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Administration Guide

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1 Overview

About This Guide

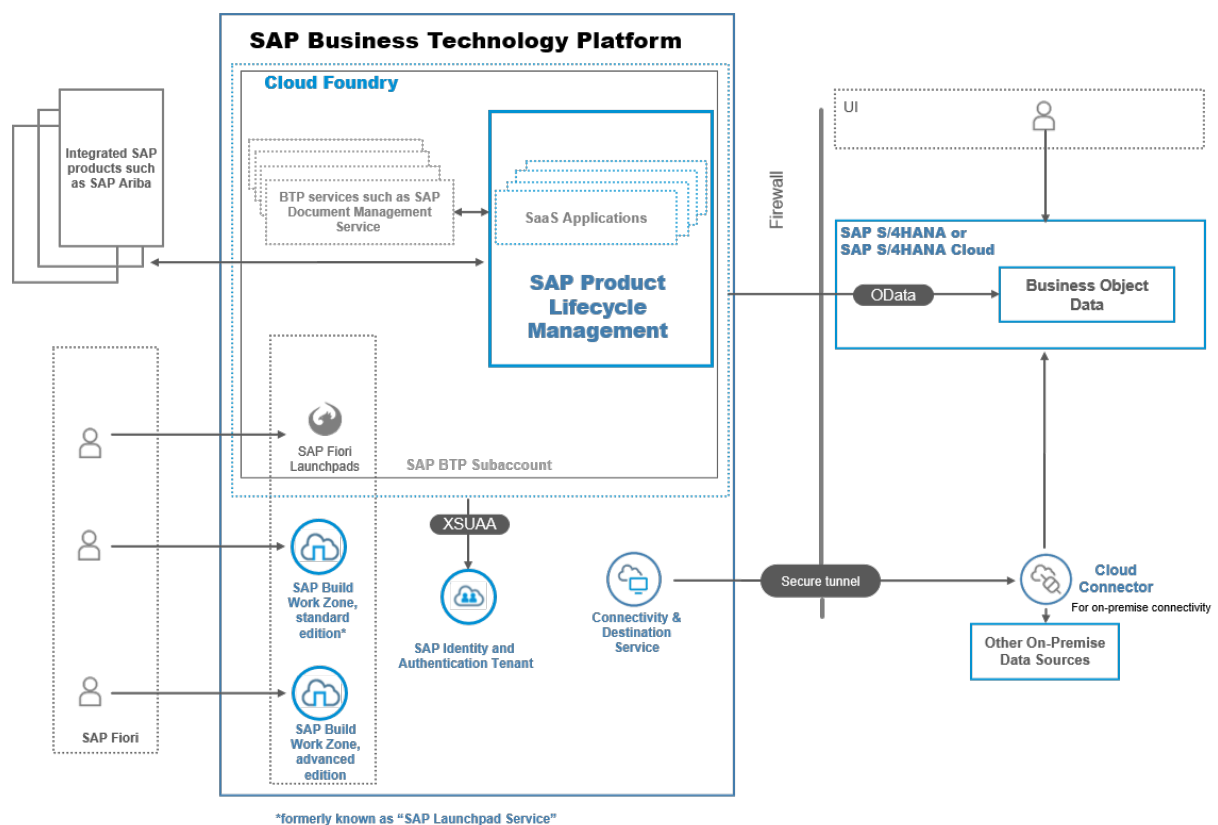
This administration guide describes the steps you need to perform as an administrator to set up and run SAP Product Lifecycle Management. It covers information specific to the cloud solution only. For general information about SAP Business Technology Platform, see the [SAP Business Technology Platform documentation](#) on SAP Help Portal.

This guide addresses the following target audience:

- System administrators
- Key users

About SAP Product Lifecycle Management

The following diagram shows the solution landscape:



SAP Product Lifecycle Management is available in the Cloud Foundry environment of SAP Business Technology Platform, and consists of the following SaaS applications:

- Collaboration
- Common Functions
- Configuration Management
- Engineering
- Enterprise Product Structure
- Insights
- Intelligent Handover
- Specification Management
- Product Innovation Management
- Visualization

Note

The functional scope of your global account depends on your organization's license arrangement with SAP.

Usage of Identity Authentication is **mandatory** and has the following advantages:

- It seamlessly supports single sign-on within the SAP cloud applications.
- You can use it as an identity provider to maintain users and user groups.
- It can work as a federated identity proxy to delegate authentication to any SAML-based custom identity providers.
- It is a standard that supports various types of authentications such as the following:
 - Username / Password
 - X.509 certificate based authentication
 - Kerberos / SPNEGO based security authentication
 - Two Factor authentication
 - Corporate user store

The administrative activities that you must perform to set up the solution are explained in further chapters.

Entry Point for App Access

To access the different apps provided by the SaaS applications for SAP Product Lifecycle Management in one place, we recommend that you use the SAP Build Work Zone, standard edition.

However, if you use only one SaaS application, it is also possible to use the individual SAP Fiori launchpad provided for that SaaS application.

Caution

If you use the Collaboration SaaS application, we recommend that you always use SAP Build Work Zone, standard edition instead of the individual SAP Fiori launchpad. The Collaboration SaaS application re-uses apps that are part of other SAP BTP services. You cannot control the access to these SAP BTP apps on the individual SAP Fiori launchpad. The apps will appear on the individual SAP Fiori launchpad for users who cannot open them.

For more information about setting up the different entry points, see [Entry Point for App Access \[page 144\]](#).

Launchpad Themes

To support various color and vision preferences, the following themes are provided for SAP Product Lifecycle Management:

- SAP Evening Horizon
- SAP High Contrast Black
- SAP High Contrast Black (SAP Horizon)
- SAP High Contrast White
- SAP High Contrast White (SAP Horizon)
- SAP Morning Horizon
- SAP Quartz Dark
- SAP Quartz Light

The default delivered theme is SAP Horizon. For information about how to change the theme, see [Managing Your Settings](#) in the user assistances for the SAP Fiori launchpad for SAP S/4HANA Cloud.

Supported Languages

The user interfaces of the solution and in-app help (where available) are provided in the following languages:

- English
- German
- Brazilian Portuguese
- Chinese (simplified)
- Chinese (traditional)
- French
- Italian
- Korean
- Japanese
- Russian
- Spanish

The solution documentation (User Guide and What's New information) is available in the following languages:

- English
- German

Related Information

[Cloud Foundry Environment in SAP Business Technology Platform](#)

2 Document History

Provides details about the changes made in this document.

Date [YYYY-MM-DD]	Area	Short Description	Link to Changed or Added Topic
2024-04-19	Collaboration	The topic has been updated with the information about the new <i>Keys</i> and <i>Non-Keys</i> tabs on the <i>Reference Objects</i> tab.	Working with Reference Objects [page 173]
2024-04-19	Collaboration	The topic has been updated with the information about deleting a collaboration type on <i>Collaboration Type</i> tab.	Working with Collaboration Types [page 163]
2024-04-19	Collaboration	The topic has been updated with the information about downloading a CSV file on <i>Supplier Data</i> tab.	Configure Supplier Data [page 231]
2024-04-19	Configuration Management	Information on routing has been added.	<ul style="list-style-type: none">• Role Templates for Configuration Management [page 41]• Configuring Connectivity for Configuration Management [page 111]• Configuring Baseline Profiles and Lifecycle Phase Templates [page 238]
2024-04-19	Intelligent Handover	Information on routing and task monitoring has been added.	Configuring Connectivity for Intelligent Handover [page 125] Role Templates for Intelligent Handover [page 53]
2024-03-15	General	A document with information about the delivery dates for 2024 has been added.	Delivery Schedule and Dates [page 375]
2024-03-15	General	A document has been added to explain the steps that existing customers need to follow to migrate from SAP Enterprise Product Development to SAP Product Lifecycle Management.	Moving from SAP Enterprise Product Development to SAP Product Lifecycle Management [page 24]

Date [YYYY-MM-DD]	Area	Short Description	Link to Changed or Added Topic
2024-02-17	Product Innovation Management	<ul style="list-style-type: none"> A new connectivity chapter has been added. A new business configuration chapter has been added. 	<ul style="list-style-type: none"> Configuring Connectivity for SAP Build Process Automation [page 139] Configuring Email Notifications [page 338]
2024-02-05	Connected Products	The information for Connected Products, which is only valid for customers who subscribed to the SaaS application before February 5, 2024, was moved to a separate guide.	Information for Administrators about Connected Products
2024-02-05	Product Cockpit	The information for Product Cockpit, which is only valid for customers who subscribed to the SaaS application before February 5, 2024, was moved to a separate guide.	Information for Administrators about Product Cockpit
2024-02-05	General	First version for SAP Product Lifecycle Management	

3 Technical Prerequisites

Before you start to use SAP Product Lifecycle Management, check the requirements and recommendations in this section.

[Minimum Hardware Requirements \[page 12\]](#)

[Software Requirements \[page 12\]](#)

[Internet Connection and Network Requirements \[page 12\]](#)

[Browsers and Browser Settings \[page 13\]](#)

3.1 Minimum Hardware Requirements

We recommend you to have dedicated graphics hardware for Visualization.

3.2 Software Requirements

Software	Details
Identity Authentication	Use of the Identity Authentication service (IAS) is mandatory. For more information, see Managing Users with the Identity Authentication Service [page 78] .
Cloud Connector	Some of the applications in the solution allow you to access data from an on-premise system. For these features to work, you must have installed the cloud connector. For more information, see Cloud Connector .

3.3 Internet Connection and Network Requirements

An internet connection is required to access the application and its functionalities. To work with the Collaboration cloud service for SAP Product Lifecycle Management, a network connection with a speed of 32 Mbps or higher is recommended for a smooth experience.

3.4 Browsers and Browser Settings

The applications for SAP Product Lifecycle Management run in the latest versions of the following browsers:

- Google Chrome

→ Recommendation

We recommend that you use Google Chrome as your browser.

- Firefox
- Safari
- Microsoft Edge

ⓘ Note

There are a number of known display issues when using Microsoft Edge.

Mobile Browsers

ⓘ Note

The *Requirements Management and System Modeling* app, which is provided by the Engineering SaaS application, is only supported for desktop use.

→ Recommendation

We recommend that you use Google Chrome for Android and Safari for iOS as your browser on mobile devices.

Web Browser Settings: Cross-Site Cookies

Applications that are accessed using SAP Build Work Zone, standard edition or SAP Build Work Zone, advanced edition are affected by web browser settings relating to cross-site cookies. Restrictions that apply to such cookies may result in applications failing to load. This can occur in the following cases:

- When you are using certain mobile web browsers
- When using a privacy mode (Incognito/Private/InPrivate tabs/windows)
- When non-default web browser settings are used

The following table shows the web browser settings that are required to use SAP Product Lifecycle Management applications with SAP Build Work Zone, standard edition or SAP Build Work Zone, advanced edition in the supported web browsers.

Web Browser	Background Information	Settings
Google Chrome	Changes to the default Google Chrome browser settings are required to use affected applications in an Incognito tab or window.	<p>To allow usage in Incognito mode on macOS or Microsoft Windows:</p> <ol style="list-style-type: none"> 1. Enter chrome://settings/cookies into your Google Chrome browser address bar. 2. Navigate to ► <i>Manage and delete cookies and site data</i> ► <i>General settings</i> ▾. 3. Ensure <i>Allow all cookies</i> is selected. <p>To allow usage in Incognito mode on Android:</p> <ol style="list-style-type: none"> 1. Open the Chrome ... menu and select <i>Settings</i>. 2. Navigate to ► <i>Site settings</i> ► <i>Third-party cookies</i> ▾ 3. Ensure <i>Allow third-party cookies</i> is selected.
Safari	<p>On macOS, changes to the default Safari browser settings are required to use affected applications in a Normal or Private tab or window.</p> <p>On iOS, changes to the default Safari browser settings are required to use affected applications (regardless of whether a Private tab is used).</p>	<p>To allow usage in Normal or Private mode on macOS:</p> <ol style="list-style-type: none"> 1. Open the Safari menu and select <i>Preferences...</i> 2. Navigate to <i>Privacy</i>. 3. Ensure <i>Prevent cross-site tracking</i> is disabled. <p>To allow usage on iOS:</p> <ol style="list-style-type: none"> 1. Open the iOS Settings application. 2. Open the settings for the Safari application. 3. Ensure <i>Prevent cross-site tracking</i> is disabled.
Firefox	<p>The affected applications can be used in Firefox with the default browser settings.</p> <p>When custom privacy settings are used, the affected applications do not work if any of the following sets of cookies are blocked:</p> <ul style="list-style-type: none"> • Cookies from unvisited websites • All third-party cookies • All cookies 	

Web Browser	Background Information	Settings
Microsoft Edge	Changes to the default Microsoft Edge browser settings are required to use the affected applications in an InPrivate tab or window.	<p>To allow usage in InPrivate mode on macOS or Microsoft Windows:</p> <ol style="list-style-type: none"> 1. Enter edge://settings/content/cookies into your Microsoft Edge browser address bar. 2. Ensure <i>Block third-party cookies</i> is disabled.

Note

Applications that are used on the SaaS application-specific launchpads that are provided by SAP Product Lifecycle Management subscriptions are not affected by these cross-site cookie restrictions.

4 Onboarding

To get started working with SAP Product Lifecycle Management, follow these onboarding steps.

Prerequisites

- You have reviewed your welcome email with the details of your purchase and a link for accessing the SAP Business Technology Platform. If you are new to SAP, the welcome email also has the information about your SAP user ID (S user ID).
- You have used the link to log on to the SAP Business Technology Platform with your S user ID.
- You have set up your global account on SAP Business Technology Platform.
- You are assigned the *Administrator* role for the global account.
- You have set up your subaccount in one of the available regions.
The detailed setup steps are available here: [Create a Subaccount](#). To know which feature set you're using, see [Cloud Management Tools – Feature Set Overview](#).

→ Tip

When creating your subaccount, keep these tips in mind:

- We recommend that you enter a user-friendly name that can help you identify the landscape. For example, if an organization named Autobot implements the solution with two types of landscapes, the following could be their naming pattern: `<org> epd <type>`, with "autobot epd dev" or "autobot epd prod" as the results.
- The subdomain that you enter becomes a part of the URL for accessing applications that you subscribe to from this subaccount.

The list of available regions is as follows:

Region Name	Region	IaaS Provider	Availability per SaaS Application
Europe (Netherlands)	eu20	Microsoft Azure	Available for all SaaS applications
Europe (Frankfurt)	eu10	Amazon Web Services	Available for all SaaS applications
US East (VA)	us10	Amazon Web Services	Available for all SaaS applications
China (Shanghai)	cn40	Alibaba Cloud	Not available for Insights

For more information about regions, see [Regions and Endpoints Available for the Cloud Foundry Environment](#).

Context

Here is a summary of the onboarding steps:

1. You set up the basic SAP BTP configuration for your entitlement and subscriptions.
2. You set up identity authentication for your subaccount on SAP BTP.
3. You set up your user roles for SAP Product Lifecycle Management.
4. You make the configuration settings for connectivity on SAP BTP.
5. Recommended: You set up the central SAP Build Work Zone, standard edition and its corresponding user roles.
6. You make the necessary business configuration settings for your SaaS applications to meet your business requirements.
7. Optional: You set up the integration to other applications and systems as needed.

The following procedure explains the steps in more detail and provides links to more detailed descriptions in this administration guide and other resources on the SAP Help Portal.

Procedure

1. Subscribe to the SaaS applications that you need. The detailed steps for subscribing are explained here: [Subscribing to the SaaS Applications \[page 19\]](#).

You use your SAP BTP subaccount to subscribe to all the SaaS applications that you plan to use. Subscribe to Common Functions to use default role collections for easier user management. For information on which SaaS applications are integrated and should be subscribed to at the same time, see [Subscription Tips: Integrated SaaS Applications \[page 20\]](#).

→ Recommendation

Don't launch the application until you have finished setting up the cloud solution. The [Go to Application](#) link becomes available once the subscription is activated, but you should work through all onboarding steps before you launch the application.

2. Establish a trust relationship with an SAML 2.0 identity provider in your subaccount on SAP BTP.

→ Recommendation

Use the SAP Cloud Identity Service - Identity Authentication (IAS) as your identity provider for SAP Product Lifecycle Management.

A detailed explanation about what IAS is and how to set it up is available here: [Trust and Federation with Identity Providers](#).

3. Define and map users based on groups or other attributes to role collections on SAP BTP for SAP Product Lifecycle Management.

Roles are assigned to role collections that are, in turn, assigned to users or user groups. The various roles are bundled into role collections, depending on the level of access that you want the user to have in SAP Product Lifecycle Management SaaS applications. Access can be based on application feature access, for example, to collaborations or requirements, or based on the personas that you define. You can use

the default role collections that are provided with SAP Product Lifecycle Management (see [Default Role Collections \[page 72\]](#)). If the default role collections don't meet your requirements, you can create your own role collections. For more detailed information, see [Defining and Bundling Roles \[page 27\]](#).

4. Establish a connection between the different services in play using SAP BTP Connectivity: Cloud Connector, the SAP BTP Destination service, and other predefined protocols for the solution.

The Cloud Connector provides a connectivity proxy to access on-premise resources. The Destination service lets you retrieve and store the technical information about the target resource (destination) that you need to connect your application to a remote service or system.

For more detailed information about the connectivity that is needed for each SaaS application, see [Connectivity \[page 82\]](#).

5. Set up the entry point for your users to open the SAP Fiori apps that are delivered with SAP Product Lifecycle Management.

Information about the different alternatives with links to more detailed setup information is available here: [Entry Point for App Access \[page 144\]](#).

6. Make the required business configuration settings for each of your SaaS applications.

For detailed information about the settings that are needed for each SaaS application, see [Business Configuration \[page 155\]](#).

7. Optional: When needed, set up the integration to other applications and systems.

The *Integration* tab on the SAP Help Portal page for SAP Product Lifecycle Management provides integration guides with detailed procedures. Here is a direct link: [Integrate](#).

For information on how to implement APIs that are published on the SAP Business Accelerator Hub for SAP Product Lifecycle Management, see the *Develop* tab. Here is a direct link: [Develop](#).

Check SAP Note [3109501](#). This contains answers to questions you might have when setting up SAP Product Lifecycle Management.

Next Steps

To onboard your users, share the information that is provided in our User Guide with them. Here is a link to the relevant section on the SAP Help Portal page: [Use](#).

The SAP Fiori apps that are delivered for the different SaaS applications also have in-app help in SAP Companion. Users can access the in-app help by choosing the [Open Help](#) in the upper right corner of the launchpad screen. This in-app help has direct links to the relevant sections in the User Guide and, where needed, more explanation at field level. For more information on how to set this up for SAP Build Work Zone, standard edition, see [SAP Build Work Zone, standard edition with Multiple SaaS Applications \[page 145\]](#).

Regularly check for any updates to this guide by reading the document history: [Document History \[page 10\]](#). Changes within the solution and its SaaS applications are published in the What's New Viewer for SAP Product Lifecycle Management. Here is a link to the relevant section on the SAP Help Portal: [What's New](#). Use the [Subscribe](#) button in the action bar of the What's New Viewer to get an email notification whenever new updates are published. For more information on how to use the What's New Viewer, see [How to Use the What's New Viewer for SAP Enterprise Product Development](#).

4.1 Subscribing to the SaaS Applications

Follow the steps given here to subscribe to the SaaS applications.

Prerequisites

You have read this document in detail: [Onboarding \[page 16\]](#).

Context

The following SaaS applications are available for SAP Product Lifecycle Management:

- Collaboration
- Common Functions
- Configuration Management
- Engineering
- Enterprise Product Structure
- Product Innovation Management
- Insights
- Intelligent Handover
- Specification Management
- Visualization

For each SaaS application to which you want to subscribe, you have to add the associated service plan as an entitlement for your subaccount and create an application instance. You may also need to subscribe to other integrated SaaS applications for all functions in a SaaS application to work properly. To get an overview of the SaaS applications that should be subscribed to and used together per SAP BTP subaccount, see [Subscription Tips: Integrated SaaS Applications \[page 20\]](#).

Note

To get access to the default role collections that can be used for user management, you must add an entitlement for Common Functions.

Procedure

1. In the SAP BTP Cockpit, open your subaccount and navigate to [Entitlements](#).
2. Search for the SaaS application that you need. If an entitlement for the SaaS application is already available, proceed to the next step. If it isn't available, follow these steps:

- a. Choose [Configure Entitlements](#) > [Add Service Plans](#).
 - b. In the *Entitlements* dialog that opens, search for the SaaS application.
 - c. Select **production** from the list of available plans.
 - d. Close the *Entitlements* screen by choosing [Add Service Plans](#).
 - e. Save your selection.
3. To subscribe to the SaaS application, choose [Services](#) > [Service Marketplace](#).
 4. Search for the SaaS application that you want.
 5. Choose **Actions** and then *Create*.
 6. In the *New Instance or Subscription* dialog, make your selections and then create the subscription.
 7. Navigate to [Services](#) > [Instances and Subscription](#). You can now see the SaaS application under *Subscriptions*.

For more detailed information about subscribing to applications on the SAP Business Technology Platform, see [Subscribe to Multitenant Applications Using the Cockpit](#).

Results

The [Go to Application](#) link becomes available once the subscription is activated. However, we recommend that you work through all onboarding steps before you choose the button to launch the application.

Note

For the Insights SaaS application, you will use your instance of SAP Build Work Zone, advanced edition as your entry point. For more information, see [SAP Build Work Zone, advanced edition \[page 148\]](#).

Since your SAP Build Work Zone, advanced edition instance is managed separately, the [Go to Application](#) link activated for your Insights subscription cannot forward you to your SAP Build Work Zone, advanced edition instance. Instead, you need to use the direct link for the instance.

4.1.1 Subscription Tips: Integrated SaaS Applications

When you subscribe to a SaaS application in SAP Product Lifecycle Management, you may also need to subscribe to other integrated SaaS applications for all functions to work properly.

The following table gives you an overview of the SaaS applications that should be subscribed to and used together per SAP BTP subaccount. The values shown in the table are as follows:

- **yes**: The two SaaS applications are tightly integrated. It is mandatory that you subscribe to both SaaS applications. If you don't, expected functions won't work properly.
- **optional**: The integrated SaaS application is needed for certain optional functions to work. You can decide if you also subscribe to it or not.
- **not required**: The two SaaS applications aren't integrated.

Tip

Here's a short explanation of how to use this table: In the first column, look for the SaaS application that you would like to subscribe to. Then, in that row, check the information for the other SaaS applications

to find what you need in addition. For example, if you want to use the Collaboration SaaS application, you see in the second column that you must also subscribe to the Common Functions. A subscription to some SaaS applications is optional and allows the use of integrated features. SaaS applications with "not required" aren't integrated with the SaaS application.

Integration Between SaaS Applications

To use the SaaS application below, you must also subscribe to...	Common Functions	Collaboration	Configuration Management	Engineering	Enterprise Product Structure	Insights	Intelligent Handover	Product Innovation Management	Specification Management	Visualization
Collaboration	yes	--	not required	optional (if you need the integration function between SAP EA Designer and Collaboration)	not required	not required	not required	not required	not required	optional
Engineering	yes	optional (if you need the integration function between SAP EA Designer and Collaboration)	not required	--	not required	not required	not required	not required	not required	not required

To use the SaaS application below, you must also subscribe to...

	Common Functions	Collaboration	Configuration Management	Engineering	Enterprise Product Structure	Insights	Intelligent Handover	Product Innovation Management	Specification Management	Visualization
Visualization	yes	optional (if you need data sources and marker intent navigation)	not required	yes (if you need data sources and marker intent navigation)	not required	not required	not required	not required	not required	--
Enterprise Product Structure	optional (to use default role collections)	not required	optional	not required	--	not required	not required	not required	not required	not required
Intelligent Handover	optional (to use default role collections)	not required	optional	not required	not required	not required	--	not required	not required	not required
Configuration Management	optional (to use default role collections)	Optional to use integrated features from Collaboration	--	not required	yes	not required	Optional to use integrated features from Intelligent Handover	not required	not required	Optional to use integrated features from Visualization
Product Innovation Management	yes	not required	not required	not required	not required	not required	not required	--	not required	not required

To use the SaaS application below, you must also subscribe to...

	Common Functions	Collaboration	Configuration Management	Engineering	Enterprise Product Structure	Insights	Intelligent Handover	Product Innovation Management	Specification Management	Visualization
Specification Management	optional (to use default role collections)	not required	not required	not required	not required	not required	not required	not required	--	not required
Insights	optional (to use default role collections)	required to use the cards in the <i>Insights: Collaboration</i> content package	not required	required to use the cards for requirements models in the <i>Insights: Define Products</i> content package	not required	--	not required	required to use the cards for ideas and campaigns in the <i>Insights: Define Products</i> content package	not required	not required

Related Information

[Subscribing to the SaaS Applications \[page 19\]](#)

4.1.2 Moving from SAP Enterprise Product Development to SAP Product Lifecycle Management

To switch from SAP Enterprise Product Development to SAP Product Lifecycle Management and continue using the features and functions that you are accustomed to, follow the steps in this document.

Prerequisites

- You received notification that your license for SAP Enterprise Product Development is going to expire.
- You are not using the Enterprise Product Development SaaS application. You are subscribed to the individual SaaS applications as needed. These include the following:
 - Collaboration
 - Common Functions
 - Configuration Management
 - Engineering
 - Enterprise Product Structure
 - Insights
 - Intelligent Handover
 - Product Innovation Management
 - Specification Management
 - Visualization

If you have not migrated to the individual SaaS applications, follow the steps in the migration guide here: [Migrating to Individual SaaS Applications](#).

- You have contacted your account executive and made the arrangements to receive a new entitlement for SAP Product Lifecycle Management, and you have received the welcome mail with a link to the SAP BTP Cockpit.
- You have read and understood all of the steps below. If you have any concerns, before proceeding open an incident with your questions under xxx.

Context

In February 2024, we rebranded our solution from SAP Enterprise Product Development to SAP Product Lifecycle Management. Subscriptions to SAP Enterprise Product Development remained unchanged, that is, the scope and services for existing customers continue seamlessly until the end of the subscription period.

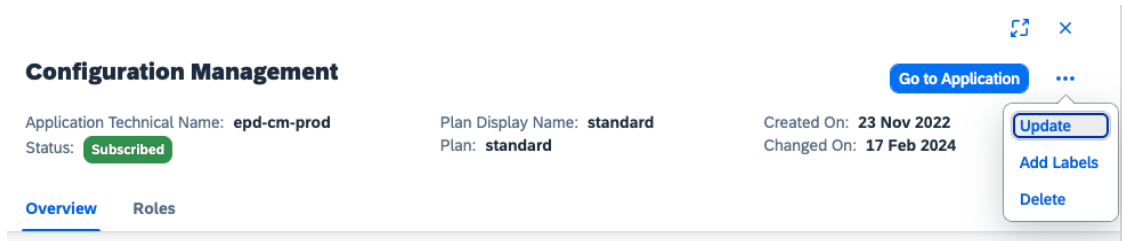
However, this change means that SAP Enterprise Product Development is no longer available for new subscriptions. If your license for SAP Enterprise Product Development is going to expire, you need to follow the steps in this document to move to SAP Product Lifecycle Management. Your existing data will be available after you complete the steps, and you can continue to use the SaaS applications that you have subscribed to.

⚠ Caution

It is important that you complete the following steps in the order described. Do **not** delete your existing subscriptions for the SAP Enterprise Product Development SaaS applications. This would result in the loss of existing data and cannot be reversed.

Procedure

1. In the SAP BTP Cockpit, check that the entitlement for the `production` plan of each SaaS application is now available in the global account that you used for SAP Enterprise Product Development.
2. Assign the new entitlement for SAP Product Lifecycle Management to the subaccount that you used for SAP Enterprise Product Development.
3. In that subaccount, update all subscriptions that you had for SAP Enterprise Product Development from the standard plan to the production plan. Do not unsubscribe and subscribe. Use the update feature as follows:
 - a. Choose the *Update* option as shown in this sample screenshot:



- b. Select `production` as the plan type and then choose *Update Subscription* as shown here:

Update Subscription

1

Basic Info

Enter basic info for your instance or subscription.

Service: * i Can't find what you're looking for?

Configuration Management
v

Plan: *

production
v

Subscriptions

production	Production
standard	standard

Update Subscription
Cancel

i Note

During the migration, you might notice that the entitlements of the old standard plan no longer show up for your global account. This is the expected behavior. These entitlements for the standard plan remain in your subaccount and must be updated as described in this step.

5 User Management

After trust is set up between the SAP Business Technology Platform and the SAP Cloud Identity Service - Identity Authentication (IAS) as your identity provider, map your SAP Product Lifecycle Management users to role collections in the SAP BTP Cockpit.

A role collection comprises several roles and is assigned to users or user groups. The roles that you bundle into a role collection for SAP Product Lifecycle Management depend on the level of access that you want a user to have to different apps for working on, for example, collaborations, requirements, and so on.

To set up your user management, we recommend that you proceed as follows:

1. Check out the default role collections that are delivered as part of the Common Functions SaaS application for SAP Product Lifecycle Management.
These default role collections for SAP Product Lifecycle Management were created based on typical personas in the product lifecycle management process and are updated regularly. They provide access to the SAP Product Lifecycle Management apps that are most often needed by your different users to complete their daily work tasks.
Details about the available default role collections, the tasks that each collection covers, and how to use them is available here: [Default Role Collections \[page 72\]](#)

Note

To be able to use the default role collections, you must also subscribe to the Common Functions SaaS application. For more information, see [Subscribing to the SaaS Applications \[page 19\]](#).

Caution

Once you use default role collections and assign them to your users, you can't delete them.

2. If the default role collections that are delivered with SAP Product Lifecycle Management do not meet your requirements, you can create your own roles, which you then bundle into your own role collections and assign to your users.
SAP Product Lifecycle Management provides role templates for you to base your own custom roles on. For more information about the apps are bundled into the different role templates, see [Defining and Bundling Roles \[page 27\]](#).

5.1 Defining and Bundling Roles

If you choose to use the default role collections that are created with the subscription to SAP Product Lifecycle Management SaaS applications, skip the steps explained here.

If you want to create a new role collection or use your own existing collection, complete these steps:

1. If needed, create a new role collection as described here: [Define a Role Collection](#).
2. Assign the existing SAP Product Lifecycle Management application roles to your new or existing role collection as described here: [Add Roles to a Role Collection](#).

If you want to create your own roles, follow the steps given in [Create Roles for Subscribed Applications Using Existing Role Templates](#).

For more information about the provided default role templates and default role collections for a specific SaaS application of SAP Product Lifecycle Management, see the relevant document:

- [Role Templates for Collaboration \[page 29\]](#)
- [Role Templates for Common Functions \[page 40\]](#)
- [Role Templates for Configuration Management \[page 41\]](#)
- [Role Templates for Engineering \[page 45\]](#)
- [Role Templates for Enterprise Product Structure \[page 48\]](#)
- [Role Templates for Insights \[page 50\]](#)
- [Role Templates for Intelligent Handover \[page 53\]](#)
- [Role Templates for Product Innovation Management \[page 60\]](#)
- [Role Templates for Specification Management \[page 62\]](#)
- [Role Templates for Visualization \[page 70\]](#)

Next Steps

[Managing Users with the Identity Authentication Service \[page 78\]](#)

5.1.1 Role Templates for Collaboration

The Collaboration SaaS application for SAP Product Lifecycle Management provides the following role templates:

Name	Description	Available Attributes	Attribute Scope	Tiles on SAP Fiori Launchpad
CollaborationAdmin	<p>Allows the user to determine which fields are shown in an app and which value is displayed for each business user.</p> <p>Allows the user to access and work with collaborations.</p>	level, type	<p>Scopes relevant for level are:</p> <ul style="list-style-type: none"> admin superadmin <p>Scope relevant for type is:</p> <ul style="list-style-type: none"> internal 	<p>Configure Collaboration, Configure Product Data, Workflow Properties, Collaboration - Data Security, Monitor Workflows, My Collaborations, My Inbox, Configure Visibility Scenarios, Event Acquisition, Manage Decisions, Manage Packages, Monitor Visibility Scenarios, Process Flexibility Cockpit, Process Workspace, Visibility Scenario Dashboard</p>
CollaborationUser	<p>Allows the user to access and work with collaborations.</p>	type	<p>Scopes relevant for type are:</p> <ul style="list-style-type: none"> internal external 	<p>My Collaborations, My Inbox</p>

Name	Description	Available Attributes	Attribute Scope	Tiles on SAP Fiori Launchpad
CollaborationAdministrator	Allows the user to determine which fields are shown in an app and which value is displayed for each business user.	type	Scope relevant for type is: <ul style="list-style-type: none"> internal 	<i>Configure Collaboration, Configure Product Data, Workflow Properties, Collaboration - Data Security, Monitor Workflows, My Collaborations, My Inbox, Configure Visibility Scenarios, Event Acquisition, Manage Decisions, Manage Packages, Monitor Visibility Scenarios, Process Flexibility Cockpit, Process Workspace, Visibility Scenario Dashboard, Visibility Scenario Dashboard</i>
CollaborationDPPAdministrator	Allows the user to determine which fields are shown in an app and which value is displayed for each business user.	type	Scope relevant for type is: <ul style="list-style-type: none"> internal 	<i>Configure Collaboration, Configure Product Data, Workflow Properties, Collaboration - Data Security, Monitor Workflows, My Collaborations, My Inbox, Configure Visibility Scenarios, Event Acquisition, Manage Decisions, Manage Packages, Monitor Visibility Scenarios, Process Flexibility Cockpit, Process Workspace.</i>
CollaborationInternalUser	Allows the user to access and work with collaborations.	type	Scope relevant for type is: <ul style="list-style-type: none"> internal 	<i>My Collaborations, My Inbox</i>
CollaborationExternalUser	Allows the user to access and work with collaborations.	type	Scope relevant for type is: <ul style="list-style-type: none"> external 	<i>My Collaborations, My Inbox</i>

Note

These are preshipped roles with default attributes. Do not modify or delete these role templates.

- CollaborationExternalUser
- CollaborationAdministrator
- CollaborationDPPAdministrator
- CollaborationInternalUser

The application identifier for Collaboration is `epd-collab-prod!<suffix>`.

Note

You can create other role collections applicable to collaboration, based on your business needs.

The following table shows you which of the default role collections contain the above role template:

Example of Role Collections for Working with Collaborations

Role template	EPD_Qual ity_Man- ager	EPD_Qual ity_Engi- neer	EPD_Sys- tems_En- gineer	EPD_Re- quire- ments_En- gineer	EPD_Prod uct_Man- ager	EPD_Ad- ministra- tor	EPD_Feed back_Pro- vider	EPD_De- sign_Engi- neer	EPD_Serv ice_Engi- neer
CollaborationAdministrator									
CollaborationDPPAdministrator						x		x	
CollaborationInternalUser	x	x	x	x	x				
CollaborationExternalUser									

To help you get started with the Collaboration cloud service, perform the following steps to create roles and role collections:

1. Create roles from the role templates.
For more information about how to create roles and how to bundle them in role collections using the SAP BTP cockpit, see [Building Roles and Role Collections for Applications](#).

Note

The following table is only an example. You can create roles based on your business needs.

Example of Roles from Collaboration Role Templates

Role	Description	Role Template	Attribute Scope	Tiles on SAP Fiori Launchpad
CollaborationDPPAdmin	<p>Allows users to define business configurations for collaborations.</p> <p>Allows users to perform tasks within the collaboration apps</p>	CollaborationAdmin	<p>level: "superadmin"</p> <p>type: "internal"</p>	<p><i>Collaboration - Data Security, Configure Collaboration, Configure Product Data, Workflow Properties, Monitor Workflows (Manage Workflow Instances and Manage Workflow Definitions), My Collaborations, My Inbox, Configure Visibility Scenarios, Event Acquisition, Manage Decisions, Manage Packages, Monitor Visibility Scenarios, Process Flexibility Cockpit, Process Workspace, Visibility Scenario Dashboard</i></p>
CollaborationAdmin	<p>Allows users to define business configurations for collaborations.</p> <p>Allows users to perform tasks within the collaboration apps</p>	CollaborationAdmin	<p>level: "admin"</p> <p>type: "internal"</p>	<p><i>Configure Collaboration, Configure Product Data, Workflow Properties, Monitor Workflows (Manage Workflow Instances and Manage Workflow Definitions), My Collaborations, My Inbox, Configure Visibility Scenarios, Event Acquisition, Manage Decisions, Manage Packages, Monitor Visibility Scenarios, Process Flexibility Cockpit, Process Workspace, Visibility Scenario Dashboard</i></p>
CollaborationExternalUser	<p>Allows users to access and work within the collaboration apps</p>	CollaborationUser	<p>type: "external"</p>	<p><i>My Collaborations, My Inbox</i></p>

Role	Description	Role Template	Attribute Scope	Tiles on SAP Fiori Launchpad
CollaborationInternalUser	Allows users to access and work within the collaboration apps	CollaborationUser	type: "internal"	My Collaborations , My Inbox

Note

By default, Source field to be set as Static when creating a new role using Create Role wizard.

2. Create role collections.

Note

The following table is only an example. You can create role collections based on your business needs.

Example of Role Collections for Working With Collaboration

Role Collection Name	Roles From	Application	Mandatory/Optional	Roles	Purpose
CollaborationAdminRC	Collaboration	epd-collab-prod! <suffix>	Mandatory	<ul style="list-style-type: none"> CollaborationAdmin CollaborationUser 	Users who are responsible for collaboration business configurations and collaboration administration.
	Document Management	sdm-di-DocumentManagement-sdm_integrati on! <suffix>	Mandatory	<ul style="list-style-type: none"> SDM_User SDM_BusinessAdmin 	
	Workflow	workflow! <suffix>	Mandatory	<ul style="list-style-type: none"> WorkflowDeveloper WorkflowAdmin WorkflowContextAdmin WorkflowParticipant WorkflowInitiator WorkflowViewer 	

Role Collection Name	Roles From	Application	Mandatory/Optional	Roles	Purpose
	Status Management	epd-status-mgmt-prod! b<suffix>	Mandatory	<ul style="list-style-type: none"> StatusManagementAdmin StatusManagementUser 	
	Specification Mangement	epd-plmfoundation-prod! b<suffix>	Optional	<ul style="list-style-type: none"> SpecificationAdministrator SpecificationExternal 	
	Visualization	3dvis-broker-3dvis-<region>! b<suffix>	Optional	<ul style="list-style-type: none"> ContentDeleter ContentCreator ContentUpdater ContentReader 	
	Workflow Management	<ul style="list-style-type: none"> pvreuseservice!b283 bpmrulebroker!b335 workflowmanagement! b885 	Optional	<ul style="list-style-type: none"> PVAdmin RuleRepositorySuperUser RuleRuntimeSuperUser WMAdmin WMDeveloper PVDeveloper PVOperator WMBusinessExpert WorkflowBusinessExpert 	
CollaborationExternalUserRC	Collaboration	epd-collab-prod! <suffix>	Mandatory	CollaborationExternalUser	Users external to your organization working with collaborations or users who require minimal authorizations.

