Sage Enterprise Intelligence 5 Administration Guide

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Contents

Introduction

Growing businesses require the freshest option in Business Intelligence software products, to give you either the whole data tree at a glance, or a selected slice. Our personalized software solutions allow organization-wide information access and manipulation. **Sage Enterprise Intelligence (SEI)** provides increased productivity and efficiency at all levels of your enterprise, optimizing knowledge and participation from the ground up. For informed decision-making practices that move you into the market and keep you there, **SEI** is the preferred choice.

Features and Benefits

SEI can be used in a variety of decision-making and strategic planning business processes. Here are some typical examples:

- Budget management and control
- Sales Analysis
- Inventory Control and Analysis
- Quality Control (Purchasing, Production, Customer Service)
- Key Performance Indicators Analysis
- Productivity Analysis

SEI's key features and functions include:

- Multi Data source access (ERP, CRM, CSM, etc.)
- Business Process management
- Workflow management
- Data entry & simulation
- Spreadsheets, Reports, Graphs
- Drill-down, Drill-through
- Security
- Centralized deployment

What's new in this version

To see the most recent list of additions to the SEI product please have a look at the SEI website.

- **Access data across different platforms as if it were all stored in one place:** Today's enterprise data is not always centralized in a single platform. Sales data might be stored in one platform, while shipping data in another. With SEI, decentralized systems become fully centralized to the end user. Imagine navigating to your sales data, stored in SQL Server on a Windows server, and opening a graph displaying your sales for the current year. Now imagine being able to drill all the way down to the sales invoice level and link directly to your shipping system data, which is stored in DB2 on an i5 server, to find a tracking number for an invoice. SEI is a single integrated solution containing graphing capabilities, reporting tools, worksheets, etc...

- **Security Management:** The SEI security is now completely self-contained. In previous versions, we had to use the existing users/groups on the database server on which SEI was configured. From now on, the groups and users are managed within SEI and are completely independent from your database server. It is important to note that SEI does not replace the existing server security, but rather adds an extra layer of security.

- **Central Point Administration Tool:** This tool allows administrators to configure the Central Point using a graphical interface. It is therefore no longer necessary to manually change the configuration in the XML files critical to the system.

- **Prompts Sharing:** From now on, the promps are defined as processes and can be shared in all your other SEI processes. The definition of a prompt is now therefore centralized and unique. Starting from the process designer, for each required column, one can simply select from a list the corresponding prompt.

- **Usage and modification statistics:** A new functionality allows from now on for a user to consult the usage and modification statistics of views and processes. This way it will be possible going forward to see whether a particular process or view is being used or not, and by whom. It is also possible to see who made the last changes to a view or process, and when the change was done.

Symbols used in this document

This document will be frequently using the following Symbols:

	Menu Option or toolbar button to access the current feature
	Useful tip
	Miscellaneous notes

What's in this Guide?

To make the best use of this guide:

Use...	**To**...
Getting Started	- Obtain the information you need for SEI Installation and Configuration. - Understand SEI's basic navigation framework (command center, toolbar, navigation window...)
SEI Administration	Learn about SEI Administration tasks (Parameters, Authorizations, Process definition...

Getting Started

This section covers:

- Information about the Hardware and Software requirements for SEI
- Steps to Install and Setup SEI
- Central Point Configuration
- How to launch SEI

System Requirements

The SEI 5 Software package consists of a client application installed on the PC, and optionally, a server portion may be installed and configured depending on the deployment scenario.

Client PC Hardware Requirements

- Intel PC 1Ghz
- Windows XP SP3, Vista, Windows 7, Windows 8
- 1 GB of RAM
- 150 MB of disk space
- TCP/IP connection to the server, depending of the deployment scenario selected.

Client PC Software Prerequisites

- Microsoft .NET Framework 3.5
- Server databases that SEI accesses may require some additional installation software. See your manufacture's documentation.
- Microsoft Excel 2000 or later (for exported views or SEI Add-in for Excel)
- Microsoft Internet Explorer 6 or later (for HTML export)

SEI Client installation

Please note that if you are installing SEI for the first time, client installation is a straightforward operation. However, if you are upgrading to a new version or if you are deploying SEI on a Windows Terminal Server, assistance from a Sage specialist might be necessary.

In addition, if SEI is to be upgraded on your server, all clients must also be upgraded.

Installation/Upgrade

To Install SEI on a client:

- Run "SetupSEI5.exe" and follow the instructions.

Central Point Configuration

All SEI clients share a common location to access resources such as definitions, views, business processes. This common location is the Central Point, and it must be configured once by the administrator to allow all other users to connect and use SEI.

By default, after each client installation, there is also an optional DEMO preconfigured Central Point that could be installed on the local PC.

If you are upgrading SEI from a previous version, there is a conversion tool that must be run in order to copy and convert the previous Central Point into a new one. This converter tool is available only if you already own a previous version of SEI.

Installation/Upgrade

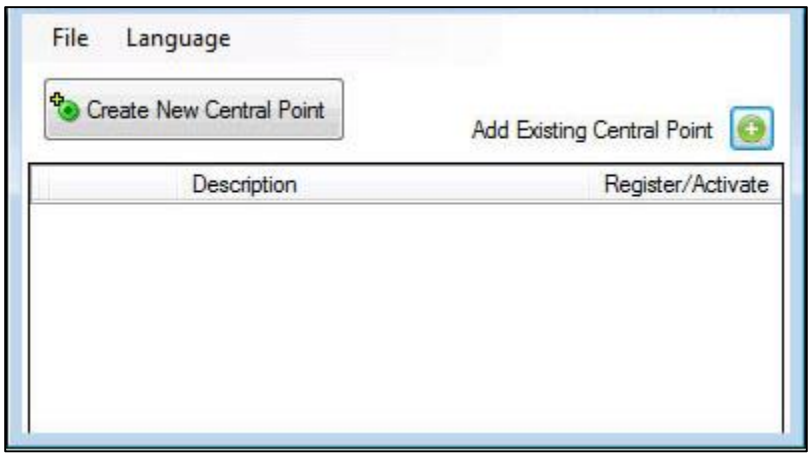
To Install SEI.Administration.exe on a client:

- Run "SetupSEI5Admin.exe" and follow the instructions.

Configuring a Central Point

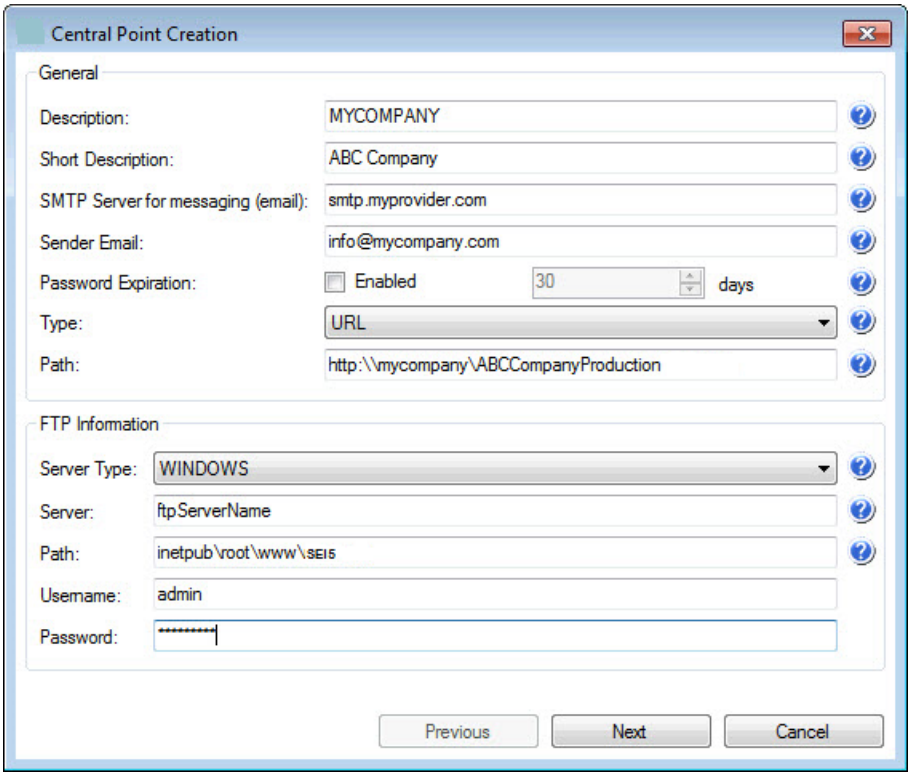
Configuring the Central Point is done through simple easy steps by running the program SEI.Administration.exe
The administrator of all SEI users must configure a Central Point to let all users share and access resources. The SEI Central Point might be any physical location from a local hard disk, a network drive or an ftp server. Depending on the chosen location, the SEI Administration program will guide you through a series of question and let you decide where you want to create it.

This window allows creating, maintaining and removing Central Points:



Central Point Installation (step 1)

The first step of the installation requires to enter all the general information of the Central Point. In the following windows you will define the central point information:



General Central Point Information

- **Description:** The full description of the Central Point.
- **Short Description:** The short descriptive name of the Central Point.
- **SMTP Server for messaging (email):** The name or network address of an SMTP server that will deliver email messages on behalf of the system.
- **Sender Email:** The sender email address used within automatically generated emails sent out by the Central Point (i.e. when a new user is created, SEI sends an automatic email to the user with the username and password).
- **Password expiration:** Enables password expiration for all user accounts created for the Central Point and sets the number of days a password is valid for, each time it is set.
- **Location Type:** The type of Central Point path to be entered below. Each has different implications. (UNC requires all users to have access to a shared path on a server or network drive; URL allows for more remote paths, but requires FTP access to the Central Point).
- **Location Path:** The UNC or URL path of the Central Point. (UNC is also known as a file system path; URL is also known as a web address).

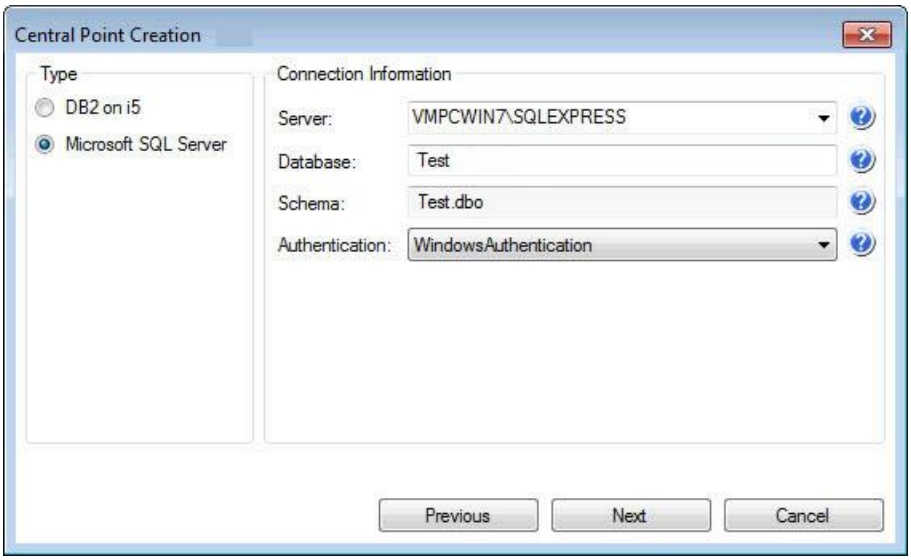
FTP Information

- **Server Type:** The type of FTP server of the Central Point.
- **FTP Server:** The name or network address of the FTP server of the Central Point.
- **FTP Path:** The remote path of the Central Point directory.
- **Username:** The FTP Username used to connect to the FTP location.
- **Password:** The password of the FTP user.

Central Point Installation (step 2)

The second step of the installation requires to enter all the connection information for the database of the Central Point. The database must not already exist, it will be created by the tool.

In the following windows you will define the connection to the Central Point Database:



Connection Information

- **Server Name**: The name or network address of the server containing the database (for SQL Server can also include the instance name if required).
- **Database Type**: The type of database used by SEI to store some all definitions.
- **Database**: The name of the database on that server.
- **Schema**: The schema name within the database where the objects (tables/views) are located. (i5 systems sometimes refer to a schema as a library; SQL Server systems require a special format of '[Database_Name].[Schema_Name]'.
- **Authentication**: Select the Authentication Strategy to use when connecting to the database:
  1) Windows Authentication: this option is only available with SQL Server connections; the current Windows user information on the client computer will be used to open a connection to the database;
  2) Server Authentication: the user will be prompted by SEI to enter a username and password to be used to open a connection to the database; this information is then cached for the remainder of the user session;
  3) Use Specific: this option allows all users to access the database using a specific username and password.

Central Point Installation (steps 3 and 4)

The third step and fourth steps of the installation require to enter the default environment and the admin user information.

In the following windows you will define the default Environment for your Central Point:

Environment

- **Name:** The name of the default environment for the central point (i.e. PROD or TEST). Please note: additional environments can be created later from within SEI.
- **Description:** The description of the default environment for the central point (i.e. Production Environment).

In the following windows you will define the admin user for this Central Point:

Default Admin Account

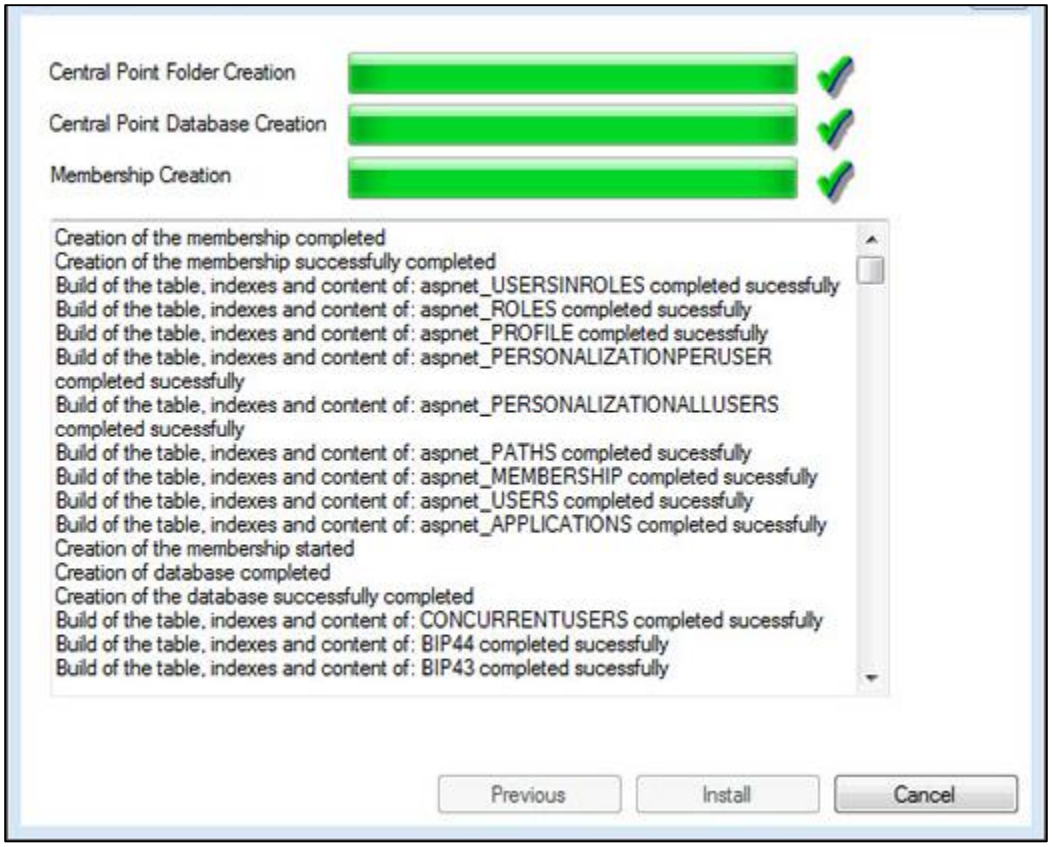
- **Username:** The username of the default admin account automatically created for the Central Point.
- **Email Address:** The email address of the person who will receive the auto generated email containing the username and password of the default admin account. This account will be used to administer the Central Point.
- **Confirm Address:** Re-enter the email address to confirm that there are no typing errors.

Central Point Installation (step 5)

The fifth step requires to enter the credential to be used for the creation of the Central Point Database.

The first time you install SEI, specific database objects need to be created on that selected database server. You will be invited to select the appropriate authentication method on that central point database to let SEI perform and complete the installation.

