
Service and Support Team	A party that is responsible for the processing of customer complaints.	Organizational Unit with Function 'Customer Service'
Sales Partner	A party that initiates and performs business transactions for another company.	Partner
Partner Contact	An employee of a sales partner.	Partner Contact
Payer	A party that pays for goods or services.	Account or Individual Customer
Organizer	A party that is responsible for the organization of an appointment.	Employee, Contact, Partner Contact, or Individual Customer
Attendee	A party that is required as an attendee of an appointment.	Employee, Contact, Partner Contact, or Individual Customer
Employee Responsible	A party that is responsible for something. Often, this employee also has tasks to fulfill or is responsible for updating the document. The party can be an internal or external employee.	Employee or Partner Contact
Processor	A party that processes a task or a ticket.	Employee or Partner Contact
Activity Contact	A party that has a reference to the current activity.	Contact or Partner Contact
Service Performer	A party that performs services.	Employee or Partner Contact
Sales Unit	An organizational unit that is responsible for the sales and distribution of products in business processes.	Organizational Unit with Function 'Sales'

Party Role	Description	Business Partner
Call Participant	A party that participates in real-time communication, for example, a phone call or Internet chat session.	Employee, Contact, Partner Contact, or Individual Customer
Sales Employee	A party that is included in the sales department of an enterprise, or that carries out sales tasks.	Employee or Partner Contact
Organizational Unit	An element of your organizational model that is assigned to an activity.	Organizational Unit

21.3.1 Define Party Roles

Administrators can create new party roles to add to the company party schema. By defining party roles, you can assign employees to specific accounts. When creating new party role entries, the *Party Role Code* must begin with the letter **Z**.

Procedure

1. Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune*.
2. Search for and select *Party Role Definition*.
3. In the *Description* field, you can rename existing party roles. A change of description is valid for all assigned business objects.

   You can also use *Language Adaptation* tool to rename a party role.

   Since the following terms are used in transactions, rename the standard party roles *39- Employee Responsible* and *142- Employee Responsible - Sales to Owner*. *142- Employee Responsible - Sales* is used in account sales and territory teams and mapped to *39- Employee Responsible* in transactions. The *Party Category* field allows you to control certain business logic such as:
   - *Party Category Competitor Party* control, for example, the role selection on the opportunities *Competitor* tab.
   - *Party Category Approver Party* allows you to use this party role for work distribution in approval processes
   - *Category Other Org Unit Party* filter is only on organizational units for the party selection and allows determination via rules.
4. You can also define new relationship types in fine-tuning activity *General Business Partner*. This allows you to use party determination based on the account's relationship maintained in *Account* master record. The *Main* relationship to an account can be copied to the transaction, if the party role is part of the party schema and corresponding determination step is active.

5. If you select the *Responsibility Role* checkbox, you can add this party role to the *Account Team* and or *Territory Team*. If required, you can add this party role for party determination in the party schema.
6. Select *Sales Data* as required.
7. Select *Unique in Account Team* as required.

21.4 Add Involved Parties Roles to Relevant Business Objects

Administrators can learn how to add new or existing party roles to business objects such as leads, opportunities, and quotes.

Context

To use new or existing roles, you add new party roles to the relevant business object in the associated fine-tuning activity. You can add party roles to sales quotes, leads, opportunities, service tickets, or activities.

Procedure

1. Go to *Business Configuration*, and the relevant fine-tuning activity for sales quotes, leads, opportunities, service tickets, or activities.
2. Choose *Maintain Involved Parties.*
3. Click *Add*, *Edit*, or *Delete roles.*

   Predelivered party roles cannot be renamed or reassigned. If you checked *Forbid Manual Changes*, the automatically determined role and *employee* cannot be changed.

   If you checked *Forbid Manual Changes*, the automatically determined role and employee cannot be modified.
4. To decide how the role is assigned, click *Maintain Determinations.*

   If you add a new role, determinations are added automatically.

   If you add a new role, determinations are added automatically.

   You cannot add determinations yourself, but you can enable or disable the determinations the system proposes.

   If you see more than one determination step, then the system uses the enabled steps in order.

   > Example
   >
   > The *Employee responsible* role for an opportunity might first determined by the step *Employee Responsible of Account Team*, then the step *Employee Responsible of Territory Team*. Then, when an opportunity is created, the system first looks for the *employee responsible* for the *account* of the

created opportunity. If the system finds an *employee responsible* for the *account team*, that person is determined to be the involved party for the opportunity. If no *employee responsible* was listed for the account, the determination continues and finds the *employee responsible* listed for the territory, who then becomes the involved party for the opportunity.

21.5 Merge Accounts Without Party Determination

You can disable party determination when merging accounts.

This allows you to keep all involved parties and organizational data, such as territory or owner (employee responsible) in transactions when merging account.

> **i Note**
>
> You can also trigger a manual party redetermination in the transaction if the transaction supports manual party redetermination.

21.5.1 Disable Party Determination When Merging Accounts

Administrators must scope the feature before you can use it.

To disable party determination when merging accounts, follow these steps:

1. Navigate to *Business Configuration* > *Implementation Projects* and select your project.
2. Go to *Edit Project Scope* > *Questions* > *General Business Data* > *Business Partners* > *Handling of Business Partner* and select following scoping question: *Do you want to disable the party redetermination during account merge for open transactions?*

21.6 Involved Parties FAQs

Having trouble using involved parties? Check this list of questions and answers for help.

21.6.1 Are involved party role consistency checks performed?

There are several consistency checks performed when a business partner is used in a party role for a document based on the party role category. Administrators can go to fine-tuning activity to set-up or change a *Party Role* definition.

For example, partner role category *Competitor Party* only allows you to enter the business partner type *Competitor*.

There are some checks that determine if you can change a party role, administrators can set an involved party to read-only in business configuration to ensure consistency in your company business processes.

21.6.2 Which party roles are copied when creating new documents from existing ones?

In most cases, when you create a new document based on an existing document, the involved parties are copied to the new document.

When creating new documents from existing ones, the involved parties are copied to the new document unless the party role is the employee responsible or the sales unit. Instead, the system triggers a new determination for these roles in the new document.

If you created an involved party role, it is also copied to a new document, assuming the role has also been added to the target document. For example, you created a party role and added it to a sales quote, then created an item from that sales quote. Now you add the role to the items for the role to be copied.

21.6.3 How are party roles determined?

Learn what to do to determine party roles in your documents.

When you first create a document such as a sales quote, initially, no parties are assigned. Once you enter an account, other involved party roles, such as the employee responsible, or ship-to party, are determined automatically.

In addition, you can manually change these parties, if your system is set up to allow you to change them.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* and search for the desired business transaction activity.

> **Note**
>
> Party roles are automatically determined again when a document is changed, unless the party has been manually changed.

21.6.4 Can you define extension fields for involved parties for quotes?

Key users can define extension fields for involved parties tab from for sales quotes. Extension fields will be part of *Quote-Party-MDAV CODCQTPTYB*. There are also other data source that allow you to report in the involved parties.

21.6.5 How do you manage involved party error handling?

If you find that the system is determining involved parties incorrectly, or is unable to find involved parties, there are a few reasons for the error.

The party determination steps do not match your business case. You can enable and disable party determination rules to solve this issue.

The master data required to determine parties is missing or inconsistent. Make sure you have added the role to the correct business object and that you have maintained the responsibility and or relationship assignments

22 Activities

Activities are methods of recording information from interactions between business partners during the customer relationship lifecycle. Managing activities properly also gives transparency to other sales team members working on the same account.

In SAP Cloud for Customer, activities include appointments, e-mails, phone calls, and tasks. Visits are technically similar to appointments, and may also be considered a type of activity. They can be created in and associated with many other business objects in the solution.

Example

If a reseller has a question about a product that her company has just included in their product range, she may call your customer support center. The customer support representative logs the call as a phone call in the solution. The account information is part of the phone call record, so the phone call is associated with the account in the system. Depending on your system's setup, the customer service agent may be able to create a service ticket to follow up on a phone call that has taken place. Any relevant emails and appointments can also be associated with the same account. Later on, you can use the associated activities to trace the progress of the issue and its resolution.

22.1 Scope and Configure Activities

Administrators can configure activities using scoping, scoping questions, and fine-tuning activities.

Scoping questions and fine-tuning activities that are self-explanatory may not be included in this list.

→ Recommendation

When you log on as an administrator, you can find the scoping questions under *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Sales* > *Account and Activity Management* > *Activity Management*.

We recommend that you review all the scoping questions in the areas that are relevant and that you have included in your scope. When you select a question, more information appears in the details section of the screen.

22.1.1 Enable Activities

Before users can manage different activities in the solution, administrators must add them to the scope of the project.

Procedure

1. Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Scoping* > *Sales* > *Account and Activity Management* > *Activity Management* and check the box next to the scoping item for using activity management.
2. Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Sales* > *Account and Activity Management* > *Activity Management* and enable scoping questions for recording appointments, e-mails, phone calls, tasks, and activity lists in the system.
3. Assign the *Activities* work center view (ID: *COD_ACTIVITIES*) to appropriate business users or roles.

   For more details, please check Create Business Roles and Assign Work Centers and Views.

22.1.2 Configure Categories

Administrators can maintain categories that classify your elements such as activities, leads, and opportunities.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *Activities* > *Maintain Categories* to edit your categories.

> **Note**
>
> This list is used for activities, leads, and opportunities, depending on your scoping. If you modify an entry in one area, then the entry is modified in the others as well.
>
> If you delete entries that are used in documents, the technical codes remain in the documents. Only the code descriptions are removed.

Related Information

Configure Assignment of Categories [page 985]
Administrators must activate any custom categories that they have created by assigning them to corresponding activity types.

22.1.3 Configure Assignment of Categories

Administrators must activate any custom categories that they have created by assigning them to corresponding activity types.

> **Note**
>
> Create or update categories before they appear in the list for assignment.

To assign your custom categories to item types, go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *Activities* > *Assign Categories* to assign categories for appointments, e-mails, tasks, and phone calls.

Related Information

Configure Categories [page 984]
Administrators can maintain categories that classify your elements such as activities, leads, and opportunities.

22.1.4 Configure Document Types

Administrators can create custom activity types to streamline filtering, define reports, or facilitate assignments.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *Activities* > *Maintain Document Types* to edit your activity types.

> **Note**
>
> You cannot delete document types that are used in activities.

22.1.5 Configure Involved Parties

Administrators can maintain involved parties for appointments, e-mails, phone calls, or tasks by activating applicable party roles and determination steps.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *Activities* > *Involved Parties for <Item Type>* > *Maintain Involved Parties for <Item Type>* to edit your involved parties.

> **Note**
>
> In addition to certain predelivered party roles, you can also assign customized party roles to activities. As prerequisites, you must go to *Business Configuration* > *Implementation Projects*. Select your project

and navigate to *Open Activity List* > *Fine-Tune* > *Party Role Definition* to define customized party roles. Only customized party roles that are created under *Sales Employee Party*, *Partner Contact Party*, or *Other Party* categories can be assigned to activities.

Related Information

Define Involved Party Roles [page 974]
As an administrator, you can configure which party roles you want to use in your application.

22.1.6 Configure System Message Severity

Administrators upgrade or downgrade the severity level of system messages in appointments, e-mails, phone calls, and tasks.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *Activities* > *Messages for <Item Type>* > *Message Severity Configuration for <Item Type>* to edit message severity.

22.1.7 Configure Selection of Sales Area Data Combinations

Administrators can enable users to select a combination of sales area data including sales organization, distribution channel, and division during activity creation. The combinations must be predefined in either or both of the matching account and employee in the *Accounts* and *Employees* work centers.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Sales* > *Account and Activity Management* > *Activity Management* and enable the scoping question about specifying a predetermined combination of sales area data.

22.1.8 Configure Default Sales Area Data During Activity Creation

Administrators can set up the solution to pre-populate sales area data including sales organization, distribution channel, and division during activity creation. The default values must be predefined in either or both of the matching account and employee in the *Accounts* and *Employees* work centers.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Sales* > *Account and Activity Management* > *Activity Management* and enable the scoping question about defaulting sales area data.

22.1.9 Configure Summary Generation for Activities and Visits

Administrators can enable users to generate summaries as a record of an activity or visit.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Sales* > *Account and Activity Management* > *Activity Management* and enable the scoping question about using summaries as meeting minutes for appointments, phone calls, and visits.

22.1.10 Configure Prevention of Sending Summaries to External Parties

Administrators can restrict users to share activity or visit summaries with internal parties only.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Sales* > *Account and Activity Management* > *Activity Management* and enable the scoping question about preventing summaries from being sent to external parties.

22.1.11 Configure Survey and Task Determination and Execution for Phone Calls

Administrators can enable sales operations or account managers to assign standard surveys and tasks to phone calls using activity plans and routing rules. The configuration also allows sales representatives to execute surveys and tasks during phone calls.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Sales* > *Account and Activity Management* > *Activity Management* and enable the scoping question about executing surveys and tasks during phone calls.

22.1.12 Configure Sender Information for Outbound E-Mails

For outbound e-mails, administrators can set up the system to display the sender's e-mail address only, instead of the sender's e-mail address "on behalf of" an automated system e-mail address.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Sales* > *Account and Activity Management* > *Activity Management* and enable the scoping question about using only the employee's e-mail address as the sender.

22.1.13 Configure Default Duration for Activities During Creation

Administrators can specify default durations that are pre-populated in appointment, phone call, and task creation.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *Date Profiles*. Under *Activities*, set default duration for appointments, phone calls, and tasks.

22.1.14 Configure Automatic Generation and Sharing of Activity Summaries

Administrators can set up the system to automatically generate and send appointment or phone call summaries using workflow rules.

Prerequisites

You have maintained appointment or phone call summary templates in the *Form Template Maintenance* work center. For more information, please see Form Templates.

Context

The procedure includes mandatory steps to automatically generate and send an appointment or phone call summary. You can define other optional fields based on your business requirements as needed.

Procedure

1. Go to *Administrator* > *Workflow Rules*, and click *New*.
2. Give a meaningful name in the *Description* field.
3. For *Business Object*, choose *Appointment* or *Phone Call*.
4. For the *Timing* type, you can choose from *On Create Only*, *On Every Save*, and *Scheduled*. If the timing field is left blank, *On Every Save* is applied by default.
5. Click *Next* to define conditions as needed.

   For example, you can set up the system to trigger the rule when the status of an appointment or phone call is set to *Completed*.

6. Click *Next* to define actions.
7. For *Rule Type*, choose *E-Mail*.
8. Enter the *Subject* of the summary e-mail.
9. Choose a template html file that contains content of the summary e-mail.
10. To include a PDF summary as an attachment, select the appointment or phone call summary template and variant that you have maintained.
11. Under *Recipient Determination*, click *Add Determination* and choose recipients.

    For example, you can send appointment summaries to all the appointment attendees and send phone call summaries to all the phone call participants.
12. Click *Next* to review your workflow rule.
13. *Activate* the workflow rule.

22.1.15 Configure Automatic E-Mail Delivery Receipts

Administrators can set up the system to automatically send an immediate acknowledgment of an incoming e-mail using workflow rules.

Prerequisites

You have enabled and maintained communication channels for both inbound and outbound e-mails. For more information, please see E-Mail Communication Channel.

Context

The procedure includes mandatory steps to set up an e-mail delivery confirmation. You can define other optional fields based on your business requirements as needed.

Procedure

1. Go to *Administrator* > *Workflow Rules*, and click *New*.
2. Give a meaningful name in the *Description* field.
3. For *Business Object*, choose *E-Mail*.
4. For the *Timing* type, you can choose from *On Create Only*, *On Every Save*, and *Scheduled*. If the timing field is left blank, *On Every Save* is applied by default.
5. Click *Next* to define conditions as needed.

    For example, you can set up the system to trigger the rule for all incoming e-mails with an open status.

6. Click *Next* to define actions.
7. For *Rule Type*, choose *E-Mail*.
8. Enter the *Subject* of the e-mail delivery receipt.
9. Choose a template html file that contains content of the e-mail delivery receipt.
10. Under *Recipient Determination*, click *Add Determination* and choose *Message From*.
11. Click *Next* to review your workflow rule.
12. *Activate* the workflow rule.

22.1.16 Configure Restriction on Downloading Activities by Role

Administrators can disable certain business roles to export activities to Microsoft Excel.

Procedure

1. Go to *Administrator* > *General Settings* > *Business Roles*.
2. Select the desired role and click *Edit*.
3. Navigate to the *Fields and Actions* tab.
4. Under *Business Action Restrictions*, add a row.
5. Search for *XLS_CRM_ACT_LIST* and select the entry.

   The *Access Restriction* field defaults to *Disabled*.

22.1.17 Configure Formatting Editor for Appointment Notes

Administrators can activate a rich text editor to allow you to use formatting in appointment notes.

Log on as an administrator and go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Sales* > *Account and Activity Management* > *Activity Management*, and select the scoping question: *Do you want to use formatted text for appointments?*

Related Information

Format Notes Text in Appointments [page 995]
You can use a rich text editor (RTE) to format text in the notes of appointments in SAP Cloud for Customer.

22.1.18 Configure Disablement of Automatic Determination of Attendees

You can disable automatic determination of primary contact as attendees or participants for appointments, visits, and phone calls while creating activities from accounts, leads, and opportunities.

Procedure

1. Go to *Business Configuration* > *Implementation Projects*.
2. Select your project and navigate to *Edit Project Scope* > *Questions* > *Sales* > *Account and Activity Management* > *Activity Management* > *Activity Attendees*.
3. Select the *In Scope* checkbox for the scoping question *Would you like to disable automatic determinations of attendess/participants for activities created from accounts, leads, and opportunities?*

22.1.19 Restrict Rescheduling of Visits and Appointments to Owners and Organizers

You can restrict rescheduling of visits and appointments to owners and organizers.

Procedure

1. Navigate to *Business Configuration* > *Implementation Projects*.
2. Select your project.
3. Navigate to *Edit Project Scope* > *Questions* > *Sales* > *Account and Activity Management* > *Activity Management*.
4. Select the following scoping question under *Calendar*: *Do you want to restrict rescheduling of visits and appointments only by organizer and owner?*
5. Save your preferences.

22.1.20 Configure Calendar Color Categorization

You can maintain color categorization for activities and visits in calendar.

Procedure

1. Navigating to *Administrator* > *General Settings* > *Calendar Color Categorization*.
2. Select *Add* from the *Customise Color Coding Configuration* section.
3. Choose the *Color*, *Activity Type*, *Parameter*, and *Parameter Value*.
4. Save your changes.

22.2 Appointments

Appointments are planned activities that appear in calendars, including external appointments and scheduled meetings with business partners who may or may not be customers. Appointments contain the details that you expect, such as information about the attendees, as well as the date and time.

From a technical standpoint, visits are also a type of appointment and behave similarly. Visits contain more details, such as promotions, tasks, surveys, planograms, notes from the last visit, or follow-up items.

You can use appointments to keep track of meetings and record them in your SAP solution:

- Focus on certain activities, such as my appointments today, with predefined queries.
- See your appointments on your calendar in the SAP solution. Attendees can also see your appointments on their calendars.
- When you add a contact or attendee to an appointment, that party's details appear in the appointment even if there is no defined business relationship between the party and the account involved in the appointment.
- Reference a campaign with a specified response option.
- If your company uses one of the e-mail add-ins, appointments can be synchronized to and from your inbox.

If your administrator enables a few features, you can do even more:

- Generate a summary of an appointment in PDF format. Use the summary as an internal record or send it to participants as meeting minutes.

Set Out-of-Office Indicator for Appointments [page 993]
You can define appointments to visually mark your time out of the office in your calendar.

Display Private Appointments with a Lock Icon [page 993]
Private appointments synchronized from groupware are distinctly visualized with a lock icon. You can see private appointments both in the list and on the calendar to avoid scheduling conflicts. However, you cannot reschedule a private appointment or open it for further details due to privacy concerns.

Generate and Send Activity Summaries Using Rules [page 994]
The system can automatically generate appointment or phone call summaries and send them to desired recipients.

[Format Notes Text in Appointments [page 995]](#)
You can use a rich text editor (RTE) to format text in the notes of appointments in SAP Cloud for Customer.

Related Information

E-Mail Add-Ins [page 804]
You can leverage tools you use every day, such as your e-mail inbox, to become more productive.

Visits

22.2.1 Set Out-of-Office Indicator for Appointments

You can define appointments to visually mark your time out of the office in your calendar.

Use the *Show As* field to indicate *Out of Office*. The appointment appears in SAP Cloud for Customer in your calendar and the team calendar highlighted in purple.

> **Example**
>
> You plan to attend a trade show on Wednesday, Thursday, and Friday. To communicate to your colleagues that you are not available on those days, you can create an appointment for the trade show and mark it as *Out of Office*.

If you use one of the groupware add-ins for Microsoft Outlook, Gmail, or IBM Notes, the systems synchronize the out-of-office setting. Just create an appointment in your groupware calendar, mark it as out of office, and add it to your SAP solution. When the appointment is synchronized, your out-of-office setting in your groupware calendar automatically sets the out-of-office indicator in SAP Cloud for Customer.

Related Information

E-Mail Add-Ins [page 804]
You can leverage tools you use every day, such as your e-mail inbox, to become more productive.

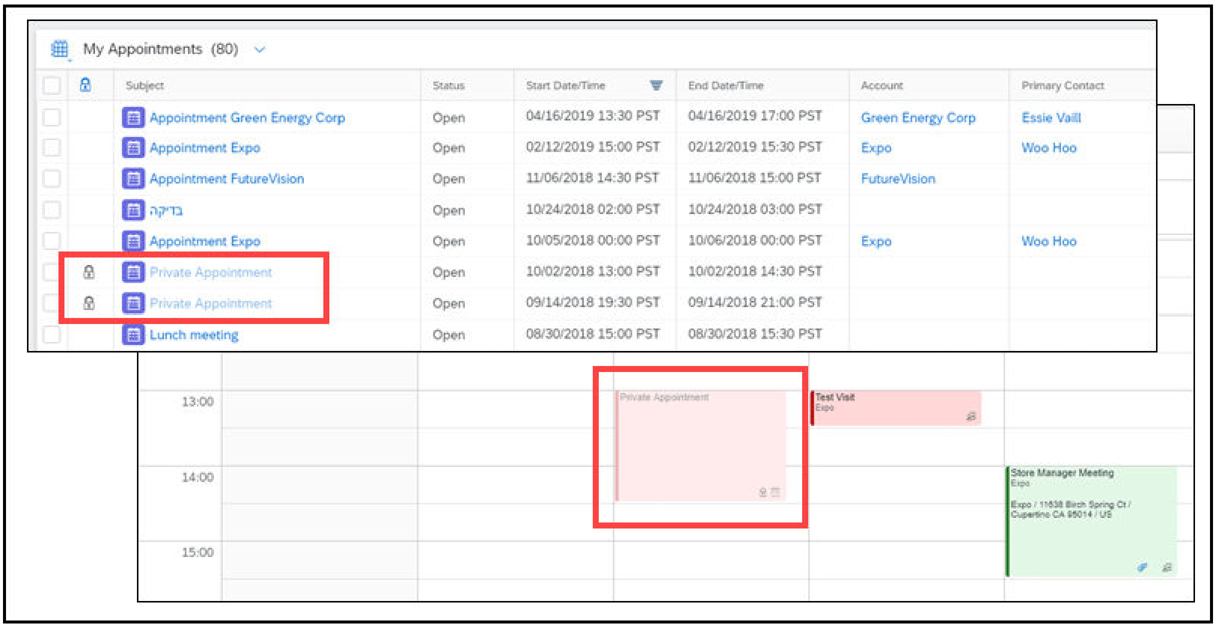
22.2.2 Display Private Appointments with a Lock Icon

Private appointments synchronized from groupware are distinctly visualized with a lock icon. You can see private appointments both in the list and on the calendar to avoid scheduling conflicts. However, you cannot reschedule a private appointment or open it for further details due to privacy concerns.

To see the lock icon, your administrator must add the *Private* column via adaptation.

i Note

This enhancement only applies to client-side appointments synchronized from groupware. There is no change in behavior for other private activities such as e-mails and tasks.



22.2.3 Generate and Send Activity Summaries Using Rules

The system can automatically generate appointment or phone call summaries and send them to desired recipients.

As prerequisites, administrators must create a workflow rule to define conditions that an activity should meet for the summary to be generated and sent, and select a predefined form template as the summary PDF attachment.

22.2.3.1 Configure Automatic Generation and Sharing of Activity Summaries

Administrators can set up the system to automatically generate and send appointment or phone call summaries using workflow rules.

Prerequisites

You have maintained appointment or phone call summary templates in the *Form Template Maintenance* work center. For more information, please see Form Templates.

Context

The procedure includes mandatory steps to automatically generate and send an appointment or phone call summary. You can define other optional fields based on your business requirements as needed.

Procedure

1. Go to *Administrator* > *Workflow Rules*, and click *New*.
2. Give a meaningful name in the *Description* field.
3. For *Business Object*, choose *Appointment* or *Phone Call*.
4. For the *Timing* type, you can choose from *On Create Only*, *On Every Save*, and *Scheduled*. If the timing field is left blank, *On Every Save* is applied by default.
5. Click *Next* to define conditions as needed.

   For example, you can set up the system to trigger the rule when the status of an appointment or phone call is set to *Completed*.
6. Click *Next* to define actions.
7. For *Rule Type*, choose *E-Mail*.
8. Enter the *Subject* of the summary e-mail.
9. Choose a template html file that contains content of the summary e-mail.
10. To include a PDF summary as an attachment, select the appointment or phone call summary template and variant that you have maintained.
11. Under *Recipient Determination*, click *Add Determination* and choose recipients.

    For example, you can send appointment summaries to all the appointment attendees and send phone call summaries to all the phone call participants.
12. Click *Next* to review your workflow rule.
13. *Activate* the workflow rule.

22.2.4 Format Notes Text in Appointments

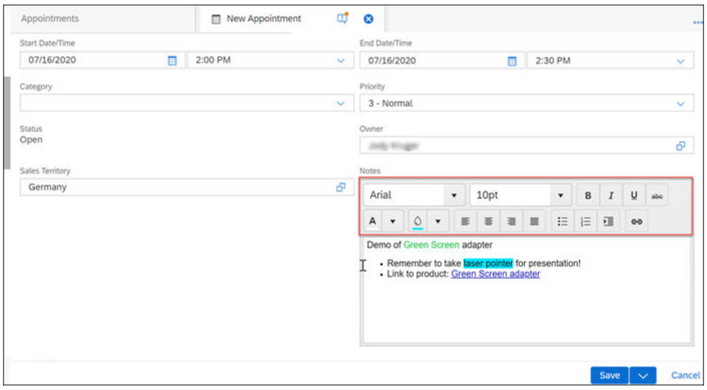
You can use a rich text editor (RTE) to format text in the notes of appointments in SAP Cloud for Customer.

If your adminstrator has made the necessary settings, you can use a formatting editor to add structure and emphasis to appointment notes.

> **i Note**
>
> When you activate this feature, it’s no longer possible to edit notes in the list of appointments directly. You can edit notes in the following views: create, quick create, and appointment details.

i Note

If you've integrated one of the e-mail add-in solutions for SAP Cloud for Customer, any formatting that you add to the notes of appointments is lost when those appointments are synchronized to or from the add-in.



Related Information

Configure Formatting Editor for Appointment Notes [page 990]
    Administrators can activate a rich text editor to allow you to use formatting in appointment notes.

Available E-Mail Add-Ins [page 805]
    Depending on the e-mail program that your company uses, choose the e-mail add-in that makes the most sense for you.

22.2.4.1 Configure Formatting Editor for Appointment Notes

Administrators can activate a rich text editor to allow you to use formatting in appointment notes.

Log on as an administrator and go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Sales* > *Account and Activity Management* > *Activity Management*, and select the scoping question: *Do you want to use formatted text for appointments?*

Related Information

Format Notes Text in Appointments [page 995]
    You can use a rich text editor (RTE) to format text in the notes of appointments in SAP Cloud for Customer.

22.3 E-Mails

You can use e-mails in your SAP solution. If your company uses one of the e-mail add-ins, e-mails are synchronized to and from your inbox.

Your SAP solution can help you save time with e-mails:

- You can create outbound e-mails from the *Activities* tab in accounts, contacts, individual customers, leads, opportunities, and sales quotes.
- For outbound e-mails, a *Bounced* field is available to indicate when an e-mail is not successfully delivered due to, for example, server or domain issues.
- If you use one of the e-mail add-ins, you can reference associated items in your SAP solution right from your e-mail inbox.
  Following synchronization to your SAP solution, e-mail details can no longer be edited.
- In offline mode, you can view your e-mails as read-only.

If your administrator enables a few features, you can do even more:

- In outbound e-mails, by default, the sender information shows the employee's e-mail address "on behalf of" an automated system e-mail address. If needed, the system e-mail address can be removed.

Related Information

E-Mail Add-Ins [page 804]
You can leverage tools you use every day, such as your e-mail inbox, to become more productive.

22.3.1 Create Default E-Mail Signatures

You can create e-mail signatures for personal or corporate use, and maintain a default signature that automatically populates in your outgoing messages.

Prerequisites

Administrators have enabled the *Templates* work center.

Context

Procedure

1. Go to *Templates* and click the plus icon.
2. Enter *Name* and *Template Text*.
3. To further edit and format the signature, click *Save and Open*.
4. Use formatting tools to edit your signature.
5. Administrators can create corporate standard signatures using placeholders.

   The values of the placeholders are dynamically populated based on logged in user credentials.
6. When you finish, click *Save*.
7. Under your profile menu, click *Settings* > *My Email Settings*.
8. Click the pencil icon, and choose one default signature for new e-mails.
9. When you finish, click *Save and Close*.

Results

When you create e-mails, you can see a default signature pre-populated in the e-mail editor.

> → Tip
>
> If you want to use a different signature for a particular e-mail, you can remove the default signature and click the sign button to choose another signature.

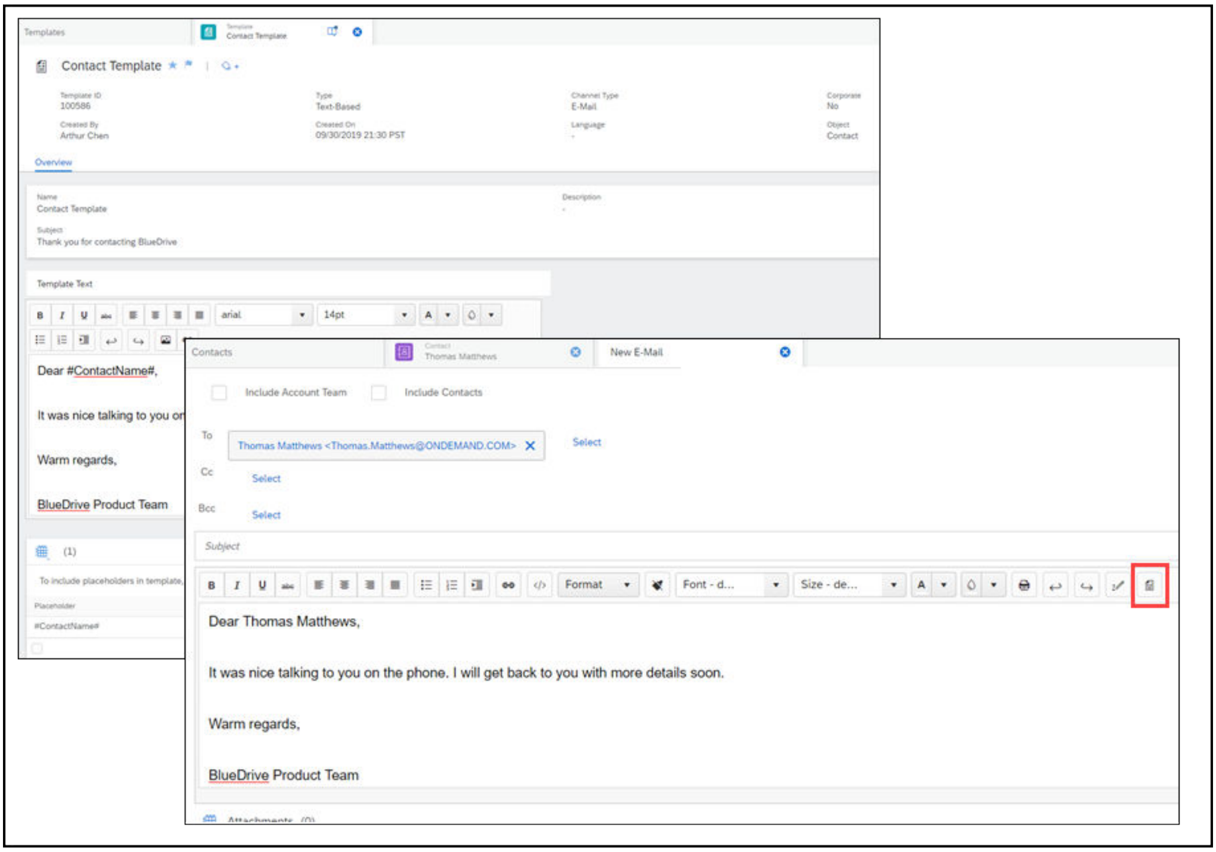
22.3.2 Create E-Mail Templates

You can create e-mail templates for business objects including accounts, contacts, individual customers, leads, opportunities, sales orders, and sales quotes. When creating e-mails from respective objects, you can save time by using those predefined templates.

Prerequisites

Administrators have enabled the *Templates* work center.

Context



Procedure

1. Go to *Templates* and click the plus icon.
2. Give it a *Name*.
3. For template usage, choose *Response*.
4. Select the *Object* that the template is created for.

   This template can only be used when an e-mail is created from the chosen business object.
5. Enter *Subject* and *Template Text*.
6. To further edit and format the template, click *Save and Open*.
7. Use formatting tools to edit your template.
8. If needed, define and add placeholders to the template.

   The values of the placeholders are dynamically populated when you choose the template during e-mail creation.
9. When you finish, click *Save*.

Results

In the business object, go to *Activities* and create an e-mail. From the editing toolbar, you can click the e-mail template icon to find the predefined template.

22.3.3 Send E-Mail Delivery Receipts Using Rules

When an e-mail message is delivered to your e-mail list in SAP Cloud for Customer, the system can automatically send a delivery confirmation to the sender.

As a prerequisite, administrators must create a workflow rule to define conditions that an incoming message should meet for a receipt to be sent.

22.3.3.1 Configure Automatic E-Mail Delivery Receipts

Administrators can set up the system to automatically send an immediate acknowledgment of an incoming e-mail using workflow rules.

Prerequisites

You have enabled and maintained communication channels for both inbound and outbound e-mails. For more information, please see E-Mail Communication Channel.

Context

The procedure includes mandatory steps to set up an e-mail delivery confirmation. You can define other optional fields based on your business requirements as needed.