Role Collection Name	Roles From	Application	Mandatory/Optional	Roles	Purpose
	Document Management	sdm-di-DocumentManagement-sdm_integrati on! b<suffix>	Mandatory	<ul style="list-style-type: none"> SDM_User SDM_BusinessAdmin 	
	Workflow	workflow! b<suffix>	Mandatory	<ul style="list-style-type: none"> Workflow-Viewer WorkflowParticipant WorkflowInitiator 	
	Status Management	epd-status- mgmt-prod! b<suffix>	Mandatory	StatusManagementUser	
	Specification Management	epd- plmfoundati on-prod! b<suffix>	Optional	SpecificationExternal	
	Visualization	3dvis- broker-3dvis- <region>! b<suffix>	Optional	<ul style="list-style-type: none"> ContentDeleter ContentCreator ContentUpdater ContentReader 	
	Workflow Management	<ul style="list-style-type: none"> pvreuseser vice!b283 bpmrulebro ker!b335 workflowma nagement! b885 	Optional		
CollaborationInternalUserRC	Collaboration	epd-collab- prod! <suffix>	Mandatory	CollaborationInternalUser	Internal users of your organization working with collaborations.
	Document Management	sdm-di- DocumentManag ement- sdm_integrati on! b<suffix>	Mandatory	<ul style="list-style-type: none"> SDM_User SDM_BusinessAdmin 	

Role Collection Name	Roles From	Application	Mandatory/Optional	Roles	Purpose
	Workflow	workflow! b<suffix>	Mandatory	<ul style="list-style-type: none"> WorkflowInitiator WorkflowViewer 	
	Status Management	epd-status-mgmt-prod! b<suffix>	Mandatory	StatusManagementUser	
	Specification Management	epd-plmfoundation-prod! b<suffix>	Optional	<ul style="list-style-type: none"> SpecificationDestinationEditor SpecificationEditor 	
	Visualization	3dvis-broker-3dvis-<region>! b<suffix>	Optional	<ul style="list-style-type: none"> ContentDeletor ContentCreator ContentUpdater ContentReader 	
	Workflow Management	<ul style="list-style-type: none"> pvreuseservice!b283 bpmrulebroker!b335 workflowmanagement! b885 	Optional		
CollaborationDP-AdminRC	Collaboration	epd-collab-prod! <suffix>	Mandatory	<ul style="list-style-type: none"> CollaborationDPPAdmin CollaborationUser 	Users responsible for collaboration data security.
	Document Management	sdm-di-DocumentManagement-sdm_integrati on! b<suffix>	Mandatory	<ul style="list-style-type: none"> SDM_User SDM_BusinessAdmin 	

Role Collection Name	Roles From	Application	Mandatory/Optional	Roles	Purpose
	Workflow	workflow! b<suffix>	Mandatory	<ul style="list-style-type: none"> WorkflowDeveloper WorkflowAdmin WorkflowContextAdmin WorkflowParticipant WorkflowInitiator WorkflowViewer 	
	Status Management	epd-status-mgmt-prod! b<suffix>	Mandatory	<ul style="list-style-type: none"> StatusManagementAdmin StatusManagementUser 	
	Specification Management	epd-plmfoundation-prod! b<suffix>	Optional	<ul style="list-style-type: none"> SpecificationAdministrator SpecificationExternal 	
	Visualization	3dvis-broker-3dvis-<region>! b<suffix>	Optional	<ul style="list-style-type: none"> ContentDeletor ContentCreator ContentUpdater ContentReader 	

Role Collection Name	Roles From	Application	Mandatory/Optional	Roles	Purpose
	Workflow Management	<ul style="list-style-type: none"> pvreuseservice!b283 bpmrulebroker!b335 workflowmanagement!b885 	Optional	<ul style="list-style-type: none"> PVAdmin RuleRepositorySuperUser RuleRuntimeSuperUser WMAdmin WMDeveloper PVDeveloper PVOperator WMBusinessExpert WorkflowBusinessExpert 	

Provisional Specifications

In addition to the general role templates for Collaboration, the following role templates are provided for working with provisional specifications:

Role Templates Provided for Provisional Specifications

Role Template	Description	Tiles on SAP Fiori Launchpad
SpecificationDestinationViewer	Allows the user to read data from a connected remote system.	-
SpecificationDestinationEditor	Allows the user to read and edit data in a connected remote system.	-
SpecificationViewer	Allows the user to read provisional specifications.	Manage Provisional Specifications
SpecificationEditor	Allows the user to create, edit, and read provisional specifications.	Manage Provisional Specifications
SpecificationAdministrator	Allows the user to perform administrative tasks like loading value sets, data anonymization, and data export. Also allows the user to delete provisional specifications.	<ul style="list-style-type: none"> Load Value Sets for Specification Specification - Data Security Configure Provisional Specifications Manage Provisional Specifications

Role Template	Description	Tiles on SAP Fiori Launchpad
SpecificationExternal	Allows the user to read, edit, and copy provisional specifications assigned to them in a collaboration.	Manage Provisional Specifications

→ Recommendation

When setting up an administrator role for the specification exchange scenario, we recommend that you add both the [SpecificationAdministrator](#) and the [CollaborationDPPAdministrator](#) rights to that role.

The application identifier for Product Development Foundation is `epd-plmfoundation<suffix>`

Working with Integrated Services

This section provides you with the information about the role templates that are needed to work with other services that are integrated with SAP Product Lifecycle Management.

UI5 Flexibility Services

The following role templates from the UI5 flexibility services are relevant for your collaboration key users:

Role Name	Role Template	Application Identifier
AdminFlexKeyUser	AdminFlexKeyUser	ui5-flexibility-keyuser! <suffix>
FlexKeyUser	KeyUser	ui5-flexibility-keyuser! <suffix>
KeyUser	KeyUser	epd-collab-prod!<suffix>

For more information on UI5 flexibility, see [What is UI5 flexibility? \[page 186\]](#).

SAP Document Management service

The following role templates are required from SAP Document Management service for collaboration users:

Service	Role Template	Application Identifier
SAP Document Management service	SDM_User	sdm-di-DocumentManagement-
	SDM_BusinessAdmin	sdm_integration<suffix>

SAP Workflow Management

The following role templates are required from SAP Workflow Management for collaboration users:

Service	Role Template	Application Identifier
SAP Workflow Management	WorkflowAdmin	workflow<suffix>
	WorkflowContextAdmin	
	WorkflowDeveloper	
	WorkflowViewer	
	WorkflowInitiator	
	WorkflowParticipant	
	WorkflowContextViewer	

5.1.1.1 Role Templates for Product Package Exchange

The Product Package Exchange which is part of the Collaboration SaaS application for SAP Product Lifecycle Management provides the following role templates:

The Collaboration SaaS application provides you with the following role templates:

Name	Description	Tiles on SAP Fiori Launchpad
ProductPackageExchangeProfessionalUser	Allows the users to access and work with collaboration and product data.	Product Package Exchange

5.1.2 Role Templates for Common Functions

The Common Functions SaaS application for SAP Product Lifecycle Management provides you with the following role templates:

Role Templates Provided by Common Functions

Name	Description	Tiles on SAP Fiori Launchpad
Team_Editor	Allows the user to read, create, update and delete teams.	Manage Teams
Team_Viewer	Allows the user to read teams.	Manage Teams

To help you get started with Common Functions, create the following role collections.

Example of Role Collections for Working With Common Functions

Role Collection										
Role Template	EPD-Quality-Manager	EPD-Quality-Engineer	EPD-Sys-tems-Engineer	EPD-Re-quire-ments-Engineer	EPD-Product-Manager	EPD-Product-Manager-Ex-tended	EPD-Ad-ministra-tor	EPD-Idea-Contrib-utor	EPD-De-sign-En-gineer	EPD-Service-Engineer
Team_Editor								x		
Team_Viewer	x	x	x	x	x	x				

5.1.3 Role Templates for Configuration Management

The Configuration Management SaaS application for SAP Product Lifecycle Management provides role templates that you can use to enable your users to perform different actions depending on their roles.

Role Templates Provided by Configuration Management

The application identifier for Configuration Management role templates is `epd_config-management!<suffix>`.

Role Templates Provided by Configuration Management

Name	Description	Tiles on SAP Fiori Launchpad	Tasks
Baseline_Administrator	Allows the user to anonymize the user details, to export business data, and to maintain customizing data.	Manage Baselines , Manage Configuration Plans , Data Security for Configuration Management , Configure Baselines and Configuration Plans	<ul style="list-style-type: none"> Takes care of data security aspects. Has the authorization to maintain baselines and configuration plans. Maintains customizing for baselines and configuration plans to define baseline profiles and life-cycle phase templates.

Name	Description	Tiles on SAP Fiori Launchpad	Tasks
Baseline_Editor	Allows the user to both define the required administrative settings for Configuration Management (configuration plans and lifecycle phases) and also to define the operational baselines by adding product structures, routing, or products, and documents to it, for example.	<i>Manage Baselines, Manage Configuration Plans, Configure Baselines and Configuration Plans</i>	<ul style="list-style-type: none"> • Defines configuration plans to describe the controlled configuration management process. • Defines lifecycle phases to detail – inside a configuration plan – the individual phases or steps inside the configuration management process. • Defines baselines to freeze a product's structure at a specific point in time. • Views and customizes entries for baselines and configuration plans
Baseline_Viewer	Allows the user to view baselines and configuration plans and lifecycle phases.	<i>Manage Baselines, Manage Configuration Plans</i>	<ul style="list-style-type: none"> • Views configuration plans to check the controlled configuration management process. • Views configuration phases to understand – inside a configuration plan – the individual phases or steps inside the configuration management process. • Views baselines and controlled objects like product structures or products or optionally routing.

Name	Description	Tiles on SAP Fiori Launchpad	Tasks
Routing_Viewer	Allows the user to baseline and view routing information.	Manage Baselines	<ul style="list-style-type: none"> Pulls routing data from the source system. Views routing information in the baselines.

Note

This role shall be used along the `Baseline_Editor` or the `Baseline_Viewer` role to be able to work with routing information in baselines.

Default Role Collections

Default Role Collections for Configuration Management

Role Template	Role Collection									
	EPD- Quality- Manager	EPD- Quality- Engineer	EPD-Sys- tems-En- gineer	EPD- Re- quire- ments -Engi- neer	EPD- Product- Manager	EPD- Prod- uct- Man- ager- Ex- pert	EPD-Ad- ministra- tor	EPD-De- sign-Engi- neer	EPD-Serv- ice-Engi- neer	EPD- Pro- duc- tion- Engi- neer
Baseline_Ad- ministrato- r							X			
Baseline_Ed- itor					X	X		X	X	X
Baseline_Vi- ewer	X	X	X	X	X	X		X	X	X

Status Management

Role Collections for Status Management

Role Name	Role Template	Tiles on the SAP Fiori Launchpad
StatusManagementAdmin	StatusManagementAdmin	Status Management
StatusManagementUser	StatusManagementUser	No dedicated tile for this role

Note

- The `StatusManagementAdmin` role is required along with the `Baseline_Administrator` role to be able to perform the following activities:
 - Create a `StatusManagementUser`
 - Create a status profile
 - Check the status tile
- The `StatusManagementUser` role is required along with the `Baseline_Editor` role to be able to perform the following activities:
 - Change the status of a baseline
 - Create a new baseline

Maintaining Attachments

As Configuration Management requires roles from other services, you must also create roles out of the following role templates:

Roles for Maintaining Attachments

Service	Role Template	Application Identifier
SAP Document Management service	<code>SDM_User</code>	<code>sdm-di-DocumentManagement-sdm_integration!<suffix></code>
SAP Document Management service	<code>SDM_Admin</code>	<code>sdm-di-DocumentManagement-sdm_integration!<suffix></code>

In order to maintain attachments in the Manage Baseline App, the existing role templates `Baseline_Editor`, `Baseline_Administrator`, and `Baseline_Viewer` have to be extended with `SDM_User`, `SDM_Admin`.

UI5 Flexibility Services

This section provides you with the information about the role templates that are needed to work with the UI5 Flexibility Services that are integrated with SAP Product Lifecycle Management.

The following role templates from the UI5 flexibility services are relevant for your key users:

Role Collections for UI5 Flexibility Services

Role Name	Role Template	Application Identifier	Description
<code>AdminFlexKeyUser</code>	<code>AdminFlexKeyUser</code>	<code>ui5-flexibility-keyuser!<suffix></code>	This role is required to download and upload the translatable texts that have been created during key user adaptation.

Role Name	Role Template	Application Identifier	Description
FlexPublicViewEditor	FlexPublicViewEditor	ui5-flexibility-keyuser!<suffix>	A user with this role can create and edit public views without having key user capabilities.
FlexKeyUser	KeyUser	ui5-flexibility-keyuser!<suffix>	A user with this role can adapt the UI.
KeyUser	KeyUser	epd-cm-prod!<suffix>	The <i>Adapt UI</i> button is only available for users with this role.

For more information on UI5 flexibility, see [What is UI5 flexibility? \[page 241\]](#)

5.1.4 Role Templates for Engineering

The Engineering SaaS application for SAP Product Lifecycle Management provides you with the following role templates:

The application identifier for the Test Management roles is `epd-engineering!<suffix>`.

Role Templates Provided by Engineering

Name	Description	Tiles on SAP Fiori Launchpad
TestCaseCoverage_Viewer	Allows the user to view the test case coverage.	<i>Test Cases Coverage</i>
TestCase_Viewer	Allows the user to read test cases.	<i>Manage Test Cases</i>
TestCase_Editor	Allows the user to read, create, update, and delete test cases.	<i>Manage Test Cases</i>
TestPlan_Viewer	Allows the user to read test plans and test cases.	<i>Manage Test Plans</i>
TestPlan_Editor	Allows the user to read test cases, as well as read, create, update, and delete test plans.	<i>Manage Test Plans</i>
TestExecution_Viewer	Allows the user to read test executions, test cases, and test plans.	<i>Manage Test Executions</i>

Name	Description	Tiles on SAP Fiori Launchpad
TestExecution_Editor	Allows the user to read test executions, test cases, and test plans, as well as create, update, and delete test executions.	Manage Test Executions
MyTest_Viewer	Allows the user to read test executions, test cases, and test case results.	My Tests
MyTest_Producer	Allows the user to read test executions, test cases, and test case results, as well as update test case results. For the users with this role template that are imported from an external identity provider, you need more configurations. See Managing Users with the Identity Authentication Service [page 78] .	My Tests
ReportCenter_Viewer	Allows the user to read the following: <ul style="list-style-type: none"> • Test executions • Test cases • Test plans • Test case results • Test execution comments 	Report Center
ReportCenter_Contributor	Allows the user to create test execution comments and read the following: <ul style="list-style-type: none"> • Test executions • Test cases • Test plans • Test case results • Test execution comments 	Report Center
RequirementQuality_Editor	Allows the user to review requirements and check suggestions.	Review Requirements
RequirementQualityConfig_Editor	Allows the user to configure the details for reviewing requirement rules.	Settings for Review Requirements
Engineering_Administrator	Allows the user to manage data security for Engineering.	Test Management - Data Security Settings

To work with the [Requirements Management and Systems Modeling](#) app, the following role templates are provided.

The application identifier is eadesignerbroker!<suffix>.

Role Templates for Working with Requirements Management and Systems Modeling

Name	Description
EADesigner_User	Views, creates, and edits diagrams in Requirements Management and Systems Modeling.
EADesigner_Operator	It is also provided and does not allow access to your repository data, and is reserved for obtaining diagnostic information.
EADesigner_Administrator	Performs administration tasks in Requirements Management and Systems Modeling.

To help you get started with the Engineering cloud service, create the following role collections.

Example of Role Collections for Working With Engineering

Name	Role Collection								
	EPD-Quality-Manager	EPD-Quality-Engineer	EPD-Systems-Engineer	EPD-Requirements-Engineer	EPD-Product-Manager	EPD-Administrator	EPD-Idea-Contributor	EPD-Design-Engineer	EPD-Service-Engineer
EADesigner_Administrator						X			
EADesigner_Operator						X			
EADesigner_User	X	X	X	X	X				
Engineering_Administrator							X		
MyTest_Producer		X		X					
MyTest_Viewer	X		X		X			X	
ReportCenter_Contributor	X		X		X				
ReportCenter_Viewer				X					
TestCase_Coverage_Viewer	X		X	X					

Role Collection

Name	EPD-Quality-Manager	EPD-Quality-Engineer	EPD-Systems-Engineer	EPD-Requirements-Engineer	EPD-Product-Manager	EPD-Administrator	EPD-Idea-Contributor	EPD-Design-Engineer	EPD-Service-Engineer
TestCase_Editor	x			x					
TestCase_Viewer		x	x		x			x	
TestExecution_Editor	x								
TestExecution_Viewer			x	x	x			x	
TestPlan_Editor	x								
TestPlan_Viewer			x	x	x			x	
RequirementQuality_Editor	x	x	x	x	x				
RequirementQualityConfig_Editor	x	x	x	x	x				

Note

The 'x' in the table indicates that the role template is recommended to define the corresponding role collection.

5.1.5 Role Templates for Enterprise Product Structure

The Enterprise Product Structure SaaS application of SAP Product Lifecycle Management provides the following role templates:

Role Templates Provided by Enterprise Product Structure

Name	Description	Tiles on SAP Fiori Launchpad
Structure_Viewer	Allows the users to view products and product structures.	Product Explorer , Product Structures

Name	Description	Tiles on SAP Fiori Launchpad
Structure_Editor	Allows the users to import products and BOMs, and manage product.	Product Explorer , Product Structures
Structure_Administrator	Allows the users to perform system administration tasks like user anonymization, and customer data export.	Product Explorer , Product Structures , Configure Product Structure
Structure_Key_User	Allows the users to perform user-interface configuration tasks.	Product Explorer , Product Structures

The application identifier for Enterprise Product Structure role templates is `sap-epd-ps-dev<suffix>`.

The following table shows you which of the default role collections contain the above role templates:

Default Role Collections for Enterprise Product Structure

Role Template	Role Collection									
	EPD-Quality-Manager	EPD-Quality-Engineer	EPD-Systems-Engineer	EPD-Requirement-Engineer	EPD-Product-Manager	EPD-Administrator	EPD-Feedback-Provider	EPD-Design-Engineer	EPD-Service-Engineer	EPD-Production-Engineer
Structure_Viewer	X	X	X	X	X			X	X	X
Structure_Editor					X			X	X	X
Structure_Administrator						X				
Structure_Key_User						X				

Note

Below role collection required for key user to access the UI5 flexibility services.

Role collections for KeyUsers

Role Name	Role Template	Application Identifier
AdminFlexKeyUser	AdminFlexKeyUser	ui5-flexibility-keyuser! <suffix>
FlexKeyUser	KeyUser	ui5-flexibility-keyuser! <suffix>
KeyUser	Key_User	sap-epd-ps-<REGION><suffix>

For more information on UI5 flexibility, see [What is UI5 flexibility? \[page 186\]](#)

5.1.6 Role Templates for Insights

The Insights SaaS application for SAP Product Lifecycle Management provides role templates that you can use to enable your users to access the different graphical representations of the information that your users work with when managing the lifecycle of your products.

Using UI Integration Cards

The Insights SaaS application for SAP Product Lifecycle Management provides the following role templates that you can use to let your users to access the data shown on the UI integration cards in the content packages for SAP Build Work Zone, advanced edition:

Role Templates for UI Integration Cards

Name	Description	Related Content Package	UI Integration Cards
<code>Change_Management_Analytics</code>	Allows the user to view the cards with data about change records.	PLM Insights: Change Management	<ul style="list-style-type: none">Change Execution StatusNewly Created and Completed Change Records <p>For details on the cards, see Insights Cards for Change Management.</p>
<code>Insights_Collaboration_Viewer</code>	Allows the user to view the cards with data about collaborations.	PLM Insights: Collaboration	<ul style="list-style-type: none">My CollaborationsMy Collaborations by Type and StatusComments on My Collaborations <p>For details on the cards, see Insights Cards for Collaboration Information.</p>

Name	Description	Related Content Package	UI Integration Cards
Insights_Innovation_Management_Viewer	Allows the user to view the cards for ideas and campaigns.	PLM Insights: Define Products	<ul style="list-style-type: none"> Assignment of Tags to Ideas New Ideas by Week Ideas by Modification Date - For Product Managers Ideas by Modification Date - For Submitters of Ideas Campaigns - For Product Managers My Campaigns - For Submitters of Ideas <p>For details on the cards, see Insights Cards for Product Innovations.</p>
Insights_Requirements_Management_Viewer	Allows the user to view the cards for requirements models.	PLM Insights: Define Products	<ul style="list-style-type: none"> My Requirements Models Requirements by Model and Status Requirements by Type and Status for One Model <p>For details on the cards, see Insights Cards for Requirements Models.</p>

These role templates are included in the following default role collections:

Default Role Collections for UI Integration Cards

Role Template	Default Role Collections						
	EPD-Idea-Contributor	EPD-Product-Manager	EPD-Product-Manager-Extended	EPD-Quality-Manager	EPD-Quality-Engineer	EPD-Requirements-Engineer	EPD-Systems-Engineer
Change_Management_Analytics		X					
Insights_Collaboration_Viewer	X	X	X	X	X	X	X

Default Role Collections

Role Template	EPD-Idea-Contributor	EPD-Product-Manager	EPD-Product-Manager-Extended	EPD-Quality-Manager	EPD-Quality-Engineer	EPD-Requirements-Engineer	EPD-Systems-Engineer
Insights_Innovation_Management_Viewer	X	X					
Insights_Requirements_Management_Viewer						X	

If you don't use the default role collections, your users need the same level of authorization as provided by the following role templates from the integrated SaaS applications:

Role Templates for Integrated Data and Apps

Content Package	Cards	Role Template	Tile on SAP Fiori Launchpad	Related SaaS Application
<i>PLM Insights: Change Management</i>	<ul style="list-style-type: none"> <i>Change Execution Status</i> <i>Newly Created and Completed Change Records</i> 	Not relevant as data is coming from external system	Not relevant as data is coming from external system	Not relevant as data is coming from external system
<i>PLM Insights: Collaboration</i>	<ul style="list-style-type: none"> <i>My Collaborations</i> <i>My Collaborations by Type and Status</i> <i>Comments on My Collaborations</i> 	CollaborationUser	<i>My Collaborations</i>	Collaboration
<i>PLM Insights: Define Products</i>	<ul style="list-style-type: none"> <i>Assignment of Tags to Ideas</i> <i>New Ideas by Week</i> <i>Ideas by Modification Date - For Product Managers</i> <i>Campaigns - For Product Managers</i> 	<ul style="list-style-type: none"> Idea_Producer Campaign_Editor 	<ul style="list-style-type: none"> <i>Manage Ideas</i> <i>Manage Campaigns</i> 	Product Innovation Management

Content Package	Cards	Role Template	Tile on SAP Fiori Launchpad	Related SaaS Application
<i>PLM Insights: Define Products</i>	<ul style="list-style-type: none"> <i>Ideas by Modification Date - For Submitters of Ideas</i> <i>My Campaigns - For Submitters of Ideas</i> 	Idea_Editor	<i>Innovation Homepage</i>	Product Innovation Management
<i>PLM Insights: Define Products</i>	<ul style="list-style-type: none"> <i>My Requirements Models</i> <i>Requirements by Model and Status</i> 	EADesigner_User	<i>Requirements Management and Systems Modeling</i>	Engineering

Related Information

[Default Role Collections \[page 72\]](#)

[Defining and Bundling Roles \[page 27\]](#)

[SAP Build Work Zone, advanced edition \[page 148\]](#)

5.1.7 Role Templates for Intelligent Handover

The Intelligent Handover SaaS application provides the following role templates:


Role Collections Provided by Intelligent Handover

Name	Description	Tiles on SAP Fiori Launchpad	Tasks
EPD-Administrator	Allows users to configure the BOM attributes required for working or planning the handovers.	<ul style="list-style-type: none"> Configure Handover Manage Data Security Task Monitoring for Handovers 	Tasks include the following: <ul style="list-style-type: none"> Create and maintain plants. Create and maintain BOM usages. Create and maintain item categories. Monitor backend tasks for handovers.


Name	Description	Tiles on SAP Fiori Launchpad	Tasks
EPD-Production-Engineer	Allows users to perform tasks related to maintaining handovers.	<ul style="list-style-type: none"> • Hand Over Engineering Bills of Material (EBOM) • Task Monitoring for Handovers 	<ul style="list-style-type: none"> • Read BOMs from the SAP S/4HANA system. • Create, update, or delete handovers. • Synchronize changes with SAP S/4HANA system. • View or display routings. • Create or update routings. • Work with visualizations • Monitor backend tasks for handovers.

The Intelligent Handover SaaS application provides the following role templates:

Role Templates Provided by Intelligent Handover

Role Collections													
Name	Description	Tiles on SAP Fiori Launchpad	EPD -Quality Manager	EPD -Quality Engineer	EPD -Systems Engineer	EPD -Requirements Engineer	EPD -Production Manager	EPD -Production Expert	EPD -Administrator	EPD -Feedback Provider	EPD -Design Engineer	EPD -Service Engineer	EPD -Production Engineer
Handover _Admin	Allows user access to configuration, maintenance coding lists. Anonymizes the user data and exports the business data. Allows user access to administrator, create, update, or	Conf igure Han dove r, Han d Over Engi neeri ng Bills of Mate rial, Man age Data Secu rity, Task Moni torin g for Han dove rs											

Name	Description	Role Collections											
		Tiles on SAP Fiori Launchpad	EPD-Quality-Manager	EPD-Quality-Engineer	EPD-Sys-tems-Engineer	EPD-eme-nts-En-gi-neer	EPD-Prod-uct-Man-ager	EPD-Product-Manager	EPD-Ex-pert	EPD-Admin-istrator	EPD-Feed-back-Provider	EPD-Design-Engineer	EPD-Serv-ice-En-gineer
	delete handovers.												
Handover_Editor	Allows users to read, create, plan, and delete handovers.	<i>Hand Over Engineering Bills of Material, Task Monitoring for Handovers</i>								✓			✓
Routing_Viewer	Allows users to view or display routings.	<i>Hand Over Engineering Bills of Material</i>	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓

Name	Description	Role Collections											
		Tiles on SAP Fiori Launchpad	EPD-Quality-Manager	EPD-Systems-Engineer	EPD-Requirements-Engineer	EPD-Product-Manager	EPD-Requirement-Engineer	EPD-Production-Manager	EPD-Administrator	EPD-Feedback-Provider	EPD-Design-Engineer	EPD-Service-Engineer	EPD-Production-Engineer
Routing_Editor	Allows user to manage (create or edit) the routing data.	Hand Over Engineering Bills of Material											

The application identifier for Intelligent Handover role templates is `epd-ihp-prod!<suffix>`.

Visualization

The following table shows the default role templates provided by Visualization required for Intelligent Handover:

Default Role Template for Visualization

Role Template	Description	Role Collection								
		EPD-Quality-Manager	EPD-Quality-Engineer	EPD-Systems-Engineer	EPD-Requirement-Engineer	EPD-Product-Manager	EPD-Administrator	EPD-Feedback-Provider	EPD-Design-Engineer	EPD-Service-Engineer
ContentCreator	Allows the user to import, create, and copy content.	X	X	X	X	X	X		X	X

Role Collection

Role Template	Description	EPD-Quality-Manager	EPD-Quality-Engineer	EPD-Sys-tems-Engineer	EPD-Requirement-Engineer	EPD-Product-Manager	EPD-Administra-tor	EPD-Feed-back-Provider	EPD-Design-Engineer	EPD-Service-Engineer
ContentDeleter	Allows the user the delete existing content.	X	X	X	X	X	X		X	X
ContentReader	Allows the user to search and browse content and view visualizations.	X	X	X	X	X	X	X	X	X
ContentUpdater	Allows the user to update content and perform authoring and association.	X	X	X	X	X	X		X	X
DataSourceAdmin	Allows the user to administer (read/create/update/delete) data sources.						X			
ProjectCreator	Allows the user to create top-level folders.						X			
SecurityAdministrator	Allows the user to reassign content ownership, manage anonymous access folders and edit security relevant tenant configuration.						X			

The application identifier for Visualization role templates is `3dvis-broker-3dvis<suffix>`.

Enterprise Product Structure

The following table shows the default role templates provided by Enterprise Product Structure required for Intelligent Handover:

Role Templates Provided by Enterprise Product Structure for Intelligent Handover

Name	De- scrip- tion	Role Collections									
		EPD- Quality- Man- ager	EPD- Quality- Engi- neer	EPD- Sys- tems- Engi- neer	EPD-Re- quire- ments- Engi- neer	EPD- Prod- uct- Man- ager	EPD- Admin- istrator	EPD- Feed- back- Pro- vider	EPD- Design- Engi- neer	EPD- Service- Engi- neer	EPD- Produc- tion-En- gineer
StructureViewer	Allows users to view products and product structures.	X	X	X	X	X			X	X	X
StructureEditor	Allows users to import products and BOMs, and manage product.					X			X	X	X
StructureAdministrator	Allows users to perform system administration tasks like user anonymization, and customer data export.						X				

Role Collections											
Name	Description	EPD-Quality-Manager	EPD-Quality-Engineer	EPD-Sys-tems-Engi-neer	EPD-Re-quire-ments-Engi-neer	EPD-Prod-uct-Man-ager	EPD-Admin-istrator	EPD-Feed-back-Provider	EPD-Design-Engi-neer	EPD-Service-Engi-neer	EPD-Produc-tion-En-gineer
Base-line_Viewer	Allows the user to view base-lines and control-led ob-jects like product struc-tures or prod-ucts..	X	X	X	X	X			X	X	X

The application identifier for Enterprise Product Structure role templates is `sap-epd-ps-dev<suffix>`.

5.1.8 Role Templates for Product Innovation Management

The Product Innovation Management SaaS application for SAP Product Lifecycle Management provides you with the following role templates:

Role Templates Provided by Product Innovation Management

Name	Description	Tiles on SAP Fiori Launchpad
Idea_Viewer	Allows the user to view ideas.	My Evaluations
Idea_Editor	Allows the user to submit, edit, read, and delete ideas.	Innovation Homepage
Campaign_Viewer	Allows the user to view campaigns.	Innovation Homepage , My Evaluations
Campaign_Editor	Allows the user to create, view, edit, and delete campaigns.	Manage Campaigns , Manage Ideas
Idea_Producer	Allows the user to read, edit, and delete ideas.	Manage Campaigns , Manage Ideas
Evaluation_Editor	Allows the user to create, edit, delete evaluations.	My Evaluations

Name	Description	Tiles on SAP Fiori Launchpad
Need_Editor	Allows the user to create, view, edit, delete needs, requirement links, and Jira links.	Manage Ideas, Needs
Settings_Editor	Allows the user to configure the details for Product Innovation Management.	Settings for Product Innovation Management
Inm_Administrator	Allows the user to manage data security for Product Innovation Management.	Data Security - Product Innovation Management

To let your users perform extra functions in Product Innovation Management, the following role templates are required:

Required Role Templates from Other SaaS Applications

Name	Description	SaaS Application
Team_Viewer	Allows the user to assign Idea Contributors to submit ideas and Idea Evaluators to evaluate ideas.	Common Functions
SDM_User	Allows the user to upload attachments.	
StatusManagementAdmin	Allows the user to create, view, edit and delete status profiles and status.	Status Management
StatusManagementUser	Allows the user to view status profiles and status in the campaigns and ideas.	Status Management
WorkflowAdmin	Allows the user to send reminder emails to experts.	Build Process Automation
WorkflowInitiator	Allow the user to send notification email to submitters and experts.	Build Process Automation

To help you get started with Product Innovation Management, create the following role collections.

Example of Role Collections for Working With Product Innovation Management

Role Template	Role Collection					
	EPD-Product-Manager	EPD-Product-Manager-Extended	EPD-Administrator	EPD-Idea-Contributor	EPD-Evaluator	EPD-Requirements-Engineer
Idea_Viewer					X	
Idea_Editor				X		
Campaign_Viewer				X		

Role Collection						
Role Template	EPD-Product-Manager	EPD-Product-Manager-Extended	EPD-Administrator	EPD-Idea-Contributor	EPD-Evaluator	EPD-Requirements-Engineer
Campaign_Editor	X	X				
Idea_Producer	X	X				
Evaluation_Editor					X	
Need_Editor	X	X				X
Settings_Editor			X			
Inm_Administrator			X			
Team_Viewer	X	X				
SDM_User	X	X		X		
StatusManagementAdmin	X	X	X			
StatusManagementUser	X	X	X			
WorkflowAdmin	X	X				
WorkflowInitiator	X	X				

5.1.9 Role Templates for Specification Management

The Specification Management SaaS application uses role templates that are driven by business object models, usually working with a display and maintainer template.

Note

The role template name generally contains `Configurator` for configuration data, `Editor` for master data maintenance, and `Viewer` for display-only authorization.

The following role templates are provided:

Role Templates Provided by Specification Management

Name	Description	Tiles on SAP Fiori Launchpad
SpecificationBasicConfigurator	Allows the user to configure specification types and Specification Management basic settings.	Specification Types
SpecificationBasicConfiguratorViewer	Allows the user to view specification types and Specification Management basic settings.	
ProductCategoryConfigurator	Allows the user to configure product categories.	Product Categories
ProductCategoryViewer	Allows the user to view product categories.	
SpecificationEditor	Allows the user to maintain specifications.	Manage Specifications
SpecificationInstanceAccess	Allows the user to maintain specifications according to rights granted by authorization contexts.	
SpecificationViewer	Allows the user to view specifications.	
SpecificationStatusCoordinator	Allows the user to set specification status after review.	
SpecificationStatusCoordinatorInstanceAccess	Allows the user to set specifications status after review according to rights granted by authorization contexts.	
PhraseEditor	Allows the user to maintain phrases.	Phrases
PhraseViewer	Allows the user to view phrases.	
PhraseStatusCoordinator	Allows the user to set the status of phrases after review.	
PhraseCollectionEditor	Allows the user to maintain phrase collections.	Phrase Collections
PhraseCollectionViewer	Allows the user to view phrase collections.	
PropertyConfigurator	Allows the user to configure property definitions. Also allows the user to configure applicable values to refine composition item data.	<ul style="list-style-type: none"> • Properties • Roles in Composition • Groups for Roles in Composition

Name	Description	Tiles on SAP Fiori Launchpad
PropertyConfigurationViewer	Allows the user to view property definitions. Also allows the user to view applicable values that refine composition item data.	<ul style="list-style-type: none"> • Value Qualifiers for Compositions • Value Qualifier Groups for Compositions • Qualitative Statements for Compositions • Qualitative Statement Groups for Compositions
PropertyTreeConfigurator	Allows the user to configure property trees.	Property Trees
PropertyTreeConfigurationViewer	Allows the user to view property trees.	
CompositionItemTypeConfigurator	Allows the user to configure composition item types.	Composition Item Types
CompositionItemTypeConfigurationViewer	Allows the user to view composition item types.	
CompositionItemConfigurator	Allows the user to configure composition items.	Composition Items
CompositionItemViewer	Allows the user to view composition items.	
CompositionItemGroupConfigurator	Allows the user to configure composition item groups.	Composition Item Groups
CompositionItemGroupViewer	Allows the user to view composition item groups.	
AuthorizationContextEditor	Allows the user to maintain authorization contexts.	Authorization Contexts
AuthorizationContextViewer	Allows the user to view authorization contexts.	

The application identifier for Specification Management is `epd-specification!<suffix>`.

The following table shows you which of the default role collections contain the above mentioned role templates:

Example of Role Collections for Working With Specification Management

Role Template	Role Collection								
	EPD-Quality-Manager	EPD-Quality-Engineer	EPD-Systems-Engineer	EPD-Requirements-Engineer	EPD-Product-Manager	EPD-Administrator	EPD-Feedback-Provider	EPD-Design-Engineer	EPD-Service-Engineer
Specific ationBas icConfig urator						X			
Specific ationBas icConfig urationV iewer									
ProductC ategoryC onfigura tor						X			
ProductC ategoryV iewer									
Specific ationEdi tor					X				
Specific ationIns tanceAcc ess					X				
Specific ationVie wer									
Specific ationSta tusCoord inator					X				

Role Collection

Role Template	EPD-Quality-Manager	EPD-Quality-Engineer	EPD-Systems-Engineer	EPD-Requirements-Engineer	EPD-Product-Manager	EPD-Administrator	EPD-Feedback-Provider	EPD-Design-Engineer	EPD-Service-Engineer
Specific ationSta tusCoord inatorIn stanceAc cess					X				
PhraseEd itor							X		
PhraseVi ewer					X				
PhraseSt atusCoor dinator							X		
PhraseCo llection Editor							X		
PhraseCo llection Viewer					X				
Property Configur ator							X		
Property Configur ationVie wer									
Property TreeConf igurator							X		
Property TreeConf iguratio nViewer									

Role Collection

Role Template	EPD-Quality-Manager	EPD-Quality-Engineer	EPD-Sys-tems-En-gineer	EPD-Re-quire-ments-Engineer	EPD-Product-Manager	EPD-Ad-ministra-tor	EPD-Feedback-Provider	EPD-De-sign-Engi-neer	EPD-Serv-ice-Engi-neer
Composit ionItemT ypeConf igurator						X			
Composit ionItemT ypeConf iguration Viewer									
Composit ionItemC onfigura tor						X			
Composit ionItemV iewer									
Composit ionItemG roupConf igurator						X			
Composit ionItemG roupView er									
Authoriza- tionCon- textEditor						X			
Authoriza- tionCon- textViewer									

Specification Management uses the Unit of Measure, Status Management, and Document external services, and a respective role template is needed for these as well.

- **Team_Viewer** (EPD common): This is necessary for available values of user groups when using the [Authorization Context](#) app.
- **UoM_Data_Access_User**: This is necessary for loading unit of measure values from a central repository.
- **SDM_User**: This is necessary to be able to see the [Documentation](#) tab in specifications.

Note

Specification Management and Collaboration share the `SDM_USER` role template. If you've subscribed to both the Specification Management and the Collaboration SaaS applications, and assign a user to a role collection from either SaaS application containing the `SDM_USER` role template, then features related to the `SDM_USER` role template are enabled for both SaaS applications.

Here is an example of what can happen in this situation: You only want your Specification Management users to have `read-only` access to a specification that in this example is called `SPEC_XYZ`. However, because these users also need access to features from the Collaboration SaaS application, they are all assigned to a role that is based on the `SDM_USER` role template. In this case, because the users have the authorizations granted by the `SDM_USER` role template, they will have more than read-only access to `SPEC_XYZ`. They will also be able to attach documents to `SPEC_XYZ`.

- `StatusManagementUser`: This is necessary for the administrator to use the *Specification Type* and *Manage Specifications* apps, when creating specifications and changing status.