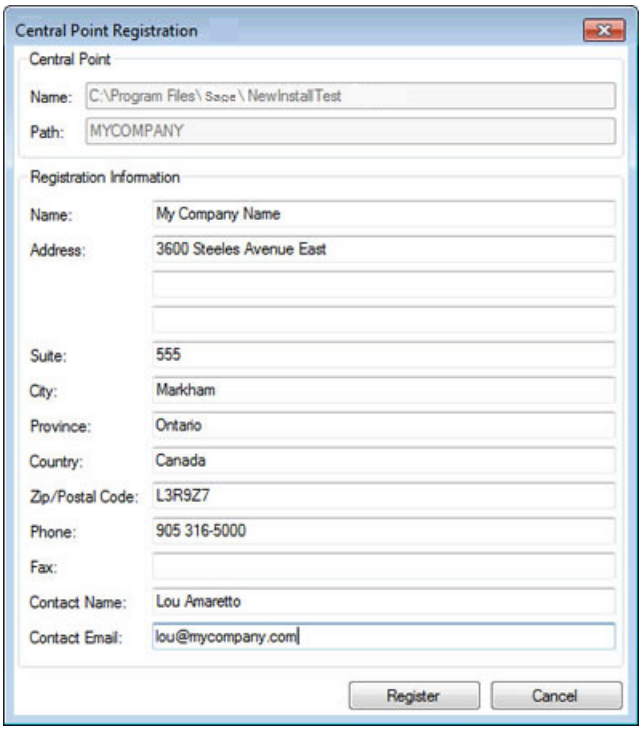
You will see a window displaying the progression of the installation.



Central Point Installation (Final Step)

The final step requires to register in order to be able to use SEI. The registration will allow the user to use SEI in Demo mode. In order to use the full version of SEI, you will need to activate the product.

Once the installation is completed, you will have to fill up a registration form in order to receive a registration code by email and then use that code to activate the product.



Start Using SEI 5

This section covers:

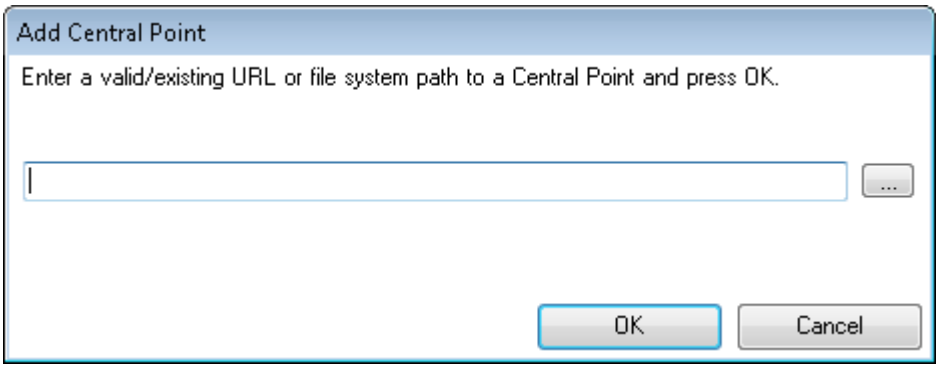
- Login window
- SEI main window (main menu, toolbar, command center and navigation area)
- Creation of shortcuts

Login window

When SEI is launched, the login window is displayed.

By default, it lets you connect to the last selected Central Point. On the first launch, there won't be any selected Central Point since it has never been selected. In that case, you must add a Central Point

location from the login window by clicking on the **+** button () and entering the location of the Central Point that was previously installed and configured by the administrator.



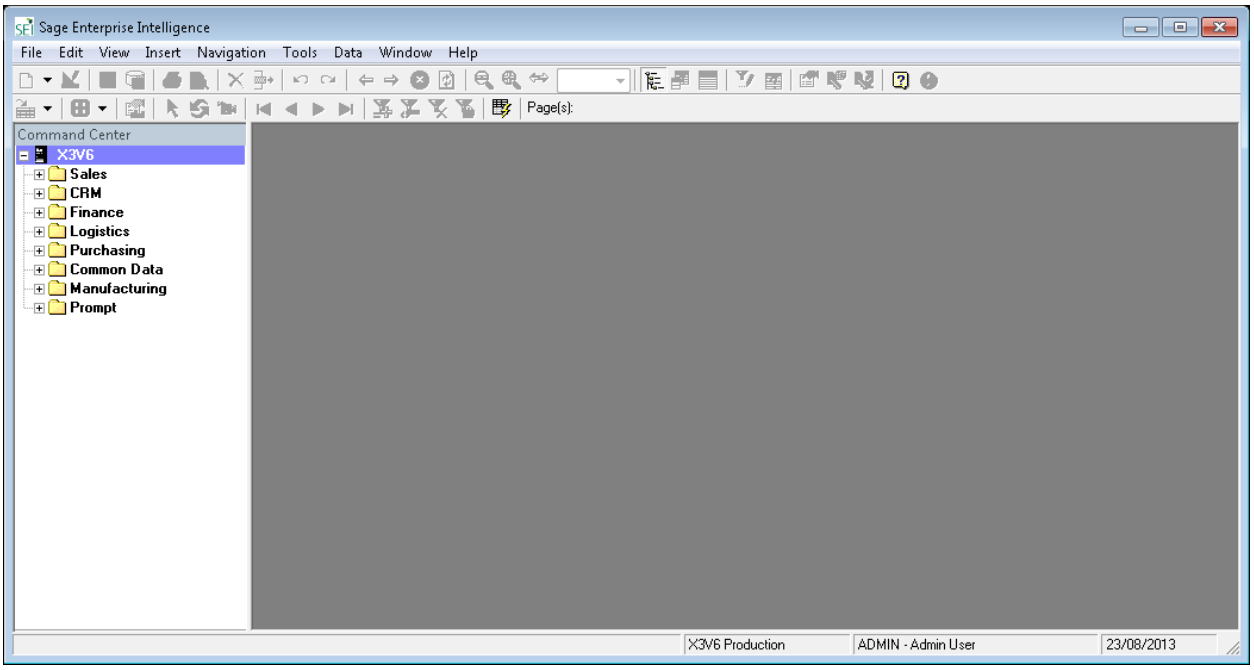
The SEI Central Point is any physical location from a local hard disk, a network drive or an http server. Just add that location and SEI will automatically retrieve its configuration and let you connect to it.

- The top portion of the login window shows the actual SEI Central Point where you are going to log in. You may select another Central Point from the list if you had previously added some other central points.
- **User:** this should be a valid user Profile defined for SEI access.
- **Password:** The user's password. If the password is not correct, access to SEI is denied.
- Check **Keep me signed in** if you want this connection to remain active for a period of two weeks.
- **Login:** Press this Button after entering a valid User name and Password. You will then get the SEI main window.
- **Cancel:** Press this button to cancel your SEI session.
- Click **Forget your password** if you want SEI to email your password.

 To launch a SEI session with this environment, locate "Sage" in Windows "Start" menuthen click on "SEI5" (This is a shortcut that can be copied to your Windows desktop). The login window is then displayed and is already defaulted to required information. Press the "Login" button to start SEI.

SEI main window

After a successful login, the SEI main window is displayed. It has been designed to facilitate access to all SEI tools and features. Here is an example of the SEI main window.



The main menu supplies all SEI functions and operations. However, options of this menu may be automatically disabled if they don't apply to the current context or if the user does not have enough authority to the corresponding function.

The toolbar is a very useful tool that helps to easily run the most common actions. Please refer to the following section for further information.

The command center is a multi-purpose control window that allows accessing and manipulating your corporate data. The following section provides more information about the command center.

The navigation area represents the main working framework in which you can open and navigate in different kinds of views. It is also the area used for designing processes, reports and graphs. SEI supports multiple document interfaces. This means that multiple views can be opened simultaneously. Please refer to the following section to learn how to open multiple views in the navigation area.

Status bar displays the current user, the environment and the current date.

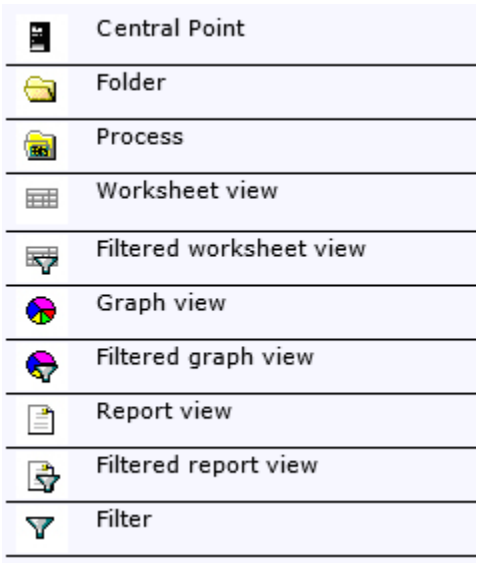
The Command Center

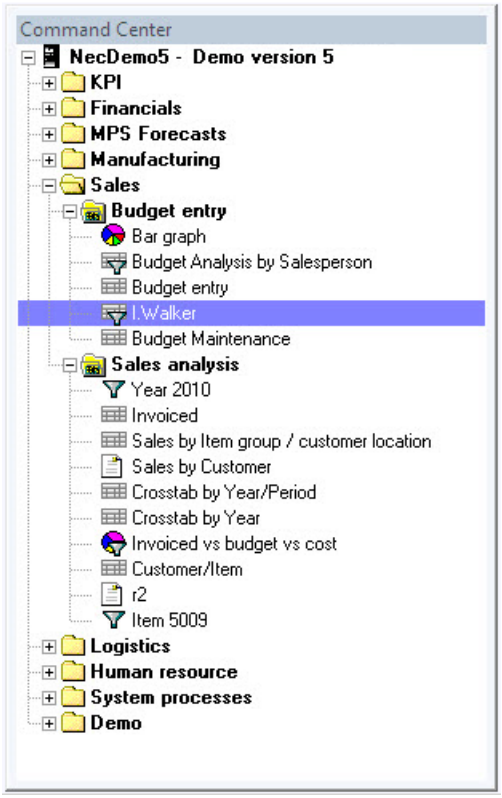
The Command Center is a control window that is very useful since it allows you to:

- Open all available views, filters, reports and graphs.
- Select and execute process-related and view-related operations (e.g. process designer, process Authorizations, creation, maintenance or deletion of reports, graphs or worksheets? etc.)
- Organize processes and views in different folders.

Here is an example of the Command Center:

Legend:





If the user clicks on a view from the command center, the navigation area displays the corresponding data in the appropriate layout (worksheet, graph or report). When the user clicks on another view, the current one is closed before the new one is displayed.

To open a view and keep the previous one open, right-click on the desired view then select "open in a new window" from the context menu.

The content of the command center can vary from a user to another. In fact, it represents only processes and views that a user is authorized to.

It's possible, for authorized users, to create multiple folders within a single process. This allows them to better organize their views.

A Context menu is provided with the command center. It is another useful way to access most frequent actions. It can be accessed, by performing a right-click on any element of the Commend Center. Here is a summary of options available in the Command Center's context menu:

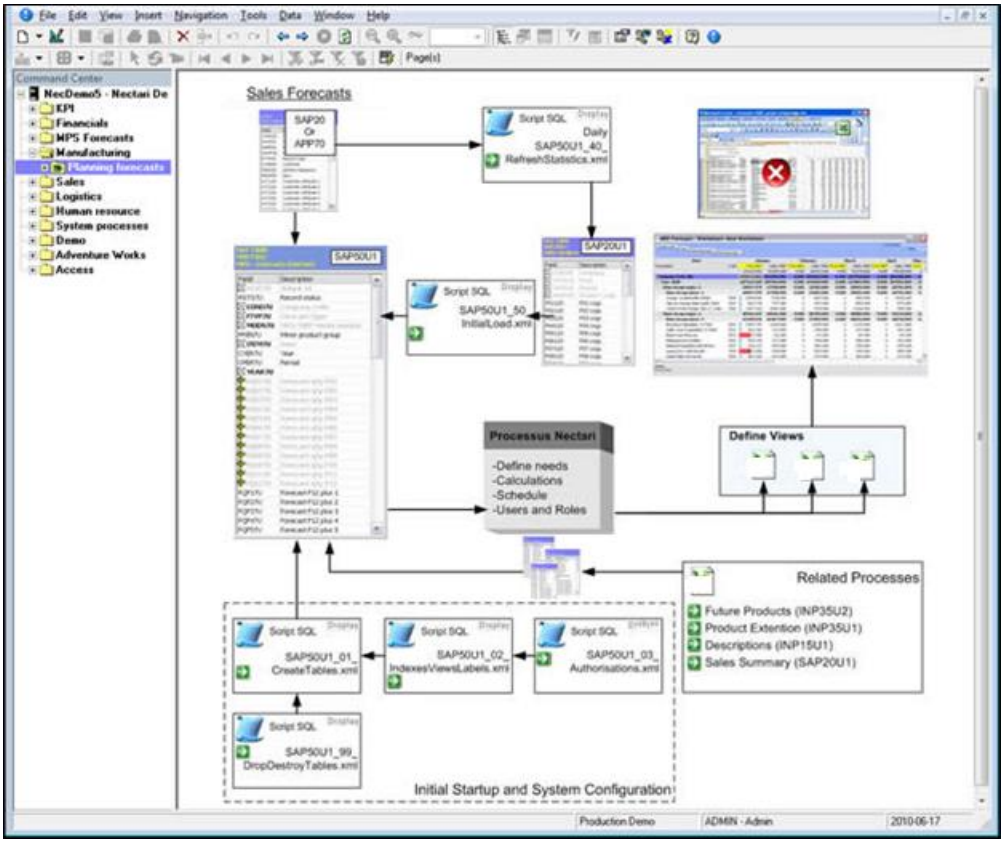
Option	Description	Applicable to
Explore	Load views of a selected process	Process
Open	Open a selected view	View
Open in a new window	Open a selected view in a new window (multiple views can be opened in different windows)	View
Design	Design a selected Process or Report	Process, Report View
New Process	Create and design a new process	Folder
New Folder	Create a new folder	Folder, Process
New Worksheet	Create a new worksheet	Process
New Graph	Create a new Graph	Process
New Report	Create a new Report	Process
Delete	Delete a selected element	Folder, Process, View
Copy	Copy the process definition to a new process	Process
Rename	Rename a selected element	Folder, Process, View
Create a shortcut in my favorites	Create a shortcut in the user's "My favorites"	View
Create a shortcut on Desktop	Create a shortcut in the user's Windows desktop	View
Properties	Display / Change properties	View
Information	Display User Defined Information about the selected View/Process	Process and View
Process Authorizations	Maintain Process Authorizations	Process
Process Restrictions	Maintain Process Restrictions	Process
Process Workflow	Maintain Process Workflow	Process
Refresh History	Run Process Initialization (if applicable)	Process
Recalculate	Run Process recalculation (if applicable)	Process
Edit Navigation links	Edit the Process navigation links	Process
Add process to links	Add a selected process to the links window	Process
Add view to links	Add a selected view to the links window	View

Statistics	Display usage and modification statistics	Process and View

Some options in this context menu may or may not be enabled depending on the user authorities and on nature of the selected (Folder, Process, View).