Procedure

1. Go to *Administrator* > *Workflow Rules*, and click *New*.
2. Give a meaningful name in the *Description* field.
3. For *Business Object*, choose *E-Mail*.
4. For the *Timing* type, you can choose from *On Create Only*, *On Every Save*, and *Scheduled*. If the timing field is left blank, *On Every Save* is applied by default.
5. Click *Next* to define conditions as needed.

For example, you can set up the system to trigger the rule for all incoming e-mails with an open status.

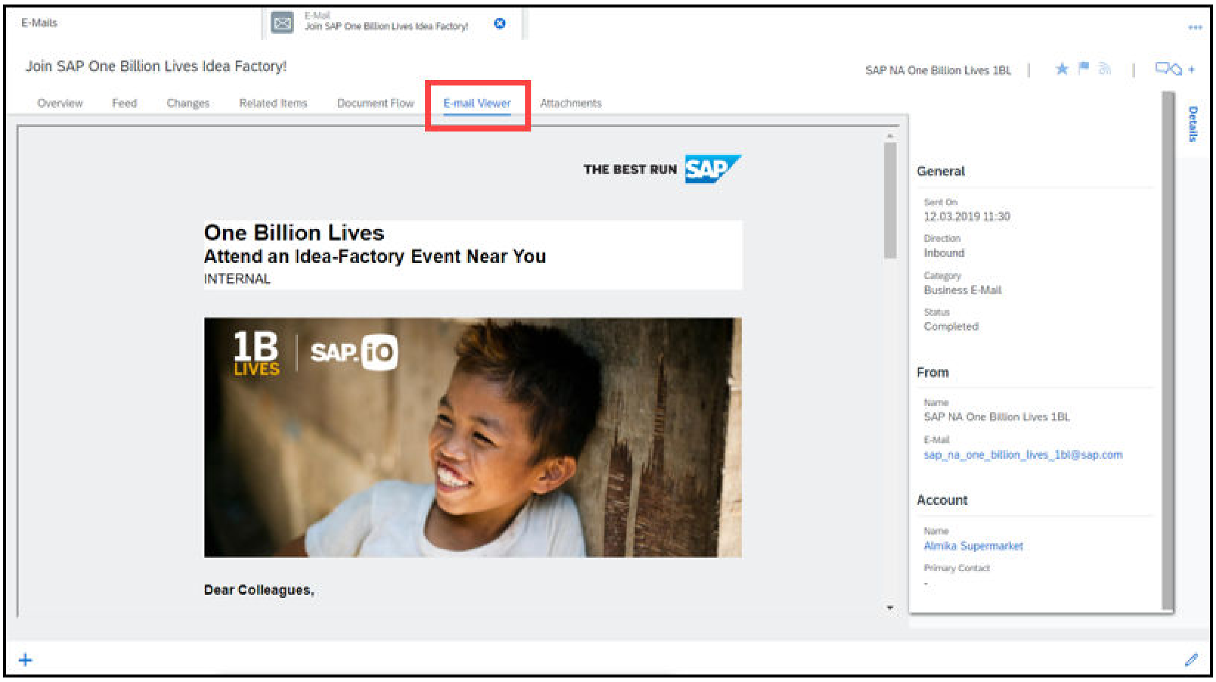
6. Click *Next* to define actions.
7. For *Rule Type*, choose *E-Mail*.
8. Enter the *Subject* of the e-mail delivery receipt.
9. Choose a template html file that contains content of the e-mail delivery receipt.
10. Under *Recipient Determination*, click *Add Determination* and choose *Message From*.
11. Click *Next* to review your workflow rule.
12. *Activate* the workflow rule.

22.3.4 View E-Mails with Original Formatting and Structure

E-Mail Viewer allows you to read e-mails without losing their original formatting and structure. You can view inline images, theme fonts, links, and so on.

As a prerequisite, your administrator must add the *E-Mail Viewer* tab via adaptation.

> **i Note**
>
> This feature is only available in e-mails that are synchronized to and sent from SAP Cloud for Customer after May 2019.

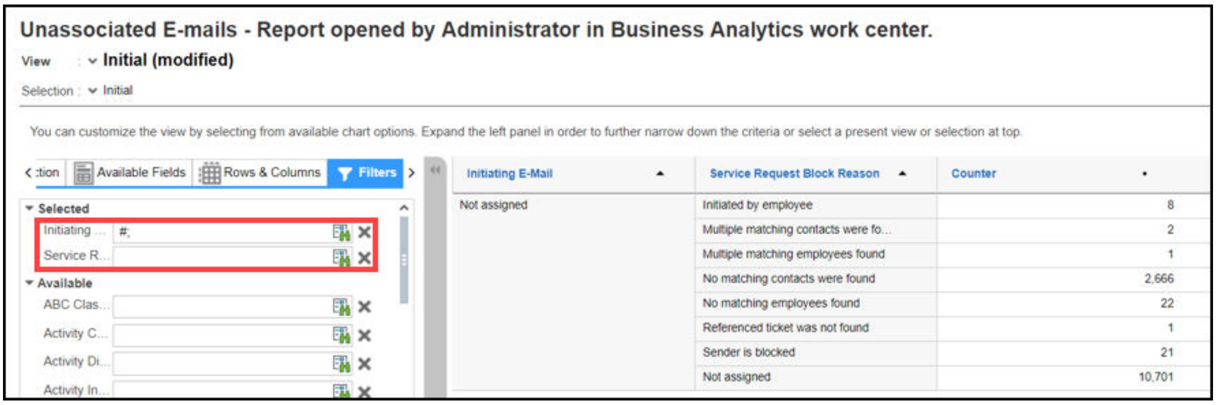


22.3.5 Report on Unassociated E-Mails

By using the e-mail data source, you can specify the *Initiating Email* characteristic along with the *Service Request Block Reason* characteristic to create a report on all the unassigned e-mails.

An unassociated e-mail is identified when:

- *Initiating Email* = *#* (Not Assigned)
- *Service Request Block Reason* is filled (except code *0 Other Reason* and *8 System not set up to support employee tickets*)



You can also view unasociated e-mail messages with the *All My Team's E-Mails* query in the ticket list.

22.4 Phone Calls

You can use phone-call activities to track and document your phone calls with business partners in the SAP solution.

You can use phone calls like this:

- Reference a campaign with a specified response option.

If your administrator enables a few features, you can do even more:

- Generate a summary of a phone call in PDF format. You can use the summary as an internal record or you can send it to participants as meeting minutes.
- Your administrator can assign tasks and surveys to phone calls, using activity plans and routing rules. Tasks and surveys are predefined in activity plans by your system administrator. They can be general checklists, industry-specific surveys, or recommended tasks to complete during the call.

  > **i Note**
  >
  > Tasks and surveys for phone calls are not available offline.

- Your administrator can use workflow rules to send notifications to participants in a phone call to alert them of a change in the phone call.

  Add Surveys or Tasks to Phone Calls [page 1003]

You may have mandatory or voluntary activity plans such as surveys and tasks predefined and assigned by your administrators to help you craft sales call script and execute outbound telesales strategies efficiently.

Generate and Send Activity Summaries Using Rules [page 1005]
The system can automatically generate appointment or phone call summaries and send them to desired recipients.

Report on Phone Call Surveys or Tasks [page 1006]
You can utilize *Activity BTD Reference* data source together with *Survey Answer* or *Activity Task* data source to report on survey or task data captured for activities.

Related Information

Workflows [page 639]
Learn how you can use workflows to support your business processes.

22.4.1 Add Surveys or Tasks to Phone Calls

You may have mandatory or voluntary activity plans such as surveys and tasks predefined and assigned by your administrators to help you craft sales call script and execute outbound telesales strategies efficiently.

> **i Note**
>
> As a prerequisite, your administrators must enable survey and task execution during phone calls in scoping questions.

In the *Activity Planner* work center, your administrators can enable automatic assignment for activity plans during creation and define routing rules.

For activity plans that can be automatically assigned, surveys and tasks are added to applicable phone calls upon a background job that runs every 10 minutes. You can manually trigger routing by refreshing to obtain most current surveys or tasks.

For activity plans that cannot be automatically assigned, you can manually add applicable surveys under the *Surveys* tab and tasks under the *Tasks* tab in a phone call.

> **i Note**
>
> Tasks and surveys for phone calls are not available offline.

Related Information

Activity Planning and Routing [page 1051]

Activity planner is used to plan activities such as surveys and tasks that help you achieve different business goals. By using routing rules, you can assign the surveys and tasks to business objects that are associated with specific accounts or territories.

22.4.1.1 Update To-Do Surveys or Tasks by Refreshing

You can obtain most current surveys and tasks assigned to your phone calls by refreshing.

Prerequisites

Your administrators have defined activity plans and routing rules in the *Activity Planner* work center.

> i Note
>
> For each survey or task to be routed, the *Assign Automatically* option must be checked during the creation of the activity plan.

Context

Applicable activity plans are automatically assigned to phone calls upon a background job that runs every 10 minutes. As users, you can also follow the steps below to manually trigger the routing.

Procedure

1. Go to the detail view of a phone call.
2. From the *Actions* menu, select *Refresh Phone Call*.

Results

Your applicable surveys and tasks appear under the *Surveys* and *Tasks* tabs as a result of rules.

22.4.1.2 Configure Survey and Task Determination and Execution for Phone Calls

Administrators can enable sales operations or account managers to assign standard surveys and tasks to phone calls using activity plans and routing rules. The configuration also allows sales representatives to execute surveys and tasks during phone calls.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Sales* > *Account and Activity Management* > *Activity Management* and enable the scoping question about executing surveys and tasks during phone calls.

22.4.2 Generate and Send Activity Summaries Using Rules

The system can automatically generate appointment or phone call summaries and send them to desired recipients.

As prerequisites, administrators must create a workflow rule to define conditions that an activity should meet for the summary to be generated and sent, and select a predefined form template as the summary PDF attachment.

22.4.2.1 Configure Automatic Generation and Sharing of Activity Summaries

Administrators can set up the system to automatically generate and send appointment or phone call summaries using workflow rules.

Prerequisites

You have maintained appointment or phone call summary templates in the *Form Template Maintenance* work center. For more information, please see Form Templates.

Context

The procedure includes mandatory steps to automatically generate and send an appointment or phone call summary. You can define other optional fields based on your business requirements as needed.

Procedure

1. Go to *Administrator* > *Workflow Rules*, and click *New*.
2. Give a meaningful name in the *Description* field.
3. For *Business Object*, choose *Appointment* or *Phone Call*.
4. For the *Timing* type, you can choose from *On Create Only*, *On Every Save*, and *Scheduled*. If the timing field is left blank, *On Every Save* is applied by default.
5. Click *Next* to define conditions as needed.

   For example, you can set up the system to trigger the rule when the status of an appointment or phone call is set to *Completed*.
6. Click *Next* to define actions.
7. For *Rule Type*, choose *E-Mail*.
8. Enter the *Subject* of the summary e-mail.
9. Choose a template html file that contains content of the summary e-mail.
10. To include a PDF summary as an attachment, select the appointment or phone call summary template and variant that you have maintained.
11. Under *Recipient Determination*, click *Add Determination* and choose recipients.

    For example, you can send appointment summaries to all the appointment attendees and send phone call summaries to all the phone call participants.
12. Click *Next* to review your workflow rule.
13. *Activate* the workflow rule.

22.4.3 Report on Phone Call Surveys or Tasks

You can utilize *Activity BTD Reference* data source together with *Survey Answer* or *Activity Task* data source to report on survey or task data captured for activities.

Following topics show you how to create a joined data source with activities and surveys (or tasks), and how to create a report on phone call surveys (or tasks).

22.4.3.1 Create a Joined Data Source with Activities and Surveys (or Tasks)

The procedure includes mandatory steps to create a joined data source with activities and surveys (or tasks). You can define other optional fields based on your business requirements as needed.

Procedure

1. Go to *Business Analytics* > *Design Data Sources*.
2. Click *New* > *Joined Data Source*.
3. Give it a name and description if desired.
4. For *Join Type*, select *Left Outer Join*.
5. Click *Add Data Source* and add *CODACTBTDB* for *Activity BTD Reference*.
6. Select the fields that you want to include in the new data source. Following fields are mandatory to create joins and filter across activity types.
    - Activity Type
    - Category
    - BTD Reference
    - BTD Reference ID
    - BTD Reference Item (only required for joining *Survey Answer* data source)
    - BTD Reference Role Code
    - BTD Reference Type
7. Click *Add Data Source* and add *FNDQREVQVB* for *Survey Answer* (or *CODTKAHB* for *Activity Task*).
8. Select the characteristics and key figures that you want to include in the data source. Following fields are mandatory to create joins and filter for activity survey answers (or activity tasks).

    For Activity Survey Answers:
    - Document Type
    - Document UUID
    - Survey ID (to retrieve information for all the surveys maintained in activities)
    - Value Collection UUID (to retrieve information for surveys that have been answered only)

    For Activity Tasks:
    - Task
    - Task ID
9. Join corresponding fields. Examples are as follows:

    Join Activity BTD Reference with Survey Answer

Joined Data Source Fields	Activity BTD Reference	Survey Answer
BTD Reference ID	BTD Reference ID	Survey ID

Joined Data Source Fields	Activity BTD Reference	Survey Answer
BTD Reference Item	BTD Reference Item	Value Collection UUID

Join Activity BTD Reference with Activity Task

Joined Data Source Fields	Activity BTD Reference	Activity Task
BTD Reference	BTD Reference	Task
BTD Reference ID	BTD Reference ID	Task ID

10. Remove duplicate rows.

> **Example**
>
> If *Survey ID* is joined to *BTD Reference ID* as shown above, then you must remove the row with *Survey ID* as *Joined Data Source Fields*.

11. Click *Save and Close*.

Related Information

SAP Cloud for Customer Analytics Guide

22.4.3.2 Create a Report on Phone Call Surveys (or Tasks)

The procedure includes mandatory steps to create a report on phone call surveys (or tasks). You can define other optional fields based on your business requirements as needed.

Procedure

1. Select the joined data source you have created with activities and surveys (or tasks).
2. Click *New* > *Report*.
3. Give it a name and description if desired.
4. Click *Next* and select key figures if desired.
5. Click *Next* and select characteristics if desired.
6. Under *Characteristic Properties*, following fields are mandatory to be maintained with *Fixed Value Selection* or *Using Variable*.
    - Activity Type
    - BTD Reference Type
    - Category (optional)

- Document Type (only required for reporting on activity surveys)

7. If you choose *Fixed Value Selection*, click *Set Fixed Value Selections* and maintain values for mandatory fields as follows:

> → Tip
>
> If you intend to report on surveys (or tasks) for a single activity type such as phone call, it is recommended that you set fixed values as below. If you want to reuse the same report for analyzing surveys (or tasks) for all supported activity types, you can only maintain *BTD Reference Type* as fixed value and enter the activity type during runtime.

Set Fixed Values for Phone Call Surveys

Characteristic	Fixed Value
Activity Type	86 (Phone Call)
BTD Reference Type	1876 (Survey)
Document Type	86 (Phone Call)

Set Fixed Values for Phone Call Tasks

Characteristic	Fixed Value
Activity Type	86 (Phone Call)
BTD Reference Type	542 (Task)

8. Click *Next* and define variables if desired.
9. Click *Next* and review report details.
10. Click *Finish*.

Related Information

SAP Cloud for Customer Analytics Guide

22.5 Tasks

Tasks help you plan your time effectively. You can also use them to design processes or best practices. Tasks are a tool for recording your work or for remembering what you still need to do.

You can create either standalone tasks or tasks that are associated with other business objects in your SAP solution. You can associate a task with an object by creating the task from the object such as accounts, leads, and opportunities. As an administrator, you can associate tasks with phone calls or visits, using activity plans and routing rules.

Other features that are specific to tasks include:

- Reference a campaign with a specified response option.
- You can use the advanced search to exclude tasks that are associated with visits, which can help you focus on the tasks you need.
- The due date for one-time tasks is the same as the due date of the activity plan under which they were created.
- If your company uses one of the email add-ins, tasks can be synchronized to and from your inbox.
- When you set a task to 100% complete, the solution automatically enters the current date as the completion date.

Mass Update Task Processor and Owner from the List [page 1010]
You can quickly change the processor and owner of multiple tasks at once from the list, which saves your efforts in going to the detail view of each task to make changes.

Create a Task for Multiple Employees [page 1012]
You can create a task, and then duplicate the same task for multiple owners.

Create Calendar Relevant Tasks [page 1012]
You can create calendar relevant tasks from the *Calendar* workcenter.

Related Information

Activity Planning and Routing [page 1051]
Activity planner is used to plan activities such as surveys and tasks that help you achieve different business goals. By using routing rules, you can assign the surveys and tasks to business objects that are associated with specific accounts or territories.

E-Mail Add-Ins [page 804]
You can leverage tools you use every day, such as your e-mail inbox, to become more productive.

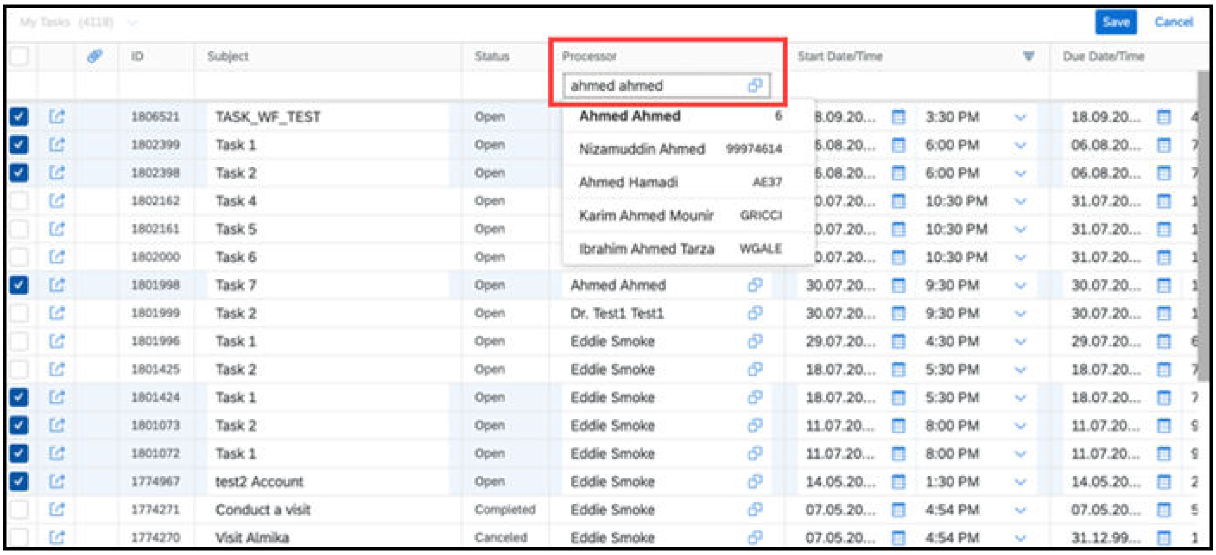
22.5.1 Mass Update Task Processor and Owner from the List

You can quickly change the processor and owner of multiple tasks at once from the list, which saves your efforts in going to the detail view of each task to make changes.

Prerequisites

Administrators must go to *Company Settings* and toggle on the option to *Enable Editing in Dataset*.

Context



Procedure

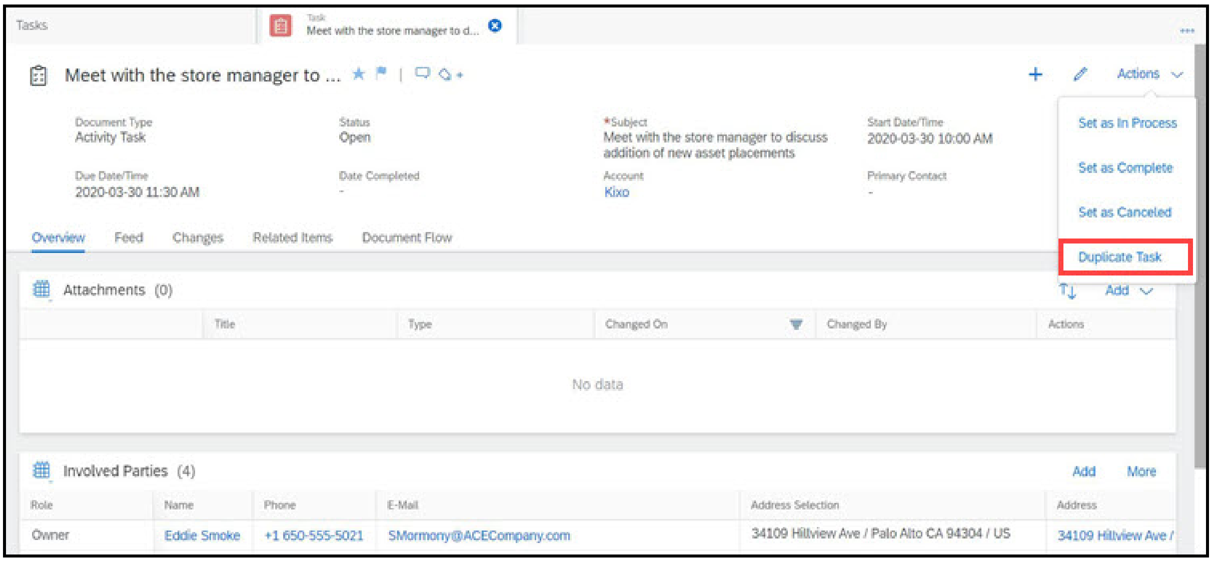
1. In the task list, click the pencil icon to launch the edit mode.

   An empty row appears at the top of the task list.
2. Select multiple tasks of which you want to change the processor and owner.
3. Set the processor and owner in the empty row to a desired value.
4. Click *Save*.

22.5.2 Create a Task for Multiple Employees

You can create a task, and then duplicate the same task for multiple owners.

Context



Procedure

1. Create a task.
2. In the detail view of the task, click *Actions* › *Duplicate Task*.
3. Select one or multiple owners, and click *OK*.

22.5.3 Create Calendar Relevant Tasks

You can create calendar relevant tasks from the *Calendar* workcenter.

Procedure

1. Navigate to the *Calendar* workcenter.
2. Click the create icon (+) and select *Task*.

3. Click on any cards to open the quick view.
4. Drag and drop the tasks to reschedule the tasks.
5. Drag and extend the task duration to change the task duration.

22.6 Activity Lists

An activity list is a collection of activities of a certain type. You can use template-based activity lists to organize and mass create appointments, phone calls, or tasks.

Create Activity Lists [page 1013]
You can create a group of appointments, phone calls, or tasks at once.

Add Activities to Activity Lists [page 1014]
You can add individual activities to an existing activity list, for reference purposes.

22.6.1 Create Activity Lists

You can create a group of appointments, phone calls, or tasks at once.

Prerequisites

Administrators must enable activity lists in scoping questions under *Activity Management*.

Procedure

1. Go to *Activity Lists* and create a new activity list.
2. Select the *Type* that determines the type of all the activities to be created.
3. Enter a meaningful name, as well as default *Start Date/Time* for the first activity to begin.
4. Click *Save and Open*.
5. Define template details to derive default settings for all the activities to be created, including *Subject*, *Category*, and *Priority*.
6. Define default *End Date/Time* when you want to create parallel appointments or tasks.

   If end date and time is defined, all activities are created with the same start and end date and time.
7. Define default *Duration* and *Gap* between activities when you want to create activities in a logical sequence.

   > Example
   >
   > Let's say your first activity starts at 8:00 a.m. If the duration is set to 1 hour and the gap is 30 minutes, then the next activity will start at 9:30 a.m.

8. To assign the owner of each individual activity based on the account, check the *Owner Determination* flag.
9. Add notes and attachments that appear for every activity generated from this activity list.
10. Add accounts, contacts, or individual customers to the activity list, which automatically generates activities.

    If you create activities by adding contacts, the contacts are automatically added to involved parties as attendees or participants in the activities generated.
11. If needed, you can change activity settings at each line item.
12. When you finish, *Save* your entries.

22.6.2 Add Activities to Activity Lists

You can add individual activities to an existing activity list, for reference purposes.

Procedure

1. Go to *Appointments*, *Phone Calls*, or *Tasks*.
2. Select one or multiple activities that you want to group into an activity list.
3. Click *More* > *Add to Activity List*.
4. Choose the desired activity list.
5. Click *OK*.

22.7 Activities Offline

This topic presents an overview of features supported for activities in offline mode. Activities create, edit and display is supported in the offline mode.

APPOINTMENTS

Offline scope

			Create Screen		Detailed View	
Tab	**Section**	**Field**	**Create**	**Default**	**Display**	**Edit (direct/via actions/via Navigation)**
Overview	Header	Subject	Y	Y	Y	Y
		Document Type	Y	Y	Y	N

			Create Screen		Detailed View	
Tab	Section	Field	Create	Default	Display	Edit (direct/via actions/via Navigation)
		ID			Y	N
		Status	Y	NA	Y	Y
		Account	Y	N	Y	Y
		Primary Con-tact	Y	Y	Y	Y
		Organizer	Y	Y	Y	Y
		Location	Y	N	Y	Y
		Location Line 2	Y	N	Y	Y
		All Day Event	Y	N	Y	Y
		Start Date/ Time	Y	Y	Y	Y
		End Date/Time	Y	Y	Y	Y
		Category	Y	Y	Y	Y
		Priority	Y	Y	Y	Y
		Owner	Y	Y	Y	Y
		Created On			Y	NA
		Created By			Y	NA
		Last Changed On			Y	NA
		External ID			Y	NA
		Sales Territory	Y	N	Y	Y
		Activity List			Y	NA
		Sales Organiza-tion	Y	N	Y	Y
		Distribution Channel	Y	N	Y	Y

			Create Screen		Detailed View	
Tab	Section	Field	Create	Default	Display	Edit (direct/via actions/via Navigation)
		Division	Y	N	Y	Y
		Extension Fields	Y	N	Y	Y
		Attendees	Y	N		
		Notes	Y	N		
	Attachments	Attachments			Y	Y
	Involved Parties	Role/Name/Phone/E-mail/Address			Y	Y
	Notes	Notes	Y	N	Y	Y
Follow-Up Items					Y	Y
Related Items					N	N

Offline Actions

Object	Tab/Global	Action	Offline Availability
Appointment	Global	Set as In Process	Y
		Set as Complete	Y
		Set as Canceled	Y
		Generate Summary	N
		Add Attachments	Y
		Add Involved Parties	Y

TASKS

Offline Scope

			Create Screen		Detailed View	
Tab	Section	Field	Create	Default	Display	Edit (directly, via actions or via naviga-tions)
Overview	Header	Document Type	Y	Y	Y	Y
		ID			Y	N
		Status	Y	Y	Y	Y
		Subject	Y	Y	Y	Y
		Processor	Y	Y	Y	Y
		Start Date/ Time	Y	Y	Y	Y
		Due Date/Time	Y	Y	Y	Y
		Date Com-pleted			Y	N
		Planned Dura-tion	Y	N	N	N
		Actual Duration			N	N
		Completion (%)	Y	Y	Y	Y
		Category	Y	Y	Y	Y
		Priority	Y	Y	Y	Y
		Account	Y	N	Y	Y
		Primary Con-tact	Y	Y	Y	Y
		Owner	Y	Y	Y	Y
		Created On			Y	NA
		Created By			Y	NA
		Last Changed On			Y	NA
		External ID			Y	NA

			Create Screen		Detailed View	
Tab	**Section**	**Field**	**Create**	**Default**	**Display**	**Edit (directly, via actions or via navigations)**
		Sales Territory	Y	N	Y	Y
		Activity List			Y	NA
		Sales Organization	Y	N	Y	Y
		Distribution Channel	Y	N	Y	Y
		Division	Y	N	Y	Y
		Extension Fields	Y	N	Y	Y
		Notes	Y	N		
	Attachments				Y	Y
	Involved Parties	Role/Name/ Phone/Email/ Address			Y	Y
	Notes				Y	Y

Offline Actions

Object	Global / Tab	Actions	Offline Availability
Task	Global	Set to In Process	Y
		Set to Complete	Y
		Set to Cancelled	Y
		Add Attachment	Y
		Add Involved Party	Y

PHONE CALLS

Offline Scope

			Create Screen		Detailed View	
Tab	Section	Field	Create	Default	Display	Edit(direct /via actions/ via navigations)
Overview	Header	Document Type	Y	Y	Y	Y
		ID			Y	N
		Status	Y	Y	Y	Y
		Subject	Y	Y	Y	Y
		Organizer	Y	Y	Y	Y
		Start Date/ Time	Y	Y	Y	Y
		End Date/Time	Y	Y	Y	Y
		Direction	Y	Y	Y	N
		Category	Y	Y	Y	Y
		Priority	Y	Y	Y	Y
		Account	Y	N	Y	Y
		Primary Con- tact	Y	Y	Y	Y
		Owner	Y	Y	Y	Y
		Campaign	Y	N	Y	N
		Response Op- tion			Y	Y
		Created On			Y	NA
		Created By			Y	NA
		Last Changed On			Y	NA
		External ID			Y	NA
		Sales Territory	Y	N	Y	Y
		Ticket ID			N	N

			Create Screen		Detailed View	
Tab	**Section**	**Field**	**Create**	**Default**	**Display**	**Edit(direct /via actions/ via navigations)**
		Activity List			Y	N
		Sales Organization	Y	N	Y	Y
		Distribution Channel	Y	N	Y	Y
		Division	Y	N	Y	Y
		Extension Fields	Y	N	Y	Y
		Notes	Y	N		
	Attachments				Y	Y
	Participants	Role/Name/ Phone/Email/ Address			Y	Y
	Notes				Y	Y

Offline Actions

Object	Global / Tab	Actions	Offline Availability
Phone Call	Global	Set as In Process	Y
		Set Complete	Y
		Set as Canceled	Y
		Generate Summary	N
		Add Attachment	Y
		Add Participant	Y

22.8 Activities FAQ

Having trouble using activities? Check this list of questions and answers for help.

22.8.1 Why is the calendar of an account useful?

The calendar view of an account shows all upcoming appointments between your company and that account in one calendar, even if they were scheduled by other colleagues. For example, you can check the account calendar to ensure that you're not scheduling a customer visit at the same time the customer has a meeting scheduled with another colleague.

22.8.2 Why does the account address appear as the location?

If the location is left blank when you save a new appointment, the solution uses the account's main address as the default location. You can update the appointment as necessary.

22.8.3 What if I need more space for the location of an appointment or visit?

The location in the system allows 80 characters. If the appointment was synchronized from the e-mail add-in, the solution copies the first 80 characters of the location. If you need more space for the location, you can use personalization to add a second line for the location.

If you personalize your appointment and visit display, when you synchronize an appointment or visit from the e-mail add-in, the rest of the characters (up to 255 characters total) appear in line 2.

If you enter location information in line 2 directly in the browser, there is no character limit.

22.8.4 What is the difference between canceling and deleting an activity?

Deleted activities disappear from the system. Canceled activities still appear in the system, which means that you can use them to track activities that were originally scheduled, but not completed.

If you use one of the e-mail add-ins, canceled activities are synchronized. In your e-mail inbox, a canceled activity and a deleted activity are reflected the same way. For example, for an appointment, if you are the organizer, the appointment is canceled and a cancellation is sent to participants.

Related Information

E-Mail Add-Ins [page 804]
You can leverage tools you use every day, such as your e-mail inbox, to become more productive.

22.8.5 What is the difference between the activity planner and the visit planner?

The activity planner lets you create activity plans and routing rules for them. The visit planner helps you filter and determine which accounts you want to visit.

Use the activity planner to create an activity plan, which is a collection of tasks and surveys. You can also create routing rules to direct these collections to visits, opportunities, service tickets, or phone calls, for example.

Use the visit planner to determine which accounts to schedule for site visits. You can use filters such as accounts that are overdue for visits, or accounts within your region.

Routes offer the same features as the visit planner, plus some additional features such as plotting visits on a map. The routes feature allows you to plan visits for your employees more effectively.

> → Tip
>
> If you're a new customer or just start to use visits, we recommend using routes to plan visits.

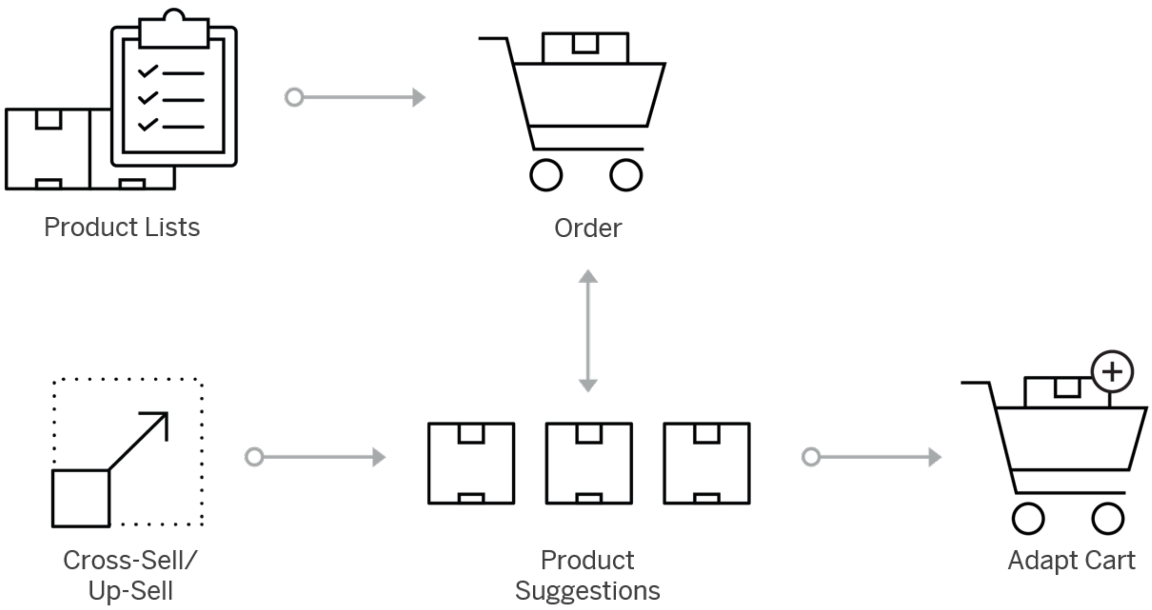
22.8.6 What is an email blast?

An e-mail blast is a mass-e-mail tool that you can use to send information to a large group of recipients at the same time. For example, sales personnel may use e-mail blasts to send out quick informational e-mails to announce new products, send monthly newsletters, or call attention to a company blog.

To use e-mail blasts, your administrator must make the appropriate settings in your solution.

23 Product Lists

Product Lists with SAP Cloud for Customer offers your company flexible product proposals in sales transactions enabling users to streamline sales processes.



