

PUBLIC 2023-10-19

# **SAP Intelligent RPA Installation Guide**



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# 1 Installing SAP Intelligent Robotic Process Automation

SAP Intelligent Robotic Process Automation is a hybrid solution made of three components:

- Desktop Studio for designing the automation processes.
- Cloud Factory for orchestrating the automation.
- Desktop Agent for executing the automation.

Two types of installation are available for SAP Intelligent Robotic Process Automation.

- A complete installation of the three SAP Intelligent Robotic Process Automation components for a full use of the product: development, orchestration, and execution of automation projects. Install and configure these three components to fully enjoy SAP Intelligent Robotic Process Automation's powerful capabilities.
- A partial installation for run-time machines where the automation projects are executed on Desktop Agents. For this installation, only refer to the installation of the on-premise Desktop Agent.

This Installation Guide contains the following:

- A registration to SAP Intelligent Robotic Process Automation Factory.
- A combined setup of the Agent (default) and the Studio and SDK (optional) installations.
- A procedure to update your SAP Intelligent RPA landscape (Desktop Agent and Studio).

### **Related Information**

SAP Intelligent Robotic Process Automation Factory Configuration [page 5] On-premise Components Setup [page 37] Updating your SAP Intelligent RPA 1.0 Landscape (Desktop Agent and Studio) [page 81]

# 2 SAP Intelligent Robotic Process Automation Factory Configuration

SAP Intelligent RPA is available via the SAP Business Technology Platform (BTP). You must create and configure an SAP Intelligent RPA tenant in the SAP BTP to get access to the SAP Intelligent Robotic Process Automation Factory.

Once you have created and configured an SAP Intelligent Robotic Process Automation Factory tenant, declare your Desktop Agents in an environment. For more information, see Add Agents to an Environment.

# 2.1 Automatically Subscribing to SAP Intelligent RPA in SAP Business Technology Platform (BTP)

To access SAP Intelligent Robotic Process Automation Factory, you first need to create your SAP Intelligent RPA subaccount in the SAP BTP cockpit.

# Context

You can automatically create your subaccount using the booster. This tool eases the creation of your subaccount and your subscription to SAP Intelligent RPA.

Once you have launched it, the booster automatically performs the following steps:

- Creating Subaccount
- Enabling Cloud Foundry
- Assigning Service Quotas
- Creating Space
- Subscribing to SaaS Applications
- Adding Cloud Foundry Users
- Creating Service Instances
- Creating Role Collection
- Assigning Role Collection

### Procedure

1. Navigate to your global account.

You need to have a SAP BTP global account on Cloud Foundry. Once you have signed your commercial contract with SAP, you will receive access information and credentials for your global account.

You can find complete information about global accounts in Setting Up a Global Account in the SAP BTP official documentation.

### 

In the SAP BTP official documentation, only refer to the **Cloud Foundry** environment to set up your global account.

2. You need to have a Cloud Foundry subaccount in the SAP BTP.

You can find information about subaccounts in Create Subaccounts Using the Cockpit in the SAP BTP official documentation.

### i Note

You must select a region during the creation of your subaccount. Please note that the performance of SAP Intelligent RPA (response time, latency) can be optimized by selecting a region close to your users. For more information, see the page about Regions in the SAP BTP documentation.

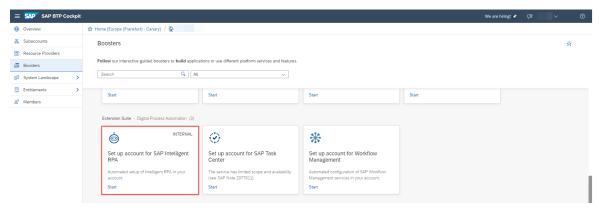
If you are in Europe, you must select the *eu10* region.

3. Click Boosters on the left-hand side panel.

SAP SAP BTP Cockpit		We are hiring! 🚀	¢9 ~	0
Overview	🔝 Home [Europe (Frankfurt) - Canary] / 🔯			
몷 Subaccounts	Global Account: - Overview			\$
Resource Providers	Export			
🛱 Boosters	_			
🕄 System Landscape 💙	Global Account Info			
Entitlements	Account ID: Account Type: Account Type: Subaccounts			
<u>A</u> <sup>#</sup> Members	Access: Standard Subaccounts W Regions			
	Service Usage			
	Service: Subaccount: Space:	Period:		
	Application Logging Service V All	Last 12 Months		$\sim$

The Boosters panel opens.

4. Find and select the Set up account for SAP Intelligent RPA tile.



On the panel that opens, you can see three tabs:

- The Overview tab, which provides information about the booster and SAP Intelligent RPA.
- The *Components* tab, which provides information about all the different components that can be part of your booster. In this case, *Intelligent Robotic Process Automation Service* and *SAP Intelligent Robotic Process Automation Subscription* are mandatory components.
- The *Additional Resources* tab, which provides information about the concepts and components mentioned in this booster.

SAP SAP BTP	Cockpit	We are hiring! 🖋		
Booster				
	Set up account for SAP Intelligent RPA		Start	☆
	Automated setup of Intelligent RPA in your account.			
	Overview Components Additional Resources			
	This booster helps you set up SAP Intelligent RPA in the SAP BTP cockpit.			
	Step by step, this booster automatically configures entitlements, subscribes to the Workflow Management application, creates required service instances and needed destinations, and assigns all required roles to users. In the background, the booster also automatically enables Cloud Foundry and creates a default space.			
	Once you have completed the booster steps, your subaccount will be ready: you will be able to use SAP Intelligent RPA and start building bots to automate your processes digitally.			
	SAP Intelligent Robotic Process Automation (RPA) Accelerate Digital Transformation by Automating Repetitive Tasks in Business Processes			
	Who Expert developers, citizen developers and business process experts Design			
	What Build bots to augment and automate human tasks across LOBs and Industries			
	Why Save time, costs and reduce human errors in business operations. While the same transmission of the same transmission			

5. Click the Start button.

= 5	AP SAP BTP Cockpit		We are hiring! 🖋	¢9	~	0
💯 Bo	oster	🔕 Home [Europe (Frankfurt) - Canary] / 🔯 🚺 Set up account for SAP Intelligent RPA 🗸				
		Set up account for SAP Intelligent RPA			Start 📩	τ
		Automated setup of Intelligent RPA in your account.				
		Overview Components Additional Resources				

6. The Check Prerequisites panel opens. Click Next.

### i Note

The booster checks if you have the necessary authorizations, enough quotas and if the providers and regions are compatible. If there is any issue, click the tile to view what is wrong. You can solve the issue and click *Rerun* to perform the check again.

1 Check Prerequisites	2 Set Up Subaccount	3 Add Users	4 Review	
All required prerequisites are met. Rerun				×
Check Prerequisites				
We're checking if you meet all the prerequisites r	equired for this booster.			
Checki	ng Authorization: 🥑 DONE			
Checking for compatible provi	ders and regions: Ø DONE			

## 7. i Note

The Set Up Subaccount panel opens.

This tab provides details of the subaccount to create. You can modify the content of the pre-filled fields.

Click Next.

Set up account for SAP Intelligent RPA						
1 Check Prerequisites	2 Set Up Subaccount		3 Add Users		4 Review	
Set Up Subaccount						
Provide the details of the subaccount to create	for your new development project.					
Entitlements:				Reset		
	Service	Plan	Required Quota	Remaining Quota		
	Intelligent Robotic Process Automation Service*	standard	- 1 +	6		
	SAP Intelligent Robotic Process Automation*	concurrent	limited	limited		
	The service plans that are required for running this project each service in your global account.	and their required quota. T	he required quota is deducted fro	m the available quota for		
Subaccount Name:*	Webspiny-Dev					
	The name for your new subaccount can contain up to 255	characters.				
Provider:*	Amazon Web Services (AWS)			~		
	Select the infrastructure provider of the new subaccount.					
Region:*	Europe (Frankfurt) - Canary - AWS			~		
	Select the region in which to create the new subaccount.					
Subdomain:*						
	The subdomain of your subaccount must be unique and c	an contain up to 64 letters	(a-z), digits (0-9), and hyphens (n	ot at the start or end).		
Org Name:*						
	The name for the Cloud Foundry org can contain up to 25	5 characters.				
1					P	revious Next Cancel

8. The Add Users panel opens. Click Next.

You can enter the details of additional users who will work on your development project and assign them to the relevant rules.

E SAP	SAP BTP Cockoit Set up account for SAP Intelligent RPA			We are	a hiringi 🖉 — CQ —
En Dooster	1 Check Prerequisites	2 Set Up Subaccount	3 Add Users	4 Review	☆
	Add Users Enter the details of additional users who will v	vork on your development project and assign them to the relevant roles.			
	Origin:		×		
	Administrators:	Enter e-mails, separated by commas, spaces, semicolons, or line breaks.			
		L Administrators will be assigned to the org. manager and space manager roles and role	collection(s) IRPAOfficer.		
	Developers:	Enter e-mails, separated by commas, spaces, semicolons, or line breaks.			
		Developers will be assigned to the space developer role and role collection(s) IRPAOffi	cer.		
★ Favorite: ⊘ Useful L					
The set of	ormation				Previous Next Cancel

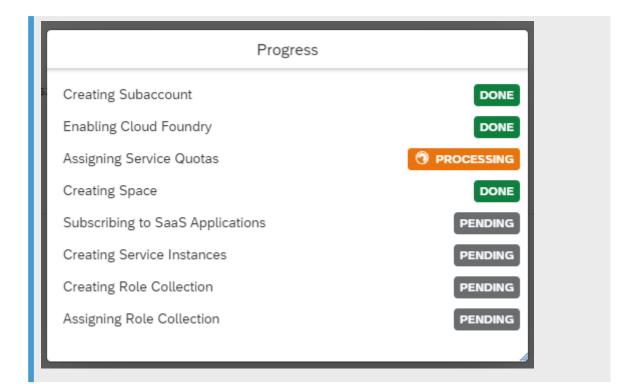
The Origin field is not visible for users who are subscribing to Feature Set B.

9. The *Review* panel opens. Review your setup and click *Finish*.

	SAP BTP Cockoll Set up account for SAP Intelligent RPA			We are hiring! 📌 🛯 🖗	× _
📱 Booster	Check Prerequisites	- 2) Set Up Subaccount	- (3) Add Users	- 4 Review	*
	-		<u> </u>	<b>_</b>	24
	Set Up Subaccount				
	Subaccount:				
	Provider:				
	Region:				
	Subdomain:				
	Org:				
	Space:		I		
	Add Users				
	Origin:				
	Administrators:				
	Developers:				
★ Favorite:					
🖉 Useful L				Previous Finish Cance	el
The Legal Inf	ormation				

### i Note

A popup appears and shows the progress of the booster that is setting up your subaccount. The setup usually takes one to two minutes to be completed. If a step fails, you can view what you need to do to solve this problem.



# Results

When the booster is executed successfully, navigate to your subaccount by clicking the *Navigate to Subaccount* link.

⊘ Success	
Booster executed successfully	
Your subaccount is ready for SAP Intelligent RPA.           Navigate to Subaccount           Follow the guide below to learn more about subaccounts in the cockpit	
Subaccounts in SAP BTP cockpit Learn how to manage entitlements and quotas in SAP cockpit Managing Entitlements and Quotas Using the Cockpit	
	Close

## $\mathbf{i}\,\mathsf{Note}$

If you click *Instances and Subscriptions* on the left-hand side panel, you can see that you have successfully subscribed to SAP Intelligent Robotic Process Automation and which plan you have acquired. If you click on the  $\overline{\mathbf{R}}$  icon, you can log onto the Cloud Factory and start working on your project.

SAP BTP Cockp	oit								We are hiring! 🚀	œ	~	
Overview	G	) Home [Europe (Frankfurt) - Canary] / 👔	/ ಜ	~								
Services	~	Subaccount: SubaccountUA - Ins		scriptions							Create	\$
Service Marketplace												~
Instances and Subscriptions		Cloud Foundry user-provided service in	stances do not appear (	on this page. To view and	manage use	er-provided service instances, firs	, navigate to Cloud Foundry -	Spaces, select your space, and t	nen from Services, select	Service In	stances.	×
Subscriptions		Search	All Services		~	All Plans V All Statuses	5					_
Cloud Foundry	>	South			· ·		<u> </u>					
HTML5 Applications		Subscriptions (1) Instances (1) Enviro	nments (1)									
Connectivity	>	Applications to which your subaccount is curre	ntly subscribed									
		Application		Plan			Created On	Changed On	Status			
Administrators		SAP Intelligent Robotic Process Automa	ition E				15/06/2021	15/06/2021	Subscribed			>
Users											_	
		Instances (1)										
Role Collections		Instances (1)										
Roles		Service instances created in: Cloud Foundry	Kyma/Kubernetes   Oth	er environments								
Trust Configuration		Instance		Plan		Runtime Environment	Scope (i)	Credentials	Status			
Entitlements		Intelligen Automati	t Robotic Process on Service	standard		Cloud Foundry	dev	1 key	Created			>
Usage Analytics												
		Environments (1)										
		Environment instances created in this subacco	unt									
		Name	Environment		Plan		Created On	Changed On	Status			
Favorites		Name	Cloud Foundry Runt	ime	standard		15/06/2021	15/06/2021	Created		890	>
Useful Links			orout outrary run		startuard		ACCOUNTS A	200 0 0 0 E V E A				

You can also see the service instances that have been created under *Instances*. If you select a service instance, you can see the service key that has been generated from it on the right-hand side panel.

SAP BTP Cockpit									We	are hiring! 🚀 🛛 💭	9 ×
A Overview	R Home [Europe (Frankfurt)	- Canary] / 🔯	/ &	~							
📢 Services 🗸 🗸	Subaccount: Sub	accountUA - Inst	ances and Su	bscriptions				Create 🚖			23
Service Marketplace									default_irpa-service-pr		View Credentials
Instances and Subscriptions	Search	٩	All Services		~	All Plans 🔍	All Statuses 🗸 🗸		Service: Intelligent Robotic Proc Plan: standard	ess Automation Servi	ice (Irpa-ser
Subscriptions									Space: dev Status: Created		
Cloud Foundry	Subscriptions (1) Ins	stances (1) Environr	ments (1)								
HTML5 Applications	Applications to which yo	ur subaccount is current	ly subscribed						Bound Applications (0)		
🗞 Connectivity 📏	Application	P	lan	Created On	Changed On	Status					Bind
😵 Security 🗸 🗸	SAP Intelligent Ro	botic Process Aut c	oncurrent	15/06/2021	15/06/2021	Subscrit	ed	>	Name	Status	
Administrators									No b	ound applications	
Users	Instances (1)								Service Keys (1)		
Role Collections											Create
Roles	Service instances create								Name		
Trust Configuration		Service P Intelligent Robotic	Plan	Runtime Environ.	Scope 🛈	Status					
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	Name	Cloud Foundry Ru			15/06/2021	15/06/2021	Created	>			
★ Favorites											
🖉 Useful Links											
Legal Information											

If you click *Role Collections* on the left-hand side panel, you can see your role collections and the users assigned to them.