The above mentioned authorizations can be individually added to custom created roles, or you can use the following example role collections provided by SAP Product Lifecycle Management:

Example of Role Collections for Working With Specification Management

Role Collection										
Role Template	EPD-Quality-Manager	EPD-Quality-Engineer	EPD-Sys-tems-Engineer	EPD-Re-quire-ments-Engineer	EPD-Product-Manager	EPD-Ad-ministra-tor	EPD-Feed-back-Provider	EPD-De-sign-Engineer	EPD-Service-Engineer	EPD-Pro-duction-Engineer
Team_Editor						X				

Note

It includes the `Team_Viewer` role.

Role Collection

Role Template	EPD-Quality-Manager	EPD-Quality-Engineer	EPD-Sys-tems-Engineer	EPD-Re-quire-ments-Engineer	EPD-Product-Manager	EPD-Ad-ministra-tor	EPD-Feed-back-Provider	EPD-De-sign-En-gineer	EPD-Service-Engineer	EPD-Pro-duction-Engineer
UoM_Configurati-on_Expert						X				
<p>Note It includes the UoM_Data_Access_User role.</p>										
SDM_User										X
SDM_Admin						X				
StatusManagementAdmin						X				X
<p>Note It includes the StatusManagement User role.</p>										

You as an administrator may decide that you need custom role collections for the use of your company. For example, you can define a phrase maintainer, as described in the following section of the user guide: [Personas and User Actions](#).

5.1.10 Role Templates for Visualization

The Visualization cloud service for SAP Product Lifecycle Management provides the following role templates:

Role Templates Provided by Visualization

Name	Description	Tiles on SAP Fiori Launchpad
ContentDeleter	Allows the user to delete existing content. Only users with this role can delete visualizations.	<i>Browse</i>
ContentCreator	Allows the user to add new content. Users must have the ContentCreator role to import a new visualization or create a copy of an existing visualization.	<i>Browse, Import</i>
ContentUpdater	User must have the ContentUpdater role to perform any authoring.	<i>Browse, Import</i>
ContentReader	Can search for and browse visualizations, can view in viewer. Users must have this role to view the recent visualizations or all visualizations in the cloud service.	<i>Browse</i>
ViewerTemplateAdmin	Allows the user to administer (read/create/update/delete) viewer templates.	<i>Manage Templates</i>
DataSourceAdmin	Allows the user to administer (read/create/update/delete) data sources.	<i>Manage Data Connections</i>
ProjectCreator	Allows the user to create top-level folders.	<i>Browse, Import</i>
ConfigurationManager	Allows the user to change tenant configuration.	<i>System Administration</i>

Name	Description	Tiles on SAP Fiori Launchpad
SecurityAdministrator	Allows the user to reassign folder and content ownership and edit security relevant tenant configuration.	Security Administration

The application identifier for Visualization role templates is `3dvis-broker-3dvis<suffix>`.

The following table shows you which of the default role collections contain the above role templates:

Default Role Collections for Visualization

Role Template	Role Collection								
	EPD-Quality-Manager	EPD-Quality-Engineer	EPD-Systems-Engineer	EPD-Requirements-Engineer	EPD-Product-Manager	EPD-Administrator	EPD-Feedback-Provider	EPD-Design-Engineer	EPD-Service-Engineer
ConfigurationManager						X			
ContentCreator	X	X	X	X	X	X		X	X
ContentDeleter	X	X	X	X	X	X		X	X
ContentReader	X	X	X	X	X	X	X	X	X
ContentUpdater	X	X	X	X	X	X		X	X
DataSourceAdmin						X			
ProjectCreator						X			
SecurityAdministrator						X			
ViewerTemplateAdmin						X			

5.1.11 Role Templates for Status Management

The *Status Management* app is a part of the Collaboration SaaS application that can be used to create status profiles across other SaaS applications for SAP Product Lifecycle Management.

The Collaboration SaaS application provides you with the following role templates:

Name	Description	Tiles on SAP Fiori Launchpad
StatusManagementAdmin	Allows the user to perform business configurations for Admin services.	Status Management
StatusManagementUser	Allows the user to access and work with status management from SaaS applications using status profile.	NA

5.2 Default Role Collections

A set of default role collections is provided.

These role collections are available once you have subscribed to the Common Functions SaaS application as described in [Subscribing to the SaaS Applications \[page 19\]](#). The default role collections cannot be deleted. They reflect typical user scenarios. If they don't meet your requirements, you can, of course, build your own role collections. For more information on how to do that, see [Defining and Bundling Roles \[page 27\]](#).

Which role templates are available in any one of the default role collections is dependent on the SaaS applications you have subscribed to.

❁ Example

After you have subscribed to the Common Functions SaaS application, the `EPD-Administrator` default role collection includes only the `Team_Editor` role template. If you also subscribe to the Collaboration SaaS application, you'll see that the `EPD-Administrator` default role collection now also includes the `CollaborationDPPAdministrator` role template.

For more information about the role templates for each SaaS application, see the respective document under [Defining and Bundling Roles \[page 27\]](#).

We recommend that you use SAP Build Work Zone, standard edition as the entry point for your business users to access apps. If you use the default role collections that are provided with Common Functions, you must also create equivalent default role collections for SAP Build Work Zone, standard edition. If you build your own role collections, you can use them for the app access for both SAP Product Lifecycle Management and for SAP Build Work Zone, standard edition. For more information on the steps you need to follow in both scenarios, see [SAP Build Work Zone, standard edition with Multiple SaaS Applications \[page 145\]](#).

The following table shows the default role collections and task information to help you map them to your business users:

Name	Description	Tasks
EPD-Quality-Manager	Enables users to perform the tasks required to lead a team of quality engineers that are working to meet project quality criteria and requirements through test planning, test execution, quality assurance and issue tracking	<p>Tasks include the following:</p> <ul style="list-style-type: none"> • Defining the testing scope based on the requirements • Defining test plans, strategies, and executions for assigned projects • Defining linkage between requirements and test cases • Estimating the testing effort required by calculating the sizing needed for the given release • Monitoring all the QA activities, test results, leaked defects, root cause analysis, gathering and presenting testing metrics and testing activities for the projects to key stakeholders • Defining areas of improvement and implementing steps required to improve the processes • View data on the collaboration cards that are provided by the Insights SaaS application

Name	Description	Tasks
EPD-Quality-Engineer	Enables users to perform the tasks required to test the product or system to ensure it functions properly and meets the business needs	<p>Tasks include the following:</p> <ul style="list-style-type: none"> • Reading all the documents and understanding what needs to be tested • Determining resource and equipment needs for conducting testing • Determining timing and cost required to execute test programs • Setting up test environments and executing all the test case and logging test results • Analyzing and tracking defects identified in testing and recommending product design revisions based on test data to meet expected results • View data on the collaboration cards that are provided by the Insights SaaS application
EPD-Systems-Engineer	Enables users to define the architecture and the behavior of the product	<p>Tasks include the following:</p> <ul style="list-style-type: none"> • Guide the engineering of mechatronic products, that is, products that contain mechanical and electronic parts as well as software • Review requirements and configure review rules • View data on the collaboration cards that are provided by the Insights SaaS application
EPD-Requirements-Engineer	Enables users to elicit, document, manage, and validate requirements	<p>Tasks include the following:</p> <ul style="list-style-type: none"> • Manage needs • Review requirements and configure review rules • View data on the collaboration and requirements models cards that are provided by the Insights SaaS application

Name	Description	Tasks
EPD-Product-Manager	Enables users to define new products and to monitor the progress of product development and the performance on the market	Tasks include the following: <ul style="list-style-type: none"> • View needs • Review requirements and configure review rules • Manage innovation campaigns in Product Innovation Management • View data on the collaboration, change management, and product innovations cards that are provided by the Insights SaaS application
EPD-Product-Manager-Extended	Enables users to define new products, define technical product packages, work with suppliers and contract manufacturers to review their responses, and monitor the progress of product development and the performance on the market	Tasks include the following: <ul style="list-style-type: none"> • View needs • Review requirements and configure review rules • Manage innovation campaigns in Product Innovation Management • View data on the collaboration cards that are provided by the Insights SaaS application

Name	Description	Tasks
EPD-Administrator	Enables users to configure all specialist project and application settings and to control sensitive security parameters	<p>Tasks include the following:</p> <ul style="list-style-type: none"> • Create and maintain visualization data sources • Create and maintain visualization viewer and card templates • Create and maintain usage ID definitions and categories • Manage visualizations and folders • Transfer ownership of folders and visualizations, for example, if an existing owner has left a project or left the company • Control the folders that are enabled for anonymous access. Anonymous access provides unauthenticated users with read access to the visualisations contained in the folder. • Define malware scanning policies for visualization uploads • Define content caching policies for visualization viewing or editing • Control the source of allowable requests to theVisualization service. This controls security on programmatic access to Visualization. • Define group management policies for user groups. This simplifies user administration in Visualization • Manage teams and rules for Common Functions • Configure the BOM attributes required for working or planning the handovers in Intelligent Handover

Name	Description	Tasks
		<ul style="list-style-type: none"> • Define data anonymization and data export in Intelligent Handover • Define CRUD (created, read, update, delete) operations for handovers in Intelligent Handover • Define questionnaires, phases, tags, status profiles, and additional idea fields in Product Innovation Management • Manage workflow instances and definitions
EPD-Idea-Contributor	Enables users to provide product idea or feedback	<p>Tasks include the following:</p> <ul style="list-style-type: none"> • Submit innovation ideas for Product Innovation Management • View data on the product innovation cards that are provided by the Insights SaaS application
EPD-Design-Engineer	Enables users to perform tasks relating to the design of certain components of a product, including taking various sources of input into account.	<p>Tasks include the following:</p> <ul style="list-style-type: none"> • Create and edit baselines and configuration plans in Configuration Management
EPD-Service-Engineer	Enables users to perform tasks related to	<p>Tasks include the following:</p> <ul style="list-style-type: none"> • Create and edit baselines and configuration plans in Configuration Management
EPD-Production-Engineer	Enables users to perform tasks related to managing manufacturing structures	<p>Tasks include the following:</p> <ul style="list-style-type: none"> • Enables users to perform tasks related to maintaining handovers • Enables users to manage routings

Name	Description	Tasks
EPD-Evaluator	Enables users to perform tasks related to evaluating the ideas	Tasks include the following: <ul style="list-style-type: none"> Enables users to perform the tasks related to evaluating the ideas assigned by EPD-Product-Manager

5.3 Assigning Role Collections to Users

In the SAP BTP cockpit, you must assign role collections to IdP users or user groups. As a prerequisite, users and user groups must have been created in the Identity Authentication service or another IdP.

Note

You assign role collections to users or user groups in the Identity Authentication service. For more information, see [Managing Users with the Identity Authentication Service \[page 78\]](#).

5.3.1 Managing Users with the Identity Authentication Service

If you have subscribed to the Identity Authentication service, you can use it to manage your users in SAP Product Lifecycle Management.

Context

If you do not already have an IAS tenant, please request it via the BTP cockpit as described in IAS [Tenant Model and Licensing](#), section *Getting a Tenant*.

If you already have an IAS tenant: Just go to the BTP trust setup and configure the trust to the existing IAS tenant. For information about how to configure the trust, see IAS [Create a New Application](#).

If you wish to use a third-party or corporate identity provider with SAP Cloud Identity Services – Identity Authentication, refer to [3080900](#).

Procedure

1. Your SAP Business Technology Platform subaccount SAML file contains metadata identifying your subaccount, and is used to allow the Identity Authentication service to trust it. To obtain the SAML file, perform the following steps:
 - a. Enter the URL in the following format in your Web Browser:
`https://<subaccountSubdomain>.authentication.<host>/saml/metadata`
where `<subaccountSubdomain>` is subdomain shown on your subaccount page and
`<host>` is the host name that depends on your region.
 - b. Save the automatically downloaded XML file to use in the next steps.
2. Log on to the Identity Authentication Service administration console using the following URL:
`https://<domain>.accounts.ondemand.com/admin`
where `<domain>` is your organization's Identity Authentication service domain.
3. Add your subaccount as an application to allow the Identity Authentication service to trust it by performing the following steps:
 - a. Choose ► *Applications and Resources* ► *Applications* ▾ in the navigation area to display the list of applications, and then choose + (*Add*) to create a new application. As type, choose *SAP BTP Solution*. (For more information, see [Create a New Application](#).)
 - b. In the *Trust* tab, choose the *SAML 2.0 Configuration* section, and import the metadata file that identifies your subaccount. (For more information, see [Establish Trust and Federation with UAA Using Any SAML Identity Provider](#).)
 - c. Back in the *Trust* tab, choose the *Subject Name Identifier* section, and specify **E-Mail** as the attribute that identifies users in the application. (For more information, see [\(Optional\) Configure the Default Name ID Format Sent to the Application](#).)

Note
We recommend using **E-Mail** to avoid errors.

 - d. Back in the *Trust* tab, choose the *Protocol* section, and specify **SAML 2.0** as the protocol.

Note
We recommend using **SAML 2.0** as the protocol to avoid errors.

 - e. Back in the *Trust* tab, choose the *Attributes* section, and add the **Groups** user attribute to the list of assertion attributes. (For more information, see [Configure the User Attributes Sent to the Application](#).)

Note
Change the *Attribute* name added to the list from **groups** to **Groups**.
4. Specify the users who are allowed to access the apps by performing the following steps:
 - a. From the navigation menu, choose ► *Users & Authorizations* ► *User Management* ▾ to manually create users, or *Import Users* to import them. (For more information, see [User Management](#).)

Note

If your organization has been using this IdP and it already contains the data of your users, skip this sub-step.

- b. From the navigation menu, choose **Users & Authorizations > User Groups** to create different user groups.
 - c. From the navigation menu, choose **Users & Authorizations > User Management**. Select each user and go to the *User Groups* tab to assign the appropriate user groups to them.
5. To obtain your Identity Authentication Service metadata, which identifies it as your identity provider, perform the following steps. The metadata is used to allow your subaccount to trust it.
- a. From the navigation menu, choose **Application & Resources > Tenant Settings**.
 - b. Choose the *SAML 2.0 Configuration* section.
 - c. Choose *Download Metadata File* at the bottom of the page to download the XML file to use in the next steps.
6. Log on to the SAP Business Technology Platform cockpit and navigate to your subaccount. To connect your subaccount to the SAP Cloud Identity Authentication Service, perform the following steps:
- a. Choose **Security > Trust Configurations** in the navigation menu.
 - b. Choose *New Trust Configuration* and enter an appropriate name.
 - c. Upload your XML file containing Identity Authentication Service metadata in the *Metadata* field and choose *Parse* to validate it.
 - d. Ensure that *Status* is set to **Active**, and the checkbox for *Available for User Logon* is enabled.
 - e. Choose *Save* to complete the creation of the trust configuration.

For more information, see [Manually Establish Trust and Federation between UAA and Identity Authentication](#).

7. To associate your role collections to the user groups defined in the SAP Cloud Identity Authentication Service, perform the following steps:
- a. In the SAP Business Technology Platform cockpit, navigate to your subaccount page and choose **Security > Trust Configuration** to enter the list of identity providers.
 - b. Choose the name of your identity provider to enter it, and then choose *Role Collection Mappings*.
 - c. Choose *New Role Collection Mapping*, select and enter the values, and choose *Save*. (For more information, see [Map Role Collections to User Groups](#).)

Note

Each time you change any role-related settings, log out and log in to view the changes.

8. Optionally, to make the users with the `MyTest_Producer` role template visible, the subaccount administrator needs to import the users from the external identity provider to BTP.
- a. Choose **Security > Users**, choose *Create* on the top right corner to create new users.
 - b. In the *New User* pop-up window, enter a user name, choose an identity provider, and enter an e-mail.
 - c. After the user is created, go to the detail page of the user and choose *Assign Role Collection* in the *Role Collections* tab.
 - d. In the pop-up window, choose a role collection value that already contains the target role template, for example `EPD_Quality_Engineer`.

Related Information

[Identity Authentication](#)

6 Connectivity

Provides you with information about the various connectivity configurations required to work with the SAP Product Lifecycle Management services and features.

Refer to the relevant sections for more information.

- [Configuring Connectivity for Collaboration \[page 90\]](#)
- [Configuring Connectivity for Common Functions \[page 110\]](#)
- [Configuring Connectivity for Configuration Management \[page 111\]](#)
- [Configuring Connectivity for Engineering \[page 114\]](#)
- [Configuring Connectivity for Enterprise Product Structure \[page 123\]](#)
- [Configuring Connectivity for Insights \[page 127\]](#)
- [Configuring Connectivity for Intelligent Handover \[page 125\]](#)
- [Configuring Connectivity for Specification Management \[page 132\]](#)
- [Configuring Connectivity for Visualization \[page 134\]](#)

6.1 How to Configure Destinations

You configure destinations in the SAP Business Technology Platform cockpit to connect SaaS applications of SAP Product Lifecycle Management to different systems.

Context

Use this procedure to find, add, or edit destinations mentioned in the subsequent topics.

Procedure

1. In your web browser, log on to the SAP BTP cockpit, and choose the relevant subaccount.
2. In the left panel, under *Connectivity*, choose *Destinations*.
3. Search for the destination name mentioned in a topic.

→ Remember

Destination titles should be prefixed with **EPD_** for the apps to function.

- If the destination does not exist, choose *New Destination*, and under *Destination Configuration*, enter the destination details as mentioned in the topic.

- If the destination exists, ensure that the configuration is as mentioned in the topic.
4. Save your changes.

6.2 Using the Cloud Connector to Connect to On-Premise Systems

If the source system for data that you use in SAP Product Lifecycle Management is an on-premise system, you must install and configure the Cloud Connector.

Context

You only need to install a Cloud Connector once for each network that you want to expose to the cloud. One Cloud Connector can connect to as many target systems as required, and can also connect to multiple SAP BTP accounts. Usually you only need to create multiple cloud connectors if you want to share different networks with SAP BTP or to separate them for load or performance reasons.

Configure the Cloud Connector for each source system.

Procedure

1. Install the Cloud Connector by following the procedure in [Installation](#).
2. Configure the Cloud Connector to make it operational for connections between your SAP BTP subaccount and on-premise systems by following the procedure in [Initial Configuration](#).
3. Configure access control, or copy the complete access control settings from another subaccount on the same Cloud Connector, by following the procedure in [Configure Access Control](#).
4. Optional: Configure principal propagation by following the procedure in [Configure principal propagation](#).

Note

If you require support or encounter any technical issues while configuring the Cloud Connector, contact SAP by reporting an incident under the component `BC-MID-SCC`.

Next Steps

Set up the destination for the source system as described in the corresponding **Connectivity** document for your SaaS applications.

Note

If your Cloud Connector configuration uses a location other than the default one, make note of the location ID. You will need that later when setting up your destination.

6.3 Connectivity Using PLM System Integration

SAP Product Lifecycle Management can be integrated with SAP S/4HANA Cloud using PLM system integration. The technical component PLMSI also offers an integration layer between SAP Product Lifecycle Management and SAP S/4HANA or SAP ERP.

The integration using PLM system integration is currently available for the following SaaS applications:

- Configuration Management
- Enterprise Product Structure
- Intelligent Handover
- Specification Management

This chapter covers how to configure the destinations needed to transfer data:

- [Destination for Connecting to SAP ERP \[page 84\]](#)
- [Destination for Connecting to SAP S/4HANA \[page 86\]](#)
- [Destination for Connecting to SAP S/4HANA Cloud \[page 88\]](#)

6.3.1 Destination for Connecting to SAP ERP

To retrieve data from an SAP ERP system using PLM system integration, you need to add a destination.

Context

It is mandatory that you use the technical component PLMSI if you need to integrate data from your SAP ERP system into the following SaaS applications for SAP Product Lifecycle Management:

- Configuration Management
- Enterprise Product Structure
- Intelligent Handover
- Specification Management

Note

To use the PLMSI technical component, the SAP ERP system to be connected must have at least Enhancement Package 8.

Set up one destination per source system. After you set up a destination to connect an SAP ERP system using the PLMSI technical component, that SAP ERP system can use the same destination for exchanging data for any SaaS application that is connected via the PLMSI technical component.

Prerequisites

- You have installed the PLMSI technical component as explained here: [About Integrating SAP Product Lifecycle Management with SAP S/4HANA or SAP ERP](#).
- You have installed and configured the Cloud Connector as explained here: [Using the Cloud Connector to Connect to On-Premise Systems \[page 83\]](#).

Procedure

1. In your web browser, log on to the SAP BTP cockpit, and choose the relevant subaccount.
2. In the left panel, under *Connectivity*, choose *Destinations*.
3. To create the destination at the subaccount level, enter the destination details as shown in the following table:

Property	Description
Name	<MySystem>
Type	HTTP
Description	Allows users to access the SAP ERP backend services.
URL	Enter the source system URL as mentioned in the section Finding Source System URL [page 204] .
Proxy Type	On-premise
Authentication	<p>PrincipalPropagation</p> <p>We recommend that you create the destination with principal propagation authentication.</p> <p>For PrincipalPropagation, the user needs to have the same authorizations that are delivered in the <i>SAP_PLME_INTEG_USER</i> role template. Enter the credentials of a user who has Read access to the service in the source system.</p> <p>If you use principal propagation, each Cloud user also needs a user for the integrated SAP ERP system with the same email address maintained. Users are able to synchronize all content that they have access to in the SAP ERP system.</p>

Note

After system synchronization, the synchronized content can be used by **all** users in the SAP Product Lifecycle Management system.

Property	Description
	<p>BasicAuthentication</p> <p>For BasicAuthentication, the user needs to have the same authorizations that are delivered in the SAP_PLME_INTEG_USER role template. Enter the credentials of a user who has Read access to the service in the source system.</p> <p>Basic authentication allows Cloud users to perform synchronization without having a user for the integrated SAP ERP system assigned. In this case, users can synchronize any content that they can access via their technical user assignment. (Technical user with client certificate is supported, see also User Authentication and Authorization.)</p>
Additional Properties	<p>For PrincipalPropagation:</p> <ul style="list-style-type: none"> • Add a property with key: sap-client and value: <client number>. • Add a property with key: sap.epd.purpose and value: synchronization. • Add a property with key: sap.epd.displayname and value <must contain your system's display name>. <hr/> <p>For BasicAuthentication:</p> <ul style="list-style-type: none"> • Add a property with key: sap-client and value: <client number>. • Add a property with key: sap.epd.purpose and value: synchronization. • Add a property with key: sap.epd.displayname and value: <must contain your system's display name>.

6.3.2 Destination for Connecting to SAP S/4HANA

To retrieve data from an SAP S/4HANA system using PLM system integration, you need to add a destination.

Context

It is mandatory that you use the technical component PLMSI if you need to integrate data from your SAP S/4HANA system into the following SaaS applications for SAP Product Lifecycle Management:

- Configuration Management
- Enterprise Product Structure
- Intelligent Handover
- Specification Management

Note

To use the PLMSI technical component, the SAP S/4HANA system to be connected must have at least release 2021 FPS000.

Set up one destination per source system. After you set up a destination to connect an SAP S/4HANA system using the PLMSI technical component, that SAP S/4HANA system can use the same destination for exchanging data for any SaaS application that is connected via the PLMSI technical component.

Prerequisites

- You have installed the PLMSI technical component as explained here: [About Integrating SAP Product Lifecycle Management with SAP S/4HANA or SAP ERP](#).
- You have installed and configured the Cloud Connector as explained here: [Using the Cloud Connector to Connect to On-Premise Systems \[page 83\]](#).

Procedure

1. In your web browser, log on to the SAP BTP cockpit, and choose the relevant subaccount.
2. In the left panel, under *Connectivity*, choose *Destinations*.
3. To create the destination at the subaccount level, enter the destination details as shown in the following table:

Property	Description
Name	<MySystem>
Type	HTTP
Description	Allows users to access the SAP S4/HANA backend services.
URL	Enter the source system URL as mentioned in the section Finding Source System URL [page 204] .
Proxy Type	On-premise
Authentication	PrincipalPropagation We recommend that you create the destination with principal propagation authentication. For PrincipalPropagation, the user needs to have the same authorizations that are delivered in the <i>SAP_PLME_INTEG_USER</i> role template. Enter the credentials of a user who has Read access to the service in the source system. If you use principal propagation, each Cloud user also needs a user for the integrated SAP S/4HANA system with the same email address maintained. Users are able to synchronize all content that they have access to in the SAP S/4HANA system.

Note

After system synchronization, the synchronized content can be used by **all** users in the SAP Product Lifecycle Management system.

Property	Description
	<p>BasicAuthentication</p> <p>For BasicAuthentication, the user needs to have the same authorizations that are delivered in the SAP_PLME_INTEG_USER role template. Enter the credentials of a user who has Read access to the service in the source system.</p> <p>Basic authentication allows Cloud users to perform synchronization without having a user for the integrated SAP S/4HANA system assigned. In this case, users can synchronize any content that they can access via their technical user assignment. (Technical user with client certificate is supported, see also User Authentication and Authorization.)</p>
Additional Properties	<p>For PrincipalPropagation:</p> <ul style="list-style-type: none"> • Add a property with key: sap-client and value: <client number>. • Add a property with key: sap.epd.purpose and value: synchronization. • Add a property with key: sap.epd.displayname and value <must contain your system's display name>. <hr/> <p>For BasicAuthentication:</p> <ul style="list-style-type: none"> • Add a property with key: sap-client and value: <client number>. • Add a property with key: sap.epd.purpose and value: synchronization. • Add a property with key: sap.epd.displayname and value: <must contain your system's display name>.

6.3.3 Destination for Connecting to SAP S/4HANA Cloud

To retrieve data from SAP S/4HANA Cloud using PLM system integration, you need to add a destination.

Context

It is mandatory that you use PLM system integration if you need to integrate data from your SAP S/4HANA Cloud system into the following SaaS applications for SAP Product Lifecycle Management:

- Configuration Management
- Enterprise Product Structure
- Intelligent Handover
- Specification Management

Note

Set up one destination per source system. If you have already set up a destination for connecting SAP S/4HANA Cloud, the system uses this destination for all SaaS applications that connect to SAP S/4HANA Cloud via this connection method.

Prerequisites

- You have activated [scope item 6u3](#) in your SAP S/4HANA Cloud system. Instructions for setting up scope items is available here: [SAP Best Practice Explorer](#).
- Your SAP S/4HANA Cloud user has been assigned a business role that contains the [Communication Management](#) (SAP_CORE_BC_COM) business catalog, for example, the [Administrator](#) (SAP_BR_ADMINISTRATOR) business role.
- You have set up a communication arrangement in your SAP S/4HANA Cloud system. For integration with SAP Product Lifecycle Management, activate the [Product Lifecycle Management - EPD Integration](#) (SAP_COM_0937) communication scenario. For more information, see [Technical Integration with SAP Enterprise Product Development](#) in the documentation for [SAP S/4HANA Cloud](#).
- To create the destination as described in the following steps, you need the API URL of the communication arrangement. You can find the URL in the [Common Data](#) section, [Inbound Services](#), of the [Communication Arrangement](#) UI. (For more information, see [How to Create Communication Arrangement](#)).

Procedure

1. In your web browser, log on to the SAP BTP cockpit, and choose the relevant subaccount.
2. In the left panel, under [Connectivity](#), choose [Destinations](#).
3. To create the destination at the subaccount level, enter the destination details as shown in the following table:

Property	Description
Name	Enter a name for the destination, for example, SAP S/4HANA Cloud system .
Type	HTTP/HTTPS
Description	Enter a description. (optional)
URL	Enter the API URL for the communication arrangement as mentioned in the Prerequisites section.
Proxy Type	Internet

Property	Description
Authentication	<p>Choose an authentication method.</p> <p>The integration supports authentication via the following authentication methods:</p> <ul style="list-style-type: none"> • Client Certificate (recommended for maximum security) <div style="background-color: #f0f0f0; padding: 10px; margin: 10px 0;"> <p>Note</p> <p>After system synchronization, the synchronized content can be used by all users in the SAP Product Lifecycle Management system.</p> </div> <ul style="list-style-type: none"> • User and Password • Basic authentication via user and password allows Cloud users to perform synchronization without having a user for the integrated SAP S/4HANA Cloud system assigned. In this case, users can synchronize any content that they can access via their technical user assignment. (Technical user with client certificate is supported, see also User Authentication and Authorization.) <div style="background-color: #f0f0f0; padding: 10px; margin: 10px 0;"> <p>Note</p> <p>If you want to switch between different authentication methods, you need to create one user per authentication method.</p> </div>
Additional Properties	<p>Enter additional properties:</p> <ul style="list-style-type: none"> • sap.epd.displayname: <must contain your system's display name> • sap.epd.purpose: synchronization. <p>Select the Use default JDK truststore checkbox.</p> <p>For authentication via client certificate, you need to provide the .pfx file that contains the public key and the private key of the client certificate, as well as the password that protects the private key.</p>

6.4 Configuring Connectivity for Collaboration

Collaboration uses SAP Connectivity service to connect to Java and ABAP on-premise systems. To make the connection, you create and configure destinations per relevant protocol type.

Refer to the topics under this section for detailed information.

[Destination for Identity Authentication \[page 91\]](#)

This destination is used to connect to Identity Authentication to allow invited collaboration participants to register with the application.

[Destination for Email Notifications Using SMTP APIs \[page 93\]](#)

Configure this destination using SMTP API for sending email notifications from a common mailbox or when the following occurs:

[Destination for Email Notifications Using Microsoft Graph \[page 94\]](#)

Learn how to enable the connection between SAP Product Lifecycle Management and Microsoft Cloud service resources using Microsoft Graph. With this connection, participants in a collaboration can use Microsoft Outlook to send emails from within a collaboration.

[Destination for Using Microsoft Teams \[page 96\]](#)

This destination is used to configure the connection between SAP Product Lifecycle Management and Microsoft Cloud service resources using Microsoft Teams. With this connection, you can create a team using the Microsoft Teams app, add members, and synchronize the information as a collaboration to the *My Collaborations* app.

[Destination for Connecting to SAP Ariba APIs \[page 99\]](#)

This destination is used to configure connectivity from SAP Business Technology Platform to the product environment of SAP Ariba APIs.

[Destination for Collaborating on Specifications \[page 101\]](#)

To retrieve specification data from any of your source systems, you need to add a destination for your source system.

[Destination for Updating Workflow Permissions \[page 103\]](#)

This destination is used to update the workflow permission for collaboration users.

[Destination for User Groups \[page 104\]](#)

This destination is used to support user groups for collaboration.

[Destination for Model Object Assignments \[page 104\]](#)

[Destination for SAP Document Center, desktop client \[page 106\]](#)

Configure this destination, if SAP Document Management service, desktop client is used to connect with the collaboration users. It must be manually configured in your subaccount.

[Destination for Custom Storage \[page 107\]](#)

Configure this destination to add the Object Store service on SAP BTP. This service enables your business users to work with custom file storage in a collaboration.

[Destination for Management Workflows using Process Variants \[page 109\]](#)

This destination provides information about configuring process flows using process variants for collaboration. It must be manually configured in your subaccount.

6.4.1 Destination for Identity Authentication

This destination is used to connect to Identity Authentication to allow invited collaboration participants to register with the application.

→ Recommendation

Configure this destination to allow first-time users to receive email notifications when invited to collaborations.

Prerequisites

Before creating a destination for Identity Authentication, create a technical user in the Identity Authentication administration console by performing the following steps:

1. In your web browser, log on to the Identity Authentication administration console.

Note

The console URL has the following pattern:

```
https://<Subdomain>.accounts.ondemand.com/admin
```

To find your <Subdomain>, log on to the cloud cockpit and navigate to your subaccount. The subdomain is displayed in the subaccount details.

2. In the left panel, under *Applications & Resources*, choose *Applications*.
3. Under *Bundled Applications*, choose the relevant application.
4. In the *Trust* tab, under *Authentication APIs*, choose *Client Authentication*.
5. Under *Secrets*, choose **+ Add**.

Note

The client ID is generated automatically.

6. Entering a description is optional. Keeping the default settings, choose *Save*.
7. The client credentials are generated and displayed.

Remember

The client credentials are used by the destination to retrieve the first name, last name, and email address of users who are added as participants to collaborations. For more information, see [Configure Secrets for API Authentication](#)

Destination Configuration

For the steps to create the destination, see [How to Configure Destinations \[page 82\]](#).

Field	Value
Name	EPD_Identity_Provider
Type	HTTP
Description	Used for inviting participants to a collaboration
URL	<pre>https://<tenantId>.accounts.ondemand.com</pre> <p>To find your tenant id details, logon to the cockpit and navigate to your subaccount.</p>

Field	Value
Proxy Type	<i>Internet</i>
Authentication	<i>BasicAuthentication</i>

Note

For the credentials, enter the client ID and secret noted in the [Prerequisites \[page 92\]](#) section.

Additional Property for Configuring Name Identifier

If you want to configure the name identifier (email ID), you have to add this additional parameter to your destination settings:

1. Under the *Additional Properties* panel, the properties listed in the table below must be maintained.
2. To create a property, choose *New Property*. In the dropdown field, enter the property name as mentioned in the following table, and then specify the value:

Property	Value	Note
applicationId	Enter the value that you have noted in the header data of the application.	<p>Note</p> <p>When you configure the name identifier, it does not update the existing participants (email ID case) of that collaboration. You need to add the participant again on the <i>Participants</i> tab in the <i>My Collaborations</i> app to grant access to the collaboration that they are part of.</p>

6.4.2 Destination for Email Notifications Using SMTP APIs

Configure this destination using SMTP API for sending email notifications from a common mailbox or when the following occurs:

- Registered users are added as participants to collaborations.
- User are added as assignees to workflows or work items in collaborations.
- Document changes for files and folders.

The destination is mandatory and must be manually configured in your subaccount.

Prerequisites

- You have the details for configuring SMTP email for your scenario.
- Your mail server has the following characteristics:
 - It supports the `SMTP STARTTLS` command on ports 587 or 465
 - It requires authentication.

Destination Configuration

To send email notifications for tasks within a workflow, you must configure a destination. For the basic steps for completing this task, see [Configure the Workflow Capability Mail Destination](#).

Under the *Additional Properties* panel, the following properties must be maintained.

To create a property, choose *New Property*. In the dropdown field, enter the property name as mentioned in the following table, and then specify the value.

Property	Value
<code>mail.epdc.participant.invite</code>	<code>true</code>
<code>mail.epdc.task.assignee.notification</code>	<code>true</code>

Note

This value is used for sending mail notifications to your business users who are added as new assignees to the existing work items in collaborations.

6.4.3 Destination for Email Notifications Using Microsoft Graph

Learn how to enable the connection between SAP Product Lifecycle Management and Microsoft Cloud service resources using Microsoft Graph. With this connection, participants in a collaboration can use Microsoft Outlook to send emails from within a collaboration.

This destination is optional.

Prerequisites

- You have registered a new application in the Microsoft Azure Active Directory.

- The values that are generated from the registration are needed to create a destination. The relevant client secret information is available in the Microsoft Azure Active Directory.
- You have added the necessary permissions for the Microsoft Graph API in the Microsoft Azure Active Directory to use the service.

For more information on the Microsoft Azure Active Directory steps, see [Microsoft documentation](#) .

Context

If you want your business users to send email notifications from their Microsoft Outlook mailbox for custom workflows, you have two alternatives for configuring the destination. We recommend that you configure the destination for sending your email notifications using the SMTP API. This destination has the type **Mail**. For more information on how to configure that destination, see [Destination for Email Notifications Using SMTP APIs \[page 93\]](#).

The other alternative is to follow the steps in the section below to create a destination with the type **HTTP**.

Destination of Type HTTP

For an overview of the steps for configuring destinations, see [How to Configure Destinations \[page 82\]](#).

To create the destination at the subaccount level, enter the destination details as shown in the table:

Field	Value
Name	MS_GRAPH_MAIL
Type	HTTP
URL	https://graph.microsoft.com
Proxy Type	Internet
Authentication	OAuth2ClientCredentials
Client ID	Enter the application (Client) ID that you have noted in the Microsoft Azure for the client secret.
Client Secret	Enter the value that you have noted in the <i>Value</i> column of the client secret.
Token Service URL Type	Dedicated

Field	Value
Token Service URL	https://login.microsoftonline.com/{{tenantID}}/oauth2/v2.0/token You can find your tenant ID details in the Microsoft Azure Active Directory.

Under the *Additional Properties* panel, the following properties must be maintained.

Choose *New Property* to create a new property. In the fields that are displayed, enter the following values:

Property	Value
graphApiUrl	Enter the endpoint URL for the Microsoft Graph API. For example: https://graph.microsoft.com/v1.0
scope	https://graph.microsoft.com/.default
tokenService.body.grant_type	client_credentials
tokenServiceURL.headersContent-Type	application/x-www-form-urlencoded

6.4.4 Destination for Using Microsoft Teams

This destination is used to configure the connection between SAP Product Lifecycle Management and Microsoft Cloud service resources using Microsoft Teams. With this connection, you can create a team using the Microsoft Teams app, add members, and synchronize the information as a collaboration to the *My Collaborations* app.

Prerequisites

- You have registered for the Collaboration application in the Microsoft Azure Active Directory. The values that are generated from the registration are needed to create a destination. The relevant client secret information is available in the Microsoft Azure Active Directory.
- You have added the necessary permissions for the Microsoft Graph APIs in the Microsoft Azure Active Directory.

For more information about the Microsoft Azure Active Directory steps, see the [Microsoft documentation](#) .

Context

You configure this destination if you want your business users to use the Microsoft Teams app.

Destination Configuration

For an overview of the steps for configuring destinations, see the [How to Configure Destinations \[page 82\]](#).

To create the destination at the subaccount level, enter the destination details as shown in the table:

Field	Value
Name	EPD_TEAMS<tenantId> You can find your tenantId details in the Microsoft Azure Active Directory.
Type	HTTP
URL	https://graph.microsoft.com
Proxy Type	Internet
Authentication	OAuth2ClientCredentials
Client ID	Enter the application (Client) ID that you have noted in the Microsoft Azure for the client secret.
Client Secret	Enter the value that you have noted in the <i>Value</i> column of the client secret.
Token Service URL Type	Dedicated
Token Service URL	https://login.microsoftonline.com/{{tenantId}}/oauth2/v2.0/token You can find your tenantId details in the Microsoft Azure Active Directory.

Under the *Additional Properties* panel, the following properties must be maintained.

Choose *New Property* to create a new property. In the fields that are displayed, enter the following values:

Property	Value
scope	https://graph.microsoft.com/.default
tenantId	You can find your tenant ID details in the Microsoft Azure Active Directory.

Configure Destination for Certificates

Configure the destination to store and decrypt the data.

Field	Value
Name	EPD_TEAMS_CERTIFICATE
Type	HTTP
URL	https://graph.microsoft.com
Proxy Type	Internet
Authentication	ClientCertificateAuthentication
<i>Update and Delete Certificates</i>	Choose <i>Upload Certificate</i> , browse to the certificate you need to upload.
Key Store Location	Choose the certificate from the dropdown.
Key Store Password	Enter the password that you have created when generating the p12 file.

How to Generate p12 file from PEM?

The p12 file contains certificate chain and private key that are used to decrypt information or notification.

Prerequisites

- You have the X.509 client certificate and private key (.pem).
- You have uploaded the certificate (.pem) in the Microsoft Azure Active Directory.