Administrators set up default products from product lists so that when users create sales transactions such as quotes or orders, proposed quantities are listed.

When users create quotes or orders, depending on the set-up, the solution suggests products depending on accounts, account hierarchy, sales area, target group, or territory. With the creation of certain product lists, users can quickly add products and related quantities for quotes or orders.

In addition, administrators can set up cross, up, or down-selling. Cross-selling offers proposed products that can be added to a required product in the sales document when the required product is part of the sales transaction. Up or down selling proposes products that replace a required product in the sales document.

If your company would like to restrict or exclude product selections in sales transactions, administrators can set up in the solution as well.

Administrators add multiselect products from product lists in offline mode to the company sales transactions. Administrators can also use product lists in offline mode (extended tablet app).

23.1 Scope and Configure Product Lists

Administrators can use product lists when sales quotes or sales orders is scoped. In addition, there are product lists fine-tuning activities.

→ Recommendation

We recommend that you review all the scoping questions in the areas that are relevant and that you have included in your scope. When you select a question, more information appears on the tabs in the details section of the screen.

When you log on as an administrator, you can find the scoping questions under *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Sales* > *New Business* > *Sales Orders* > *Questions for Sales Orders* > *Group: Product List for Sales Orders*.

Scoping questions and fine-tuning activities that are straightforward may not be included in this list.

23.1.1 Enable Product Lists

To use product lists, administrators should ensure that sales orders or sales quotes are in scope.

Product lists enable you to suggest products or products by product category. You can also decide whether you want your sales team to use products list types or default products.

1. Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Sales* > *New Business* > *Sales Orders* and check the box.
2. Assign the *Product Lists* work center to the appropriate business roles.

i Note

To use product lists in offline mode, assign colleagues to the *Product Lists* tab.

23.1.2 Configure Product List Sequences

As an administrator, learn how to configure a sequence of the proposed products within a product list.

Add the products to sales quotes or sales orders in the same sequence represented in the product list.

1. Navigate to *Proposed Product* or *Proposed Product Categories*.
2. Click *Personalize* or *Adapt*.
3. Add the hidden field *Sequence*.
4. Go to *More* > *Renumber* to edit your sequence.

→ Tip

Clicking *Renumber* defines in increments of ten (10). This action is helpful in cases when you later add products to another sequence.

5. Enter any numerical value in the *Sequence* column.
6. Save your entries and the system automatically reorders the list based on the number values in this column.

i Note

In the quote or order fast entry, products appear in reverse order. Added products display on the top row.

23.1.3 Configure Access Control for Product Lists

As an administrator, learn how to define access control restrictions for product lists.

Administrators can restrict access control to read and write access to the *Product Lists* enter tab.

1. To define access control for product lists, navigate to *Administrator* > *General Settings* > *Users* > *Business Roles*.
2. Click the *Business Role ID* for the user you want to change the access rights for.
3. Click *View All* > *Access Restrictions* and highlight *COD_PRODUCTLIST_WCVIEW*.
4. In the *Read Access* row, select *Restricted*.
5. Under *Restriction Rule*, select *2 – Employee*.

After defining access control, users with the modified business role have product list selections in their transactions. This step eliminates the need to add the *Product Lists* tab to their business role.

i Note

If users work in offline mode using product lists, administrators should assign the product lists tab to those users.

23.1.4 Configure Product List Categories

Administrators can fine-tune product list categories.

1. Go to *Business Configuration* > *Implementation Projects*.
2. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *All Activities*.
3. Search for and open *Product List Categories*.
4. Click *Add Row*.
5. Enter a category ID and description.
6. Save your entries.

23.1.5 Configure Product List Determination Based on Requested Delivery Date

To determine product list based on requested date, follow these steps:

1. Navigate to *Business Configuration* > *Overview* > *Sales Quotes* > *Maintain Document Types*.
2. In the *Document Type* screen, select the document type that you want to change and under *Product Proposal Date*, select *Requested Date (Header)*.

When you select the specific *Document Type* during the quote creation process, the product list is determined based on the *Requested Date*.

23.1.6 Configure Product List Determination Based on Document Type

To determine product list based on document type based on sales quotes, sales orders, or opportunity, follow these steps:

1. Navigate to *Product* > *Product List* > *Sales*.
2. Scroll down to *Document Type*.
3. To add a new document type, click *Add*.
4. In the *Document Type* window, select an option and click *Add*.
5. Click *Save*.

23.1.7 Configure the Default Product Quantity to Zero

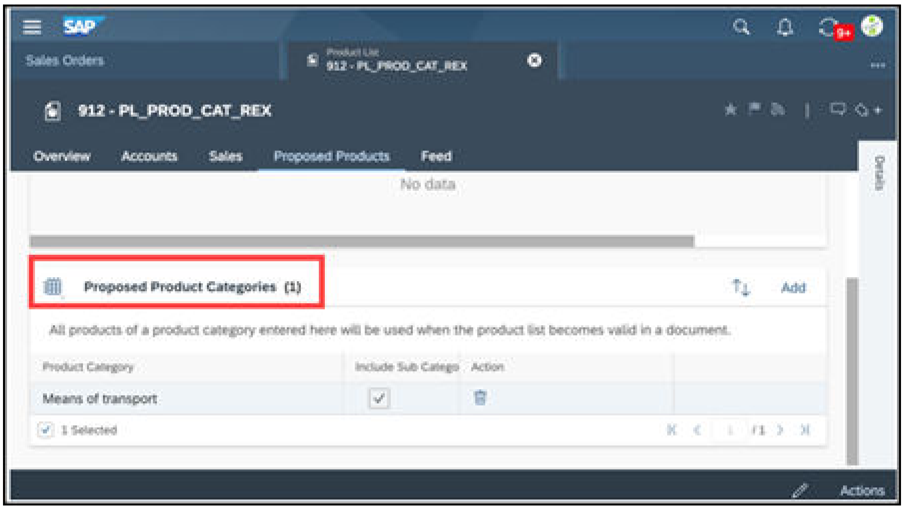
Administrators can configure the product quantity default to zero (0) instead of one (1).

If no other proposed quantities are maintained, you can default the requested quantity is sales quotes and sales orders to zero (0). The configuration improves your usability in cases where order entry occurs mainly on mobile devices. The use of the business option is helpful when adjustments on requested order quantities are mainly changed using an increment counter on the user interface.

Navigate to *Business Configuration* > *Scoping Element: Sales* > *Sell Standard Products* > *Product Quantity Default* > *Do you want to change the product quantity default in sales documents from one to zero?*

23.1.8 Configure Product Lists Based on Categories for Offline Use

Configure product lists based on product categories. In offline mode, users can access the product list with all products belonging to that product category.



23.2 Maintain Product Lists

Administrators create, copy, and migrate product lists as well as set-up automatic product proposals.

The solution supports the following product lists types:

- *Product Proposal* - Define a validity for all accounts, individual customer assignments, sales areas, territories, or target groups. You can also create product proposals using product categories.
- *Cross/Up/Down Selling* - Define cross-sell, up-sell, or down-sell to recommend related products, more expensive products, or products that conform to a customer budget.
- *Product Exclusion* - Exclude products, product categories so that defined products from lists are not visible to users in sales transactions.
- *Product Restriction* - Restrict the selection for products and or product categories in sales transaction based on a restricted product list.

Create a Product List [page 1028]
    Learn how to create product lists.

Use Automatic Product Proposals [page 1030]
    Learn about automatic product proposals in product lists.

Migrate Product Lists [page 1031]
    Learn about migrating product lists from external sources to SAP Cloud for Customer using migration templates.

Copy Product Lists [page 1031]
    Learn how to save time and copy existing product lists.

Use Validity for Product Lists [page 1031]
Explore how the maintained product lists validity affects product lists.

Product List Categories [page 1031]
Learn about using and defining the proposed products to be selected based on product list category (including its hierarchy).

Define Product List Queries [page 1032]
Learn how to define an advanced product list search query, for example, by sales organization, distribution channel, or division.

Use Advanced Search for Product List Fields [page 1033]
Personalize or adapt the advanced search screen for product lists to enable a search for hidden fields.

Simultaneously Search and Add Products or Accounts [page 1033]
From *Product Lists*, concurrently search for a product and add it if it does not already exist in the table.

Implement BAdIs for Product Lists [page 1033]
Learn about the product list BAdI which allows you to narrow down the product lists determination result.

Add External Product IDs to External Systems [page 1033]
Learn about adding external fields to the *Proposed Products* tab.

Copy and Paste Account and Products Mass Entries in Product Lists [page 1034]
You can copy items from Excel using the copy and paste function in product lists.

Mass Update Product Lists [page 1034]
You can reduce time with a mass update of products assignments without configuration by their administrator.

Use List View to Select and Remove Products from Product Lists [page 1034]
Remove selected products from a product list.

Related Information

Use Cross, Up, and Down Selling

23.2.1 Create a Product List

Learn how to create product lists.

1. To create a product list, from the *Products* tab choose *Product Lists*, and select *New*.
2. Enter a description for the appropriate product list type and a validity period. In addition, decide whether the list is valid for all accounts and whether it is automatically proposed.

> **i Note**
>
> Mark *Valid for All Accounts* if the product list is valid for all customers, prospects, and individual customers.
>
> Mark *Automatic Proposal* if you want products to be automatically added to the sales document including the proposed product quantity.

3. Click *Save and Open*.
4. On the *Products* tab, add the products and enter a proposed quantity that end users enter automatically. For example, proposed products and quantities in a sales quote. Here you can also enter products with a specific validity period.

   → Tip

   Fields *Valid From* and *Valid To* may be personalized and hidden.
5. If the list is only valid for specific accounts or target groups, add them to the *Accounts* tab.

   i Note

   The Accounts tab disappears when the list is valid for all accounts.

   If you use accounts with hierarchies and you want to include them in the determination, subordinate accounts are also determined.
6. Narrow the determination by adding sales areas and sales territories on the *Sales* tab.

   → Remember

   The product list is determined if the sales document has the correct account, sales area, and sales territory maintained.
7. Save your product list and activate it from *Actions*.

When users create sales transactions, product lists assigned to their accounts, sales, areas, and territories are available.

→ Tip

Personalize or adapt the advanced search screen for product lists to enable a search for hidden fields.

23.2.1.1 Configure Product List Sequences

As an administrator, learn how to configure a sequence of the proposed products within a product list.

Add the products to sales quotes or sales orders in the same sequence represented in the product list.

1. Navigate to *Proposed Product* or *Proposed Product Categories*.
2. Click *Personalize* or *Adapt*.
3. Add the hidden field *Sequence*.
4. Go to *More* > *Renumber* to edit your sequence.

   → Tip

   Clicking *Renumber* defines in increments of ten (10). This action is helpful in cases when you later add products to another sequence.
5. Enter any numerical value in the *Sequence* column.
6. Save your entries and the system automatically reorders the list based on the number values in this column.

> **i Note**
>
> In the quote or order fast entry, products appear in reverse order. Added products display on the top row.

23.2.1.2 Configure Access Control for Product Lists

As an administrator, learn how to define access control restrictions for product lists.

Administrators can restrict access control to read and write access to the *Product Lists* enter tab.

1. To define access control for product lists, navigate to *Administrator* > *General Settings* > *Users* > *Business Roles*.
2. Click the *Business Role ID* for the user you want to change the access rights for.
3. Click *View All* > *Access Restrictions* and highlight *COD_PRODUCTLIST_WCVIEW*.
4. In the *Read Access* row, select *Restricted*.
5. Under *Restriction Rule*, select *2 – Employee*.

After defining access control, users with the modified business role have product list selections in their transactions. This step eliminates the need to add the *Product Lists* tab to their business role.

> **i Note**
>
> If users work in offline mode using product lists, administrators should assign the product lists tab to those users.

23.2.2 Use Automatic Product Proposals

Learn about automatic product proposals in product lists.

When your administrator creates products and defines *Automatic Proposal* when creating new product lists, products are automatically added to the sales document including the proposed product quantity.

Automatic proposals are defined per validity for all accounts or based on individual customers (including account hierarchy) assignments. In addition, sales areas, territories, and target groups can be defined in automatic proposals .

When users create sales transactions such as quotes, products may be automatically defaulted. For example, product catalogs, product catalogs would be included in the quote transaction.

> **i Note**
>
> You can assign products to a sales order or sales quote based on a restricted product list. When you unblock the restricted *Product List*, the system proposes only the products in the restricted product list during the quote creation process. You can select and edit product proposals derived from a restricted product list.

23.2.3 Migrate Product Lists

Learn about migrating product lists from external sources to SAP Cloud for Customer using migration templates.

Administrators upload data into their system such as product lists by using the migration tool. Download the required templates, enter the necessary data into them, and follow the steps to import the product list data to your system.

Alternatively, you can upload product lists and other business objects using the Data Workbench.

23.2.4 Copy Product Lists

Learn how to save time and copy existing product lists.

To copy a product list, from *Products*, choose the *Product Lists* tab to open the list you want to copy. Then, click *Actions* > *Copy*. All details of the original product list are copied over and you can edit the new list details, such the product list name and its products.

23.2.5 Use Validity for Product Lists

Explore how the maintained product lists validity affects product lists.

Several types of validity can be created when working with product lists:

- *Valid for All Accounts* - Selecting this checkbox means that the product list is valid for all customers, prospects, and individual customers.
- *Valid From* - The created product list is available once the administrator activates it.
- *Valid To* - The product list is no longer available after the display date. There is also a validity on proposed product lists, which should be within the header validity range.

23.2.6 Product List Categories

Learn about using and defining the proposed products to be selected based on product list category (including its hierarchy).

Product categories include detailed information about goods your company produces or sells. For example, the product name, and product ID.

Product categories are used to organize the products you company sells. For example, if you sell boilers, your categories might be combi boilers, heat only boilers, or system boilers. If you company only sells one product type such as computer keyboards, you could create product categories for laptops, gaming, ergonomic keyboards.

23.2.6.1 Use Product List Categories

Relevant for administrators or key users, fine-tuning is required to define the product list category. The category can be used to define which list should be copied to a survey.

> **i Note**
>
> If the *Category* field is not displayed, you can add it to the *New Product List* screen by navigating to *Personalize* or *Adapt*.

> **→ Tip**
>
> Product list categories have no correlation to product categories in the product master.

23.2.6.2 Configure Product List Categories

Administrators can fine-tune product list categories.

1. Go to *Business Configuration* > *Implementation Projects*.
2. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *All Activities*.
3. Search for and open *Product List Categories*.
4. Click *Add Row*.
5. Enter a category ID and description.
6. Save your entries.

23.2.7 Define Product List Queries

Learn how to define an advanced product list search query, for example, by sales organization, distribution channel, or division.

1. Navigate to *Products* > *Product Lists*.
2. Select to *Personalize* or *Adapt*.
3. Click the sections until the plus (+) add field sign appears to add the desired fields.
4. Select the desired fields to be included in your defined product list search query.
5. Click *Save Query* and exit from *Personalize* or *Adapt*.

> **→ Tip**
>
> You can use product list queries to distribute product lists to offline clients.

23.2.8 Use Advanced Search for Product List Fields

Personalize or adapt the advanced search screen for product lists to enable a search for hidden fields.

23.2.9 Simultaneously Search and Add Products or Accounts

From *Product Lists*, concurrently search for a product and add it if it does not already exist in the table.

The feature also applies to accounts. If an account does not already exist, you can concurrently search for it and add it to the list.

> **i Note**
>
> You cannot disable the feature in the key user tool.

23.2.10 Implement BAdIs for Product Lists

Learn about the product list BAdI which allows you to narrow down the product lists determination result.

The BAdI *ProductBusinessPartnerRelationDeterminationFilter* is based on additional attributes defined on product list header by its own implementation.

> **i Note**
>
> Product list BAdIs cannot be used in offline mode.

23.2.11 Add External Product IDs to External Systems

Learn about adding external fields to the *Proposed Products* tab.

1. Navigate to *Products* > *Product Lists*.
2. Open a product list to edit.
3. Select to *Personalize* or *Adapt*.
4. Click the *Valid To* section until the plus (add field) sign appears.
5. Click the plus sign and add the following fields:
   - *External Product ID* - The ID from external systems such as SAP ERP is displayed.
   - *External System* - The name from external systems such as SAP ERP is displayed.

23.2.12 Copy and Paste Account and Products Mass Entries in Product Lists

You can copy items from Excel using the copy and paste function in product lists.

This task allows you to quickly paste accounts and products to a product lists. Ensure that the copied data exactly matches the order of columns in the user interface so that the combined fields represent two columns.

1. Open a product list.
2. Go to the *Accounts* or *Products* of the product list.
3. Click the *Paste* icon and the paste field appears.
4. Click in the *Paste supported data, such as Excel* field.
5. Use your keyboard paste function, such as Ctrl + V (or Shift + Insert) to paste the data in the field.

> i Note
>
> The number of input fields should not exceed the maximum number of exposed fields.

23.2.13 Mass Update Product Lists

You can reduce time with a mass update of products assignments without configuration by their administrator.

Mass update product assignments such as, *Proposed Products*, *Restricted Products*, *Excluded Products*.

1. Click *Actions*.
2. Go to the *Product Lists*.
3. 2. Select the *Product Lists* that need updating.

   > i Note
   >
   > For *Product Lists* that need replacing, filter by *Product ID*.
4. Select one of the following:
   - *Add Product* - Perform a mass product update from the *Products* tab for all selected product lists.
   - *Update Product* - Perform a mass product update from the *Products* tab for all selected product lists. You can modify the validity or replace it with another product.
   - *Remove Product* - Perform a mass removal of products from the *Products* tab for all selected product lists.

23.2.14 Use List View to Select and Remove Products from Product Lists

Remove selected products from a product list.

Use the list view to select the products and then use the *Remove* option under the *Actions* menu to remove products.

23.3 Add Quick Products from Product Lists to Sales Quotes

Learn how to quickly add products and related quantities to sales quotes or sales orders using the action *Product Lists*.

Procedure

1. Open or create a sales quote or sales order.
2. Click *Quick Create*. Alternatively, you can add quick products from the quote or order from *Actions* > *More*.
3. Click *Actions* > *More*.
4. Add products from the defined product lists.

   When your administrator maintains *Product Lists*, you can multiselect products based on defined proposals that depend on:
   - Target groups
   - Accounts
   - Account hierarchy
   - Sales data
   - Territory

   You can also copy and paste products to list using *External ID*.

   Use Cross, Up, and Down Selling [page 1035]
   Learn how the solution uses cross selling to display proposed products to users when creating sales transactions.

23.3.1 Use Cross, Up, and Down Selling

Learn how the solution uses cross selling to display proposed products to users when creating sales transactions.

Cross, up, and down selling offers proposed products, which can be added to a sales document when selected by the user.

When sales quotes include required products from the list, users see a list of related products, product upgrades, or economical products in the sales transactions.

1. If you use cross-sell products, to the sales quote or sales order, navigate to *Recommended Products* on the *Products* tab.

   > **Note**
   >
   > The *Recommended Products* tab is only visible if your administrator has defined cross-selling. Up and down-selling is indicated using an action. Clicking the action allows you to select and exchange the product. For quotes, you can add the product as an alternative item.

2. Click ▸ *Action* ▸ *Up/Down Selling Products* ▸.

> **Note**
>
> The *Up/Down Selling Products* field indicates that users can replace the product to use up or down-sell. The icon only appears if your administrator has defined the applicable product proposals.

3. Enter the desired quantities.
4. Save your entries and continue processing the sales quote.

23.3.1.1 Create Product Lists for Cross, Up, and Down Selling

Learn how to create cross, up, or down selling product lists types, allowing users to select from those products in a sales quote or sales order.

1. Navigate to ▸ *Products* ▸ *Product Lists* ▸ *New* ▸.
2. Select the *Personalize* or *Adapt* menu to modify the screen layout.
3. Click the plus sign (+) to add the *Type* field and save your changes.
4. Exit the personalization or adaptation mode.
5. Select the product proposal *Type* such as up, down or cross.
6. Add products by clicking ▸ *Proposed Products* ▸ *Add* ▸ and enter a product name or ID.

> **Note**
>
> In the newly created product list, the *Required Products* tab appears. For other product lists types, addition tabs may also appear. For example, the *Excluded Products* tab appears when creating new product exclusion list types.

7. Choose the type of desired proposed products, for example, *Cross Selling*, *Down Selling*, *Up Selling*.

23.3.1.2 Recommend Products for Cross, Up, and down Selling

Add products to an opportunity from proposed product recommendations.

You can add products to your opportunities from proposed product recommendations for cross selling. Up and down selling is supported by using an action that proposes - up or down sell products to replace the selected product.

Under *Recommend Product from Cross Selling Product Lists*, add cross sell products to the opportunity products by selecting the plus (+) icon.

If you have already defined product lists that include up- and down sell products in sales quotes and sales orders, the action to replace a product is also displayed in the opportunity.

> **Note**
>
> Add *Recommend Product from Cross Selling Product Lists* from *Adaptation* mode.

23.4 Define Exclusions and Restrictions for Product Lists

Administrators can learn about defining product lists types, which exclude and restrict the selection of products and product categories in sales transactions.

You can also determine product lists based on requested date and *Document Type* for sales quotes and sales orders.

23.4.1 Configure Product Exclusions

Administrators can exclude products or product categories from a product list selection. Products from those lists are not visible to users in the product list item selection in sales transactions.

> **Example**
>
> For a certain territory or sales area, certain products are not being sold. These products can be excluded by a product list

When the list type *Product Exclusion* is created, the *Excluded Product* tab appears. Administrators can add exclude products in sales transactions.

Exclude products, product categories or both from a product list selection. Products from those lists are not visible in the product list item selection in a sales transaction. Users receive an error message stating `Product <ID> not valid; it is excluded by at least one product list`.

Use this function by selecting*Product Exclusion* from the *Type* list.

23.4.2 Configure Product Restrictions

Administrators can restrict products or product categories from a restricted product list. Users can only add products to sales transactions from those lists.

When the list type *Product Restrictions* is created, the *Restricted Product* tab appears. Administrators can restrict the desired product in sales transactions.

Restrict the selection for products, product categories in sales transaction based on a restricted product list. Only products from those lists are allowed to be added to a sales transaction. In addition, products from those lists can only be added to a sales transaction. If a product is selected outside a valid restricted product list, users receive an error message stating `Product <ID> not valid; it is not allowed (restricted by product list)`.

Use this function by selecting *Product Restriction* from the *Type* list.

23.4.3 Configure Product List Determination Based on Requested Delivery Date

To determine product list based on requested date, follow these steps:

1. Navigate to *Business Configuration* > *Overview* > *Sales Quotes* > *Maintain Document Types*.
2. In the *Document Type* screen, select the document type that you want to change and under *Product Proposal Date*, select *Requested Date (Header)*.

When you select the specific *Document Type* during the quote creation process, the product list is determined based on the *Requested Date*.

23.4.4 Configure Product List Determination Based on Document Type

To determine product list based on document type based on sales quotes, sales orders, or opportunity, follow these steps:

1. Navigate to *Product* > *Product List* > *Sales*.
2. Scroll down to *Document Type*.
3. To add a new document type, click *Add*.
4. In the *Document Type* window, select an option and click *Add*.
5. Click *Save*.

23.5 Use Product Lists Feed

Learn about the product list feed, which allows you to follow product lists that are relevant to you.

When an administrator creates product lists, an action appears in the product list feed displayed in *Feed* or within the product list on the *Feed* tab.

Users can view feed product list changes by using the follow action.

23.6 Use Product Lists Change History

Learn about viewing product list modifications.

Users assigned to product lists can track product list modifications by adding the *Changes* tab to the *Product List* tab.

Go to *Personalize* > *Start Personalization* and click *Add Tab* to make the *Changes* tab visible.

Search for changes by filtering the following change history fields:

- *Changes Made From*
- *Changes Made To*
- *Attribute*
- *Changed By User*

23.7 Use Product Lists Offline

Learn about working with product lists in offline mode.

You can add multiselect products from product lists in offline mode to your sales transactions.

> **Note**
>
> If users work in offline mode using product lists, administrators should assign the product lists tab to those users.

My Accounts Product Lists Query

You can select the query *My Accounts Product Lists* to download product lists for offline use. The query includes the following product lists:

- Valid for all accounts assigned to account hierarchies belonging to *My Accounts* (from the *Account Team* and or *Territory Team*).
- Assigned to target groups including *My Accounts*.
- Assigned to a territory belonging to *Territory* (including sub-territories).

An administrator can configure this setting by navigating to *Administrator* > *General Settings: Offline Settings*.

> **Note**
>
> The *My Account's Product Lists* query is not available for online selection.

24 Product Administration

Products help your colleagues drive sales activity and monitor customer satisfaction.

Choose *Products* > *Product Administration* to perform administrative tasks that relate to products. Your sales colleagues can add products to leads, opportunities and sales quotes, or assign products as a category for surveys, while your service colleagues can work with products as a criterion for categorizing, routing, or analyzing the text of customer tickets.

You have decided whether you want to create products manually, or upload data for products via the migration tool in the implementation project activity *Migration of Materials*.

Configuring Product Categories [page 1043]
Product categories help you organize products more easily by gathering them into recognizable entities.

Creating and Maintaining Product Lists [page 1046]
With product lists, you can combine a set of products associated with an account.

Enabling Cross, Up, and Down Selling [page 1049]
Create product lists of the Cross/Up/Down Selling type to enable users to select from those products in a sales quote.

Important tasks

Create products

To create products manually, proceed as follows:

1. Choose *Products* > *Product Administration*.
2. On the following screen, choose *New*.
3. Enter the required information.

> **i Note**
>
> Once your entries are saved, you can no longer change the *ID*.

4. Save your entries.

You can also create products by selecting an existing product and clicking on the *Copy* option. This copies the product's General data, *Overview*, *Sales*, *Attachments*, and *Quantity Conversion* data. You can then edit the data to suit your requirements. On clicking *Save*, a new product is created.

> **i Note**
>
> Some data that does not get copied includes *Price List*, *Customer Part Number*, and *Product ID*.

Add or change product images

1. Choose *Products* > *Product Administration* .

   > **Note**
   >
   > You cannot add or change product images in the *Products* tab. You can only do so under *Products* > *Product Administration* .

2. Open the product.
3. Choose *Actions* > *Change Image* .
4. Choose *Browse*.
5. Specify the file of the image to be assigned to the product from now on, then choose *OK*.
6. Save your entries.

> **Note**
>
> You can also scope your solution to enable users to add product images to sales quote form templates. While scoping your solution, choose *Sales* > *New Business* > *Communication for New Business* , then answer the corresponding question.

Add minimum order quantity, and sales notes

1. Open the product.
2. Select the *Sales* tab.
3. Choose *Add*.
4. Specify the sales organization and distribution channel, then choose *OK*.
5. Specify the sales unit of measure and the minimum order quantity.
6. If desired, choose *Sales Notes* to enter language-dependent information for this product.
7. Save your entries.

Add a customer part number

1. Open the product.
2. Select the *Sales* tab.
3. Create a new row for sales organization and distribution channel or select an existing one, and click on the *Customer Part Number* tab.
4. Click on *Add Row*.
5. Enter the *Customer*, *Customer Part Number*, and *Description* details.
6. Save your entry.

Assign a Static Rounding Profile

1. Open the product.
2. Select the *Sales* tab
3. Create a new row for sales organization and distribution channel or select an existing one, and click on the *Sales* sub tab.
4. Select the relevant *Rounding Profile* from the dropdown list.

> **i Note**
>
> The *Rounding Profile* field is hidden by default. You can enable it through the *Personalize* option.

5. *Save* your entries.

Change the status for products and competitor products

1. Choose *Products* > *Product Administration*.
2. If necessary, personalize this screen to make the *Status* column visible.
3. Open the product whose status you want to change.

> **i Note**
>
> By default, the system only displays products whose status is *Active*. If you want to display products whose status is *Blocked*, then use the *Advanced Search* option.

4. Change the status as follows:
   - For an active product, choose *Actions* > *Block*.
   - For a blocked product, choose *Actions* > *Activate*.

> **i Note**
>
> - You can determine the status of the corresponding sales organization within the *Sales* table. If the status of the sales organization is active, and if you block the product, then the status of the sales organization is set to *Blocked* as well. However, if the status of the sales organization is blocked, and if the status of the product is active — but you decide to block it — then if you later activate the product anew, the sales organization status will not change.
> - If the status of a product is *Blocked*, then you cannot change the status of the corresponding sales organization.

Use products to route tickets

You can use products as a criterion for routing customer tickets to your service colleagues. For more information, see *Defining Rules for Ticket Routing*.

Related Information

[Configuring Product Categories [page 1043]](#)
    Product categories help you organize products more easily by gathering them into recognizable entities.

[Creating and Maintaining Product Lists [page 1046]](#)
    With product lists, you can combine a set of products associated with an account.

Configuring Employees

24.1 Configuring Product Categories

Product categories help you organize products more easily by gathering them into recognizable entities.

Product categories help your colleagues organize products more easily by gathering them into recognizable entities.

Choose *Administrator* > *General Settings* > *Products* and then choose *Product Categories*, to create and edit your product categories, and to organize them into a product category hierarchy.

Parent topic: Product Administration [page 1040]

Related Information

Creating and Maintaining Product Lists [page 1046]
    With product lists, you can combine a set of products associated with an account.

Enabling Cross, Up, and Down Selling [page 1049]
    Create product lists of the Cross/Up/Down Selling type to enable users to select from those products in a sales quote.

Tasks

Create the root product category

1. Choose *New Hierarchy*.
2. In the first row of the table, enter the *Product Category ID*.
3. In the *Details* section, specify the additional details for the root product category, as follows:
    - In the *Product Category* field, enter the product category description.
    - Choose the *Language* for the new product category.

→ Tip

It is not best practice to allow users to assign products to the root product category. We therefore recommend that you deselect the *Product Assignment Allowed* checkbox of the root product category.

4. Choose *Save*.
   You can now add product subcategories, and organize a product category hierarchy.

Create a product category

1. Choose *Maintain Product Categories* to open the *Product Categories* editor.
   The *Table* view of the *Product Categories* editor is displayed by default.
2. Select the product category to which you want to add a subcategory.
3. Choose *Actions*, then *Add Subcategory*.
   The new category is added as a blank row.
4. Enter the *Product Category ID* in the new row.
5. In the *Details* section, specify the additional details for the product category, as follows:
   - In the *Product Category* field, enter the product category description.
   - Choose the *Language* for the new product category.
   - To allow products to be assigned to the product category, select the *Product Assignment Allowed* checkbox.
6. Choose *Save*.

Upload product categories

You can also upload product categories into your solution with the migration tool that is available in the implementation project activity *Product Category Hierarchy*.

Organize product categories in Table view

1. Open the *Product Categories* editor.
2. Before you begin to organize them, expand or collapse the levels of your product category hierarchy as required.
3. Within the product category hierarchy, move product categories up or down, as follows:
   1. Select the product category you want to move.
   2. Choose *Actions* , then *Move Product Category*.
   3. Enter the product category ID of the destination product category.
      In response, the product category becomes a subcategory of the destination product category.
4. Choose *Save*.

Organize product categories in Chart view

1. Open the *Product Categories* editor.
2. Choose *Chart* to display the *Chart* view of the *Product Categories* editor.
3. Expand or collapse the levels of your product category hierarchy, as required, and adjust your view of the product category hierarchy by zooming in or out, as follows:
    - To focus on a particular category, select the category and choose *Actions*, then *Zoom In*. Alternatively, choose the arrow in the lower right corner of the category and select *Zoom In*.
    - To zoom out again, select the category and choose *Actions*, then *Zoom Out*. Alternatively, choose the arrow in the lower right corner of the category and select *Zoom Out*.
4. Within the product category hierarchy, move product categories up or down, as required.
5. Choose *Save*.

Delete product categories

1. Open the *Product Categories* editor.
2. Select the product category that you want to delete.
3. Choose *Actions*, then *Delete*.

    > **i Note**
    >
    > You can only delete a product category if no products are assigned to it or any of its subcategories.

4. Choose *Save*.

Use product categories to route tickets

You can use product categories as a criterion for routing customer tickets to your service colleagues. For more information, see *Defining Rules for Ticket Routing*.

Related Information

Configuring Products [page 1040]
Products help your colleagues drive sales activity and monitor customer satisfaction.

Creating and Maintaining Product Lists [page 1046]
With product lists, you can combine a set of products associated with an account.

24.2 Creating and Maintaining Product Lists

With product lists, you can combine a set of products associated with an account.

When you create a sales quote for an account that has an associated product list, the product list will appear at the end of the form after you choose *New*. To create a product list, enable the *Product Lists* view in the *Products* work center. There you then can create a list, and use it in your quote when the list is activated.

Parent topic: Product Administration [page 1040]

Related Information

Configuring Product Categories [page 1043]
Product categories help you organize products more easily by gathering them into recognizable entities.

Enabling Cross, Up, and Down Selling [page 1049]
Create product lists of the Cross/Up/Down Selling type to enable users to select from those products in a sales quote.

Business background

Migrating Product Lists

You can migrate product lists from external sources to SAP Cloud for Customer using migration templates.

Access Control for Product Lists

You can also restrict the access to product lists to the responsible employee or own restrictions.

Extensibility

You can extend the product lists with your own fields and also add costs to the product lists.

Advanced Search Fields for Product Lists

You need to personalize or adapt the advanced search screen for product lists in order to enable searching on the newly available fields. Add the following fields to the advanced search screen for product lists:

- Sales Organization

- Distribution Channel
- Division

Important tasks

Creating Product Lists

1. To create a product list, choose the *Product Lists* view in the *Products* work center and click *New*.
2. Enter a description, a validity, and decide whether the list is valid for all accounts and whether it should be proposed automatically.
3. Click *Save and Open*.
4. On the *Products* tab add the products you want to have in the list and enter a proposed quantity that should be entered automatically, for example, in a sales quote. Here you can also enter products with a specific validity period. The fields *Valid From* and *Valid To* are personalized hidden.
5. If the list is only valid for specific accounts or target groups, add them on the *Accounts* tab.

   > i Note
   >
   > - The *Accounts* tab disappears when the list is valid for all accounts.
   > - In case you use an account hierarchy and you want to include it in the determination, also all subordinate accounts are determined.

6. You can narrow the determination additionally by adding sales areas and sales territories on the *Sales* tab.

   > i Note
   >
   > Be aware that in this case the product list will only be determined if the sales document has the correct account, sales area, and sales territory maintained.

7. Now you can save your product list and activate it.

Copy a Product List

To copy a product list, choose the *Product Lists* view in the *Products* work center and open the list you want to copy. Then click *Actions* > *Copy*.

24.2.1 Restriction and Exclusion Product Lists

Restriction or *Exclusion* lists restrict or exclude products from appearing for selection.