# 2.2 Manually Subscribing to SAP Intelligent RPA in SAP Business Technology Platform (BTP)

To access SAP Intelligent Robotic Process Automation Factory, you first need to create your SAP Intelligent RPA subaccount in the SAP BTP cockpit.

### Prerequisites

To know which feature set you're using in your SAP BTP global account, check the Feature Set Overview in the SAP BTP documentation.

Subscribing to SAP Intelligent RPA [Feature Set A] [page 12]

Subscribing to SAP Intelligent RPA [Feature Set B] [page 20]

# 2.2.1 Subscribing to SAP Intelligent RPA [Feature Set A]

### Procedure

1. You need to have a SAP BTP global account on Cloud Foundry. Once you've signed your commercial contract with SAP, you'll receive access information and credentials for your global account.

You can find complete information about global accounts in Setting Up a Global Account in the SAP BTP official documentation.

### ▲ Caution

In the SAP BTP official documentation, only refer to the **Cloud Foundry** environment to set up your global account.

2. You need to have a Cloud Foundry subaccount in the SAP BTP.

You can find information about subaccounts in Create Subaccounts Using the Cockpit in the SAP BTP official documentation.

### ${f i}$ Note

You must select a region during the creation of your subaccount. Please note that the performance of SAP Intelligent RPA (response time, latency) can be optimized by selecting a region close to your users. For more information, see the page about Regions in the SAP BTP documentation.

If you are in Europe, you must select the *eu10* region.

3. In your subaccount, click Enable Cloud Foundry.

≡	SAP BTP Cockpi		Join our user survey!	 ¢ 🗒	~	?
옯	Overview	☆ Home [Europe (Frankfurt)] / 🕼 Global Account $\lor$ / 문 Subaccount $\lor$				
<b>V</b> ê	Services Service Marketplace	Subaccount: UA Subaccount - Overview Delete Subaccount				
53	Subscriptions	Subaccount Details	Subscriptions			
5	HTML5 Applications	Subdomain: UA	Available:			
8	Connectivity	ID: 37e285b5-cda4-48bd-a733-d5ebc5f885fb	Active:			
•	Security >					
2	Entitlements	Cloud Foundry You are not currently using Cloud Foundry capabilities. Enable Cloud Foundry				
		Quota No quotas are assigned				

Enter a name for your organization, and click *Create*. As a best practice, enter the name in lower case.

4. In the navigation area of your subaccount, click *Service Marketplace* under *Services* to show the applications that are available to you.

E SAP SAP BTP Cockpit		Join our user survey! 🕄 🗘 🗊 🔽 🗸	(?)
윦 Overview	යි Home [Europe (Frankfurt)] / 🕼 $\sim$ / සි UA Subaccount $\sim$		
🦚 Services 🗸 🗸	Subaccount: UA Subaccount - Overview		
Service Marketplace	Delete Subaccount		
Instances and Subscriptions			
Subscriptions	Subaccount Details	Subscriptions	
HTML5 Applications	Subdomain: ID:	Available: 2 Active: 0	
🗞 Connectivity 🗲 🗲	ID.	Active: 0	
Security >	Claud Earste		
Entitlements	Cloud Foundry You are not currently using Cloud Foundry capabilities. Enable Cloud Foundry		
	Quota No quotas are assigned		
∂ Usefut Links			
1 Legal Information			

5. Click the SAP Intelligent RPA tile to enter its overview page.

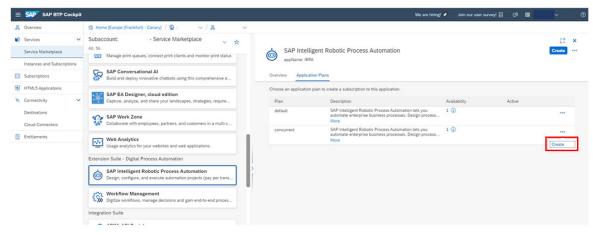
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۲	HTML5 Applications					
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	Destinations	A				
	Cloud Connectors					
63	Entitiements	SAP Intelligent Robotic Process Autom Workflow Management Design, configure, and execute automation Digitize workflows, manage decisions and gain				
		projects (pay per transaction). end-to-end process visibility				
		Integration Suite				
		****				
		· · · · · · · · · · · · · · · · · · ·		22		

If you don't see any SAP Intelligent RPA tile in the *Subscriptions* of your subaccount, it means that you haven't been granted with an entitlement. Entitlement should be granted once you've signed your commercial contract with SAP, so in this case, raise a BCP Ticket on component *CA-ML-IPA* to ask for information about the entitlement of your global account.

6. Click the •••• icon in the **concurrent** field.

E SAP SAP BTP Cockpit			We are hiring	gl 🝠 🔹 Join our user survey! 📗	1 ¢9 💵	~	0
S Overview	ାଇନ୍ଥ Home (Europe (Frankfurt) - Canary) / ଭି 🛛 🗸 / 😹 🗸						
Services  Service Marketplace Instances and Subscriptions	Subaccount: - Service Marketplace  Al: 56 Subaccount: Subaccount of the status of the s	SAP Intelli appName: IRP/	gent Robotic Process Automation			Create	× 
Subscriptions HTML5 Applications	SAP Conversational Al Build and deploy innovative chatbots using this comprehensive e	Overview Applicat	on Plans				
🗞 Connectivity 🗸 🗸	SAP EA Designer, cloud edition Capture, analyze, and share your landscapes, strategies, require	to-end scenarios. Impo automation) or as a Dig	Process Automation lets you automate enterprise business process rt these scenarios into the cloud Factory to configure and execute th jtal Worker (unattended automation).	es. Design process automations wi em with Agents. An Agent can wor	th the Desktop Stu k as a Digital Assist	dio by creating en tant (attended	d-
Destinations Cloud Connectors	SAP Work Zone Collaborate with employees, partners, and customers in a multi-c	Documentation (3)					
Entitlements	Web Analytics Usage analytics for your websites and web applications.	Choose an application	plan to create a subscription to this application. Description	Availability	Active		
	Extension Suite - Digital Process Automation  SAP Intelligent Robotic Process Automation  Design, configure, and execute automation projects (pay per trans	default	SAP Intelligent Robotic Process Automation lets you automate enterprise business processes. Design process More				
	Workflow Management Digitize workflows, manage decisions and gain end-to-end proces	concurrent	SAP Intelligent Robotic Process Automation lets you automate enterprise business processes. Design process More	1 ①		***	
	Integration Suite						
	APIM, API Portal An API Portal allows you to configure systems, build, publish, test						
	APIM, Developer Portal A Developer Portal allows you to onboard a developer, create app						
★ Favorites	Retrieve information about destinations in the Cloud Foundry envi						
Useful Links     Legal Information	Event Mesh Connect antifications: sand sustems arross different lands						

7. Click the *Create* button.



8. Select the **concurrent** plan and click *Create*.

New Instance or Subscription		
Basic Info		
Enter basic info for your instance or subscription. Service:* (j)		
SAP Intelligent Robotic Process Automation		~
() Some services are not shown because Cloud Foundry is not enabled. Enable Cloud	Foundry	
Plan:*		~
concurrent	Subs	scription
default	Subs	scription
	Create	Cancel

Please ignore if you see *concurrent-attended* and *concurrent-unattended* tiles in your subscription screen. Use only *concurrent* tile to subscribe to SAP Intelligent RPA.

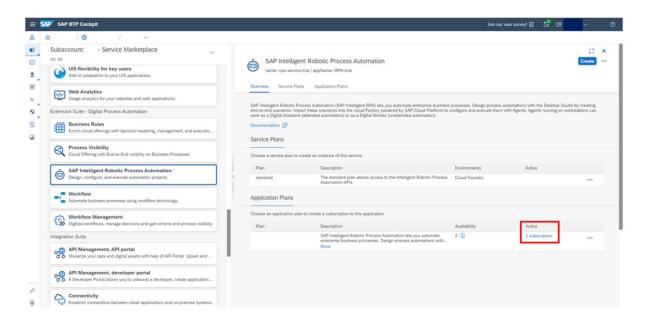
### ${f i}$ Note

SAP Intelligent RPA is now priced on concurrent executions for attended and unattended modes.

- **n** unattended Units means that you can execute n unattended bots in parallel.
- **p** attended Units means that you can execute p \*10 attended bots in parallel.

## Results

Once your SAP Intelligent RPA subaccount is created and the subscription is completed, you can see that your subscription is active. Click *1 subscription* under *Active*.



You can see that the Subscribed button is enabled.

		& ~					
Subaccount:	- Instances an	d Subscriptions					Create
Search	Q All Sen	vices	✓ ]   All Plans	All Statuses 🗸			
Instances (0) Subsc	criptions (1)						
Service Instances create	ed in: Cloud Foundry   Kyma/Kuberr	netes   Other environments					
Instance	. Service	Plan	Runtime Environment	Scope (j)	Credentials	Status	
		There are no	service instances in this subaccount	t. Choose 'Create' to get s	larted,		
Subscriptions (1)							
Applications to which yo	our subaccount is currently subscrit	oed					
Application		Plan		Created On	Changed On	Status	
	obotic Process Automation	concurrent					

In the *Entitlements* of the SAP Business Technology Platform Cockpit, you can manage the quotas allocation to a subaccount.

# **Next Steps**

### **Quota Allocation**

A quota represents the numeric quantity that defines the maximum allowed consumption of a resource. In other words, how much of a service plan you're entitled to use. The quotas are allocated based on the license type.

To add services and plans to a subaccount, follow the below procedure.

1. Click *Entitlements* in the BTP Cockpit left-hand panel. The **Entitlements** screen displays.

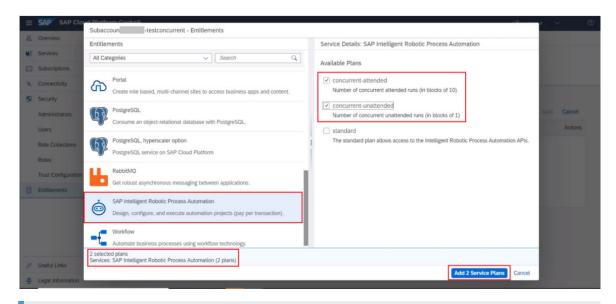
≡	SAP SAP Cloud	Platfor	m Cockpit					Ċ8 I	<b></b>	3
묾	Overview		🗇 Home 🔰	/ 🕼 SAP_ML_IRPA ∨ / 🐰	testconcurrent ~					
¥0	Services	>	Subaccount:	testconcurrent	- Entitlements					
E	Subscriptions		Subaccount	testeoneurient	Entrements					
8	Connectivity	>								
8	Security Administrators	~	응 -tes	tconcurrent			Search	Q C0	nfigure Entitlement	5
	Users		Service	Plan	Assign Quota 🚺	Subaccount Assignment	Remaining Global Quot	a	Actio	ns
	Role Collections Roles Trust Configuration				Choose 'Configure Entitlen	s have been added yet. nents' to add the services and p	lans			
8	Entitlements				that you want to	enable for this subaccount.				
	Useful Links Legal Information									

2. Click Configure Entitlements.

≡	SAP SAP Cloud	I Platfor	n Cockpit			Ç9 📕	~ ®
8	Overview		☆ Home / ⓒ SAP_ML_IRPA ∨ / 봆	testconcurrent $\sim$			
.40	Services	>	Subaccount: testconcurrent - Ent	titlements			
(E	Subscriptions						
8	Connectivity	>					
8	Security Administrators	~			Search	Q Add Service Plan	Save Cancel
	Users		Service Plan	Assign Quota 🚺	Subaccount Assignment	Remaining Global Quota	Actions
	Role Collections						
	Roles			No entitlemen	ts have been added yet.		
	Trust Configuration				ments' to add the services and plans		
	Entitlements			that you want to	enable for this subaccount.		
8 \$							

The Add Service Plans button is enabled.

- 3. Click Add Service Plans. The entitlement category list is displayed.
- 4. Find and select the SAP Intelligent Robotic Process Automation category. All available plans list is displayed.
- 5. Select the required plans and then click *Add Service Plans*.



### ${f i}$ Note

The two plans are provided according to your purchased SKU.

- Attended (bots are triggered by a bot developer).
- Unattended (bots are fully autonomous).

You can select one of the plans or both plans according to your needs.

The services and plans are added to the subaccount.

	SAP SAP Cloud						Çe I	Ň
8	Overview		A Home A SA	P_ML_IRPA ∨ / &	-testconcurrent 🗸			
ø	Services	>	Subaccount:	-testconcurrent - Entit	lements			
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	Role Collections		SAP Intelligent Robotic Process Automation	concurrent-attended	2	- 6 + Units	6 units	8
	Roles			concurrent-unattended	9	- 6 + Units	6 units	8
	Trust Configuration		You have unsaved chan	ges				
3	Entitlements							
9	Useful Links							
	Legal Information							

## ${f i}$ Note

If you have only one sub account, it is recommended to allocate all the units available in Global Quota.

- 1 unattended Unit means that you can execute 1 unattended BOT in parallel.
- 1 attended Unit means that you can execute 10 attended BOT in parallel.

If you have multiple sub accounts, you can allocate quota units to your sub-accounts based on your requirement.

### i Note

If you have a Cloud Platform Entreprise Agreement (CPEA), untick the box under Assign Quota to have unlimited quota.

6. Click Save.

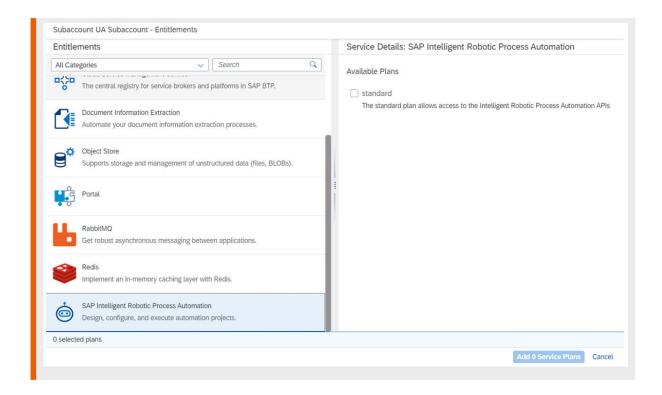
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	Roles			concurrent-unattended		6 units	() units	9
	Trust Configuration							
3	Entitlements							
0	Useful Links							
P	Legal Information							

You can manage authorizations and trust configurations to finalize the subscription. For more details, refer to the Custom Scripting section.