User Defined Information

In SEI it is possible, for the authorised user, to document each process and view found in the command center by selecting the Information menu option from their respective context sensitive menu:

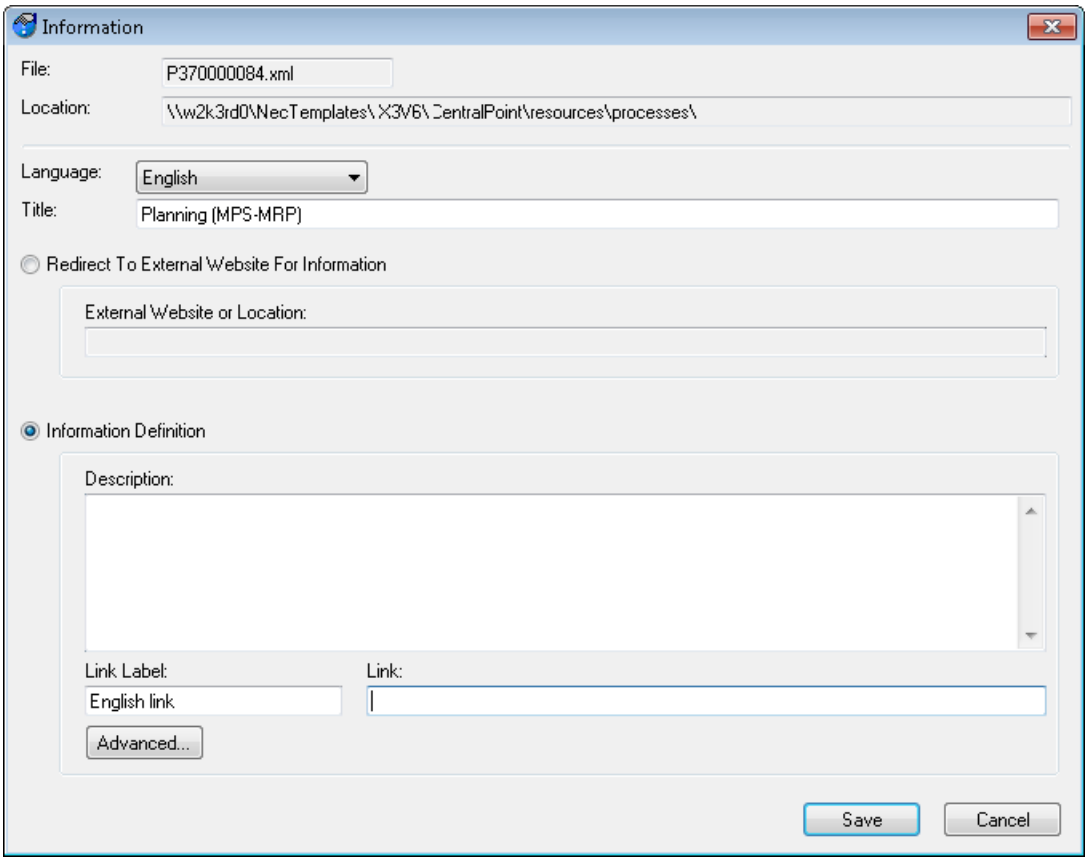


The information page can be displayed by selecting the menu option *"Information"* on any item from the command center. If the user clicks on a view or a process from the command center, the navigation area displays the corresponding information page. When the user clicks on another item, the current one is closed before the new one is displayed.

To open a view and keep the information page visible, open both windows and select menu option Window/Horizontal to display both pages at the same time.

The information pages are saved on the SEI Central Point location, usually under folder *http://centralLocation/*resources/processes/ for process documentation and *http://centralLocation/*resources/views/ for views. Only authorised users can modify and save documentation to these locations.

To define and maintain information pages, open the information page for a selected process or view, then select the property page by clicking the icon on the toolbar.



You have 3 options on how to define the page documentation:

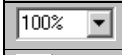
- Specify an external link pointing to the documentation. (Http, URL or even a file document like Word)
- Specify basic documentation using this property window
- Use the *"Advanced"* button and maintain the xml documentation file directly.

Here is how to use the information property window:

- **File** is the internal file name of the item being documented. It is an xml file using the internal number of the selected item.
- **Location** is the address of the central point where the documentation is placed.
- The **Language** selection allows users to create language dependent documentation. Select the appropriate language before defining the documentation.
- **Title** is the main description of the documented item.
- Check **Redirect To External Website For Information** and enter an **External Web site or Location** if you wish to select another method of documenting the item.
- Enter a **Description** of the item.
- An optional **Link** may be specified.
- Click the **Advanced** button if you want to produce more complete documentation that includes more than one paragraph, image or external web page or contents displayed in frames.

The Toolbar

The toolbar gives a quick access to most frequent features. Here is a brief definition of the functions available in the toolbar:

	Create a new Process / Worksheet / Graph / Report
	Design an existing Process / Worksheet / Graph / Report
	Saves View Definition
	Save Data
	Print the content of the Worksheet
	Print preview
	Go to previous / next View or Filter
	Stops the loading of data
	Refreshes data
	Zooms in / Zooms out
	Zooms %
	Fit Selection: resize columns automatically to fit all data
	Shows / hides Command Center
	Graph Organizer
	Shows / hides Grouping area
	Shows Filters window
	Shows Prompts window
	Shows the View properties window
	Maintains Process authorizations
	Opens Workflow window
	Opens Help window
	Switches to a different Type of Graph
	Changes the report's zoom (Page width, whole page, thumbnails, etc)
	Adds selection to the current filter
	Exclude selection from the current filter
	Clears the filter
	Locks the current filter
	Maintains graph properties
	Switches between Navigation, Rotation or Animation mode (for Graphs only)
	Page navigation for reports
	Loads only a sample of 100 records when opening or changing a view

	Displays the information page related the selected view, process or folder

More details are provided in the User Guide for most of the features above.

 While using SEI, you will notice that the features above are not always available. In fact, related buttons are disabled in one of the following situations:

- The current user is not authorized to the feature.
- The feature does not apply to the current context. For example, if a worksheet window is active, the button that allows maintaining Graph properties would not be available.

Shortcuts

SEI allows users to create shortcuts for any view listed in the Command Center (Graphs, Worksheets and Reports). This feature allows users to quickly access frequently used views. All shortcuts will behave and have the same properties as a regular Windows shortcut.

 To create a shortcut, right-click on a view from the Command Center, then select "**Create Shortcut in My Favorites**" or "**Create Shortcut on Desktop**".

SEI Administration

This Part of the Guide provides information about the security and administration functions available from the Main menu:

- Global Parameters
- SEI Authorizations
- Process definition and maintenance

Security considerations

SEI has its own security system which needs a username in order to access the navigation interface of SEI.

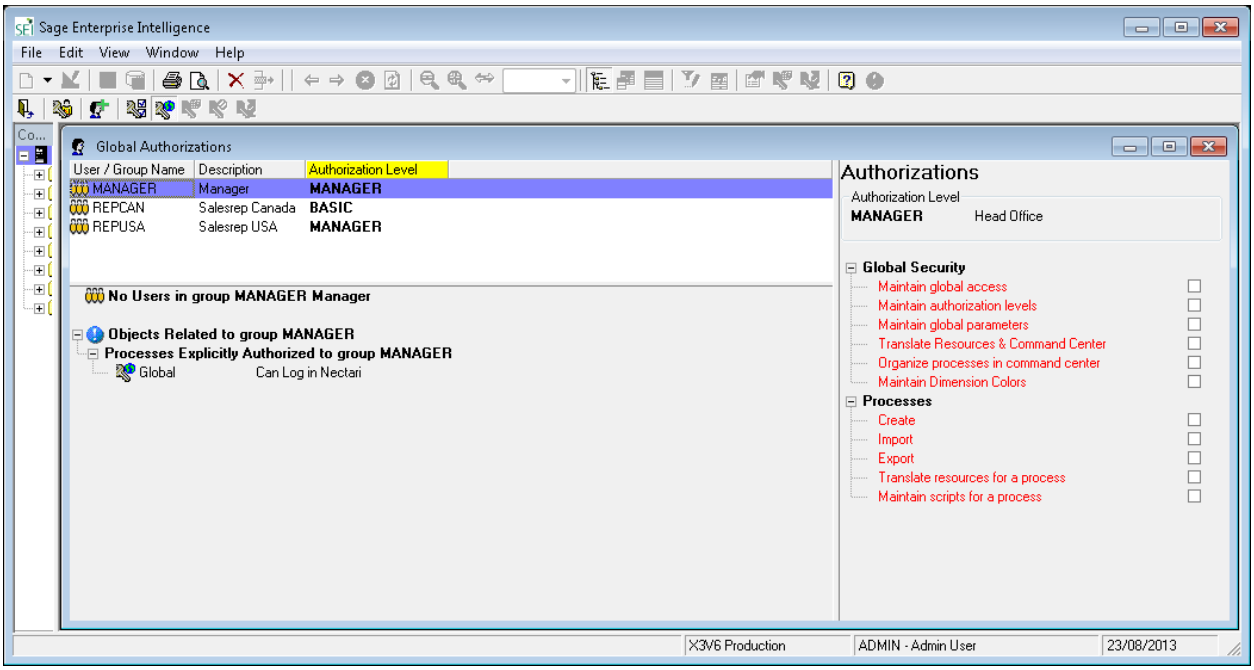
User profiles and groups are managed using the Administration tool from SEI. The administrator can immediately begin to setup access rights and authorizations for SEI as soon as the installation is finished. Moreover, users and groups can be used within SEI to share views. For instance, a user can create a new view and publish it for another user or group (please refer to SEI User Guide for more information about publishing views).

Global Users Authorizations

Global Users Authorizations maintains user authorities for all SEI functionalities. It consists of a list of user profiles and/or groups. Authorization levels are assigned to users / groups. When a user / group is selected from the list, the corresponding authorization level window is displayed in the right side of the screen.

 To maintain Global Authorizations, select "**Tools**" then "**Global Authorizations**" from SEI main menu.

This is an example of the Global Users Authorizations screen:



The ***Global Authorizations*** section of this screen displays the list of authorized Users and/or Groups. For each User/group, the following information is provided:

- The User Id or the Group Name.
- The description of the User/Group.
- The specified Authorization level: you can either select one of the existing Authorization levels or it can be ***NONE:** no authorization is granted to the User/Group.

Authorizations specified for a group are applied to all users who belong to it. However, if authorizations are defined implicitly for a specific user, the user's authorizations will override any inherited group authorizations.

Toolbar functions include the following:

	Add a new User and/or Group
	Delete a User and/or Group
	Print the Global Authorizations list
	Print preview
	Save changes

Adding a user / group

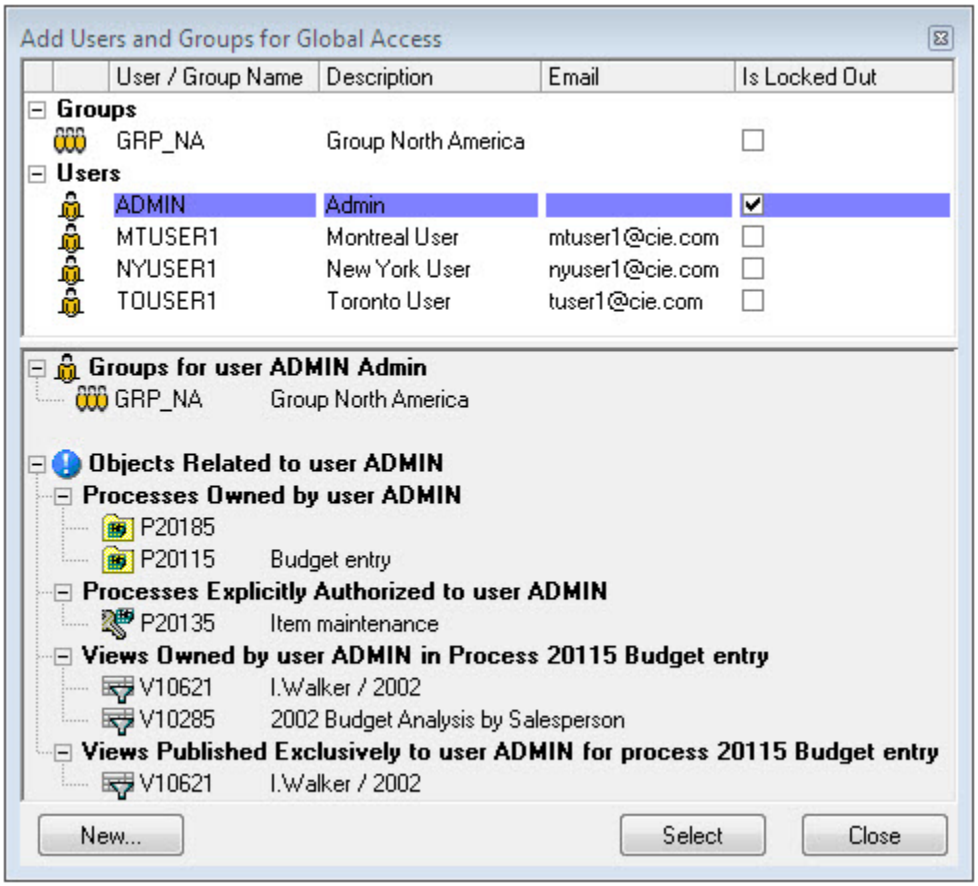
To add a user or group to Global user authorizations, you can either:

- Select "**File / Add Users and Groups to the list**" from the menu

Or

- Click on the following button from the toolbar:

The following window will then be displayed:



The screen shows the list of available users and groups. Select the desired group or user, then click "**Add**" to include it in the Global authorizations.

Sort and search functions are available. To sort on "**Name**", for example, simply click on the related column header. To search a specific user or group, you can type the first letters and the list will be automatically positioned to the corresponding line.

Authorization levels

An Authorization level is a user-defined combination of elementary Authorizations to SEI functions. It has been provided in order to categorize authorizations and avoid manually entering authorizations for each single user profile. Furthermore, it allows an easier and more organized way to manage user authorizations and avoids repetitive entries.

To maintain authorization levels, select "**Tools**" then "**Authorization levels**" from the SEI main menu.

Elementary authorizations are classified by category. Some categories are applicable to Global Users Authorizations Global Security and Processes while others (Navigator, Views, Filters...) are relevant to Process Authorizations.

As you can see in the illustration, you can:

- Create a new Authorization level by pressing the **Add** button. You will first be asked to provide a short code (e.g. ADMIN) and a description (e.g. Administrator). Then you can select the elementary Authorizations to include in your new Authorization level.

- Modify an existing Authorization level by pressing the **Edit** button. Two new buttons are then displayed: you can either save your changes using the **Save** button or discard the changes using the **Cancel** button.

- Delete an Authorization level by pressing the **Delete** button. A confirmation message will be displayed in order to confirm deletion of the Authorization level.

- Rename the short code and/or the description of an Authorization level by pressing the **Rename** button.

The same Authorization levels are used in the Process Authorizations.

Defining a process

The definition of a process allows the encapsulation of all the technical details of the database, of the business rules and of the security settings within the process itself. This encapsulation allows non-technical users to navigate through the data in a transparent and easy manner within SEI.

Process Management is a task that must be performed carefully and requires substantial knowledge of Relational Databases and SQL (Structured Query Language). In addition, it requires a full understanding of the user's needs and objectives.

Process creation

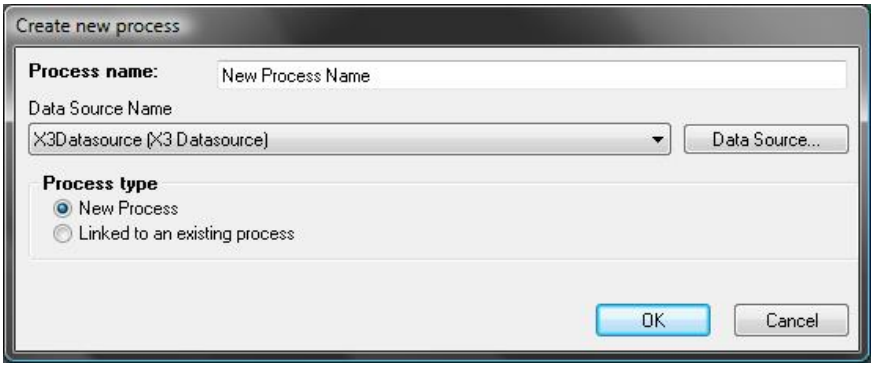
There are two ways to create a new process:

- In the command center, click on the folder in which you want to create the process, then select "**File / New / Process**" from the main menu

  OR

- In the command center, Right-click on the folder in which you want to create the process, then choose "**New process**" from the popup menu.

The following window will then be displayed and will allow the user to enter the name of the new process:



When the user clicks "**OK**", the process designer window will be displayed and the user can start defining his new process.