> i Note
>
> The product lists must belong to the **same sales area as that of the account** for which you are creating these product lists.

To use this feature, you must have already created the following product lists of type:

- *Restriction* and added a set of products that you would to restrict the selection to.
- *Exclusion* and added a set of products that you would like excluded from selection.

In the sales order quick create, when you add products using product lists, you will see that the product lists (of type *Proposal* and *Restriction*) are displayed to the left of your screen and the products available for selection are shown to the right of the screen. The following conditions apply for the display of product lists and products:

- Only valid product list of type *Proposal* and *Restriction* should appear in the product lists section on the left of your screen.
- The products entries for any product list should not contain the excluded products.

> **i Note**
>
> The exclusion or restriction product lists are also valid in scenarios where products are manually added in a sales order. So if you add a product and that product belongs to an exclusion or restriction product list, the same validations and considerations as described above will apply.
>
> > **i Note**
> >
> > This feature is also available in the offline version of Extended Edition.

Validations and Messages: The product restriction and exclusion lists will be considered for product determination if the following criteria are fullfilled:

- **Products**:
  - If a product is included in both restriction and exclusion list, then the exclusion list criteria will take precedence.
  - If you add products that are included in an exclusion list, then a validation check ensures that the product is not added to the sales document. Similarly, if a product is not part of a restriction list, then a similar validation check as above applies.
  - Products enrolled in the lists are active in product master.
- **Validity**:
  - The validity of proposed products is the same as that of the product list. However, if you modify the validity of a product and it is no longer within the validity of the product lists, then the product does not appear for selection.
  - Product lists should be valid within the date range of the sales document.
- **Sales Area**:
  - Product sales area is active.
  - Product list account and sales area should match with that of the sales document.

    > **i Note**
    >
    > If no account is maintained, then the product list is considered valid for all sales documents.
- **Excluded product categories** - The behaviour of the feature for exclusion list is also valid for excluded product categories.

24.2.2 Define Product List Sequences

Define a sequence of the proposed products within a product list.

Context

This feature allows you to add the products to the sales quote or sales order in the same sequence represented in the *Product List*.

Procedure

1. Navigate to *Proposed Product* or *Proposed Product Categories.*
2. Click *Personalize* or *Adapt.*
3. Add the hidden field *Sequence.*
4. Go to *More* > *Renumber* to edit your sequence.

   Clicking *Renumber* defines in increments of ten (10). This action is helpful in cases where products are added later to another sequence.
5. Enter any numerical value in the *Sequence* column.
6. Save your entries. The system automatically reorders the list based on the number values in this column.

   In the quote or order fast entry, products appear in reverse order. Added products display on the top row.

24.3 Enabling Cross, Up, and Down Selling

Create product lists of the Cross/Up/Down Selling type to enable users to select from those products in a sales quote.

Follow these steps:

1. Go to *Products* > *Product Lists* > *New* .
2. Choose from either the *Personalize* or the *Adapt* menu to modify the screen layout.
3. Add the Type field to the *New Product List* box and save your changes.
4. Create a new product list and select the type: *Cross/Up/Down Selling*.
5. Go to the *Required Products* tab and add the reference products.
6. Go to the *Proposed Products* tab to add products and select their types as either cross, up, or down selling and save your product list.
   Any time a sales quote includes one of the required products from the list, the associated proposed products will be available for cross, up, or down selling, depending on their type in the product list.
   - Cross selling: results in a list of recommended products in the sales quote that the user can add directly to the quote.

- Up or down selling: results in an icon in the products list of a sales quote to indicate that the user can replace the product, to up or down sell, via the actions menu.

Parent topic: Product Administration [page 1040]

Related Information

Configuring Product Categories [page 1043]
Product categories help you organize products more easily by gathering them into recognizable entities.

Creating and Maintaining Product Lists [page 1046]
With product lists, you can combine a set of products associated with an account.

25 Activity Planning and Routing

Activity planner is used to plan activities such as surveys and tasks that help you achieve different business goals. By using routing rules, you can assign the surveys and tasks to business objects that are associated with specific accounts or territories.

Activity planning enables you to transform marketing initiatives and sales execution strategies into executable surveys and tasks. Let's say there is a new product launch next month. As part of the sales execution plan, every sales representative needs to talk to customers about this event in the next couple of visits. In addition, they need to collect sales data by conducting certain product surveys. As sales operations or key account managers, you can create activity plans that group relevant tasks and surveys. You can then define routing rules and make sure that the right set of tasks and surveys are intelligently assigned to each applicable visit for execution.

You can plan surveys and tasks for multiple objects. For example, you can assign questionnaire surveys that sales representatives must complete when they qualify a lead. Instead of adding standard surveys to each applicable lead, planning activities ahead of time facilitates qualification process and improves your work efficiency as a team. You can also assign customer satisfaction surveys to service tickets and gain insights into sale representatives' service performance.

In addition to tasks and surveys, you can suggest appointments and phone calls using activity planner. Currently, activity plans that contain appointments and phone calls can only be assigned to opportunities or sales quotes.

25.1 Scope and Configure Activity Planning

Administrators can configure the activity planner and the corresponding routing rules using scoping and scoping questions.

25.1.1 Enable Activity Planner

Before users can plan surveys and tasks using activity planner, administrators must add it to the project scope.

Procedure

1. Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Sales* > *Account and Activity Management* > *Activity Management* and check the box next to the scoping item.

2. Go to ▶ *Business Configuration* ▶ *Implementation Projects* ▶. Select your project and navigate to ▶ *Edit Project Scope* ▶ *Questions* ▶ *Sales* ▶ *Account and Activity Management* ▶ *Activity Management* ▶ and enable the scoping question for maintaining activity planners in the system.
3. Assign the *Activity Planner* work center view (ID: *ACTIVITYWORKLIST*) to appropriate users or roles.

Related Information

Create Business Roles and Assign Work Centers and Views

25.1.2 Configure Default Organizational Unit During Activity Plan or Routing Rule Creation

Administrators can set up the solution to pre-populate organizational unit based on the logged-in user who is creating the activity plan or routing rule.

Go to ▶ *Business Configuration* ▶ *Implementation Projects* ▶. Select your project and navigate to ▶ *Edit Project Scope* ▶ *Questions* ▶ *Sales* ▶ *Account and Activity Management* ▶ *Activity Management* ▶.

Under *Activity Planner*, answer the question about defaulting organizational unit based on the logged-in user.

25.2 Create Activity Plans

You can create activity plans to organize standard lists of tasks and surveys. Based on your business needs, the activity plan can be assigned to various business objects. You can also mass upload activity plans via the SAP Cloud for Customer APIs.

Prerequisites

You must have access to the *Activity Planner* work center to create an activity plan.

Context

Activity plans must be used together with routing rules. By using routing rules, the tasks and surveys within an activity plan can be determined and assigned to applicable business objects for further use.

> **i Note**
>
> In addition to tasks and surveys, you can suggest appointments and phone calls using activity planner. Currently, activity plans that contain appointments and phone calls can only be assigned to opportunities

or sales quotes. Administrators must add the *Appointments* and *Phone Calls* tabs in an activity planner via adaptation.

Procedure

1. Go to *Activity Planner* > *Plans*.
2. To create an activity plan, click the plus icon.

   When setting properties for the activity plan, you have following two indicators that you can turn on:

   - *Mandatory*
     If you toggle on this button at the activity plan level, all the tasks and surveys that you add to the plan are designated as mandatory by default. This button is also available in each individual task or survey, which you can toggle off as desired.
     It is useful to turn on this option when all or most of your tasks and surveys are mandatory to be completed.
   - *Assign Automatically*
     If you toggle on this button at the activity plan level, all the tasks and surveys that you add to the plan allow automatic assignment by default. This button is also available in each individual task or survey, which you can toggle off as desired.
     It is useful to turn on this option when all or most of your tasks and surveys must be assigned automatically.
3. To continue adding tasks and surveys to the activity plan, choose *Save and Open*.
4. To create a task in the activity plan, go to the *Tasks* tab and click *New*.

   For a task to be used in visits, you must clarify the *Frequency*. Choosing *Always* allows the task to be generated in every applicable visit. Choosing *Once* allows the task to be generated only until the task is completed for an account.

   > i Note
   >
   > **What happens when you define a frequency of once?**
   >
   > Some tasks and surveys only need to be completed once per account. For example, setting up a promotional display for a major sporting event only needs to be done once, and makes sense only until that sporting event is over.
   >
   > When you define one-time tasks or surveys in the activity planner, your SAP solution handles them as follows:
   >
   > Handling of One-Time Tasks and Surveys
   >
   > | Your Action | Response of SAP Solution |
   > | --- | --- |
   > | You complete the one-time task or survey during the first visit. | You don't see that task or survey again for the remainder of the date range defined in the activity plan. |

Your Action	Response of SAP Solution
You cancel the visit.	One-time tasks or surveys either: • **Automatically** move to next existing or generated visit within the date range defined in the activity plan. • Stay in the original visit as incomplete tasks or surveys forever, for example, when the activity plan is no longer in the validity period.
You complete the visit without completing the one-time task or survey.	One-time tasks or surveys either: • **Automatically** move to an existing or generated visit within the date range defined in the activity plan. • Stay in the original visit as incomplete tasks or surveys forever, for example, when the activity plan is no longer in the validity period.

Here you can also decide whether this particular task is mandatory to be completed and if it must be assigned automatically.

i Note

- For tasks and surveys that are automatically assigned, they are added to applicable business objects when the routing rules are triggered.
  Please check respective object documentation for when and how the routing rules can be triggered.
- For tasks and surveys that are not automatically assigned, sales users can manually add them to applicable business objects if needed.

5. To add notes and attachments to a task, select the task in the table and you can see the *Notes* and *Attachments* sections pop up.

   Notes and attachments are passed down when tasks are assigned.
6. To attach a survey to the activity plan, go to the *Surveys* tab and click *Add*.

   i Note

   You can only add surveys that are *Active* to an activity plan.

   For a survey to be used in visits, you must clarify its frequency of use. You can also decide whether this particular survey is mandatory to be completed and if it must be assigned automatically.
7. (Optional) Go to the *Organizational Units* tab and define sales units only to which the activity plan applies.
8. (Optional) Go to the *Involvement* tab and define sales employees and units that are involved with the activity plan.

   Sales people or groups involved can switch to the *Activity Plans for Me or My Area* view in the activity plan list to see plans that are relevant to them.
9. When you finish creating the activity plan, click *Save*.

Next Steps

Create routing rules to define criteria that a business object must fulfill to receive the activity plan.

Related Information

Create Routing Rules [page 1056]
You can create routing rules to assign an activity plan to various business objects. The routing rules contain a series of conditions that a business object must meet to receive certain activity plans.

25.2.1 Enable Activity Planner

Before users can plan surveys and tasks using activity planner, administrators must add it to the project scope.

Procedure

1. Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Sales* > *Account and Activity Management* > *Activity Management* and check the box next to the scoping item.
2. Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Sales* > *Account and Activity Management* > *Activity Management* and enable the scoping question for maintaining activity planners in the system.
3. Assign the *Activity Planner* work center view (ID: *ACTIVITYWORKLIST*) to appropriate users or roles.

Related Information

Create Business Roles and Assign Work Centers and Views

25.2.2 Configure Default Organizational Unit During Activity Plan or Routing Rule Creation

Administrators can set up the solution to pre-populate organizational unit based on the logged-in user who is creating the activity plan or routing rule.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Sales* > *Account and Activity Management* > *Activity Management*.

Under *Activity Planner*, answer the question about defaulting organizational unit based on the logged-in user.

25.3 Create Routing Rules

You can create routing rules to assign an activity plan to various business objects. The routing rules contain a series of conditions that a business object must meet to receive certain activity plans.

Prerequisites

You must have access to the *Activity Planner* work center to create a routing rule.

Context

> **! Restriction**
>
> Activity plans that contain appointments and phone calls can only be assigned to opportunities or sales quotes.

Following steps show you how to create a routing rule. As to when and how the routing rule can be triggered, please check respective object documentation for details.

Procedure

1. Go to *Activity Planner* > *Routing Rules*.
2. To create a routing rule, click the plus icon and set properties for the routing rule.

   > **i Note**
   >
   > Each routing rule only applies to one specific business object.

3. To continue setting up conditions that define this routing rule, choose *Save and Open*.
4. Under the *Conditions* tab, click *Add Group* and define the condition.

   Conditions are structured in groups. When a routing rule is triggered, different condition groups are evaluated as a logical OR relationship; conditions within one group are evaluated as a logical AND relationship.

   To create another condition under the same group, in the *Actions* column of the previous condition you added to the group, click the plus icon.

> → Tip
>
> There are two conditions related to the account hierarchy: *Top-Level Account* and *Higher-Level Account*. In both cases, all accounts that fall under a root account or a higher-level account are affected when that condition is true. However, only the top-level account condition includes itself in the result. If you want to group an entire account hierarchy including the root account, use the *Top-Level Account* condition. To include all accounts that fall under a non-root account, as well as the higher-level account itself, use *Higher-Level Account* and add the higher-level account ID to the condition.

5. To select the activity plans that follow this routing rule, go to the *Activity Plans* tab and click *Add*.

   > → Tip
   >
   > You can see and select activity plans with future dates as follows:
   >
   > 1. In the *Name* field, click the value selection help.
   > 2. In the dialog box appears, click *Advanced Search*.
   > 3. Set the *Valid From* and *Valid To* dates appropriately.

6. (Optional) Go to the *Organizational Units* tab and define sales units only to which the routing rule applies.
7. (Optional) Go to the *Accounts* tab and define accounts or target groups only to which the routing rule applies.
8. (Optional) Go to the *Involvement* tab and define sales employees and units that are involved with the routing rule.

   Sales people or groups involved can switch to the *Routing Rules for Me or My Area* view in the routing rule list to see rules that are relevant to them.
9. When you finish creating the routing rule, click *Save*.
10. Click *Actions* > *Set as Active*.

    Only active routing rules can be executed. When a business application is created, the system checks for matching routing rules and determines and assigns the tasks and surveys within an activity plan to the business application for further use.

Related Information

Create Activity Plans [page 1052]
You can create activity plans to organize standard lists of tasks and surveys. Based on your business needs, the activity plan can be assigned to various business objects. You can also mass upload activity plans via the SAP Cloud for Customer APIs.

25.3.1 Enable Activity Planner

Before users can plan surveys and tasks using activity planner, administrators must add it to the project scope.

Procedure

1. Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Sales* > *Account and Activity Management* > *Activity Management* and check the box next to the scoping item.
2. Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Sales* > *Account and Activity Management* > *Activity Management* and enable the scoping question for maintaining activity planners in the system.
3. Assign the *Activity Planner* work center view (ID: *ACTIVITYWORKLIST*) to appropriate users or roles.

Related Information

Create Business Roles and Assign Work Centers and Views

25.3.2 Configure Default Organizational Unit During Activity Plan or Routing Rule Creation

Administrators can set up the solution to pre-populate organizational unit based on the logged-in user who is creating the activity plan or routing rule.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Sales* > *Account and Activity Management* > *Activity Management*.

Under *Activity Planner*, answer the question about defaulting organizational unit based on the logged-in user.

25.4 FAQ for Activity Planning and Routing

Having trouble using activity planner? Check this list of questions and answers for help.

25.4.1 How do I know which routing rules are used for an activity plan?

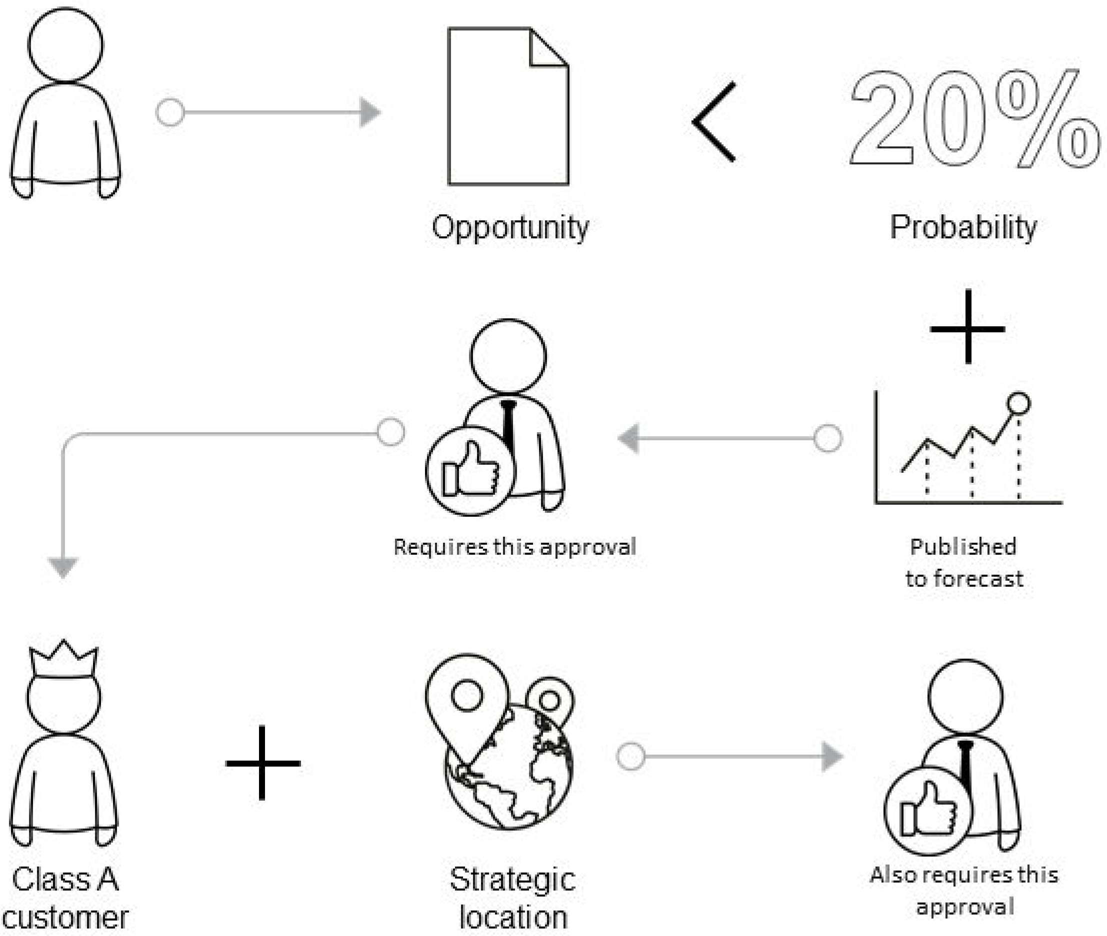
You can use the cross-referenced fields to find out which activity plans contain a certain routing rule, or which routing rules are used for a particular activity plan.

In the activity plan list, your administrators can adapt the master layout and add the *Routing Rule* field to the advanced search. It allows you to search and sort activity plans based on the routing rule.

Similarly, in the routing rule list, your administrators can adapt the master layout and add the *Activity Plan* field to the advanced search. It allows you to search and sort routing rules based on the activity plan.

26 Approvals

Learn how approvals work in the solution.



Approval workflows are configured by your solution administrator and help streamline your business processes. Approvals are typically routed to your reporting line manager, though there may be multiple levels of approval required for certain objects or conditions. Your administrator can also incorporate conditions into the approval process itself such as limits to the amount an approver is allowed to approve. And finally, your administrator can configure your solution to include e-mail approval notifications in addition to the default notifications found in the toolbar.

Important Facts About Approvals

- One business transaction can have one active approval process.
- Within an approval process, you can define several approval steps with different approvers and conditions.

- For multiple approval steps, the system checks each step in succession for the defined conditions. If approval for one step is not granted, then the system will not proceed to the next approval step.
- The approval notifications, such as the request and the confirmation, appear in the notification area of the system for the involved employees and managers.
- If the approver finds an unsatisfactory transaction, then the approver can add a comment and return it to the employee for revision. The employee then revises the transaction and submits it again for approval. Once the business transaction is correct, it can be further processed.
- The approval process can be enhanced with e-mail notifications that are sent directly to the applicable employees, as described in the prerequisites below.

Example: Campaign Approvals

> Example
>
> For example, you have activated the approvals for campaigns in your system, and now you want to define a two-step approval process. In the first step, campaigns created for the campaign execution type *Direct E-Mail* are to be approved by one of two employees in your company. In the second step, campaigns with target groups greater than 10,000 members are to be approved by the line manager of the employee.
>
> Now suppose that the employee created a campaign with execution type *Direct E-Mail*, with a target group that contains 10,523 members, but neglected to specify the start and end date of the campaign.
>
> In response, the system first confirms that this campaign requires approval, so the employee is only authorized to select *Actions* > *Submit for Approval*. Then, one of the approvers checks the campaign and notices that the campaign start and end dates are missing, so the approver adds a comment to the campaign, and returns it to the employee for revision. The employee corrects the campaign accordingly and submits it again for approval.
>
> The campaign is then initially approved, but the employee must wait until the line manager also provides approval, because the target group has more than 10,000 members. The system determines the line manager from the organizational management hierarchy, upward from the employee, until the first manager is found.

Example: Multi-Step Approval for Opportunity

Let's say your system has been set up with a rule that requires your manager's approval for any opportunity that has a less than a 20% probability of closing but that has already been published to the forecast. In addition, there's another rule that requires the top-level account owner's approval for any opportunity at an "A" category customer within a specific region. When you create an opportunity that fits both of these conditions, you are prompted to submit it for approval. The system then notifies your manager who can either approve the opportunity or send it back to you for revision. Once your manager approves it, the system will send a notification to the top-level account owner who also needs to approve the opportunity before it can move to the next stage in your business process.

Enable Approval Processes [page 1062]
Scope questions for various business objects for which you need to use approval processes

26.1 Enable Approval Processes

Scope questions for various business objects for which you need to use approval processes

Administrators can configure approval processes. Before configuring approval processes, confirm that the following questions are in scope under *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions*.

Scoping Questions for Enabling Automatic Approval Processes

Business Object	Navigation in System	Scoping Question
Campaigns	*Sales Campaign* > *Campaign Management* > *Campaign Execution*	`Do you want to use a multi-step approval for campaigns?`
Opportunities	*Sales* > *New Business* > *Opportunities*	`Do you want to use a multistep approval for opportunities?`

Business Object	Navigation in System	Scoping Question
		`Do you want the system to automatically submit an opportunity for approval?` **i Note** This question is optional and only relevant if you want trigger automatically an approval for your opportunities if the entered data fulfill the defined criteria.
Sales Quotes	*Sales* › *New Business* › *Sales Quotes*	`Do you want to use a multi-step approval for sales quotes?`
Tickets	*Service* › *Customer Care* › *Service Request Management*	`Do you want to use a multi-step approval for tickets?`
		`Do you want that the system submits automatically a ticket for approval?`
	Service › *Employee support* › *Ticket Management*	`Do you want to use a multi-step approval for tickets?`
		`Do you want that the system submits automatically a ticket for approval?` **i Note** This question is optional and only relevant if you want trigger automatically an approval for your tickets if the entered data fulfill the defined criteria.
Contracts	*Service* › *Entitlement Management* › *Service Contract Management*	`Do you want to use a multi-step approval for service contracts?`

Business Object	Navigation in System	Scoping Question
E-mail Notifications - E-mail encryption and signature	*Build-in Services and Support* › *System Management* › *Security*	`Do you want to use encryption and signature for e-mails?`

26.2 Configure Prerequisites for Defining Approvals

Enable your system to approve business transactions automatically when the defined conditions are fulfilled. Configure the prerequisites before defining the approval processes.

- **E-Mail Notifications**: Ensure that the involved employees are business users and have valid e-mail addresses, and that the CA certificates from the employees are uploaded to the system for outgoing e-mails.
- **E-Mail Notifications**: Each involved employee must subscribe to the e-mail notifications by opening the *Notifications* view and choosing *Subscribe to E-Mail*.
- **E-Mail Notifications**: Check that the e-mail clients of the involved employees have enabled the receipt of encrypted e-mails.

26.3 Configure Approvers Under Work Distribution

Define approvers who will be involved in the approval processes.

The following options are available to define an approver:

- *Direct Approvers*: You can select specific employees responsible as direct approvers, provided that they possess the corresponding access rights to the task type and business transaction. Such approvers also require read access to the relevant business transaction data and write access to the notes of the business transaction.

  > **i Note**
  >
  > You can enable approvers to trigger actions directly from the details of the item to be approved. To do so, from the Approval tab of any related item, make the Actions column visible on the user interface.

- *Functional Unit Manager*: For example, if the business process must identify a cost center manager to approve a shopping cart in the system, then the system accesses the hierarchy at the level of the employee who created the shopping cart and searches upward in the hierarchy until the responsible functional unit manager is found.
- *(Reporting) Line Manager*: The system accesses the organizational structure at the level of the employee who submitted the approval task and searches upward in the hierarchy until the manager above the employee is found.
- *Responsible for Account*

Special Cases

- No approver found.
  If the system cannot find an approver for a particular step, then an unassigned task is created. The administrator is therefore requested to specify an approver.

26.4 Configure Approval Conditions

Conditions allow you to configure the triggers for approval processes.

For each process step, you can create conditions. Note that the system continues to follow the sequence of process steps even if a condition for a specific step is not met. The approval process for a related business transaction only ends when an approver in the process rejects the request as described in the approval task.

Specifics

- **Sender E-Mail Address in E-Mail Campaigns**
  You can create an approval condition that shall trigger an approval for a campaign that uses a specific sender e-mail address or only specific strings of an e-mail address.

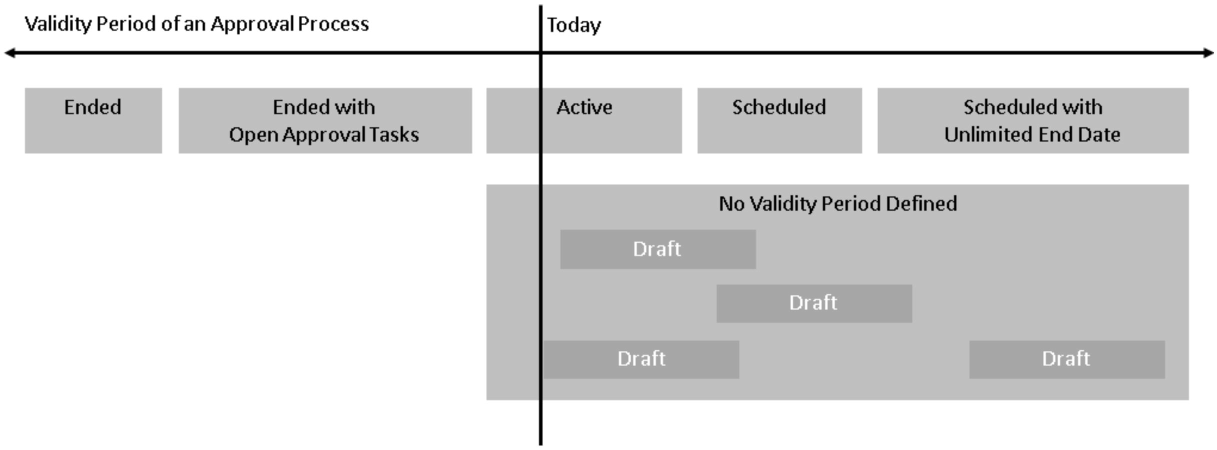
  > Example
  >
  > Here are some examples, how this can look like:
  >
  > - `*@abccompany.com`
  > - `info@*.abcompany.com`
  > - `jeff.james@abccompany.com`

26.5 Configure Validity for Approval Processes

Approvals are time dependent and are valid only for a specified period of time.

Some of the specific features of approval process validity are:

- When you edit the validity of an approval process, the system displays the approval processes of the related business transaction that have not yet ended. Note that the system allows neither gaps nor overlaps in the validity period of the approval processes.
- Note that you must have one approval process with an unlimited end date; the approval process can have either the *Active* or *Scheduled* status.
- Draft approval processes do not have a validity period defined. When you define the validity of an approval process that has the *Draft* status, the *Valid From* date must be later than or equal to today's date. By defining the validity, the status of the approval process changes accordingly.



26.6 Configure S-MIME E-Mail Notifications

Use CA certificates for E-Mail Notifications.

As an administrator, to enable e-mail notifications, you must upload the CA certificates in this area for the generic business task management e-mail address for all involved employees and managers.

1. Choose *Configure S/MIME* in the *Administrator* work center under *Common Tasks*.
2. On the *Incoming E-Mail* tab, upload the CA certificates from all involved employees for the generic incoming e-mail address *Business Task Management Email Notifications*.
3. On the *Outgoing E-Mail* tab, install the system CA certificate in the e-mail client of the involved employee as follows:
    1. Click on *Link to SAP CA* and open the site *SAP Trust Center Service — Root Certificates*.
    2. Click on *SAP Passport CA Certificate*. A popup opens.
    3. Click *Install Certificate* and follow the wizard by clicking *Next >*.
    4. Select *Place all certificate in the following store* and click *Browse...*.
    5. Select *Trusted Root Certification Authorities* and click *OK* and then *Next >*.

    Now the CA certificate from the system is installed locally.
4. Now activate the S/MIME on the *Activate S/MIME* tab and select the options:
    - *Check Signature of Incoming E-Mails*
    - *Encrypt Outgoing E-Mails* (optional)
    - *Signing Outgoing E-Mails*

26.7 Configure E-Mail and Fax Settings for E-mail Notifications

Maintain the e-mail sender and receiver domains for e-mail notifications.

You must specify your company domain in the *E-Mail and Fax Settings* activity. To do so, select the activity *E-Mail and Fax Settings* under *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List*.

Enter your company domain, such as **`example.com`**, as the *Allowed Sender E-Mail Domain*.

26.8 Create Workflow Notifications to Set Reminders

If an approval is pending for a certain time, notifications can be created through workflow rules to inform employees about the delay.

Related Information

Workflow Notifications [page 1084]
Internal notifications are those sent only to users of the solution and include the workflow notifications found on the toolbar as well as e-mails.

26.9 Monitor Approval Processes

Monitor status of your approval processes.

Show Open Approval Tasks

For approval processes that have the status *Active* or *Ended with Open Approval Tasks*, you can view open approval tasks by clicking *Show Open Approval Tasks*.

Monitor Approval Processes

You can view and monitor approval processes. Use filteres listed in the approval processes launch screen; The following options are available:

Value	Description
All Processes	Shows all approval processes available in the system, including all default approval processes.
Active Processes	Shows approval processes for which the validity period has not expired.

Value	Description
Inactive Processes	Shows approval processes for which the validity period has expired and approval processes that have *Draft* status.
Expired Processes with Open Approval Tasks	Shows approval processes that have expired with approval tasks that were not processed during the validity period of the approval process.
Active and Scheduled Processes	Shows active approval processes and approval processes for which the validity period lies in the future.

You can also group approval processes by the related business transaction.

26.10 Edit or Delete Approval Processes

Steps to edit or delete an approval process.

Follow these steps to edit validity of an approval process:

1. Select the approval process of the business transaction whose validity periods are to be edited. Note that the approval process must have the status Draft, Active, or Scheduled.
2. Click Edit Validity. All approval processes are displayed for the corresponding business transaction, provided that it has not expired.
3. Specify the validity periods and the corresponding time zones for one or more approval processes.

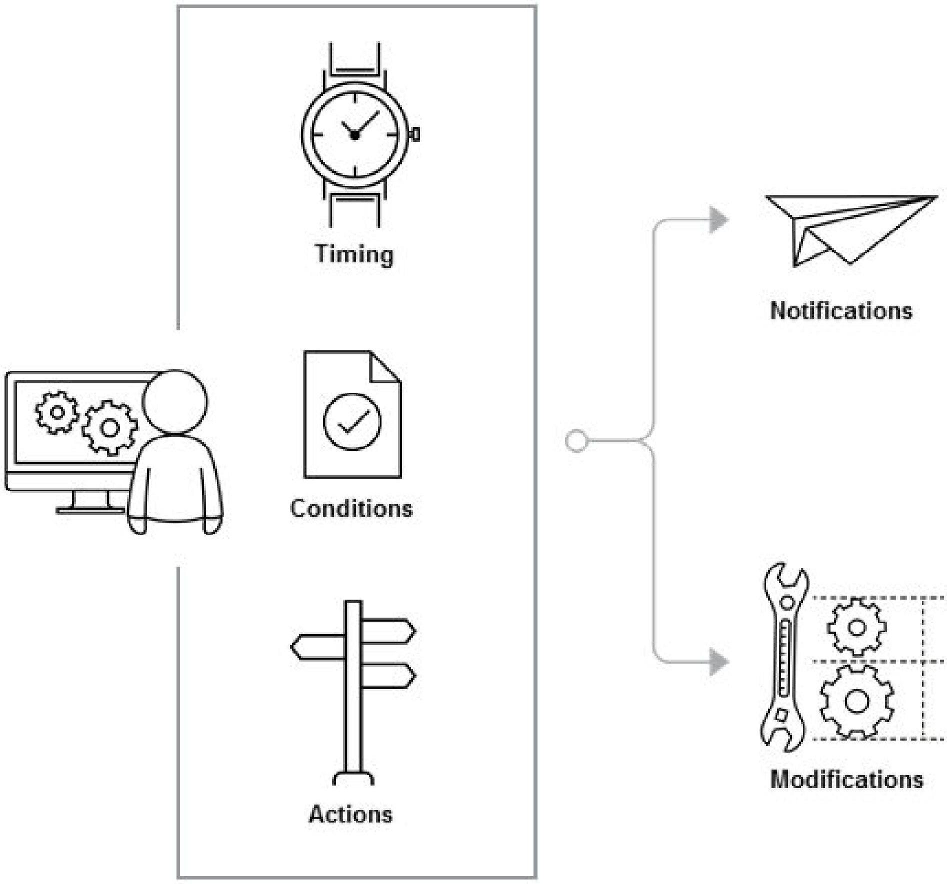
   > **i Note**
   >
   > Ensure that the validity periods do not overlap. The validity of one approval process for each business transaction is unlimited by selecting the *Unlimited Validity* checkbox.

For deleting approval processes, note that you can only directly delete approval processes that have *Draft* status. However, if an approval process has status as *Scheduled* , then you can delete its validity period by clicking *Edit Validity*, then removing the validity period. In response, the status changes to *Draft*, and the approval process can then be deleted.

27 Workflows

Learn how you can use workflows to support your business processes.

Automate your business processes using workflows. Configure to send notifications, trigger automatic e-mails and define conditions to update fields or calculated values. Also trigger actions or schedule workflows based on dates, time or other complex conditions. Workflows also allow you to create multi-step approvals.



Workflow configuration involves creating workflow rules that can trigger automatic e-mail messages, notifications, field updates and actions for business objects. Administrators can create workflow rules specifying actions/notifications/field updates for business objects, recipient groups, employees and so on. Workflows enhance the flexibility and adaptability of your Cloud for Customer solution to your custom business requirements.