For more details about configure entitlements and quotas, refer to the following related topics Managing Entitlements and Quotas Using the Cockpit

### 

For customers with contracts closed before January 25th, 2021, you can still use the standard plan instead of the concurrent plan.



# **Related Information**

Authorization and Trust Management [page 25]

# 2.2.2 Subscribing to SAP Intelligent RPA [Feature Set B]

## Procedure

1. You need to have a SAP BTP global account on Cloud Foundry. Once you've signed your commercial contract with SAP, you'll receive access information and credentials for your global account.

You can find complete information about global accounts in Setting Up a Global Account in the SAP BTP official documentation.

### ▲ Caution

In the SAP BTP official documentation, only refer to the **Cloud Foundry** environment to set up your global account.

You need to have a Cloud Foundry subaccount in the SAP BTP.
 You can find information about subaccounts in Create Subaccounts Using the Cockpit in the SAP BTP official documentation.

You must select a region during the creation of your subaccount. Please note that the performance of SAP Intelligent RPA (response time, latency) can be optimized by selecting a region close to your users. For more information, see the page about Regions in the SAP BTP documentation.

If you are in Europe, you must select the *eu10* region.

3. Click *Entitlements* in the BTP Cockpit left-hand panel. The **Entitlements** screen displays.

≡ SAP BTP Cockpit					Join our user survey! 🗐		
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	API Endpoint: https://api.cf.sap.hana.ondemand.com			No spaces defined in this suba	ecount		
	Environment Instance Details						
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	Cloud Service Management Service	service-operator-access 🗔		1			
	Master Data Integration (Orchestration)	Standard 🔁		1			
	SAP Cloud Identity Services	application 🔁		1			

#### 4. Click Configure Entitlements.

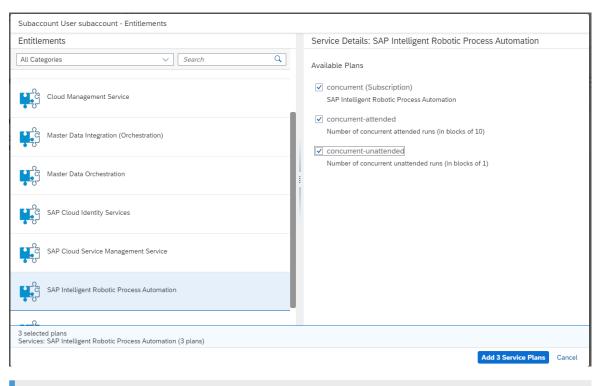
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Usage Analytics		Master Data Integration (Orchestration)	standard (Subscription) ह		1 shared units (i)	1 shared units (i)	·

The Add Service Plans button is enabled.

5. Click Add Service Plans. The entitlement category list is displayed.

E SAP SAP BTP Cockpit	it					Join our user survey! 📰	ç9 ~	
	⊕ IPA-CPEA / & User subaccour	x ~						
Services >	Subaccount: User subaccount - Entitlements							
Subscriptions								
HTML5 Applications								
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Usage Analytics	Cloud Identity Services	application 🔁		1 shared units (i)	1 shared units (i)			Ē
<ul> <li>oougermanydub</li> </ul>	Master Data Integration (Orchestration)	standard (Subscription) 🔁		1 shared units (j)	1 shared units (j)			1

- 6. Find and select the SAP Intelligent Robotic Process Automation tile.
- 7. Select the **concurrent (Subscription)**, **concurrent-attended** and **concurrent-unattended** plans and then click *Add 3 Service Plans*.



The two plans are provided according to your purchased SKU.

- Attended (bots are triggered by a bot developer).
- Unattended (bots are fully autonomous).

The services and plans are added to the subaccount.

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Services							
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HTML5 Applications		Cloud Identity Services	application 📮		1 shared units (i)	1 shared units (i)	8
Connectivity Security	>	Master Data Integration (Orchestration)	standard (Subscription) 🔁		1 shared units (j)	1 shared units (j)	- 0
Entitlements		SAP Intelligent Robotic Process Automation	concurrent (Subscription)		5 shared units (i)	5 shared units (j)	窗
Usage Analytics			concurrent-attended		- 5 + Units	0 units	Û
			concurrent-unattended	$\checkmark$	- 5 + Units	0 units	<b>1</b>
		You have unsaved changes					

### i Note

If you have only one sub account, it is recommended to allocate all the units available in Global Quota.

- 1 unattended Unit means that you can execute 1 unattended BOT in parallel.
- 1 attended Unit means that you can execute 10 attended BOT in parallel.

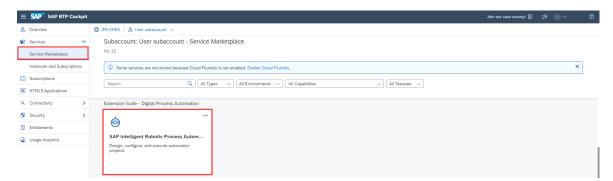
If you have multiple sub accounts, you can allocate quota units to your sub-accounts based on your requirement.

- 8. Click Save.
- 9. In the BTP Cockpit left-hannd panel, click *Service Marketplace* under *Services* to show the applications that are available to you.

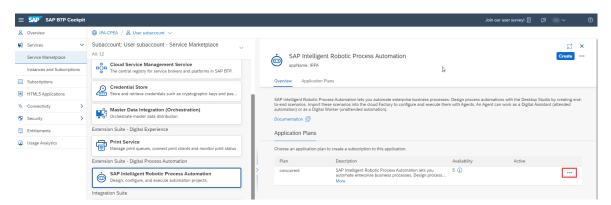
### i Note

If you don't see any SAP Intelligent RPA tile in the *Subscriptions* of your subaccount, it means that you haven't been granted with an entitlement. Entitlement should be granted once you've signed your commercial contract with SAP, so in this case, raise a BCP Ticket on component *CA-ML-IPA* to ask for information about the entitlement of your global account.

10. Click the SAP Intelligent RPA tile to enter its overview page.



11. Click the ••• icon in the **concurrent** field.



- 12. Click the Create button.
- 13. Select the **concurrent** plan and click *Create*.

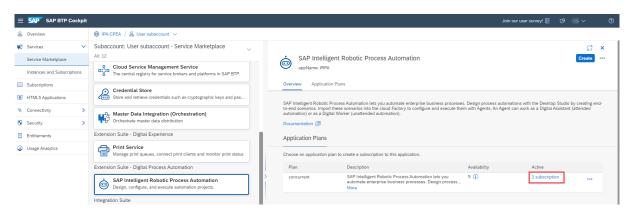
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pto	Enter basic info for your instance or subscription.		ne
atio	Service:* (i)		nd
	SAP Intelligent Robotic Process Automation	~	
	(i) Some services are not shown because Cloud Foundry is not enabled. Enable Cloud Foundry		
	Plan: *		
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uto			ets
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n the			
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SAP Intelligent RPA is now priced on concurrent executions for attended and unattended modes.

- **n** unattended Units means that you can execute n unattended bots in parallel.
- **p** attended Units means that you can execute p \*10 attended bots in parallel.

# Results

Once your SAP Intelligent RPA subaccount is created and the subscription is completed, you can see that your subscription is active. Click *1 subscription* under *Active*.



You can see that the Subscribed button is enabled.

•	● IPA-CPEA / 몷 User subaccount									
× .	Subaccount: User suba	account - Instances and Su	bscriptions						Create	
Instances and Subscriptions Search Q SAP Intelligent Robotic Process Automation V concurrent V All Statuses V										
	Instances (0) Subscriptions (	(1)								
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>	Instance	.≜ Service	Plan	Runtime Environment	Scope (i)	Credentials	Status			
			There are no service	instances in this subaccount. Choose	se 'Create' to get started.					
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	Applications to which your subac	count is currently subscribed								
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## **Related Information**

Authorization and Trust Management [page 25]

# 2.3 Authorization and Trust Management

In SAP Business Technology Platform (BTP), your SAP Intelligent Robotic Process Automation subaccount gets its users from identity providers.

As an administrator, you allow users to access their subaccount by making sure that there is a dedicated trust relationship between the identity providers and the respective subaccounts.

You can choose between the SAP BTP default identity provider, that is SAP ID Service, or a custom SAML 2.0 identity provider.

# **Default Identity Provider**

The default identity provider is SAP ID Service. It is part of SAP BTP. The trust relationship is already established.

SAP ID Service enables the registration of SAP S-User IDs or SAP BTP Register Users. It provides an access to SAP Intelligent Robotic Process Automation Factory and the SAP BTP Cockpit.

# **Custom Trust Configuration**

To set up secure authentication and single sign-on for your users, it's recommended to add a custom trust configuration. A custom trust configuration can for example help you to comply with the security policy of your company in term of identification. SAP BTP supports SAML 2.0 identity providers.

You can establish a custom trust configuration using SAP BTP Identity Authentication service. SAP BTP Identity Authentication provides you with simple and secure cloud-based access to business processes. Fore more information about SAP BTP Identity Authentication service, refer to the SAP BTP documentation. You can also use any SAML 2.0 identity provider.

If you want to use SAP BTP Identity Authentication service, or your own custom SAML 2.0 identity provider, you must configure it and establish trust between your SAP BTP subaccount and the identity provider.

For more information, see Authorization and Trust Management Overview in the SAP BTP Administration guide.

# **Related Information**

Establishing Default Trust Configuration with SAP ID Service [page 26] Custom Trust Configuration [page 27]

# 2.3.1 Establishing Default Trust Configuration with SAP ID Service

The default identity provider of SAP Business Technology Platform (BTP) is SAP ID Service.

Trust to SAP ID service in your SAP Intelligent Robotic Process Automation subaccount is pre-configured in the Cloud Foundry environment of SAP BTP by default, so you can start using it without further configuration.

You can thus proceed directly to the management of the role collections.

### 

If you do not intend to use SAP ID service, you must establish trust to your custom SAML 2.0 identity provider. For more information, see Custom Trust Configuration [page 27].

# **Related Information**

Role Collections [page 30]

# 2.3.2 Custom Trust Configuration

If you do not intend to use SAP ID service, you must establish trust to your custom SAML 2.0 identity provider.

You can establish a trust configuration using SAP BTP Identity Authentication service, or any SAML 2.0 identity provider.

To do so, you need to establish trust on both sides, that is, in your SAP Intelligent Robotic Process Automation subaccount, and in your SAML 2.0 identity provider.

It is a standard procedure for the SAP BTP, so you can find complete and detailed information in the Authorization and Trust Management in the Cloud Foundry Environment section of the SAP BTP security guide.

# Establishing Trust with an SAML 2.0 Identity Provider in your SAP Intelligent Robotic Process Automation Subaccount

Depending on the identity provider you choose, do one of the following:

### **Using SAP BTP Identity Authentication Service**

### Prerequisites

- You have already created a SAP Intelligent Robotic Process Automation subaccount.
- You have downloaded a SAML 2.0 metadata file from the SAP BTP Identity Authentication service using the URL https://<Identity\_Authentication\_tenant>.accounts.ondemand.com/saml2/ metadata.

#### Procedure

- 1. Go to your SAP Intelligent Robotic Process Automation subaccount and select Security Trust Configuration in the SAP BTP cockpit.
- 2. Choose New Trust Configuration.
- 3. Enter a name and a description that make it clear that the trust configuration refers to the identity provider.
- To get the relevant metadata, go to https:// <Identity\_Authentication\_tenant>.accounts.ondemand.com/saml2/metadata.
- 5. Copy the SAML 2.0 metadata and paste it into the Metadata field.
- To validate the metadata, choose *Parse*. This will fill the *Subject* and *Issuer* fields with the relevant data from your SAML 2.0 identity provider. The name of the new trust configuration now shows the value

<Identity\_Authentication\_tenant.accounts.ondemand.com. It represents the identity provider SAP BTP Identity Authentication service.

This also fills the fields for the single sign-on URLs and the single logout URLs.

7. Save your changes.

### Using Any SAML 2.0 Identity Provider

#### Prerequisites

- You have already created a SAP Intelligent Robotic Process Automation subaccount.
- You have downloaded a SAML 2.0 metadata file from your SAML 2.0 identity provider using the relevant URL.

### Procedure

- Go to your SAP Intelligent Robotic Process Automation subaccount and select Security Trust Configuration in the SAP BTP cockpit.
- 2. Choose New Trust Configuration.
- 3. Enter a name and a description that make it clear that the trust configuration refers to the identity provider.
- 4. To get the relevant metadata, go to go to the metadata of your identity provider.
- 5. Copy the SAML 2.0 metadata and paste it into the *Metadata* field.
- To validate the metadata, choose *Parse*. This will fill the *Subject* and *Issuer* fields with the relevant data from your SAML 2.0 identity provider.
   The name of the new trust configuration now shows the value of your custom identity provider.
   This also fills the fields for the single sign-on URLs and the single logout URLs.
- 7. Save your changes.

# Registering your SAP Intelligent Robotic Process Automation Subaccount in the SAML 2.0 Identity Provider

To establish trust between an identity provider and your SAP Intelligent Robotic Process Automation subaccount, you must register your SAP Intelligent Robotic Process Automation subaccount by providing the SAML details for web-based authentication in the identity provider itself.

Depending on the identity provider you choose, do one of the following:

### **Using SAP BTP Identity Authentication Service**

### Context

The identity provider you use here is the SAP BTP Identity Authentication service. As an administrator, you must configure trust on both sides, in your SAP Intelligent Robotic Process Automation subaccount, and in the SAP BTP Identity Authentication Service. The trust configuration on the side of the SAP BTP Identity Authentication service must contain the following items:

- Metadata for web-based authentication or the relevant configuration information. If available, the metadata contains the configuration information, including the signing certificate and the required URLs.
- Use e-mail as the unique name ID attribute and map the user attribute Groups to the assertion attribute Groups (case-sensitive). This assertion attribute is required for the assignment of roles. This makes sure that there is a trust relationship between the SAP BTP Identity Authentication service and your SAP Intelligent Robotic Process Automation subaccount.

To establish trust from a tenant of SAP BTP Identity Authentication service to your SAP Intelligent Robotic Process Automation subaccount, assign a metadata file and define attribute details. The SAML 2.0 assertion includes these attributes.

### Procedure

- Open the administration console of the SAP BTP Identity Authentication service. https://<Identity\_Authentication\_service>/admin https://<tenant\_name>.accounts.ondemand.com/admin
- 2. To go to the service provider configuration, choose Applications & Resources Applications in the menu or the Applications tile.

### i Note

In the administration console, you find the service providers in *Applications*.

- 3. To add a new SAML service provider, create a new application by using the + Add button.
- 4. Choose a name for the application that clearly identifies it as your new service provider. Save your changes. Seeing this name, users know which application they currently access after authentication.
- 5. Choose SAML 2.0 Configuration and import the relevant metadata XML file. Save your changes.