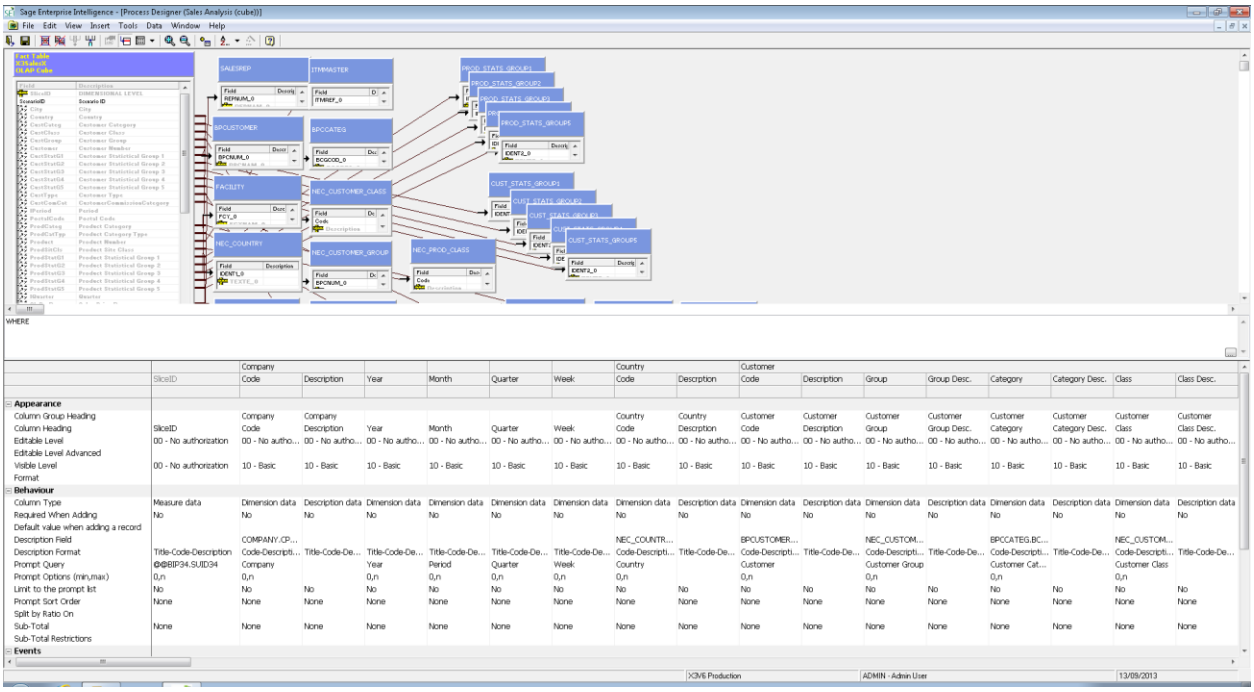
Data Source Name: Use this drop-down to select the data source name for this process.

Linked to an existing process: if this option is selected, the new process definition will be based on an existing process selected by the user. Setting this option will duplicate the same set of tables (with their joins) as the existing process. The user will not be able to add or remove tables when defining the new process. However, he can select different fields and change their properties.

Data source: this button is used to maintain the list of data sources available in the drop-down control.

Process Designer window

Here is an example of the process designer window:



This window contains three main sections:

1-	The upper section contains all tables involved in the process as well as relational joins between them.
2-	The middle section allows the user to provide a "**Where**" clause to select a subset of data for the process.
3-	The lower section represents the selected fields and their properties.

Process Designer Toolbar

This gives a quick access to the most frequent operations of the Process Designer :

	Saves the current process
	Closes the Process Designer window
	Removes selected table from the tables section
	Removes all tables
	Removes selected column from the columns section
	Inserts a new column in the column section
	Edits properties for selected column(s)
	Shows / Hides the Where clause (the middle section of the window)
	Changes the display mode : Design mode / SQL statement mode / Process Variables
	Zooms in / Zooms out the selected section
	Adds tables from the database
	Sorts columns properties : alphabetic / by category

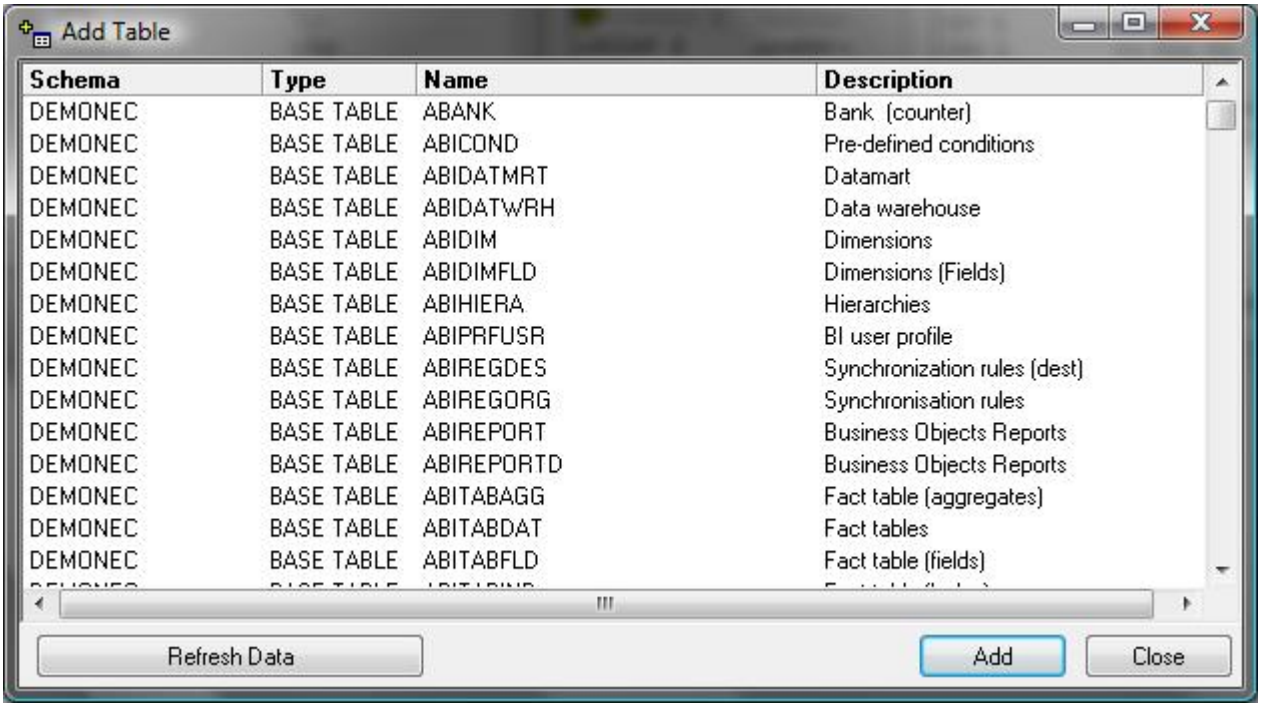
	Opens Script Expression builder for a calculated field
	Opens Help window

Adding new tables

When a new process is created, the tables section of the process designer window is empty. The user may then add tables in his process.

To add new tables, select "**Insert / Add table**" from the process designer menu. The same action can be accomplished by clicking on the following button from the toolbar:

Selecting this option opens a window containing available tables to be added. Here is an example of the "**Add table**" dialogue:



It is possible to select more than one table at a time using the Ctrl and Shift keys.

Sort and search functions are available. To sort on "Name", for example, simply click on the related column header. To search for a specific table, you can type the first letters and the list will be automatically positioned to the corresponding line.

The Add table window supplies only the tables that belong to the selected environment which has been specified in the command center and for the selected data source defined for the designed process. If you need to create a different environment or data source, you may configure it by using the SEI Administration application provided with SEI.

Joining Tables

The definition of a table join allows linking two or more tables together, to allow the retrieval of all the information required for the analysis.

Ex: Suppose the analysis of the sales data. The first step would be to add the sales header table, but this table on its own does not contain all the information required by the analysis. It's therefore necessary to create a join to the sales detail table, in order to get the product information.

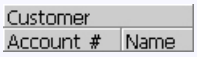
To create a join, simply drag a field from one table to the corresponding one in the second table.

Joins cannot be defined if related fields don't have the same data type.

Column Properties

The lower section of the process designer window contains the fields (columns) to be included in the process. For each field, a set of properties can be defined. Column properties are classified by category (Appearance, behavior, events, miscellaneous).

The following table describes all properties that a user can set for a column:

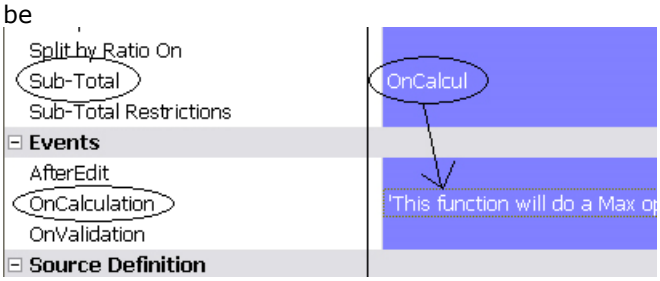
Property Name	Description	Possible values
Appearance properties :		
Column Group Heading	When a process is opened in a worksheet view, column header can be grouped. This is used to show the columns that are related to the same entity. For example, if "Customer" is specified in this property for both "Customer Account #" and "Customer name", the resulting column header in a worksheet would be as follows :  This property is used in conjunction with the column heading property.	Free text
Column Heading	Column group heading and Column heading are combined to identify the columns of a process.	Free text
Editable Level	This property is used to define the minimum security level that a user must have to be authorized to edit the value of the current column. "Column Editable level" is one of the elementary Authorizations that can be set for a user within process Authorizations. The value of this elementary Authorization is compared to the "Editable level" property to determine if a user is allowed to edit the value of related column.	00-No Authorization 10-Basic 20-Intermediate 30-Advanced 40-Manager 50-Administrator 60-System Administrator 99-Security Officer
Editable Level Advanced	For advanced use only, this property allows the administrator to define a script (containing IF/Else statements for example) to calculate the final value of the "Editable Level" property.	Script Expression builder
Visible Level	This property is used to identify the minimum authorization level applicable when displaying the specified column. "Column Visible level" is one of the elementary Authorizations that can be set for a user within process Authorizations. The value of this elementary Authorization is compared to the "Visible level" property	00-No Authorization 10-Basic 20-Intermediate 30-Advanced 40-Manager 50-Administrator

	to determine if a user is allowed to see the value of related column.	60-System Administrator 99-Security Officer
Format	Display format for numbers or Date/Time fields. There is also 2 special formats for DB2 databases. S21DATE-> will translate dates like 1070115 into 2007-01-15 and MAPDATE-> will map null dates like 0001-01-01 and display them as blank.	Selected from a list
Behaviour properties :		
Column Type	There are three main categories of fields: - Dimension fields: fields for which data is to be analyzed, summarized or grouped (e.g. Company, Region code, Customer Account No, Salesman Code, Item class etc). Fields that determines a unique record in the process must be set as "Dimension key". - Measure Data: fields that represent data to be analyzed (e.g. Goods value, Quantity, Cost). Measures that are calculated based on the values of other columns are automatically set as "Measure Calculated". - Description data: fields that give a description of some dimension fields (e.g. Customer name, Item description, Salesman name etc).	-Dimension key -Dimension data -Measure Data -Measure Calculated -Description data
Required when adding	Determines if the field is required when a user is about to add a new record in the process database.	Yes / No
Default value when adding a record	If the "Required when adding" is set to "yes", this property allows specifying the default values when adding a new record.	Free text
Description field	This property allows linking a dimension key to its description field (e.g. Customer Account Number with Customer name, Item code with Item description). If data is grouped by Item code in a worksheet, the grouped lines could contain both the Item code and its description.	Selected from a list
Description format	Allows specifying the layout, in a worksheet or a graph, of dimension fields and their descriptions.	-Title-Code-Description -Title-Description-Code -Title-Code -Title-Description -Code-Description -Code -Description -Description-Code
Prompt query	Query definition to execute in order to get a prompt window for this field. If the column is editable, this query is also used to build the selection list for that column.	Prompt designer window

Prompt options (min, max)	Allows to set whether a selection must be made from the guide and how values should be selected. **0,N**: Not required with the ability to select as many desired values. **1,N**: Required with the ability to select as many desired values. **1,1**: Required with the ability to select a single value.	Selected from a list
Limit to the prompt list	Indicate whether or not editable fields in data entry mode will validate that each entry are within one of the list of items existing in the prompt selection window	No / Limit to the list
Split by Ratio	Used for splitting any amount entered on a total line using a ratio based on this specified field. Applicable only if this column is editable.	Selected from a list
Sub total	Allows to specify which kind of summary value will be calculated when data is grouped.	-None -Sum -Min -Max -Avg (average) -Count -OnCalcul
Sub total restrictions	Allows applying restrictions on what grouping levels that will show subtotal values.	Subtotal restrictions window
Event properties :		
After Edit	A script to be run after a field's value is changed	Script Expression builder
On Calculation	A script to execute when refreshing calculated fields	Script Expression builder
On Validation	A script to check the validity of entered data	Script Expression builder
Source Definition :		
(Source Field Name)	Database field name of the current column	Selected from a list
(Source File Name)	Database file name of the current column	Cannot be changed
Data Len of Decimal precision	-If data type is NUMERIC, this property determines the number of decimal positions that will be considered when displaying data. -if data type is CHAR, the property determines the field length	Numeric
Data Type	Database field type	-CHAR -NUMERIC -DATE
Calculation	SQL Calculation for calculated fields	Script Expression builder
Definition	Allows to specify a brief description for the field	Free text
Parameter Name	If necessary, specify a SEI parameter name that will be used as a variable by the Web Viewer application	Free text

Calculation Samples

In the process designer, when specifying the value ***OnCalcul*** into the **sub-total** property, you may enter a calculation script into the **OnCalculation** property. Here are some examples of scripts that can be used.



Ratio on a sub-total

```
If TABLE1_SALES = 0 Then
   TABLE1_RATIO = 0   'Avoid division by 0
Else
   TABLE1_RATIO = (TABLE1_SALES - TABLE1_COST) / TABLE1_SALES
End If
```

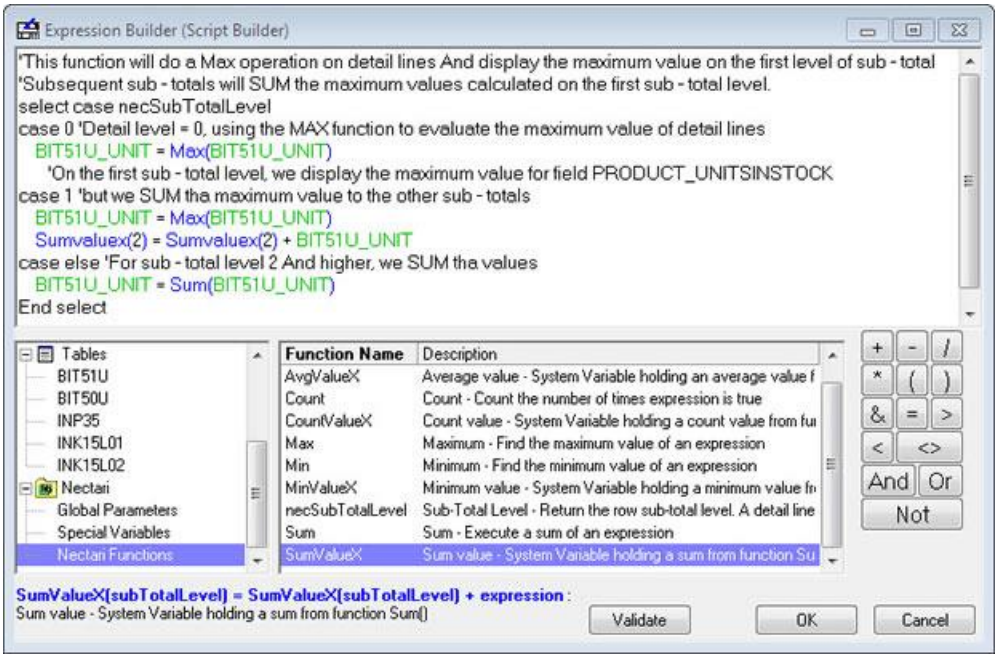
Specific aggregation functions per sub-total levels

It is possible to use multiple aggregation functions on different sub-total levels. The following example shows how to do a **MAX** on the first sub-total level and then **SUM** those maximum values up to the other higher sub-total levels.