To configure workflow rules, go to *Administrator* > *Workflow Rules* > *New*. Using workflows,you can activate rules for updating fields, setup automatic notifications, trigger creating tasks, send e-mail notifications to customers and so on. The various configuration possibilities for workflows are described here.

Workflow rules involve a five step process. These include *Business Object*, *Timing*, *Conditions*, *Actions*, *Review* and *Confirmation*. These components determine how the workflows will be used in the various business processes. The steps are described in detail further in this chapter.

Object

The first step to creating a workflow rule is selecting the business object for which the rule applies.

Timing

The timing determines when the system should evaluate the rule. The three available options are *On Create Only* (when the object is created), *On Every Save* (every time an object is saved) and *Scheduled* (scheduled after an event occurs). You can specify, for example, if a workflow rule be triggered when an object like a sales quote or ticket is created or when saved. There is also an option to schedule the rule for a specific time, for example two days before the due date of an item.

Conditions

Conditions are the criteria which trigger workflow rules. These conditions may be standard fields, extension fields, field value change and so on. For example, if you create a sales quote above a certain value (the condition), the system triggers the associated action. You must maintain conditions in **Groups**. Maintain multiple conditions within a group if you need more than one criteria to be met for the workflow rule. Use separate groups to define **OR** conditions.

Actions

E-mail, *Messaging* and Actions define tasks that must be executed when a workflow rule is triggered. For example, send an e-mail, generate a notification, send a text message or update a field of the object (both standard and extension fields as well as trigger an action). You can define actions using one of the supported rule-types namely the *Notifications*. To better understand how these actions are triggered, here are the basic steps your administrator takes to set up workflow:

27.1 Configure Workflow Timing

Administrators can configure when a workflow rule must be evaluated and triggered. Timing can be relative to create or change of a business object or can be scheduled.

The three available options in configuring workflow timing are are *On Create Only* (when the object is created), *On Every Save* (every time an object is saved) and *Scheduled* (scheduled after an event occurs).

Following options are available:

- *On Create Only* - The rule is applied at every create of a business object instance; No other attributes are considered for *On Create Only* selection.

- *On Every Save* - The rule is applied at every save of a business object instance; No other attributes are considered for *On Every Save* selection.
- *Scheduled* - The rule is applied as scheduled for a business object instance (scheduled after an event occurs); The *Events* to schedule the rule can be defined. You can specify, for example, if a workflow rule be triggered when an object like a sales quote or ticket is created or when saved. There is also an option to schedule the rule for a specific time, for example two days before the due date of an item. For example, a ticket is scheduled for escalation one day after completion is due, if the status is still *In-Process*.
  Schedule a workflow rule if you refine the workflow based on events like Business Object Change or *Custom Date*. You can select the event and then specify the relative time like *On* (a specific date), *After* (after the specific event with a relative time offset), *Before*. The related attributes for Scheduled Timing are
  - Event

    > **Note**
    >
    > The events listed in the field help are specific to a business object you have selected. Further, the business object selected can be enhanced with a custom field with data type as *Date*.

  - Relative Time [like After, Before, On]
  - Time Offset [To set the duration]

> **→ Recommendation**
>
> - Workflow rules that are set to with *Timing* - *On Every Create* or *On Every Save* are run synchronously while the transaction object is being created or saved in user session. Too many rules affect system performance. Therefore it is recommended that you consolidate these rules.
> - Use the *Scheduled* option as the scheduled rules run asynchronously and the conditions and actual workflow for scheduled rules are triggered outside the user session.
> - Note that workflow time affects all users using the business object within a process and define rules accordingly.

27.2 Configure Workflow Conditions

Administrators can configure conditions to specify criteria that must be fulfilled in order to trigger workflow rules. Conditions can be based on standard fields, extension fields, field value change and so on.

Conditions are structured in groups and include criteria that must be fulfilled if a workflow action must be triggered. More than one condition can be defined using logical operators *AND/OR*. The *AND* operator can be defined using condition within the same group. To add more than one condition, use the *OR* operator. Add a new group to define the OR operator amongst the workflow conditions such that if conditions in at least one group are met, then the overall condition is considered fulfilled and the workflow rule has been triggered.

For example, the value - *Before Object Change*, can be used to define conditions based on the field value changes. For example, a notification is sent when the field - **Escalated** is changed from **Not Escalated** to **Escalated**.

Follow these steps to define conditions.

1. **Define Conditions** (Optional).

1. In the *Define Conditions* step, click *Add Group* to define a new condition group.
2. To start with, you need at least one group to define conditions. Within one group, you can add conditions using either of the following:
   - *Conditions Met* or *Conditions Not Met* criteria that validate if the conditions are true or false respectively.
   - The operands such as *AND* or *OR*. Note that when using operands, the first condition can only be defined using the AND operand. To use the OR operand, you must have defined more than one conditions in the group.
3. In the dialog box, select the field, such as *Status*, for the expression of the condition.
   Then specify an appropriate *Compare Operator*, and a **value**.

   > i Note
   >
   > You can also create conditions using custom (adapted) fields. Set up any custom fields first, before you create your workflow rules.
4. If desired, specify conditions with the following options:
   - To add an AND expression, click *Add Condition*.
     Conditions within a group are logical AND expressions. All conditions within a group are met for the condition group to be considered fulfilled.
   - To add an OR expression, click *Add Group*.
     If all conditions in at least one group are met, then the overall condition for the rule is considered fulfilled.
5. To remove or edit a condition, click the corresponding icons.
   To remove a condition group, click *Remove Group*.
6. Click *Next* to define the actions associated with the rule.

27.3 Configure Messaging Workflows

Messaging rules can be configured to send a formatted text message to the mobile device number registered in the master data of the recipients.

Follow these steps to send SMS text messages:

- Select the flag *Create Messaging Activity* to create a business activity for the SMS text messages.
- Specify the *Sender* of this message. This is the Mashup Web Service ID that is used to trigger the SMS text message.
- In the *Text* field, enter the description that should be displayed for the user.
- Placeholders are the field values of the formatted text message. To add placeholders, perform these steps:
  1. Click *Add Row*.
  2. Enter the placeholder as it appears in your chosen template file.

  > ⚠ Caution
  >
  > All placeholders included in notification templates must be in all caps, contain no special characters, and begin and end with a hash tag (#).

For example:

- #ID#
- #ACCOUNT#
- #100#

3. Select from the available list of fields. The list is dependent on the business object you selected for the workflow rule. Custom fields appear in the list, and can be used with template placeholders.
4. You may also use your defined placeholders in the subject line of the notification.

- To define employees of a particular responsibility category as the recipients, click *Add Determination*. Then select from the available list and repeat this selection as necessary.

> **i Note**
>
> All business partner roles are available for selection in the list. The complete selection list is dynamically added using code list and hence the values in the selection list can be modified. You can use the fields *Top Level Account Owner* and *Top Level Account Team* as filters to include only the parent company in a notification.

- To define a particular employee as the recipient, click *Add Employee*. Repeat this selection to add all recipients of the notification.

27.3.1 Enable Messaging Workflows

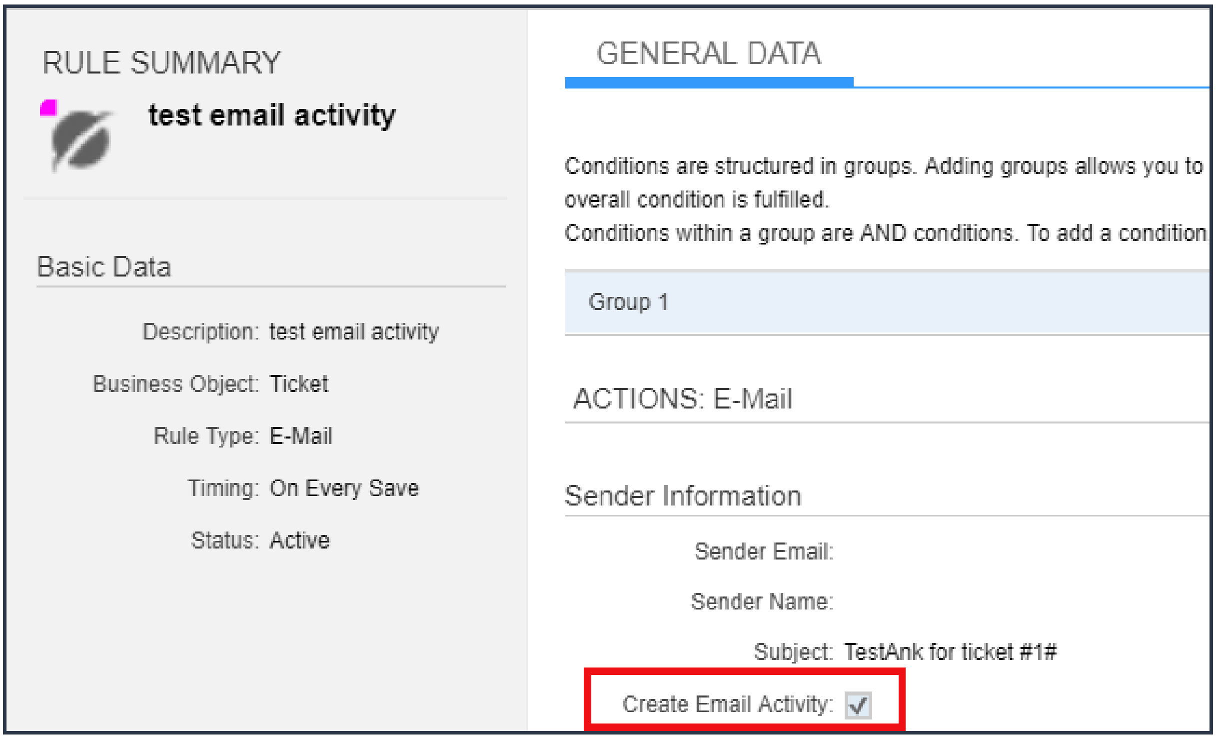
Administrators must enable messaging before configuring messaging in workflows.

Maintain the following configuration:

- Configure sender service: Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Sales* > *Account and Activity Management* > *Activity Management* > *Activity Types* and select the scoping question: *Do you want to record messaging activity?*
- Under *Administrator* > *Mashup Web Services*, create a mash-up web service to integrate to the SMS provider.

27.3.2 Track E-Mail and Messaging Activity

Any e-mail and messaging activity that you trigger using workflows can be tracked in the document flow for an object. This is possible because e-mail and messaging activities created through workflows are now linked to the source object.



Example

When creating workflows for sales order, if you select the *Create E-Mail Activity* flag, the e-mail activity is linked to the sales order and also available in the *Document Flow* and *Activities* tabs in the sales order.

27.4 Configure Field Updates using Workflow Rules

Field Update rules result in an automatic update to the specified field when the defined conditions are met.

Administrators can configure updates to fields that must be performed when workflow rules are triggered. Field updates change value of the field. For example, when a lead is created with Qualification level as Hot, priority of the lead is automatically changed to Immediate

Follow these steps to configure field updates:

1. In the *Fields to Update* table, click *Add Row* to choose a field to update if the rule conditions are met.
2. Selects the fields that are required for update **OR** or select the Actions that are required to be triggered. For example, if you select the field **Priority**, then select an *Update Type* with value as **Urgent**.
   Depending on the type of field you select, the *Update Type* displays various options such as *Calculated*, *Value*, *Formula* and *Copy from Field* :
   - *Value* - This option allows you to enter text, numeric value, add/remove for multivalue fields, or even calculate values. These options vary based on the update type that you have selected.

- *Formula* - Enter the formula that is internally in the system to perform the calculations and accordingly update the existing field value.
- *Copy from Field* - Use this option to copy values from another field. It copies values as well as text description of any code list. This function works only if the data types of the fields (copied from and copied to) are the same. Further, note that this feature option is available only if there exist fields of the same type in the business object. The field help for *Field* displays all fields of the same type available in the business object.

> **i Note**
>
> When workflow rules impact fields from other business objects, then the authorization of the user triggering the workflow is not considered. For example, an administrator configures the workflow to update the account role from **Prospect** to **Customer** when the quote is converted to *Won*. The end user only has a read authorization to customer records even though the user has a create/update authorization of sales quote. When the user converts the quote to Won, the customer's role is updated to Customer even though the user does has no authorization to update customer record.

Then specify a value (such as *Urgent*).

3. If you want to notify appointment attendees of changes, specify additional fields to update by adding more rows to the table.
4. To remove a row, select the row, then click *Remove*.
   To edit a row, click the edit icon in the table.

27.4.1 Replace or Update Multi Value Code Lists

You can replace the entire lists and add or remove specific values from value help lists using the *Field Update* option for workflow rules. Note the following checkbox options:

- *Replace all existing values* - Select this checkbox to replace the existing codelist with new values. When you select this flag, the *Add* checkbox is automatically enabled for all the new values you have added in the list.
- *Add* - Enables you to select individual values from the list.
- *Remove* - Enables you to remove select values from the list.

27.5 Configure E-mail Workflows

Understand the various options and process steps involved in configuring workflows for e-mail notifications.

For example, when you define workflow rules for visits, you can send e-mail notifications to visit attendees or visit contacts.You want to ensure that everyone involved in a visit always has the latest information. Define a rule so that anytime a visit is updated (any save), an e-mail notification is sent to the visit contacts and visit attendee.

In the *Define Actions* step, select the *Rule Type - E-mail*. The **E-Mail** rules result in an e-mail being sent to the list of recipients and requires an HTML file for use as the e-mail template. Use the following options to configure an e-mail workflow template:

> → Tip
>
> If you want to use predefined HTML templates for e-mail notifications, add HTML files to the list of allowed MIME types in the *Allowed MIME Types for Document Upload* fine-tuning activity.

- Some appointment attendees may be outside your company and have no access to notifications in the solution. Use rule type *E-Mail* to notify attendees of changes to appointments. When you use rule type *E-Mail*, the option *Appointment Attendees* appears in the *Recipient Determination* section.
- Select *Always Send E-mail* flag if you want to receive an e-mail each time the business object is changed. By default (flag is unchecked), an e-mail is sent only once.
- If you trigger creation of an activity for the e-mails that are triggered based on the workflow rule, select the flag *Create E-mail Activity*.
- Select the flag *Add Attachment* if you want to enable adding custom attachments to the e-mails sent using this workflow rule. Maintain the required logic to collect documents and attach them to e-mail. You maintain this customizing in the enhancement option: `ExitForGettingWorkflowAttachment` using SAP Cloud Application Studio.
- To display the sender name in an e-mail alert, enter the *Sender Name* and *Sender E-mail*.
- Select the flag *Select a Sender E-mail* to determine sender name and e-mail address for workflow generated e-mail notifications. For example, you may want to use e-mail address of the sales representative to send a sales quote. The feature uses party determination to select a sender address. With this feature, any e-mail replies to the workflow generated e-mails are routed to the inbox of the sender and you no longer have to provide a hard-coded sender name and address.

  > i Note
  >
  > Only parties with **employee role** can be used in the sender determination. If there are multiple employees assigned to a party role, the determination selects details of the first employee in the list.

- *Subject Template File - Mandatory* - In order to complete configuring the workflow rule for e-mails, browse for and select a template file that will be used for the e-mail notification.
- Enter the subject displayed for the recipient of the notification. You can also enter the subject in other available languages by clicking
- Add placeholders to include them in the subject line and the template file of your e-mail notification. Map any placeholders used in the template to fields in your solution. To do this,
  1. Click *Add Row*.
  2. Enter the placeholder as it appears in your chosen template file.

     > ⚠ Caution
     >
     > All placeholders included in e-mail notification templates must be in all caps, contain no special characters, and begin and end with a hash tag (#).
     >
     > For example:
     >
     > - #ID#
     > - #ACCOUNT#
     > - #100#

3. Select from the available list of fields. The list is dependent upon the business object you selected for the workflow rule. Custom fields appear in the list, and can be used with template placeholders.
4. You may also use your defined placeholders in the subject line of the e-mail notification.

- To define employees of a particular responsibility category as the recipients, click *Add Determination*. Then select from the available list and repeat this selection as necessary.

> **i Note**
>
> All business partner roles are available for selection in the list. The complete selection list is dynamically added using code list and hence the values in the selection list can be modified. You can use the fields *Top Level Account Owner* and *Top Level Account Team* as filters to include only the parent company in a notification.

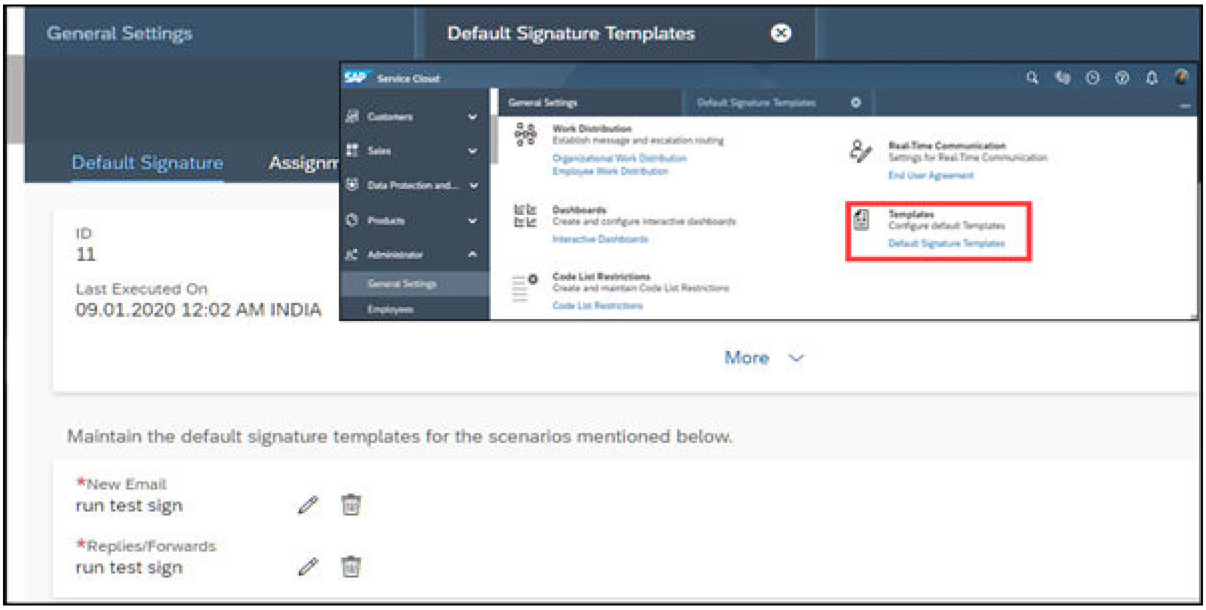
- To define a particular employee as the recipient, click *Add Employee*. Repeat this selection to add all recipients of the notification.

27.5.1 Configure Signature Templates

Administrators can configure templates with signatures for all e-mail communication including replies and forwards.

Users can be assigned to whom these templates apply. These signature templates will overwrite any existing assigned templates. This feature allows administrators to enforce a uniform template for all users in the organization.

Configure this feature under *Administrator* > *General Settings* > *Templates* > *Default Signature Templates*.



27.5.2 Set Account and Contact of Source Workflow Object in E-mail Notification

Default the account and contact from source workflow object in the e-mail notifications (triggered from workflows for that object).

Administrators can enable this feature by selecting the checkbox for *Activity Creation* under *Actions* › *Workflow Settings*.

Example

A workflow rule is configured for a sales quote to send an e-mail notification to contact person. However, the contact person has primary relationships with two accounts, Account1 and Account2. In this scenario, if the sales quote is created for Account2, then the e-mail notification triggered for the sales quote has account defaulted to Account2.

27.5.3 Code List Descriptions in E-mail Notification Templates

Code list descriptions are displayed in the placeholders in e-mail notifications.

These descriptions are more relevant and meaningful and add context to the e-mail. However, if you use formatted texts in template placeholders, the e-mail displays same format in which the field value is saved in the source transaction (for example, sales quote, sales order, ticket and so on).

The graphic explains the difference between using code list descriptions and formatted texts. The placeholder #SOURCE# displays code list description **E-mail request** while the #MANAGERNOTES# placeholder field is replaced by a text **Manager** with bold and colored font.

27.5.4 Track and Manage Bounced E-mails

Track bounced e-mails and correct any inconsistencies in e-mail addresses. The workflow log is also updated with the bounced instances.

Following feature possibilities are available for bounced e-mails:

- Track them in the workflow logs
- View them in the sender inbox; A notification is sent to the sender inbox.
- View the service tickets created to follow-up on the bounced e-mail. A new service ticket is created for each bounced e-mail to help in tracking them.

27.5.5 Configure Employee E-mail Address as Default Sender Address

Sender name and e-mail address can be automatically determined for workflow generated e-mail notifications.

For example, you may want to use e-mail address of the sales representative to send a sales quote. The feature uses party determination to select a sender address. With this feature, any e-mail replies to the workflow generated e-mails are routed to the inbox of the sender and you no longer need to provide a hard-coded sender name and address.

> **Note**
>
> Only parties with **employee role** can be used in the sender determination. If there are multiple employees assigned to a party role, the determination selects details of the first employee in the list.

To use this feature, select the checkbox for *Select a Sender E-mail* for rule type - *Actions* under *Workflow Rules* > *Define Actions*.

27.5.6 Configure Workflows to Send E-Mail Notifications to Active Delegates

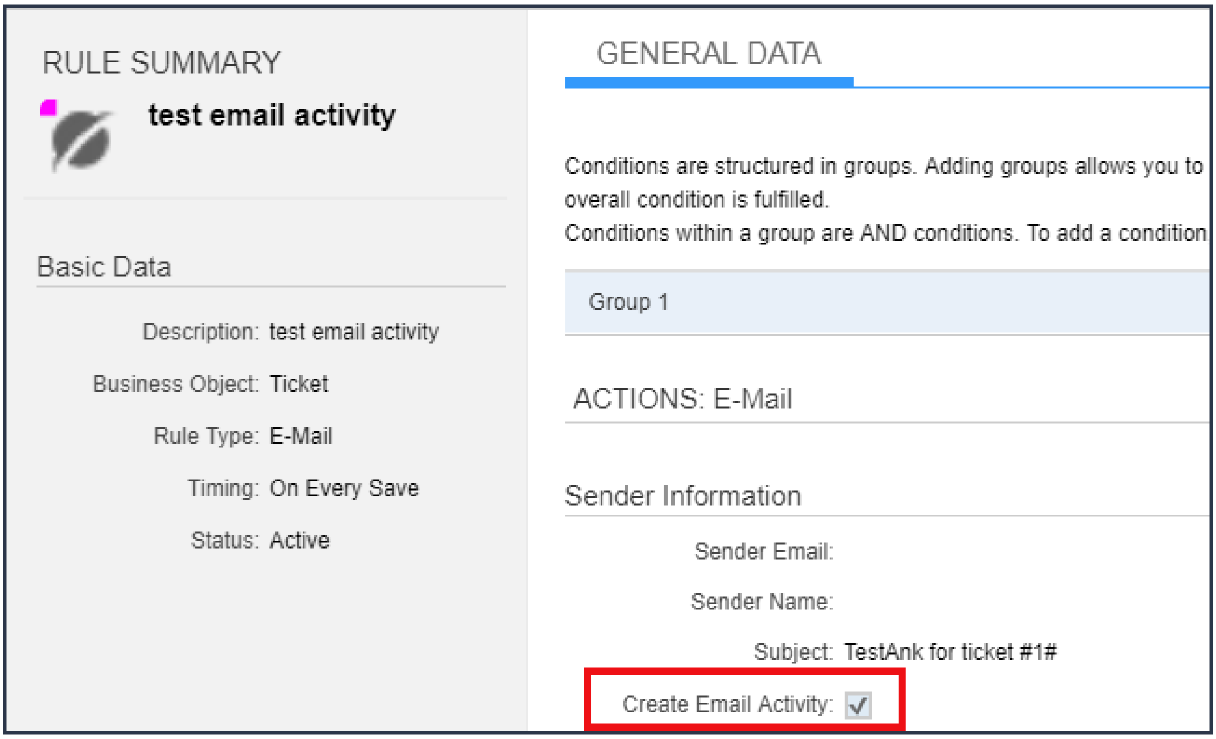
Administrators can configure workflows to allow active delegates in your system can receive e-mail notifications.

Use this feature to ensure information channeled for employees is received by their delegates or substitutes in the absence of the employees. You can configure this feature under *Administrator* > *Workflow Rules* > *Workflow Settings* > *Recipient Determination* > *Determine the active delegates for an employee in the system, as a recipient in workflow rules*.

27.5.7 Configure Tracking E-Mail Triggered from Workflows

Possibility to track e-mail and messaging activity triggered from workflows.

As an administrator, any e-mail and messaging activity that you trigger using workflows can be tracked in the document flow for an object. This is possible because e-mail and messaging activities created through workflows are now linked to the source object. To enable tracking e-mails, you must select the flag *Create E-mail Activity* in the workflow rule.



Example

When creating workflows for sales order, if you select the *Create E-Mail Activity* flag, the e-mail activity is linked to the sales order and also available in the *Document Flow* and *Activities* tabs in the sales order.

27.5.8 Configure to Send E-Mail and SMS to Main Recipient Only

Administrators can configure workflows to send e-mail and SMS only to the main recipient maintained in the address.

Under *Workflow Settings* > *Address Determination*, select *Use main address of the recipient to send out e-mail and sms*, to send e-mail only to the main address that is maintained in the business address for a contact. System behavior when this setting is applied, is documented below:

- E-mail is sent if the e-mail address is available in the business address.
- E-mail is not sent if address is not maintained in the business address, though it is still available from the main personal e-mail address.
- E-mail is sent to the ID maintained in the main personal address, if the contact is not associated with any account.
- E-mail is sent to the e-mail ID maintained in the relationship of the account, that is used in the transaction.
- The logic described above also applies to SMSes.

27.5.9 Attach Business Object Summary as PDF in an Outgoing E-mail

You have the ability to attach the business object summary as PDF in an outgoing e-mail.

When you configure a workflow for triggering email notifications, then depending on the condition of the business object (for example, a sales quote) for which you configure the workflow, a summary of the business object gets attached to the outgoing email.

> i Note
>
> This feature is possible only if a form template has been maintained for a business object and an e-mail template has been configured in the workflow configuration.

The enhancements have been defined in the third step of workflow configuration - *Define Actions*. Select the *Create E-mail Activity* checkbox to send the PDF summary as an attachment in e-mail. If you do not select this checkbox, only an e-mail notification will be sent without the PDF attachment.

> i Note
>
> Also note that when you select the *Create E-mail Activity* checkbox, the PDF attachment sent in the e-mail also gets attached to the activity.

Also note the new selection options for the template for PDF summary. The *PDF Template Language* and the *PDF Template Country* together determine the *PDF Template Variant*. You also will need to add the employees who are recipients of this notification rule.

27.6 Configure Social Media Workflow

Understand the various options and process steps involved in configuring workflows for social media channels like WeChat, Facebook and Twitter.

27.6.1 Send Notifications to Social Media Channels as WeChat

Use the push notifications sent to social media channels such as WeChat to communicate and also fill-up surveys.

To receive these notifications, the contacts or users must register on the official social media account, that creates a social media user profile for the contact.

27.6.2 Survey Form for Facebook and Twitter User

Configure workflow rules to send survey link through social messages.

This feature enables you to generate a survey link and send it on the social media channels like Facebook and Twitter.

> **i Note**
>
> You must enable the *Value Before Object Change* while defining conditions to prevent multiple executions of the workflow.

27.6.3 Automatic Reply to Facebook or Twitter User

Automate reply message to Facebook or Twitter users social post by configuring workflow.

This feature enables you to reply in the original message thread, public posts, or private messages.

You can also automate the sending of notifications for changes in social ticket for Facebook or Twitter user through social channel.

> **i Note**
>
> Your user must enable *Value Before Object Change* while defining conditions to prevent multiple executions of the workflow.

27.7 Configure Workflow Follow-Up Tasks

If defined conditions are fulfilled, this rule type *Activity-Task* triggers creation of a task for the selected business object.

The creation of a task results in a new **Save** of the main object involved (e.g. Opportunity or Ticket), potentially triggering the execution of other workflow rules. Always define the conditions of each rule to be as restrictive as possible, to avoid the risk of creating loops.

Following possibilities exist for creating follow-up tasks:

- Create and assign a new task to an employee responsible
- Link task to the object for which the task is created; This assignment is taken care internally in the system.
- Use placeholders in subjects
- Start date defaulted as workflow execution date

> **! Restriction**
>
> Workflow rules of type *Activity Task* cannot be created for activity objects (appointments, tasks, phone calls, and visits).

For each of these tasks, maintain the following:

- By default, creation of a task results in a save instance for the business object. To create a task on every save of the object, select the flag - *Always Create Activity Task*.
- Enter the subject to displayed to the recipient of the notification. Enter the subject in other available languages by clicking
- Due In (number of days, weeks or months)
- Category for the task such as Customer Visit, User Task, Telephone Call and so on.
- Add placeholders to include them in the subject line and the template file of your e-mail notification. Map any placeholders used in the template to fields in your solution. To do this,
    1. Click *Add Row*.
    2. Enter the placeholder as it appears in your chosen template file.

    > ⚠ Caution
    >
    > All placeholders included in e-mail notification templates must be in all caps, contain no special characters, and begin and end with a hash tag (#).
    >
    > For example:
    >
    > - #ID#
    > - #ACCOUNT#
    > - #100#

    3. Select from the available list of fields. The list is dependent upon the business object you selected for the workflow rule. Custom fields appear in the list, and can be used with template placeholders.
    4. You may also use your defined placeholders in the subject line of the e-mail notification.
- Maintain Recipient Determination; To define a particular employee as the recipient, click *Add Employee*. Repeat this selection until all recipients of the notification are defined.
- Maintain Employee Determination; To define employees of a particular responsibility category as the recipients, click *Add Determination*. Then select from the available list and repeat this selection as necessary.

    > i Note
    >
    > All business partner roles are available for selection in the list. The complete selection list is dynamically added using code list and hence the values in the selection list can be modified. You can use the fields *Top Level Account Owner* and *Top Level Account Team* as filters to include only the parent company in a notification.

27.8 Configure Workflow Actions on Business Objects

Rule type - *Actions* allows you to set certain statuses for the business objects.

If the conditions you have defined are fulfilled, you can set following updates to the respective business objects:

- *Activate* - This action changes the account status from *In Preparation* to *Active*.
- *Assign Me as Owner* - This action adds the logged in employee as employee responsible to the account team.

- *Block* - This action changes the account status from *Active* to *Blocked*.
- *Derive Territories* - This action derives the territory for an account.
- *Flag as Obsolete* - This action changes the account status from *Active* or *Blocked* to *Obsolete*.
- *Revoke Obsolescence* - This action changes the account status from *Obsolete* to *Blocked*.
- *Unblock* - This action changes the account status from *Blocked* to *Active*.

27.8.1 Custom Actions on Standard Business Objects using Workflow Engine

You can use the workflow engine to configure custom actions and define when to trigger these custom actions.

This allows you to leverage the scheduling capabilities of the workflow engine. It also allows administrators to modify the standard logic without having to modify the SDK code.

27.9 Design Your Workflows Using Workflow Analysis and System Recommendations

Run workflow analysis to use system generated recommendations to configure workflows for optimum performance.

Administrators can run the workflow analysis using *Administrator* > *Workflow Rules* > *More* > *Workflow Analysis*.

Apart from design time analysis of the workflow rules for best system performance, this feature also identifies workflow rules that are maintained without conditions or actions. Recommendations are given to configure workflow rules with specific conditions and actions, in order to maintain a defined scope.

27.10 Workflow Notifications

Internal notifications are those sent only to users of the solution and include the workflow notifications found on the toolbar as well as e-mails.

27.10.1 Configure Workflow Notifications

Notification is sent to the recipient as defined in the workflow rules.

In the *Define Actions* step, select the rule type *Notification*. Notification rules create a new item in the Notifications list available in the toolbar. Only internal recipients receive notifications.

Steps to create a notification:

- *Send Notification* determines when the notification must be sent to the recipient. You can specify for example, if the notification be sent on change or create of business object. In the previous Conditions tab,define time-based conditions based on a date or time field of the selected business object. The system uses these conditions to determine when to send notification to the recipient. For example: Send a notification 10 days before the due date of the completion of a business document.
- Specify the expiration period for the notification — for example *10 Day(s)*. *Expires After* defines when the notification is removed from the Notification List of the recipientThe default validity is set to 30 days after which the notification expires if you have not mentioned an expiration period.
- Under *Cancellation of Task*, select the criteria, which for cancellation of the notification.
- Enter the subject to be seen by the recipient of the notification. You can also enter language specific subject in other available languages by clicking .
- Placeholders are field values of the object that are used in the subject of the formatted text for notification. Add placeholders to include them in the subject line and the template file of your notification. Map any placeholders used in the template to fields in your solution. Placeholder are the field values of the object that are used in the Subject of the Notification. To do this,
    1. Click *Add Row*.
    2. Enter the placeholder as it appears in your chosen template file.

        > ⚠ Caution
        >
        > All placeholders included in notification templates must be in all caps, contain no special characters, and begin and end with a hash tag (#).
        >
        > For example:
        >
        > - #ID#
        > - #ACCOUNT#
        > - #100#

    3. Select from the available list of fields. The list is dependent on the business object you selected for the workflow rule. Custom fields appear in the list, and can be used with template placeholders.
    4. You may also use your defined placeholders in the subject line of the notification.
- To define employees of a particular responsibility category as the recipients, click *Add Determination*. Then select from the available list and repeat this selection as necessary.

    > **i** Note
    >
    > All business partner roles are available for selection in the list. The complete selection list is dynamically added using code list and hence the values in the selection list can be modified. You can use the fields *Top Level Account Owner* and *Top Level Account Team* as filters to include only the parent company in a notification.

- To define a particular employee as the recipient, click *Add Employee*. Repeat this selection to add all recipients of the notification.

27.10.2 Add Recipients for Failed Workflow Notifications

Administrators can choose to send notifications for failed workflow rules to specific administrators and users.

You can choose whom to send notifications for failed workflow rules. In the *Workflow Rules* workcenter view, click on the gear icon for *Actions* and then choose *Workflow Settings*. In the *Workflow Settings* screen, click on the hyperlink for *Notifications on Failed Rules*. You are navigated to *Failed Notification Recipient* dialog screen where you can add specific administrators to whom you want to send the notifications for failed workflow rules. Use *Remove* to delete administrators from this list.

27.10.3 Receive Notifications outside of Your Inbox

Send push notifications to inbox and mobile devices. Tap on the notification to navigate to the object related to the notification.

Administrators can configure this feature by selecting the *Send Push Notification* indicator in the workflow rules of type *Notification*.