### i Note

Use the metadata XML file of your SAP Intelligent Robotic Process Automation subaccount. The subdomain name is identical to the tenant name.

If the contents of the metadata XML file are valid, the parsing process extracts the information required to populate the remaining fields of the SAML configuration. It provides the name, the URLs of the assertion consumer service and single logout endpoints, and the signing certificate.

- 6. Choose Name ID Attribute and select E-Mail as a unique attribute. Save your changes.
- 7. Choose Assertion Attributes, use +Add to add a multi-value user attribute, and enter **Groups** (casesensitive) as assertion attribute name for the *Groups* user attribute. Save your changes.

### Using Any SAML 2.0 Identity Provider

### Context

As an administrator, you must configure trust on both sides, in your SAP Intelligent Robotic Process Automation subaccount, and in the SAML 2.0 identity provider. The trust configuration on the SAML 2.0 identity provider must contain the following items:

- Metadata for web-based authentication or the relevant configuration information. If available, the metadata contains the configuration information, including the signing certificate and the required URLs.
- Use e-mail as the unique name ID attribute and map the user attribute Groups to the assertion attribute Groups (case-sensitive). This assertion attribute is required for the assignment of roles. This makes sure that there is a trust relationship between your SAML 2.0 identity provider and your SAP Intelligent Robotic Process Automation subaccount.

You use the administration console of your SAML 2.0 identity provider to register your SAP Intelligent Robotic Process Automation subaccount.

To establish trust from a tenant of your identity provider to your SAP Intelligent Robotic Process Automation subaccount, assign a metadata file and define attribute details. The SAML 2.0 assertion includes these attributes.

### Procedure

- 1. Open the administration console of your SAML 2.0 identity provider.
- 2. Go to the configuration of your SAML 2.0 identity provider.
- 3. Add a new SAML service provider as described in the documentation of your identity provider.
- 4. (If applicable) Choose a name for your identity provider that clearly identifies it as your new service provider. Save your changes.

Seeing this name, users know which application they currently access after authentication.

5. Choose the SAML 2.0 configuration and import the relevant metadata XML file. Save your changes.

### i Note

Use the metadata XML file of your SAP Intelligent Robotic Process Automation subaccount. The subdomain name is identical to the tenant name.

Take care that the fields of the SAML configuration are filled. The metadata provides information, such as the name, the URLs of the assertion consumer service and single logout endpoints, and the signing certificate.

- 6. Choose or create the name ID attribute and select E-mail as a unique attribute. Save your changes.
- 7. Choose or create a user attribute and enter **Groups** (case-sensitive) as assertion attribute name for the **Groups** user attribute. Save your changes.

# 2.3.3 Role Collections

Role collections are sets of authorizations that are suitable for distinct user groups.

SAP Intelligent Robotic Process Automation uses the authorization concept provided by the SAP Business Technology Platform and Cloud Foundry. Therefore, the recommendations and guidelines for authorizations as described in the SAP Business Technology Platform Security Guide also apply to SAP Intelligent Robotic Process Automation.

### **Related Information**

User Roles in SAP Intelligent Robotic Process Automation [page 30] Configuring Role Collections [page 31] Assigning Role Collections [page 32]

# 2.3.3.1 User Roles in SAP Intelligent Robotic Process Automation

Different roles are available in SAP Intelligent Robotic Process Automation.

By assigning roles to SAP Intelligent Robotic Process Automation users, you can grant them access to specific applications, data sources, or environments (development, test, or production).

According to their roles, users manage the application, along with its cloud and on-premise resources.

### → Tip

This section refers to several specific concepts of SAP Intelligent Robotic Process Automation such as agent groups, environment or jobs. To have a clear understanding of the roles, see the definitions of those concepts in the SAP Intelligent Robotic Process Automation Glossary.

For more information about the user roles in SAP Intelligent Robotic Process Automation, see: Authorizations.

# 2.3.3.2 Configuring Role Collections

Role collections group together the different role templates that can be applied to the SAP Intelligent Robotic Process Automation users.

# Context

As an administrator, you first need to create and set up your first role collections before assigning any users.

## Procedure

- 1. Open the SAP BTP cockpit.
- 2. Go to your SAP Intelligent Robotic Process Automation subaccount and select Security Role Collections.
- 3. Click the symbol + to create a new role collection.
- 4. Enter the name and the description of your role collection. Click *Create*.
- 5. Select the role collection you just created and click *Edit*.
- 6. Click the field under Role Name, on the left-hand side. The pop-up screen Select: Role opens.
- 7. SAP BTP prompts you to make the following mandatory entries:
  - Role Name

The roles come with the role templates of SAP Intelligent Robotic Process Automation.

### → Tip

If the fields in the popup are disabled, and you can't configure any role collection, this usually means that you didn't subscribe to your SAP Intelligent Robotic Process Automation subaccount. For more information, see Manually Subscribing to SAP Intelligent RPA in SAP Business Technology Platform (BTP) [page 12].

- Role Template
  - Select one or several of the following pre-defined roles in SAP Intelligent Robotic Process Automation:
  - IRPAOfficer

- IRPAProjectMember
- IRPAParticipant
- IRPAAgentUser
- IRPASupervisor
- IRPASystemManager
- IRPAPersonalDataAccess
- Document\_Information\_Extraction\_UI\_Templates\_Admin For more information on annotating document templates, see Process Documents Using Templates and Standard Roles.

IRPASupervisor, IRPASystemManager and IRPAPersonalDataAccess are now obsolete roles. You should avoid using them. For more information, see: Obsolete roles.

### • Application Identifier

Since the application security descriptor contains the role template, it's necessary to choose the one specific to SAP Intelligent Robotic Process Automation.

### → Tip

To easily recognize the dedicated identifier for SAP Intelligent Robotic Process Automation, look for the one with uaa-ipa in the URL.

- 8. Click Add.
- 9. Save your changes.

## **Related Information**

User Roles in SAP Intelligent Robotic Process Automation [page 30]

# 2.3.3.3 Assigning Role Collections

You configured role templates in role collections, and now want to assign these role collections to your users.

You are using one or both of the following trust configurations:

- Default trust configuration (SAP ID service)
- Custom trust configuration (SAP BTP Identity Authentication service or any SAML 2.0 identity provider)

How you assign users to their authorizations depends on the type of trust configuration, and on whether or not you prefer to maintain the authorizations of individual users rather in the identity provider or in SAP Business Technology Platform (BTP). The following options are available:

• Directly assign role collections to users.

32

• Map role collections to user groups defined in your identity provider. You initially maintain the mapping between user groups and role collections once in SAP BTP and maintain group memberships of users in the identity provider.

# **Directly Assigning Role Collections to Users**

You want to directly assign a role collection to a user. You can use this option for default and custom trust configurations.

### Prerequisites

You have created role collections containing authorizations in the form of roles.

### Procedure

- 1. Open the SAP BTP cockpit.
- 2. Go to your SAP Intelligent Robotic Process Automation subaccount and select Security Trust Configuration .
- 3. Choose the trust configuration for the identity provider of the user, for example SAP ID.
- 4. Enter the user's name, for example john.doe@example.com.

### i Note

If you are using a custom trust configuration, enter the user name according to the name ID format configured in the identity provider. If you are using SAP ID Service, enter the e-mail address.

- 5. To see the role collections that are currently assigned to this user, choose Show Assignments.
- 6. To assign a role collection, choose *Assign Role Collection*. Select the name of the role collection you want to assign.
- 7. Click *Assign Role Collection* to save your changes. You have assigned a role collection to a user.

# Mapping Role Collections to User Groups

You want to assign a role collection to a user group provided by an SAML 2.0 identity provider that has a custom trust configuration in SAP BTP. In this case, the assignment is a mapping of a user group to a role collection. Your identity provider provides the user groups using the SAML assertion attribute called Groups. Each value of the attribute is mapped to a role collection as described in this procedure.

### Prerequisites

• You have configured your custom SAML 2.0 identity provider and established trust in your SAP Intelligent Robotic Process Automation subaccount.

### → Remember

The name of the trust configuration is different from SAP ID Service. The name of a custom trust configuration to SAP BTP Identity Authentication service could be as follows:

https://Identity\_Authentication\_tenant>.accounts.ondemand.com

- You have configured the identity provider so that it conveys the user's group memberships in the *Groups* assertion attribute.
- You have created role collections containing authorizations in the form of roles.

#### Context

The SAML 2.0 identity provider provides the users, who can belong to user groups. It's efficient to map user groups to role collections. The role collection as a reusable element contains the authorizations that are necessary for this user group. This saves time when you want to add a new user. Simply add the user to the respective user group or groups, and the user automatically gets all the authorizations that are included in the role collections.

For this reason, the assignment is a mapping of user groups to role collections.

#### Procedure

- 1. Open the SAP BTP cockpit.
- 2. Go to your SAP Intelligent Robotic Process Automation subaccount and select Security Role Collections.
- 3. Select a role collection.
- 4. In the role collection overview page, choose the *Edit* button.
- 5. Under User Groups, select an identity provider.
- 6. Enter the name of the user group.

### → Tip

You must use the exact name of the user group as provided by the identity provider.

### Example

In the SAP BTP Identity Services - Identity Authentication, you find the user groups in the administration console of your SAP BTP Identity Services - Identity Authentication tenant under Users & Authorizations User Groups . Open the administration console using https://

7. Save your changes.

# 2.4 Create a Service Key

To access SAP Intelligent RPA APIs, you need to get a service key from the Service Instance in the SAP BTP Cockpit. If you have administrator rights of the global account, proceed as follow:

1. When you create your SAP Intelligent RPA subaccount in the SAP BTP cockpit, make sure you enable Cloud Foundry.

= SAF	SAP BTP Cockpit		Join our user survey!	C3	¢9 ~	?
& @	Trial Home / 🌐 / 🏂 UA Trial 🗸					
	Subdomain: UA Trial Subdomain: UA Triat UD: Cloud Foundry Environment Entitlements Entitlements				Delete Subacc	count
3	You are not currently using Cloud Foundry capabilities. Entitlements					
	Service	Service Plan	Quota Assignment			
	Cloud Service Management Service	service-operator-access 🔁	1			- 1

- 2. In the navigation area of your subbacount, go to the *Spaces* tab to access the spaces of the Cloud Foundry organization and create a new space.
- 3. Click the newly created space, and select Services Service Marketplace to display all the available services.
- 4. Click the SAP Intelligent Robotic Process Automation Service and click the *Create* button to create a new instance of the service.

≡	SAP BTP Cockpit	ල Evgen	iy 🗸	?
٥	Applications	$\oplus$ CISDX2020 $\checkmark$ / $\lessapprox$ CF IRPA $\checkmark$ / $\boxtimes$ sp1 $\checkmark$		
ųô	Services 🗸	Space: sp1 - Service Marketplace 🗸	23	×
	Service Marketplace	All: 18 SAP Intelligent Robotic Process Automation	Create	•••
	Instances	Recent a registry for service brokers		- 1
٥	SAP HANA Cloud	Extension Suite - Digital Experience Service Plans		
Ş	SAP HANA Cloud Migrations	Print Service SAP Intelligent Robotic Process Automation (SAP Intelligent RPA) lets you automate enterprise bus	inoss	
đ	Routes	Print Service Manage print queues, connect print cli	Import the	ie .
88	Security Groups	Extension Suite - Digital Process Automation Agents running on workstations can work as a Digital Assistant (attended automation) or as a Digita (unattended automation).	al Worker	
	Events	SAP Intelligent Robotic Process Automation Discovery Center		
8	Members	Design, configure, and execute automa Service Plans		- 1
		Integration Suite Choose a service plan to create an instance of this service.		
?	Help and Support	Audit Log Management Service Plan Description Environments Active		
ð	Useful Links	standard The standard plan allows access to the Cloud Foundry 2 instant Intelligent Robotic Process Automatio More	ces .	•••
P	Legal Information	Audit Log Service API More		

- 5. **Optional:** If users further need to access and create other service keys, they need to be members of the space with a *Space Developer* role.
- In the *Create* window, you're prompted to choose a service plan: select the standard predefined plan.
   Do not specify any optional parameters or assign any applications.
   At the and of the greation present you enter a name for the carvies instance of your choice and confirm

At the end of the creation process, you enter a name for the service instance of your choice and confirm the creation.

For more information on the creation of service instances, see Creating Service Instances in Cloud Foundry.

7. Click the Actions menu of the service instance for which you want to create a service key.

Subaccount: trial	Instances	and Subscriptions						Creat
Search		Q All Services	~	All Plans \vee 🛛 🗛 🗸				
	ptions (2) in: Cloud Four	ndry   Kyma/Kubernetes   Other environm	ients					
	in: Cloud Four	ndry   Kyma/Kubernetes   Other environm Service	Plan	Runtime Environment	Scope 👔	Credentials	Status	

- 8. Choose Create Service Key.
- 9. In the *New Service Key* wizard, choose a name for your service key and provide configuration parameters either by uploading a JSON file or by configuring them in-line.

New Service Key	
Service key name:*	
Enter a name up to 32 chars	
Configure service key parameters	
Upload a JSON file:	
Select JSON file	Browse
Specify the parameters in JSON format:	Clear
1	
	Create Cancel

The service key contains the API URL and the credentials under the property uaa (under url) that allow you to obtain a JWT token, with the help of which you can access the SAP Intelligent RPA API.

### ${f i}$ Note

You need to add "/oauth/token" to the end of the URL provided in the service keys to obtain an access token for Postman.

# **3 On-premise Components Setup**

The combined setup groups the installation of the different on-premise components of SAP Intelligent Robotic Process Automation.

Installation of the Desktop Agent is enabled by default. Install the Desktop Agent for runtime machines where the automation projects are executed.

Go to the SAP Software Downloads page to download the on-premise components of SAP Intelligent Robotic Process Automation.

#### 

Check out the migration topic [page 81] if you want to upgrade your SAP Intelligent Robotic Process Automation on-premise components.

# 3.1 Technical Prerequisites and System Requirements

#### i Note

Prior to installing the SAP Intelligent Robotic Process Automation on-premise components:

- You need administrator rights.
- Make sure the following elements are installed on your machine:
  - Microsoft Edge
  - Microsoft.NET framework 4.7.2
  - Microsoft Visual C++ 2013 Redistributable Package x86 available on Microsoft website
  - Remote Tools For Visual Studio 2022 (only for the Desktop Studio, not required for Agent). Fore more information, see Installing Remote Tools For Visual Studio 2022 [page 54].

#### i Note

The dependency on Microsoft Internert Explorer 11 has been replaced with a dependency on the Microsoft Edge web browser. To launch the Desktop Agent on Microsoft Edge, the WebView2 runtime component is required.