Procedure

1. To generate p12 and the key store password using the certificate and the private key (.pem).
2. Run the following command format given:
For example: `Openssl pkcs12 -export -in <certificate.pem> -inkey <key.pem> -out <certificate.p12> -name <certificateAliasName>`
3. Enter a new key store password.
You need this value to configure the destination.

Under the *Additional Properties* panel, the following properties must be maintained.

Choose [New Property](#) to create a new property. In the fields that are displayed, enter the following values:

Property	Value
alias	Enter the name that you have noted down when generating the .p12 file as explained in the procedure for How to Generate p12 file from PEM? .
encryptionCertificateId	Enter the certificate ID that you have noted after you have uploaded the certificate (.pem) in the Microsoft Azure Active Directory.

6.4.5 Destination for Connecting to SAP Ariba APIs

This destination is used to configure connectivity from SAP Business Technology Platform to the product environment of SAP Ariba APIs.

Note

If you are using SAP Ariba Supplier Lifecycle and Performance and intend to onboard suppliers as participants in collaborations, this destination configuration is **mandatory**.

Prerequisites

Before configuring the destination, perform the activities mentioned in [Connect to SAP Ariba Supplier Lifecycle and Performance \[page 230\]](#).

Destination Configuration

The following destination is used to configure connectivity to an API published on the production environment of SAP Ariba APIs.

For an overview of how to create destinations, see [How to Configure Destinations \[page 82\]](#).

Field	Value
Name	EPD_Ariba
Type	HTTP
Description	Used for accessing SAP Ariba APIs.

Field	Value
URL	https://openapi.ariba.com/api
Proxy Type	<i>Internet</i>
Authentication	<i>OAuth2ClientCredentials</i>
Client ID	Enter the client ID that you noted in Connect to SAP Ariba Supplier Lifecycle and Performance [page 230] .
Client Secret	Enter the client secret that you noted in Connect to SAP Ariba Supplier Lifecycle and Performance [page 230] .
Token Service URL	https://api.ariba.com/v2/oauth/token

Under the *Additional Properties* panel, the properties listed in the table below must be maintained.

To create a property, choose *New Property*. In the dropdown field, enter the property name as mentioned in the following table, and then specify the value.

Property	Value	Note
apiKey	Enter the application key that you noted in Connect to SAP Ariba Supplier Lifecycle and Performance [page 230] .	
realm	Depending on the extension application and the SAP Ariba solution you use, you have an SAP Ariba Company / SAP Ariba Realm. Enter this value.	Only one realm is supported. For more information about a realm, see SAP Ariba Glossary .
saml2idp	Enter the value that you noted in the <i>Original Key</i> column of the Ariba Identity Provider. You can find these details in the SAP BTP cockpit in the Security > Trust Configuration table.	This value is used to allow your business users to fetch the supplier data directly from the Ariba Sourcing project. For more detailed explanation about how to establish the connection between Ariba Network and collaborations, see Configuring Single Sign-On Between Ariba Network and Collaborations .

6.4.6 Destination for Collaborating on Specifications

To retrieve specification data from any of your source systems, you need to add a destination for your source system.

Prerequisites

If the Cloud Connector for SAP BTP, Cloud Foundry Environment, is not already installed and configured for connecting cloud applications to your SAP S/4HANA system, complete the necessary steps. For more information, see [Using the Cloud Connector to Connect to On-Premise Systems](#).

Configuring and Installing Cloud Connector

If your source system is an on-premise system, add a destination for the Cloud Connector.


Note

The specification exchange scenario works with APIs that are available in the following **SAP S/4HANA** On-Premise releases: 2020 or later, 1909, and 1809. The scenario can also work with the Enhancement Package 8 of **SAP ERP**.

Here is the workflow for setting up the cloud connector using principal propagation:

1. Install the Cloud Connector by following the procedure in [Installation](#).
2. Configure the Cloud Connector to make it operational for connections between your SAP BTP subaccount and on-premise systems by following the procedure in [Initial Configuration](#).
3. Configure access control, or copy the complete access control settings from another subaccount on the same Cloud Connector, by following the procedure in [Configure Access Control](#).
4. Configure the newly installed Cloud Connector (initial configuration, subaccounts, access control) using the OData configuration by following the procedure in [Configuration REST APIs](#).
5. Configure principal propagation by following the procedure in [Configure principal propagation](#).

Note

If you require support or encounter any technical issues while configuring the Cloud Connector, contact SAP by reporting an incident on the [Support Portal](#)  under the component BC-MID-SCC.

Creating SAP BTP Destinations

Configure HTTP destinations to connect to an SAP S/4HANA system through HTTP(s) as mentioned below.

For the source system that you want to retrieve product data from, you must create a destination as mentioned in the following table. It is left to your discretion to select the authentication type of the destination.

→ Recommendation

We recommend that you create the destination with principal propagation authentication.

Name	Type	URL	Proxy Type	Authentication	Additional Properties
PLM_CORE	HTTP	Enter the source system URL as mentioned in the section Finding Source System URL [page 204] .	On-premise	BasicAuthentication	-

Note

Enter the credentials of a user who has **Read** access to the service in the source system.

PrincipalPropagation	Add a property with key as sap-client and value as the system client number.
----------------------	---

Additional Properties for Older Source Systems

Refer to the following table and add the respective additional properties to your destination, based on your source system version.

Source System	API Related Property	Classification Related Property
SAP S/4HANA On-Premise 1909	old-system property set to true	-
SAP S/4HANA On-Premise 1809	old-system property set to true	classificationAPI property set to the exact name of your Classification API implementation
SAP ERP EhP8	old-system property set to true	classificationAPI property set to the exact name of your Classification API implementation

For more information about implementing the Classification API, see SAP Note [3145055](#).

APIs in the Source System

To retrieve specification data, you have to also configure the APIs that are related to specifications in your source system. For more information, see [Specification APIs for Recipe Development](#).

6.4.7 Destination for Updating Workflow Permissions

This destination is used to update the workflow permission for collaboration users.

This destination is **mandatory** and must be manually configured in your subaccount.

Prerequisites

You have created a service key for the service instance for the Collaboration service as mentioned in [Configuration for Using APIs \[page 372\]](#).

The values that are generated from the service key are needed, to create the destination. To access these values, you can follow the below steps:

1. In your web browser, log on to the SAP BTP cockpit, choose the relevant subaccount.
2. In the left panel under *Services*, choose *Instances and Subscriptions*.
3. Under *Instances* tab, select the application. Choose **...** (*Actions*) .
For more information, see [Creating a Service Instance and Service Key](#)
4. In the endpoints section, note the value of the Collaboration service URL in the *url* parameter.
5. In the *uaa* section, note the values of *clientid*, *clientsecret*, and *url*.

Service Instance JSON	Corresponding Destination
API URL	URL
CLIENT ID	CLIENT ID
CLIENT SECRET	CLIENT SECRET
URL	TOKEN SERVICE URL AND APPEND suffix /oauth/token

Destination Configuration

For the steps to create the destination, see [How to Configure Destinations \[page 82\]](#).

Property	Value
Name	EPD_Collaboration
Type	<i>HTTP</i>
Description	Used to update workflow permissions for new collaboration users.
URL	Enter the endpoints URL that you noted in the prerequisites.
Proxy Type	<i>Internet</i>

Property	Value
Authentication	<i>OAuth2ClientCredentials</i>
Client ID	Enter the client ID that you noted in the prerequisites.
Client Secret	Enter the client secret that you noted in the prerequisites.
Token Service URL	Enter the URL that you noted in the prerequisites and append suffix /oauth/token .

Under the *Additional Properties* panel, the following properties must be maintained.

To create a property, choose *New Property*. In the dropdown field, enter the property name as mentioned in the following table, and then specify the value.

Property	Value
FLP_URL (Case sensitive)	Update URL login to cFLP or FLP For example: https://epd-dev-eu20-consumer.launchpad.cfapps.eu20.hana.ondemand.com/site/dev (dev is the siteid configured in cFLP).

6.4.8 Destination for User Groups

This destination is used to support user groups for collaboration.

This destination is **mandatory** and must be manually configured in your subaccount.

Destination Configuration

For the steps to create the destination, see [Configuring Connectivity for Common Functions \[page 110\]](#).

6.4.9 Destination for Model Object Assignments

This destination is required for the integration of Collaboration with Engineering and must be manually configured in your subaccount.

Prerequisites

You have created a service key for the service instance for the SAP EA Designer service as shown in [Configuration for Using APIs \[page 372\]](#).

From the service key details, note the following values to use when creating the destination:

- ead-designer-backend url
- client id
- client secret
- uaa url(Authentication url)

Destination Configuration

For information about how to create the destination, see [How to Configure Destinations \[page 82\]](#).

Property	Value
Name	EPD_EAD_COLLABORATION
Type	<i>HTTP</i>
Description	Used to enable viewing of requirements that are related to the collaboration for new collaboration participants.
URL	Enter the ead-designer backend url that you noted in the prerequisites.
Proxy Type	<i>Internet</i>
Authentication	<i>OAuth2JWTBearer</i>
Client ID	Enter the client ID that you noted in the prerequisites.
Client Secret	Enter the client secret that you noted in the prerequisites.
Token Service URL	Enter the <i>uaa</i> URL that you noted in the prerequisites and append /oauth/token .

6.4.10 Destination for SAP Document Center, desktop client

Configure this destination, if SAP Document Management service, desktop client is used to connect with the collaboration users. It must be manually configured in your subaccount.

Prerequisites

You have created a service key for the service instance for the *Collaboration* service as mentioned in [Configuration for Using APIs \[page 372\]](#).

The values that are generated from service key are needed to create a destination. To access these values, you can follow the steps below:

1. In your web browser, log on to the SAP BTP cockpit, choose the relevant subaccount.
2. In the left panel, under *Services*, choose *Instances and Subscriptions*.
3. Under *Instances* tab, select the application. Choose **...** (*Actions*) .
For more information, see [Creating a Service Instance and Service Key](#).
4. In the endpoints section, note the value of the Collaboration service URL to enter in the *url* parameter.
5. In the *uaa* section, note the values of *clientid*, *clientsecret*, and *url* parameter:

Service Instance JSON	Corresponding Destination
API URL	URL
CLIENT ID	CLIENT ID
CLIENT SECRET	CLIENT SECRET
Token Service URL	TOKEN SERVICE URL AND APPEND suffix /oauth/token

Destination Configuration

For the steps to create the destination, see [How to Configure Destinations \[page 82\]](#).

Property	Value
Name	SDM_Instance_Client
Type	<i>HTTP</i>
Description	Used to connect from the document center to the collaboration users.
URL	Enter the value of the service URL that you have noted in the endpoints URL of the service instance.

Property	Value
Proxy Type	<i>Internet</i>
Authentication	<i>OAuth2ClientCredentials</i>
Client ID	Enter the client ID that you noted in the prerequisites.
Client Secret	Enter the client secret that you noted in the prerequisites.
Token Service URL	Enter the <i>uaa</i> URL that you noted in the prerequisites and append suffix /oauth/token .

6.4.11 Destination for Custom Storage

Configure this destination to add the Object Store service on SAP BTP. This service enables your business users to work with custom file storage in a collaboration.

This destination is **optional**.

Prerequisites

You have added the Object Store service to your subaccount. For more information, see [Configure Entitlements and Quotas for Subaccounts](#).

Note

Ensure you have enabled the feature for maintaining multiple versions of the object on Azure landscape. For more information, see [Object Versioning](#).

Ensure you have enabled the feature for preventing accidental deletion of objects in your service instance resources. Make the settings that are described here:

- [Preventing Accidental Deletion of Azure Containers](#)
- [Prevent Accidental Deletion of AWS S3 Buckets](#)

You have created a service key for the service instance for the Object Store service. For more information, see [What Is Object Store?](#).

The values that are generated from the service key are needed, to create the destination. To access these values, you can follow the below steps:

1. In your web browser, log on to the SAP BTP cockpit, choose the relevant subaccount.
2. In the left panel under *Services*, choose *Instances and Subscriptions*.
3. Select the instance, in the *Credentials* column, choose the service key that is created.
4. In the dialog, under *JSON* tab, you can see the values for the service instance.

Destination Configuration

For the steps to create the destination, see [How to Configure Destinations \[page 82\]](#).

Property	Value
Name	EPD_CUSTOM_STORAGE
Type	<i>HTTP</i>
Description	Object store custom storage
URL	<ul style="list-style-type: none">• Enter the URL that you have noted in the <i>container uri</i> field from the service instance for azure-standard plan.• Enter the URL mentioned that you have noted in the <i>uri</i> field for s3-standard plan.
Proxy Type	<i>Internet</i>
Authentication	NoAuthentication

Under the *Additional Properties* panel, the following properties must be maintained.

To create a property, choose *New Property*. In the dropdown field, enter the property name as mentioned in the following table, and then specify the value.

Configuring for azure-standard:

Property	Description
account_name	Name of the storage account
container_name	Name of the container created within the storage account
container_uri	Copy the URL as mentioned in the service instance.
plan	azure-standard
region	The region in which the storage account and container are created.
sas_token	The service sas_token

Note

This feature is not supported in CN_40.

Configuring for aws-standard:

Property	Description
access_key_id	The access key ID of the technical user created

Property	Description
bucket	Name of the AWS - s3-standard
host	Host Name
plan	s3-standard
region	The region in which the AWS - s3-standard is created
secret_access_key	The secret key ID of the technical user created
uri	<div style="border-left: 2px solid orange; padding-left: 10px;"> <p>⚠ Caution</p> <p>You need to replace <code>s3://</code> with <code>https://</code></p> </div>
username	The user name

📘 Note

Once configured, it is recommended not to delete the destination configuration.

6.4.12 Destination for Management Workflows using Process Variants

This destination provides information about configuring process flows using process variants for collaboration. It must be manually configured in your subaccount.

This destination is **optional**.

Destination Configuration

Configure the `bpmworkflowruntimeoauth` destination to execute workflows where principal propagation destination is enabled.

To create the destination, see [Create an OAuth Destination](#).

Related Information

[Configuring Process Flows Using Process Variants \[page 202\]](#)

6.5 Configuring Connectivity for Common Functions

This destination is **mandatory** for connecting to the Common Functions and must be manually configured in your subaccount.

The Common Functions for SAP Product Lifecycle Management allows you to use the following features:

- Manage Teams

Prerequisites

You have created a service key for the service instance under [▶ Service Marketplace](#) [▶ Authorization & Trust Management](#) [▶](#) for the authorization and trust management (XSUAA). For more information about creation steps, see [Configuration for Using APIs \[page 372\]](#).

Note

The service instance plan should be `apiaccess`.

Destination Configuration

Property	Description
Name	EPD_XSUAA_APIAccess (the destination name is case-sensitive)
Type	<i>HTTP</i>
Description	Enter a description for your service as appropriate.
URL	Enter the value of <i>apiurl</i> from service key credentials.
Proxy Type	<i>Internet</i>
Authentication	<i>OAuth2ClientCredentials</i>
Client ID	Enter the value of <i>clientid</i> from service key credentials.
Client Secret	Enter the value of <i>clientsecret</i> from service key credentials.

Property	Description
Token Service URL	<p>Enter the value of <i>URL</i> from service key credentials and append the path <code>/oauth/token</code>.</p> <p>For example, <code>https://sub-domain.authentication.eu20.hana.ondemand.com/oauth/token</code>.</p>

6.6 Configuring Connectivity for Configuration Management

Describes the connectivity configuration for Configuration Management apps to allow data sources to retrieve data from SAP ERP, SAP S/4HANA, and SAP S/4HANA Cloud systems.

PLMSI is required to integrate SAP S/4HANA with the Configuration Management SaaS application. For detailed information on how to configure connectivity, see [Connectivity Using PLM System Integration \[page 84\]](#).

For Synchronization of BOM Data

With SAP ERP

The necessary steps to set up the destination is here, see [Destination for Connecting to SAP ERP \[page 84\]](#).

With SAP S/4HANA

The necessary steps to set up the destination is here, see [Destination for Connecting to SAP S/4HANA \[page 86\]](#).

With SAP S/4HANA Cloud

The necessary steps to set up the destination is here, see [Destination for Connecting to SAP S/4HANA Cloud \[page 88\]](#).

Note

In the prerequisite step of [How to Create Communication Arrangement](#), ensure that you have created the communication arrangement for the `SAP_COM_0937` communication scenario.

For Synchronization of Routing Master Data

With SAP ERP

Note

Routing synchronization is not available with SAP ERP.

With SAP S/4HANA

The necessary steps to set up the destination is here, see [Destination for Connecting to SAP S/4HANA \[page 86\]](#).

To enable the master data objects to work for the routing scenario, subscribe to the following public APIs that are available in the following SAP S/4HANA On-Premise releases:

Public APIs	Available From Release
Production Routing	SAP S/4HANA 2021 FPS00 onwards
Work Center	SAP S/4HANA 2021 FPS00 onwards
Production Version	SAP S/4HANA 2022 FPS00 onwards

With SAP S/4HANA Cloud

The necessary steps to set up the destination is here, see [Destination for Connecting to SAP S/4HANA Cloud \[page 88\]](#).

Note

In the prerequisite step of [How to Create Communication Arrangement](#), ensure that you have created the communication arrangement for the following communication scenarios:

- SAP_COM_0104
- SAP_COM_0519

For the above communication scenarios (SAP_COM_0104 and SAP_COM_0519), perform the following procedure as described in [How to Create Communication Arrangement](#):

1. Select the scenario.
2. Perform the steps from 1 to 4.
3. Go to the section [Outbound Communication](#) > [Outbound Services](#) > [Service Status](#) and uncheck the [Active](#) checkbox.

To enable the master data objects to work for the routing scenario, the following public APIs are available for the above communication scenarios:

- [Production Routing](#)
- [Work Center](#)
- [Routing Version](#)

6.6.1 Destination for Connecting to On-Premise Content Server

You need to create a destination for your Content Server to retrieve document content from an on-premise Content Server (KPro). An on-premise Content Server is set up outside SAP S/4HANA, SAP S/4HANA Cloud or SAP ERP systems.

Note

If you use the Content Server within the source system, this topic is not relevant.

Prerequisites

- You've set up a Cloud Connector for your on-premise Content Server to enable access to Enterprise Product Structure to retrieve the document originals. For more information, see [Using the Cloud Connector to Connect to On-Premise Systems \[page 83\]](#).
- You've configured the connectivity for Enterprise Product Structure apps to allow data sources to retrieve data from the SAP ERP, SAP S/4HANA, or SAP S/4HANA Cloud systems. For more information, see [Configuring Connectivity for Enterprise Product Structure \[page 123\]](#).

Creating SAP BTP Destinations

Configure HTTP destinations to connect to your content server through HTTPS as mentioned below. The connection can be established by a technical user.

For the Content Server that you want to retrieve document content from, you must create destinations as mentioned in the table below. Enterprise Product Structure supports multiple destinations, so it is left to your discretion to choose a name for a destination.

There are three additional properties that need to be specified for the Enterprise Product Structure services to recognize a destination properly:

- `sap.epd.displayname:<must contain your system's display name>`
- `sap.epd.purpose: content`
- `sap.epd.contentserver.host: <https://host:port>` of your content server

→ Recommendation

We recommend that you create the destination with technical user authentication.

Destination

Property	Description
Name	<MySystem>
Type	HTTP
Description	Allows users to access the Content Server
URL	Enter the Cloud Connector URL
Proxy Type	On-premise
Authentication	NoAuthentication
Additional Properties	For NoAuthentication : <ul style="list-style-type: none">• Add a property with key: sap.epd.purpose and value: content.• Add a property with key: sap.epd.displayname and value: <must contain your system's display name>.• Add a property with key: sap.epd.contentserver.host and value: <https://host:port> of your content server. The content server host:port can be identified by navigating to the transaction OACO on your source system.

6.7 Configuring Connectivity for Engineering

The Engineering cloud service for SAP Product Lifecycle Management allows you to use the following features:

- Requirements Management and Systems Modeling
- Test Management

You must connect the Test Management apps to other applications and services in order to enable the complete functionalities of these apps.

Create the destinations mentioned in the subsequent topics for Test Management by using the following procedure:

1. In the SAP Business Technology Platform cockpit, navigate to your subaccount page and choose [Connectivity](#) > [Destinations](#) to view the list of destinations.
2. Create a destination by choosing [New Destination](#), entering the values, and then choosing [Save](#).

For the [Test Management](#) feature, if you want to retrieve the list of quality engineer, and assign test cases to the engineers in the [Manage Test Executions](#) app, you can configure a destination for the list. For more information, see [Configuring Connectivity for Common Functions \[page 110\]](#).

6.7.1 Configuring Connectivity for Test Management Apps

Describes the connectivity configurations for the Test Management apps.

6.7.1.1 Connecting to BOMs in SAP S/4HANA Cloud or On-Premise

[Test Management apps] To access the data of bills of materials (BOMs) from the Test Management apps, configure integration with either SAP S/4HANA Cloud or SAP S/4HANA (on-premise).

[Connecting to SAP S/4HANA Cloud \[page 115\]](#)

[Connecting to SAP S/4HANA \(On-Premise\) \[page 117\]](#)

6.7.1.1.1 Connecting to SAP S/4HANA Cloud

Prerequisites

- To be able to access the BOM data in SAP S/4HANA Cloud, make sure the scope items [3LO](#) and [3LP](#) are activated.
- Before creating the following destination, you must use the Communication Management apps from SAP S/4HANA Cloud to make the required configuration, which enables the Test Management apps to securely exchange data with SAP S/4HANA Cloud. See [Communication Management](#) for details about the configuration, or reference the following process overview:
 1. Log on to your SAP S/4HANA Cloud launchpad with the appropriate role. In the [Maintain Communication Users](#) app, create a new user for the Test Management apps. Enter a user name, description and password as appropriate. **Keep the entered user name and password available for use shortly - the values are required when creating the destination in SAP Business Technology Platform cockpit.**
 2. In the [Communication Systems](#) app, create a new communication system for the Test Management apps. Enter a system ID (for example,), system name and host name (as host name is not required in this scenario, just enter the system ID again in the [Host Name](#) field) for it as appropriate. Add the user you just created to the communication system in the [Users for Inbound Communication](#) table.
 3. In the [Communication Arrangements](#) app, create a new communication arrangement. Select **Product Lifecycle Management - Master Data Integration (SAP_COM_0105)** as its communication scenario. Enter the communication system and the user name you just created for the arrangement.

Destination

Property	Description
Name	EPD_S4HANA_Service
Type	HTTP
Description	Allows users to access access the S4 HANA backend services.
URL	https://<s4-cloud-domain>.<domain> <div><p>Note</p><p>You can copy your SAP S/4HANA Cloud system URL from User Settings > User Account > Server.</p></div>
Proxy Type	Internet
Authentication	BasicAuthentication
User	Enter the name and password of your communication user of SAP S/4HANA Cloud.
Password	

Property	Description
Name	EPD_S4HANA_Application
Type	HTTP
Description	Allows users to navigate to the S4 HANA applications.
URL	https://<s4-cloud-domain>.<domain>/ui# <div><p>Note</p><p>You can click the Home button to enter to the home page, copy your SAP S/4HANA Cloud system URL from https:// to #, and paste it in the field.</p></div>
Proxy Type	Internet
Authentication	NoAuthentication

6.7.1.1.2 Connecting to SAP S/4HANA (On-Premise)

Prerequisites

Install and configure the SAP HANA Cloud Connector as a link between your SAP Business Technology Platform subaccount for Test Management apps and the on-premise SAP S/4HANA system.

1. Install the SAP HANA Cloud Connector to the on-premise server for your SAP S/4HANA system. For more information, see [Installation](#) in the *SAP BTP Connectivity* documentation.
2. Log on to the SAP HANA Cloud Connector from your Web browser and connect it to your SAP Business Technology Platform subaccount.

For detailed information about the initial logon and configuration, see [Initial Configuration](#) in the *SAP BTP Connectivity* documentation.

Enter parameters as follows and click [Save](#):

Parameter	Description
Region	Select the region where your subaccount is deployed.
Subaccount	Enter the ID of your subaccount.
<div style="border: 1px solid #ccc; background-color: #f9f9f9; padding: 10px;"><p>Note</p><p>This value can be found in the Subaccount Details panel on the subaccount Overview page in the SAP BTP cockpit.</p></div>	
Display Name	[optional] Enter the name to show for the subaccount in the Cloud Connector interface.
Subaccount User	Enter your subaccount administrator username.
Password	Enter your subaccount password
Location ID	Specifies a short name to identify the Cloud Connector in the subaccount. This value will be used when adding the Cloud Connector instance as a destination in your subaccount.
Description	[optional] Enter further information about the subaccount.
HTTPS Proxy	[if required in your environment] Enter parameters for your proxy.

If your parameters are correct, the Cloud Connector will automatically connect to your subaccount.

3. Create a system mapping from the Cloud Connector to the SAP S/4HANA system:
 1. In the Cloud Connector navigation area, click [Cloud To On-Premise](#), click [Add](#), and then complete the [Add System Mapping](#) wizard pages as follows:

Parameter	Description
Back-end Type	Select SAP Gateway and click Next .
Protocol	Select HTTPS and click Next .

Parameter	Description
Internal Host / Port	Specify the actual host and port under which the SAP S/4HANA system can be reached within the intranet. Click Next .
Virtual Host / Port	Specify a name for the agent instance and keep the same port as for the internal port. These values will be used adding the Cloud Connector instance as a destination in your subaccount.
Principal Type	Select None and click Next .
Host in Request Header	Keep the default value Use Virtual Host and click Next .
Description	Optionally enter a description for the mapping, click Next , check Check Internal Host and then Finish .

For detailed information, see [Configure Access Control \(HTTP\)](#) in the *SAP BTP Connectivity* documentation.

2. Click the [Check Availability](#) action to see if your parameters are correct.
3. Click the [Add](#) tool above the [Resources Accessible](#) table, enter parameters as follows, and then click [Save](#):

Parameter	Description
URL Path	Enter <code>/</code> .
Enabled	Leave selected.
Access Policy	Select Path and all sub-paths .
Description	Optionally enter a description for the resource.

Procedure

In your subaccount, create two destinations. For details about how to create a destination, see [Configuring Connectivity for Engineering \[page 114\]](#).

Enter the property values as follows:

Property	Description
Name	EPD_S4HANA_Service
Type	HTTP
Description	Allows users to access access the S4 HANA backend services.
URL	Enter the virtual host and port value you specified when creating a system mapping from the Cloud Connector to the your on-premise system in the form: <pre>http://<VirtualHost>:<Port></pre>
Proxy Type	OnPremise

Property	Description
Authentication	BasicAuthentication
User	Enter the name and password of your technical user in SAP S/4HANA.
Password	
Property	Description
Name	EPD_S4HANA_Application
Type	HTTP
Description	Allows users to navigate to the S4 HAHA applications.
URL	Enter the URL in the following pattern: <pre>https://<hostname>/sap/bc/ui5_ui5/ui2/ushell/shells/abap/FioriLaunchpad.html<sap-language=>&<sap-client=>#</pre>
<p>Note</p> <p>You can click the <i>Home</i> button to enter to the home page, copy your system URL from https:// to #, and paste it in the field. For example, https://uyt928-er9001.wdf.sap.corp/sap/bc/ui5_ui5/ui2/ushell/shells/abap/FioriLaunchpad.html?sap-language=&sap-client=928#</p> <p>If a specific language is configured in the destination, the web page will be displayed in the configured language, even though the end users set a different logon language. You can also leave the language unconfigured in the destination, and the web page will be displayed in the logon language end users set.</p>	
Proxy Type	Internet
Authentication	NoAuthentication

Next Steps

If you want to verify whether S4 function works well, you can go to *Test Management* app, choose *Manage Test Execution* and click *Add Test Object*, instead of choosing *Check Connection* on BTP.

6.7.2 Configuring Connectivity for Requirements Management and Systems Modeling

Describes the connectivity configurations for the *Requirements Management and Systems Modeling* apps.

6.7.2.1 Connecting to Test Management

Integrate the Test Management apps with the *Requirements Management and Systems Modeling* app.

Context

The integration allows your users to assign the requirements in *Requirements Management and Systems Modeling* to test cases for traceability. For more information, see [Assigning Requirements to a Test Case](#).

Procedure

1. Select *Requirements Management and Systems Modeling* tile in the launchpad.
2. Activate test case as external object types in *Requirements Management and Systems Modeling* by performing the following steps:

Note

For all the following steps, you must be assigned to a role collection that contains the role **EADesigner_Administrator**, which includes the *Edit Extensions on Web* right.

Or at least you must have the *Edit Extensions on Web* right.

1. In *Requirements Management and Systems Modeling*, click ► *Administration* > *Settings* ▾ in the navigation panel, and then click the *External Systems* tile. Select *External Objects*.
Two tables are displayed on the page.
2. Above the right table, select SAP Enterprise Product Development from the dropdown list.
3. Select *Activate*.
Now, test case is activated as an external object type and listed in the right table.
3. Add the system of Test Management as an external system in *Requirements Management and Systems Modeling* by performing the following steps:
 1. In *Requirements Management and Systems Modeling*, select ► *Administration* > *Settings* ▾ in the navigation panel, select the *External Systems* tile, and then select the *System Connections* tile.
 2. Select the *Add* button and enter the following property values for the new external system:

System ID	Host URL	Description
<p>Enter EPD-Engr-<tenantID></p> <p>For <tenantID>, go to your subaccount page in the SAP Business Technology Platform cockpit. In the <i>Subaccount Details</i> section, copy the value for <i>ID</i>.</p>	<p>Reference the application URL of your SAP Fiori launchpad for the EPD apps - copy the URL from the beginning to the character "#".</p>	<p>EPD or other meaningful description.</p>

Note

To find the application URL:

1. Go to your subaccount in SAP BTP cockpit.
2. Select *Subscriptions* in the navigation panel.
3. Click *Go to Application* on the *EPD* tile

6.7.2.2 Connecting to Collaboration

Integrate the Collaboration SaaS application with the *Requirements Management and Systems Modeling* app.

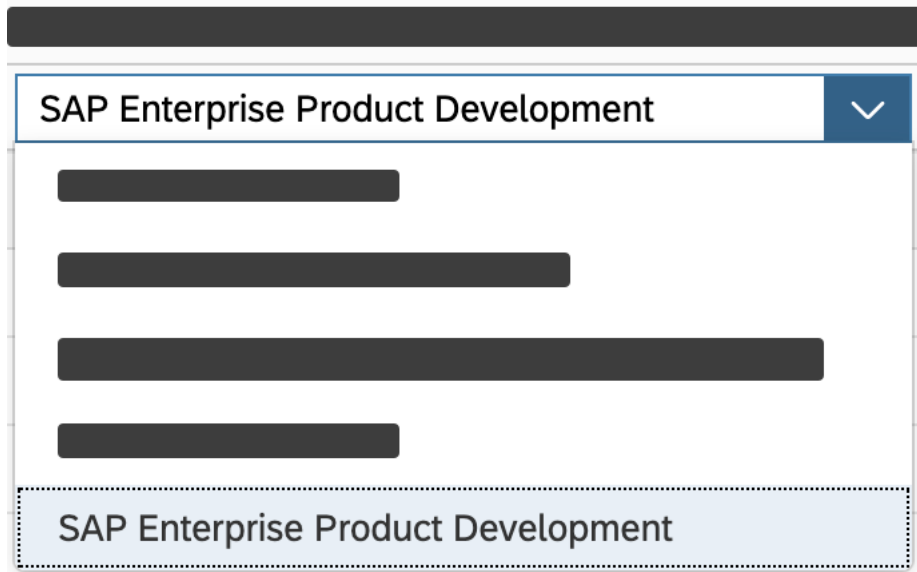
Procedure

1. In *Requirements Management and Systems Modeling*, click **Administration > Settings** in the navigation panel, and then click the *External Systems* tile. Select *External Objects*.

Two tables are displayed on the page.

2. In the *System Versions* table, select from the dropdown list.

System Versions



3. Click *Activate*.

Now, Collaboration is activated as an external object type and listed in the *Active External Object Types* table.

4. Go back to the *External Systems* tile, and then select the *System Connections* tile.
5. Select the *Add* button and enter the property values for the Collaboration SaaS application.

System ID	Host URL	System Description
To connect to the Collaboration apps, enter EPD-Colla-<tenantID> . Replace <tenantID> with the ID of the Collaboration apps' subaccount.	Copy the launchpad portal URL starting from the beginning to the character "#". For example: <pre>https://<host ID>/portal.portal/site#</pre>	Enter something that indicates the purpose.

For more information, see [Connecting to External Systems \[page 254\]](#).

6.7.2.3 Connecting to External Systems

For more information, see [Connecting to External Systems \[page 254\]](#).

6.8 Configuring Connectivity for Enterprise Product Structure

Describes the connectivity configuration for Enterprise Product Structure apps to allow data sources to retrieve data from the SAP ERP, SAP S/4HANA, and SAP S/4HANA Cloud systems.

You must integrate the Enterprise Product Structure SaaS application via PLMSI. For detailed information on how to configure connectivity, see [Connectivity Using PLM System Integration \[page 84\]](#).

You can configure connections to the following destinations, depending on your source system:

For Synchronization of BOM Data With SAP ERP

The necessary steps to set up the destination is here, see [Destination for Connecting to SAP ERP \[page 84\]](#).

For Synchronization of BOM Data With SAP S/4HANA

The necessary steps to set up the destination is here, see [Destination for Connecting to SAP S/4HANA \[page 86\]](#).

For Synchronization of BOM Data With SAP S/4HANA Cloud

The necessary steps to set up the destination is here, see [Destination for Connecting to SAP S/4HANA Cloud \[page 88\]](#).

Note

If your source system is an SAP S/4HANA Cloud system, then download of document originals and Visualization are not supported.

6.8.1 Destination for Connecting to On-Premise Content Server

You need to create a destination for your Content Server to retrieve document content from an on-premise Content Server (KPro). An on-premise Content Server is set up outside SAP S/4HANA, SAP S/4HANA Cloud or SAP ERP systems.

Note

If you use the Content Server within the source system, this topic is not relevant.

Prerequisites

- You've set up a Cloud Connector for your on-premise Content Server to enable access to Enterprise Product Structure to retrieve the document originals. For more information, see [Using the Cloud Connector to Connect to On-Premise Systems \[page 83\]](#).
- You've configured the connectivity for Enterprise Product Structure apps to allow data sources to retrieve data from the SAP ERP, SAP S/4HANA, or SAP S/4HANA Cloud systems. For more information, see [Configuring Connectivity for Enterprise Product Structure \[page 123\]](#).

Creating SAP BTP Destinations

Configure HTTP destinations to connect to your content server through HTTPS as mentioned below. The connection can be established by a technical user.

For the Content Server that you want to retrieve document content from, you must create destinations as mentioned in the table below. Enterprise Product Structure supports multiple destinations, so it is left to your discretion to choose a name for a destination.

There are three additional properties that need to be specified for the Enterprise Product Structure services to recognize a destination properly:

- `sap.epd.displayname:<must contain your system's display name>`
- `sap.epd.purpose: content`
- `sap.epd.contentserver.host: <https://host:port>` of your content server

→ Recommendation

We recommend that you create the destination with technical user authentication.

Destination

Property	Description
Name	<MySystem>
Type	HTTP
Description	Allows users to access the Content Server
URL	Enter the Cloud Connector URL
Proxy Type	On-premise
Authentication	NoAuthentication
Additional Properties	<p>For NoAuthentication:</p> <ul style="list-style-type: none">• Add a property with key: sap.epd.purpose and value: content.• Add a property with key: sap.epd.displayname and value: <must contain your system's display name>.• Add a property with key: sap.epd.contentserver.host and value: <https://host:port> of your content server. The content server host:port can be identified by navigating to the transaction OACO on your source system.

6.9 Configuring Connectivity for Intelligent Handover

Allows you to work on Bills of material (BOMs) from different source systems and to enable the exchange of BOM data between the intelligent handover and the source systems, you need to configure the connectivity.

You can configure to the following destinations depending on your source system:

For Synchronization of BOM Data

With SAP ERP

The necessary steps to set up the destination is here, see [Destination for Connecting to SAP ERP \[page 84\]](#).

Note

The destination name should be `PLM_CORE_DISCRETE`.

With SAP S/4HANA

The necessary steps to set up the destination is here, see [Destination for Connecting to SAP S/4HANA \[page 86\]](#).

Note

The destination name should be `PLM_CORE_DISCRETE`.

With SAP S/4HANA Cloud

The necessary steps to set up the destination is here, see [Destination for Connecting to SAP S/4HANA Cloud \[page 88\]](#).

Note

In the prerequisite step of [How to Create Communication Arrangement](#), ensure that you have created the communication arrangement for the `SAP_COM_0937` communication scenario.

The destination name should be `PLM_CORE_DISCRETE`.

For Synchronization of Routing Master Data

With SAP ERP

The necessary steps to set up the destination is here, see [Destination for Connecting to SAP ERP \[page 84\]](#).

Note

Routing synchronization is not available with SAP ERP.

With SAP S/4HANA

You have to set up the destination to retrieve the BOM data, see [Destination for Connecting to SAP S/4HANA \[page 86\]](#).

Additionally, you need to enable the master data objects to work for routing scenario by subscribing to the following public APIs that are available in the following SAP S/4HANA On-Premise releases:

Public APIs	Available From Release
Production Routing	SAP S/4HANA 2021 FPS00 onwards
Work Center	SAP S/4HANA 2021 FPS00 onwards
Production Version	SAP S/4HANA 2022 FPS00 onwards

With SAP S/4HANA Cloud

The necessary steps to set up the destination is here, see [Destination for Connecting to SAP S/4HANA Cloud \[page 88\]](#).

Note

In the prerequisite step of [How to Create Communication Arrangement](#), ensure that you have created the communication arrangement for the following communication scenarios:

- `SAP_COM_0104`

- SAP_COM_0519

Also note that for communication scenarios SAP_COM_0104 and SAP_COM_0519, perform the following as provided in the link, [How to Create Communication Arrangement](#):

1. Select the scenario.
2. Perform the steps from 1 to 4.
3. Go to the section **Outbound Communication** > **Outbound Services** > **Service Status** and uncheck the **Active** check box.

The destination name should be PLM_CORE_DISCRETE.

To enable the master data objects to work for the routing scenario, the following public APIs are available for the above communication scenarios:

- [Production Routing](#)
- [Work Center](#)
- [Routing Version](#)

6.10 Configuring Connectivity for Insights

Learn how to create the destinations that are needed for the Insights SaaS application for SAP Product Lifecycle Management in the SAP BTP cockpit.

Connecting SAP Build Work Zone, advanced edition

This is a mandatory destination.

Before you use the Insights SaaS application, you must configure the destination needed to connect Insights for SAP Product Lifecycle Management and SAP Build Work Zone, advanced edition. This connection lets your business users access data in the UI integration cards in SAP Build Work Zone, advanced edition. For the required steps, see [Connecting SAP Build Work Zone, advanced edition \[page 128\]](#).