27.10.4 Configure Notifications for Failed Workflow Rules

Notifications for failed workflow rules are generated using an hourly background scheduled run. Note that the notifications are generated only if there are failed workflow rules in the scheduled run. For each of the background job, you can see how many workflow rules have failed.

Follow these steps to view the failed workflow rules notification logs:

1. Click on the *Notifications* icon on your screen.
   The list contains notifications for each of the hourly scheduled job runs to track failed workflow rules. Each notification also displays the number of workflow rules that have failed in that scheduled run.
2. Click on a notification to view the failed workflow rules.
3. Next, click on *More* to view details of the failed workflow rule.
4. Click on an object ID to view for which instance the workflow rule failed.
5. Next, click on an instance to navigate to the rule summary details.

Clean your Notifications

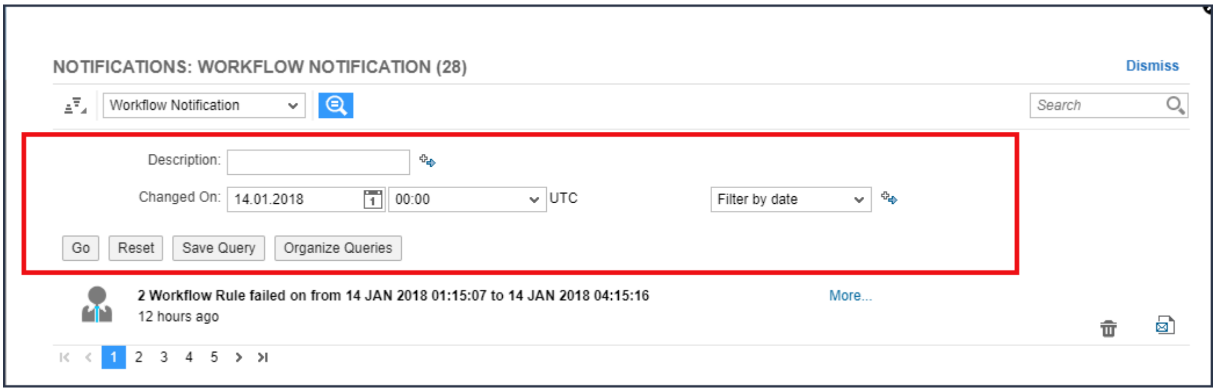
You can now clean up your notifications list using *Dismiss*. This dismisses the notification for your user but continues to display in the list for other users to whom the notification has been sent. You can also dismiss multiple notifications at a time using multi-select and *Dismiss* option.

Personalize Filter Queries for Notifications

In the *Notifications* screen, click on the icon for advanced search and create a new query filter or modify existing ones. Save these query filters and use them to search for notifications.

27.10.5 Personalize Filter Queries for Notifications

In the *Notifications* screen, click on the icon for advanced search and create a new query filter or modify existing ones. Save these query filters and use them to search for notifications.



27.10.6 Clean Up Notifications List

You can clean up your notifications list using *Dismiss*.

This dismisses the notification for your user but continues to display in the list for other users to whom the notification has been sent. You can also dismiss multiple notifications at a time using multi-select and *Dismiss* option.

27.10.7 Configure Notifications for Employee Delegates

Administrators can define notifications for delegates, where the delegate receives notifications of tasks to be completed, or general notifications for the employee who is absent. Follow the steps given below to create a delegate notification:

> **i Note**
>
> When you or the employee activates delegate, the system automatically provides copies of notifications to the delegate without the administrator having to manually maintain this view.

1. Go to *Administrator* > *Notification of Delegates*.

2. Select the employee for whom you want to create or edit delegates, and choose *Edit Delegates*.

> **i Note**
>
> You will see a list of existing delegates, if any. You can activate them by selecting *Activate*.

3. To create a new delegate, select *Add Row* and enter:
    1. The *Relationship Type* depending on whether the employee you selected is the employee who will be absent or the employee who will become the delegate.
    2. The *Related Employee* who will either be a delegate for or have work delegated to him or her by the former employee, depending on what you select in the previous column.

    > **i Note**
    >
    > To activate this delegate immediately, select *Activate*.

4. Save your changes.

27.11 Manage Workflow Logs

Administrators can access workflow logs in the actions listed under the *Settings* (gear) icon in the *Workflow Rules* work center view.

Feature highlights of workflow logs are listed here:

- Workflow logs are listed for all *Past Rules* and *Scheduled Rules*. Choose additional filters to display logs.
- The logs display date and time stamp for the error.
- The logs contain error messages displayed in the business object instance where the error occurred. Click the hyperlink for business object ID to navigate to the business object instance where the error has occurred.
- Select a rule and click *Retry* action listed under the actions.
- Click *Export Rules* to download the logs in an excel file.

27.11.1 Rule Log

Rule log displays error log for a selected workflow rule. Access this menu option under the settings (gear) icon in the *Workflow Rules* work center view. Same set of details as workflow logs are displayed for the selected workflow rule.

27.12 Monitor Workflow Rules

Administrators can monitor, review, schedule and re-trigger workflow rules.

Following actions provided under the gear icon in the *Workflow Rules* work center view:

- Deactivate
- Activate
- Rule Schedule
- Workflow Log (shows past rules and scheduled rules to be executed in the future)
- Rule Log
- Workflow Settings (notifications on failed rules)

27.12.1 Monitor Execution Outcome

Monitor the status of the workflow rules that have already been triggered.

Use the *Rule Log* action to view the status of executed rules and review the outcome of all rules executed in the past, and confirm if any rules have failed. This feature is helpful to monitor rules scheduled on multiple instances. Further, if the workflow rule fails to execute, you can navigate to the object or to the rule to investigate further.

27.12.2 Re-Execute Failed Rules

Retry executing the failed workflow rules.

With the *Retry* feature, administrators can re-trigger a failed workflow rule. you can filter the logs results by specifying a time frame. For example, select *Today* in the selection help to view the logs created on that particular day. A new log is generated with the updated statuses for the rules that have been re-executed. To view the logs, click on *Refresh*. You can also filter the logs based on *Rule Description*, *Object Type* and *Status* in the advanced search.

27.12.3 View Workflow Rule Execution Status

View the execution status for a workflow rule in the *Past Rules* table under *Workflow Changes*.

28 Surveys

Surveys are an integral feature in retail execution and service scenarios in SAP Cloud for Customer. You can design surveys that sales representatives will use to capture business related data at customer locations. The information captured in the surveys offers you an insightful direction for your next set of business actions. The survey offering includes comprehensive survey design, execution as well as reporting capabilities.

From a usage perspective, surveys in SAP Cloud for Customer can be broadly categorized as internal and external surveys.

- **Internal Surveys**: The internal surveys are used at customer locations to capture the necessary information regarding sales, product display and so on. Note that internal surveys can be consumed only if they are assigned to a business object such as visit, service ticket, lead, opportunity and so on.
- **External Surveys**: The external surveys on the other hand are filled by the customers and are typically used to capture the satisfaction quotient of a target group audience or customers.

28.1 Scope and Configure Surveys

Administrators can configure surveys using scoping, scoping questions, and fine-tuning activities.

Scoping questions and fine-tuning activities that are straightforward may not be included in this list.

28.1.1 Enable Surveys

Administrators can add *Surveys* to your project scope.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Sales* > *Account and Activity Management* > *Activity Management* and check the box next to the scoping question for using surveys.

28.1.2 Configure Survey Categories

Administrators can configure survey categories in fine-tuning activities to meet your business needs.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *Surveys* > *Maintain Survey Categories* to edit your categories.

28.1.3 Configure Survey Question Categories

Administrators can add and delete question categories in fine-tuning activities.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *Surveys* > *Maintain Question Categories* to edit your categories.

28.1.4 Configure Survey Answer Categories

Administrators can configure answer categories for surveys in fine-tuning activities.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *Surveys* > *Maintain Answer Categories* to edit your categories.

28.1.5 Configure Product Determination Rules for Surveys

Administrators can create rules for the system to dynamically assign products or product lists to a survey at runtime.

Context

This rule framework allows you to define both product determination and classification.

! Restriction

Products and product lists cannot be maintained together in a single rule.

Procedure

1. Go to *Administrator* > *Sales and Campaign Settings* > *Define Rules for Survey Product Determination* to launch the rules table.
2. If it is your first time to create rules, use *Adapt Columns* to set up the rules table. You can have up to 20 columns in the table, including last three result columns, *Product*, *Product List ID*, and *Classification*.

   → Tip

   We recommend that you remove any unwanted columns and only keep required ones as extra columns can impact system performance.
3. Choose *Insert Row* above the rules table. A new row with an asterisk in each field is added to the table.

   You can add values to more than one field in a row. The fields in one row evaluate as a logical **AND** relationship, which means the field values must all evaluate to true in order for the rule to evaluate to true.
4. Click the asterisk symbol in a cell to enter a value for that field. The rules table offers a variety of logical operators to define your values.
5. Continue to add rows for each desired result.

   The rows in the rules table evaluate as a logical **OR** relationship. The system compares each rule from top to bottom until it finds one match, which suggests that the most specific rule should be placed at the top of the table and generic ones should be near the bottom.

   You can rearrange rows by selecting the row and clicking *Swap*.
6. Click *Save* when you finish.
7. Click *Activate Rules*.

   For your updated rules, unless you reactivate them, otherwise the previous rule sets continue to execute.

28.1.6 Configure Add Products from Past Orders in SAP Cloud for Customer, Extended Edition

Administrators can enable this SAP Cloud for Customer, Extended Edition feature by selecting a scoping question.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Sales* > *Account and Activity Management* > *Activity Management* > *Surveys* to find the corresponding scoping question.

28.1.7 Configure Icons for Product Classification

Administrators can assign icons for product classification in fine-tuning activities.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *Surveys* > *Maintain Product Classification for Survey* to assign a product classification icon for surveys.

> **Note**
> - Only a limited set of icons are available.
> - A default classification icon is provided for classifications which do not have any icons maintained.

28.1.8 Configure Surveys in SAP Cloud for Customer, Extended Edition

Administrators can configure survey options in SAP Cloud for Customer, Extended Edition.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Sales* > *Account and Activity Management* > *Activity Management* > *Surveys* to view the scoping questions for Surveys in Extended Edition.

You can choose to display the product image, ID, or description, and to allow products from past orders to be added in SAP Cloud for Customer, Extended Edition.

28.1.9 oData and Web Services for Surveys

Administrators can integrate this feature by using oData and web services.

To learn more about oData and web services, go to the SAP Cloud for Customer Help Center and under the Integration section, view the SAP Cloud for Customer OData API and the Web Service API documentation.

28.2 Survey Types

Use different types of surveys to accomplish your various goals.

General (Checklist) Surveys [page 1094]
General surveys, also known as checklist surveys, contain a collection of questions in a list format.

Product Surveys [page 1095]
Use product surveys to collect data about products.

Competitor Product Surveys [page 1095]

Capture information about your competitor's products in a competitor product surveys.

Registered Product Surveys [page 201]

Create a survey based on the registered products for a specific account.

Competitor Surveys [page 1097]

Evaluate competitor performance.

Create Satisfaction Surveys [page 1098]

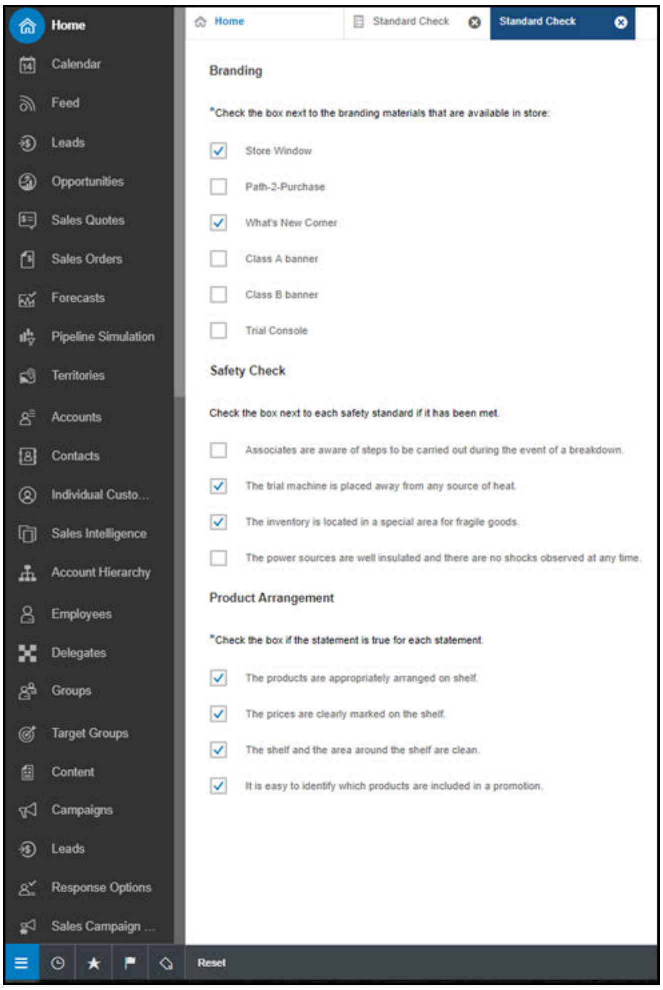
Collect feedback from your customers with a satisfaction survey.

Survey Categories [page 1099]

Define survey categories based on survey types for your reporting needs.

28.2.1 General (Checklist) Surveys

General surveys, also known as checklist surveys, contain a collection of questions in a list format.



28.2.2 Product Surveys

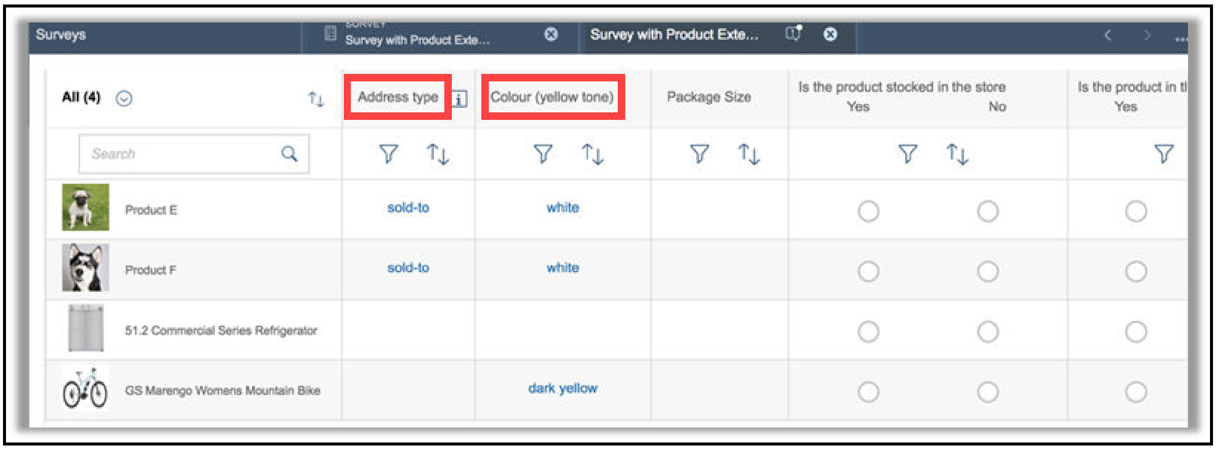
Use product surveys to collect data about products.

Create a product survey to answer the same set of questions for multiple products. You can add individual *Products*, products from a *Product List*, and products from a *Product List Category* to a *Product Survey*. These products can be added during design time as well as runtime.

You can dynamically add products from product lists based on a product list category. For example, if you set a product list category for Seasonal Sales in the survey, and create a product list called Summer Products assigned to this product list category, then the Summer Products product list will automatically be added to the survey if its valid for the account being visited.

You can search for products using extension fields. First, create extension fields for products, then add the extension fields as questions in the survey.

In the following example, *Address type* and *Colour* are extension fields.



Product Surveys are available in list view and matrix view.

Related Information

[Complete Product Surveys [page 1136]]

Product surveys have additional options during survey completion.

28.2.3 Competitor Product Surveys

Capture information about your competitor's products in a competitor product surveys.

Create your own criteria to audit your competitors' products in store. For example, you may want to check availability, prices, or promotions for your competitor's product to see how your products compare. Competitor product surveys are created like a regular product survey, but with competitor products instead.

Related Information

https://help.sap.com/viewer/24765b551a014b779b95c7b07d8e9079/latest/en-US/1143cc7fad7348089f0cbf8f918456ff.html

28.2.4 Registered Product Surveys

Create a survey based on the registered products for a specific account.

To collect information regarding products that have been installed at a specific account, use a registered product survey.

Create a registered product survey like regular product survey, but without adding products to it. Instead, when you assign a survey to a visit, it automatically includes the registered products that have been set for the assigned account.

Related Information

Product Surveys [page 1095]

Use product surveys to collect data about products.

Visits

28.2.4.1 Registered Products Based on Involved Parties for Visits in Surveys

All registered products for all involved parties are included in registered product surveys.

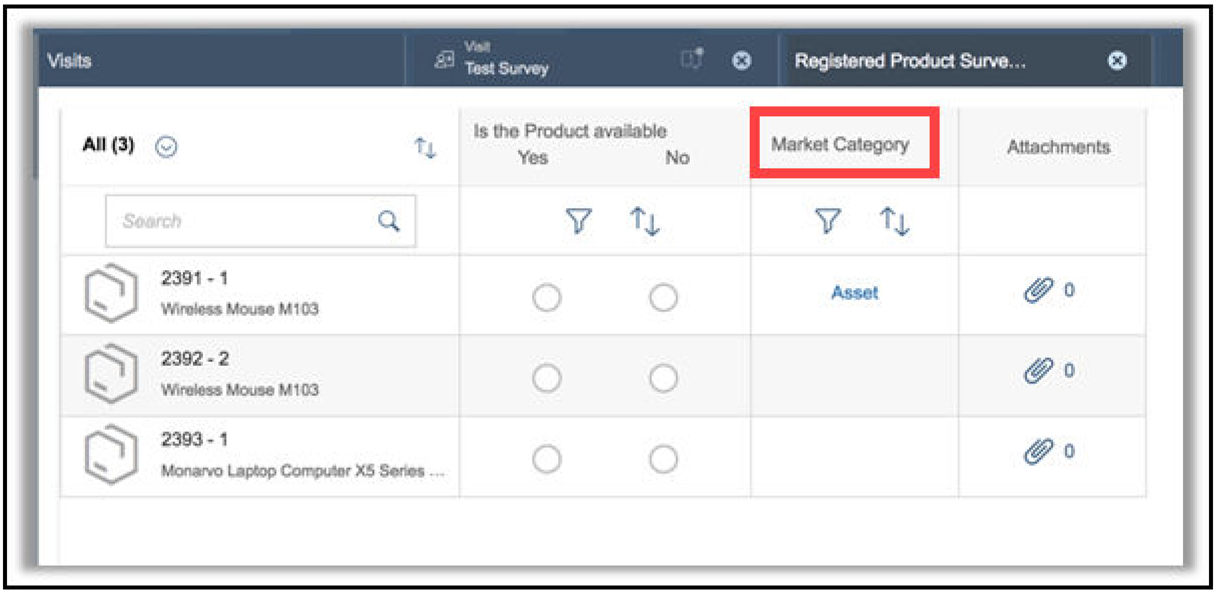
When you assign a registered product survey to a visit, all registered products for the account being visited are automatically populated in the survey. This includes all registered products where the account being visited is listed as an involved party, regardless of the role assigned. Previously, only registered products with the visit account assigned the role of customer would have been considered and populated in the survey.

28.2.4.2 Search for Registered Products Using Serial ID, Description, and Extension Fields

Use the serial ID, description, and extension fields of registered products instead of the product ID to search for registered products in surveys.

Create extension fields for registered products, then add the extension fields as questions in the survey.

In the following example, *Market Category* is an extension field.



28.2.4.3 Define a Product and Product Category for Registered Product Surveys

When designing a registered product survey, define a product or product category for your registered products. During runtime, the system displays registered products based on these requirements.

28.2.5 Competitor Surveys

Evaluate competitor performance.

Gain insight about your competitors with competitor surveys. Measure performance across multiple categories and compare these results to your own. Use this data to improve your performance and stay ahead of your competition.

Competitor surveys collect data about the competitors related to an opportunity. If you add a competitor survey to an opportunity, the competitors listed in the opportunity will be added to the survey by default. If you'd like to add additional competitors to a survey, you can do so when designing the survey.

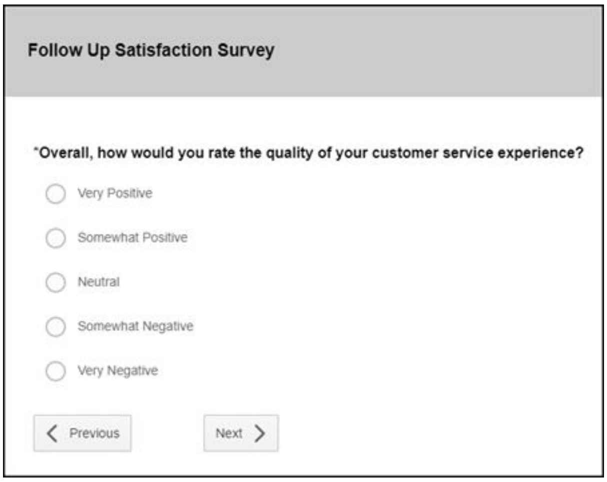
28.2.6 Create Satisfaction Surveys

Collect feedback from your customers with a satisfaction survey.

Context

Create satisfaction surveys that you can send out to your customers using an e-mail template. Your customers can rate how satisfied they are with several answer options based on a scale you create. You can also use all other question types in satisfaction surveys to collect more details about your customers.

After users complete a satisfaction survey, they receive a message signifying that they have completed the survey and thanking them for their participation. You can configure this message for each of your satisfaction surveys to meet your brand and business needs.



> **Note**
>
> Satisfaction surveys aren't available on the iPad and are therefore also not available for offline usage.

Procedure

1. Add a new survey, choose the *Satisfaction* category and fill in the basic information.
2. Add satisfaction questions by selecting *Customer Satisfaction* under *Question Category* and use *Multiple Choice (select one)* questions to set your scale. Here, you could choose to use numerical values and give a rating scale in your short descriptions or use the answer options to describe satisfaction.
3. Add other additional question types if you'd like to collect other data in your survey.
4. Under *Survey End Message*, format and enter the message you'd like your participants to receive upon completion.
5. Select *Save*.

28.2.7 Survey Categories

Define survey categories based on survey types for your reporting needs.

Survey categories are different from survey types. Survey types are predefined survey formats whereas survey categories are classification names created by your administrator. Survey categories define each survey type further by giving them custom names. Create reports based on these categories to gather data in a larger business context.

Example

You can create one survey category for Seasonal Products, one for Standard Products, and one for Promotional Products. All categories will have the product survey type, but will belong to different survey categories. You can apply these categories for many different surveys you create and then create reports based on each category to evaluate performance in each category.

28.2.7.1 Configure Survey Categories

Administrators can configure survey categories in fine-tuning activities to meet your business needs.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *Surveys* > *Maintain Survey Categories* to edit your categories.

28.3 Design Surveys

Design your survey questions, layouts, and other options to create a unique output.

Survey Statuses [page 1101]
Survey statuses are important to keep in mind when designing surveys because they define what actions are available for users.

Question Types [page 1102]
Configure your surveys with different types of questions and reporting features.

Survey Question Bank [page 1108]
Store survey questions for easy reuse in multiple surveys.

Copy Previous Answers [page 1108]
Automatically populate answers from a past visit in a survey.

Matrix View for Surveys [page 1109]
Simplify the layout of your product survey questions, and answer all questions for all products quickly.

Use Pagination in Matrix Surveys [page 1109]
Design your survey layout to distribute product questions in different pages.

Add Branching Logic to a Survey Question [page 1110]
Based on how respondents answer the current question, they can skip questions that are no longer applicable, and jump to a later question in the survey sequence. Define survey branching when you design the question.

Dynamically Display Answer Options in a Survey Question [page 1111]
Based on how a respondent answers a previous question, answer options in the current question can be dynamically filtered. Define the source question and maintain answer option dependencies when you design the question.

Add Products to Product Surveys [page 1112]
You can add products to your survey while you are completing it.

Define Product Determination Rules for Surveys [page 1112]
Products or product lists can be dynamically assigned to a survey at runtime, provided the product determination rules have been defined by your administrators.

Add Products and Search Products Using Barcode Scanner [page 1114]
You can conveniently add products in a survey and search products inside a survey using a barcode scanner.

Disable Addition of Products During Survey Execution [page 1115]
The *Add Products* option during survey execution can now be switched off as part of survey design.

Classify Products in Product Surveys [page 1115]
You can classify products in a survey to simplify survey execution.

Restrict Access to Surveys [page 1115]
Make surveys available to only a specific sales or service organization.

Assign Surveys [page 1115]
Surveys can be assigned to visits, leads, opportunities, and so on.

Score Multiple Choice Surveys [page 1116]
Add scoring values to multiple choice questions and answer options.

Preview Surveys [page 1120]
Preview surveys with a simulation.

Create Survey Exceptions [page 1120]
Create survey exceptions after you've added all questions to your survey.

Use Reference Questions for Survey Exceptions [page 1121]
Use survey questions as references for survey comparison exceptions.

Set Up Automatic Creation of Follow-Up Tasks in Surveys [page 1122]
Upon survey submission, the system can automatically generate follow-up tasks from surveys when conditions are met. This feature is available in online mode for all survey types, except satisfaction surveys.

Set Up Automatic Creation of Follow-Up Tickets in Registered Product Surveys [page 1123]
Upon survey submission, the system can automatically generate follow-up tickets from registered product surveys if conditions are met. This feature is available online only.

Create a Sales Quote or Sales Order as A Follow-Up Item from a Survey [page 1125]
Design your survey to create and populate a sales quote or sales order automatically based on the answers to the questions in the survey.

Create Surveys in Multiple Languages [page 1126]

Create a survey and add descriptions, questions, and answers in additional languages.

Use OData Services for Surveys [page 1127]
Odata services are available for both design time and runtime time of surveys.

Update Marketing Attributes Using a Survey [page 1127]
You can now update marketing attributes for Accounts and Contacts using a survey.

Create Satisfaction Surveys [page 1128]
Collect feedback from your customers with a satisfaction survey.

Transfer Surveys Using Transport Management [page 1129]
As an administrator, you can transfer surveys from one system to another using the Transport Management System.

28.3.1 Survey Statuses

Survey statuses are important to keep in mind when designing surveys because they define what actions are available for users.

Once you start creating a survey, you'll need to pay attention to its status.

Set the survey status from the *Actions* menu.

- *In Preparation* (initial status): In this status you can add, change or delete questions and answers. Surveys with status *In Preparation* cannot be assigned to an activity plan or a visit.
  From *In Preparation* you can switch to *Active*.
- *Active*: Indicates that the survey is ready to be used. You can use the survey for activity plans and store visits. If a survey is active you can't change, add or delete questions from it, but you can edit the attachements, products, categories, and score values.
  From *Active* you can switch to *In Preparation* and *Obsolete*.
- *Obsolete*: The survey can no longer be assigned to new visits or activity plans. If the survey is already used for open, or in process store visits, the survey can still be completed during the visit.
  From *Obsolete* you can switch to *In Preparation* and *Active*.

> **Note**
>
> You can switch from *Obsolete* and *Active* to *In Preparation* only when there are no answers available for this survey.

28.3.2 Question Types

Configure your surveys with different types of questions and reporting features.

28.3.2.1 Survey Question Types

Use *Question Types* to specify the format of the answer options.

The following *Question Types* are offered:

- *Amount* - Enter a value in a specific currency. Validations are performed against the lower or upper limits you have set.
- *Date* - Use the calendar button to enter a date in a supported date format.
- *Date Range* - Use the calendar button to choose start and end dates.
- *Matrix* - Gather more details at once using a matrix of rows and columns. Only available in the SAP Fiori Client.
- *Multiple Choice (select multiple)* - Choose one or more predefined answer options.
- *Multiple Choice (select one)* - Choose only one predefined answer option.
- *Numeric Value* - Capture numeric (integer) responses and can be included without specifying the unit of measurement or the currency as a mandatory field.
- *Quantity* - Enter a value for a specific unit of measure.
- *Registered Product Extension Fields* - Add an extension field for the registered product of interest, and then add the extension field as a question in the survey.
- *Section* - Create a section to organize and structure your surveys. This question type is not a question with answer options, but allows you to add headings and enter blocks of text that provide more information and organization for survey respondents.
- *Signature* - Ask for a signature upon completion of a survey.
- *Text* - Use the text field to enter any additional information you may want to give your survey respondents. You can configure the text box size while designing the external survey. You can select either small, medium, or large size text box. The default size is set to medium.

> **i Note**
>
> Zero is not supported as the lower limit.

28.3.2.2 Signatures in Surveys

Ask for a sign-off upon completion of surveys.

You can capture a signature in a survey when you submit a survey. On signature capture, the survey status is set to *Completed* and can no longer be modified. You can view the signature at the end of the survey summary PDF.

Add a signature question to your survey when designing it. You can use the *Mandatory* flag to require a signature for completion.

> **i Note**
>
> Currently, only one signature question type is allowed for a single survey.

This feature is valid only for:

- SAP Cloud for Customer, Extended Edition - In the HTML5 edition, you can still capture a signature but the survey status will not be set to *Completed*.
- Internal surveys - This feature is not supported for external or satisfaction surveys.

You can view the *Signed Status* for a survey. The following statuses are set by the system:

- *Signed* – Indicates that the signature has been added.
- *Not Signed* – Indicates that the signature has not been added. This status also indicates that signature is optional for the survey.
- *Blank* – Indicates that the signature is not required for the survey.

28.3.2.3 Hide Questions in Surveys

During runtime of a survey, you can hide questions.

In the design screen set the *Hide Question* toggle button to *Yes*.

Note that only calculated fields and extension field questions can be hidden.

28.3.2.4 Survey Page Breaks

Use page breaks to group questions by page.

For all default question types in a survey, you have the option to place the question on a new page within your survey. Use the page break checkbox when designing your question. The question that has the box checked and all following questions are shown on a new page.

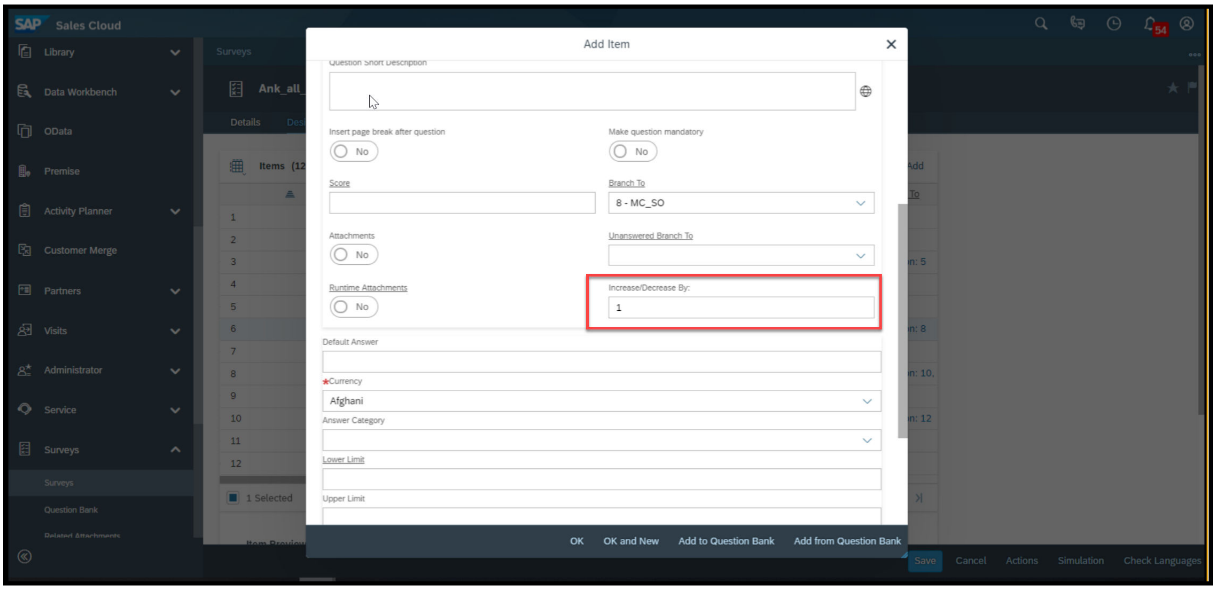
28.3.2.5 Incremental Numeric Boxes

Incremental numeric boxes are available for amount, quantity, and numeric type of questions.

Based on the number you define in the *Increase/Decrease By* field, during runtime, the value of the field is changed on each click.

Note that if derivation method is enabled for these types of questions, then the feature is not applicable. When you select an option in the *Derivation Method* field, the system hides the *Increase/Decrease By* field.

> **i Note**
>
> The feature is only available in Fiori Client.



28.3.2.6 Attachments for Survey Questions

Add attachments to display in your surveys, and allow participants to attach files when completing surveys.

You can add attachments to individual questions at design time in the survey by setting the flag for *Attachments*. Add attachments to surveys using one of the following options: Local file, Web link, and Library. You can add PPTs, PDFs, JPGs, PNGs, and URLs as attachments.

> → Recommendation
>
> For performance reasons, we recommend attaching a maximum of one large picture, 10 medium pictures, or 30 small pictures per survey.

Use the *Planogram Attachment Category* to attach account-level attachments. Select the *Attachment Type Category* you'd like to add, and then, during runtime, the attachments relevant for the account and category will be available to view.

If you want participants to be able to add attachments to questions when they are completing a survey, set the flag for *Runtime Attachments* at the question level.

> i Note
>
> For matrix surveys, you cannot add attachments at the question level. You can only add attachments at the product level in matrix surveys.

28.3.2.7 Survey Question Categories

Define question categories that can be used in reporting.

When creating survey questions, you can assign a *Question Category* to help classify the question in a larger business context. You can then create reports based on a specific question category.

28.3.2.8 Configure Survey Question Categories

Administrators can add and delete question categories in fine-tuning activities.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *Surveys* > *Maintain Question Categories* to edit your categories.

28.3.2.9 Survey Answers

Choose the format for the answers to your multiple choice survey questions.

The format for your multiple choice survey answer fields depends on the type of question. Some question types allow you to choose an answer format. The following options are available:

- Toggle
- Radio Button
- Dropdown List
- Checkbox

28.3.2.10 Survey Answer Categories

Define answer categories that can be used in survey reporting.

When creating answers for your survey questions, you can add them to an *Answer Category* to help describe the meaning of the answer in a larger business context. You can then create reports based on a specific answer category.