# Supported Operating Systems

System Type	Version	Desktop Studio	Desktop Agent (Agent 2.0.X and Agent 3.x)	Cloud Factory / Cloud Studio
Server	Server Windows Server 2016 x64 (*)		Supported (1)	See the supported browsers
	Windows Server 2019 x64	Not supported	Supported (1)	See the supported browsers
	Windows Server 2022 x64	Not supported	Supported	See the supported browsers
Client	Windows Desktop/Client 10 x86	Supported	Supported	See the supported browsers
	Windows Desktop/Client 10 x64 (*)	Supported	Supported	See the supported browsers
	Windows Desktop/Client 11 x64	Not supported	Supported	See the supported browsers

(\*) Reference Platform

(1) See the SAP Note 3107785/ for multi-user limitations.

# **Supported Browsers**

Cate- gory	Web Browser	Version	Cloud Fac- tory	Cloud Stu- dio	Captured Web Appli- cations	Browser Ex- tension	Store
Chro- mium -base	Google Chrome	94 and greater	Supported	Supported	Supported (4)	Supported	Supported
d brow sers (*)	Microsoft Edge (1)	94 and greater	Supported	Supported	Supported (4)	Supported	Supported
Oth- ers	Microsoft Internet Explorer 11 (2)		Not sup- ported (3)	Not sup- ported (3)	Supported	Supported	Not sup- ported (3)
	Mozilla Firefox	88 and greater	Supported	Not sup- ported	Limited support (4) (5)	Limited sup- port (5)	Supported
	Safari (macOS)	14 and greater	Supported	Not sup- ported	Not sup- ported	Not availa- ble	Supported

(\*) Reference platforms

(1) Starting with the version 2.0.18 of the Desktop Agent, Microsoft Edge is used to log into the Cloud Factory. In the future version of the Desktop Agent, Microsoft Edge is also used for the rendering of the Desktop Agent. In such a configuration, the Edge 'WebView2' component is mandatory: if not already installed on your machine, please install Edge WebView2 from the Microsoft website *r*.

(2) Internet Explorer 11 is no longer supported by Microsoft. Support of IE11 is only for capturing and executing legacy third-party applications.

(3) Rendering of the Cloud Factory or the Cloud Studio doesn't work: we recommend using a supported browser instead.

(4) Capture or execution is not supported for non-Windows OS.

(5) Only for the Desktop Studio. Use of Chromium-based browsers instead is highly recommended.

Category	Technology or Software	Cloud Studio	Cloud Studio Recorder	Desktop Agent	Desktop Stu- dio	Additional In- formation
SAP	SAP GUI for Windows (*)	Supported	Supported	Supported	Supported	Version 7.40 and greater.
	SAP GUI for HTML	Supported	Supported	Supported	Not supported	
	SAP BAPI	Supported (1)	Not applicable	Supported	Not supported	
	SAP S/ 4HANA / SA- PUI5	Supported	Supported	Supported	Supported	On-premise edi- tion 1809 or greater.
	SAP Ariba	Supported	Future release (Roadmap)	Supported	Not supported (3)	
	SAP Success- Factors	Supported	Future release (Roadmap)	Supported	Not supported	
Desktop-based applications	UIAutomation	Supported	Supported	Supported	Supported	For all Win- dows-based ap- plications with UIAutomation support. UIAu- tomation gives a significant subset but it is restricted to user interface.

## **Supported Technology Interfaces**

Technology or Category Software		Cloud Studio	Cloud Studio Recorder	Desktop Agent	Desktop Stu- dio	Additional In- formation
	Surface Auto- mation / OCR	Supported	Not supported	Supported	Supported	Recommended if the applica- tion you want to automate can't be automated using any of the other technol- ogy connectors previously de- scribed.
	WIN	Not supported	Not supported	Supported	Supported	For 32-bit exe- cutable without sandboxing. WIN driver gives full access to a Windows Application.
	JAVA / SWG	Future release (Roadmap)	Not supported	Supported	Supported	Swing (JRE/JDK 8).
	Terminal / HLLAPI	Future release (Roadmap)	Not supported	Supported	Supported	Requires a third-party (HLLAPI) soft- ware installed. (2)
Web-based ap- plications	WEB	Supported	Supported (1) (2) with Agent 2.0.21 with Edge	Supported	Supported	Requires browser exten- sion installed and enabled.
	WebService	Supported (1)	Not applicable	Supported	Supported	Requires cus- tom script.
Office integra-	Excel	Supported (1)	Not applicable	Supported	Supported (1)	Version 2013,
tion	Outlook	Supported (1)	Not applicable	Supported	Supported (1)	2016, 2019. Re- quires the on-
	PowerPoint	Supported (1)	Not applicable	Supported	Not available	premise soft-
	Word	Supported (1)	Not applicable	Supported	Supported (1)	ware installa- tion.
File integration	PDF	Supported (1)	Not applicable	Supported	Supported (1)	Doesn't require third-party soft- ware installa- tion.
	Document In- formation Ex- traction (with or without Tem- plate)	Supported (1) (4)	Not applicable	Powered by Cloud Service	Not supported	SAP Cloud Service: doesn't require third- party software installation.

(\*) SAP GUI for Windows applications can be automated in SAP Intelligent RPA using the SAP GUI connector (for manual capture ) and the recorder. Both rely on SAP scripting which depends on the version of SAP GUI for Windows client.

We recommend using SAP GUI for Windows 7.40 and above. Please also take into account the SAP GUI for Windows releases as mentioned in the following note to understand the maintenance strategy and deadlines: 147519/2.

Check the SAP GUI Scripting API documentation to find the SAP Scripting requirements. You also need to take into account that:

- Applications may change from one release to the next. This means scripts for a transaction may work in one release, but not in the other if the application changed.
- Some applications are using controls or logic which are not compatible with scripting (see the limitations in the following note: 587202/2).
- (1) Through activities or custom script
- (2) IBM Personal Communications 14.x is fully supported
- (3) Without custom type or framework. May require further tests
- (4) With built-in Artifact support

#### **Minimum Requirements**

Component	Requirement Category	Minimum Requirement
Desktop Agent	Hardware	Screen resolution: 1366x768
		CPU: Dual Core @ 2 Ghz
		Memory: 4GB (at least 1GB of free memory depending on the project/ package)
		Disk space: 1 GB of free space
	Software components	Microsoft .NET framework 4.7
		Internet Connection to SAP Business Technology Platform (Public Cloud)
		For Desktop Agent 2: Microsoft Internet Explorer 11
		For Desktop Agent 3: Microsoft Edge 94 (1)
Cloud Studio	Hardware	Screen resolution: 1920x1080
		CPU: Dual Core @ 2 Ghz
		Memory: 8GB (at least 2GB of free memory depending on the project/ package)

Component	Requirement Category	Minimum Requirement		
		Disk space: 1 GB of free space		
	Software components	Microsoft .NET framework 4.7		
		Supported Browser and Browser Extensions		
		Internet Connection to SAP Business Technology Platform (Public Cloud)		
		Microsoft Visual C++ 2013 Redistribut- able Package x86		
Desktop Studio	Hardware	Screen resolution: 1920x1080		
		CPU: Dual Core @ 2 Ghz		
		Memory: 8GB (at least 2GB of free memory depending on the project/ package)		
		Disk space: 1 GB of free space		
	Software components	Microsoft .NET framework 4.7		
		Remote Tools Visual Studio 2019 for re- mote debugging		
		Java JRE 8 (*)		
		NodeJS (*)		
		Three-way Diff Tool through command line		
		Supported Browser		
		Internet Connection to SAP Business Technology Platform (Public Cloud)		
		Microsoft Visual C++ 2013 Redistribut- able Package x86		
SAP Intelligent Robotic Process	Hardware	Screen resolution: 1600x900		
Automation Factory	Software components	Supported Browser		
		Internet Connection to SAP Business Technology Platform (Public Cloud)		

#### (\*) included in the setup

(1) Starting with the version 2.0.18 of the Desktop Agent, Microsoft Edge is used to log into the Cloud Factory. In the future version of the Desktop Agent, Microsoft Edge will also be used for the rendering of the Desktop Agent. In such a configuration, the Edge 'WebView2' component is mandatory: if not already installed on your machine, please install Edge WebView2 from the Microsoft website result.

# About WebSockets protocol

WebSockets provide a persistent connection between Desktop Agent and Cloud Factory that both parties use to start sending data at any time. The Desktop Agent establishes a WebSocket connection (WebSocket handshake) to the Cloud Factory. When running behind a proxy or a firewall, make sure that the WebSockets protocol is properly supported and not blocked.Microsoft Visual C++ 2013 Redistributable Package x86 available on the

# 3.2 Installing SAP Intelligent RPA On-Premise Components

## Prerequisites

Installing SAP Intelligent RPA on-premise components automatically installs the web browser extension for Google Chrome and Microsoft Edge. To prevent issues during the installation, please close all the Chrome tabs open on your machine.

#### i Note

To run projects with BAPI activities, your IT administrator must install a Windows component on your PC. If you have administrator access, please install Microsoft Visual C++ 2010 Redistributable Package  $x86 \neq 0$  on your machine. If you do not have this access, please ask your administrator to install the component.

# Context

The setup program is provided in the form of an industry standard Windows MSI installer. You can download it from the SAP Software Center.

## Procedure

1. Launch the MSI file execution.

2. Select *Next* to begin the installation process.

#### ${f i}$ Note

You can stop the installation process at any time by clicking Cancel.

3. Select the component you want to install.

You can choose to install the components according to your needs:

- The Desktop Agent installation is enabled by default. Install the Desktop Agent for run-time machines where the automation projects are executed.
- Select the installation of the optional components Desktop Studio and SDK to achieve a complete setup. It enables a full use of SAP Intelligent Robotic Process Automation: development, orchestration and execution of automation projects.

Click Next

4. Optional: Choose Browse to change the destination of the installation folder.

nis	😸 SAP Intelligent Robotic Process Automation Desktop 1.0.5.57 — 🗌 🗙
	Select Installation Folder
	This is the folder where SAP Intelligent Robotic Process Automation Desktop
	To install in this folder, dick "Next". To install to a different folder, enter it below or dick "Browse".
	Eolder: C:\Program Files (x86)\SAP\Intelligent RPA\ Br <u>o</u> wse
R	Advanced Installer < <u>B</u> ack <u>N</u> ext > Cancel

5. Select *Install* to start the installation.

The installation process may take a few seconds to complete. An authorization request to bring change to the computer might appear.

i	🖟 SAP Intelligent Robotic Process Automation Desktop 1.0.5.57 Setup	×
	Ready to Install	
	The Setup Wizard is ready to begin the SAP Intelligent Robotic Process Automation Desktop 1.0.5.57 installation	5
	Click "Install" to begin the installation. If you want to review or change any of your installation settings, click "Back". Click "Cancel" to exit the wizard.	
R	Advanced InstallerCa	incel

- 6. Select *Next* to finalize the installation.
- 7. Once the installation has been successfully completed, select the checkbox to launch SAP Intelligent Robotic Process Automation Desktop and click *Finish*

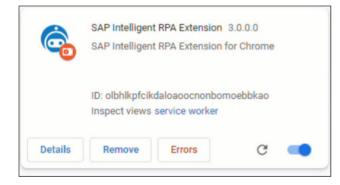
The *Desktop Agent Tenant Registration* window pops up: you now need to register the Desktop Agent to finalize the installation. For more information, see Desktop Agent Tenant Registration [page 46].

#### i Note

Microsoft Edge is also used for the rendering of the Desktop Agent. In such a configuration, the Edge 'WebView2' component is mandatory: if not already installed on your machine, please install Edge WebView2 from the Microsoft website *r*.

Make sure you install the version Microsoft Evergreen Bootstrapper for the browser to receive Microsoft updates.

8. Activate the extension after installation.



Desktop Agent Tenant Registration [page 46]

Registration of a Desktop Agent tenant is required to use SAP Intelligent Robotic Process Automation.

```
Manifest V2 (mV2) Extension Updates [page 48]
```

# 3.2.1 Desktop Agent Tenant Registration

Registration of a Desktop Agent tenant is required to use SAP Intelligent Robotic Process Automation.

# Context

Once you've completed the installation steps of the SAP Intelligent Robotic Process Automation setup wizard, you need to register your agent and connect it to an SAP Intelligent RPA tenant in order to execute automations.

# Procedure

- 1. When the Desktop Agent Tenant Registration window pops up, enter:
  - the name of your tenant in the *Name* field.
  - the tenant URL you want to connect to and that you copy from the *Agents* tab in the Factory and paste in the *Domain* field.

Desktop Agent Tenant Registration
Enter the name and the URL of your tenant to register your agent. Name
Domain
Save Cancel

2. On the SAP Intelligent Robotic Process Automation Factory homepage, go to the *Agents* tab and then click on the *Register New Agent* button on the right-hand side of the screen.

Home	Projects	Packages	Agents ~	Environments	Monitoring $\checkmark$	Store 🗸	Configuration 🗸
Agents							Register new agent
Login		М	achine		Status		
Search		~ S	Search	$\sim$	Select	$\sim$	•
Package		Er	nvironment		Attributes		
Search		✓ [5	Search	~	Search	$\sim$	۲ آ <sub>×</sub>

3. When the pop-up opens, select *Copy and Close*.

Register new agent	
Copy the link to the agent systray     https://ipa-	
Read more on agent registration.	
Copy and Close	Cancel

- 4. Then paste the URL into the Domain field on your Desktop Agent Tenant Registration window.
- 5. Select Save.
- 6. Log in to your SAP Intelligent Robotic Process Automation Factory tenant with your user name or e-mail and password.

## **Next Steps**

Before you can deploy agents, you need to declare them in an agent group. Do the following:

- 1. Open SAP Intelligent RPA Factory, go to the *Agents* tab and click *Agent groups*.
- 2. **Optional:** If you don't already have an agent group, click *New agent group*. Enter a name for (max. 256 characters), choose the type of agent group (**machine** or **login**) and click *Create*.
- 3. In the *Agent groups* tab, select the agent group in which you want to declare the agent, and create a new node by clicking the + (*Add node*) in the panel on the left.
- 4. Enter a name and a label for the node. Click *Create*.

For more information, see Create an Agent Group.

#### **Related Information**

Desktop Agent Tenant Registration via the Command Line [page 52]

# 3.2.2 Manifest V2 (mV2) Extension Updates

Starting 2306, the manifest V2 (mV2) extension becomes decommissioned and the Agent2.0 Installer installs the manifest V3 (mV3) extension by default.

The Agent2.0 Installer is now enhanced to install only the mV3 extension. You don't see any dialog screen in the installer to choose between the extensions (mV2, mV3, or both). The mV2 extension is released with a tag **Deprecated** in the description of the extension.