Connecting External Systems Needed by Specific Content Packages

The UI integration cards for Insights are delivered in content packages for SAP Build Work Zone, advanced edition. For some content packages, you need to also configure a destination to an external system. This allows Insights to ingest the information that is displayed in an aggregated form on the UI integration cards.

PLM Insights: Change Management Content Package

This is a mandatory destination for using the *PLM Insights: Change Management* content package.

To ingest the change record information to be displayed on the UI integration cards, you must configure a destination to connect Insights for SAP Product Lifecycle Management and SAP S/4HANA. For information on the parameters that you need, see [Connecting SAP S/4HANA for Change Management Data \[page 130\]](#).

PLM Insights: Collaboration **Content Package**

No additional connection to external systems is needed. Insights automatically ingests data from the collaborations that are part of the Collaboration SaaS application. Important: You must subscribe to the Collaboration SaaS application for the data ingestion to work.

PLM Insights: Define Products **Content Package**

No additional connection to external systems is needed. Insights automatically ingests data from the following:

- The Product Innovation Management SaaS application for cards with information about ideas and campaigns. Important: You must subscribe to the Product Innovation Management SaaS application for the data ingestion to work.
- The Engineering SaaS application for cards with information about requirements models. Important: You must subscribe to the Engineering SaaS application for the data ingestion to work.

Also Relevant for You

There is also information related to Insights in the Security Guide for SAP Product Lifecycle Management. Check the information about authorizations, audit logging, and data storage for Insights here:

- [User Administration, Authentication, and Authorizations](#)
- [Data Storage Security](#)

6.10.1 Connecting SAP Build Work Zone, advanced edition

Follow these steps to configure the destination needed for connecting Insights for SAP Product Lifecycle Management and SAP Build Work Zone, advanced edition.

Prerequisites

1. You have subscribed to the Insights SaaS application. For more information, see [Subscribing to the SaaS Applications \[page 19\]](#).
2. You have created a service instance for Insights and (in Cloud Foundry) a service key or (in other environments) a service binding. You need the credentials of your service key/binding for the destination details. For more information, see the following documents:
 - [Creating Service Instances](#)
 - [Creating Service Keys in Cloud Foundry](#)
 - [Creating Service Bindings in Other Environments](#)

Context

This connection allows you to give your business users access to the UI integration cards in SAP Build Work Zone, advanced edition. You only need to create this destination once.

Procedure

1. In your web browser, log on to the SAP BTP cockpit, and choose the relevant subaccount.
2. In the left panel, under *Connectivity*, choose *Destinations*.
3. To create the destination at the subaccount level, enter the destination details as shown in the following table:

Note

For general information about configuring destinations, see [How to Configure Destinations \[page 82\]](#).

Field	Value
<i>Name</i>	For example: EPD_API_Insights
<i>Type</i>	HTTP
<i>Description</i>	For example: API for connecting to SAP Build Work Zone
<i>URL</i>	Use the json property <i>url</i> that is stored in the credentials from your Insights service key/binding.
<i>Proxy Type</i>	Internet
<i>Authentication</i>	OAuth2JWTBearer
<i>Client ID</i>	Use the properties that are enclosed by the uaa json object for your service key/binding for Insights.
<i>Client Secret</i>	Use the properties that are enclosed by the uaa json object for your service key/binding for Insights.
<i>Token Service URL</i>	Use the properties that are enclosed by the uaa json object for your service key/binding for Insights. Enter the URL and add the following at the end: /oauth/token
<i>Additional Properties</i>	From the dropdown list, select HTML5.DynamicDestination . Set the value to true .

4. Save your entries.

Next Steps

1. If you want to use UI integration cards in the *PLM Insights: Change Management* content package, configure the connection to SAP S/4HANA. Information on how to do that is available here: [Connecting SAP S/4HANA for Change Management Data \[page 130\]](#).
2. Set up your SAP Build Work Zone, advanced edition entitlement in SAP BTP. Activate the UI integration cards for the content package that you need. For more information on how to do that, see [SAP Build Work Zone, advanced edition \[page 148\]](#).

6.10.2 Connecting SAP S/4HANA for Change Management Data

Follow these steps to configure the destination needed for connecting Insights for SAP Product Lifecycle Management and SAP S/4HANA so that you can use the *PLM Insights: Change Management* content package.

Prerequisites

- You have checked the information about the integration between Insights and SAP S/4HANA to ensure that your SAP S/4HANA release is supported: [Integrating Insights with Other Products](#).
- You have configured the connection to SAP Build Work Zone, advanced edition. For more information, see [Connecting SAP Build Work Zone, advanced edition \[page 128\]](#).
- If the Cloud Connector for SAP BTP, Cloud Foundry Environment, is not already installed and configured for connecting cloud applications to your SAP S/4HANA system, complete the necessary steps. For more information, see [Using the Cloud Connector to Connect to On-Premise Systems \[page 83\]](#).
- You have contacted the system administrator of your SAP S/4HANA system to get the following information:
 - URL for the SAP S/4HANA system
 - Client information for the SAP S/4HANA system if you want to use a client that is different from the default client
 - If you choose to use basic authentication (not recommended), the user name and password for the technical user
- To allow navigation from the Insights cards to the *Manage Change Records* app, you have exposed the SAP S/4HANA app in SAP Build Work Zone, advanced edition. For more information, see [Content Providers - On-Premise Solutions](#).

Context

This connection allows Insights to ingest the change record information to be displayed on the UI integration cards in the *PLM Insights: Change Management* content package for SAP Build Work Zone, advanced edition. For more information about the available cards, see [User Guide for Insights](#).

Procedure

1. In your web browser, log on to the SAP BTP cockpit, and choose the relevant subaccount.
2. In the left panel, under *Connectivity*, choose *Destinations*.
3. To create the destination at the subaccount level, enter the destination details as shown in the following table:

Note

For general information about configuring destinations, see [How to Configure Destinations \[page 82\]](#).

Field	Value
<i>Name</i>	EPD_S4HANA_Insights <div><h3>Note</h3><p>Enter only this value.</p><p>When you create destinations, you often can use your own naming convention. However, for this destination, you must enter the value as given here:</p><p>EPD_S4HANA_Insights.</p></div>
<i>Type</i>	HTTP
<i>Description</i>	For example: API for connecting to SAP S/4HANA
<i>URL</i>	Enter the URL that you got from the administrator of your SAP S/4HANA system.
<i>Proxy Type</i>	OnPremise
<i>Authentication</i>	PrincipalPropagation We recommend that you create the destination with principal propagation authentication. If you use principal propagation, each Cloud user also needs a user for the integrated SAP S/4HANA system with the same email address maintained. Users are only able to view the content that they have access to in the SAP S/4HANA system. For more information, see Configuring Principal Propagation .

Field	Value
	<p>BasicAuthentication</p> <p>Basic authentication allows Cloud users to view content without having a user for the integrated SAP S/4HANA system. This means that users can view any content that they can access via their technical user assignment. For this reason, we do not recommend using basic authentication.</p>
<i>Location ID</i>	If your Cloud Connector configuration uses a location ID other than the default location, enter your location ID here. Otherwise, leave this blank.
<i>User</i>	Enter the user that you got from the administrator of your SAP S/4HANA system.
<i>Password</i>	Enter the password that you got from the administrator of your SAP S/4HANA system.
<i>Additional Properties</i>	<p>If you want to use the default system client, no additional property is needed.</p> <p>If you want to use a system client that is different from the default client, you must enter the corresponding client information. From the dropdown list, select sap-client as the key. Enter the 3-digit client ID that you got from the administrator of your SAP S/4HANA system.</p>

4. Save your entries.

Next Steps

Set up your SAP Build Work Zone, advanced edition entitlement in SAP BTP. Activate the UI integration cards for the content package that you need. For more information on how to do that, see [SAP Build Work Zone, advanced edition \[page 148\]](#).

6.11 Configuring Connectivity for Specification Management

Describes the connectivity configuration for Specification Management apps to allow data sources to retrieve data from SAP ERP, SAP S/4HANA, and SAP S/4HANA Cloud systems.

From November 2023 on, you must integrate the Specification Management SaaS application via PLMSI. For detailed information on how to configure connectivity, see [Connectivity Using PLM System Integration \[page 84\]](#).

You also need to configure the SAP Build Work Zone, standard edition to establish connectivity. For more details, see [Federation of Remote Content Providers](#).

For Synchronization of Product Master Data With SAP ERP

The necessary steps to set up the destination is here, see [Destination for Connecting to SAP ERP \[page 84\]](#).

Note

The destination name should be `PLM_CORE_DISCRETE`.

For Synchronization of Product Master Data With SAP S/4HANA

The necessary steps to set up the destination is here, see [Destination for Connecting to SAP S/4HANA \[page 86\]](#).

Note

The destination name should be `PLM_CORE_DISCRETE`.

For Synchronization of Product Master Data With SAP S/4HANA Cloud

The necessary steps to set up the destination is here, see [Destination for Connecting to SAP S/4HANA Cloud \[page 88\]](#).

Note

The destination name should be `PLM_CORE_DISCRETE`.

Central Components

The Specification Management cloud service of SAP Product Lifecycle Management allows you to use the following central components:

- Status Management
For more information on the used service, see [Business Configuration for Status Management \[page 367\]](#).
- Unit of Measure

For more information on the used service, you can read through the following document: [What is Unit of Measure](#).

- Common Functions

For more information on the used service, see [User Guide for Common Functions](#).

More Information

[Cross-Product Features used in Specification Management \[page 330\]](#)

6.12 Configuring Connectivity for Visualization

Describes the connectivity configuration for Visualization apps to allow data sources to retrieve data from an S/4HANA On-Premise back-end system.

6.12.1 Connecting to SAP S/4HANA On-Premise

For data sources, you can configure a connection to an SAP S/4HANA On-Premise system.

SAP Business Technology Platform Cloud Connector must be configured to allow connection to an on-premise system. SAP Business Technology Platform Cloud Connector provides a proxy to an on-premise URL resource.

Configuring and Installing Cloud Connector

If your source system is an on-premise system, add a destination for the cloud connector.

Set up the cloud connector using principal propagation, as mentioned below:

1. Install the Cloud Connector by following the procedure mentioned in [Installation](#).
2. Configure the Cloud Connector to make it operational for connections between your SAP BTP subaccount and on-premise systems. For detailed information about the initial logon and configuration, see [Initial Configuration](#).

Enter parameters as follows and click [Save](#):

Parameter	Description
Region	Select the region where your subaccount is deployed.

Parameter	Description
Subaccount	Enter the ID of your subaccount.
<div style="border: 1px solid #ccc; background-color: #f9f9f9; padding: 10px;"> <p>Note</p> <p>This value can be found in the Subaccount Details panel on the subaccount Overview page in the SAP Cloud Platform Cockpit.</p> </div>	
Display Name	[optional] Enter the name to show for the subaccount in the Cloud Connector interface.
Subaccount User	Enter your subaccount administrator username.
Password	Enter your subaccount password.
Location ID	[optional] Specifies a short name to identify the Cloud Connector in the subaccount. This value will be used when adding the Cloud Connector instance as a destination in your subaccount. This is typically used when there are multiple Cloud Connectors connected to the same subaccount.
Description	[optional] Enter further information about the subaccount.
HTTPS Proxy	[if required in your environment] Enter parameters for your proxy.

If your parameters are correct, the Cloud Connector will automatically connect to your subaccount.

3. Configure access control or copy the complete access control settings from another subaccount on the same Cloud Connector by following the procedure mentioned in [Configure Access Control](#).
4. [optional] Configure principal propagation by following the procedure mentioned in [Configure principal propagation](#).
5. Create a system mapping from the Cloud Connector to the SAP S/4HANA system:
 1. In the Cloud Connector administration UI, click [Cloud To On-Premise](#), click [Add](#), and then complete the [Add System Mapping](#) wizard pages as follows:

Parameter	Description
Back-end Type	Select SAP Gateway and click Next .
Protocol	Select HTTPS and click Next .
Internal Host / Port	Specify the actual host and port under which the SAP S/4HANA system can be reached within the intranet. Click Next .
Virtual Host / Port	Specify a name for the agent instance and keep the same port as for the internal port. These values will be used adding the Cloud Connector instance as a destination in your subaccount.
<div style="border: 1px solid #ccc; background-color: #f9f9f9; padding: 10px;"> <p>Example</p> <p>S4H</p> </div>	
Principal Type	If you have configured principal propagation for the data source, then select X.509 Certificate (General Usage) or X.509 Certificate (Strict Usage) . If you have not configured principal propagation, but have chosen a different authentication method, for example, Basic Authentication , then select None here. Click Next .

Parameter	Description
Host in Request Header	Keep the default value Use Virtual Host and click <i>Next</i> .
Description	Optionally enter a description for the mapping, click <i>Next</i> , check Check Internal Host and then <i>Finish</i> .

For detailed information, see [Configure Access Control \(HTTP\)](#) in the *SAP BTP Connectivity* documentation.

2. Click the *Check Availability* action to see if your parameters are correct.
3. Click the *Add* tool above the *Resources Accessible* table, enter parameters as follows, and then click *Save*:

Parameter	Description
URL Path	Enter <i>/</i> . You can specify a more specific path here (for example, <i>/sap/opu</i>) if you want to further restrict which paths are available to the data source.
Enabled	Leave selected.
Access Policy	Select Path and all sub-paths .
Description	Optionally enter a description for the resource.

Note

If you require support or encounter any technical issues while configuring the Cloud Connector, contact SAP by reporting an incident on the [Support Portal](#) under the component BC-MID-SCC.

Configuring Data Sources

You use details from the Cloud Connector that you set up in SAP BTP Cockpit to provide information in the data source configuration in Visualization. Make the following relevant settings in the *Connection* section of the data source configuration.

- In *URL*, specify *Host* name as the proxy host name (this is also the *Virtual Host* used in the Cloud Connector configuration, for example, S4H). *Host* name is shown in SAP BTP Cockpit for the Cloud Connector under *Exposed Back-End Systems*. URL also specifies the service that the data source connects to in the S/4HANA system.
- Set *Proxy Type* to **On Premise**. This makes the connection to the S/4HANA On-Premise system through the Cloud Connector.
- [optional] If a Location ID was specified when connecting the Cloud Connector to the subaccount, set *Location ID* to be the same as the Master Instance name configured in the Cloud Connector in SAP BTP Cockpit.
- In *Authentication*, select the authentication method. If you have configured principal propagation, select **Principal Propagation**. Otherwise, select **Basic Authentication** and enter the username and password of a technical user in the S/4HANA On-Premise system.

For more information about configuring a data source, see [Creating a New Data Source](#).

6.13 Configuring Connectivity for Product Innovation Management

Learn how to enable the connections between Product Innovation Management and the *Requirements Management and Systems Modeling* app from Engineering.

6.13.1 Configuring Integration with *Requirements Management and Systems Modeling*

It is mandatory to build connections between needs from Product Innovation Management and requirements.

Context

With the integration, your users can create a requirement in a specified requirements model in *Requirements Management and Systems Modeling* based on needs sourced from innovation. For more information, see [Creating a Requirement Link](#).

Procedure

1. Choose *Requirements Management and Systems Modeling* tile in the launchpad.
2. Activate needs as an external object type in *Requirements Management and Systems Modeling* by performing the following steps:

Note

For all the following steps, you must be assigned to a role collection that contains the role **EADesigner_Administrator**, which includes the *Edit Extensions on Web* right.

Or at least you must have the *Edit Extensions on Web* right.

1. Choose ► *Administration* ► *Settings* ▾ in the navigation panel, and then choose the *External Systems* tile. Select *External Objects*.
Two tables are displayed on the page.
2. Above the right table, select SAP Enterprise Product Development from the dropdown list.
3. Select *Activate* on the top right.
Now, need is activated as an external object type and listed in the right table.
3. Add the system of Product Innovation Management as an external system by performing the following steps:

1. Choose **Administration** > **Settings** in the navigation panel, select the *External Systems* tile, and then select the *System Connections* tile.
2. Choose **Add** button and enter the following property values for the new external system:

System ID	Host URL	Description
<p>EPD-PrIM-<tenantID></p> <p>For <tenantID>, go to your sub-account page in the SAP Business Technology Platform cockpit. In the <i>Subaccount Details</i> section, copy the value for <i>ID</i>.</p>	<p>Reference the application URL of your SAP Fiori launchpad for the EPD apps - copy the URL from the beginning to the character "#".</p>	<p>EPD or other meaningful description.</p>

Note

To find the application URL:

1. Go to your subaccount in SAP BTP cockpit.
2. Select *Subscriptions* in the navigation panel.
3. Click *Go to Application* on the *EPD* tile

Next Steps

Standard users of *Requirements Management and Systems Modeling* are assigned to a role collection containing the role **EADesigner_User**, which allows connecting to the app. To create requirements from Product Innovation Management, users also need the **Edit on Web** privilege, which must be granted by you (or any administrator user of *Requirements Management and Systems Modeling*). See the following steps

1. Choose **Administration** > **Users** in the navigation panel, and then select the appropriate user in the list to open its property sheet.

Note

For your users to appear in the list, they must log in to the *Requirements Management and Systems Modeling* at least once after roles are assigned.

2. Select the checkbox for **Edit on Web**.
3. Save your changes.

For more information about the privileges and permissions in *Requirements Management and Systems Modeling*, see [Controlling Repository Access \[page 243\]](#).

6.13.2 Connecting to Jira

This destination is used to build the connection between the project management software Jira and Product Innovation Management. With the destination, you can create a Jira item based on a need in Product Innovation Management.

Property	Description
Name	JIRA_Destination (the destination name is case-sensitive)
Type	HTTP
Description	It is used for the integration with the external project management tool, that is, the Jira software
URL	Enter the value of your Jira host url <div style="background-color: #f0f0f0; padding: 5px; margin-top: 5px;">❖ Example <code>https://jira.tools.sap</code></div>
Proxy Type	Internet
Authentication	BasicAuthentication
User	Enter the Jira technical users, who can create and review Jira items in the Jira system.
Password	Enter the password of Jira technical users

6.13.3 Configuring Connectivity for SAP Build Process Automation

Your users can send emails for notifications and reminders after you configure the required destinations for SAP Build Process Automation.

To enable SAP Build Process Automation, which allows your users to send email notifications and reminders to idea submitters and evaluators, you need three destinations:

- Create a new destination for connecting to Product Innovation Management, see [Destination for Connecting to Product Innovation Management \[page 140\]](#).
- Create a new destination for connecting to the email service, see [Destination for Connecting to Email Service \[page 141\]](#).
- Add customized properties for the existing destination of SAP Build Process Automation, see [Destination for Connecting to SAP Build Process Automation \[page 142\]](#).

6.13.3.1 Destination for Connecting to Product Innovation Management

Create a new destination to build a connection between Product Innovation Management and SAP Build Process Automation.

Prerequisites

You have created a service key for the service instance under [Service Marketplace](#) > [Product Innovation Management](#). For more information about creation steps, see [Configuration for Using APIs \[page 372\]](#).

Destination Configuration

Property	Description
Name	innovation_management_service (the destination name is case-sensitive)
Type	<i>HTTP</i>
Description	Enter a description for your service as appropriate.
URL	Enter the endpoint of the service key, append the path /odata/v4/InnovationManagementService to the end of it.
Proxy Type	<i>Internet</i>
Authentication	<i>OAuth2JWTBearer</i>
Client ID	Enter the value of <i>clientid</i> from service key credentials.
Client Secret	Enter the value of <i>clientsecret</i> from service key credentials.
Token Service URL	Enter the value of <i>URL</i> from service key credentials and append the path /oauth/token. For example, <code>https://sub-domain.authentication.eu20.hana.ondemand.com/oauth/token</code> .

Choose *New Property* and add each of the following additional properties.

Additional Property	Value
sap.applicationdevelopment.actions.enabled	true
sap.build.usage	odata_gen
sap.processautomation.enabled	true

6.13.3.2 Destination for Connecting to Email Service

Create a new destination that is required for users to send email notifications.

Destination Configuration

Property	Description
Name	sap_process_automation_mail (the destination name is case-sensitive)
Type	<i>MAIL</i>
Description	Enter a description for your service as appropriate.
Proxy Type	<i>Internet</i>
Authentication	<i>BasicAuthentication</i>
User	Enter your user name for your mail server
Password	Enter a password for your mail server

Choose *New Property* and add each of the following additional properties.

Additional Property	Value
mail.smtp.auth	true
mail.smtp.from	Enter the email address to send notifications
mail.smtp.host	Enter the host of your mail server
mail.smtp.ssl.checkserveridentity	true
mail.smtp.starttls.enable	true

Additional Property	Value
mail.smtp.starttls.required	true
mail.transport.protocol	smtp

For more information about how to configure the destination, see [Configure an SMTP Mail Destination](#) in SAP Build Process Automation.

6.13.3.3 Destination for Connecting to SAP Build Process Automation

Add additional properties to the existing SAP Build Process Automation destination so that you can have customized configurations on email notifications.

Prerequisites

After you've subscribed to SAP Build Process service, the destination `sap_process_automation_service_user_access` will be created automatically. For more information about how to subscribe to the service, see [Initial Setup](#).

Destination Configuration

Do not modify the existing properties of the destination `sap_process_automation_service_user_access` and add the following additional properties:

Additional Property	Value
bpa.notifyExperts	Enter the definition ID for notifying experts process. To find the definition ID, see Determine the Workflow Definition ID .
bpa.notifySubmitters	Enter the definition ID for notifying submitters process. To find the definition ID, see Determine the Workflow Definition ID .
bpa.notifyForNewIdea	Enter the definition ID for notifying idea submission process. To find the definition ID, see Determine the Workflow Definition ID .
bpa.reminder.flag	If you want to reminder emails to experts with a configured interval, set it as true . Otherwise, set it as false .

Additional Property	Value
inno.consumer.url	Enter the portal URL. Open an application homepage and copy the system URL from https to site , do not include # . For example, https://epd-dev-eu20-consumer.launchpad.cfapps.eu20.hana.ondemand.com/site/dev

Note

With two new destinations that you've created, you can deploy the predefined process templates we provide. For more information about how to configure the email notifications, see [Configuring Email Notifications \[page 338\]](#). After deploying, you can find the process definition IDs in the destinations. For more information about how to find the definition ID, see [Determine the Workflow Definition ID](#).

7 Entry Point for App Access

You need to set up the entry point for your users to access and work with the apps from SAP Product Lifecycle Management.

Choose from one of the available options:

- SAP Build Work Zone, standard edition is a cloud-based solution that enables your users to access apps from multiple systems, cloud and on premise, in a unified manner. The site is divided into groups or spaces and pages that contain tiles that launch apps.
If you have subscribed to several SaaS applications for SAP Product Lifecycle Management, you can configure the SAP Build Work Zone, standard edition. Your users can then use SAP Build Work Zone, standard edition as the single entry point for the apps provided by the different SaaS applications. For more information, see [SAP Build Work Zone, standard edition with Multiple SaaS Applications \[page 145\]](#).
- SAP Build Work Zone, advanced edition provides the same functions as SAP Build Work Zone, standard edition with the addition of features for your teams and colleagues to share and interact and the possibility for you to flexibly create business workspaces as entry points for your users. SAP Build Work Zone, advanced edition is provided as an entry point with the Insights SaaS application. You can use the UI integration cards that are provided by Insights, create your own cards, and set up role-based workspaces that combine UI integration cards and other SAP Fiori apps. For more information, see [SAP Build Work Zone, advanced edition \[page 148\]](#).
- If you have subscribed to only one SaaS application, you can use the individual SAP Fiori launchpad provided for that SaaS application. This individual launchpad contains only the apps for this specific SaaS application. For information, see [SAP Fiori Launchpad for Single SaaS Applications \[page 153\]](#).

Caution

If you use the Collaboration SaaS application, we recommend that you always use SAP Build Work Zone, standard edition instead of the individual SAP Fiori launchpad. The Collaboration SaaS application reuses apps that are part of other SAP BTP services. You cannot control the access to these SAP BTP apps on the individual SAP Fiori launchpad. The apps will appear on the individual SAP Fiori launchpad for users who cannot open them.

Related Information

- [What Is SAP Build Work Zone, standard edition?](#)
- [What Is SAP Build Work Zone, advanced edition?](#)

7.1 SAP Build Work Zone, standard edition with Multiple SaaS Applications

SAP Build Work Zone, standard edition provides a central entry point to apps from SAP Product Lifecycle Management and other platforms.

If you have subscribed to several SaaS applications from SAP Product Lifecycle Management, we recommend that you use SAP Build Work Zone, standard edition. This central service lets you tailor access to the apps from the different SaaS applications for different users. The general steps for setting up and administering your SAP Build Work Zone, standard edition are explained in the SAP Build Work Zone, standard edition documentation: [Initial Setup](#)

This document provides additional guidance that is specific to setting up the service for use with SAP Product Lifecycle Management.

App Access

There are two scenarios:

- You use the default role collections that are provided by the Common Functions SaaS application for SAP Product Lifecycle Management.
- You want to create your own role collections for accessing the apps in SAP Product Lifecycle Management.

Using the Default Role Collections for SAP Product Lifecycle Management

To make SAP Product Lifecycle Management apps visible on the SAP Build Work Zone, standard edition and allow your users to navigate between them as needed, follow these steps:

1. Assign the same apps that are included in the SAP Product Lifecycle Management default role collection to the new SAP Build Work Zone, standard edition role.
2. Assign the SAP Build Work Zone, standard edition role to the users that need to see and use the apps. The role in SAP Build Work Zone, standard edition is the same as the SAP Product Lifecycle Management default role collection.
3. Inform your users that they need to log off and on again to see the changes.

Note

Visualization Apps

The *Viewer* and *Authoring* apps that are provided by the Visualization subscription can't be launched directly from a launchpad or a menu. These apps are launched from within other apps, for these purposes:

- To view design models from apps in the Collaboration SaaS application
- To view visualizations from apps in the Connected Products SaaS application

The Viewer and Authoring apps are excluded from the list of applications that can be added to a catalog or group in a SAP Build Work Zone, standard edition and advanced edition launchpad. So, to use these apps, you must add them to *My Content* and assign them to the appropriate SAP Build Work Zone, standard edition and advanced edition roles.

Creating Your Own Role Collections

If you want to build your own role collections, you can use them for the app access for both SAP Product Lifecycle Management and for SAP Build Work Zone, standard edition. Proceed as follows:

1. Create role collections in SAP Build Work Zone, standard edition. The detailed steps to follow are available here: [Assign Content to a Role](#).

⚠ Caution

When deleting a role in the Role editor in SAP Build Work Zone, standard edition, the corresponding role collection and all user and group assignments to it are deleted from SAP BTP as well.

2. Assign the roles for accessing apps in SAP Product Lifecycle Management. For more information, see [Defining and Bundling Roles \[page 27\]](#).

Language Activation for Your Site (Optional)

If a business user wants to see translated texts in a language other than the source language that the site in the SAP Build Work Zone, standard edition was built with, you need to activate the language. This enables the user to select the language in their runtime site. For more information about how to activate languages in a site, see [Translate Your Site](#).

→ Recommendation

We recommend that you activate the languages that are supported for the user interfaces and in-app help for SAP Product Lifecycle Management. For more information, see the **Supported Languages** section in [Overview \[page 6\]](#).

Activation of In-App Help (Optional)

SAP Companion provides on-screen help to support your business users when they are using the apps for SAP Product Lifecycle Management.

How to Activate SAP Product Lifecycle Management In-App Help

1. In the Site Directory, choose the site for which you want to activate the in-app help.
2. On the *Site Settings* screen of the relevant site, select the *SAP Companion* setting.
3. Enter the following parameters:

Parameter	Value
<i>product</i>	PLM_EPD
<i>version</i>	Cloud
<i>stateUACP</i>	PRODUCTION

Parameter	Value
<code>dataUrIUACP</code>	<code>https://help.sap.com/webassistent/</code>
<code>resourceUrl</code>	<code>https://xray.hana.ondemand.com/xRayControls/resources/sap/dfa/help</code>

Note

If you have a license for SAP Enable Now and would like to add your own content to the in-app that is delivered for SAP, also enter the following values for these parameters:

Parameter	Value
<code>serviceLayerVersion</code>	EXT
<code>dataURLSEN2</code>	Enter the URL for the workarea in your SAP Enable Now Manager instance.


For more information about the features and functions that are provided by SAP Enable Now, see https://help.sap.com/docs/SAP_ENABLE_NOW SAP Enable Now on the SAP Help Portal.

Caution

After activating SAP Companion, in the browser settings in your site configuration, ensure that asynchronous module loading is not active.

4. Save your settings.

Results

After activation, in the launchpad, business users can open the SAP Companion by choosing the  [Open Help](#).

In-App Help for Multiple Products

In-app help is also available at the launchpad level for SAP Build Work Zone, standard edition. If you want to use both types of help together, follow these steps to first activate the help for SAP Build Work Zone, standard edition:

1. In the Site Directory, choose the site for which you want to activate the in-app help.
2. On the [Site Settings](#) screen of the relevant site, select the [SAP Companion](#) setting.
3. Enter the parameters for the SAP Build Work Zone, standard edition in-app help in the [SAP Companion](#) section. Those parameters are available here: [Activating SAP Companion Content](#).
4. Save your settings.

Each SaaS application for SAP Product Lifecycle Management that you have subscribed to has a content channel on your site. To see the in-app help for a SaaS application, you have to add the corresponding content channel as a destination in SAP BTP Cockpit. The name of the destination must match the ID of the content channel as it is shown in your Channel Manager. For example, if you have subscribed to the Configuration Management SaaS application, you create a destination in the following way:

Parameter	Value
<i>Name</i>	You enter the ID of the content channel for Configuration Management.
<i>Type</i>	HTTP
<i>URL</i>	https://help.sap.com
<i>Proxy Type</i>	Internet
<i>Authentication</i>	NoAuthentication
<i>Additional Properties</i>	<ul style="list-style-type: none"> Name: launchpad.wa.productId Value: PLM_EPD
<i>Additional Properties</i>	<ul style="list-style-type: none"> Name: launchpad.wa.productVersion Value: Cloud

Create a destination for each of the SaaS applications that you have subscribed to and for which you want to use the in-app help. If you use other SAP products in addition, create additional destinations for them. For more information, check the relevant product documentation on the SAP Help Portal.

7.2 SAP Build Work Zone, advanced edition

SAP Build Work Zone, advanced edition gives your users quick access to the information they need to start their workday and allows them to jump directly to the apps they need to get their work done.

For more information about other features offered by SAP Build Work Zone, advanced edition, see [What is SAP Build Work Zone, advanced edition?](#)

When you use SAP Build Work Zone, advanced edition together with SAP Product Lifecycle Management, you optimize your business processes for managing the lifecycle of your products by creating role-specific workspaces that give your users access to the following:

- Any of the SAP Fiori apps from the SaaS applications for SAP Product Lifecycle Management that you have subscribed to in the same subaccount.
- Any of the UI integration cards provided by the Insights SaaS application for SAP Product Lifecycle Management. These cards allow your users to view information, for example, about a product's lifecycle in different kinds of charts. For information about the UI integration cards that are available with the Insights SaaS application, see [User Guide for Insights](#).
- Any SAP Fiori apps or UI integration cards that are available from other integrated SAP products.
- Any of your own UI integration cards or other SAP Build Work Zone, advanced edition objects that you have created to meet your specific needs.

A workspace for your users of SAP Product Lifecycle Management with apps and cards could then look, for example, like this:

(Note: The screenshot is available in English only.)

SAP Sample Workspace

All Search

Home My Workspace Applications Workspaces Tools

Enterprise Product Development

Public 37 Members

Sample Workspace

My Collaborations

All Favorites

Name	Type	Status	Changed On	↓	↑
TM electric backbone	DFLT	CREA	Oct 24, 2023	2	4
Main frame extension	★ INFO	CREA	Oct 24, 2023	2	0
Testing black steel cover (CS)	★ 05CS	CREA	Oct 24, 2023	2	0
Insights-collab07	DFLT	CREA	Oct 21, 2023	4	1
Sim Collab 1205	DFLT	CREA	Oct 21, 2023	5	0
2307 Customer Storage	05CS	CREA	Aug 25, 2023	12	0
Workflow Sorting Demo	CONS	0001	Aug 25, 2023	9	0
Electric Bike	ELEC	CREA	Aug 24, 2023	16	2
2307 Default Storage	05DF	CREA	Aug 22, 2023	12	1
Insights-Collab03	00CM	1A	Jul 17, 2023	4	0

More

New and Closed Change Records

In the Last 4 Weeks

Date	New	Closed
Oct 1	15	1
Oct 2	31	1
Oct 3	45	1
Oct 4	61	1
Oct 5	75	1
Oct 6	89	1
Oct 7	127	2
Oct 8	140	2
Oct 9	152	2
Oct 10	167	4
Oct 11	176	4
Oct 12	193	9
Oct 13	203	9
Oct 14	220	10
Oct 15	220	10
Oct 16	220	10
Oct 17	220	10
Oct 18	220	10
Oct 19	220	10
Oct 20	220	10

My Home

- Manage Ideas
- Manage Teams
- Product Explorer: Manage and Import ...
- Monitor Visibility Scenarios
- My Inbox
- Documents

Procedure

1. To get access to all SAP Build Work Zone, advanced edition, features for SAP Product Lifecycle Management, subscribe to the Insights SaaS application as explained here: [Subscribing to the SaaS Applications \[page 19\]](#)
2. To give your users access to the relevant features and functions from SAP Product Lifecycle Management, subscribe to the other SaaS applications that are part of SAP Product Lifecycle Management that you need in one subaccount. Subscribe to each additional SaaS application, ensure that your business users have the proper roles to access the relevant apps, and make the needed business configuration settings. The relevant steps are explained in the corresponding sections in this Administration Guide. To be able to use the default role collections from SAP Product Lifecycle Management, we recommend that you also subscribe to the Common Functions SaaS application.

3. Configure the connectivity between SAP Product Lifecycle Management and SAP Build Work Zone, advanced edition as described here: [Configuring Connectivity for Insights \[page 127\]](#).
4. Complete the onboarding process for SAP Build Work Zone, advanced edition. In that process, use the subaccount destination that you created in step 3. For more information, see [Onboarding to SAP Build Work Zone, advanced edition](#).
5. Create the necessary workspaces in SAP Build Work Zone, advanced edition and add the relevant apps and cards. For more information on adding apps and cards, see the following sections.

How to Deploy Apps in SAP Build Work Zone, advanced edition

You can add apps from SAP Product Lifecycle Management into the workpages of your site using the Content Manager tool in SAP Build Work Zone, advanced edition.

The general steps for adding apps are explained in the SAP Build Work Zone, advanced edition documentation: [Adding Apps to Your Site](#). Follow the steps for adding apps from an SAP BTP content provider for each of the SaaS applications that you have subscribed to.

The following section provides additional guidance about the role concept that you need for using apps from SAP Product Lifecycle Management.

Role Concept for App Access

There are two scenarios:

- You use the default role collections that are provided by the Common Functions SaaS application for SAP Product Lifecycle Management.
- You want to create your own role collections for accessing the apps in SAP Product Lifecycle Management.

Using the Default Role Collections for SAP Product Lifecycle Management

To make SAP Product Lifecycle Management apps visible on the SAP Build Work Zone, advanced edition and allow your users to navigate between them as needed, follow these steps:

1. Assign the same apps that are included in the SAP Product Lifecycle Management default role collection to the new SAP Build Work Zone, advanced edition role. The role in SAP Build Work Zone, advanced edition is the same as the SAP Product Lifecycle Management default role collection.
2. Assign the SAP Build Work Zone, advanced edition role to the users that need to see and use the apps.
3. Inform your users that they need to log off and on again to see the changes.

Note

Visualization Apps

The *Viewer* and *Authoring* apps that are provided by the Visualization subscription can't be launched directly from a launchpad or a menu. These apps are launched from within other apps, for these purposes:

- To view design models from apps in the Collaboration SaaS application
- To view visualizations from apps in the Connected Products SaaS application

The Viewer and Authoring apps are excluded from the list of applications that can be added to a catalog or group in a SAP Build Work Zone, advanced edition launchpad. So, to use these apps, you must add them to *My Content* and assign them to the appropriate SAP Build Work Zone, advanced edition roles.

Creating Your Own Role Collections

If you want to build your own role collections, you can use them for the app access for both SAP Product Lifecycle Management and for SAP Build Work Zone, advanced edition. Proceed as follows:

1. Create role collections in SAP Build Work Zone, advanced edition. The detailed steps to follow are available here: [Assign Roles to Your Site](#).

⚠ Caution

When deleting a role in the Role editor in SAP Build Work Zone, advanced edition, the corresponding role collection and all user and group assignments to it are deleted from SAP BTP as well.

2. Assign the roles for accessing apps in SAP Product Lifecycle Management. For more information, see [Defining and Bundling Roles \[page 27\]](#).

For more information about the apps that are available in the different SaaS applications, see the relevant section in the User Guide for SAP Product Lifecycle Management.

How to Get the UI Integration Cards in SAP Build Work Zone, advanced edition

Prerequisites

To use the UI integration cards that are included with the Insights SaaS application, you have given your business users the authorizations that they need. For more information, see [Role Templates for Insights \[page 50\]](#).

Procedure

In the *Administration Console* in SAP Build Work Zone, advanced edition, find the content packages that you want to use. The following content packages are provided by the Insights SaaS application for SAP Product Lifecycle Management:

- *PLM Insights: Change Management*. For more information about its cards, see [Insights Cards for Change Management](#).
- *PLM Insights: Collaboration*. For more information about its cards, see [Insights Cards for Collaboration Information](#).
- *PLM Insights: Define Products*. For more information about its cards, see [Insights Cards for Product Innovations](#).

Then follow these steps:

1. [Install the content package](#).
2. [Activate the UI integration cards](#).
3. [Integrate the cards into your work pages](#).

For some cards, you can configure the way that the data is displayed on them. If you allow your users to configure the cards themselves, they can overwrite your settings. You can make, for example, the following configuration settings:

Content Package	UI Integration Card	Configuration Settings
<i>PLM Insights: Collaboration</i>	<i>Comments on My Collaborations</i>	Configure the number of comments displayed per page on the card. Configure the number of recently modified collaborations to be used when the card logic determines which comments are displayed.
<i>PLM Insights: Collaboration</i>	<i>My Collaborations</i>	Configure the number of collaborations that are displayed per page on the card. Configure which columns are shown on the card.
<i>PLM Insights: Collaboration</i>	<i>My Collaborations by Type and Status</i>	Configure the time frame for including modified collaborations in the display.
<i>PLM Insights: Define Products</i>	<ul style="list-style-type: none"> • <i>My Ideas by Modification Date - For Product Managers</i> • <i>My Ideas by Modification Date - For Product Managers - For Submitters of Ideas</i> 	Configure the number of ideas displayed per page on the card.
<i>PLM Insights: Define Products</i>	<ul style="list-style-type: none"> • <i>Campaigns - For Product Managers</i> • <i>My Campaigns - For Submitters of Ideas</i> 	Configure the number of campaigns displayed per page on the card.
<i>PLM Insights: Define Products</i>	<i>My Requirements Models</i>	Configure the number of requirements models displayed per page on the card.
<i>PLM Insights: Define Products</i>	<i>Requirements by Model and Status</i>	Configure the number of models that is shown in the filter selection for the card.
<i>PLM Insights: Define Products</i>	<i>Requirements by Type and Status for One Model</i>	Configure the number of models that is shown in the filter selection for the card.