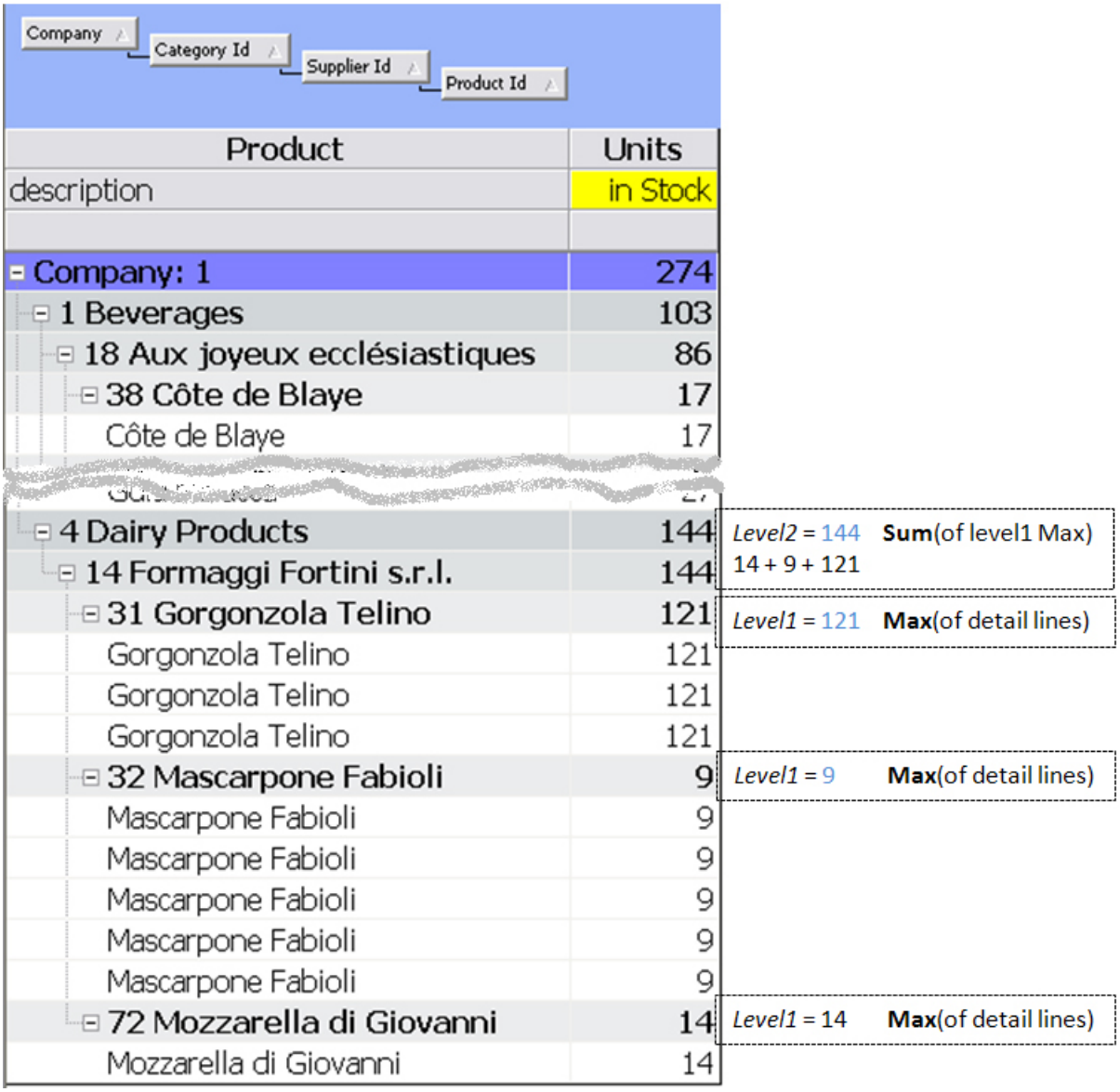
```
'This function will do a Max operation on detail lines And display the maximum value on the first level of sub - total
'Subsequent sub - totals will SUM the maximum values calculated on the first sub - total level.

select case necSubTotalLevel
case 0 'Detail level = 0, using the MAX function to evaluate the maximum value of detail lines
    BIT51U_UNIT = Max(BIT51U_UNIT)
       'On the first sub - total level, we display the maximum value for field PRODUCT_UNITSINSTOCK
case 1 'but we SUM tha maximum value to the other sub - totals
    BIT51U_UNIT = Max(BIT51U_UNIT)
    Sumvaluex(2) = Sumvaluex(2) + BIT51U_UNIT
case else 'For sub - total level 2 And higher, we SUM tha values
    BIT51U_UNIT = Sum(BIT51U_UNIT)
End select
```

To sum up the maximum values from the sub-total level 1 is done here by using the internal system accumulator variable used by the **MAX** function. There is an internal variable array named *Sumvaluex()* where *Sumvaluex(1)* is used to accumulate values for sub-total at level 1 and *Sumvaluex(2)* is for level 2 and *Sumvaluex(3)*...



Here is the result of a worksheet using that calculation



Note: If you just want to execute a **Sum** on all levels or any single aggregation operation, do not use this sample's method. The built-in function **Sum** specified for the property **Sub-Total** property will perform better.

Script Expression builder

The Script Expression builder is a user-friendly tool that facilitates the composition of a script for a field's event properties or for global parameters. In Addition, fields, functions and operators are pre-defined and presented to build scripts.

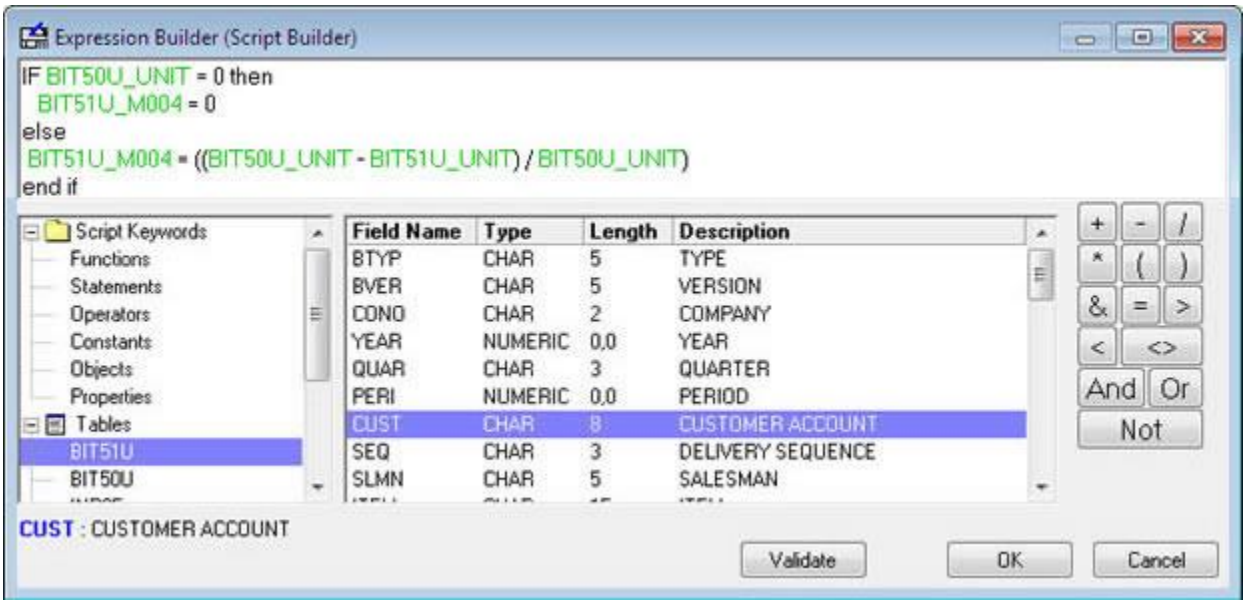
The script language used is VBScript. Therefore, a fair knowledge of this language is needed to be able to use Script Expression builder.

The following list provides examples of what can be used in the Script Expression builder:

- Process Fields: grouped by the source files they belong to.
- SEI global parameters.

- Arithmetic operators: +, -, / , *, %, (,)
- Logical operators: AND, OR, NOT...
- Comparison operators: <, <=, >, >=, <> ...
- Script statements (for advanced users): If/Else, Do while, For / Next ...
- Built-in functions: Date functions, numeric functions ...

Here is an example of Script Expression builder:



The upper section of the window contains the expression's editing box, where users may manually construct the expression. However, keywords and operators can be inserted from the list provided in the lower section of the window.

The list on the bottom left side provides keywords categories, as well as the process source files. Once a category is clicked (from the "**Script keywords**" folder), the list in the center will show all keywords from the selected category. Also, a description is provided for each keyword. For example, when you click on a table (from the "**Tables**" category), related process fields are displayed in the center. The field name, type, description and length are provided.

In order to add a keyword or a field to your script, simply double-click on the corresponding entry in the center list. Similarly, operators can be added by clicking the buttons provided in the right side of the window.

The "**Validate**" button verifies if your expression is valid.

SQL Expression builder

The SQL Expression builder is a user-friendly tool that assists in building SQL calculations and selections. It can be used for calculated fields (virtual columns) that can be defined in a process. It also can be used to specify process restrictions.

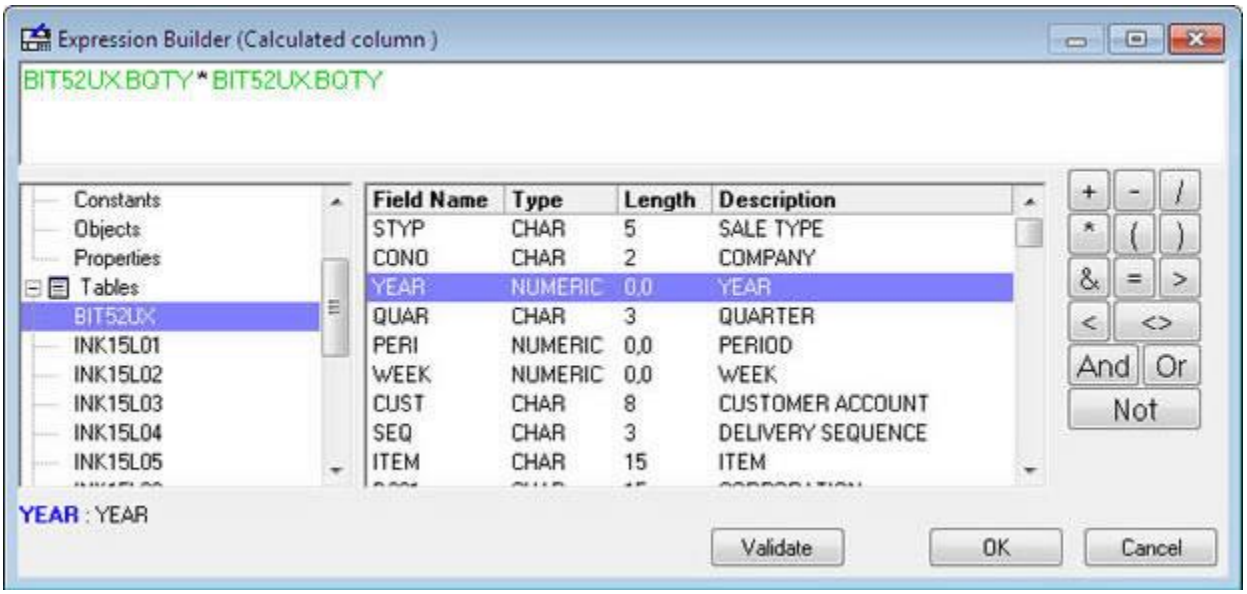
A fair knowledge of Structured Query Language (SQL) is needed to be able to use SQL Expression builder.

The following list provides examples of what can be used in the SQL Expression builder:

- Process Fields: grouped by the source files they belong to.
- SEI global parameters.

- Arithmetic operators: +, -, / , *, %, (,)
- Logical operators : AND, OR, NOT ...
- Comparison operators: <, <=, >, >=, <> ...

Here is an example of SQL Expression builder:



The SQL Expression Builder is very similar to the Script Expression Builder. The upper section of the window contains the expression's editing box, where users may manually construct the expression. However, fields and operators can be inserted from the list provided in the lower section of the window.

The list on the bottom left side has two categories: the process source files and SEI global parameters. The list in the center shows the detail of the selected table / global parameters. For example, when you click on a table (from the "**Tables**" category), the related process fields are displayed in the center. The field name, type, description and length are provided.

In order to add a field or a global variable to your expression, simply double-click on the corresponding entry in the center list. Similarly, operators can be added by clicking the buttons provided in the right side of the window.

The "**Validate**" button verifies if your expression is valid.

Process properties window

The process properties window contains a set of parameters that can be defined at the process level (not at field level).

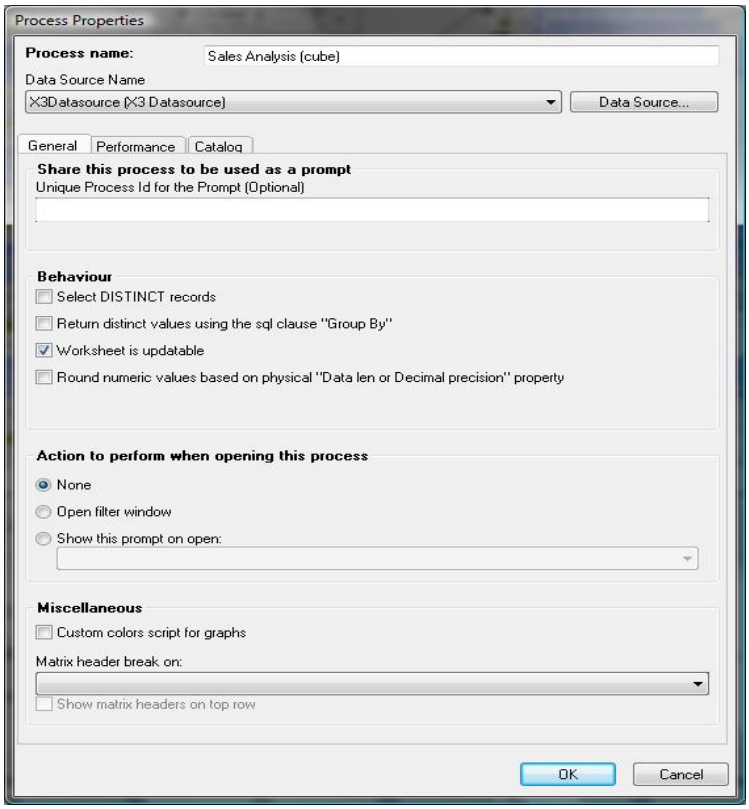
 To open the process properties window, select "**File**" then "**Process properties**" from the Process Designer menu.

The following is the list of parameters that can be set:

- **Process Name**: Enter the name for this process
- **Data Source Name:** Use this drop-down to select the data source name for this process.

Share this process to be used as a prompt

- **Unique Process Id for the Prompt (Optional):** This information is optional. You may specify a unique Id for this process if you want to reuse its definition as a prompt for other processes.



Behaviour

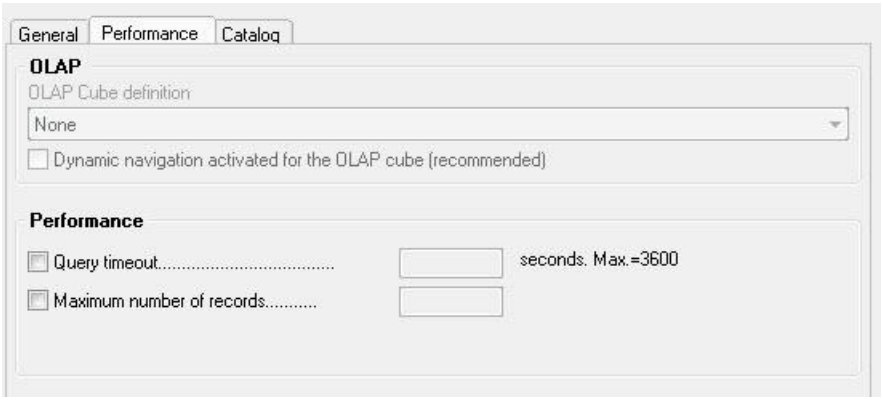
- **Select Distinct records**: When activated, this option allows extracting only one record among records having the same record key values.
- **Return distinct values using the SQL clause "Group By"**: this allows to eliminate duplicates when using SQL grouping.
- **Worksheet is updatable**: SEI supports 2-way communication between the enterprise data and its views. This option is used to allow, at the process level, data entry for editable fields. If this option is not checked, editable fields cannot be updated. Note that the fact table must have a field named "MODFLG" Char(1) that must be added to the process with Visible level set to 00-No Authorization in order to enable the update functionality.
- **Round numeric values based on physical "Data len or Decimal precision" property** : Check this box for updatable processes that have calculated fields that you would prefer to use the physical fields length and decimal precision to execute rounding. If this option is unchecked, rounding for calculated fields will be performed using the output display format precision as defined by the "Format" property.

Action to perform when opening this process

- **None**: Select if you do not have to perform any specific action.
- **Open Filter Window**: Select if you wish to open the filter window before loading data when using this process.
- **Show this prompt on open**: This parameter allows displaying a prompt for the selected field each time a view is opened. The prompt is displayed so that the user can select certain values before the data is loaded in the view.

Miscellaneous

- **Custom colors script for graphs**: By default, colors in graphs are chosen randomly by SEI. This option allows customizing colors and associates them with particular dimensions.
- **Matrix header break on**: Used for matrix layout in worksheet views, this parameter allows selecting the field for which matrix headers will change.
- **Show matrix header on top row**: In case all the views show one single matrix header, this option can be used to display this header as the worksheet header.