The extension gets added and removed along with the installer. If you want to upgrade to the mV3 extension, it is recommended to install the latest installer by uninstalling the old version. This way, you don't have to remove the mV2 extension manually. However, you can still remove the mv2 extension manually if you want to use only the mV3 extension without upgrading the agent.

After installation, if the mV2 extension:

- Doesn't already exist in the browser, the mv3 extension becomes active once you click on the 'enable extension' popup.
- Already exists in the browser, the mv2 extension isn't removed by the installer. You can then decide whether to activate the mV2 or mV3 extension.

# 3.3 Installation via the Command Line

You can use this method if you want to deploy agents automatically.

When launching the installation of the Desktop package, you can set the install type by means of certain options.

- Open "Windows PowerShell" run as Administrator.
- Type the following commands:
  - \$params = '/i', <Path to desktop.msi>, '/quiet', '/passive', '/qb-', '/L\*V', <path to save your installation log ADDLOCAL=ALL>
  - \$p = Start-Process 'msiexec.exe' -ArgumentList \$params -NoNewWindow -Wait -PassThru

where:

- Path to desktop.msi: Path where the .msi has been stored in local system.
- path to save your installation log: Path to the local machine to save the installation log.

For example, the following command launches the installation of the package:

- \$params = '/i', "C:\SAPDevelop\INT\_RPA\_AGENTOOP\_48-80004525.msi", 'WEB\_EXTENSION=WEBV3', '/ quiet', '/passive', '/qb-', '/L\*V', "C:\SAPDevelop\SAPDesktop\_install\_3.log ADDLOCAL=ALL"
- \$p = Start-Process 'msiexec.exe' -ArgumentList \$params -NoNewWindow -Wait -PassThru

#### No User Interaction and Silent Mode

To launch the full installation of "Desktop" solution with no user interaction (only display of progress bar) and with the full verbose mode enabled and the prompted restart if is required:

msiexec.exe /i "C:\SAPDevelop\IRPA\SAPDesktop\_1.0.2.110.msi" /passive /L\*V! "C:\SAPDevelop\IRPA\SAPDesktop\_install.log" /promptrestart ADDLOCAL=ALL

To deploy the Desktop Agent component in silent mode (no UI) with the full verbose mode enabled and with forced restart, use:

msiexec.exe /i "C:\SAPDevelop\IRPA\SAPDesktop\_1.0.2.110.msi" /quiet /qn /L\*V! "C:\SAPDevelop\IRPA\SAPDesktop\_install.log" /forcerestart

#### 

The above command line must be run on a console with administrator privileges to force a restart. All unsaved user work will be lost.

For further information on the msiexec.exe tool's command-line options and on Windows Installer technology, please see: https://docs.microsoft.com/fr-fr/windows/win32/msi/command-line-options

Display Options [page 50]

Restart Options [page 50]

Logging Options [page 51]

Desktop Agent Tenant Registration via the Command Line [page 52]

# 3.3.1 Display Options

The user interface level of the installation can be configured according to the target environment. For example, a package distributed to clients should have a full UI, while a package deployed through Group Policy should have no user interface. Msiexec.exe sets the UI level of the installation with these options:

msiexec.exe /i <path\_to\_package> [/quiet][/passive][/q{n|b|r|f}] where:

- /quiet means quiet mode (with no user interaction)
- /passive means unattended mode (only a progress bar is displayed)
- /q is used to set the UI level as follows:
  - n no UI
  - n+ no UI except for a modal dialog box displayed at the end
  - b basic UI
  - b+ basic UI with a modal dialog box displayed at the end. The modal box is not displayed if the user cancels the installation. Use qb+! or qb!+ to hide the *Cancel* button.
  - r reduced UI
  - f full UI

For example, to install the package with no user interaction (only a progress bar is displayed to show the user that installation is in progress, but no prompts or error messages are displayed):

msiexec.exe /i "C:\SAPDevelop\IRPA\SAPDesktop\_1.0.2.110.msi" /passive

# 3.3.2 Restart Options

Sometimes installation overwrites files that are in use, or needs to reboot the machine in order to finish. The reboot policy used by the installation can be set by means of the following options:

msiexec.exe /i <path\_to\_package> [/norestart][/promptrestart][/forcerestart]

• /norestart - the machine will not be restarted after the installation is complete

- /promptrestart the user will be prompted if a reboot is required
- /forcerestart the machine will be restarted after the installation is complete

For instance, the following prevents restart of the machine after completion of the installation:

msiexec.exe /i "C:\SAPDevelop\IRPA\SAPDesktop\_1.0.2.110.msi" /norestart

# 3.3.3 Logging Options

When debugging an installation package you can use multiple logging parameters in order to create a log. This log will contain different information for each parameter you use:

 $msiexec.exe \cite[/i][/x] < \cite{to_package} [/L{i|w|e|a|r|u|c|m|o|p|v|x+|!|*}][/log] \label{eq:msiexec.exe} \cite{to_package} \cite{to$ 

<path\_to\_log> where:

- /L enable logging:
  - i include status messages
  - w include non-fatal warnings
  - e include all error messages
  - a mention when an action is started
  - r include action-specific records
  - u include user requests
  - c include the initial UI parameters
  - m include out-of-memory or fatal exit information
  - o include out-of-disk-space messages
  - p include terminal properties
  - v verbose output
  - x include extra debugging information
  - + append to an existing log file
  - ! flush each line to the log
  - \* log all information, except for v and x options
- /log is equivalent to /l\*

For example, use the following to activate full verbose mode:

msiexec.exe /i "C:\SAPDevelop\IRPA\SAPDesktop\_1.0.2.110.msi" /L\*V! "C:\SAPDevelop\IRPA\SAPDesktop\_install.log"

#### 

With this mode, the LOG file generated will be large (around 18 MB).

# 3.3.4 Desktop Agent Tenant Registration via the Command Line

As well as installing the Desktop Agent and Desktop Studio software via the command line, you can also register Desktop Agent tenants by this method, using ctxtrun.exe.

The parameters used with ctxtrun.exe are:

- tenantURL (mandatory) specifies the domain tenant.
- tenantName (optional) gives the tenant a name.
- nocheck (optional) specifies that no health check should be performed. By default, a health check is
  performed.

#### Example

ctxtrun.exe -tenantURL irpa-training23.app.irpa.cfapps.eu10.hana.ondemand.com

This creates a default .json file in the Tenants folder, for example: C:\ProgramData\SAP\Intelligent RPA\Tenants.

The process exits with code 0 if everything is ok, with code 1 if it fails.

#### Example: with no health check

```
ctxtrun.exe -tenantURL irpa-training23.app.irpa.cfapps.eul0.hana.ondemand.com -nocheck
```

The process exits with code 0 if everything is ok, with code 1 if it fails.

#### Example

```
ctxtrun.exe -tenantURL irpa-training23.app.irpa.cfapps.eul0.hana.ondemand.com -tenantname myname
```

This creates a default.json file in the Tenants folder, where:

- tenantName is myName.
- tenantDomain is irpa-training23.app.irpa.cfapps.eu10.hana.ondemand.com.

The process exits with code 0 if everything is ok, with code 1 if it fails.

#### Example: as before but with no health check

```
ctxtrun.exe -tenantURL irpa-training23.app.irpa.cfapps.eu10.hana.ondemand.com -tenantname myname -nocheck
```

## **Error Cases**

If the health check is not ok, the process exits with code 1.

If creation of the tenant . json file fails, the process exits with code 1 and a log entry is created on Windows event viewer.

# 3.4 Mandatory Requirements for Desktop Studio

Congratulations, you have successfully installed the on-premise components of SAP Intelligent Robotic Process Automation. You must perform a few additional steps to finalize the installation before starting to use the SAP Intelligent Robotic Process Automation Desktop Studio.

#### i Note

Before finalizing the installation of SAP Intelligent Robotic Process Automation, make sure that you already installed Microsoft Visual C++ 2013 Redistributable Package x86 *r* on your machine.

## **Related Information**

Installing Remote Tools For Visual Studio 2022 [page 54] Installing a Source Code Compare Tool [page 54] Configuring Web Browsers [page 57] Quick Installation Check-Up [page 63]

# 3.4.1 Installing Remote Tools For Visual Studio 2022

#### Procedure

- 1. Go to the Microsoft website *r* and expand the Tools for Visual Studio 2022 section. Select Download next to **Remote Tools for Visual Studio 2019** at the bottom of the section.
- 2. Double-click on the saved executable file to start the installation process.
- 3. Click *Continue* and accept the terms to continue with the installation.
- 4. After the installation progress dialog, click *Close* to exit the setup wizard.

# 3.4.2 Installing a Source Code Compare Tool

## Context

To enable the advanced phases of development using the SAP Intelligent Robotic Process Automation Desktop Studio, the installation of a Diff and Merge tool is highly recommended.

Indeed, such tools like KDiff3 or Beyond Compare allow you to merge the generated code from workflows and the code added manually to the scripts.

As an example of source code compare tool, here is the procedure to install KDiff3.

## Procedure

- 1. Go to http://kdiff3.sourceforge.net/ ro download the latest KDiff3 version.
- 2. Double-click the saved executable file to start the installation process.
- 3. Click Next and accept the license terms to continue with the installation.
- 4. Change the default destination folder if necessary and click Next.
- 5. Click the icons in the tree to change the way features will be installed and click Next.
- 6. Click Install to begin the installation.
- 7. After the installation progress dialog, click *Finish* to exit the setup wizard.

# 3.4.2.1 Installation of KDiff3 merger tool in the Desktop Studio

# Prerequisites

Install KDiff3 on your computer

To install KDiff3 on your computer, refer to the following link Installing a Source Code Compare Tool [page 54].

## Context

Add KDiff3 to the Desktop Studio

## Procedure

1. In the Desktop Studio, navigate to File and then click *Settings*. The Desktop Studio settings screen is displayed.

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2. In the Desktop Studio settings screen, select the *Workflow* tab and scroll down to the bottom.

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3. Click the *three dots* button to open the Windows explorer.

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- 4. Navigate to the following path: "C:\Program Files\KDiff3\kdiff3.exe".
- 5. Select *KDiff3* for the Merge Command Line.

SAP Intelligent Robotic Process Automation Desktop Studio		– ti x
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6. Click the Save button and restart the Desktop Studio.

# 3.4.3 Configuring Web Browsers

# **Google Chrome**

The Desktop Agent installation automatically installs the web browser extension for Chrome. You then need to enable that extension:

- 1. Open Google Chrome.
- 2. Click the three dots at the top right of your browser.
- 3. Select More Tools Extensions .
- 4. Click the toggle button to activate the SAP Intelligent RPA Extension.
- 5. Optional: if you need to access html files locally, click *Details* on the SAP Intelligent RPA tile. Then enable the option "Allow access to file URLs".

#### i Note

The SAP Intelligent RPA Extension is not accessible publicly in the Chrome store.

There are three versions of the same connector. The latest releases have more fixes and improvements and work only from the product version 2.0.3.97/patch 14, or from version 2.0.5.

Use one of the following links depending on your product version:

- From version 2.0.5 *r*.
- From version 2.0.3.97 ℯ .

#### Before version 2.0.3.97 🏓 .

#### i Note

As a best practice, whenever you install or update the browser extension for Chrome, you must:

- Close or refresh all the browser windows.
- Close the Cloud Studio.

#### i Note

When you try to capture a web page in Google Chrome using the UI Automation, it does not capture the content of the page. Therefore, you must modify the accessibility modes in Chrome to enable accessibility support for web content.

To enable the accessibility modes, perform the following steps:

- 1. Open Chrome and navigate to "chrome://accessibility".
- 2. Check all the checkboxes under Accessibility modes.

← → C △ ③ Chrome   chrome://accessibility		6 \$	*		-	÷
Accessibility Internals						-
Use this page to inspect the internal representation of accessibility in Chrome. You can see and mod	fy the various accessibility modes Chrome has. You can also view the accessibility tree for a specific page, or for the Chrome app natively.					
Accessibility modes:	Accessibility tree viewing options:					
Check/uncheck accessibility modes to see how they change a page's accessibility.	Internal Show internal accessibility tree instead of native					
Native accessibility API support Allows Chrome to be controlled via native accessibility APIs specific to this platform.	Filters:					
Web accessibility Accessibility support is enabled for web content.	Use filters to match the attributes and attribute values you want included in the output. Filters can contain si they're not regular expressions. Attributes are separated by spaces.	mple wildo	ards (*)	only,		ł
Text metrics Enables support for querying line breaks and the bounding box of arbitrary character ranges.	Allow: * Include these attributes. Empty attributes are skipped.					
<ul> <li>Screen reader support Exposes accessibility APIs typically needed only by screen readers.</li> </ul>	Allow empty: Include these attributes: even if they are empty.					
<ul> <li>HTML</li> <li>Exposes HTML tag names and attributes via accessibility APIs.</li> </ul>	Include these attributes, even if they are empty. Deny: Exclude these attributes.					

#### 3. Reboot Chrome.

#### i Note

As a best practice, you must not remove the V3 extension manually from the Chrome browser and install Agent 3.

If you manually remove the V3 extension from the chrome browser before installing a new version of Agent 3, the result is an erroneous state where Agent 3 is installed, but the V3 extension is not installed.

To reinstall the V3 extension on the Chrome browser, refer to the following steps:

- 1. Uninstall the Chrome browser.
- 2. Reinstall the Chrome browser.
- 3. Install Agent 3. This adds the V3 extension to the Chrome browser.

#### i Note

To run an automation in unattended mode, make sure you perform the following steps to run the browser extension in the background:

- 1. Open Chrome and navigate to "chrome://settings".
- 2. Select "System".
- 3. Enable "Continue running background apps when Google Chrome is closed".

### i Note

Our mutation observer is now improved to detect webpage unloads in the Chrome browser, eliminating the need for UNLOAD event listeners.

The MutationObserver is an interface that provides the ability to watch for changes being made to the DOM tree.

## **Microsoft Edge**

Installing the Desktop Agent automatically includes the installation of the web browser extension for Microsoft Edge. You then need to enable that extension:

- 1. Ensure you have the chromium-based Microsoft Edge version (version 86+).
- 2. Go to *Extensions* and enable the third-party store. Developer mode is not required. For more information see Microsoft Edge (Chromium) Developer Tools overview *r*.
- 3. Click Chrome Web Store.

# Installed extensions

You haven't installed any extensions

Get extensions for Microsoft Edge

Can't find what you're looking for? You can also get extensions from the Chrome Web Store.