4. Inform your business users that the new cards are available.

7.3 SAP Fiori Launchpad for Single SaaS Applications

⚠ Caution

If you use the Collaboration SaaS application, we recommend that you always use SAP Build Work Zone, standard edition instead of the individual SAP Fiori launchpad. The Collaboration SaaS application re-uses apps that are part of other SAP BTP services. You cannot control the access to these SAP BTP apps on the individual SAP Fiori launchpad. The apps will appear on the individual SAP Fiori launchpad for users who cannot open them.

As described in [Onboarding \[page 16\]](#), you activate the application link on subscribing to the SaaS application for your SaaS application. Choose the [Go to Application](#) link to launch the application.

Once you are redirected to the SAP Fiori launchpad, obtain its URL and share this link with your business users so they can access the SAP Fiori launchpad to use the apps.

7.3.1 Defining the SAML 2.0 Identity Provider via URL Parameter

Using a URL query parameter `sap_idp` with the IDP origin key, you can set the identity provider (IDP) for the application's login process.

📘 Note

This URL parameter works with the launchpads for the individual SaaS applications of SAP Product Lifecycle Management, but not with SAP Build Work Zone, standard edition.

A typical use case is that of a company that wants to provide access to SAP Product Lifecycle Management to both internal and external users. The company configures two SAML 2.0 identity providers, one for internal users and another for external users. In such a case, the company would then be able to provide different URLs to the internal users and external users, using the URL parameter `sap_idp` with values that point to different identity providers.

You can define the SAML 2.0 identity provider using a URL parameter with the format `sap_idp=<origin_key_of_idp>`:

- If you don't provide the query parameter `sap_idp`, when you log in to the launchpad, all the configured SAML 2.0 identity providers are provided for you to choose from.
- If you provide the query parameter `sap_idp`, when you log on to the launchpad, the IDP defined in the query parameter is chosen by the system automatically to allow you to log in.

To find the origin key in the SAP BTP cockpit, choose [► Security ► Trust Configuration ▾](#). The origin key is shown in the [Origin Key](#) column.

ⓘ Note

Position the parameter `sap_idp` ahead of the fragment identifier, which is preceded by a hash (#) character, as the fragment identifier is not sent to the network. In the case of the following URLs, the first works as expected, but the second does not:

- Correct URL: https://<your_subaccount>.epd.cfapps.eu20.hana.ondemand.com/portal.portal/site?sap_idp=<origin_key_of_idp>#Shell-home
- Incorrect URL: https://<your_subaccount>.epd.cfapps.eu20.hana.ondemand.com/portal.portal/site#Shell-home?sap_idp=<origin_key_of_idp>

8 Business Configuration

Based on your business requirements and the SaaS applications of SAP Product Lifecycle Management that you use, perform the required business configuration described in the following sections.

- [Business Configuration for Collaboration \[page 155\]](#)
- [Business Configuration for Configuration Management \[page 237\]](#)
- [Business Configuration for Engineering \[page 242\]](#)
- [Business Configuration for Enterprise Product Structure \[page 284\]](#)
- [Business Configuration for Intelligent Handover \[page 295\]](#)
- [Business Configuration for Product Innovation Management \[page 334\]](#)
- [Business Configuration for Specification Management \[page 296\]](#)
- [Business Configuration for Status Management \[page 367\]](#)
- [Business Configuration for Visualization \[page 339\]](#)

8.1 Business Configuration for Collaboration

Describes the business configuration needed to work with the various apps in the Collaboration SaaS application of SAP Product Lifecycle Management.

Prerequisites

Your user is assigned the **CollaborationAdmin** role listed in [Role Templates for Collaboration \[page 29\]](#).

Business Configuration for Collaboration

As an administrator, you must perform the following business configuration, which is essential for working with collaborations, in the correct sequence:

- Create a user group with special authorizations for collaborations. For more information, see [Creating a Group with Special Authorizations \[page 156\]](#).
- Define status profiles using the *Status Management* app. For more information, see [Business Configuration for Status Management \[page 367\]](#).
- Define collaboration types and status profiles to use in collaborations, using the *Configure Collaboration* app. For more information, see [Configure Collaboration \[page 160\]](#).
- Model and deploy workflows to use in collaborations. For more information, see [Modeling Workflows \[page 189\]](#).

- Configure workflow properties that you define in the workflows, using the *Workflow Properties* app. For more information, see [Workflow Properties \[page 193\]](#).
- Configure systems and objects to retrieve product data from your source system using the *Configure Product Data* app. This configuration allows your users to collaborate on product data in collaborations. For more information, see [Configure Product Data \[page 203\]](#).

You can also do the following:

- Load value sets from the source system to work with provisional specifications. For more information, see [Useful Information for Value Sets \[page 214\]](#).
- Integrate with SAP Ariba Supplier Lifecycle and Performance to enable your users to search for and add suppliers to collaborations. For more information, see [Integrating with SAP Ariba Supplier Lifecycle and Performance \[page 229\]](#).

8.1.1 Create User Groups for Collaborations

User groups are a collection of users who can work together to perform a similar set of tasks in a collaboration. Users of these groups are also assigned to roles and authorizations to perform specific actions.

You can add individual users and user groups to collaborations. This section provides you with the following information:

- Creating a user group with special authorizations in collaborations. For more information, see [Creating a Group with Special Authorizations \[page 156\]](#).

ⓘ Note

This configuration is **mandatory**. Without this user group, you will not be able to create collaborations.

- Creating user groups to add as participants in collaborations. For more information, see [Creating Participant User Groups \[page 158\]](#).

8.1.1.1 Creating a Group with Special Authorizations

You can create a group with authorizations to supersede the rights of participants having the *Administrator* role within collaborations. Users of this group can perform certain actions that are available only to them.

Why You Require the Group

ⓘ Note

Creating this group is **mandatory**. Without this group, you cannot create collaborations.

Only participants assigned the *Administrator* role within a collaboration can perform the following actions:

- Invite other participants to a collaboration.
- Change the role of participants within a collaboration.
- Remove participants from a collaboration.

While working with collaborations, you may encounter the following situations:

- A collaboration cannot be worked upon due to collaboration administrators being unavailable to perform their actions.
- A participant is no longer available in your subaccount, or required in a collaboration, and must be replaced or removed from a collaboration. (Also, the administrators of the collaboration are unavailable to add or remove participants.)

To address such situations, you require a user group with access to all collaborations.

⚠ Caution

Deciding who and how many users you assign to this group requires a great deal of consideration because they have a higher level of access, and can modify any collaboration existing in your subaccount.

Creating the Group and Assigning Users

Before you perform the steps, note the following:

→ Remember

- Once you have created this user group, every collaboration that is created in your subaccount will have the user group added as a participant, and assigned the *Administrator* role.
- The user group `DL_SUPER_ADMIN_GROUP` must not be deleted.
- This user group will not be visible in the list of participants in a collaboration.
- This user group name is not searchable, and is not displayed in the suggestion list when you add participants in a collaboration.

Procedure

1. Create the user group `DL_SUPER_ADMIN_GROUP` in the cloud cockpit as mentioned in [Creating Participant User Groups \[page 158\]](#) and assign the super admin email IDs to this group by performing the following steps:
 1. Ensure that your user is assigned the `CollaborationDPPAdmin` role. For information about the role, refer to the **Collaboration** section in [Defining and Bundling Roles](#).
 2. If you use the public API, one of the e-mail IDs in this group can be set as the From header to have access to all collaboration.

Replacing Participants in a Collaboration

Note


If you are configuring the collaboration capabilities of the solution, the following information is not relevant.

If the Collaboration apps have been configured, and you need to replace participants in a collaboration, refer to the following information.

Prerequisites

- You are added as a user to the `DL_SUPER_ADMIN_GROUP` role collection as mentioned in [Creating Participant User Groups \[page 158\]](#).
- You are familiar with working in collaborations using the *My Collaborations* app. For more information, see [Working with Collaborations](#) and [Participants](#) in the *User Guide for Collaboration*.

Procedure

1. Open the *My Collaborations* app.
All collaborations created in your subaccount are listed in the table.
2. Choose a collaboration to view its details.
3. In the collaboration, choose the *Participants* tab.
4. For the participant you want to replace, choose  (*Replace Participant*).
5. Enter the participant email address, or choose a participant from the suggested list.

Note

- *New Participant* supports type-ahead functionality. If you enter an email address, the list of suggestions displays the user names.
- The new participant you require must be listed in the suggestion list.

6. Choose *Replace*.
The existing participant is removed from the collaboration and is replaced by the new participant. All tasks that were being processed by the existing participant get unassigned.

8.1.1.2 Creating Participant User Groups

You can add individual users and user groups as participants in a collaboration. Refer to the information in this topic to use the feature of user groups in collaborations.

Prerequisites

You have created a destination called `EPD_XSUAA_APIAccess`. For more information, see [Destination for User Groups \[page 104\]](#).

Note

- The user group can be created using SAP Business Transformation Services (BTS) security role collection or using the `xsuaa` API. For more information, see the Role Collections entity in the [Authorization API](#).
- Do not add roles to the user groups other than the ones mentioned in the [Defining and Bundling Roles](#) [page 27].

Procedure

1. Create the user group in the role collection and add the required users to the user group.
2. Ensure that the users are assigned the necessary role collections.

Role collection is nothing but the user group.

→ Remember

- The user group name must be unique in your subaccount.
- The user group is case sensitive.
- No spaces to be added in the user group.
- Recommendation is to add the users to the user group and not to role collection mapping.

The user group is ready to be added as a participant in collaborations.

8.1.2 Configuring Status Management for Collaboration

Create the status profiles that you need for your collaborations and shared product data.

You create status profiles in the *Status Management* app. For information on how to use the app, see [Business Configuration for Status Management](#) [page 367].

Status Profiles for Collaborations

Status profiles are linked to the collaboration types that you must configure for collaborations. For more information, see [Working with Collaboration Types](#) [page 163].

Note

If you want your users to be able to invite participants to a collaboration, you must set the action of a status profile to **editable** when you create it. You then link this status profile to the relevant collaboration types and use those collaboration types for collaborations. The participants in those collaborations can then invite other participants to join.

Status Profiles for Shared Product Data

A processing status is needed for product data records to properly record the lifecycle of an object. For more information about how users can work with this kind of processing status, see [Setting the Processing Status of Product Data Records](#).

ⓘ Note

For an integration with SAP Ariba Sourcing: Create a status profile with the status network as explained here: [Integrating with SAP Ariba Sourcing](#).

8.1.3 Configure Collaboration

You can use the [Configure Collaboration](#) app to define the collaboration type for a collaboration. To work with collaborations, you must configure a collaboration type and link it to a status profile.

On launching the [Configure Collaboration](#) app, the page displays an overview of sections that you as an administrator have to configure before your business users can start working with collaborations:

Section	Result
Collaboration Type	The categorization of collaborations that share the same attributes. Working with Collaboration Types [page 163]
Supplier Data	Enables your business users to search for supplier data in the <i>My Collaborations</i> app. For more information, see Configure Supplier Data [page 231] .
Reference Objects	A reference object is a point of reference for the participants to use in a collaboration. Working with Reference Objects [page 173]
Job Scheduler	Enables your business users to plan, run, and monitor execution of scheduled jobs. Working with Job Scheduling [page 180]
Settings	<h3>ⓘ Note</h3> <p>If you want to use collaborations within Microsoft Teams, you must enter information on the Settings tab. For more information on how to set up the integration with Microsoft Teams and what to enter in this app, see Integration with Microsoft Teams.</p>

Collaboration Types

Defining collaboration types enables you to create collaborations for different purposes and to keep collaborations consistent.

Note

Every collaboration type must be linked to a status profile, which you create using the [Status Management](#) app.

Pagination support is available. By clicking [More](#) allows you to move to the next page or the preceding page of the listed collaborations.

Note

The support [Chatbot](#) is available in the [Configure Collaboration](#) app. For more information, see [Chatbot](#).

Status of a Collaboration Type

The following table describes the available statuses:

Status	Description
In Preparation	<p>When you create a collaboration type, this status is the default status until you change its status to <i>In Use</i>. A collaboration type with status <i>In Preparation</i> is not available for use when creating collaborations.</p> <p>When you also edit and save a collaboration type, this status is automatically assigned.</p>
In Use	<p>Once you set a collaboration type to this status, the collaboration type is available to use.</p>
Out of Use	<p>On setting a collaboration type to this status, the collaboration type is no longer available for creating collaborations. Existing collaborations with this status are not affected.</p>

To work with collaboration types, see the following topic:

- [Working with Collaboration Types \[page 163\]](#)

Status Profiles

Defining a status profile lets you create a status network for different business processes in collaborations. The status profile that you set represents the entire processing cycle of a collaboration, from beginning to end. The status network is formed by the relationship of one collaboration to another, as predecessor and successor.

Status profiles can be used to indicate the status of the whole collaboration as well as the processing status of shared product data.

Every collaboration has a status that helps to show its progress with respect to the defined business process. The statuses you define to form a status network let you set the collaboration status within a collaboration.

A status is defined by the following fields:

Field	Description
Status ID	A unique status name with a maximum length of 10 characters
Status Description	Description of the status
Status Type	An internal status that determines the action to be performed in a collaboration.
Next Status	A list of successor statuses

Available Status Types

You must map every status to a status type. A status type determines the action to be performed on a collaboration. The following table describes the available status types:

Status Type	Description	Note
Initial	Initial status	-
In Work	Intermediate status	-
Locked	A status that allows no changes to a collaboration (if necessary, it can be set back to <i>Initial</i> or <i>In Work</i> status for changes)	If set, only the user who created the collaboration can set the collaboration back to <i>Initial</i> or <i>In Work</i> status from a locked status. All other users who are a part of the locked collaboration only have read permissions on the collaboration. You are allowed to post comments in a collaboration that's in the <i>Locked</i> status.

Note

- It is mandatory to have two statuses in the status network, *Initial*, and *In work* or *Locked* mapped to the *Initial* status type.
- The status profile can be changed only under these conditions:
 - When a collaboration type is first created
 - When the collaboration type is in the status *In Preparation*.
Once the status of collaboration type is changed to *In Use*, the associated status profile cannot be changed.
- If you edit a status profile that is used in collaboration types, the changes are visible in the existing or new relevant collaborations.

- When you create a collaboration, the collaboration is assigned the status mapped to the Initial status type.

Processing Status

In a collaboration, users can share product data. To indicate in which phase of the process the given product data collaboration is, a processing status can be set for each product data record.

This status is only valid for the product data record within the collaboration, and is not the status of the object in the source system.

Each collaboration type can have a different processing status profile assigned. To define processing status profiles, see .

❖ Example

As a company, you can ask external suppliers to fill in the specification templates for your item. The project manager sets the processing status of each specification according to the defined profile, for example, to Sent, Received, Reviewed.

📘 Note

- It is mandatory to have two statuses in the status network, *Initial* and *In Work* or *Locked* mapped to the *Initial* status type.
- The processing status profile can be changed only under these conditions:
 - When the collaboration type is created for the first time.
 - When the collaboration type is in the status, *In Preparation*
Once the status of collaboration type is changed to In Use, the associated processing status profile cannot be changed.
- If you edit a processing status profile that's used in collaboration types, the changes are visible in the relevant product data of collaboration type.

8.1.3.1 Working with Collaboration Types

Use the [Configure Collaboration](#) app to work with collaboration type for collaborations.

Prerequisites

- You have the necessary roles and authorizations as mentioned in [Role Templates for Collaboration \[page 29\]](#).
- You have created the necessary status profiles. For more information, see [Configuring Status Management for Collaboration \[page 159\]](#).

Note

For Product Package Exchange, you must do the following:

- Create the collaboration type DFLT. This collaboration type is applicable only for default storage.
- In the collaboration type DFLT, add **PPX** as the associated reference object.

Creating a Collaboration Type

1. From the SAP Fiori launchpad, open the [Configure Collaboration](#) app.
2. Choose [Collaboration Type](#).
3. Choose [Create](#).
4. Edit the fields as shown in this table:

Field	User Action	Comments
ID	Enter a collaboration type ID with a maximum length of 4 characters.	The following special characters are allowed: underscore (_) and en dash (-)
Description	Enter a description for the collaboration type.	When you create a collaboration, the description for the collaboration type is displayed in the Type field.
Purpose	Enter the purpose of the collaboration type.	-
Status Profile	Select a status profile defined for managing collaboration statuses within a collaboration.	Note Once the status of collaboration type is set to <i>In Use</i> , the associated status profile cannot be changed. For more information, see Status Profile [page 160] .
Processing Status Profile	Select a status profile that's defined for managing processing statuses of product data in a collaboration.	Note Once the status of the collaboration type is marked to <i>In Use</i> , the associated processing status profile cannot be changed. For more information, see Processing Status [page 160] .

Field	User Action	Comments	
<p>Note</p> <p>This configuration is only for rendering the data in the UI.</p>	Configure Tabs in Collaboration Type	Enable or disable tabs:	
		Shared Product Data	Based on the selection, show or hide tabs for the collaboration type in the collaboration.
		Reference Objects	
		Design Models	
	Comments	To enable the option Do not allow readers to post comments in the <i>User Management</i> section, choose the tab for the collaboration type in the collaboration.	
	Work Items	To enable the option Allow users to start workflow and work items in the <i>User Management</i> section, choose the tab for the collaboration type in the collaboration.	
Associated Workflows	Select the relevant workflows and process variants.	Based on the business purpose of a collaboration type, you can associate multiple workflows and process variants with it. In a collaboration of this collaboration type, these workflows and process variants are recommended when you want to add a workflow.	
		<p>Note</p> <p>You can assign multiple workflows to a collaboration type. Once the status of a collaboration type is changed to <i>In Use</i>, you cannot unassign the workflows from the collaboration type. But, you can assign more workflows to the same collaboration type.</p>	
		<p>Note</p> <p>Only the workflows for which at least one property is associated within the <i>Workflow Properties</i> app are displayed here.</p>	

Field	User Action	Comments
Associated References	Select the reference objects that are associated with the collaboration type. Based on the business purpose of a collaboration type, you can associate multiple references with it. In a collaboration of this collaboration type, these references are available on the Reference Objects tab.	<p>Note</p> <p>You can assign multiple reference objects to a collaboration type. You can unassign associated references only when there are no collaborations for the collaboration type and no reference object data has been added to it.</p> <p>For more information, see Working with Reference Objects [page 173].</p>
User Management	Allow users to start workflow and work items	Readers of a collaboration can manage the lifecycle of workflows or work items that are created by them.
	Do not allow readers to post comments	Hides Post Comments button for Readers.
	Allow contributors to access collaboration history	Contributors of a collaboration can view the history of document changes made to the corresponding collaborations on the History tab in the My Collaborations app.
Admin Settings	Allow Propagation to Visualization	Allows design model files to be propagated to a visualization.
Shared Documents	File Storage:	To check files that are uploaded to custom storage for malware before they are processed and made available for download, choose the Malware Scanning option. Once the option is enabled, you can upload only one file at a time. For more information, see Malware Scanning .
	<ul style="list-style-type: none"> • Default • Custom 	To learn more about the different possibilities provided by default and custom storage, see Compare Document Storage Types for Collaborations [page 169] .

Field	User Action	Comments
	Enable document expiry for documents within collaboration	<p>Enter the number of days for the collaboration type in the <i>Document Expiry(Days)</i> field.</p> <p>Number of days should be a positive whole number (example 1, 2, and 50).</p> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> <p>Note</p> <p>In custom storage, the number of days for document expiry feature is applicable for files and folders.</p> </div>
	Allow override of document expiry day during collaboration creation	<p>Allows user to change the document expiry days when creating a new Collaboration.</p> <p>If this option is unchecked, the default value that's set for collaboration type is used.</p>

5. Save your changes.

Note

The table on the *Collaboration Type* tab displays a new collaboration type with the status *In Preparation*.

Editing a Collaboration Type

You edit the collaboration type.

1. From the SAP Fiori launchpad, open the *Configure Collaboration* app.
2. Choose *Collaboration Type*, choose *Edit*.

Restriction

When editing a collaboration type, be sure about associating the following:

- the processing *Status Profile*
- the *Workflow*
- the *Reference Objects*.
- In the *Shared Documents* section, modify the expiry date for the documents. Once associated, these changes cannot be reverted irrespective of the status (*In Preparation* or *In Use*) in which the collaboration type is placed.

The following table also shows the change in status after a collaboration type is edited:

Previous Status	Current Status
In Preparation	In Preparation
In Use	In Preparation
Out of Use	In Preparation

Note

The type ID is not editable.


When you are making changes to the collaboration type, the status of the collaboration type goes from its current status of *In Use* to the status *In Preparation*.

However, provided that the collaboration type has been set to the status *In Use* at least once in the past, users can still continue to create a collaboration while the collaboration type is still in the *In Preparation* status.

Deleting a Collaboration Type

1. From the SAP Fiori launchpad, open the *Configure Collaboration* app.
2. Choose *Collaboration Type*, choose *Delete*.

Note

- You can only delete one collaboration type at a time.
- You cannot delete the collaboration type with the  (*Collaboration type is locked*), it means that the collaboration type is being used in a collaboration.

3. Confirm the warning.


Ariba sourcing

For the Ariba sourcing use case, it is mandatory to create the collaboration type SRCE with below configuration:

Field	Information
Collaboration Type	SRCE (The collaboration type is case-sensitive)
Associated Reference Object	The SRCE collaboration type to associate with the following: <ul style="list-style-type: none"> • ARIBA • COLLABORATION • MATERIAL

Toolbar Buttons

The toolbar buttons that are available in the *Collaboration Type* main page. Select the required collaboration type and choose the respective button:

Button	User Action	Comments
Import	<p>You can import a list of collaboration types and their metadata.</p> <p>Edit the fields following:</p> <ul style="list-style-type: none"> • Enter a collaboration type ID with a maximum of 4 characters. • Enter a status profile id. • Select relevant associated workflows, associated references 	<ul style="list-style-type: none"> • You can import a maximum of 1000 records. • The validation is applied to all the fields before you import a collaboration type. • Only csv file format is supported. • The destination for custom storage is mandatory. • Once you import a collaboration type, the <i>In Preparation</i> is the default status. If you want your business users to use a collaboration type, you must change the status to <i>In Use</i>.
 (Export)	<p>You can select a list of collaboration types to download and save the data to a CSV file.</p>	<ul style="list-style-type: none"> • When you export a collaboration type, you download the information associated to a collaboration type such as: status profile, associated workflows, associated reference objects, configure tabs, admin settings and shared documents. • Atleast one collaboration type should be selected. • The exported file that is downloaded to your local system.

8.1.3.1.1 Compare Document Storage Types for Collaborations

Read about the differences between default and custom storage so that you know which storage type you need when configuring collaboration types.

Context

A key element of a collaboration is managing and sharing files and folders with participants. Depending on your ways of working with your documents, you need to choose the optimal storage type.

SAP Product Lifecycle Management offers the following different document storage types:

- **Default storage:** This storage type uses the SAP Document Management service embedded directly into SAP Product Lifecycle Management. Default storage supports all available integrations for collaboration, namely SAP Document Management service, SAP Engineering Control Center, SAP Ariba as well as sharing of product data (PPX). However, the maximum size of a file is limited.
- **Custom storage:** This storage type uses the Object Store service on SAP BTP. Custom storage with the Object Store service does not support integration with SAP Document Management service, SAP Engineering Control Center, SAP Ariba or sharing of product data (PPX). It is suitable for large files that are greater than 1 GB in size.

→ Recommendation

We recommend that you choose default storage if your scenario requires any of the available standard integrations. We recommend that you choose custom storage if you plan to exchange very large files through Collaboration that are either uploaded manually or through the available APIs.

It is also possible to use both storage types in parallel for different scenarios. You can configure the storage type that you required within the collaboration type. It is also possible to link collaborations to each other. This way one collaboration can be used to handle integration scenarios and a linked collaboration can be used for the exchange or transfer of the (very) large files.

What Is Default Storage? What are the Key Features?

Default storage uses the SAP Document Management service. For more information, see [What Is Document Management Service](#). This service is embedded directly into SAP Product Lifecycle Management, which allows you to access it without any additional configuration.

Key Features:

- 1 GB embedded storage in the subscription for each user.
- Desktop client application to manage files and folders.
- Supports document versioning.
- Collaboration integrates with the following SAP products:
 - **SAP Engineering Control Center:** This integration supports sharing and exchange of data such as CAD drawings and document info records between the control center and the Collaboration SaaS application.
 - **SAP Document Management service:** You can use document info records and their originals. These can be replicated or pushed into a collaboration and synchronized back to Document Management.
 - **Product Package Exchange Publisher:** This integration enables you to select key data from your SAP S/4HANA system, based on a variety of criteria, and publish it direct to SAP Product Lifecycle Management.
 - **SAP Enterprise Portfolio and Project Management:** This integration helps to link collaborations to project elements as object links. This contains projects and portfolios.
 - **SAP Ariba:** This integration enables your suppliers to access collaborations where you have shared content related to sourcing objects or RFx (Request for Quotation, Proposal, or Information).

What Is Custom Storage? What are the Key Features?

Custom storage uses the Object Store service on SAP BTP. It allows you to store and manage your business documents. This service supports Infrastructure as a Service (IaaS) such as Azure Blob Storage, Amazon Web Services. To use this service, you need to configure a destination. For more information, see [Destination for Custom Storage \[page 107\]](#).

Key Features:

- No storage limitation
- Maximum data availability and scale efficiently for large files.
- Allows usage of storage provided by the hyperscaler's object store offerings.

For more information, see [What Is Object Store?](#).

When to choose Default Storage or Custom Storage?

Choose default storage in the following cases:

- When you are working with smaller files. For more information, see [Restrictions and Limits](#).
- When you are working with different versions of a file.
- When you are working with the other SAP products that are integrated with the Collaboration SaaS application.

Choose custom storage in the following cases:

- When you are working with very large files and no standard integration or versioning is required.

Note

Depending on your business use case, choose the collaboration type with a suitable storage type. These collaborations can also be linked to each other via reference object.

Comparison of Default Storage and Custom Storage Types

The following tables break down the features of the two storage types allowing easy comparison of their attributes and the features supported for collaborations:

Storage Attributes

Storage Attributes	Default Storage	Custom Storage
Requires configuration	No	Yes
Maximum storage	Unlimited	Unlimited

Storage Attributes	Default Storage	Custom Storage
Storage repository	CMIS repository	<ul style="list-style-type: none"> • Microsoft Azure • Amazon Web Services

CMIS Standard	Yes	No
---------------	-----	----

Features Supported for Collaboration

Features	Default Storage	Custom Storage
File and folder management	Yes	Yes
File versioning	Yes	No
Document expiry and retention on files	Yes	Yes
Document expiry date on file can be decreased	No	Yes
Document expiry and retention on folders	No	Yes
Pause the upload of a file	No	Yes
Resume the upload of a file	No	Yes

Usability Features

Usability Features	Default Storage	Custom Storage
Desktop client support	Yes	No
E-mail notifications to document changes	Yes	No

Integration

Integration	Default Storage	Custom Storage	More Information
SAP Engineering Control Center	Yes	No	Connecting with Collaborations in SAP Enterprise Product Development
SAP Document Management service	Yes	No	Integration with SAP Enterprise Product Development
Product Package Exchange Publisher	Yes	No	SAP Note 3269788
SAP Enterprise Portfolio and Project Management	Yes	No	Integration with Collaborations in SAP Enterprise Product Development

Integration	Default Storage	Custom Storage	More Information
SAP Ariba Sourcing	Yes	No	Integrating with SAP Ariba Sourcing

Note

For more information about the API, see the [SAP Business Accelerator Hub](#).

For information about browser recommendations, see [Browsers and Browser Settings \[page 13\]](#).

8.1.3.2 Working with Reference Objects

Use the [Configure Collaboration](#) app to create, edit, or delete custom reference objects. The standard reference objects that belong to the object types [Collaboration](#), [Specification](#), [Requirements](#), [Change Record](#), [Product Package Exchange \(PPX\)](#), [Configuration Management Baseline](#), and [Specification Management](#) cannot be edited. Reference objects that are added as associated references to any of the collaboration types cannot be edited or deleted.

Prerequisites

You must be assigned to the `COLLABORATION_ADMIN` group as mentioned in the [Role Templates for Collaboration \[page 29\]](#).

Context

Reference objects are entities that are defined for a business object. There are two types of reference objects:

- Custom reference objects: Custom reference objects can be added as needed, based on your business requirements by your collaboration administrator, using the [Configure Collaboration](#) app.

- **Standard Reference Objects**

The following table displays the preshipped reference objects and the values for their key and non-key fields:

Reference Object	Key Field	Non-Key Field
COLLABORATION	Key1: COLLABORATION_ID Key2: DESCRIPTION	not applicable
SPECIFICATION	Key1: ID Key2: DESCRIPTION	Non-Key1: Purpose

Reference Object	Key Field	Non-Key Field
REQUIREMENT	Key1: EADOBJECTID Key2: MODELOBJECTID Key3: NAME Key4: DIAGRAMREPOSITORYID Key5: PRIORITY Key6: DESCRIPTION	Non-Key1: MODELVERSION Non-Key2: REQUIREMENTVERSION Non-Key3: MODELNAME
PPX	Key1: ID Key2: DESCRIPTION Key3: TYPE Key4: SYSTEM	Non-Key1: Valid From
CHANGE_RECORD	Key1: Change Record Key2: Record Type Key3: Record Status Key4: Change Responsible Key5: Expected Completion Date	Non-Key1: Valid From
CONFIG_MGMNT_BASELINE	Key1: GUID (The value is hidden to the users) Key2: Baseline ID Key3: Baseline Version	Non-Key1: Baseline Description Non-Key2: Controlled Object Non-Key3: Controlled Object Description
SPECIFICATION_MANAGEMENT	Internal ID: UUID (The value is hidden to the users) Key1: DISPLAY ID Key2: VERSION	Non-Key1: NAME (The value is hidden to the users) Non-Key2: STATUS (The value is hidden to the users)

SAP Ariba Sourcing

For the SAP Ariba sourcing use case, it is mandatory to create custom reference objects as shown in this table:

Reference Object (case sensitive)	Key Field	Non-Key Field
ARIBA	Key1: type	not applicable
MATERIAL	Key1: materialNumber	not applicable

Creating a Reference Object

1. From the SAP Fiori launchpad, open the *Configure Collaboration* app.
2. On the *Reference Objects* tab, choose *Create*.
The page displays with the header data, keys, and non-keys tabs.
3. On the *Header Data* tab, to create a reference object enter the following values:

Field	User Action	Comments
Reference Object	Enter an object type with a maximum length of 30 characters.	The following special characters are allowed: underscore (_), dash (-), or space (" ").
Select Language	The default language is English.	-
Navigation URL	Enter a URL that uses one of these protocols: http, https, or ftp.	<p>For the URL to navigate to a custom reference object, note the following:</p> <ul style="list-style-type: none"> • The navigation URL is an optional field. • The navigation URL is case-sensitive. • Both keys and non-keys are valid placeholders. • Only predefined keys are allowed. • The key value is used to reference the associated value of the key. <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> <p>❖ Example</p> <pre>https://<basepath>.<domain>/?<param-name1>={key1}&<param-name2>={key2}&<param-name3>={key3}&<param-name4>={key4}&<param-name5>={key5}&<param-name6>={nonkey1}</pre> </div>

4. To add keys, on the *Keys* tab, choose *Add*.
In the table that is displayed, enter the following values:

Column	User Actions	Comments
Fields	You can enter up to 6 keys.	It's mandatory to enter a key. A maximum of 6 keys are allowed. For example: if the object type is Document, you could enter these keys: <ul style="list-style-type: none"> • Key1 is DOKNR • Key2 is DOKAR • Key3 is DOKTL • Key4 is DOKVR The default language is English.
Value	Enter any value for keys.	Hypertext does not support placeholders.
Select Language	The default language is English.	-
Data type	Select text or hypertext as required.	Default data type is text.
Hide	Select this checkbox to hide any key	Default is unhide – meaning it is visible to the user in the My Collaborations app under Reference Objects .

5. To add non-keys, on the [Non-Keys](#) tab, choose [Add](#).
In the table that is displayed, enter the following values:


Column	User Actions	Comments
Fields	Enter any free text.	Only 10 non-key fields are allowed. <ul style="list-style-type: none"> • Non-keys are optional. • Non-key fields have to be in sequence. For example: <ul style="list-style-type: none"> • Non-Key1 is created by • Non-Key2 is modified by • Non-Key3 is a description The default language is English.
Value	Enter any value.	Hypertext does not support placeholders.

Column	User Actions	Comments
Select Language	The default language is English.	-
Data type	Select text or hypertext as required.	Default data type is text.
Hide	Select this checkbox to hide any non-key	Default is unhide – meaning it is visible to the user in the My Collaborations app under Reference Objects .

6. Save changes.

Editing a Reference Object

You edit a reference object. The reference objects that are added as associated references to any of the collaboration types cannot be edited.

1. From the SAP Fiori launchpad, open the [Configure Collaboration](#) app.
2. On the [Reference Objects](#) tab, choose  in the navigation panel.
3. Choose [Edit](#).
The page displays with the header data, keys, and non-keys tabs.
4. Edit the following values:

Field	User Action	Comments
Reference Object	Enter an object type with a maximum length of 30 characters.	The following special characters are allowed: underscore (_) and en dash (-).
Select Language	<p>Define a reference object only in English.</p> <p>Select the language that you want to use for the translation. For the information about the supported languages, see Overview [page 6].</p> <p>The default language is English.</p> <p>Your business users see the text in the default language if you don't configure a different preferred language.</p>	The selected language is added to the Display Language list. For more information, see Filtering Texts by Language [page 188] .

Field	User Action	Comments
Navigation URL	Enter a URL that uses any of these protocols: http or https or ftp	<ul style="list-style-type: none"> The navigation URL is not a mandatory field. The navigation URL is case sensitive. Both keys and non-keys are valid placeholders. The key value which is used to reference associated value of the key. <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> <p>❖ Example</p> <pre>https://<basepath>.<domain>/?<param-name1>={key1}&<param-name2>={key2}&<param-name3>={key3}&<param-name4>={key4}&<param-name5>={key5}&<param-name6>={nonkey1}</pre> </div>

5. In the [Keys](#) section, edit the following values:

Column	User Actions	Comments
Fields	<p>(This is read only)</p> <p>The default language is English.</p> <p>Your business users see the text in the default language if you don't configure a different preferred language.</p>	<p>It is mandatory to enter a key. A maximum of 6 keys are allowed.</p> <p>For example: Object type is Document, then:</p> <ul style="list-style-type: none"> Key1 is DOKNR Key2 is DOKAR Key3 is DOKTL Key4 is DOKVR
Value	Enter any value for keys.	Hypertext does not support placeholders.

Column	User Actions	Comments
Select Language	<p>Select the language that you want to use for the translation. For the information about the supported languages, see Overview [page 6].</p> <p>The default language is English.</p> <p>Your business users see the text in the default language if you don't configure a different preferred language.</p> <p>The default language is English.</p>	<p>The selected language is added to the <i>Display Language</i> list. For more information, see Filtering Texts by Language [page 188].</p>
Data type	Select text or hypertext as required.	Default data type is text.
Hide	Select this checkbox to hide any key	Default is unhide – meaning it is visible to the user in the <i>My Collaborations</i> app under <i>Reference Objects</i> .

6. In the *Non-Keys* section, edit the following values:

Column	User Actions	Comments
Fields	<p>(This is read only)</p> <p>The default language is English.</p> <p>Your business users see the text in the default language if you don't configure a different preferred language.</p>	<p>Only 10 non-key fields are allowed</p> <p>Non-key fields are optional.</p> <p>Non-key fields have to be in sequence.</p> <p>For example:</p> <ul style="list-style-type: none"> • Non-Key1 is created by • Non-Key2 is modified by • Non-Key3 is a description <p>The selected language is added to the <i>Display Language</i> list. For more information, see Filtering Texts by Language [page 188].</p>
Value	Enter any value for non- keys.	Hypertext does not support placeholders.

Column	User Actions	Comments
Select Language	<p>Select the language that you want to use for the translation. For the information about the supported languages, see Overview [page 6].</p> <p>The default language is English.</p> <p>Your business users see the text in the default language if you don't configure a different preferred language.</p> <p>The default language is English.</p>	<p>The selected language is added to the <i>Display Language</i> list. For more information, see Filtering Texts by Language [page 188].</p>
Data type	Select text or hypertext as required.	Default data type is text.
Hide	Select this checkbox to hide any non- key	Default is unhide – meaning it is visible to the user in the <i>My Collaborations</i> app under <i>Reference Objects</i> .

7. Save your changes.

Deleting a Reference Object

You delete a reference object.

1. From the SAP Fiori launchpad, open the *Configure Collaboration* app.
2. On the *Reference Objects* tab, choose the reference object.
3. Choose *Delete*.

8.1.3.3 Working with Job Scheduling

Use the *Configure Collaboration* app to configure daily notification and deletion jobs. This is applicable only for default storage.

Prerequisites

You must be assigned to the `COLLABORATION_ADMIN` group to have the authorization to create a job scheduler as mentioned in the prerequisites in [Business Configuration for Collaboration \[page 155\]](#).

Context

You can schedule a job to create or delete the daily notification frequency option for participants in a collaboration.

You can schedule a job to delete files and folders that are older than a certain number of days in a collaboration.

Creating a Job

You can create a job for sending the daily notification and deletion of files and folders.

1. From the SAP Fiori launchpad, open the [Configure Collaboration](#) app.
2. On the [Job Scheduler](#) tab.
 - Choose [Notifications](#) tab, choose [Create](#).
Enter values in the fields as follows:

Column	Values To Be Entered
Job Name	EPDCJobDaily
Schedule	Daily
Description	Enter a description for the notification.
Schedule Time	Enter the time at which the job should run daily.
Scheduled Start Time	Enter the data and time when the job should run.
Scheduled End Time	This is an optional field.

Enter values in user's local time for the schedule time, scheduled start time, and scheduled end time fields.

Note

The daily notification frequency option is enabled for the participants in the [My Collaborations](#) app, only if you have added a [Job Scheduler](#).

You can schedule a job in the following cases:

- To maintain the logs of files that are expired in the [History](#) tab in [My Collaborations](#) app.
 - To maintain the list of favorites for a collaboration, based on users added, or removed from user group.
1. Choose [Deletion](#) tab, choose [Create](#).
 1. In the wizard that opens, enter the necessary values. For the fields in this table, follow these additional instructions:

Step	Fields	Additional Instructions
<i>Basic Details</i>	<i>Schedule</i>	Enter the scheduling frequency, for example, daily or weekly.
	<i>Scheduled start time</i>	Enter the data and time when the job should run.