Example

If you have a question that asks users to rate their experience on a scale from 1 to 5 with 1 being very dissatisfied and 5 being very satisfied, you can apply the category negative to answers 1 and 2, neutral to answer 3, and positive to answers 4 and 5. These same categories can be applied to other answers, and then you can run a report based on answers that were positive, neutral, and negative. You can collect this data for a particular survey or account to view your results on a broader or more focused scale.

28.3.2.11 Configure Survey Answer Categories

Administrators can configure answer categories for surveys in fine-tuning activities.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Open Activity List* > *Fine-Tune* > *Surveys* > *Maintain Answer Categories* to edit your categories.

28.3.2.12 Default Survey Answers

Set a default answer for multiple choice, amount, quantity, and text questions.

Choose a default answer to show during runtime for your survey questions when you design each question.

- For multiple choice, set the *Default Answer* flag next to the answer you want to set as default.
- For date questions, use the calendar next to *Default Answer* to select a default date.
- For amount, quantity, and text questions, enter a value in the *Default Answer* field.

28.3.2.13 Calculated Fields on Surveys

Answers to a question can be populated based on the answers provided to other questions.

Quick calculated answer values are available based on the responses you provide thus helping you in easy inference of the responses.

To populate a calculated field, follow these steps:

1. Select an amount, quantity, or numeric question type.
2. Select the option of making this a calculated answer type.
3. Provide the calculation logic.

> **i Note**
>
> Calculated answers are read-only during runtime.

In a calculation, you can either choose a response from an existing question, or enter a constant numeric value as the operand.

This option is not available by default. You must personalize this in the adaptation mode.

28.3.2.14 Score Surveys

Add values for scoring to multiple choice, quantity, and amount questions.

Assigning values at the question level allows you to weight certain questions to have a higher impact on the results overall. Survey respondents do not see these score values when they are completing the survey. The scores are shown in your PDF summary or in your survey reports.

Related Information

Score Quantity and Amount Questions [page 1116]
Add scoring options for quantity and amount questions in your surveys.

28.3.2.15 Additional Information for Questions

Add help text for your question.

Text you enter here appears in a help icon next to the question. The survey respondent can click the icon to see the text.

28.3.2.16 Short Description for Questions

Add a description to quickly find your previously created questions.

The short description field is for internal purposes only and is not shown to survey respondents. Short descriptions are helpful when selecting questions from the question bank.

28.3.2.17 Mandatory Questions

Make questions mandatory for survey submission.

When designing a question, use the mandatory checkbox to require the respondent to answer the question to submit the survey. When completing the survey, the question displays an asterisk and an error is given when an attempt to submit the survey is made without answering the question.

28.3.2.18 Matrix Questions

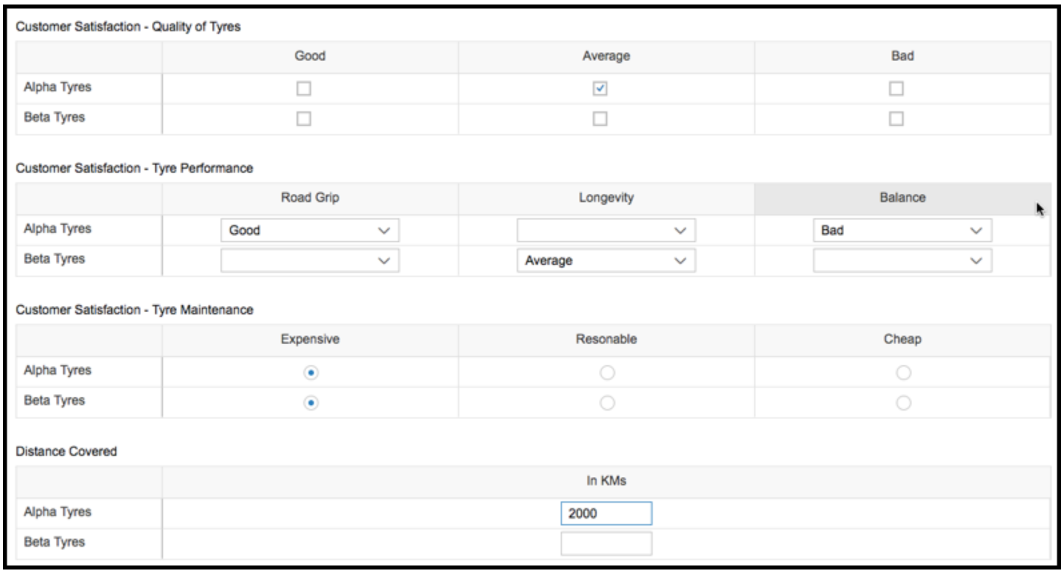
Create flexible matrix questions to fit your survey question needs.

Effectively collect data for different sources and categories with individual matrix questions. Decide how many rows and columns for each matrix question and what answer options to display.

For matrix questions, you answer options are restricted to:

- Radio Button
- Checkbox
- Numeric Value
- Text Value
- Dropdown List

Example



28.3.3 Survey Question Bank

Store survey questions for easy reuse in multiple surveys.

The Survey Question Bank stores frequently used questions that can be added to multiple surveys. You can add questions to the questions bank when you are creating questions for a survey or create questions in the bank directly for a later use.

When designing a survey question, use *Add To Question Bank* to save your question so you can use it again in another survey. When you are ready to use one of your saved questions, use *Add From Question Bank* to select a previously prepared question.

The usage and maintenance of question are controlled by the status.

- *In Preparation* – Questions are modifiable and can't be used in a survey. This is a default status when questions are created from question bank.
- *Active* – Questions can be used in surveys. This is the default status when the question is created from the survey and added to the question bank.
- *Obsolete* – Questions cannot be used in a survey. The status can only be changed to *Active* if the question is used in a survey. It can be changed to *In Preparation* at any time.

28.3.4 Copy Previous Answers

Automatically populate answers from a past visit in a survey.

You can copy answers from a previous visit's survey by selecting the *Include Previous Answers* flag in the survey details view. All answers from a previous visit's survey get copied for the current survey. To exclude the previous answers for a specific question in the survey, select the flag for*Exclude Previous Answer* available at the individual survey question level. This flag overrides the *Include Previous Answers* setting and ensures that previous answers do not get copied for the selected question.

> **i Note**
>
> The *Exclude Previous Answer* flag appears in survey questions only if you have selected the flag for *Previous Answers* in the survey header.

28.3.4.1 Copy Previous Answers and Previous Products in Opportunities

When designing surveys for use in opportunities, you can now specify to copy either previous answers or previous products from the last survey executed.

The survey completion process is streamlined for improved efficiency. The copy process is executed automatically during survey execution. To enable this function, select the *previous answers* checkbox and the *previous runtime products* checkbox while designing the survey.

28.3.5 Matrix View for Surveys

Simplify the layout of your product survey questions, and answer all questions for all products quickly.

With the *Matrix View* checkbox in the survey you can simplify the layout of the questions for each product. The matrix view allows you to view the products in your survey as rows and the questions in your survey as columns.

> **i Note**
>
> Matrix view is for product surveys, competitor product surveys, and registered product surveys only.

In the SAP Fiori Client, quickly access the sort and filter options directly beneath each question. Select the question at the top of the column to see more options such as

- Full text of a question
- Set all answers to
- Attachments

28.3.6 Use Pagination in Matrix Surveys

Design your survey layout to distribute product questions in different pages.

The number of pages rendered in a survey depends on the available height of the device screen and the number of products.

Pagination offers the ability to navigate to and jump between different pages in a survey. The scrolling between pages is faster and it significantly improves performance, particularly in large product matrix surveys. Note that when you sort or apply filters, the filters are applied across all products in the survey. Use the rewind feature to rewind to page 1.

During survey design, select the flag *Pagination* in the *Details* tab to enable pagination for a survey.

> **Note**
>
> This feature is only available in SAP Cloud for Customer, Extended Edition.

28.3.7 Add Branching Logic to a Survey Question

Based on how respondents answer the current question, they can skip questions that are no longer applicable, and jump to a later question in the survey sequence. Define survey branching when you design the question.

Context

This feature allows you to branch respondents to different questions in the survey sequence based on their responses.

> **→ Tip**
>
> It's recommended that you define all the questions in the survey before you set the branching logic.

Procedure

1. Under the *Design* tab, select the question to which you want to add the branching logic.
2. In the *Branch To* field, choose the next question that you want respondents to see after they answer the current question. For multiple-choice (select one) questions, branching is defined at the answer option level. You can choose a different branching target for each answer option.

   > **Note**
   >
   > Branching only allows forward progress within a survey. You can only select a future question as the branching target.

   If branching isn't defined, respondents are taken to the next question in your survey sequence.
3. In the *Unanswered Branch To* field, define what the next question is when no answer is submitted.

   If the field isn't defined and no answer is submitted for a question with branching, respondents are taken to the next question in your survey sequence.

i Note

The *Unanswered Branch To* field was earlier called *Default Branching*. From the February 2019 release, enhancements have been made so that the behavior is consistent across all the clients. To know more about how differently it worked before, read this blog.

4. When you finish, save your entries.

   Once you apply branching in your survey, the *Branching Logic* flag gets automatically checked in the survey details.

Next Steps

Preview your survey with a *Simulation* to see if the questions are logically displayed as expected.

In the matrix view, all questions are displayed, but respondents can only answer questions that are applicable based on the branching logic. The others are grayed out.

28.3.8 Dynamically Display Answer Options in a Survey Question

Based on how a respondent answers a previous question, answer options in the current question can be dynamically filtered. Define the source question and maintain answer option dependencies when you design the question.

Context

This feature allows you to present a more concise survey by only showing answer options that are relevant to the respondent.

→ Tip

It is recommended that you define all the questions in the survey before you define answer option dependencies.

Procedure

1. Under the *Design* tab, select the question whose answer options need to be dynamically displayed.
2. Toggle on the *Add Source Question* button.

3. Select a *Source Question*.

> **Note**
>
> Only multiple choice single select questions are available for selection. One question can be selected as a source question more than once.

4. For each answer option, you can select one or multiple source answer options.

   When multiple source answer options are selected, that means as long as the respondent chooses **any one** of those source answer options during survey execution, the selected answer option is displayed.
5. Once you finish defining source answer options for all the answer options, save your entries.

Next Steps

Preview your survey with a *Simulation* to see if the answer options are dynamically filtered as expected.

28.3.9 Add Products to Product Surveys

You can add products to your survey while you are completing it.

Set the flag for *Add Products from Product List* in the *Details* tab to enable adding products when completing surveys. The products that you add when you are completing a survey can be filtered using parameters such as product category, sales organization, and distribution channel.

Related Information

Product Surveys [page 1095]
Use product surveys to collect data about products.

28.3.10 Define Product Determination Rules for Surveys

Products or product lists can be dynamically assigned to a survey at runtime, provided the product determination rules have been defined by your administrators.

This feature is helpful when product determination is based on various conditions and you are not sure which specific products or product lists should be added during survey design time. Products or product lists that are added using rules are not directly attached to the survey, allowing one product survey to be easily reused for different products in different scenarios.

> **i Note**
>
> If you have explicitly added certain products to the survey, those products are displayed in the survey regardless of the rules.

Related Information

Add Products to Product Surveys [page 1112]
You can add products to your survey while you are completing it.

28.3.10.1 Configure Product Determination Rules for Surveys

Administrators can create rules for the system to dynamically assign products or product lists to a survey at runtime.

Context

This rule framework allows you to define both product determination and classification.

> **! Restriction**
>
> Products and product lists cannot be maintained together in a single rule.

Procedure

1. Go to *Administrator* > *Sales and Campaign Settings* > *Define Rules for Survey Product Determination* to launch the rules table.
2. If it is your first time to create rules, use *Adapt Columns* to set up the rules table. You can have up to 20 columns in the table, including last three result columns, *Product*, *Product List ID*, and *Classification*.

   > **→ Tip**
   >
   > We recommend that you remove any unwanted columns and only keep required ones as extra columns can impact system performance.

3. Choose *Insert Row* above the rules table. A new row with an asterisk in each field is added to the table.

   You can add values to more than one field in a row. The fields in one row evaluate as a logical **AND** relationship, which means the field values must all evaluate to true in order for the rule to evaluate to true.

4. Click the asterisk symbol in a cell to enter a value for that field. The rules table offers a variety of logical operators to define your values.
5. Continue to add rows for each desired result.

   The rows in the rules table evaluate as a logical **OR** relationship. The system compares each rule from top to bottom until it finds one match, which suggests that the most specific rule should be placed at the top of the table and generic ones should be near the bottom.

   You can rearrange rows by selecting the row and clicking *Swap*.
6. Click *Save* when you finish.
7. Click *Activate Rules*.

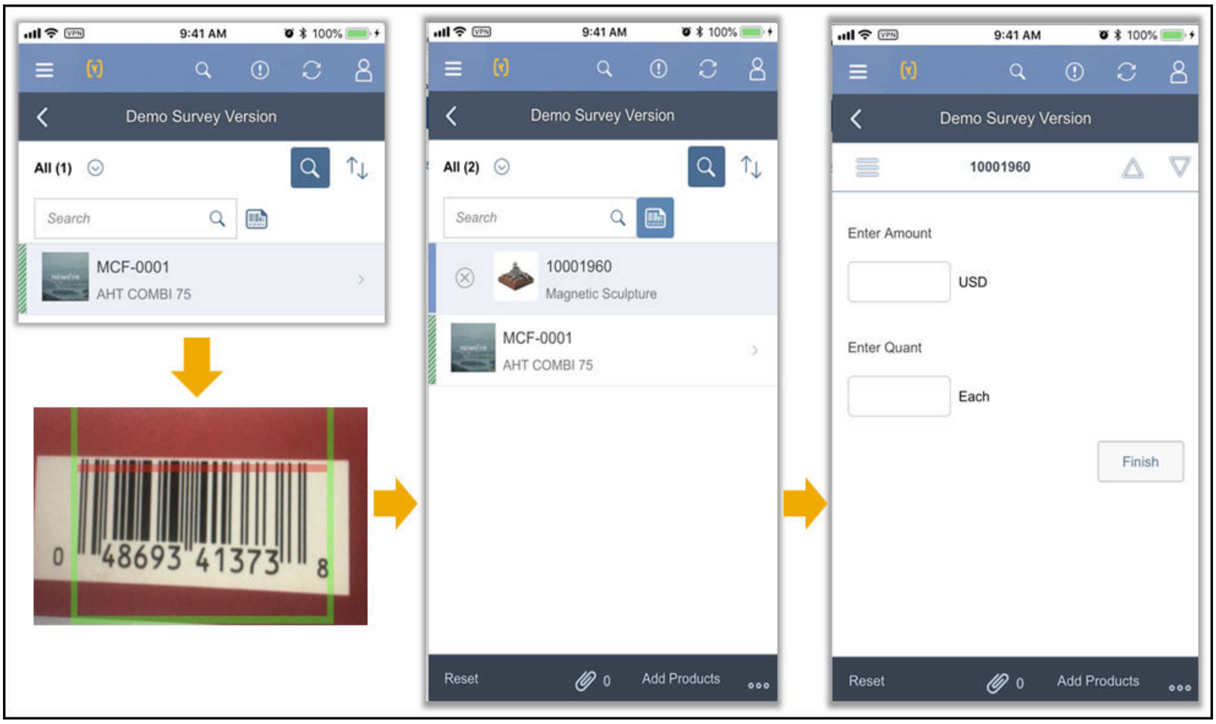
   For your updated rules, unless you reactivate them, otherwise the previous rule sets continue to execute.

28.3.11 Add Products and Search Products Using Barcode Scanner

You can conveniently add products in a survey and search products inside a survey using a barcode scanner.

The process of adding product information in the survey is simplified thus the productivity is improved.

> **i Note**
> - This feature is only available for the mobile apps in the online scenario.
> - To use this feature, the barcode of Global Trade Item Number (GTIN) should be maintained for the products.



28.3.12 Disable Addition of Products During Survey Execution

The *Add Products* option during survey execution can now be switched off as part of survey design.

You can now disable the *Add Product* option during survey execution by selecting the **Block Runtime Products Addition** checkbox when you design the survey. It offers you an enhanced control when the addition of products during survey execution is not desired.

28.3.13 Classify Products in Product Surveys

You can classify products in a survey to simplify survey execution.

The product classification is based on a rule framework. Products can also be classified as mandatory based on the rule framework. The classification enables you to quickly identify all the surveyed products of a certain classification and allows for more efficient prioritization and completion. It can be used to ensure that the mandatory products are answered before the completion of the survey.

As an administrator, you can maintain the classifications in the fine-tuning activity. To maintain the rule framework, go to *Administrator* > *Sales and Campaign Settings* > *Define rules for Survey Product classification*.

28.3.14 Restrict Access to Surveys

Make surveys available to only a specific sales or service organization.

You can assign a sales or service organization to a survey to make it restrict access to members of the organization. Once the organization has been assigned, it takes one day to apply the changes and reflect the new access restrictions.

28.3.15 Assign Surveys

Surveys can be assigned to visits, leads, opportunities, and so on.

Related Information

Create Activity Plans [page 1052]
You can create activity plans to organize standard lists of tasks and surveys. Based on your business needs, the activity plan can be assigned to various business objects. You can also mass upload activity plans via the SAP Cloud for Customer APIs.

28.3.16 Score Multiple Choice Surveys

Add scoring values to multiple choice questions and answer options.

For each multiple choice (select multiple) and multiple choice (select one) question, set a score value at the question level and at the answer level when you design them.

28.3.16.1 Score Quantity and Amount Questions

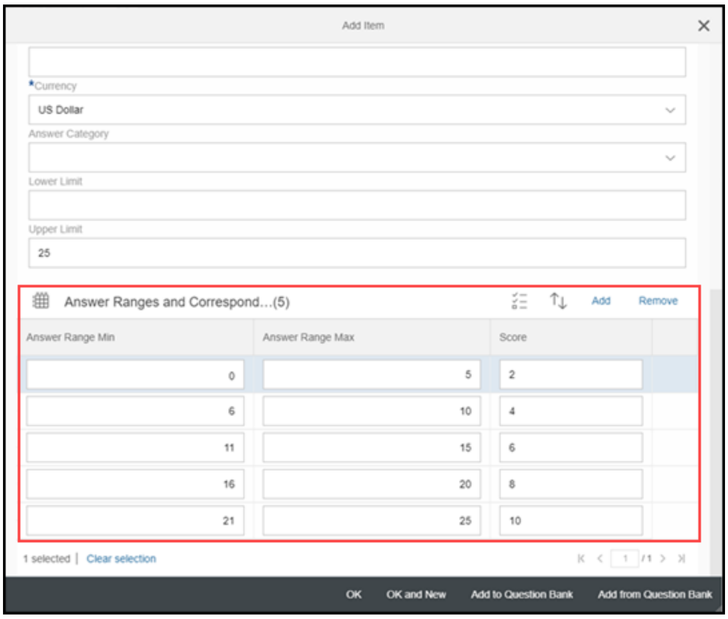
Add scoring options for quantity and amount questions in your surveys.

Context

Define score values at the question level and answer level for quantity and amount questions when designing your survey.

Procedure

1. When you are editing a quantity or amount question in a survey, enter a value next to *Score* for the question
2. Under *Answer Ranges and Corresponding Score Values* define the *Min* and *Max* values to create answer ranges that correspond to a *Score*. Answer range min and max values must align the upper and lower limit values you have set for the answer field. The range includes the min and max values you set so you cannot set the same value for the max of one answer range and the min of the next answer range.



3. Enter a *Score* value for each answer range.

Results

In the *Design* tab for your survey, you see the *Score*, the *Minimum Score*, and *Maximum Score* for the question.

28.3.16.2 Survey Score Calculations

Calculate your minimum and maximum scores for multiple-choice questions and surveys overall.

In a multiple-choice survey, the values you set during design time determine the *Minimum Score* , *Maximum Score*, and actual score for each question.

Use the personalization feature to make the fields visible for the actual score and the maximum and minimum scores that can be reached in the *Design* tab. In the*Results* tab, you can add the field for *Total Score*, and in the survey header you can add the *Score Min/Max* field to view the overall minimum and maximum scores available in a survey.

> **Note**
>
> The scores are not shown when the employee fills out the survey.

	Minimum Score	*Maximum Score*	**Actual Score**

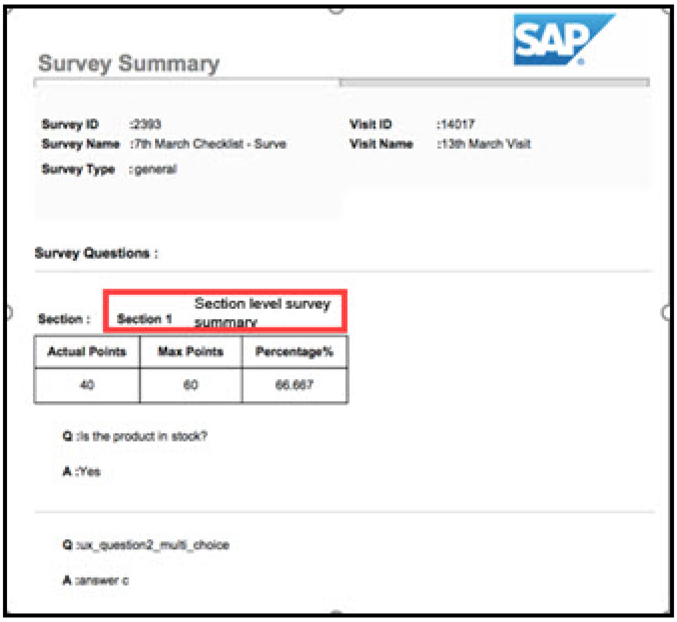
Multiple Choice (select one)	The score is calculated by multiplying the lowest answer score by the question score. **Example** **Question 1** Score: 1 • Answer A: 1 • Answer B: 2 • Answer C: 3 Question 1 Minimum Score: 1*1=1 **Question 2** Score: 1 • Answer A: 3 • Answer B: -2 • Answer C: -3 Question 2 Minimum Score: –3*1=–3	The score is calculated by multiplying the highest answer score by the question score. **Example** **Question 1** Score: 1 • Answer A: 1 • Answer B: 2 • Answer C: 3 Question 1 Maximum Score: 3*1=3 **Question 2** Score: 1 • Answer A: 3 • Answer B: -2 • Answer C: -3 Question 2 Maximum Score: 3*1=3	This score is calculated by multiplying the answer chosen by the question score. **Example** **Question 1** Score: 1 • Answer A: 1 • Answer B: 2 • Answer C: 3 Answer Chosen = A Question 1 Actual score: 1*1=3 **Question 2** Score: 1 • Answer A: 3 • Answer B: -2 • Answer C: -3 Question 2 Actual Score: -2*1= -2

Multiple Choice (select multiple)	The score is calculated by summing up the lowest reachable answer scores and multiplying it by the question score. **Example** **Question 1** Score: 1 • Answer A: 1 • Answer B: 2 • Answer C: 3 Minimum Score: 1*1=1 **Question 2** Score: 1 • Answer A: 3 • Answer B: -2 • Answer C: -3 Minimum Score: (-2+ (-3))*1= -5	The score is calculated by summing up the highest reachable answer scores and multiplying it by the question score. **Example** **Question 1** Score: 1 • Answer A: 1 • Answer B: 2 • Answer C: 3 Maximum Score: (2+3+1)*1=6 **Question 2** Score: 1 • Answer A: 3 • Answer B: -2 • Answer C: -3 Maximum Score: 3*1=3	This score is calculated by summing up the chosen answer scores and multiplying it by the question score. **Example** **Question 1** Score: 1 • Answer A: 1 • Answer B: 2 • Answer C: 3 Answers Chosen = A and B Question 1 Actual score: 1+2*1=3 **Question 2** Score: 1 • Answer A: 3 • Answer B: -2 • Answer C: -3 Answer Chosen = B and C Question 2 Actual Score: -2+-3*1= -5
Overall Survey Total This total is shown in the *Details* view of the survey as *Score Min/Max*.	The overall survey minimum score is the sum of all minimum scores in the survey.	The overall survey maximum score is the sum of all maximum scores in the survey.	The overall survey actual score is the sum of all actual scores in a suvey.

28.3.16.3 Section Summary for Checklist Surveys

View scores for each section in a checklist survey.

If a survey has multiple sections with scoring assigned in each of these sections, the survey summary shows the score for each section.



28.3.17 Preview Surveys

Preview surveys with a simulation.

When you are designing a survey, use the *Simulation* action to ensure that it meets your needs. You can view the format and all questions, exceptions, and products in the simulation as well as select answers for the questions. The answers you select are only for preview purposes and the data is not saved or stored.

28.3.18 Create Survey Exceptions

Create survey exceptions after you've added all questions to your survey.

Context

Exceptions can be created only for amount, date, multiple choice – multiple select, multiple choice – single select, and quantity question types.

> **Note**
>
> This feature is available in the SAP Fiori client only.

Procedure

1. Open a survey and navigate to the *Exceptions* view.
2. Click *Add* to enter a description for your exception. The description is the text that the user sees when the exception conditions have been met.
3. Choose a question for your exception from the dropdown menu. The dropdown menu shows only questions eligible for exceptions.
4. Set the operators and values for your exception. For amount, date, and quantity question types, set a range or restriction operator and a value for the exception. For multiple choice question types, select the answers that are required to trigger the exception.
5. Click *Ok* to save your exception.

Related Information

Check for Survey Exceptions [page 1132]
Use the exception icon to ensure that you have entered appropriate answers.

28.3.19 Use Reference Questions for Survey Exceptions

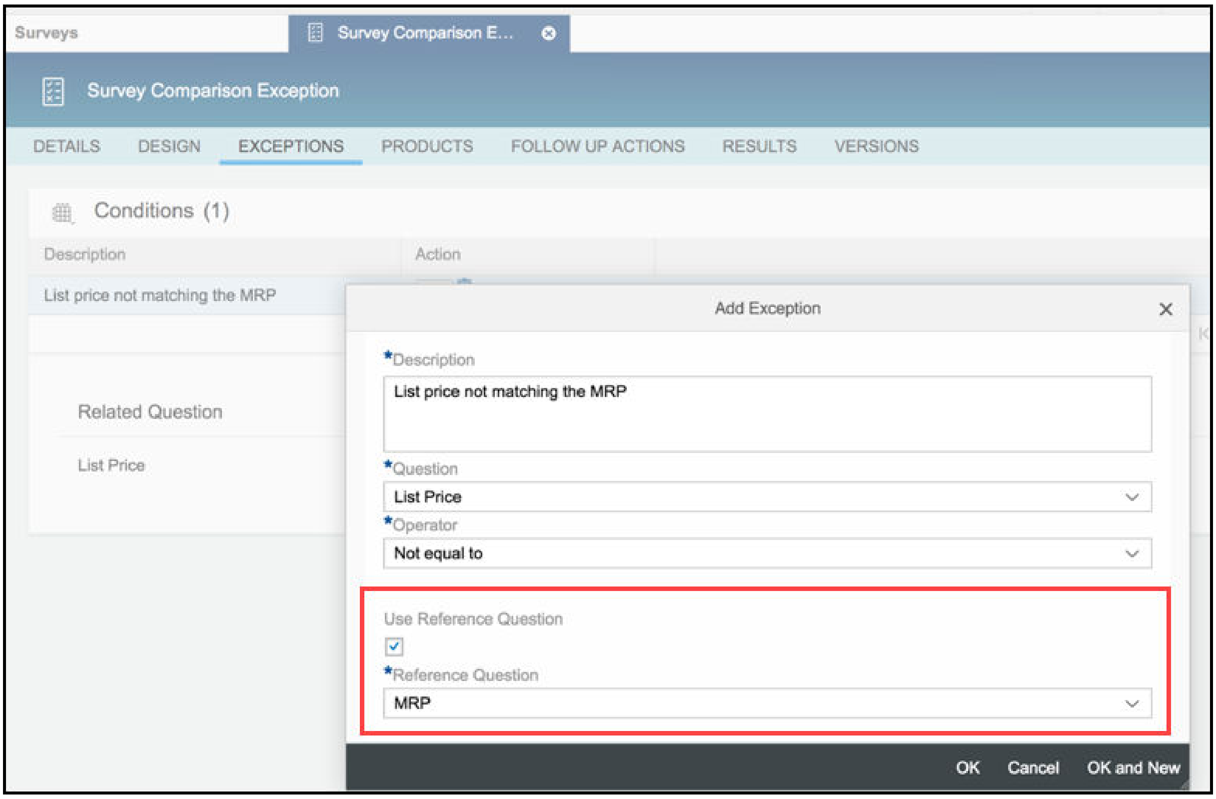
Use survey questions as references for survey comparison exceptions.

For amount, quantity, and date questions, you can use other questions from your survey as a reference to create a comparison exception. When you design a survey, go to *Exceptions* to add an exception for your survey. Select the *Use Reference Question* checkbox and select a question from your survey. Use the same operators as you would a regular survey exception to define the exception criteria and add the exception to your survey.

When the survey gets completed, users can check for survey exceptions, and the system uses the reference question and operator you've chosen to determine when an exception should be displayed.

Example

If you have a question that asks for the manufacturer's retail price of a product and a question that asks for the list price for the product, you can create an exception that appears if the list price does not equal the manufacturer's retail price.



28.3.20 Set Up Automatic Creation of Follow-Up Tasks in Surveys

Upon survey submission, the system can automatically generate follow-up tasks from surveys when conditions are met. This feature is available in online mode for all survey types, except satisfaction surveys.

Prerequisites

You've defined survey exceptions to be used as preconditions for triggering automatic generation.

Context

In surveys, follow-up tasks can be created in response to any problems or customer needs identified during survey execution. Automatic generation of follow-up tasks further streamlines this process, allowing sales reps to better track survey outcomes with less manual intervention.

! Restriction

Currently, for each survey, administrators can choose only one exception, set up only one condition for triggering task generation.

Procedure

1. Navigate to the *Follow-Up Actions* tab.
2. Add a follow-up item, and choose the type *Task*.
3. Under *Preconditions*, choose an exception that you've defined.
4. Under *Follow-Up Details*, predefine *Task Subject* by mapping the attribute to a question response.

    i Note

    We only support *Multiple Choice (select one)* and *Text* question types for mapping.

    As *Subject* is a required field to create a task, you must map it to a question that is marked as mandatory for answering.
5. Save your entries.

    In product surveys, one follow-up task can be generated for each product that meets the condition.

Related Information

Create Survey Exceptions [page 1120]
Create survey exceptions after you've added all questions to your survey.

28.3.21 Set Up Automatic Creation of Follow-Up Tickets in Registered Product Surveys

Upon survey submission, the system can automatically generate follow-up tickets from registered product surveys if conditions are met. This feature is available online only.

Prerequisites

You've defined survey exceptions to be used as preconditions for triggering automatic generation.

Context

In registered product surveys, it's imperative that follow-up tickets can be created as a result of the survey response to a customer issue, or to address a problem in the health of an asset during product audit. Automatic generation of follow-up tickets streamlines this process, allowing sales reps to better track survey outcomes with less manual intervention.

> **! Restriction**
>
> Currently, for each registered product survey, administrators can choose only one exception, set up only one condition for triggering ticket generation.

Procedure

1. Navigate to the *Follow-Up Actions* tab.
2. Add a follow-up item, and choose the type *Ticket*.
3. Under *Preconditions*, choose an exception that you've defined.
4. Under *Follow-Up Details*, predefine ticket attributes including *Subject* and *Description* by mapping them to question responses.

   > **i Note**
   >
   > We only support *Multiple Choice (select one)* and *Text* question types for mapping.
   >
   > As *Subject* is a required field to create a ticket, you must map it to a question that is marked as mandatory for answering.

5. Save your entries.

   One follow-up task can be generated for each registered product that meets the condition.

Related Information

Create Survey Exceptions [page 1120]
Create survey exceptions after you've added all questions to your survey.

28.3.22 Create a Sales Quote or Sales Order as A Follow-Up Item from a Survey

Design your survey to create and populate a sales quote or sales order automatically based on the answers to the questions in the survey.

Prerequisites

Create a product survey that includes two specific question types that initiate the creation of a sales quote or order. You'll need to create a multiple choice single select question with an answer that initiates the creation of a sales quote or order for a product and a quantity question that determines the quantity of the product to add. You must create these questions before you add the follow-up action to your survey.

Procedure

1. When designing a survey, under *Follow-Up Actions*, *Add* a follow-up item to your survey.
2. Select *Create Sales Quote* or *Create Sales Order* from the dropdown menu.
3. Select a question from the *Question* dropdown menu. Only multiple choice single select questions are available here.
4. Select the answer choice you want to trigger the creation of the sales quote.
5. Select a question from the *Quantity* dropdown menu. The sales quote or sales order uses the answer to the quantity question to populate the quantity field.

> i Note
>
> Selecting a quantity question and autopopulating the sales quote or sales order is optional. You can manually input the quantity in the sales quote or order.

Example

Let's say you want to create a sales quote as a follow-up item from a survey and autopopulate quantity based on the answer to a question. First, you'd create a multiple choice (select one) question that asks if you would like to create a sales quote for this product with the answers yes and no. Next, you'd create a quantity question that asks how many items to add to the sales quote. Then add the follow-up sales quote. Set the sales quote question and the answer yes as the trigger for the creation of the sales quote. Then set the quantity question to autopopulate the sales quote.

28.3.23 Create Surveys in Multiple Languages

Create a survey and add descriptions, questions, and answers in additional languages.

Context

When you create a survey, you can manually add other language options for the descriptions, questions, and answers. During design time, select the globe icon to edit the language options.

> **i Note**
>
> Multiple languages are not supported for survey exceptions.