- 4. Search for SAP Intelligent RPA or click SAP Intelligent RPA Extension ₱.
- 5. Install the extension by selecting *Add to Chrome*.
- 6. Open Microsoft Edge. The following pop-up window appears:

Ô	Add "SAP Intelligent RPA Extension" to Microsoft Edge?
	The extension can:
	<ul> <li>Access the page debugger back end</li> </ul>
	<ul> <li>Read and change all your data on the websites you visit</li> </ul>
	<ul> <li>Read and modify data you copy and paste</li> </ul>
	<ul> <li>Communicate with cooperating native applications</li> </ul>

Cancel

R

Add Extension

#### 7. Click Add Extension.

You have now installed the SAP Intelligent RPA extension to Microsoft Edge.

#### $\mathbf{i}$ Note

To run an automation in unattended mode, make sure you perform the following steps to run the browser extension in the background:

- 1. Open Edge and navigate to "edge://settings".
- 2. Select "System and performance".
- 3. Enable "Continue running background extensions and apps when Microsoft Edge".

#### i Note

Our mutation observer is now improved to detect webpage unloads in the Edge browser, eliminating the need for UNLOAD event listeners.

## **Internet Explorer**

Installing the Desktop Agent automatically includes the installation of the web browser extension for Internet Explorer. You then need to enable that extension.

#### i Note

Only Agent 2 supports Internet Explorer (IE), and moreover, you must check the System Requirements page for the status of IE support because Microsoft no longer supports IE.

- 1. Open Internet Explorer.
- 2. Select Tools Manage add-ons Enable the add-on CxWebBho3 Class

You must then configure the Internet Explorer settings.

- 1. Open Internet Explorer.
- 2. Select Tools Internet Options Advanced
  - 1. In the *Browsing* section, ensure that the following setting option is enabled:
    - Enable third-party browser extensions\*
  - 2. In the Security section, ensure that the following setting options are enabled:
    - Allow active content from CDs to run on My Computer\*
    - Allow active content to run in files on My Computers\*
    - Use TLS 1.2
- 3. Click Apply.

You must then enable Active Scripting in the Security Settings - Local Intranet Zone.

- 1. Select Tools Internet Options Security
- 2. Click Internet Custom level...
- 3. Ensure that the Active scripting under Settings Scripting is enabled.

- 4. Click OK to apply the changes and exit the Security Settings Local Intranet Zone.
- 5. Click Apply and OK to exit the Internet Options
- 6. Close the Internet Explorer.

## → Tip

Do not forget to close the Internet Explorer after enabling the extension. Otherwise, the content in the Credentials store pop-up will be disabled.

# 3.4.3.1 Web Browser Extension Updates

If you've been redirected to this page from the SAP Intelligent RPA application, it means that your browser extension has been updated to a new version. You must:

- refresh your tabs to continue working in the Cloud Studio.
- refresh the target application that's being automated.

When a new version of SAP Intelligent RPA is released, an update of the browser extension to the latest version is automatically done in the Chrome or Edge Store.

Every time your browser extension has been updated, you must refresh your tabs.

If you don't refresh the Cloud Studio tab, you'll have a timeout error with the following message:



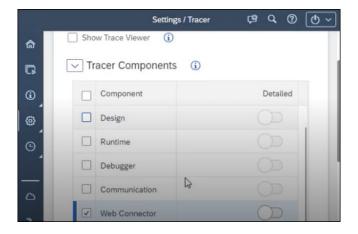
If you don't refresh the target application that's being automated, it won't appear in the list of screens to capture.

# 3.4.3.2 Web Browser Extension Traces

You can export the logs generated from the browser extensions to the Cloud Factory by clicking the upload ( $\uparrow$ ) button.

			History / Jobs	çe q	1	<u>o</u> ~
⋒	Jobs (	9)	All	😵 3 🚫 0	<b>Ø</b> 4	32
G	Status	Job Name	Time stamp	Project Name		
G	0	test Automation	Jun 28, 2:10 PM	traceCS	<u>↑</u>	>
୍ତ	0		Jun 28, 1:44 PM	traceCS	Ð	>
0	0		Jun 28, 1:33 PM	traceCS	<u>↑</u>	>
-	0	test Automation	Jun 28, 1:13 PM	traceCS	<u>↑</u>	>
-0	0	test Automation	Jun 28, 10:22 AM	traceCS	<u>↑</u>	>
-	0	test Automation	Jun 28, 10:21 AM	traceCS	<u>↑</u>	>

For browser extension tracing, you must select the *WEB Connector* component from the list of components in the *Tracer*.



# **Related Information**

Manage Traces Manage Traces Trace Collector Manage Traces

# 3.4.4 Quick Installation Check-Up

This check-up is a quick procedure for validating that the installation is complete.

1. Start Desktop Studio

TheDesktop Studio application can be launched by clicking Start, All Programs SAP Intelligent RPA

Desktop Studio .

2. Configure diff and merge tool

- Open the Desktop Studio Settings dialog box via File Settings
- Open the Workflow Settings panel by clicking the Workflow tab.
- In the *Merge* section, configure your diff and merge tool.

Indicate properly the appropriate command line and full pathname (including the executable name) according to your diff and merge tool.

If you use the KDiff3 tool, select KDiff from the *Merge command line* field's dropdown list. This will immediately setup the correct command line for standard use of the KDiff3 tool.

- 3. Create a new project
  - Create a new project using File New Project .
  - Type the project name (for example, myFirstProject), type a title and client name.
  - Click OK.
- 4. Build the project
  - Build the project using Debug Build .
  - Check the output panel. It should include: "Build done : 0 error(s), 0 warning(s)".

#### I Output

- ---- Workflow generation done : 0 error(s), 0 warning(s)
- ---- Javascript files compilation : done (Advanced mode)
- ---- Syntax checking for XML project files : done
- ---- Build done : 0 error(s), 0 warning(s) ---- Project file synchronisation : done
- ---- XML Project file generation : done
- ---- Key.xml file generation : done
- ---- UiDesigner Build Popup : done

If that is not the case, check the Property Files on your machine to see if Node.js and SAP JVM have been properly installed.

5. Launch Desktop Agent in debug mode

Launch Desktop Agent in debug mode via  $\triangleright$  *Debug*  $\triangleright$  *Debug* (*F5*) . The Desktop Studio debugger should appear: If that is not the case, check that Desktop Agent has been properly installed.

6. Stop and close the Desktop Studio debugger.

# 3.5 Install and Update the Desktop Agent 3

Before you start to install and use the desktop agent 3, check the following requirements:

- Make sure Microsoft.NET framework 4.7.2 is installed on your machine.
- To run projects with BAPI activities, your IT administrator must install a Windows component on your PC. If you have administrator access, please install Microsoft Visual C++ 2010 Redistributable Package x86 ₥ on your machine. If you don't have this access, please ask your administrator to install the component.
- Update the Core SDK dependency in your project to version 1.26 or higher. For more information see, Update a Dependency.

+ = >

• If you want to install the agent service to keep the agent running when using unattended mode, you need administrator rights. For more information on the agent service, see How the Agent Service Works [page 79].

Supported Browsers

Category	Web Browser	Version	Cloud Fac- tory	Cloud Studio	Captured Web Applica- tions	Browser Ex- tension	Store
Chromium- based brows-	Google Chrome	94 and greater	Supported	Supported	Supported	Supported	Supported
ers	Microsoft Edge	94 and greater	Supported	Supported	Supported	Supported	Supported

# 3.5.1 Enable Agent Download and Automatic Updates

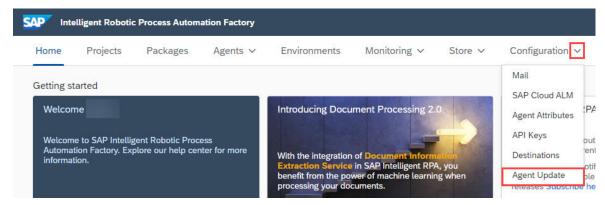
## Context

In order to download and install the desktop agent 3, you must first create a technical user in the **Repository-Based Shipment Channel** portal (or **RBSC portal**) and copy its secret ID to your tenant.

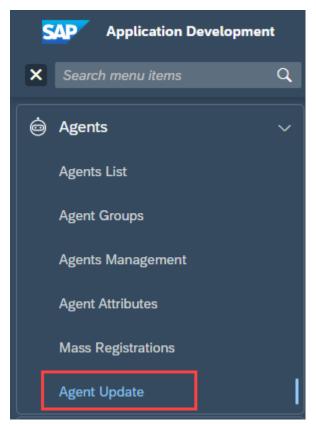
This secret ID is also required to update your agent 3 automatically when a new version is released. For more information, see Enable Automatic Updates [page 74].

## Procedure

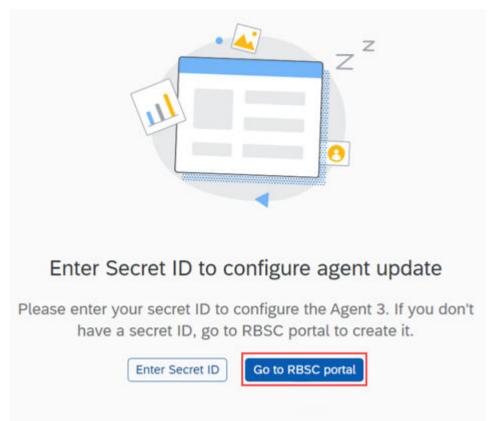
1. If you use an RPA tenant: In the Cloud Factory, choose the dropdown arrow next to *Configuration* and choose *Agent Update*.



If you use an SPA tenant: In the tenant, go to Settings, and choose Agent Update.



2. Choose Go to RBSC Portal.



#### 3. Choose Add User.

8
Add User

- 4. Enter a name to create a technical user and choose Add User.
- 5. On Users panel, choose the technical user you've created.
- 6. Go to the Strong Cryptography Authentication section and choose Generate.

Repository-Based Shipment Cha	innel			8
Users Management Products Shipme	ent IBSO Shipment			
Users Max users: 20	Add User	sap-testuser3 Created by:		Delete User X
Users (1)	Search Q	Type Basic Auth Password	Valid to Action	5
Name	Status	Basic Auth Password Password for basic authentication for accessing Docker, Maven and Helm repositories	2022-12-13	Regenerate 🗂
sap-testuser3	>	NPM Base64 Credentials Base64 encoding pair of user name and Basic Auth Password. Te be used in .npmrc file for accessing NPM repositories.	2022-12-13	Regenerate
		GitLab PAT Personal Access Token for accessing Git repositories	2022-12-13	Regenerate
		Strong Cryptography Authentication Generated Secret ID can be used for generation of JWT authentication token	[	Generate JWT

7. Choose  $\Box$  on the Success window that appears to copy the generated secret ID. Choose OK.

⊘ Success	
Secret ID: Make sure you save the Secret ID - you won't be able to access it again. For information about generating JWT authentication token, check the documentation.	T T
	ж

You've added a technical user and generated a secret ID.

- 8. Enter both the technical user and the secret ID in the *Agent Update* page: **If you use an RPA tenant:** In the Cloud Factory, choose the dropdown arrow next to *Configuration* and choose *Agent Update*.**If you use an SPA tenant:** In the tenant, choose *Settings* and choose *Agent Update*.
- 9. Choose Enter Secret ID.

Enter Secret ID to configure agent update
Please enter your secret ID to configure the Agent 3. If you don't have a secret ID, go to RBSC portal to create it.
Enter Secret ID Go to RBSC portal

10. Enter your technical name in the *Name* field and paste the secret ID you copied from the RBSC page in the *Secret ID* field. Choose *Confirm*.

Enter Secret ID		
Name:*		
Secret ID:*		
•••••		۲
	Confirm	Cancel

# Results

You can now install the desktop agent 3 or copy the link to the download page to send it to other users.

# 3.5.1.1 Update Expired RBSC Secret ID

# Context

The RBSC secret ID has a six-month expiration period. Therefore, you must regenerate a new secret ID once it expires.

To regenerate a new secret ID, refer to the following steps:

## Procedure

- 1. In SAP Build, go to Control Tower.
- 2. Choose Agents Agent Update .
- 3. On the Agent Update page, choose Change Settings.

The *Change Settings* pop-up window is displayed. Here, you can see the expiration date of your current secret ID.

4. Choose the Go to RBSC portal link.

Change Settings

Authentication		
Name:*		
Name.	 	
Secret ID:*		
*******		
Expires On:		
2/27/2024, 08:08:52 PM		
Go to RBSC portal 回		
	Confirm	Cancel
	Confirm	Cancel

5. On the RBSC portal, regenerate your new secret ID.

Users Manageme	ent							
<b>Users</b> Max users: 20	_	Add User		Created by:			Delete User	×
Users (1)	Search by name	Q		Туре	Valid to	Actions		
				Basic Auth Password	2024-03-04		Destaurate	6
Name		Status		Password for basic authentication for accessing Docker, Maven and Helm repositories	2024-03-04		Regenerate	E
		>		NPM Base64 Credentials				
			>	Base64 encoding pair of user name and Basic Auth Password. Te be used in .npmrc file for accessing NPM repositories.	2024-03-04		Regenerate	e
				GitLab PAT	2024-03-04		Regenerate	G
		Personal Access Token for accessing Git repositories	2024-03-04		Regenerate	'U		
				Strong Cryptography Authentication				
				Generated Secret ID can be used for generation of JWT authentication token	2024-03-04	Regenerate	Generate	JWT

# Results

Your new secret ID is regenerated.

# 3.5.2 Install the Desktop Agent 3

## Context

You've generated a secret ID and pasted it in your tenant. You can now download and install desktop agent 3.

### Procedure

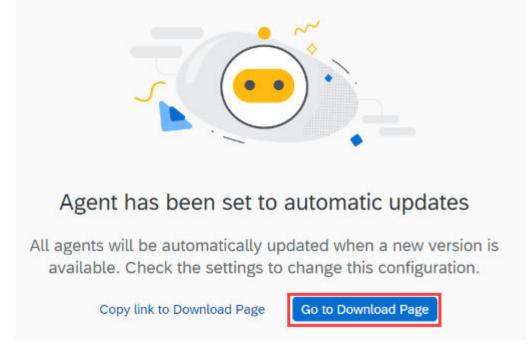
1. If you use an RPA tenant: In the Cloud Factory, choose the dropdown arrow next to *Configuration* and choose *Agent Update*.

Home	Projects	Packages	Agents ∨	Environments	Monitoring 🗸	Store V	Configuration
	5 6 6						Mail
ietting st	tarted						SAP Cloud ALM
Welcor	ne			Introducing Docu	ment Processing 2.	0	
				introducing Docu	intent Frocessing 2.	0	Agent Attributes
Welcom		gent Robotic Proc	ess		inent Processing 2.		Agent Attributes API Keys
	e to SAP Intellig tion Factory. Exp	gent Robotic Proc plore our help cer		With the integration	of Document Inform	2	

If you use an SPA tenant: In the tenant, go to Settings, and choose Agent Update.