Step	Fields	Additional Instructions
<i>Collaboration Preferences</i>	<i>Include all collaborations</i>	<ul style="list-style-type: none"> • By default this option is enabled. • If you do not disable this option, the files and folders for all collaborations are deleted during each run. • If you disable this option, you can limit what the run searches for by entering conditions. • The conditions that you can enter to limit the amount of collaborations included in the deletion are the following: <ul style="list-style-type: none"> • Starts with: The collaboration names that start with the set values are deleted. • Ends with: The collaboration names that end with the set values are deleted. • Contains: The collaboration names that contain the set values are deleted. • Equals: The collaboration names that have the exact set values are deleted.

❖ Example

The following examples explain how some sample conditions would be handled in the deletion run:

- All collaborations that match any of the keywords entered for one condition type. For example, to delete all collaborations that have "COLLAB" at the beginning of their name, you select "starts

Step	Fields	Additional Instructions
		<p>with" as the condition type, or delete all collaborations that have "COLLABORATION" as the keyword.</p> <ul style="list-style-type: none"> All collaborations that match both the conditions if you enter multiple conditions. For example, to delete all collaborations that have "COLLAB" at the beginning of their name, you select "starts with" as the condition type, and to delete all collaborations that have "COLLABORATION" at the end of their name you select "ends with" as the condition type.
<i>Document Preferences</i>	<i>File Preferences:</i> <i>Include all extensions</i>	<ul style="list-style-type: none"> By default this option is enabled. If you enable this option all file types will be deleted. Disable the option and enter values as needed.

Step	Fields	Additional Instructions
	<p><i>Folder Preferences:</i></p> <p><i>Include all folders</i></p>	<ul style="list-style-type: none"> • By default this option is enabled. • If you enable this option all folders will be deleted. • Disable the option to enter a value as needed. • You can set conditions to limit the folders for which this operation is performed: <ul style="list-style-type: none"> • Starts with: The folder names that start with the set values are deleted. • End with: The folder names that end with the set values are deleted. • Contains: The folder names that contain the set values are deleted. • Equals: The folder names that have the exact set values are deleted. • You can set only one type of condition.
<i>Review</i>	<i>Edit</i>	The wizard takes you back to the relevant step so that you make changes.

Editing a Job

You can only edit a job scheduled for deleting files and folders in a collaboration.

1. From the SAP Fiori launchpad, open the [Configure Collaboration](#) app.
2. On the [Job Scheduler](#) tab.
3. Choose the [Deletion](#) tab.
4. Choose the job you want to edit, choose [Edit](#).

Deleting a Job

You can delete a scheduled job.

1. From the SAP Fiori launchpad, open the [Configure Collaboration](#) app.
2. On the [Job Scheduler](#) tab.
3. Choose the job you want to delete, choose [Delete](#).

8.1.4 What is UI5 flexibility?

Users with the UI5 flexibility role can customize user interface controls using **Adapt UI** in the user profile and manage views (public variant) in the [My Collaborations](#) app.

Features

Adapt UI

The **Adapt UI** feature is shown in the user profile in [My Collaborations](#) app, only if the user has *FlexKeyUsers* role authorization.

Key users can add, hide or rearrange fields, or rename labels.

Public Variant

- Public views (variant) can be visible only to the key users, to create filter and table views available for all authorized end users.
- For saving variants, key users can save the view to *Public* and this will be available within *Manage Views* dialog.
- The Manage Views (public variant) option is available only in the [My Collaborations](#) app.

Note

The public variant feature is not supported for reference objects in the [My Collaborations](#) app.

8.1.4.1 UI5 flexibility for Key Users

Users with the UI5 flexibility role can customize using "Adapt UI" available in user profile and Manage views (public variant) in the [My Collaborations](#) app. A key user can make UI changes and publish on behalf of end users.

Prerequisites

To use flexibility features, you must have assigned `FlexKeyUser` role. For more information, see [Role Templates for Collaboration \[page 29\]](#).

Note

Key users must have an understanding about the application and apply the changes cautiously.

- Restricting access to any UI controls is not available. Hence, it is the key user's responsibility to make changes carefully. After applying changes, if the error appears, you can revert to the default view on UI.
- Removing any mandatory field from the UI will result in a validation error.
- The "Adapt UI5" feature is only supported for static UI5 controls with stable ids.
- If you want to add the URL link to the embedded content, you would require certain preconditions and security standards.

For more information on editing embedded content, see [Embedding Content](#)

For more information on UI5 flexibility for key users, see [What Is UI5 Flexibility for Key Users?](#)

8.1.5 Enable Model Object Assignments in a Collaboration

Use this procedure to enable the Model Object Assignments feature in a collaboration for users.

Prerequisites

You have the necessary roles and authorizations as subaccount administrator to manage the role collections and destinations.

Context

By integrating with the Requirement Engineering and System Modeling SaaS application, you can also add requirements to collaborations. When a participant creates a requirement in the Requirement Engineering and System Modeling app, the requirement can be linked to a collaboration and worked on it as a reference object in the My Collaborations app. To enable this feature, you need to configure a destination. For more information see [Destination for Model Object Assignments \[page 104\]](#). Your business users see the *Model Object Assignments* button in the collaboration header section.

Procedure

1. Assign any of the `EADesigner` roles to users who need access to this feature. For more information, see [Role Templates for Engineering \[page 45\]](#).

For steps on how to assign the role to users, see [Assigning Role Collections to Users \[page 78\]](#).

2. Create the destination `EPD_EAD_COLLABORATION`.

For steps on how to create the destination, see [Destination for Model Object Assignments \[page 104\]](#).

8.1.6 Filtering Texts by Language

You as an administrator can configure texts in different languages.

Prerequisites

You must be assigned to the `COLLABORATION_ADMIN` group.

Context

Your business user sees the texts in the configured language other than the default language. You can configure the preferred language from the list of supported languages.

Note

In addition to the *Status Management* app, you can use this feature in the *Configure Product Package Exchange* app and the *Workflow Properties* app in the Collaboration SaaS application.

In addition to the *Status Management* app, you can use this feature in the *Configure Product Package Exchange* app, the *Workflow Properties* app and the *Configure Collaboration* app in the Collaboration SaaS application.

Procedure

1. From the SAP Fiori launchpad, open the *Status Management* app.
2. Choose *Display Language*, on the configuration page of the app.
 - You see the translated texts in the preferred language.
 - For more information about the supported languages, see [Overview \[page 6\]](#).
3. The selected language is highlighted bold in the *Display Languages* column.
4. Save your changes.

Results

The configured rows are highlighted bold in the preferred language, if the user wants to see the texts in a different language other than default language.

Related Information

[Working with Context Properties \[page 200\]](#)

[Configure Product Package Exchange \[page 233\]](#)

8.1.7 Modeling Workflows

To achieve the goal of a business process, you can model workflows. You can use forms to model the user interfaces for the *My Collaborations* and *My Inbox* apps used in the workflow. You can set up the workflow for use in a collaboration. Your business users can then process the tasks contained in the workflow for the collaboration.

Prerequisites

- You have subscribed to the SAP Business Application Studio. For more information, see [What is SAP Business Application Studio?](#).
- You have configured the destination for email notifications with the additional property `mail.epdc.participant.invite` set to `true`. For more information, see [Destination for Email Notifications Using SMTP APIs \[page 93\]](#).

Context

If you enter `workflowDueDate` as the property in the *Workflow Properties* app. Your business users will see the due date for the workflow in the *Due Date* column on the *Work Items* tab. For more information, see [Work Items](#).

Note

This topic outlines the general process for creating a workflow and provides links to detailed instructions and information at each step.

Procedure

1. To model a workflow, you must first create a workflow module. See [Create a Workflow Module](#).
2. Next, you need to define the workflow. See [Define Workflows](#).
Consider the following points when defining a workflow:

- When configuring a user task in the workflow, enter these values in the component information:

Property	Value
<i>HTML5 App Name</i>	comsapepdcollaboration.epdcollaborationTask
<i>SAPUI5 Component</i>	epd.collaboration.Task

Note

Ignore the error message regarding the HTML5 app name.

- To send emails to one or more recipients, configure mail tasks. See [Configure Mail Tasks](#).
- In the workflow editor, in the *Workflow Properties* panel, ensure that you have the following values configured:

Important: Without this configuration, the workflow feature does not work in collaborations.

Name	Value	Note
Subject	<code>\${context.subject}</code>	This value maps a workflow definition to a specific instance of workflow that's triggered in a collaboration.
Business Key	<code>\${context.businessKey}</code>	This value maps an instance of a workflow to a collaboration.

Caution

Do not add the subject and business key values in the *Workflow Properties* app that is part of the Collaboration cloud service for SAP Product Lifecycle Management.

3. For information about how to define workflow properties in workflow tasks, see [Expressions](#).
4. Next, ou build the workflow module. See [Build and Deploy the Workflow Module](#).
5. For information about how to use decisions in the workflows, see [Creating and Reading Workflow Context Structures](#). Use following code in the script task:

Sample Code

```
$.context.<usertask> = {
  action:{
    approve:{
      text:"Approve Changes",
      type:"Accept" //Either Accept or Reject
    },
    reject:{
      text:"Reject",
      type:"Reject" //Either Accept or Reject
    }
  }
};
```

The `<usertask>` is the ID of the user task on which you want the decision buttons to appear.

Note

- The text and type attributes can be changed according to your business requirements.
- The texts that are used as labels for the decision buttons are not translated.

6. To control the flow of the implementation after a decision, see [Gateways](#).

Example

You can use the expression `${context.<usertask>.result == <actionExpectation>}` to control the flow of the implementation.

Configuring Workflow Definitions

You must configure a workflow definition so that email notifications are sent to the participants in a collaboration when the following events occur:

Type	Purpose	Name	Description
Add adhoc work items	To add users to the work items	SAP_EPD_ADHOC_WI_DE F	Enabling collaboration participants to add ad hoc work items to collaborations.
Notification Mails	To add registered users to the collaborations as participants	EmailInviteWorkflow	Enable this option to add registered users as participants to a collaboration. You have the option of sending notification mails to them.
	To make changes to the files and folders in a collaboration	EPD_DOCUMENT_MANAGEMENT_NOTIFICATION	Enable this option to perform actions on files or folders (documents) in a collaboration, such as creating or deleting a folder, uploading or deleting a file, or downloading a file or folder. The system instantly sends an email notification to the subscribed user.
	To add a daily notification job for document changes	EPDC_DOCUMENT_CHANGES_CONSOLIDATED_NOTIFICATION	This option enables collaboration participants to add job scheduler in collaborations.

Type	Purpose	Name	Description
	To request for approval of a redline	EPDC_PPX_APPROVE_REDLINING	Enable collaboration participants to send a request to approve a redline from the Product Package Exchange app.

Note

To see the configuration steps and download the workflow definition templates for SAP Product Lifecycle Management, see SAP Note [3060483](#).

Do not delete the workflows from your subaccount: **SAP_EPD_ADHOC_WI_DEF**, **EPDC_DOCUMENT_CHANGES_CONSOLIDATED_NOTIFICATION**.

8.1.7.1 Configuring Notification Mails

You must perform the following configuration to send notification mails to participants when working with collaborations:

Note

To see the configuration steps and download the workflow definition templates for the Collaboration SaaS application of SAP Product Lifecycle Management, see [3060483](#).

- To send invitation mails to first-time users when added to collaborations, see [Invitation Mails to First-Time Users \[page 192\]](#).
- To send email notifications to registered users when they are added as participants to collaborations, see [Modeling Workflows \[page 189\]](#).

8.1.7.1.1 Invitation Mails to First-Time Users

Invitation mails can be sent to participants when they are first-time users and are added to collaborations. A default mail template provided by SAP is used to send invitation mails.

Prerequisites

- You are using Identity Authentication service as your identity provider.
- You have configured the following destination. For more information, see [Destination for Identity Authentication \[page 91\]](#).

Note

If the prerequisites mentioned are not met, invitation mails are not sent to first-time users to register with the application and access the collaboration.

Procedure

1. The invitation mail uses a default HTML mail template provided by Identity Authentication service. The mail format is as follows:

Example

```
Dear User ,  
  
You are invited to join: <Collaboration_URL>  
  
<Click here to accept>
```

Where <Collaboration_URL> is the link to access the collaboration.

The link to register with the application is present in <Click here to accept>.

2. To customize the mail template with different language versions, see [Configuring E-Mail Templates](#).

Remember

Customize the template for the *Invitation* option in Identity Authentication service.

8.1.8 Workflow Properties

You can use the *Workflow Properties* app to configure the workflow properties that were defined in the workflows.

Prerequisites

You have modeled workflows and defined properties in the workflow tasks. For more information, see [Modeling Workflows \[page 189\]](#).

Fields Relevant for Workflow Properties

A workflow task (work item) has properties such as description, recipient user, and recipient groups. You must define these properties when creating a task. To simplify the process of configuring values for these properties, you can use the [Workflow Properties](#) app. In this app, a workflow property is defined by the following fields:

Field	Description	Note
Workflow	Name of the workflow.	-
Workflow Property	Name of the workflow property exactly as defined in the workflow.	If you enter workflowDueDate as the property, to prevent possible inconsistencies, the Property Value field and the Assign Users to Business Role checkbox are hidden. The Allow Changes at Runtime checkbox is selected and the value can't be changed.
Property Value	A value containing either free text, or an expression that is evaluated when the workflow is triggered in a collaboration. For information about the expressions, see Property Value Expressions [page 194] .	-
Property Value Description	A description of the property value.	-
Default Property Value	A default value for the workflow property.	If you do not enter a value in Property Value , the value entered in Default Property Value is used. This will be supported in the future release.
Allow Changes at Runtime	An option, when enabled, to allow changes to the property value when the workflow is triggered in a collaboration.	If you enable this option, you must enter a value for Property Value Description . This value is displayed as the label of a mandatory field when adding the workflow in a collaboration.
Assign Users to Business Role	An option, when enabled, that allows you to assign users to the business role when adding the workflow to a collaboration. For more information about this field, and business roles, see Business Roles [page 197] .	If you enable this option, you must enter a value for Property Value Description . This value is displayed as the name of the business role when adding the workflow in a collaboration.

Property Value Expressions

The following entities are available for use in expressions in the field [Property Value](#).

Sl. No.	Entity	Expression Format	Attribute	Note
1	Collaboration	Collaboration/attribute	Name	-
			Description	-
			modifiedAt	-
			modifiedBy	Returns the user ID of the user who last edited the collaboration.
			CreatedAt	-
			CreatedBy	Returns the user ID of the user who created the collaboration.
			Contributors	Requires additional attributes as mentioned in Row 2 of this table.
			ID	Collaboration ID
			Status	Collaboration Status
Collaboration Type	Collaboration Type			

Sl. No.	Entity	Expression Format	Attribute	Note
2	Collaboration/contributors	<ul style="list-style-type: none"> Collaboration/contributors<attribute EQ value> Collaboration/contributors/attribute Collaboration/contributors<attribute EQ value>/attribute Collaboration/contributors<attribute NE value>/attribute Collaboration/contributors<attribute EQ value attribute EQ value>/attribute Collaboration/contributors<attribute EQ value && attribute EQ value>/attribute 	participantId	<p>Examples:</p> <ul style="list-style-type: none"> Collaboration/contributors/participantId. <div style="border: 1px solid #ccc; background-color: #f9f9f9; padding: 5px; margin-top: 10px;"> <p>Note</p> <p>If you are not adding any attributes, SAP recommends that you always specify the attribute Type: UserGroup or Member for Collaboration/contributors/participantId.</p> </div> <ul style="list-style-type: none"> Collaboration/contributors<Role EQ Administrator Role EQ Contributor>/participantId Collaboration/contributors<Role EQ Administrator Role EQ Contributor && Type EQ Member>/participantId
			Role	Collaboration/contributors<Role EQ Administrator>/participantId

Sl. No.	Entity	Expression Format	Attribute	Note
			Type	<p>This attribute has the following two permissible values: Member and UserGroup.</p> <p>Examples:</p> <ul style="list-style-type: none"> Collaboration/contributors<Type EQ Member>/participantId Collaboration/contributors<Type EQ UserGroup>/participantId

Note

The default value for a user group, must match with the name of the user group defined in the *Manage Teams* app.

Note

- The attributes are not case-sensitive.
- The operators || (OR) and && (AND) can be used in expressions within the angle brackets < >.
- When evaluating expressions, the operator && is evaluated first.
- The relational operators that can be used in expressions are as follows: EQ (equal to) and NE (not equal to).

Business Roles

A business role represents a group of users who perform similar functions in your organization. To indicate whether a workflow property is a business role, you must enable the option *Assign Users to Business Role*.

Note

It is left to your discretion to name your business roles using the *Property Value Description* field.

The following depicts an example of a workflow property that is related to a business role:

Example

You have defined and deployed a workflow named **DocumentReview** to be used in collaborations. You have created a workflow task in the workflow, and defined a workflow property as `sDesignEngineer`. To configure a value for this property, create an entry in the *Workflow Properties* app as follows:

Field	Value
Workflow	Select DocumentReview
Workflow Property	sDesignEngineer
Property Value Description	Design Engineer
Assign Users to Business Role	Enabled

The value you maintain in the *Property Value Description* is displayed as the name of the business role when adding the workflow in a collaboration. You can then assign users to the business role from the list of available participants. For information about adding workflows in collaborations, see [Adding a Workflow](#) in the *User Guide for Collaboration*.

8.1.8.1 Working with Workflow Properties

This section provides you with information on how to create, edit and, delete workflow properties.

Prerequisites

- You have the `CollaborationAdministrator` role to perform this action.
- You have modeled workflows to be used in collaborations. In those workflows, you have defined workflow properties in workflow tasks, for which you must configure values using this app. For more information, see [Modeling Workflows \[page 189\]](#)

Creating a Workflow Property

1. From the SAP Fiori launchpad, open the *Workflow Properties* app.
2. On the *Workflow Properties* tab, choose **+** (*Create Workflow Property*).
3. Edit the fields as described in the following table. For examples and more information about the fields, see [Workflow Properties \[page 193\]](#).

Field	User Action
Workflow	Select a workflow.
Workflow Property	Enter the name of the property as defined in the workflow task.
Property Value	<p>Enter one of the following:</p> <ul style="list-style-type: none"> An expression that is evaluated when the workflow is triggered in a collaboration Free text <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> <p>Note</p> <p>Enter free text within double quotes.</p> </div> <p>For more information, see Property Value Expressions [page 194].</p>
Property Value Description	Enter a description for the property value.
Default Property Value	Enter a default property value.
Allow Changes at Runtime	Enable the option to allow changes to the property value when the workflow is triggered in a collaboration.
Assign Users to Business Role	Enable the option to use the <i>Property Value Description</i> field as a business role. For more information, see Business Roles [page 197] .

Note

Workflow properties aren't validated for correctness. Hence, you must ensure that the property name entered in *Workflow Property* is as defined in the workflow.

4. Save your changes.

Note

- By default, the workflow properties when created are sorted in alphabetical order.
- Only workflows for which at least one property is set within the *Workflow Properties* application are relevant for collaboration.
- Once workflow is associated to a collaboration type, then the workflow properties cannot be deleted.
- When you set **Purpose** as workflow property with the property value as **lockedCollaboration**, enables your business users to work with workflows even when the collaboration in the *Locked* state.

Editing a Workflow Property

You can edit a workflow property by choosing  (*Edit*).

Note

The fields *Workflow* and *Workflow Property* aren't editable.

Deleting a Workflow Property

You can delete a workflow property by choosing  (*Delete*).

Note

A workflow property once associated to a collaboration type cannot be deleted.

8.1.8.2 Working with Context Properties

Use the *Workflow Properties* app to add and edit context labels for workflows or work items. You can also delete context properties if needed.

The context in a workflow or work item definition contains properties. To make it easier for your business users to work with these properties, you can add labels for them in different languages as needed. Your business users see the labels that you have configured for the context properties in the *My Collaborations* app.

Prerequisites

- You must be assigned the CollaborationAdmin role to perform this action.
- You have modeled workflows to be used in collaborations. In those workflows, you have defined workflow properties in workflow tasks, for which you want to create business labels using this app. For more information, see [Modeling Workflows \[page 189\]](#).

Adding a Context Property Label

1. From the SAP Fiori launchpad, open the *Workflow Properties* app.
2. On the *Context Properties* tab, choose *Add*.
3. In the dialog that opens, enter the following values:


Field	Values to Be Entered
Workflow/Work item	Select the relevant workflow or work item.
Context Property	Enter the technical name of the context property as defined in the workflow task. The technical name of the context property follows this pattern: "workflow.status.entityName".
Context Label	Enter the label text that you want your business users to see. The default language for creating labels is English. You can only change the language and translate the label by editing the context property.

4. Save your changes.

The table on the [Context Properties](#) tab displays the list of workflow items with the property values.

Editing a Context Property Label

You edit the context label for a workflow or a work item when you want to translate the label text into different languages.

1. From the SAP Fiori launchpad, open the [Workflow Properties](#) app.
2. On the [Context Properties](#) tab, choose  ([Edit Context Property Label](#)).
3. In the dialog that is displayed, enter the following values:

Field	Values to Be Entered	Comments
Select Language	Select the language that you want to use for the translation. The following languages are supported: <ul style="list-style-type: none"> • English • German • Spanish • French • Simplified Chinese The default language is English. Your business users see the text in the default language, if you don't configure a different language.	The selected language is added to the Display languages list. For more information, see Filtering Texts by Language [page 188]

Field	Values to Be Entered	Comments
Select Language	<p>Select the language that you want to use for the translation. For the information about the supported languages, see Overview [page 6].</p> <p>The default language is English.</p> <p>Your business users see the text in the default language if you don't configure a different language.</p>	<p>The selected language is added to the Display languages list. For more information, see Filtering Texts by Language [page 188]</p>
Workflow/Work item	(The field is read only.)	-
Context Property	(The field is read only.)	-
Context Label	Overwrite the English text with the text in the language that you selected.	-

4. Save your changes.
5. Choose [Display Language](#), for your business users to view texts in a selected language.

The next time that your business users open the [My Collaborations](#) app, they will see the translated label for the context properties.

Deleting a Context Property Label

1. From the SAP Fiori launchpad, open the [Workflow Properties](#) app.
2. On the [Context Properties](#) tab, choose **X** ([Delete Context Property Label](#)).
3. Confirm the warning.

The context property with the selected label in the configured languages is deleted.

8.1.9 Configuring Process Flows Using Process Variants

You can configure process flows using process variants to meet your changing business environment, stay compliant, improve the experience of the people involved, and improve process efficiency.

SAP Workflow Management allows you to configure your process flows using process variants. Once you activate the process variants and perform the required configuration, your users can then add them in collaborations the same way as workflows.

Procedure

1. To activate the process variant, follow the steps described in [Configure a Process Variant](#).
2. Configure the workflow properties defined in the workflows of the process variant. For more information, see [Workflow Properties \[page 193\]](#).
3. Add the process variant as an associated workflow to a collaboration type. For more information, see [Working with Collaboration Types \[page 163\]](#).
When a collaboration is created using the relevant collaboration type, the process variant can be added as a workflow in the collaboration. For more information, see [Work Items](#) in the **User Guide for Collaboration**.

Related Information

[Destination for Management Workflows using Process Variants \[page 109\]](#)

8.1.10 Configure Product Data

Using the [Configure Product Data](#) app, you can enter the SAP S/4HANA systems and product data needed to collaborate with suppliers on product data within a collaboration.

Original equipment manufacturers (OEMs) want to be able to share product data information (bills of material) available in SAP S/4HANA with participants in a collaboration, so that the participants from different suppliers can check the BOM details and provide their feedback to the OEM as redlines. Before this can happen, you must have configured the SAP S/4HANA systems needed to establish the connection between SAP S/4HANA and Collaboration.

You use the [Configure Product Data](#) app to do the following:

- Configure the SAP S/4HANA systems from which you want to retrieve product data (object) for inclusion in the collaboration.
- Configure the type of object (product data) that you want to retrieve from the SAP S/4HANA system to the collaboration.

To configure product data, follow the steps to create the destinations as described in before proceeding to configure the systems and objects.

For information on working with product data in a collaboration, see [Collaborating on Product Data](#).

[Prerequisites for Configuring Product Data \[page 204\]](#)

Collaboration participants who do not have users in the source system must still be able to view and perform operations on product data in collaborations. To make this possible, perform the following configuration steps.

[Configuring a System \[page 205\]](#)

Configure the system using destinations. The configured systems are made available in collaborations to retrieve product data.

[Configuring an Object Type \[page 207\]](#)

You configure the type of object (product data) that you want to retrieve from the configured source system to collaborations.

[Configuring URL Definitions \[page 210\]](#)

Configure the URLs for combinations of object types and source systems.

8.1.10.1 Prerequisites for Configuring Product Data

Collaboration participants who do not have users in the source system must still be able to view and perform operations on product data in collaborations. To make this possible, perform the following configuration steps.

Finding Source System URL

To retrieve product data from any of your source systems into collaborations, you need to add a destination for your source system.


- If your source system is a cloud system, add a destination according to the communication arrangement.
- If your source system is an on-premise system, add a destination for the Cloud Connector.

Configuring and Installing Cloud Connector

Set up the Cloud Connector using principal propagation, as mentioned below:

1. Install the Cloud Connector as described in [Installation](#).
2. Configure the Cloud Connector to make it operational for connections between your SAP Business Technology Platform subaccount and on-premise systems by following the procedure mentioned in [Initial Configuration](#).
3. Configure access control or copy the complete access control settings from another subaccount on the same Cloud Connector by following the procedure mentioned in [Configure Access Control](#).
4. Configure the newly installed Cloud Connector (initial configuration, subaccounts, access control) using the OData configuration by following the procedure mentioned in [Configuration REST APIs](#).
5. Configure principal propagation by following the procedure mentioned in [Configure principal propagation](#).

Note

If you require support or encounter any technical issues while configuring the Cloud Connector, contact SAP by reporting an incident on the [Support Portal](#)  under the component BC-MID-SCC.

Creating SAP Business Technology Platform Destinations

Note

Destination titles should be prefixed with `EPD_S4HANA_` for collaboration applications to function.

Configure HTTP destinations to connect to an SAP S/4HANA system through HTTP(s) as mentioned below:

1. For every SAP S/4HANA system that you want to retrieve product data from, you must create a destination using the details mentioned in the following table. It is left to your discretion to select the authentication type of the destination.

→ Recommendation

We recommend that you create the destination with principal propagation authentication.

Name	Type	URL	Proxy Type	Authentication	Additional Properties
Enter any name as required.	HTTP	Enter the source system URL as mentioned in the section Finding Source System URL [page 204] .	OnPremise/Cloud	BasicAuthentication	-
				PrincipalPropagation	Add a property with key as sap-client and value as the client number.

Note

Enter the credentials of a user that has **Read** access to the service in the source system.

8.1.10.2 Configuring a System

Configure the system using destinations. The configured systems are made available in collaborations to retrieve product data.

Prerequisites

- You have configured the destinations for the source system, that is, SAP S/4HANA systems.
- You have launched the [Configure Product Data](#) app from the SAP Fiori launchpad.


Adding a System

To add a system, perform the following steps:

1. Choose the *Systems* tab.
2. Choose **+** (*Add System*).
3. Make entries for *System ID* and *System Name*. These entries are freely selectable. For *Destination*, select the destination from which you want to retrieve the object type (product data) from the dropdown.
4. Choose *Add*.
A new system is configured for retrieving product data to the collaboration.

Editing a System

To edit a system, perform the following steps:

1. Choose the *Systems* tab.
2. For the system that you want to edit, choose  (*Edit*).
3. Edit the required system details and save your changes.

Deleting a System

To delete a system, perform the following steps:

1. Choose the *Systems* tab.
2. Delete a system by choosing

Note

URL and objects related to systems should be deleted first (sequence to delete is URL, objects, and systems).

(*Delete*).

The configured system is only deleted from the *Configure Product Data* app but not from the source system.

8.1.10.3 Configuring an Object Type

You configure the type of object (product data) that you want to retrieve from the configured source system to collaborations.

Prerequisites

- You have configured the source systems or the on-premise back-end systems using the destinations. For more information, see [Prerequisites for Configuring Product Data \[page 204\]](#).
- You have valid services for retrieving product data. For more information, see [OData Services \[page 207\]](#).

Related Information

[Working with Object Types \[page 208\]](#)

8.1.10.3.1 OData Services

Each object type in the *Configure Product Data* app is associated with an OData service.

The OData service for bills of material (BOM) and order bills of material (Order BOM) are [API_BILL_OF_MATERIAL_SRV](#) and [API_ORDER_BILL_OF_MATERIAL_SRV](#), respectively.

For information on other published services, see [SAP API Business Hub](#).

Example of Object Type of BOM

Based on the available service, [API_BILL_OF_MATERIAL_SRV](#), you can define object types using the details mentioned in the following table.

For steps to add an object type, see [Adding an Object Type \[page 209\]](#).

Field	Value	Note
Object Type ID	DEFAULTBOM	

Field	Value	Note
Object Type Name	Enter a name as required.	The Object Type Name you define is displayed as an entry in the <i>Product Data</i> field in collaborations. Your users can select this entry to search for this type of product data from the source system that you have configured in the <i>System</i> tab
Service Name	API_BILL_OF_MATERIAL_SRV	
Path	/odata/SAP	
Root Entity	Select A_BillOfMaterial	

Example of Object Type of Order BOM

Based on the available service, [API_ORDER_BILL_OF_MATERIAL_SRV](#), you can define object types using the details mentioned in the following table.

Field	Value	Note
Object Type ID	DEFAULTORDERBOM	
Object Type Name	Enter a name as required.	The Object Type Name you define is displayed as an entry in the <i>Product Data</i> field in collaborations. Your users can select this entry to search for this type of product data from the source system that you have configured in the <i>System</i> tab
Service Name	API_ORDER_BILL_OF_MATERIAL_SRV	
Path	/odata/SAP	
Root Entity	SalesOrderBOM	

8.1.10.3.2 Working with Object Types

Configure object types (product data) to allow your users to retrieve product data records of those object types from the configured source system, into collaborations.

Prerequisites

You have launched the *Configure Product Data* from the SAP Fiori launchpad.

Adding an Object Type

To add an object type, perform the following steps:

1. Choose the *Object Types* tab.
2. Choose **+** (*Add Object Type*).
3. Enter the required details.


Note

- The *Object Type Name* you define is displayed as an entry in the list of product data to add to a collaboration. Your users can select this entry to search for this type of product data from the source system.
- For the field *Service Name*, select the service as configured in the destination. For example, for the bills of material (BOM) object type, the service is `API_BILL_OF_MATERIAL_SRV` and for order bills of material (Order BOM), the service is `API_ORDER_BILL_OF_MATERIAL_SRV`.
- The field *Root Entity* displays the root entities based on the service.

4. Save your changes.

Editing an Object Type

To edit an object type, perform the following steps:

1. Choose the *Object* tab.
2. For the object that you want to edit, choose  (*Edit*).
3. Edit the required object details and save your changes.

Deleting an Object Type

To delete an object type, perform the following steps:

1. Choose the *Object* tab.
2. Delete an object by choosing

Note

The sequence to delete is URL first and then product data from collaborations.

(*Delete*).

The configured object is only deleted from the *Configure Product Data* app, and not from the source system.

8.1.10.4 Configuring URL Definitions

Configure the URLs for combinations of object types and source systems.

When collaborating on product data in collaborations, you can view the details of the product data in the source system. To enable this feature, you must configure the navigation URL for a combination of an object type and the source system.

Note

Access to viewing product data in the source system depends on the authentication and authorizations of the user in the source system.

Prerequisites

- You have configured the source systems or the on-premise back-end systems. For more information, see [Prerequisites for Configuring Product Data \[page 204\]](#) and [Configuring a System \[page 205\]](#).
- You have valid OData services for retrieving product data. For more information, see .
- You have configured the object types for retrieving product data from the source systems into collaborations. For more information, see [Working with Object Types \[page 208\]](#).

Adding a URL Definition

Note

A solution administrator has the discretion to add a URL definition, either bona fide or otherwise.

To add a URL definition, perform the following steps:

1. In the *Configure Product Data* app, choose the *URL Definitions* tab.
2. Choose **+** (*Add URL Definition*).
3. Select the object type and system.
4. Enter the URL that is required for viewing product data of the selected object type from the source system.

The URL has the following pattern:

```
<External_System_Host_URL>?sap-client=<sap-client>#<semanticObject>-<action>?
sap-app-id=<sap-app-id>&///<C_CDS_View>( <AttributeName1>=' $<AttributeName1>$' ,
<AttributeName2>=' $<AttributeName2>$' ,...)
```

where

<External_System_Host_URL>

is the URL of the external system

<sap-client>

Interfacing system with SAP Enterprise Product Development like S4 system that contains bill of material.

<code><semanticObject>-<action></code>	Bill of Material -Read
<code><sap-app-id></code>	User Interface app ID of Bill of Material
<code><C_CDS_View></code>	is the c CDS view
and the attribute names	are the names of the fields in the service metadata (linked to the object type). The attribute names when entered as values must be preceded by and followed by the \$ (dollar) symbol.

The following is an example of the URL:

Example

```
<External_System_Host_URL>?sap-client=790#MaterialBOM-maintenance?sap-app-id=pise.mi.plm.bom.mbom.0001&//C_BillofMaterialTP(BillofMaterial=' $BillofMaterial$ ',BillofMaterialCategory=' $BillofMaterialCategory$ ',BillofMaterialVariant=' $BillofMaterialVariant$ ',BillofMaterialVersion=' $BillofMaterialVersion$ ',EngineeringChangeDocument=' $EngineeringChangeDocument$ ',Material=' $Material$ ',Plant=' $Plant$ ',DraftUUID=guid'00000000-0000-0000-0000-000000000000',IsActiveEntity=true)
```


Note

The navigation URL is validated only for a URL format, and not for correctness.

5. Save your changes.

Editing a URL Definition

To edit a URL definition, perform the following steps:

1. In the *Configure Product Data* app, choose the *URL Definitions* tab.
2. For the URL definition that you want to edit, choose  (*Edit*).
3. Edit the navigation URL and save your changes.

Note


The navigation URL is validated only for a URL format, and not for correctness.

Deleting a URL Definition

Note

If you delete a URL definition, the feature in a collaboration that allows you to view the relevant product data details in the source system is disabled.

To delete a URL definition, perform the following steps:

1. In the *Configure Product Data* app, choose the *URL Definitions* tab.
2. Delete a URL definition by choosing  (*Delete*).
3. Confirm the warning message.

8.1.11 Configuring Provisional Specifications

To enable a product developer and a supplier to collaborate in a specification exchange scenario, as an administrator you'll need to do some configuration tasks.

Note

The specification exchange scenario works with APIs that are available in the following **SAP S/4HANA** On-Premise releases: 2020 or later, 1909, and 1809. The scenario can also work with Enhancement Package 8 of **SAP ERP**.

Prerequisites

Before you can configure provisional specifications, you must do the following:

- Set up the destination for your source system. For more information, see [Destination for Collaborating on Specifications \[page 101\]](#).
- Set up users within Collaboration for the specification exchange scenario. For more information, see [Role Templates for Collaboration \[page 29\]](#).
- Register the specification-related API services and the **Characteristic Data for Classification** API service in your source system. For more information about the specification-related APIs, see [Specification APIs for Recipe Development](#) and [3117894](#). For more information on how to configure the Classification API for EPD, see [3145055](#).
- Check if you need to apply any SAP Notes based on the following collection: [SAP Notes for the Specification Exchange Scenario \[page 228\]](#).

Procedure

The recommended order for performing the administrative tasks for configuring the specification exchange scenario is as follows:

1. Set the relevant customizing activities in your source system.
For an S/4HANA On-Premise system, you can find the customizing activity `Define Settings for Specification APIs` under [Logistics - General > Product Lifecycle Management \(PLM\) > PLM Web User Interface > Recipe Development > Specification Management > Specification > Additional Information for Value Assignment > Specific Settings for Recipe Development](#). For more information, first consult the documentation of the customizing activity, and then the API documentation: [Specification APIs for Recipe Development](#). For setting up the standard composition items (nutrients, allergens, and pure substances) properly, see the section [Setting Up Standard Composition Items \[page 215\]](#).
You can also find useful information in the following video:
2. In the *Load Value Sets for Specification* app, load the values from your source system, see [Loading Value Sets \[page 214\]](#). For information on how to set up your value sets to be able to load them, see [Useful Information for Value Sets \[page 214\]](#).

Note

The first time you do this, it may take time for the values to load. Later, when you are just updating the values, the process should be quicker.

3. In the *Configure Provisional Specifications* app, define property groups. For more information, see [Handling Properties and Property Groups \[page 217\]](#).
4. (Optional) In the *Configure Provisional Specifications* app, you can add additional information for suppliers for every property. For more information, see [Long Text Information \[page 219\]](#).
5. Still in the *Configure Provisional Specifications* app, create at least one template. Templates are custom-defined views where you can decide which compositions and properties are available for a provisional specification. For more information, see [Defining Templates \[page 220\]](#).

Note

Your product developer may need multiple templates based on the set of data they need to request from suppliers.

The last steps are explained in detail in the following video:

As an administrator, you can also export or anonymize your data if needed. For more information, see [Provisional Specifications: Data Export and Anonymization \[page 380\]](#).

Troubleshooting

If you encounter any problems, or if the specification exchange scenario doesn't work properly, see the following topic: [Most Common Problems \[page 222\]](#).

8.1.11.1 Loading Value Sets

Here you can see how to load your value sets into SAP Product Lifecycle Management and how to clear your synchronization.

Process

Loading value sets from your source system has the following steps:

1. Open the [Load Value Sets](#) app.
2. Choose [Load](#) for composition configurations. You get a success message if the load was successful.
3. Choose [Load](#) for property configurations. You get a success message if the load was successful.

Clear Synchronization Dates

When changing the source system, the synchronization dates can cause incoherence, because in the new system all items should be checked. We recommend to clear synchronization dates after changing a source system, and then load all values again. To do this, do the following:

1. Open the [Load Value Sets](#) app.
2. Click the [Clear Synchronization Dates](#) button and confirm that you want to perform this action.

Note

The dates are cleared from the tiles.

To load all value sets again, click the respective [Load](#) buttons.

8.1.11.1.1 Useful Information for Value Sets

Here you can find information on how to set up your source system to be able to load your value sets to SAP Product Lifecycle Management.

Prerequisites

You have set up the respective specification APIs and the Customizing activities properly in your source system. For more information, see [Specification APIs for Recipe Development](#) and the documentation for the following Customizing activity: [Logistics - General](#) > [Product Lifecycle Management \(PLM\)](#) > [PLM Web User Interface](#) > [Recipe Development](#) > [Specification Management](#) > [Specification](#) > [Additional Information for Value Assignment](#) > [Specific Settings for Recipe Development](#) > [Define Settings for Specification APIs](#).