Procedure

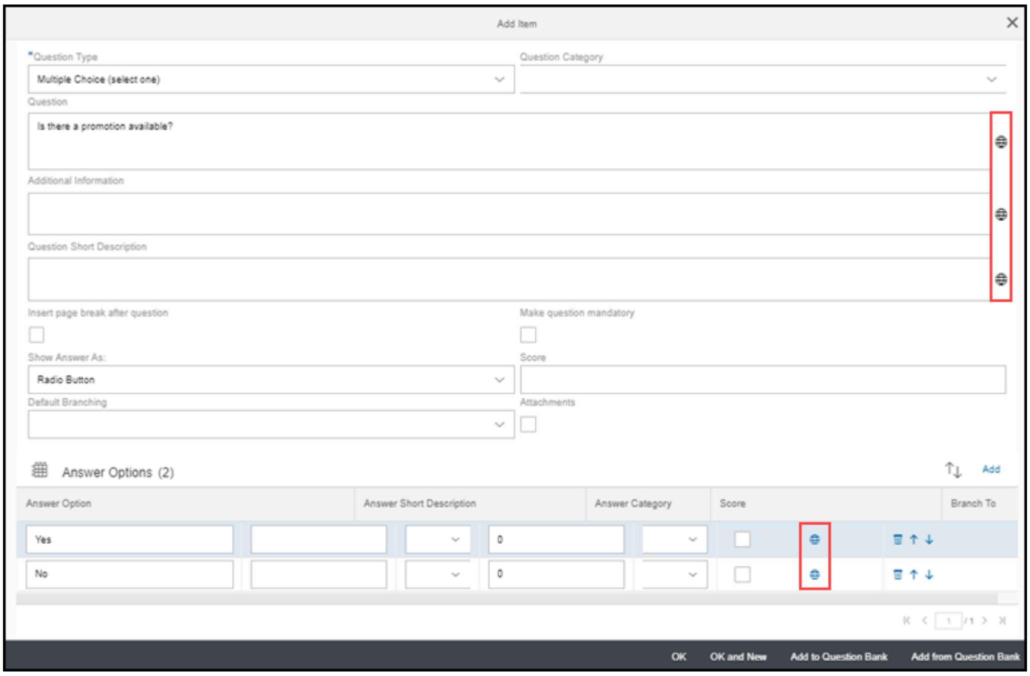
1. Open a survey and under *Details*, select the globe icon next to the name of the survey.
2. Select *Add* to add an additional language to the description. You can *Delete* a selected (highlighted) item in the list.
3. Once you have added or removed the languages, select *Update Languages* to sync all of the available text fields within a survey with the languages. This action updates all text fields with the same languages you set for the survey name.

   > **⚠ Caution**
   >
   > If you delete a language, and select *Update Languages* all corresponding text fields within your survey will deleted. Any existing text that you have entered for questions, descriptions, and answers in the language you deleted will also be deleted.

4. Once you have added additional languages to the survey from the survey name, you can go to the *Design* tab to add text for existing questions in the new languages.

   > **i Note**
   >
   > You can only add and remove additional languages to your survey from the survey name. You cannot add or remove languages from any other field.

5. Select the globe icon next to a text field such as the survey name, question, description, or answer.



6. Enter the corresponding text for the language you just added. The language field will be prepopulated according to your entry for the survey name.
7. Select *OK*.

> **i Note**
>
> You must enter text in all applicable fields for all languages to activate a survey. The system displays a warning symbol and message when you have left a text field blank.

28.3.24 Use OData Services for Surveys

Odata services are available for both design time and runtime time of surveys.

The OData services can help in mass migration from one system to another in survey design time. The services can be used to update or modify responses within a survey from an external system.

28.3.25 Update Marketing Attributes Using a Survey

You can now update marketing attributes for Accounts and Contacts using a survey.

Multiple attributes can be updated in one survey question. To enable this function, add a question of type 'attribute' and select the attribute set and attribute to be added in the survey.

i Note

- Only the default contact marketing attributes can be updated.
- Only one question of type attributes can be included in a survey.
- Only update is possible. Create scenarios are not supported.

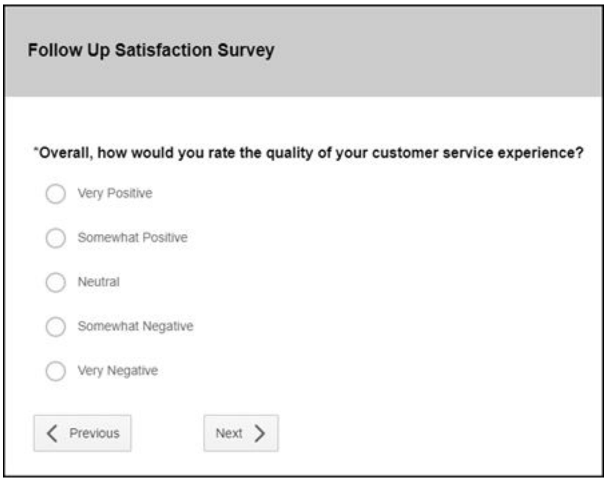
28.3.26 Create Satisfaction Surveys

Collect feedback from your customers with a satisfaction survey.

Context

Create satisfaction surveys that you can send out to your customers using an e-mail template. Your customers can rate how satisfied they are with several answer options based on a scale you create. You can also use all other question types in satisfaction surveys to collect more details about your customers.

After users complete a satisfaction survey, they receive a message signifying that they have completed the survey and thanking them for their participation. You can configure this message for each of your satisfaction surveys to meet your brand and business needs.



i Note

Satisfaction surveys aren't available on the iPad and are therefore also not available for offline usage.

Procedure

1. Add a new survey, choose the *Satisfaction* category and fill in the basic information.

2. Add satisfaction questions by selecting *Customer Satisfaction* under *Question Category* and use *Multiple Choice (select one)* questions to set your scale. Here, you could choose to use numerical values and give a rating scale in your short descriptions or use the answer options to describe satisfaction.
3. Add other additional question types if you'd like to collect other data in your survey.
4. Under *Survey End Message*, format and enter the message you'd like your participants to receive upon completion.
5. Select *Save*.

28.3.27 Transfer Surveys Using Transport Management

As an administrator, you can transfer surveys from one system to another using the Transport Management System.

This provides you with an easy way of migrating surveys from a test to a productive environment thus helping you save implementation time.

To transport surveys from one system to another, follow these steps:

1. Go to *Administrator* > *Transport Management* and choose *New* to create a transport request.
2. In the *Transport Request* screen, choose *Select*.
3. In the *Select Transport Objects* dialog, select *Surveys* from the *Transport Object* dropdown menu, and then choose *OK*.
   All the available transport objects are list in the *Available Transport Objects* table.
4. Select the transport objects in the *Available Transport Objects* table and choose *Add Selected* to add the object to the *Selected Transport Objects* table.
5. Go to *Target Systems* > *Add System*, select the systems where you want to transport the survey, and choose *OK*.
6. Choose *Actions* > *Assemble* to create a zip file of all survey content to be transported.

   > **i Note**
   >
   > You can download the zip file on the *Transport Content* tab and verify its content.

7. Choose *Action* > *Release* to export the surveys to the target systems.

   > **i Note**
   >
   > You can check the assemble and release information on the *Transport Logs* tab.

8. Log on to the target system and go to *Administrator* > *Transport Management* > *All Transport Requests*.
   A survey object with the *Imported* status appears in the table.
9. Select the imported object and you can see the list of surveys assembled in the source system.
10. Choose *Action* > *Activate* to transport all the surveys to the target system.

28.4 Complete Surveys

Choose how to answer questions and complete surveys.

28.4.1 Save, Finish, and Submit Surveys

Understand your options for completing surveys.

Use the following actions when you are filling out a survey:

- *Save as Draft*: Save your surveys as drafts so you can pick them up later for completion.
- *Finish*: Complete responses for a specific product in product checklist surveys.
- *Submit*: Officially set a survey to status *Completed* and save the survey to your system.

i Note

Additionally, in SAP Cloud for Customer, Extended Edition, features such as reset, submit, sort and filter for columns, and products filter by category are supported for matrix type surveys.

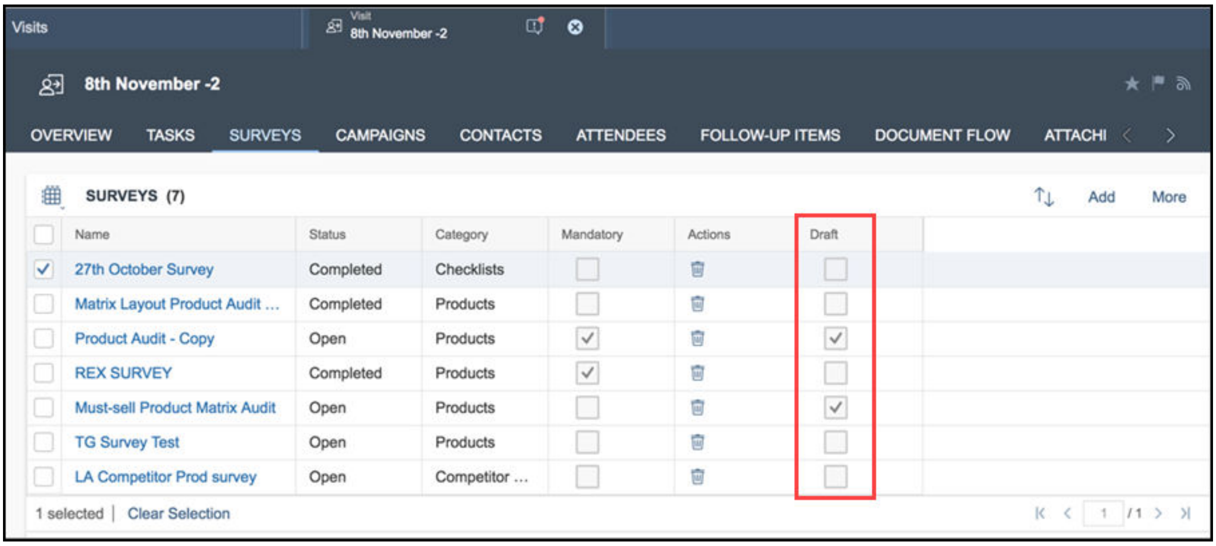
28.4.1.1 Indicator for Surveys Saved as Draft

Draft indicator is available for surveys.

You can easily distinguish between surveys in open status and in draft status using a *Draft* indicator field, and quickly find the surveys you still need to complete.

i Note

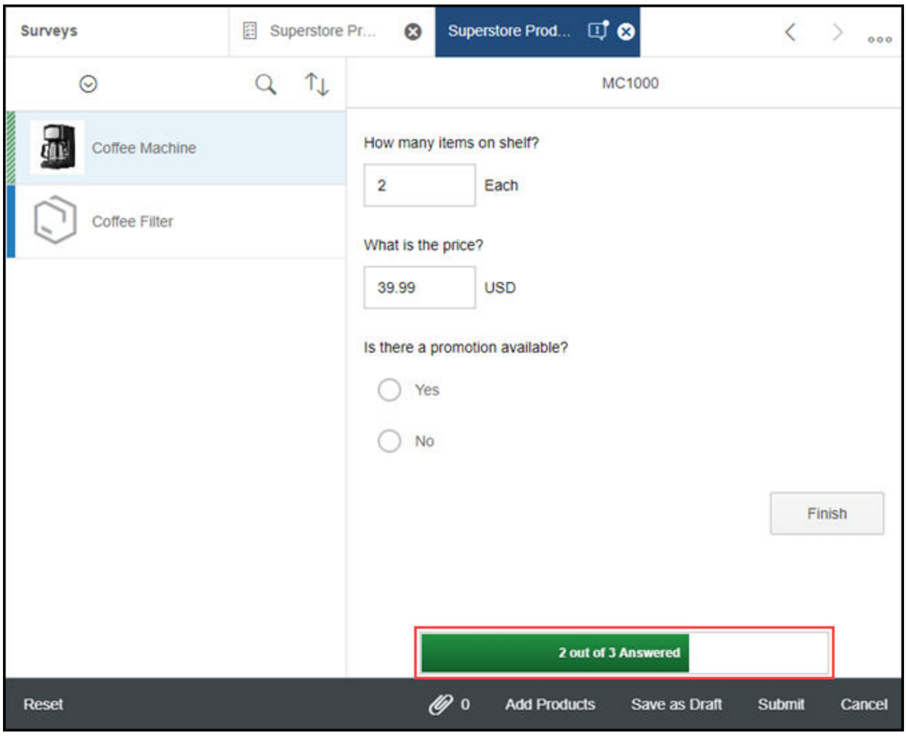
This feature is enabled but hidden by default. You can use the key user tool to make the *Draft* indicator field available on the screen.



28.4.2 View Survey Progress

Use the progress bar to view your completion rate when completing a survey.

At the bottom of your survey, view how many questions you've answered and the total number of questions in a survey in the progress bar. It updates automatically each time you answer a question. For product surveys, you'll see your progress for the product you're currently viewing and the number of questions per product.



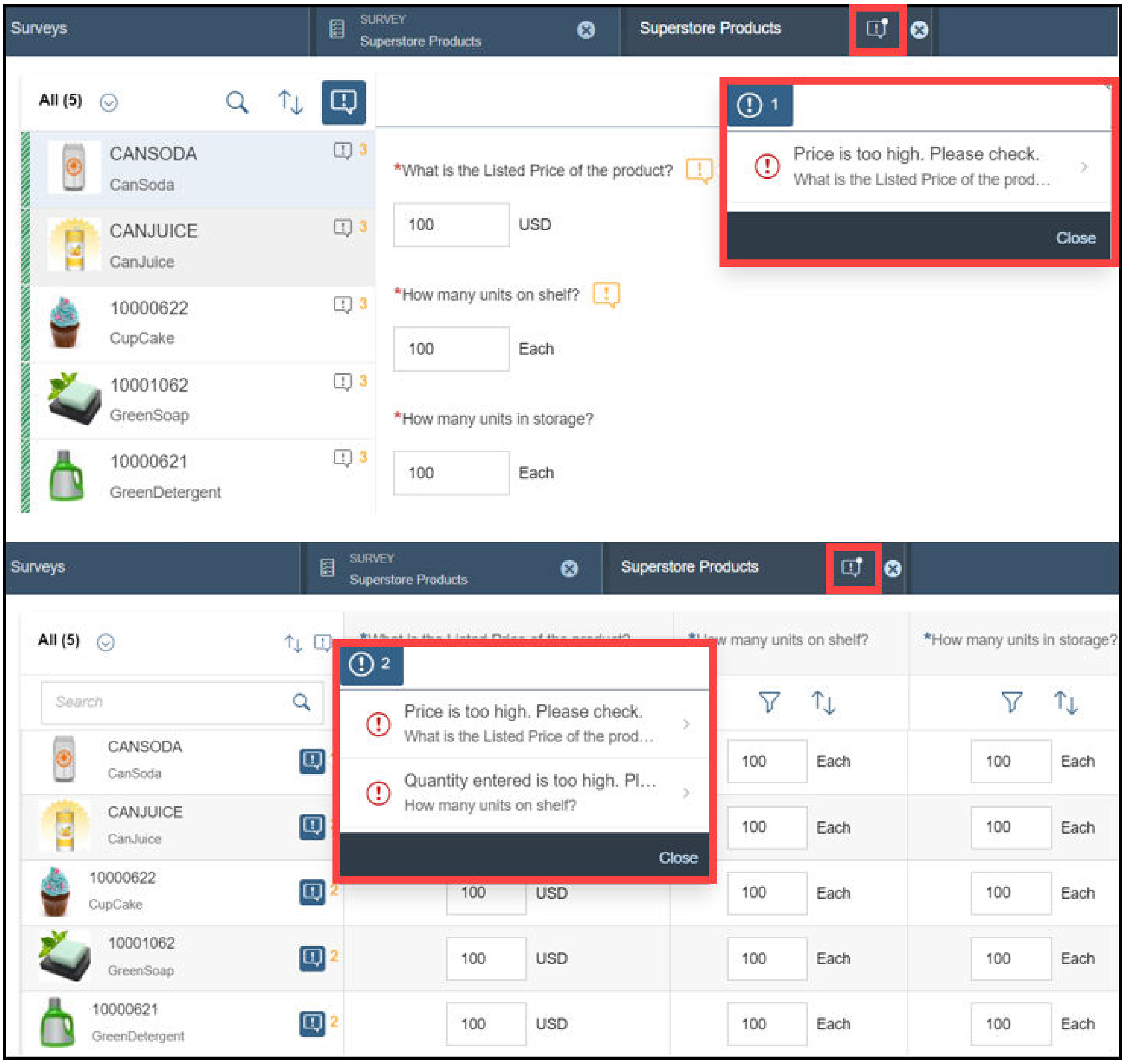
i Note

The progress bar is only available for surveys without branching, checklist surveys, and the checklist view of product surveys.

28.4.3 Check for Survey Exceptions

Use the exception icon to ensure that you have entered appropriate answers.

When you check for exceptions, the exception icon appears next to each question with an inappropriate answer. Click the exception icon to see its description. You can then correct your answers to make the exceptions disappear.

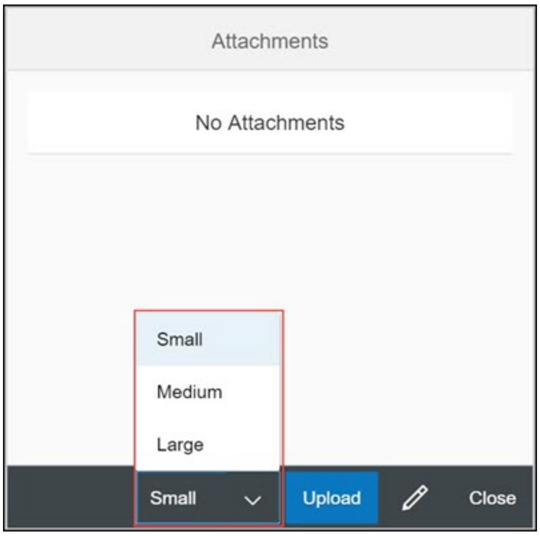


Related Information

28.4.4 Add Attachments to Surveys

When you are completing a survey, you can add attachments to it.

When you are completing a survey, you can capture an image with your device camera and add it as an attachment to an answer. You have the option of selecting a size for this attachment such as small (400x400), medium (600x600), or large (800x800). You can also select the original size of the attachment. The system remembers your most recent selection and applies it to the next image you attach.



→ Recommendation

For performance reasons, we recommend attaching a maximum of one large picture, 10 medium pictures, or 30 small pictures per survey.

28.4.5 Generate Survey PDF Summary

Once a survey has been completed within a visit, you can generate a PDF summary of the results.

Context

Survey summaries can include detailed information about the customer and answers to survey questions. Summaries can vary in their content based on how your administrator has configured the survey summary template.

Procedure

1. Open a visit and navigate to the *Survey* view.
2. Select a completed survey from the list of surveys.
3. Select *Actions* and choose *Generate Survey Summary*.
4. Under *Survey Summaries*, select the name of a survey to start the download.

28.4.5.1 Aggregation of Survey Results

View aggregated scores in the survey summary PDF.

Aggregated scores are displayed at the bottom of the survey summary PDF document.

> i Note
>
> To generate the survey summary, you must have already completed and submitted the survey.

The aggregation for product and checklist type surveys is as follows:

The aggregation is for both for scores (assigned for questions and answers) as well as for answer options (in a question). The aggregation is calculated as follows

- **Scores for product surveys** - Product level maximum and actual scores
- **Scores for checklist type surveys** - Question level maximum and actual scores
- **Answer options (Relevant only for product surveys)** - Actual count and the percentage value are displayed for the answer options selected for a question.

The following criteria apply for aggregation of survey results:

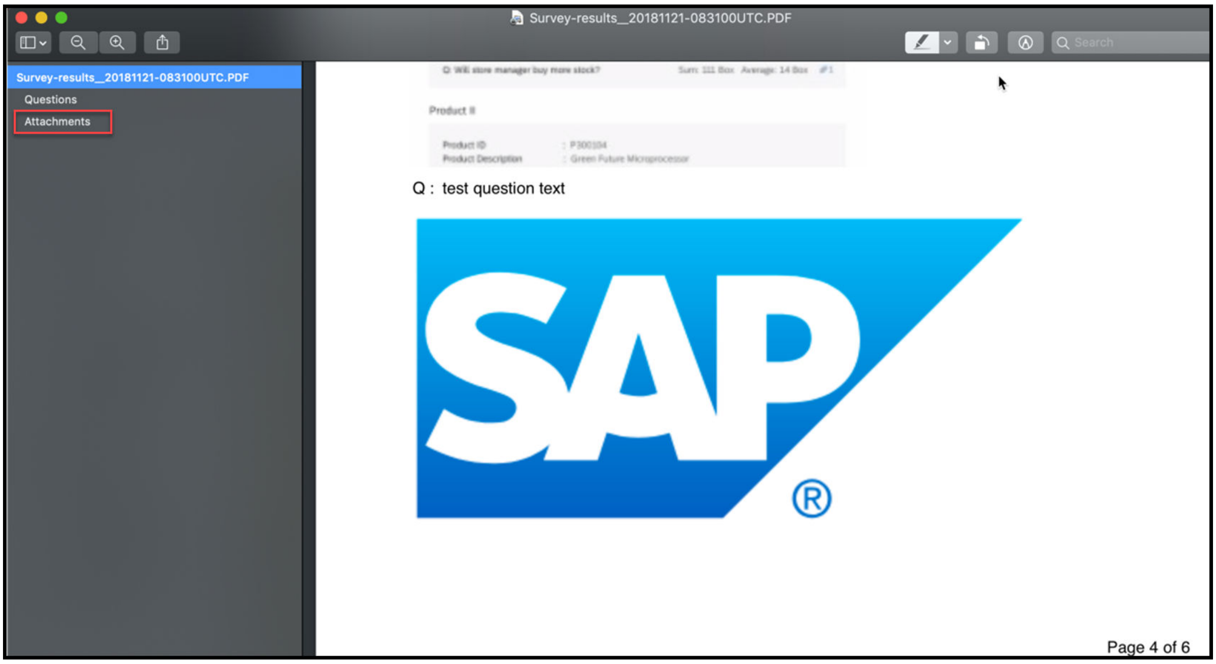
- Aggregation is calculated only for *Amount*, *Multiple Choice*, and *Quantity* based questions
- Aggregation rules can be displayed as: *Absolute Value* (valid for multiple choice questions) and *Percentage Average* (valid only for amount and quantity type of questions)

> i Note
>
> You must have maintained scores at each question and answer option level when designing a survey.

28.4.5.2 Pictures in Survey Summary

Pictures added to the survey are available in the survey summary pdf.

You can use the pictures as a quick reference to check the answers available in the survey summary pdf.



A separate section called *Attachments* is available in the pdf which contains all the attachments of the survey.

> **i Note**
>
> - Only runtime attachments are available in the appendix section of the document.
> - Only checklist view surveys are enabled for this feature.

28.4.6 Search Related Attachments

You can search for attachments that have been added to surveys during visit execution.

> **i Note**
>
> The *Related Attachments* work center only lists survey attachments that are associated with visits or perfect store visits.

Sort and search through attachments. Use the advanced search options to filter by a specific survey or date and other options to find the attachments you need.

28.4.7 Complete Product Surveys

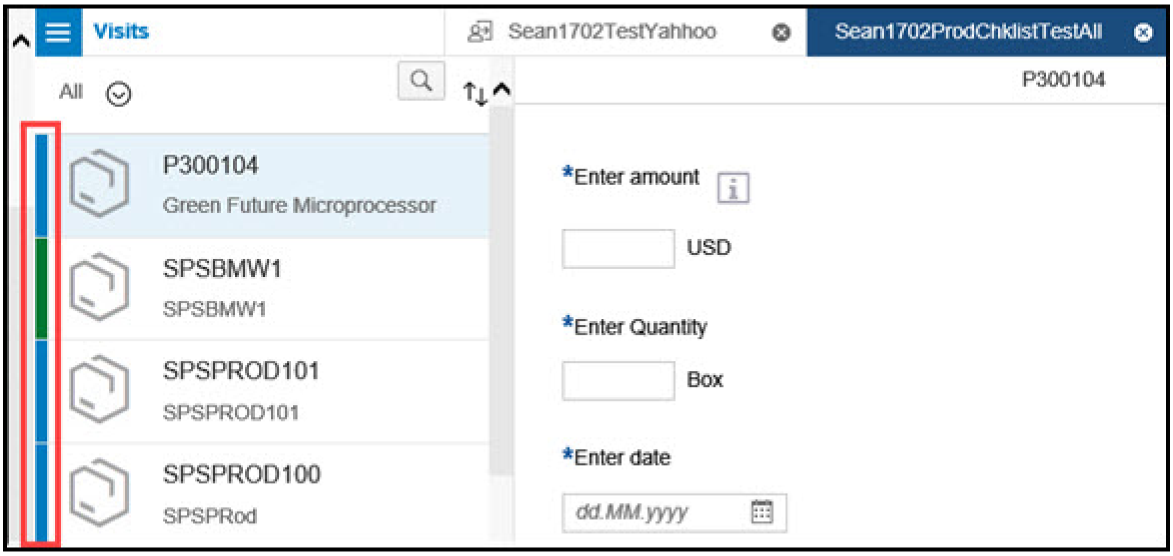
Product surveys have additional options during survey completion.

28.4.7.1 Status Indicator for Product Surveys

In product surveys that do not use matrix view, track progress of product questions using the status indicator that is displayed alongside the product.

- A green bar indicates that the survey has been *Set to Finish* for the product.
- A green bar with white stripes indicates that a survey is in progress for the product.
- A blue bar indicates that the survey has not been started for the product.

> **i Note**
>
> This feature is only available in the Extended Edition.



Related Information

[Product Surveys [page 1095]](#)
Use product surveys to collect data about products.

28.4.7.2 Copy Products Added During Survey Execution for a Next Visit

For product matrix surveys, during survey execution, you can copy products that you add to the next survey.

Set the flag *Previous Answers* if you want to copy the answers for these products from the previous visit. Deselect the flag for *Previous Runtime Products* in the *Details* tab to turn-off this feature. This function is possible for visits belonging to the same account.

Related Information

Product Surveys [page 1095]
Use product surveys to collect data about products.

Matrix View for Surveys [page 1109]
Simplify the layout of your product survey questions, and answer all questions for all products quickly.

28.4.7.3 Add Products from Past Orders in Extended Edition

During survey execution in the Extended Edition, you can add products to a survey from past orders by using the *Past Orders* in the *Add Products* menu.

When you click *Past Orders*, you can select a specific query from the *My Products* bucket. The options include *Account Sales Orders*, *My Past Orders*, *My Past Orders for Account* and *My Past Orders for Account and Sales Area*.

The sales orders that match the selected query are displayed to the left of your screen. To the right, you see a list of products that belong to the selected order. By default, the list displays products for the first sales order in the list.

Related Information

Product Surveys [page 1095]
Use product surveys to collect data about products.

28.4.7.4 Use Image Viewer to View Enlarged Image of Product

Tap on the product image in product surveys to view an enlarged image of the product. Use the navigation arrows and the dotted carousel at the bottom to scroll between products.

28.4.7.5 Configure Add Products from Past Orders in SAP Cloud for Customer, Extended Edition

Administrators can enable this SAP Cloud for Customer, Extended Edition feature by selecting a scoping question.

Go to *Business Configuration* > *Implementation Projects*. Select your project and navigate to *Edit Project Scope* > *Questions* > *Sales* > *Account and Activity Management* > *Activity Management* > *Surveys* to find the corresponding scoping question.

28.4.7.6 Additional Settings for Product Matrix Surveys

View additional options for questions in a product matrix survey.

In each question header, use the three dots view the following options:

Complete Question

View the full text of the question and answers if the matrix view has hidden part of the question.

Mass Answer Entry

When you are filling out a product matrix survey with many products, save time by entering the same answer for all products for one question. Mass answer entry is especially helpful when there is a most-used answer for a question.

Choose *Set all answers to* and select an answer option. You can then change the answers for specific products when necessary.

Filter

Choose the funnel icon to see filtering options such as ascending or descending or sort by answer.

Attachments

Select the photo icon to view any attachments available for the question.

Related Information

Product Surveys [page 1095]
Use product surveys to collect data about products.

Matrix View for Surveys [page 1109]
Simplify the layout of your product survey questions, and answer all questions for all products quickly.

28.4.8 Complete Competitor Product Surveys

Competitor product surveys have additional options during survey completion.

28.4.8.1 Add Competitor Product Extension Fields as Questions

When designing a competitor product survey, you can add *Competitor Product Extension Fields* question type to include an extension field maintained at the competitor product header.

Such extension fields are read-only in the survey. The values maintained at the product level are determined for user reference at the time of survey execution.

28.4.8.2 Filter Competitor Products by Related Product Category

During competitor audits, you can filter long lists of products by category. This category is the *Product Category* maintained under the associated *Our Product*.

28.4.8.3 Add Competitor Products at Survey Runtime

During in-store audits, sales reps can add competitor products that are not part of the audit lists.

Existing functionalities *Previous Runtime Products* and *Block Runtime Products Addition* flags under survey details also apply to this feature.

> **i Note**
>
> This feature is only supported online.

Related Information

Copy Previous Answers and Previous Products in Opportunities [page 1109]
When designing surveys for use in opportunities, you can now specify to copy either previous answers or previous products from the last survey executed.

Disable Addition of Products During Survey Execution [page 1115]
The *Add Products* option during survey execution can now be switched off as part of survey design.

28.4.9 View Survey Results for Individual Customers

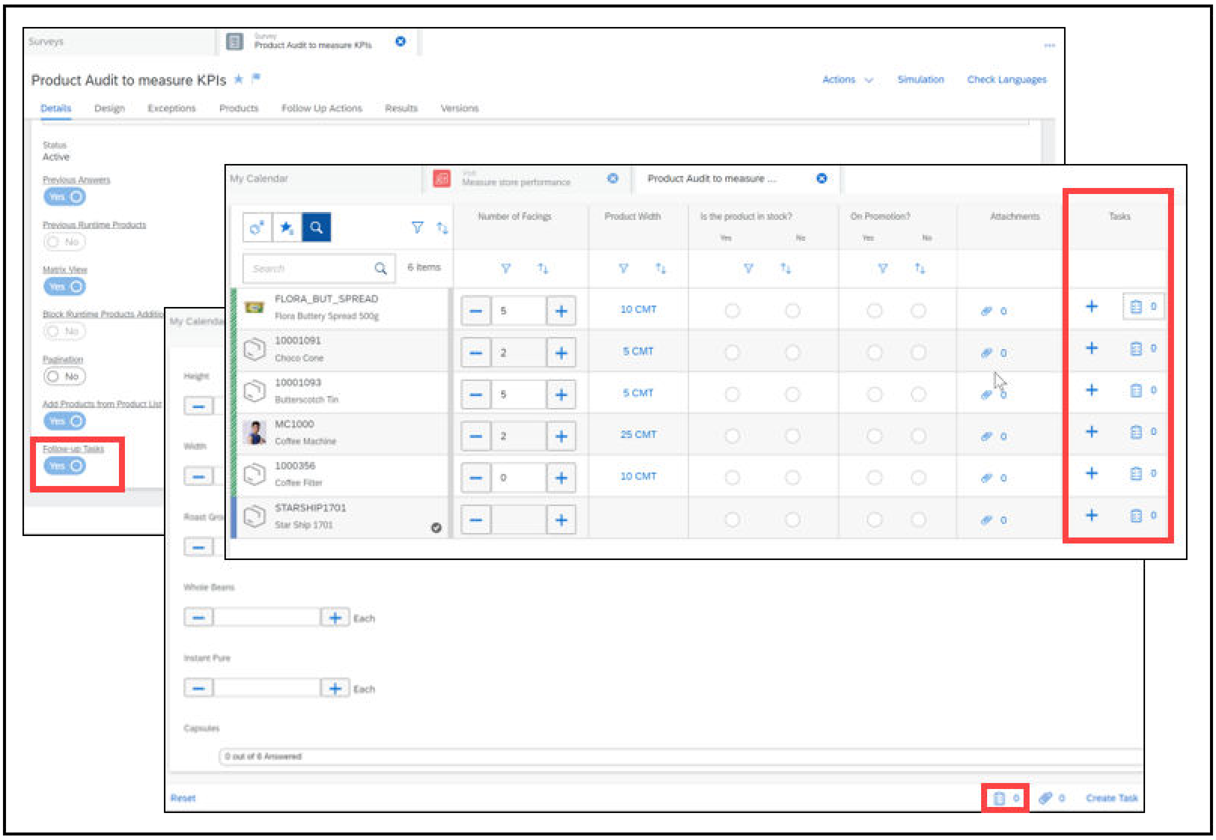
Go to the *Survey Results* view for an individual customer to see all surveys assigned to the individual customer.

Use the dropdown menu to select the business object you'd like to search from such as a visit and see the list of completed surveys. You can see the details of the survey by selecting the survey name.

28.4.10 Create Follow-Up Tasks from Surveys

You can create and view follow-up tasks while conducting a product or checklist survey. In the matrix view of a product survey, follow-up tasks can be created per product. In checklist surveys, follow-up tasks can be created at the survey level. This feature is currently available online only.

As a prerequisite, when designing the survey, administrators must turn on the *Follow-up Tasks* indicator.



You can also attach the survey's summary to any follow-up task that you create, by turning on the *Attach Summary to Follow-up Task* indicator.

28.4.11 Add Products to Checklist Surveys During Runtime

When a sales representative is filling out a survey, they can add products to a product checklist survey by selecting *Add Products*.

28.4.12 Add Registered Products During Runtime

Registered products can be added to a survey during survey execution.

Extra registered products can be added to the survey on an ad hoc basis during execution.

28.5 Survey Reporting

Create reports using the data collected from your surveys to better understand your current performance and make improvements.

You can create different types of reports based on questions, answers, and other survey categories or simply export a single survey's results.

Survey Report Data Sources [page 1142]
Create reports for your survey results.

Export Survey Results [page 1143]
Export all results of a single survey for advanced reporting purposes.

Create Target Groups from Survey Reports [page 1143]
Use data from survey reports to create a new target group.

28.5.1 Survey Report Data Sources

Create reports for your survey results.

You can generate survey reports based on data sources such as question categories, answer categories, survey categories that you have defined in fine tuning or by the individual group or group of individuals who designed the survey. In the *Business Analytics* work center you can find the reports for surveys by searching for the prefixes **`Visit Survey:`** or **`Business Partner Survey:`**:

- Reports with the prefix **`Visit Survey:`** are the aggregated data about surveys used in visits.
- Reports with the prefix **`Business Partner Survey:`** are the aggregated data about accounts, contacts, and employees within satisfaction surveys.

The data sources for surveys include full text of questions and answers so you can create reports based on the exact questions and answers.

You can also view attachments in survey reports via the hyperlinks enabled. The data source is survey answers with attachments (FNDQRERUNTATTACHB).

→ Recommendation

Before you run a report, select the criteria based on the survey ID, survey name, or document UUID, as the data volume may lead to performance issues.

28.5.2 Export Survey Results

Export all results of a single survey for advanced reporting purposes.

Context

If you'd like to create a report based on the data collected from a single survey, use the export feature from within a specific survey. This feature exports all stored data from a single survey into an Excel spreadsheet for manual filtering or advanced reporting.

Procedure

1. From the *Surveys* work center, open a survey.
2. Navigate to the *Results* view and click *Export*. Your report will be downloaded as .csv file.

28.5.3 Create Target Groups from Survey Reports

Use data from survey reports to create a new target group.

You may find interesting patterns in your survey reports and want to take actions based upon your findings. For example, you might find many customers answered a satisfaction survey negatively during a certain time period and want to create a special promotion for these unsatisfied customers. You can create a target group directly from a survey report and then assign a promotion to that target group.

You can create target groups from the following survey reports:

- Business Partner Survey
    - Customer Satisfaction Answers
    - Net Promoter Score
- Visit Survey
    - Answers
    - Completion Rate and Score

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