<b>SAP</b> Application Developme	nt
Search menu items	Q
lo Agents	~
Agents List	
Agent Groups	
Agents Management	
Agent Attributes	
Mass Registrations	
Agent Update	

2. Choose Go to Download Page.



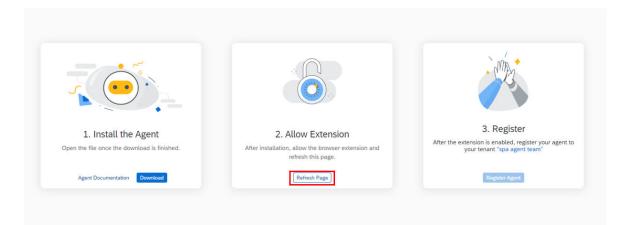
3. Choose Download.

1. Install the Agent Open the file once the download is finished.	2. Allow Extension After installation, allow the browser extension and refresh this page.	3. Register After the extension is enabled, register your agent i your tenant "spa agent team"
Agent Documentation Download	Refresh Page	Register Agent

- 4. Open the file and wait until the installation of the agent 3 is complete.
- 5. Enable the extension in your browser.

	🖻 🖈 🖪 😩 Error 🚦				
	"SAP Intelligent RPA Extension" added				
	Another program on your computer added an extension that may change the way Chrome works.				
	It can:				
L	Access the page debugger backend				
L	Read and change all your data on all websites				
L	Manage your apps, extensions, and themes				
L	Communicate with cooperating native applications				
	Enable extension Remove from Chrome				

6. Choose Refresh Page.



7. Choose Register Agent.

		- M23
1. Install the Agent Open the file once the download is finished.	2. Allow Extension After installation, allow the browser extension and refresh this page.	3. Register After the extension is enabled, register your agent to your tenant "spa agent team"
Agent Documentation Download	Refresh Page	Register Agent

8. Open your agent to finalize the setup and accept the tenant configuration.

### Results

You've added your tenant to your agent and registered it. You can now start working on your projects.

# 3.5.3 Register Desktop Agent 3

After you have installed desktop agent 3, you need to register your agent and connect it to a tenant before you can run automations.

## Prerequisites

You have installed desktop agent 3 as described in Install the Desktop Agent 3 [page 70].

### Procedure

- 1. In SAP Build, choose Control Tower and Agents.
- 2. Choose Register New Agent and Copy and Close.
- 3. Open the agent, choose *Tenants*, and *Add Tenant*.
- 4. Enter a name for your tenant in the *Name* field, paste the copied URL into the *Domain* field, and *Save* your changes.
- 5. Activate the tenant and authenticate in the browser pop up.
- 6. Optional: If the authentication window does not appear, choose *Settings / System*, and uncheck *Use browser for tenant registration*. Then repeat the above step: *Activate* and authorize.

#### Results

Your agent is now connected to the tenant.

## 3.5.4 Update the Desktop Agent 3

New versions of the Desktop Agent 3 are frequently available.

By default, the Agent 3 is configured to be automatically updated. This way, the newly available version is automatically pushed to your agent. For more information, see Enable Automatic Updates [page 74].

You can also choose to manage agent updates for testing purposes for example. For more information, see Manage Updates [page 76].

## 3.5.4.1 Enable Automatic Updates

#### **Prerequisites**

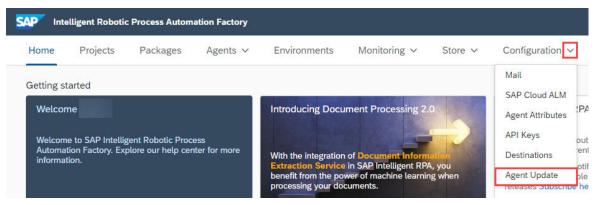
You have generated a secret ID from the RBSC portal as described in Enable Agent Download and Automatic Updates [page 65].

#### Context

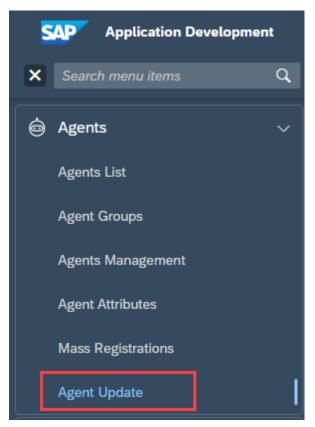
Automatic updates deliver the latest version of the Agent 3 directly to your machine or to all your users' machines.

## Procedure

1. If you are using an RPA tenant: In the Cloud Factory, click the dropdown arrow next to *Configuration* and select *Agent Update*.



If you are using an SPA tenant: In the tenant, go to *Settings*, and select *Agent Update* on the left-hand side panel.



- 2. Click Change Settings.
- 3. In the Change Settings dialog, check Enable automatic updates.

SAP Build	Lobby	Store Monitor	Settings	çe 🛃 🖽
×		~		
🚇 Agents 🗸 🖌	Agent Update	e (i) Automa	Go to Download P	age Change Settings
Agents				
Agent Groups	Items (24)			C
Agent Management	Agent version	on ≡ Del	livery Date Agent	Actions
Agent Attributes	3.13.18		1 30, 09:46 AM 용량 1 19, 11:12 AM 용량 3	<u>+</u>
Mass Registrations	3.12.41		1 27, 02:41 PM	
Agent Update	3.12.32	Jar	n 19, 11:24 AM	
External Ip Safelist				

## Results

The updates are automatically delivered to your agent if it is in unattended mode.

If you agent is in attended mode, when a new update is available, it is automatically downloaded, and you receive a notification prompting you to open your agent. You can then choose to update your agent now or tonight by selecting one of the two options on the pop-up window that appears.

## 3.5.4.2 Manage Updates

### Prerequisites

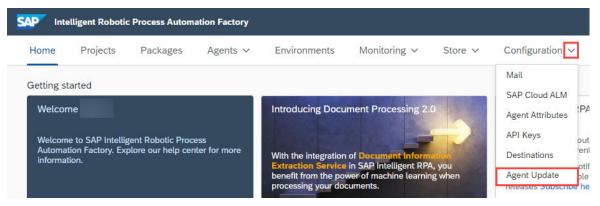
You have generated a secret ID from the RBSC portal as described in Enable Agent Download and Automatic Updates [page 65].

### Context

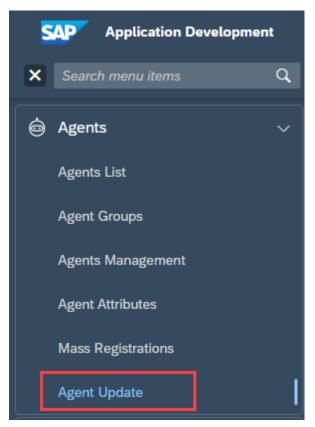
If you decide to manage updates, you can pause these updates to test them, for instance. You can then choose which versions you want your users to receive on their machines.

## Procedure

1. If you are using an RPA tenant: In the Cloud Factory, click the dropdown arrow next to *Configuration* and select *Agent Update*.



If you are using an SPA tenant: In the tenant, go to *Settings*, and select *Agent Update* on the left-hand side panel.



- 2. Click Change Settings in the top right-hand corner.
- 3. In the Change Settings dialog, deselect Enable automatic updates and click Confirm.

Change Settings		
Authentication		
Name:*		
Secret ID:*		
•••••		
Expires On: 11/2/2022, 10:04:59 AM		
Go to RBSC portal 🔄		
Distribution Policy		
Enable automatic updates		
	Confirm	Cancel

## Results

On the *Agent Update* page, you can you can see the list of the last published Agent versions and manage updates.

Home	Projects	Packages	Agents 🗸	Environments	Monitoring $ \!$	Store 🗸	Configuration ~	
Agent	t Update 🧯	)						Go to Download Page Change Settings
Items (7)								Э
	Agent version	Ξ.	Agent Count					Actions
	3.4.33	Beta	88 I					Activate ***
	3.4.3	Active	88 1					<u>+</u>
	3.3.76							***
	3.3.75							***
	3.3.61							***
	3.3.44							***
	3.3.24							

You can perform several actions such as:

- Activate an agent version.
   To do so, click ••• under Actions next to the version of your choice and select Activate.
   You can also click the Activate button next to the beta version to set this version as the active version.
- Set an agent version as a beta, if you want to test this version for example.
   To do so, click ••• under *Actions* next to the version of your choice and select *Activate as Beta*.
   You can then select to which agents this beta version will be pushed and click *Activate Beta*.

Activate version 3.5.17 as beta						
Select	Select the agents for which the beta version will be activated.					
Items	Items (7)					
	Machine	Login	Current version			
$\checkmark$			3.4.15			
			3.5.30			
$\checkmark$			3.4.45			
$\checkmark$			3.5.30			
			3.5.22			
			3.3.61			
$\Box$			3.5.18			
			Activate Beta Ca	ancel		

You can edit the agents for which the beta version is activated by clicking ••• under *Actions* and selecting *Edit Beta Agents*.

• Download an agent version on your machine.

To do so, click ••• under *Actions* next to the version of your choice and select *Download*. You can also click  $\downarrow$  next to the active version to download it.

By clicking

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next to an agent version, you can see which agents are registered in this version.

## 3.5.5 How the Agent Service Works

The service ensures that the agent is always running and is required when the agent is running in unattended mode.

When the agent is installed on a machine, a service named SAPDesktopAgentService.exe can also be installed. This service runs under the local system identity. It is independent of the agent that runs under the session user identity.

To check if the agent service is installed on your machine, choose *About* and *Agent Details* in the agent. If the agent service is not installed on your machine, the service state is *Not detected*, and the service version is *Unknown*.

## What Is the Purpose of the Agent Service?

The service ensures that the agent is always running and monitors it for issues. Therefore, if you are using an RDP environment, we recommend that you install the service.

The service is also required when the agent is running in unattended mode. The agent sometimes needs to unlock and lock the session to perform activities and for security. Enable the agent to automatically unlock a session by entering the credentials in the *Connection* tile. For more information, see Configure the Connection Settings .

## How to Install and Update the Agent Service

As an admin, you can install the service on your users' machines at the same time as you install the Desktop Agent 3. To do so, you must run the setup as administrator and check the corresponding checkbox on the installation window.

#### ${f i}$ Note

If you don't run the setup as administrator, the checkbox is not visible.

You can also install the service using the following command line (if your script has been started as an administrator): xxx.exe /s --service

When a new version of agent 3 is available, a new version of the service is also available.

#### i Note

You must update the service manually. If automatic updates are enabled, only the agent is automatically updated.

# 4 Updating your SAP Intelligent RPA 1.0 Landscape (Desktop Agent and Studio)

## Context

Your Desktop Agents are currently deployed with an old version and you would like to update to a newest version. Existing packages hosted in the Factory have been uploaded with the old version.

The Factory will apply the following rules:

The packages generated from the Desktop Studio embed the SDK version used for the compilation. That's why the packages generated using an old version of the Desktop Studio are usually not compatible with newer versions of the Desktop Agent. Make sure that the version of the Desktop Studio in which the package has been compiled is the **same version (or higher)** than the Desktop Agent version on which the package will be executed.

#### → Tip

To find out in which version of the Desktop Studio a package has been created, proceed as follows:

- 1. On the *Packages* tab, click the three points icon ••• on the right of the package.
- 2. Select *Information* to open the *Package Information* window. The versions of the Desktop Studio and the SDK are displayed in the *Project Information* section.

Right-click the Desktop Agent icon in the system tray and select *About...* to find out the version of the Desktop Agent.

Please check the SAP Intelligent RPA 1.0 Compatibility Matrix [page 82] for specific rules on combining Agents and Packages.

Before installing and deploying the latest version of Desktop Agents on a large scale, please do the following:

### Procedure

- 1. Install the latest version of the on-premise components (Agent + Studio) on a developer workstation. See On-premise Components Setup [page 37] for more information.
- 2. Open the project, compile and perform local testing. Once the tests are successful, you can export the new package version.
- 3. Import the new package to the Factory
- 4. Add it to a test environment
- 5. Perform the tests. Once the tests are successful, you can now deploy to production.

6. Desktop Agents will retrieve the latest version of the package.

## Results

Existing Desktop Agents with old versions can now be updated to the latest version.

## 4.1 SAP Intelligent RPA 1.0 Compatibility Matrix

Cloud Factory is updated automatically on a regular basis. Existing packages exported by Desktop Studio and imported in Cloud Factory will continue to be distributed to Desktop Agents without further human intervention.

However, once a new version of on-premise components is available for download, we recommended that you follow the pattern explained in the update [page 81] page to avoid potential inconsistencies in your landscape deployment. Latest version of on-premise components includes fixes and improvements.

The table below lists the compatibility rules between a Desktop Agent and the Desktop Studio Package imported in Cloud Factory.

Agent Version	Desktop Studio Package Version Imported	Desktop Studio Package Version Imported in Cloud Factory		
	1.0.5 to 2.0.34	2.0.35		
1.0.5 / 1912 to 2.0.34 / 2302	Supported	Supported		
2.0.35/2303	Supported	Supported		

• **Supported**: Agent and package share the same version and are designed to work seamlessly. Usually, when the package version is greater than the Agent version, the Agent is also able to work with this package. To avoid potential inconsistencies in your landscape deployment it is recommended to follow the pattern explained in Updating your SAP Intelligent RPA 1.0 Landscape (Desktop Agent and Studio) [page 81].

• Other cases: The Agent may not work with a different package version and the Factory will not distribute.

# 5 SAP Intelligent RPA 2.0 Compatibility Matrix

SAP Intelligent RPA Cloud Factory, Cloud Studio and Cloud SDK packages are updated automatically on a regular basis.

Once a new version of the Desktop Agent is available for download, we also recommend that you upgrade your landscape with the latest version available to maintain compatibility between your projects and agents.

Indeed at runtime your project interacts with an agent through SDK activities that come from cloud packages. But the SDK package version you use may contain activities that have been developed after the agent you are using and may not be supported by the agent. For more information, see Manage Compatibility of Projects with Agents.

The table below lists the compatibility rules between a Desktop Agent and the SDK versions used in the Cloud Studio.

Desktop Agent Version	Cloud SDK Version		
	1.5 / 2011 to 1.42 / 2309	1.43 / 2310	
2.0.43 (Agent 2) and 3.21.45 (Agent 3) / 2310	Supported	Supported	
2.0.42 (Agent 2) and 3.20.59 (Agent 3) / 2309	Supported	Supported	
2.0.6 / 2011 to 2.0.29 / 2209	Supported	Supported	
2.0.0 / 2005 to 2.0.5 / 2010	-	-	
1.0.5 / 1903 to 1.0.9 / 2004	-	-	

## **Related Information**

Version History

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