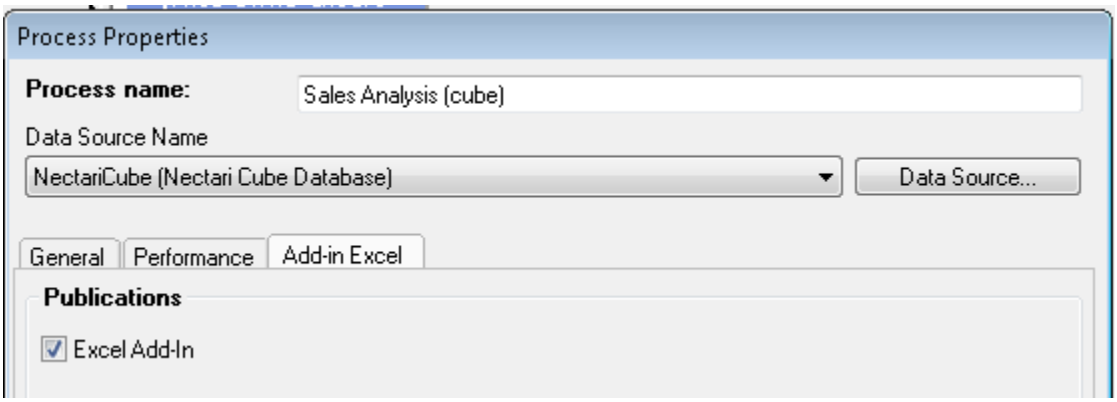


OLAP

- **OLAP Cube Definition**: Select here the OLAP cube defined in the OLAP Manager tool if this process relates to one of those cubes.
- **Dynamic navigation activated for the OLAP Cube** This option is recommended to be checked if you always want SEI to analyze every request and select the best data slice available according to each query request.

Performance

- **Query timeout**: The maximum number of seconds that SEI will wait for a query (related to a process) which will be running to extract data. This helps to prevent long and probably undesired queries from consuming resources (processor and disk). The query is cancelled if the timeout is reached. If this parameter is not specified, SEI will wait until the complete data is loaded.
- **Maximum number of records**: is the maximum records that can be loaded in any view of the process. If not specified, no restriction is applied.



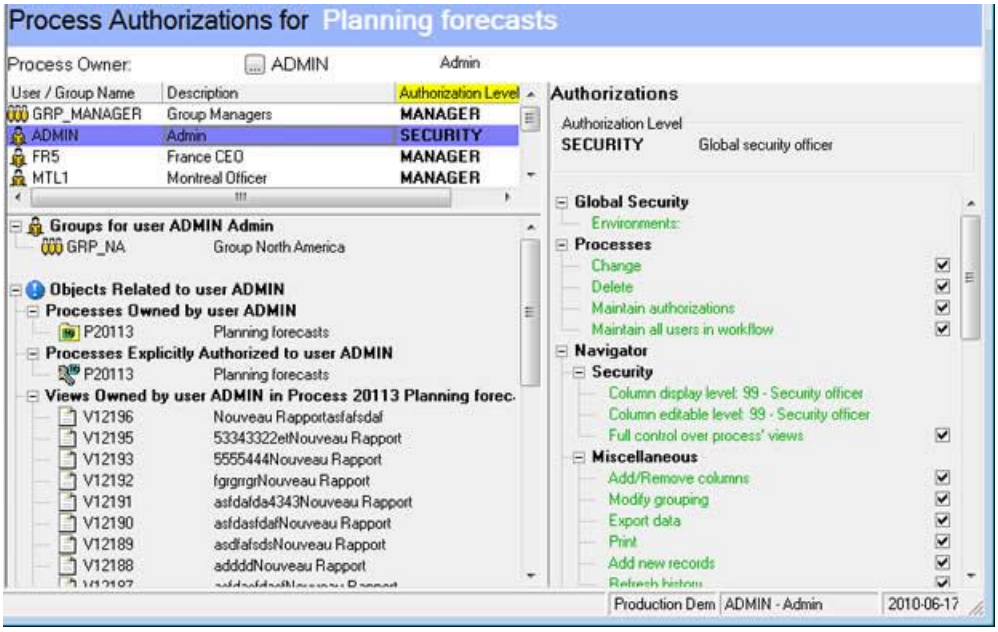
Publications

- **Excel Add-In**: Check this box if you want this process accessible from the SEI Add-In tool for Microsoft Excel.

Defining User Authority for a Process

SEI process authorizations allow administrators to manage users' access to the features for specific processes. Process Authorizations are maintained in the same fashion as the Global Users Authorizations. The only difference is that Authorization levels contain more options that are applicable for processes.

This is an example of the process authorizations window:

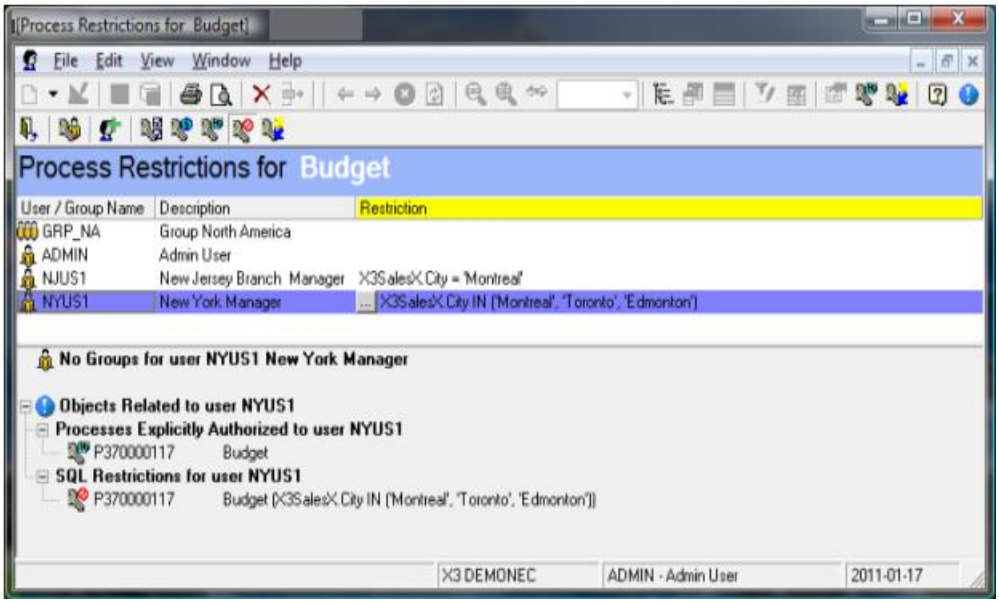


To maintain process authorizations, click on the process in the command center, then select "**Tools/Process Authorizations**" from the SEI main menu.

Defining Data Restrictions for a Process

This function allows the administrator to limit, for each user/group, access to a specific subset of data. In the example below, the user NYUS1 can ONLY access the data related to the city 'Montreal', 'Toronto'

and 'Edmonton'; all other records containing values other than 'Montreal', 'Toronto' and 'Edmonton' will be restricted.



To maintain process restrictions, select "Tools" then "Process Restrictions" from the SEI main menu. A process must be previously selected from the command center.

Restrictions must be specified in SQL language, meaning that all comparison operands ("=", "<>",">", ">=", "<", "<=", "IN", "LIKE", "BETWEEN") and logical operands ("AND", "OR") are supported. A fair knowledge of databases and SQL is required to be able to set restrictions.

The lower gray section of the window is for information only. It provides details for the user / group selected in the upper section:

- If a group is selected, the lower section provides the list of users who belong to the group.
- If a user is selected, it provides the groups that the user belongs to.

The SQL Expression Builder is very useful to build restrictions. It can be reached using the ellipse button under the restriction area. Please refer to SQL Expression Builder for more information.

Inter-process links

Inter-process linking allows defining joins between different processes based on one or many fields. With such links, a user can select multiple lines in a worksheet view and jump to a view of another process. Data will automatically be filtered to what the user has selected in the first view. This is a powerful feature since it provides an easy way to navigate and drill through data.

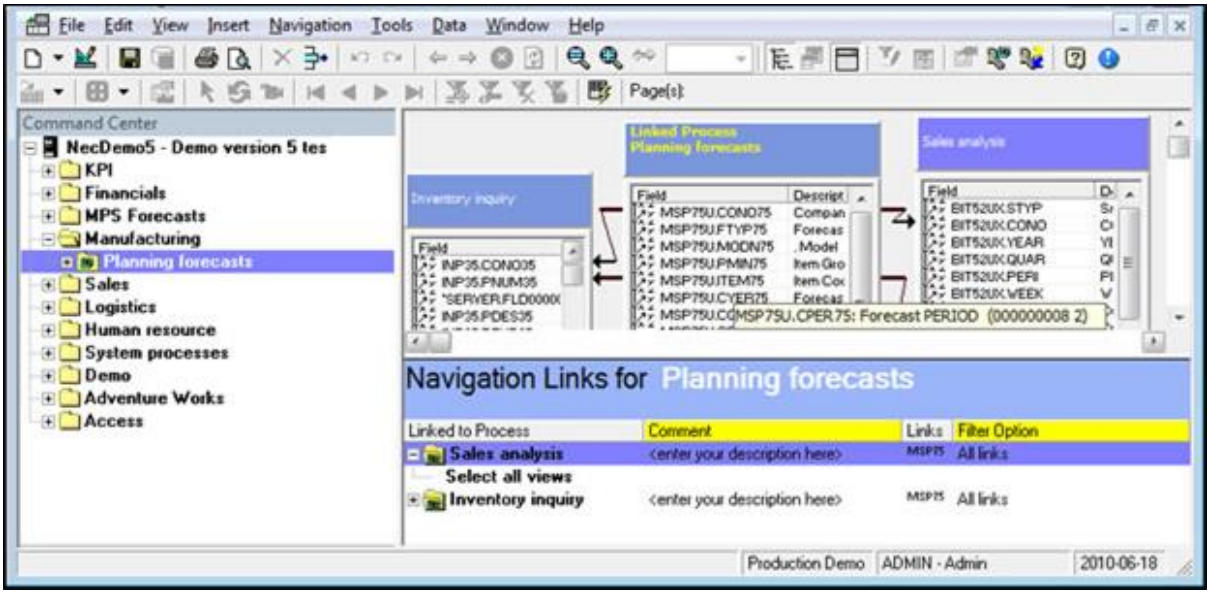
See below an example to illustrate this concept; while entering forecast data for a specific set of products, a user might need to examine sales history by period for these products. Thanks to Inter-process links, it’s possible to jump to a graph view of a different process: "Sales Analysis". The graph view would display, in a new window, only relevant data for selected products. It would also be possible to check the inventory for the same products using the "Inventory Inquiry" process.

In order to perform such operations, the administrator will have to define navigation links between a linked process (source process) and one or several target processes. In the example presented above, navigation links must be set for the process "Planning forecast" to enable navigation to the "Sales Analysis" and "Inventory Inquiry" processes.

To define or maintain navigation links for a process, do one of the following:

- Click on the process from the Command Center, then select "**Tools / Edit Navigation Links**" from the main menu.
- Right-click on the process in the Command Center, and select "**Edit Navigation Links**" from the popup menu.

The example below shows the "Navigation Links" window for the "Planning Forecast" process:



The "Navigation Links" window contains two main sections:

- The upper section describes the joins between the linked process and other processes. In fact, each process, represented by a table, contains all process fields. In addition, all joins between processes are represented by black lines that attach a field from the linked process to a field from a target process.

- The lower section outlines the views (of each target process) that can be accessed from any view of the linked process (source process). Comments can be specified in this section for each target process. In the example above, the lower section indicates that users can jump from any view of the "Planning Forecast" process to any view of "Sales Analysis" process.

Adding processes to navigation links

To add a target process to the navigation links window, you can either:

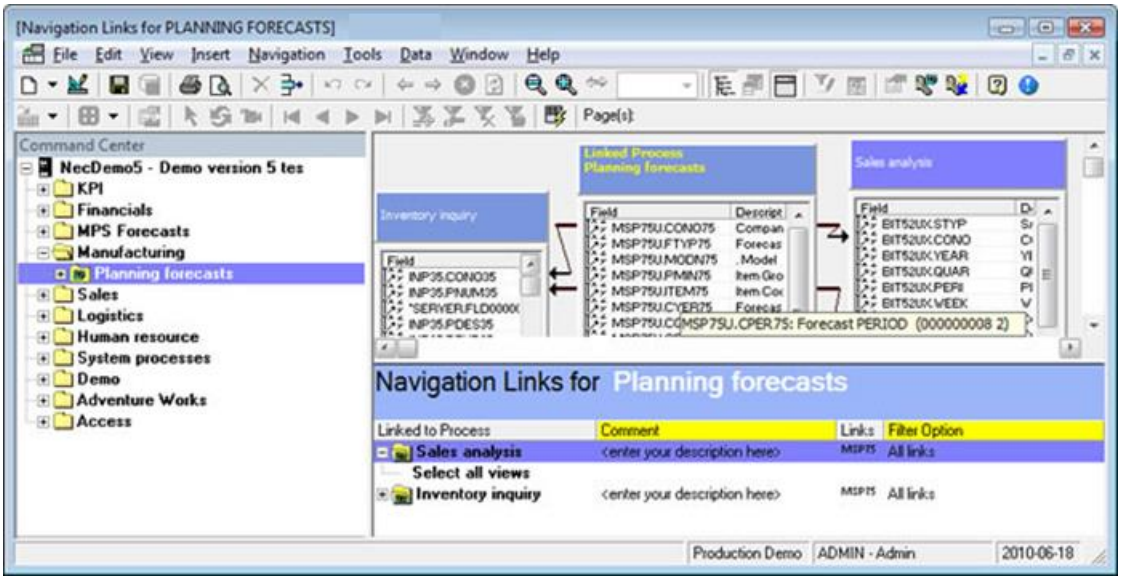
- Click on the process from the Command Center, then select "**Edit / Add process to Links**" from the main menu.

  Or

- Right-click on the process in the Command Center, and select "**Add process to Links**" from the popup menu.

After executing this operation, it is necessary to set joins between the Linked process and the newly added target process. In order to create a join, simply drag a field from the Linked process to the corresponding one in the target process.

In the example presented earlier, to setup a link from the "Planning Forecast" process to the "Inventory Inquiry" process, the latter must be added to the upper section of the window (navigation links). In addition, joins must be defined between the two processes. The following figure shows the resulting window:



By default, when a process is added, all its views are accessible for the linked process. This is the case for the "Inventory Inquiry" process in the example above. However, when views are specified in the lower section of the window, only the specified views are accessible.

Adding specific views to navigation links

To add a view to the navigation links window, right-click on the view then select "Add view to Links" from the popup menu.

If a process is not defined as a target process (not included in the upper section), its views cannot be added to navigation links.

Global Parameters

This function defines a list of parameters that can be used within any process to select specific data or perform calculations.

For example, in a "Budget entry" process used to enter forecast data every year, users need to display data related to a specific year (e.g.2012) while the database contains data for multiple years.

In the process definition, it is possible to use, in the "**Where**" section, global parameters instead of constant values (i.e. "WHERE BIT51U.YEAR = @@BUD" instead of "WHERE BIT51U.YEAR = 2012").

However, the global parameter "@@BUD" must be created with the desired value (i.e. 2012). SEI replaces global parameter variables with their values each time the process is used. The advantage of such feature is that there will be no need to modify the process definition when it comes to enter forecast data for the year. In fact, in this case only this value of the global parameter @@BUD must be increased every year.

To maintain global parameters, select "Tools" then "Global Parameters" from SEI main menu.

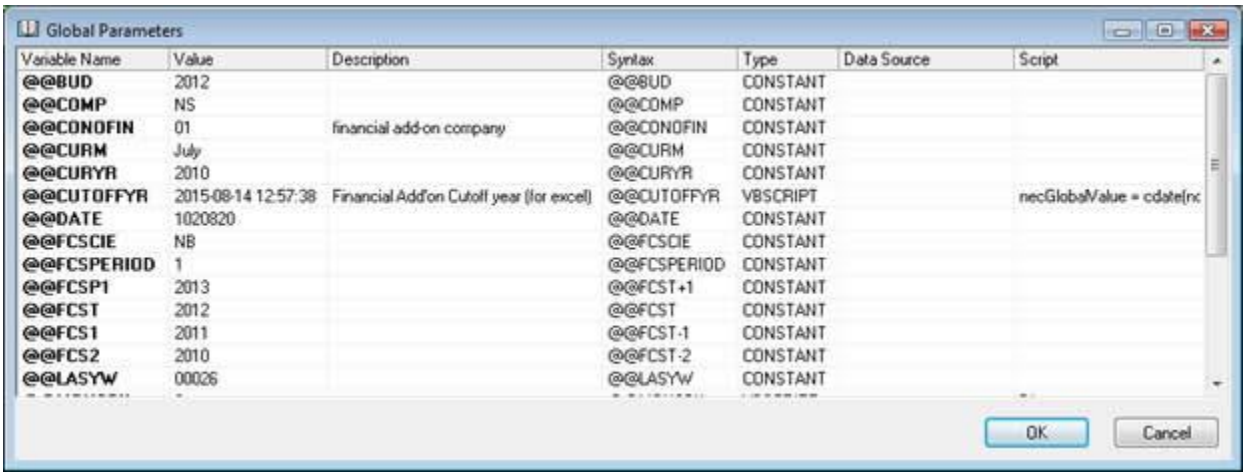
To add a new global parameter, select an empty line and enter the appropriate information. Press the Save button in order to save the changes. To remove a global parameter, select it and then press delete on your keyboard.

There are two types of global parameters:

- **Constants**: values are entered directly in the column "**Value**" and will always retain the entered value.
- **Scripts**: values are calculated from the script that must be specified in the column's script. Script Expression builder is a tool that will help construct script code. To use Script Expression builder, click on the following button: ... Please refer to Script Expression builder for more information.

The script language used is VBScript. Therefore, a fair knowledge of this language is needed to be able to create global parameters with scripts.

Here is an example of the Global Parameters window:



Parameters **MUST** include 2 special characters @@ at the beginning of the Parameter Key name in order to avoid confusion with the Process Database fields.

Environment/Datasources Maintenance

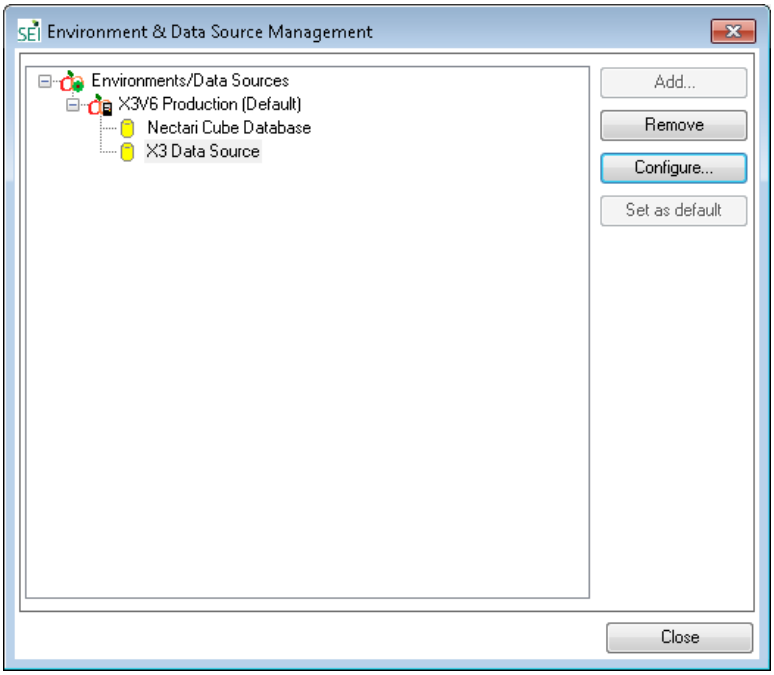
The environment and datasource maintenance option allow the user the ability to add new environments and datasources or to maintain them. Only the users with *Security level will be able to access this option.

The datasources are shared among the different environments of SEI.

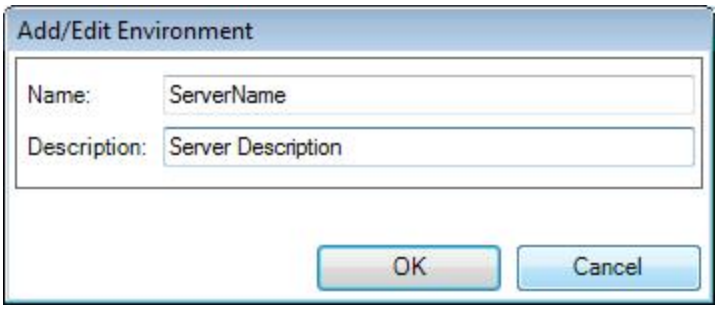
Example: Let's say that you have a "Production" and a "Test" environment. Inside the "Production" environment the datasource "MainERP" will point to your production server and inside your "Test" environment, your datasource "MainERP" will point to your test server. This way you can define one process, attach this process to the "MainERP" datasource and then you can switch the environment from Production to Test to see the data flipping from Production to Test as well without having to duplicate the process definition.

You can define as many environments as you want and as many datasources as well.

You can access this options from the menu "**Tools/Manage environments and datasources**".



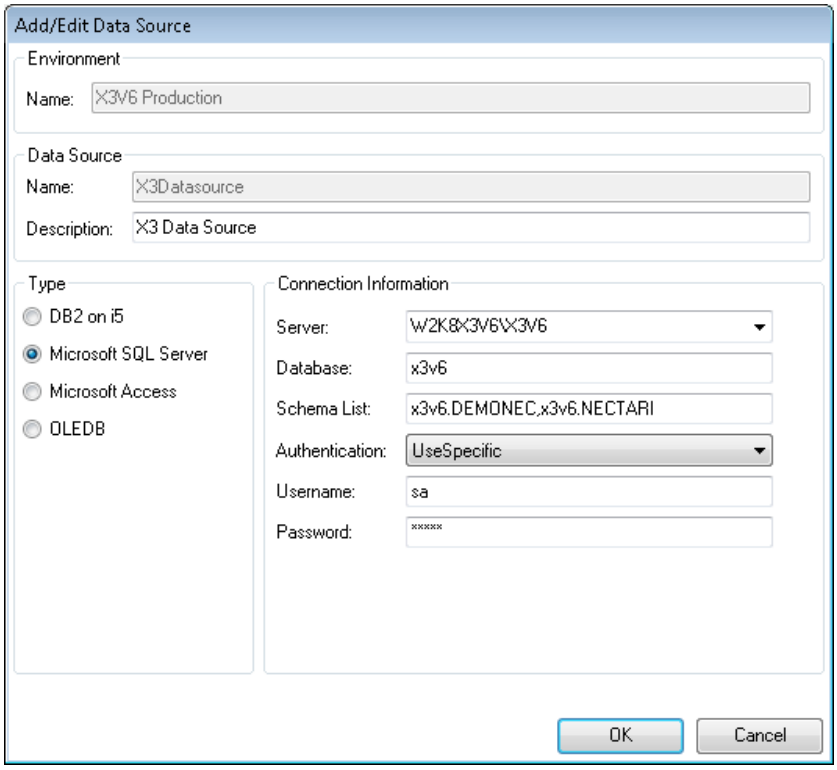
To add a new environment select the root node and click the add button. Enter an Environment name and description as shown in the screen below:



Environment

- **Name:** The name of the default environment for the central point (i.e. PROD or TEST). Please note: additional environments can be created later from within SEI.
- **Description:** The description of the default environment for the central point (i.e. Production Environment).

To add a new datasource select the root node of the environment where you want to add a datasource and click the add button. Enter the required information as shown in the screen below:



Connection Information

- **Server Name:** The name or network address of the server containing the database (for SQL Server can also include the instance name if required).
- **Database Type:** The type of database used by SEI to get the data from.
- **Database:** The name of the database on that server.
- **Schema:** The schema name within the database where the objects (tables/views) are located. (i5 systems sometimes refer to a schema as a library; SQL Server systems require a special format of '*[Database_Name].[Schema_Name]*' .
- **Authentication :** Select the Authentication Strategy to use when connecting to the database:

  1) *Windows Authentication*: this option is only available with SQL Server connections; the current Windows user information on the client computer will be used to open a connection to the database;

  2) *Server Authentication*: the user will be prompted by SEI to enter a username and password to be used to open a connection to the database; this information is then cached for the remainder of the user session;

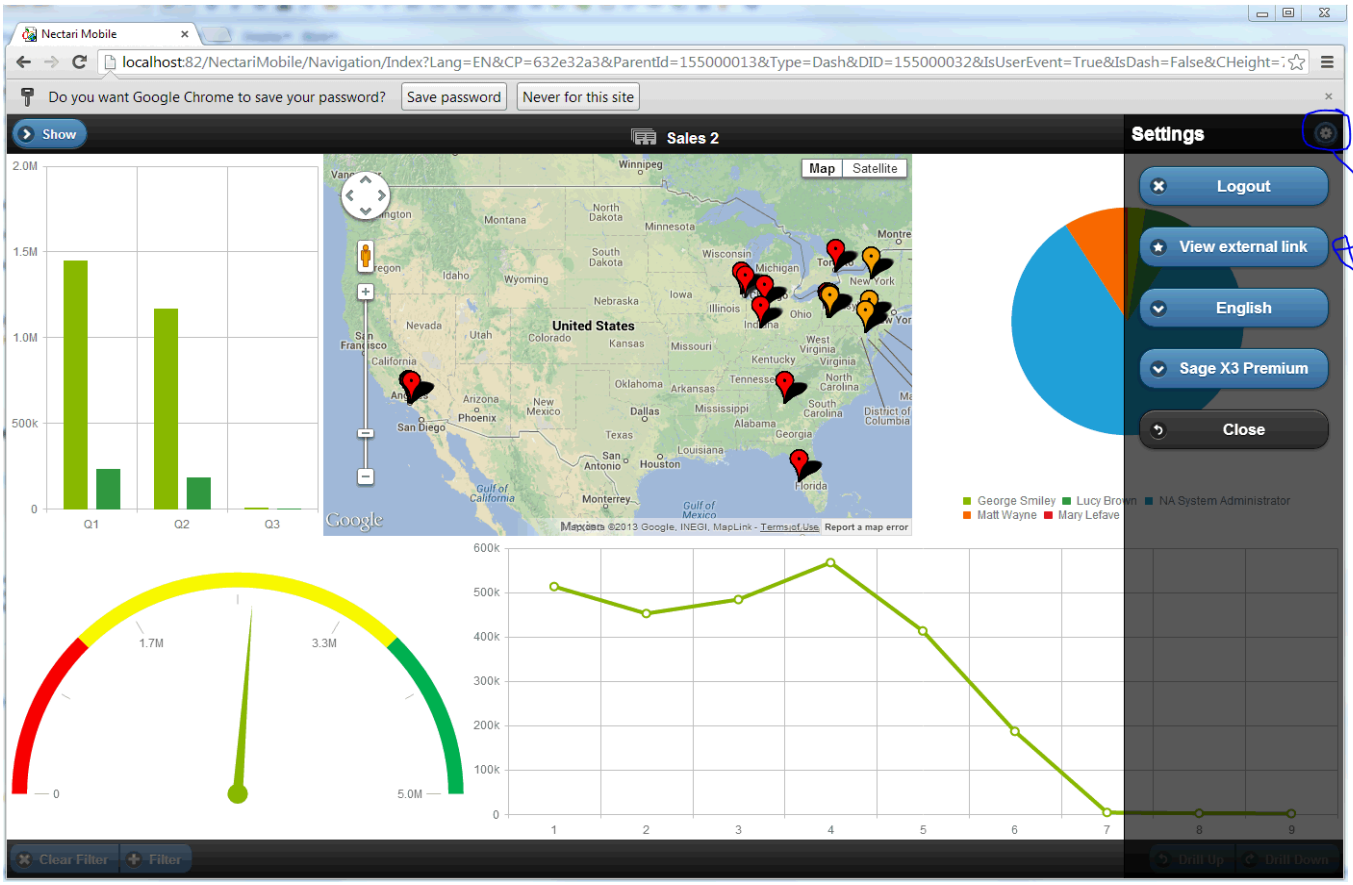
  3) *Use Specific*: this option allows all users to access the database using a specific username and password.

There is another login window to connect of the different data sources used by the processes. Whenever a process is opened for the first time, you might be prompted to connect to the database it is referring to. You must then provide a valid user profile and password defined on that server to continue working with the process.

Adding an SEI view or dashboard to X3

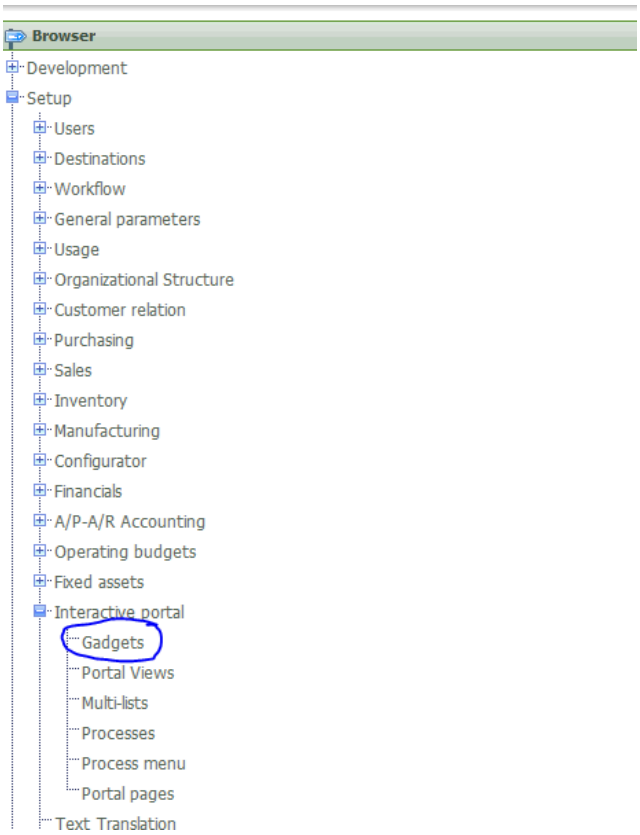
This feature lets you make an SEI view or dashboard available in X3. We do this by adding the SEI link to the view in X3. Below are the steps to accomplish this.

1. Open from your browser the mobile interface (ex : http://yourservername:82), navigate to the view or dashboard that you want to use and press the setting button and then the option "External Link" like show in the picture bellow.

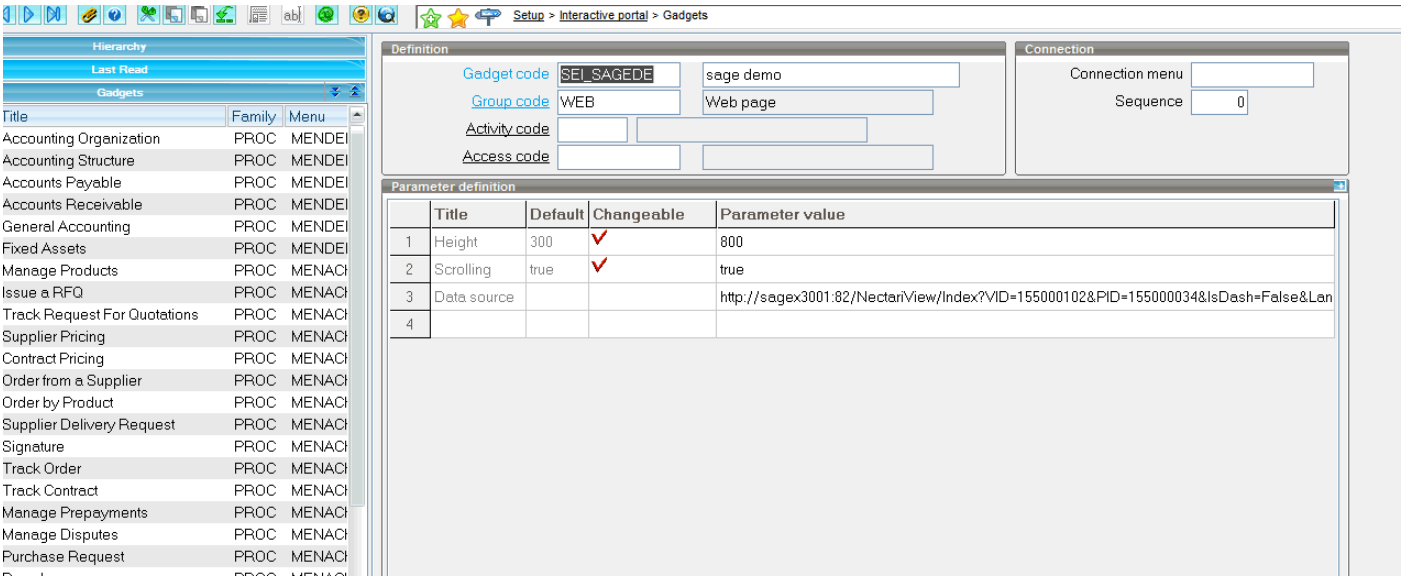


2. Copy the link in your browser, this link will be used to open this dashboard inside X3.

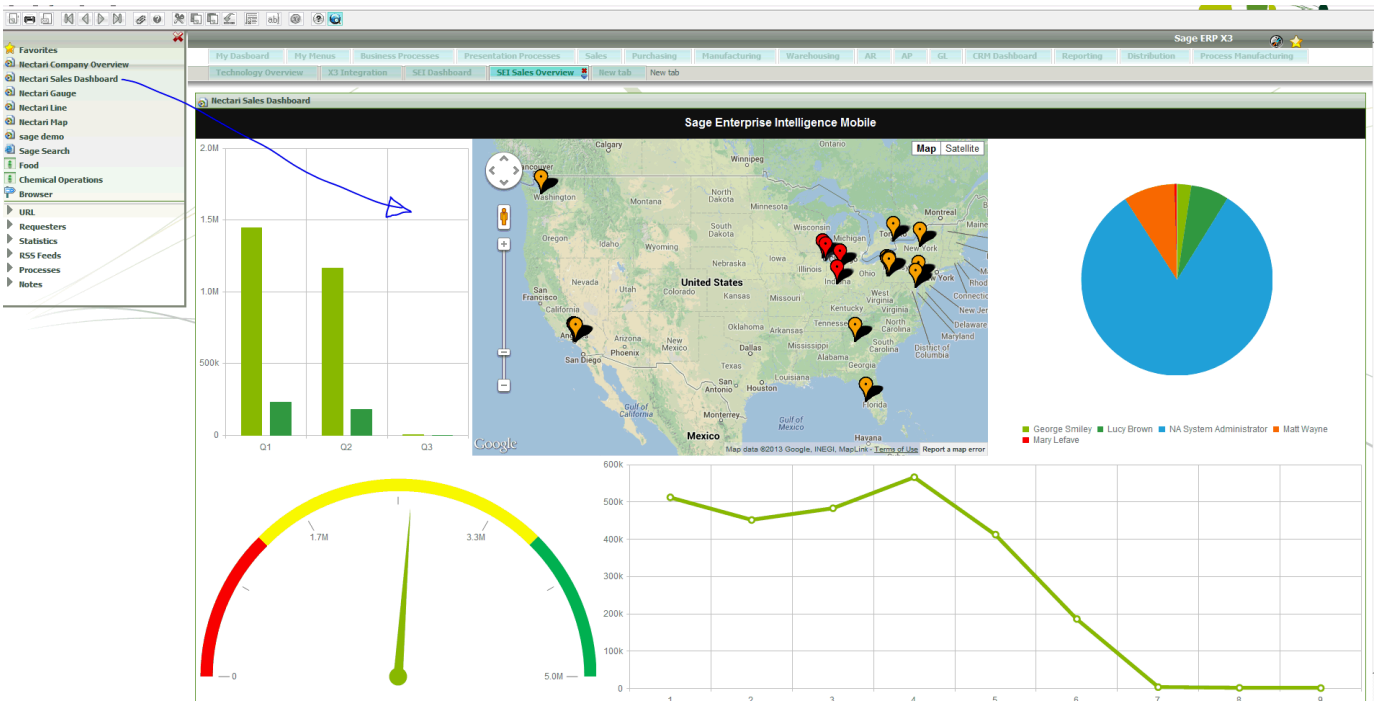
3. Open X3/Setup/Interactive Portal and Gadget



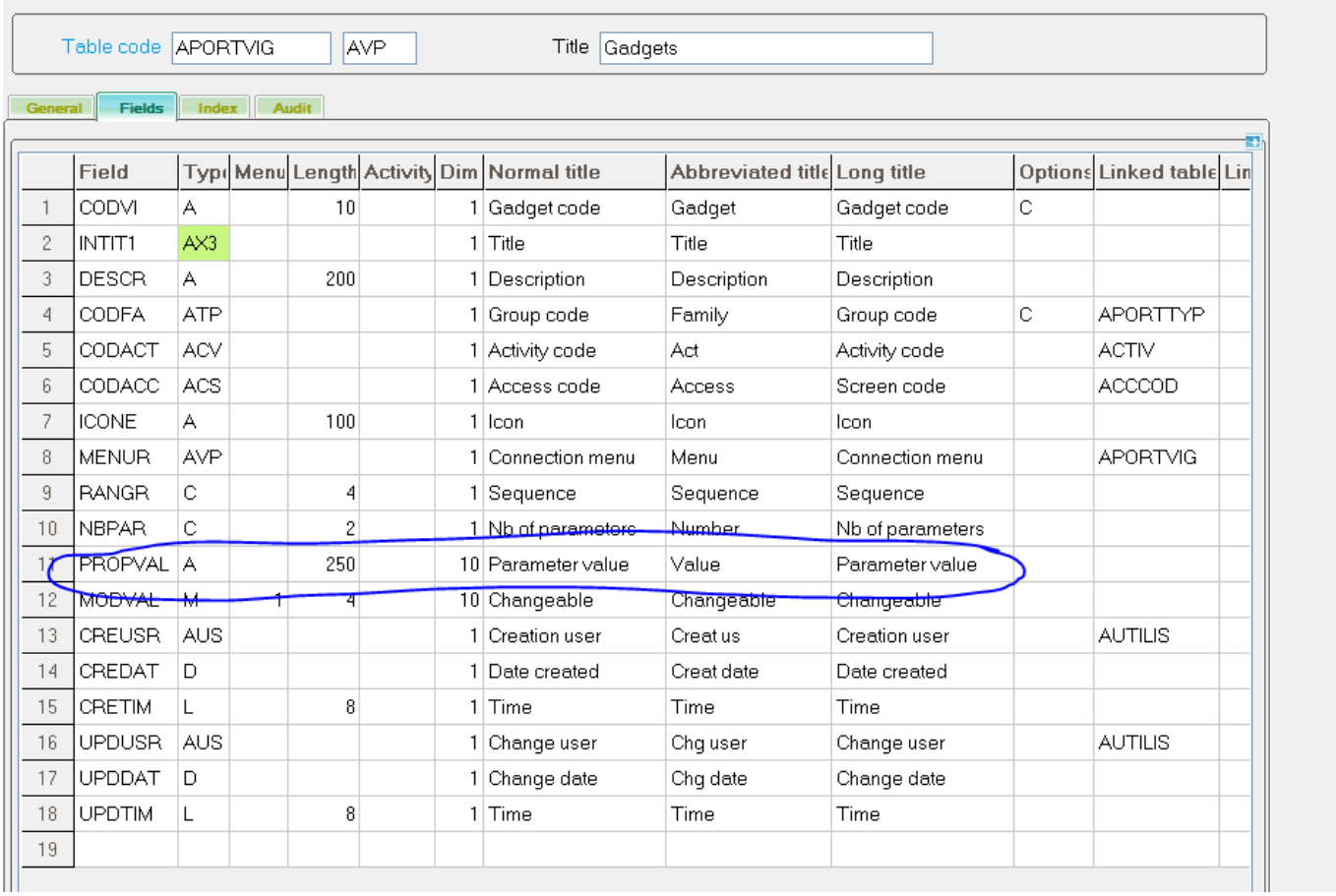
4. Create a new Gadget of type Web and put the link in the Data Source



5. Open a portal and drag your gadget.



6. If it is not working you may have to change the size of the field where the link is stored to be able to put up to 250 characters inside X3.



	Field	Typ	Menu	Length	Activity	Dim	Normal title	Abbreviated title	Long title	Options	Linked table	Lin
1	CODVI	A		10		1	Gadget code	Gadget	Gadget code	C		
2	INTIT1	AX3				1	Title	Title	Title			
3	DESCR	A		200		1	Description	Description	Description			
4	CODFA	ATP				1	Group code	Family	Group code	C	APORTTYP	
5	CODACT	ACV				1	Activity code	Act	Activity code		ACTIV	
6	CODACC	ACS				1	Access code	Access	Screen code		ACCCOD	
7	ICONE	A		100		1	Icon	Icon	Icon			
8	MENUR	AVP				1	Connection menu	Menu	Connection menu		APORTVIG	
9	RANGR	C		4		1	Sequence	Sequence	Sequence			
10	NBPAR	C		2		1	Nb of parameters	Number	Nb of parameters			
11	PROPVAL	A		250		10	Parameter value	Value	Parameter value			
12	MODVAL	M	1	4		10	Changeable	Changeable	Changeable			
13	CREUSR	AUS				1	Creation user	Creat us	Creation user		AUTILIS	
14	CREDAT	D				1	Date created	Creat date	Date created			
15	CRETIM	L		8		1	Time	Time	Time			
16	UPDUSR	AUS				1	Change user	Chg user	Change user		AUTILIS	
17	UPDDAT	D				1	Change date	Chg date	Change date			
18	UPDTIM	L		8		1	Time	Time	Time			
19												

Audit and Usage Statistics

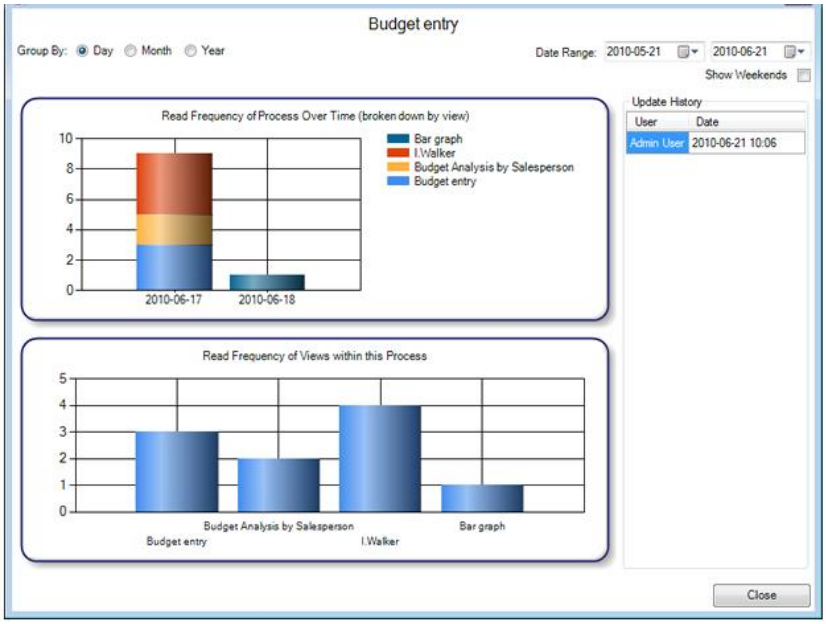
This feature tracks usage of your processes and views so you know how often they are being used and by whom. It also tracks the dates and users making changes to processes and views so you know when and who made changes to your system. You will know if a process is not being used by your end users, enabling you to ask why and help them become more efficient.

Audit and Usage Statistics per Process

To access the "Audit and Usage Statistics", you need to select the process, right click and choose the option "Statistics" from the context menu.

In this window you will be able to:

- See the usage of the views of this process per date, month or year.
- See the audit of the modifications of this process.
- Change the range of date to show.
- Change to format of the period to show from (Year, Month or Day).
- Include or exclude the weekends from the stats.
- Click on the bar graph to drill-down to the view statistics level.

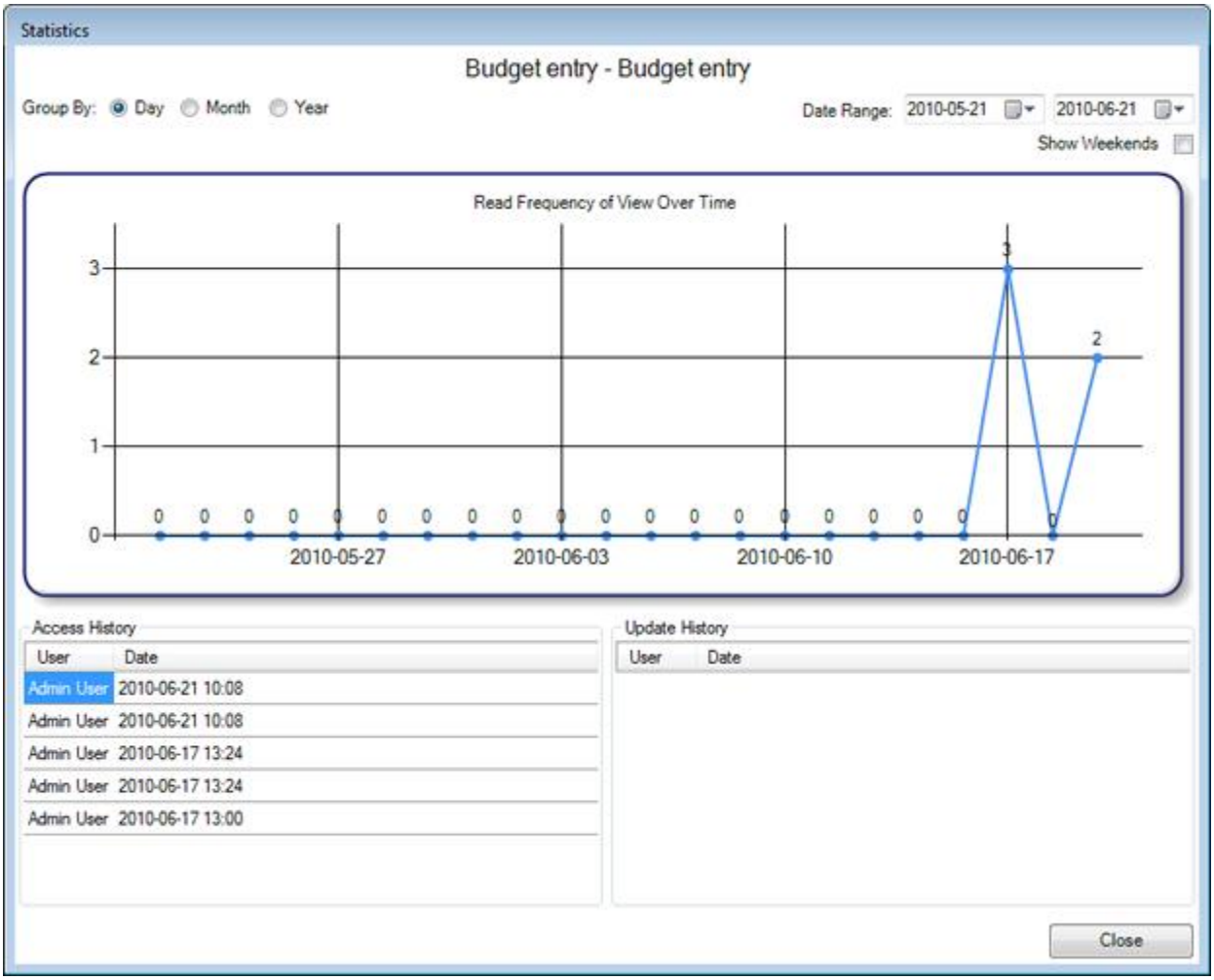


Audit and Usage Statistics per View

To access the "Audit and Usage Statistics" you need to select the view, right click and choose the option "**Statistics**" from the context menu, or you can click on the bar corresponding to the desired view from the "**Audit and Usage Statistics per Process**" screen.

In this window you will be able to:

- See the usage of the views per date, month or year.
- See the audit history of this view.
- See the access history of this view.
- Change the range of date to show
- Change to format of the period to show from (Year, Month or Day)
- Exclude or include the weekends from the stats.
- Click on the bar graph to drill-down to the view statistics level.


Statistics
Budget entry - Budget entry
Group By: Day Month Year
Date Range: 2010-05-21 2010-06-21
Show Weekends
Read Frequency of View Over Time
3
2
1
0
2010-05-27
2010-06-03
2010-06-10
2010-06-17
Access History
User Date
Admin User 2010-06-21 10:08
Admin User 2010-06-21 10:08
Admin User 2010-06-17 13:24
Admin User 2010-06-17 13:24
Admin User 2010-06-17 13:00
Update History
User Date
Close

Your Comments are Welcome

While every effort has been undertaken to make this documentation complete and accurate, we would be pleased to hear from you in order to improve its quality. If you have questions or comments regarding this documentation, please address them to:

Sage Software Inc.