Use

You can load the following value sets:

- **Composition Definitions:**
 - **Nutrients:** Values used in the nutrient composition of a specification.
 - **Substances:** Values used in the standard composition of a specification.
 - **Allergens:** Values used in the allergen composition of a specification.
 - **Allergen Statements:** Exception values used for allergen statements.
 - **Roles in Composition:** Values used as component types in a composition. For more information, see [Roles in Composition \[page 216\]](#) below.
 - **Custom Composition Definitions:** Values that are custom-defined in the source system. You can load the custom composition definitions and the related exception values, listed items, and component types as well.
- **Property Definitions:** Values that are custom-defined in the source system. You can load custom property definitions and the related property fields (characteristics) together. You can also load your phrase sets from your active library here.

Loading the value sets is a manual process. You have to load all values from the source system before using provisional specifications. If there are any changes in the source system (for example, when a value is created, modified, or deleted), the value sets have to be manually loaded to the cloud again.

Note

Loaded value sets are not deleted in SAP Enterprise Product Development after they are removed from your source system.

Reference Quantity

In case of nutrients and quantitative (RMS_N) type custom compositions, the reference quantity for the specification exchange scenario is always 100 grams. When transferring back this type of data into the source system, the Customizing activity [Define Reference Quantity for Composition per Specification Type](#) isn't considered, and the values are written back as they are in the cloud.

Setting Up Standard Composition Items

If you're managing nutrients, allergens, and pure substances, SAP already provided a definition for those items. Therefore, to replicate these value sets to the cloud, as an administrator you only have to add the relevant rows in the Customizing activity [Define Settings for Specification APIs](#), in the view [Define Compositions \(Custom\)](#).

Note

For other purposes, you can also expose nutrients, allergens, and pure substances in the view [Define Compositions \(Standard\)](#), but those are not considered in SAP Product Lifecycle Management.

The following table contains the information that must be added for each standard composition item.

Standard Composition Items in the Define Compositions (Custom) View

Composition Type	Value Assignment Type	Rating	Validity Area	Specification Type	Spec. Group Type	Specification
__SAP_EPD_AL LERGEN	SAP_RMS_1012 _021	PUBLIC	REG_WORLD	ALLERGEN	ALLERG_GRP	SUBSTANCE
__SAP_EPD_N UTRIENT	SAP_RMS_1012 _005	PUBLIC	REG_WORLD	NUTRIENT	NUTR_GROUP	SUBSTANCE
__SAP_EPD_ST ANDARD_COM- POSITION	SAP_EHS_1012 _003	PUBLIC	REG_WORLD			SUBSTANCE

Roles in Composition

The data is brought over from your source system using the following logic:

1. If a Value Assignment Type (VAT) is given for STANDARD_COMPOSITION under the *Define Compositions (Custom)* view of the Customizing activity *Define Settings for Specification APIs*, then roles in composition are the component types that are maintained in the respective VAT. You can check this in the following Customizing activity: [Logistics - General](#) > [Product Lifecycle Management \(PLM\)](#) > [PLM Web User Interface](#) > [Recipe Development](#) > [Specification Management](#) > [Specification](#) > [Specification Database Structure](#) > [Component Settings](#) > [Specify Context-Specific Component Types](#), with Work Area SUBSTANCE, and the exact same VAT that you assigned to STANDARD_COMPOSITION in the other Customizing activity (*Define Settings for Specification APIs*).
2. If no VAT is maintained for STANDARD_COMPOSITION under the *Define Compositions (Custom)* view of the *Define Settings for Specification APIs* Customizing activity, the component types for the default SUB_COMP_STD_DIALOG context parameter will be used as roles in composition.

Composition Descriptions

When loading compositions from the source system, the language-dependent descriptions of the value assignment types are also loaded and these are then used in the *Manage Provisional Specifications* app as headers for the composition tables.

For this function, if your source system is earlier than SAP S/4HANA On-Premise 2020 FPS2, make sure that you've installed SAP Note [3054030](#).

If there are no VAT descriptions loaded to the cloud, the custom composition definition IDs given in the *Define Settings for Specification APIs* are used instead.

More Information on Property Definitions

You define properties (characteristics) in your source system, and after loading them, you can add them to property groups in SAP Product Lifecycle Management. See [Handling Properties and Property Groups \[page 217\]](#).

Here are some notes that you may find useful when defining properties:

- Date and time type characteristics can't be loaded to SAP BTP, but you can use character type characteristics for this purpose with a suitable template defined (for example YYYY-MM-DD).
- Additional data and restrictions are not taken over from characteristics.
- Multivalue characteristics are not supported on the SAP BTP side.
- Allowed values can be modelled with phrases and phrase enabled fields.
- Property tree nodes (value assignment type category H) are not taken over from your source system. You can create property nodes in the [Configure Provisional Specifications](#) app manually.

8.1.11.2 Handling Properties and Property Groups

Properties are taken over from the source system with the [Load Value Sets for Specification](#) app. In the [Configure Provisional Specifications](#) app, these properties are only displayed on the [Properties](#) tab. Property fields are displayed on the [Property Fields](#) tab.

Properties can be organized into [property groups](#). The property groups are then assigned to templates, and based on the used template, each property group is displayed as a separate tab in the [Manage Provisional Specifications](#) app.

Properties can contain a single value or multiple values. Both single-value and multi-value properties can be included in one property group.

Note

A property can be assigned to multiple property groups and a property group can be assigned to multiple templates. However, a property can occur only once in a template.

Creating a New Property Group

To create a new property group, do the following:

1. Open the [Configure Provisional Specifications](#) app and go to [Property Groups](#).
2. Choose [Create](#).
3. Name your property group and save it.

Assigning Properties to Property Groups

To assign properties to a property group, open the property group in the *Configure Provisional Specifications* app and do the following:

1. Create or open a property group.
2. Under *Properties*, choose *Create*.
3. Select a property to add to the property group. If you want to add multiple properties, repeat this step.
4. Decide if your property should be single-value or multi-value.

❖ Example

If a property has a single value, only one form is displayed. A good example can be **PH value**.

If a property has multiple values allowed, it is rendered as a table, and the product developer can add multiple rows to that property with different values. A good example can be **color**.

5. Save the property group.

Removing Properties from Property Groups

A property can be removed from the property group it is assigned to, depending on the following circumstances:

- If the property hasn't been used in any provisional specifications, it is simply removed from the property group.
- If the property has been used in any provisional specifications, the property is not removed, it instead gets a *Hidden* flag and is hidden from the UI, but the values aren't deleted. In this case, the flag can be changed back to visible, so the values will again be visible for the provisional specifications.

ⓘ Note

While hidden, properties are not copied over or transferred back to the source system.

Removing Property Groups from Templates

A property group assignment can be removed from templates, depending on the following circumstances:

- If no property within the property group has been used in any provisional specifications, then the property group is simply removed from the template.
- If a property within the property group has been used in any provisional specifications, the property group is not removed, instead it gets a *Hidden* flag and is hidden from the UI, but the values aren't deleted. In this case, the flag can be changed back to visible, so the values will again be visible for the provisional specifications.

ⓘ Note

While hidden, properties are not copied over or transferred back to the source system.

Deleting Property Groups

If a property group is no longer needed, you have two options to remove them from productive use.

- **Delete:** Property groups can only be deleted if they're not included in any templates.
- Set to **Obsolete status:** If the property group is assigned to a template, you can still make it obsolete. Obsolete property groups do not appear in the list when you create a new template, but they can be used with already existing templates, and these property groups are also visible in the [Configure Provisional Specifications](#) app.

Note

Obsolete property groups can't be edited.

Mandatory and Non-Mandatory Properties

The mandatory attribute of a property is set in your source system, not in the cloud side. The mandatory attribute is simply taken over when you are loading the custom properties with the [Load Value Sets for Specification](#) app.

Tip

The property fields within the specification exchange scenario use respective characteristics in your source system, so if you want to modify the mandatory attribute, check the characteristic with transaction `CT04`.

Property Fields

Property fields are taken over from your source system, and in SAP Product Lifecycle Management they are only displayed. However, you can mark a CHAR type property field with multiple values, see [Long Text Information \[page 219\]](#).

8.1.11.2.1 Long Text Information

You can set up long text information for two objects.

Additional Information for Suppliers

After loading properties from your source system, you can add an arbitrary long text to these properties in the cloud. This is not transferred back to the source system and is only visible in the [Manage Provisional Specifications](#) app.

To add this long text to a property, perform the following steps:

1. Open the *Configure Provisional Specifications* app.
2. Navigate to the *Properties* tab, and select the respective property. On the object page, select *Edit*.
3. Enter your long text in the *Additional Information for Suppliers* edit box.

Long Text Enablement for Property Fields

When loading characteristics to the cloud with the *Load Value Sets for Specification* app, these characteristics will become property fields for properties. However, characteristics with character format that have multiple values enabled can be marked in the *Configure Provisional Specifications* app for long text enablement. This allows the user to add a maximum of 1000 characters to the respective property field.

If you want to enable long text for a CHAR type property field with multiple values enabled, perform the following steps:

1. Open the *Configure Provisional Specifications* app.
2. Navigate to the *Property Fields* tab, and select the respective characteristic. On the object page, select *Edit*.
3. Select the *Long Text Enabled* checkbox.

Note

The semicolon (;) character is not supported in this feature; please avoid using it in the long text.

8.1.11.3 Defining Templates

Templates are custom-defined views where you can decide which compositions and properties are available for a provisional specification in the *Manage Provisional Specifications* app. Templates are visible to all users.

Note

At least one template is needed before provisional specifications can be created in the *Manage Provisional Specification* app, because selecting a template is mandatory.

Compositions

The following **standard compositions** are predefined by SAP:

- Nutrient composition
- Allergen composition
- Standard composition

You can also add custom compositions to a template. You have to define them in your source system.

Property Groups and Properties

You can assign multiple property groups to a template, these are then displayed as separate tabs in the *Manage Provisional Specifications* app.

Note

A property can occur only once in a template. A template can have properties from different property groups, but only if the groups don't contain the same properties. Therefore, if two property groups share any of the same properties, you can add only one of those groups to the template, but not both.

For more information about property groups, see [Handling Properties and Property Groups \[page 217\]](#).

Defining a New Template

To define a new template, do the following:

1. Open the *Configure Provisional Specifications* app and choose *Create*.
2. Enter a description for your new template.
3. (Optional) If you want users working with the *Manage Provisional Specifications* app to not see the technical ID-s of compositions and properties, you select the *Switch Off Technical IDs* checkbox.

Note

By default, technical ID-s are visible because the name of a composition or a property is not unique.

4. Go to the *Compositions* section in the Detail view and choose *Create*.
A new row appears.
5. Select the composition you want to add to your template.
6. Select the property group you want to add to your template.
7. Repeat steps 3-5 for any additional compositions and property groups.
8. Save your template.

You can also edit one of your existing templates by choosing *Edit*.

Deleting Templates

If a template is no longer needed, you have two options to remove them from productive use.

- **Deletion:** Templates can only be deleted if no specifications use it (the *Number of Uses* status equals zero).
- **Obsolete status:** If one or more specifications use the template, you can still make it obsolete. Obsolete templates do not appear in the list when creating new provisional specifications, but they can continue to be used with already existing specifications, and these templates are also visible in the *Configure Provisional Specifications* app.

Note

Obsolete templates can't be edited or deleted.

8.1.11.4 Deleting Provisional Specifications

Deleting a provisional specification removes the object and all references to it (for example in a collaboration) from the system.

Context

Only administrators can delete a provisional specification.

Procedure

1. Open the *Manage Provisional Specifications* app.
2. Select the respective provisional specification and choose *Delete*.
3. Confirm to delete the provisional specification and all references to it.

8.1.11.5 Most Common Problems

If the specification exchange scenario doesn't work, go through these preliminary checks to determine where can the problem be.

- The first thing to check is whether you *activated all of the following services* and you're getting data from these APIs:
 - [Allergen - Read](#) (sample URL: `https://{host}:{port}/sap/opu/odata/sap/API_ALLERGEN/Allergen`)
 - [Allergen Statement - Read](#) (sample URL: `https://{host}:{port}/sap/opu/odata/sap/API_ALLERGENSTATEMENT/AllergenStatement`)
 - [Nutrient - Read](#) (sample URL: `https://{host}:{port}/sap/opu/odata/sap/API_NUTRIENT/Nutrient`)
 - [Nutrient Statement - Read](#) (sample URL: `https://{host}:{port}/sap/opu/odata/sap/API_NUTRIENTSTATEMENT/NutrientStatement`)
 - [Product Specification](#) (sample URL: `https://{host}:{port}/sap/opu/odata/sap/API_PRODUCTSPECIFICATION/ProductSpecification`)
 - [Product Specification Composition Configuration - Read](#) (sample URL: `https://{host}:{port}/sap/opu/odata/sap/API_PRODSPECCMPSTNCONFIG/ProdSpecComponent`)
 - [Product Specification Property Configuration - Read](#) (sample URL: `https://{host}:{port}/sap/opu/odata/sap/API_PRODSPECPRPTYCONFIG//ProdSpecPrptyDefinition`)
 - [Pure Substance - Read](#) (sample URL: `https://{host}:{port}/sap/opu/odata/sap/API_PURESUBSTANCE/PureSubstance`)
 - [Pure Substance Component Type - Read](#) (sample URL: `https://{host}:{port}/sap/opu/odata/sap/API_PURESUBSTCOMPONENTTYPE/PureSubstanceComponentType`)
 - [Specification Phrase - Read](#) (sample URL: `https://{host}:{port}/sap/opu/odata/sap/API_SPECIFICATIONPHRASE/SpecificationPhrase`)

- [Characteristic Data for Classification](#) (sample URL: `https://{host}:{port}/sap/opu/odata/sap/API_CLFN_CHARACTERISTIC_SRV/A_ClfCharacteristicForKeyDate`)
- Product Specification Authorization Group
- (sample URL: `https://{host}:{port}/sap/opu/odata/sap/API_PRODSPECAUTHZNGROUP/ProdSpecAuthorizationGroup`)
- Product Specification Type
- (sample URL: `https://{host}:{port}/sap/opu/odata/sap/API_PRODSPECTYPE/ProdSpecType`)

Note

For detailed information about the Specification APIs, see: [Specification APIs for Recipe Development and 3117894](#). For information on how to configure the Classification API for EPD, see [3145055](#).

- Also check whether all relevant SAP Notes are there in your system, see [SAP Notes for the Specification Exchange Scenario \[page 228\]](#).

Here are the most common problems that cause the specification exchange scenario to not work properly.

Destination Not Set Up Correctly

If you get data from the APIs listed in this topic, but the specification exchange scenario still doesn't work properly, you may have a problem with your cloud connector or with the destination. To check if everything is set up correctly, see the following guide: [Connectivity \[page 82\]](#). If you don't get any response for those API requests, look for a setup issue in your source system. For more information, see: [Destination for Collaborating on Specifications \[page 101\]](#).

Authorization Issues

If you've set up your destination and are using basic authorization (for details, see the following topic: [Destination for Collaborating on Specifications \[page 101\]](#)), and you're using technical users, make sure that you set up users to have at least **Read** access to the service in the source system. Otherwise the value sets won't load.

Categories Are Not Set

To load the value sets properly to the cloud, the system needs to understand which nutrients, allergens, and substances you're using in your source system. To make sure that the system recognizes those items, assign the appropriate category to your specification types in the following Customizing activity: [Logistics - General > Product Lifecycle Management \(PLM\) > PLM Web User Interface > Recipe Development > Specification Management > Specification > Specification Master > Specify Specification Types in Recipe Development](#)

The following rules apply:

- A specification is considered an allergen if the category ALLERGEN is assigned to it.
- A specification is considered a nutrient if the category NUTRIENT is assigned to it.
- A specification is considered a pure substance if the category PURE is assigned to it.

If you can't load data from your source system with the [Load Value Sets](#) app, check the Customizing activity to see if your specification types **Allergen**, **Nutrient**, and **Pure Substance** do have those specification categories assigned.

Usage Is Not Consistent

When the specification API wants to create composition headers (for example, when transferring data back to the source system), it checks for the settings in the customizing activity [Define Settings for Specification APIs](#), where a rating and a validity area are assigned to a VAT. The VAT itself is defined in the customizing activity [Specify Value Assignment Types](#), where a usage profile is assigned to it (you can check by double-clicking the respective VAT). The usage profile assigned to the VAT has to contain the same rating and validity area information that is defined in [Define Settings for Specification APIs](#), otherwise the API call fails.

You can check the usage profile in the following customizing activity: [Logistics - General](#) > [Product Lifecycle Management \(PLM\)](#) > [PLM Web User Interface](#) > [Recipe Development](#) > [Specification Management](#) > [Specification](#) > [Additional Information for Value Assignment](#) > [Usage](#) > [Specify Usage Profiles](#).

Getting All Specification Types for Custom Compositions

In case of B (listing) or C (composition) type custom compositions, the [Specification Type](#) column in the Customizing activity [Define Settings for Specification APIs](#) isn't taken into consideration. To fix this problem, in the Customizing activity [Specify Value Assignment Types](#) you have to define which specification types are allowed for the custom composition. To do this or to check the settings, go to the following node: [Logistics - General](#) > [Product Lifecycle Management \(PLM\)](#) > [PLM Web User Interface](#) > [Recipe Development](#) > [Specification Management](#) > [Specification](#) > [Specification Database Structure](#) > [Settings for Value Assignment](#).

In the Customizing activity [Specify Value Assignment Types](#), select the respective VAT and go to the detailed [Specification Type](#) view, where you can list the specification types that you want associated with your custom composition.

Note

Check the [Used in Composition](#) flag for the specification types that you would like to use in the cloud.

If no specification type is defined here, all specification types are accepted for the respective custom composition - and loading all data with the [Load Value Sets for Specification](#) app can take much longer.

Problem While Transferring Qualitative or Quantitative Custom Compositions

With RMS_D (qualitative) or RMS_N (quantitative) type custom compositions, the *Specification Type* column in the Customizing activity *Define Settings for Specification APIs* is taken into consideration. This means that only specifications with the given specification type can be entered as an item in the composition.

However, this specification type has to correspond to the specification type defined in the respective calculation ID as well.

To assign Calculation ID-s to VATs, go to the following Customizing activity: [Logistics - General](#) > [Product Lifecycle Management \(PLM\)](#) > [PLM Web User Interface](#) > [Recipe Development](#) > [Specification Management](#) > [Specification](#) > [Additional Information for Value Assignment](#) > [Specific Settings for Recipe Development](#) > [Assign Calculation ID to Value Assignment Type](#) . If you set up a new custom composition, you have to assign a calculation ID to it as well.

Note

Although calculations are used primarily in recipes, assigning to Calculation IDs is needed for specifications themselves because the specification type determines the data tables too.

The specification type given in the respective calculation ID and the specification type given in the Customizing activity *Define Settings for Specification APIs* both have to be the same. Otherwise transferring data from the cloud to the source system can cause inconsistencies.

In the following Customizing activity, you can check the specification type that's assigned to the calculation ID: [Logistics - General](#) > [Product Lifecycle Management \(PLM\)](#) > [PLM Web User Interface](#) > [Recipe Development](#) > [Specification Management](#) > [Recipe](#) > [Calculations](#) > [Define Recipe Calculations](#) . Here you select the calculation ID and go to the subview as follows:

- In case of RMS_D (qualitative) type custom compositions, select the subview *Qualitative Composition (Group-Based)*
- In case of RMS_N (quantitative) type custom compositions, select the subview *Quantitative Composition (Group-Based)*

Problem with Transferring Properties

Mandatory Information Not Filled

The **mandatory** attribute of properties can be only set in the source system. However, because of how the different Customizing activities work, something that is mandatory in the source system may not be marked as mandatory in the UI of the *Manage Provisional Specifications* app.

→ Recommendation

We recommend that all fields be filled, so that no problem occurs with transferring data back to the source system.

This transfer problem can happen when a characteristic isn't set as *Entry Required* in transaction C104, but is marked later as *Rq.Ent.Fld* in the Customizing activity *Set Up Table-Based Value Assignment*. This setting isn't regarded as mandatory in the provisional specification, therefore, if fields are left empty, the transfer can fail.

VAT Not Active

If while transferring you get an error message stating that the request can't be performed and you should check the respective Customizing activities, this may be because the Value Assignment Types (VATs) that are used as properties aren't marked as active. To check this, go to the Implementation Guide and open the Customizing activity [Logistics - General > Product Lifecycle Management \(PLM\) > PLM Web User Interface > Recipe Development > Specification Management > Specification > Specification Database Structure > Settings for Value Assignment > Specify Value Assignment Types](#).

Here, double click on the VATs that you're using in your cloud system and check if the following fields are checked:

- VA Copy Active
- New VA Active
- Change Active

Descriptions Are Not Displayed

If you see no descriptions for your compositions or properties on the cloud side and you are sure that they are maintained in your source system, then the problem can be that the identifiers are not configured correctly.

You can customize the displayed identification types with the following Customizing activity: [Check Identification Listing](#) under [Logistics - General > Product Lifecycle Management \(PLM\) > PLM Web User Interface > Recipe Development > Specification Management > Specification > Specification Master](#).

The identifiers in position 1 and 2 are exposed to the API per specification category. You can use language dependent and language independent descriptions.

→ Tip

We suggest that the description in the position 1 is a language independent description.

The following table summarizes how the identifiers should look like.

Defining Identifiers

Spec. Cat.	IDListPos.	IDLISTPrio	ID Categ	ID Type	Comment
ALLERGEN	1	1	NAM	DESC	Language independent description
ALLERGEN	2	1	NAM	PROD	Language dependent description
ALLGROUP	1	1	NAM	DESC	Language independent description

Spec. Cat.	IDListPos.	IDLISTPrio	ID Categ	ID Type	Comment
ALLGROUP	2	1	NAM	PROD	Language dependent description

You have to maintain this table for all used specification categories, including the category `SUBSTANCE`, which is used by the specification exchange scenario as the main category.

See [Descriptions in Different Languages \[page 227\]](#) for more information.

8.1.11.5.1 Descriptions in Different Languages

This topic is only relevant if you are using the specification exchange scenario in a language that is different from English.

Use

Compositions, properties and property fields are loaded from your source system, therefore all translations happen there. The specification exchange scenario only uses these descriptions.

Note

SAP Enterprise Product Development has its language scope that may differ from your source system, so please refer to the following topic: [Overview \[page 6\]](#) for available languages.

Here you can see which object gets their description in the source system and where from:

- Custom composition: takes over the translation of the respective value assignment type (VAT)
- Property: takes over the translation of the respective value assignment type (VAT)
- Property field: takes over the translation of the respective characteristic

After translations are done, you have to manually load these translations to the cloud with the [Load Value Sets for Specification](#) app.

VAT Translations

If you want to add a translation to a value assignment type, follow these steps:

1. Open the respective value assignment type in the Customizing activity: [Logistics \(General\)](#) > [Product Lifecycle Management](#) > [PLM Web User Interface](#) > [Recipe Development](#) > [Specification Management](#) > [Specification](#) > [Specification Database Structure](#) > [Settings for Value Assignment](#) > [Specify Value Assignment Types](#).
2. Choose [Goto](#), and then [Translation](#).

3. Select the languages you want to maintain.
4. Maintain translations.

Note

If you want to add languages after the initial setting, you can do it selecting the *Utilities* and then the *Choose Languages* menu items.

5. *Save* the Customizing activity.

Translations of Characteristics

If you want to add translations to characteristics, follow these steps:










1. Open the respective characteristic in the transaction CT04.
2. Select the *Descriptions* view.
3. Add the language key and the translation.
4. Save the characteristic.

8.1.11.6 SAP Notes for the Specification Exchange Scenario

Here are the SAP Notes collected that may be relevant when setting up the specification exchange scenario.

Any Source System

Please read and apply the following SAP Notes:

- [3124692](#): Set PLM RD expected behaviour for EHS in Product Specification API
- [3206622](#): Property Upsert (Create with Update) Processing
- [3193473](#): Cannot Create Composition Item by Association with ECN
- [3181916](#): Product Specification API - 'Assign Characteristics to Property Definitions' cannot be transported correctly
- [3189584](#): Product Specification API - Characteristic Internal IDs Are Exposed with Different Keys
- [3226570](#): The overwrite property values with create operation is not functioning correctly if property contains phrase based attribute
- [3241119](#): Product Specification API - Correction for Multi-Value Properties
- [3247138](#): Product Specification API - Correction for Property Update
- [3278205](#): Enable Specification Type, Authorization Group and Create operation for Prov.Spec API

Any SAP S/4 HANA On-Premise Version

Please read and apply the following SAP Notes if your source system is running SAP S/4HANA On-Premise:

- [3212611](#): Can't delete non-mandatory property value when mandatory exists
- [3211101](#): Cannot Create Property Value for Multiple Properties

Source System Earlier than SAP S/4HANA On-Premise 2020 FPS2

Please read through this composite note if your source system is earlier than SAP S/4HANA On-Premise 2020 FPS2: [3167052](#): Product Specification APIs for SAP S/4HANA 1809 and 1909 - Composite Note.

Please also read and apply the following note: [3054030](#): Specification - Last Changed Date Issues.

EhP8 Source System

Please read through this composite note if your source system is on EHP8: [3117894](#): Product Specification APIs for SAP Business Suite (EhP8) - Composite Note.

Also, implement the following note: [3145055](#): Product Specification APIs - Implementation Guide for Reading Characteristic Data.

8.1.12 Integrating with SAP Ariba Supplier Lifecycle and Performance

You can search for and add suppliers from SAP Ariba Supplier Lifecycle and Performance to collaborations. To enable this feature, this section provides you with information about the necessary configurations to be performed.

Prerequisites

You must have SAP Ariba Supplier Lifecycle and Performance, which is an SAP Ariba solution.

Configuration Steps

Perform the following steps:

1. [Connect to SAP Ariba Supplier Lifecycle and Performance \[page 230\]](#).

2. Configure [Destination for Connecting to SAP Ariba APIs \[page 99\]](#).

Note

If this destination is not configured, the collaboration feature to add suppliers is not visible on the UI.

3. [Configure Supplier Data \[page 231\]](#).
4. [Configure Export Fields for the Supplier Data API \[page 233\]](#).

Related Information

[Introduction to Ariba Network](#)

8.1.12.1 Connect to SAP Ariba Supplier Lifecycle and Performance

Collaborations access SAP Ariba Supplier Lifecycle and Performance using SAP Ariba APIs. To enable the collaboration feature for onboarding suppliers to collaborations, configure the connectivity from SAP Business Technology Platform to SAP Ariba.

Configure connectivity by performing the following steps:

1. [Get an SAP Ariba APIs Account](#).
2. Follow the procedure section in the topic [Register an Application in SAP Ariba Developer Portal](#).

→ Remember

- When creating the application, select the *Supplier Data API With Pagination* API with version 4.
- Store the application key in a safe place as you need it in a later step.

3. [Promote the Application in SAP Ariba APIs to Production](#).

→ Remember

Store the client ID and client secret in a safe place as you need these details in a later step.

Related Information

[Using SAP Ariba APIs](#)

[Configure SAP Ariba APIs](#)

8.1.12.2 Configure Supplier Data

As a solution administrator, you must configure product and service categories, and supplier locations, to allow collaboration users to search for suppliers from SAP Ariba Supplier Lifecycle and Performance.

Context

In a collaboration, you can search for suppliers from SAP Ariba Supplier Lifecycle and Performance using fields such as product and service categories and supplier location. By creating and uploading a list of your product and service categories, the list is made available as value help for the field. Similarly, you must make a list of locations based on your product and service categories, and upload the file.

Configuring your supplier data is a one-time activity.

⚠ Caution

Anytime you upload a list again, the respective data is overwritten.

Procedure

1. To configure product and service categories, perform the following steps:
 - a. Create a Comma-Separated Values (CSV) file containing a list of product and service categories with the following header attributes in the same order and case:
 - **Segment**
 - **Segment Name**
 - **Family**
 - **Family Name**
 - **Class**
 - **Class Name**
 - **Commodity**
 - **Commodity Name**

You can refer to the UNSPSC code set for products and services. The following is an example of the CSV file content.

🔗 Example

```
Segment,Segment Name,Family,Family Name,Class,Class
Name,Commodity,Commodity Name
51000000,Drugs and Pharmaceutical Products,51100000,Amebicides
and trichomonacides and antiprotozoals,51101600,Amebicides and
trichomonacides,51101602,Eflornithine
51000000,Drugs and Pharmaceutical Products,51100000,Amebicides
and trichomonacides and antiprotozoals,51101600,Amebicides and
trichomonacides,51101604,Meglumine antimonate
23000000,Industrial Manufacturing and Processing Machinery and
Accessories,23150000,Industrial process machinery and equipment and
```

```
supplies,23152200,Manufacturing tables and stands,23152203,Engine or  
component test stands  
23000000,Industrial Manufacturing and Processing Machinery and  
Accessories,23150000,Industrial process machinery and equipment and  
supplies,23152200,Manufacturing tables and stands,23152204,Machine  
guarding
```

Note

- The header attributes must be entered in English and are validated for correctness.
- The product and service categories can be entered in any language of your choice, and are not validated for correctness.
- The file size can be a maximum of 20 MB.
- Do not enter any personal data in the CSV file. Data from the file is displayed on the UI when searching for suppliers in collaborations.

- b. From the SAP Fiori launchpad, open the *Configure Collaboration* app.
 - c. Choose *Supplier Data* tab.
 - d. In the *Product and Service Categories* section, choose *Upload* to upload the file.
 - You can only update a CSV file with a maximum file size of 20 MB.
 - To view the existing data, choose *Download*.
 - e. Confirm the warning.
2. To configure supplier locations, perform the following steps:
- a. Create a Comma-Separated Values (CSV) file containing a list of your supplier locations. The header attributes must be **Name** and **Code** in the same order and case. You can refer to the ISO code set for locations. The following is an example of the CSV file content.

Example

```
Name , Code  
Argentina , AR  
Australia , AUS  
India , IN  
Sweden , SE
```

Note

- The header attributes must be entered in English and are validated for correctness.
- The supplier locations can be entered in any language of your choice, and are not validated for correctness. It is left to your discretion to enter the locations correctly.
- The file size can be a maximum of 20 MB.
- Do not enter any personal data in the CSV file. Data from the file is displayed as a suggestion list when searching for suppliers in collaborations.

- b. From the SAP Fiori launchpad, open the *Configure Collaboration* app.
- c. Choose *Supplier Data* tab.
- d. In the *Supplier Locations* section, choose *Upload* to upload the file.
 - You can only update a CSV file with a maximum file size of 20 MB.
 - To view the existing data, choose *Download*.

- e. Confirm the warning.

8.1.12.3 Configure Export Fields for the Supplier Data API

As a solution administrator, you must perform this configuration in order to retrieve supplier information when collaboration users search for suppliers.

Context

To retrieve supplier information such as contact person details and qualification status, certain fields must be included in the Supplier Data API data export.

Procedure

To perform the configuration, see [How to configure export fields for the Supplier Data API](#) in SAP Ariba APIs documentation.

While configuring, from the list of configurable fields, select the following:

- [PrimaryContact](#)
- [Qualification](#)

8.1.13 Configure Product Package Exchange

Use the [Configure Product Package Exchange](#) app, to add, and edit header labels for bill of material, material, and change master. You can also remove the label if needed.

Your business users see the labels in the header section that you have configured for the [Bill of Material](#), [Material](#), and [Change Master](#) tabs in the [Product Package Exchange](#) app.

Prerequisites

You must be assigned the `CollaborationAdministrator` role to perform this action.

Context


The attributes are pushed from your SAP S/4HANA system. You can configure the header labels for these attributes for bill of material, material, and change master.

Adding Attributes

1. From the SAP Fiori launchpad, open the [Configure Product Package Exchange](#) app.
2. Choose one of the following tabs to configure:
 1. [Bill of Material](#)
 2. [Material](#)
 3. [Change Master](#)
3. Choose [Add](#).
4. In the dialog that opens, select a maximum of six attributes.
The selected attributes are displayed in the selected items.
5. Save your changes.
The table displays the list of attributes with the label values.

Editing Attributes

You edit the label of an attribute when you want to translate the label text into different languages.

1. From the SAP Fiori launchpad, open the [Configure Product Package Exchange](#) app.
2. Select a label attribute, choose  ([Edit Label Attribute](#)).

Note

You can edit only the custom label attributes.

3. In the dialog that is displayed, enter the following values:

Field	Values to Be Entered	Comments
Select Language	Select the language that you want to use for the translation. For the information about the supported languages, see Overview [page 6] . The default language is English. Your business users see the text in the default language if you don't configure a different language.	The selected language is added to the Display Language list. For more information, see Filtering Texts by Language [page 188] .

Field	Values to Be Entered	Comments
Label Attribute	(The field is read only.)	-
Display Label	Overwrite the English text with the text in the language that you selected.	-

4. Save your changes.
5. Choose [Display Language](#) for your business users to view texts in a selected language. The next time that your business users open the [Product Package Exchange](#) app, they will see the translated labels for the bill of material, material, and change master.

Removing Attributes

1. From the SAP Fiori launchpad, open the [Configure Product Package Exchange](#) app.
2. Select an attribute and choose **X** ([Delete](#)).
3. Confirm the warning.
The attribute with the selected label in the configured languages is removed.

8.1.14 Security Administration

This information is aimed at technology consultants, security consultants, and system administrators.

It provides an overview of the security-relevant information that applies to [Collaboration](#) and [Status Management](#):

- [Auditing and Logging \[page 235\]](#)

Note

In the [Configure Collaboration](#) app, select the option [Malware Scanning](#), to check the uploaded files for malware before they are processed and made available for download. Files found to contain malware are deleted. For more information, see [What Is SAP Malware Scanning Service](#).

For security-related information such as audit logging and malware scanning, see the relevant chapters in the security guide [Security Guide](#).

8.1.14.1 Auditing and Logging

The Collaboration capability allows SAP Business Technology Platform administrators to monitor the list of events and accesses concerning documents in collaboration. The relevant events and accesses are logged in the [Audit Log Service](#).

The [Audit Log Service](#) records the following:

Events

Collaboration entity	Events
Participants	Create,update, and delete
Reference objects	Create,update, and delete
Workflow	Create,update, and delete
Collaboration type	Create,update, and delete
Shared Documents	Create or delete folder Upload,download, or delete file
Status profile	Create,update, and delete
Configure Collaboration - Reference objects	Create,update, and delete
Supplier data - Product and Services Categories	Upload
Supplier data - Supplier Locations	Upload
Data Security	<ul style="list-style-type: none">• Data Protection and Privacy• Data Export• Data Delete
Workflow Properties	Add, update, and delete

Access

- Changed On – Timestamp
- Changed By – Name of the user
- Deleted By – Name of the user
- Event name – Created, Deleted, Uploaded, Downloaded
- Entity name mentioned in the above table

For more information, see [Audit Logging in the Cloud Foundry Environment](#).

8.2 Business Configuration for Configuration Management

This section describes the business configuration to be performed so that you can work with the various applications in the Configuration Management SaaS application of SAP Product Lifecycle Management.

Subscription

- New customers (beginning with 2302): First subscribe to Enterprise Product Structure, then to Configuration Management.
- Existing customers (before 2302): Simply subscribe to Enterprise Product Structure.
- (Optional) If you want to use the function **View 3D Models of Parts** in the Manage Baselines app (see also [Frequently Used Functions in Manage Baselines](#)), you need to subscribe to Visualization.
- (Optional): If you want to use the function Collaboration in the Manage Baselines app, you need to subscribe to the Collaboration SaaS application.

See also [Subscribing to the SaaS Applications \[page 19\]](#).

Synchronization of Document Info Records

In order to configure the correct synchronization of document info records of the source system, follow these instructions:

- [Configuring Document Synchronization \[page 286\]](#)
- [Destination for Connecting to On-Premise Content Server \[page 113\]](#)

Customizing for Enterprise Product Structure

To configure the synchronization of BOM usages and plants, follow these instructions:

- [Configuring BOM Usages \[page 284\]](#) for importing BOM usages from a source system.
- [Configuring Plants \[page 285\]](#) to import plants from a source system.

Status Management

To configure status management for Configuration Management, see [Configuring Status Management for Configuration Management \[page 240\]](#).

8.2.1 Configuring Baseline Profiles and Lifecycle Phase Templates

In this section, you learn how to create baseline profiles as well as lifecycle phase templates.

When working with configuration plans, you often find yourself in a situation where you have to do tasks that are widely similar (if not identical) for many products. It's desirable to perform these tasks in a uniform way, so that similar things look similar. At the same time, tedious and repetitive tasks can be avoided.

By creating baseline profiles, you can reduce your work efforts by configuring basic settings for the baselines that you later create for your configuration plans. You can accomplish this by carefully maintaining the settings for the *Master Data Object Selection*, where you specify the amount of master data that's loaded into a configuration plan for a specific lifecycle phase.

In addition to the settings specified in a baseline profile, profiles can be assigned to lifecycle phase templates that you maintain in the same application.

Note

With the introduction of baseline profiles in SAP Product Lifecycle Management, their usage has been made mandatory. This means that for each lifecycle phase that you create in a configuration plan, you have to assign a baseline profile. For existing data, a default profile provided by SAP is automatically assigned.

The lifecycle phase templates along with their associated baseline profiles that you create in this app can be assigned to a configuration plan in the *Lifecycle Phases* section of the *Manage Configuration Plans* application.

Prerequisites

You have the `Baseline_Administrator` role assigned to your user. See [Role Templates for Configuration Management \[page 41\]](#).

Procedure

Baseline Profiles

1. In the *Configuration Management* launchpad group, choose the *Configure Baselines and Configuration Plans* application.
2. From the *Baseline Profiles* view, choose *Create*.
3. In the *Header* section, provide a unique *Profile Name*. To make it easier to understand the purpose of the new baseline profile, we recommend entering a *Description*.
4. In the *Master Data Object Selection* section, specify how the baseline profile shall define the properties of a baseline based on that baseline profile:
 - *Product Structure*: Specifies whether derived baselines shall contain a product structure or not.
 - *Routing*: Specifies whether derived baselines shall contain routing information or not.

- *Product Data*: Specifies whether derived baselines shall contain product data or not.
- *Document Info Records*: Specifies whether derived baselines shall contain document info records or not.
- *BOM Explosion Stopping at*: Specifies the hierarchy level of the bill of materials that shall be made available in the derived baselines. You can choose between two predefined hierarchy levels. In addition, you can choose the Explosion Level entry and specify the desired hierarchy level as a number, or you specify that no BOM explosion shall be performed. The predefined hierarchy levels are:
 - Assemblies on Stock
 - Items Externally Procured

ⓘ Note

You need to select at least one of the options in the *Master Data Object Selection* section. Otherwise, you can't save the profile.

To learn more about the different BOM explosion options, see the detailed explanation here: [Restricting the View for BOM Explosion](#).

5. In the *Default Options* section, specify the default settings for a newly created baseline:

- *Source System*: From the list of connected systems, choose the one to be used.

ⓘ Note

Specifying a default source system is an essential setting. Therefore, maintaining a value for this field is mandatory.

- *BOM Application*: Specifies the application that provides the bill of material data to be used.
- *Plant*: Specifies the plant to which the construction or manufacturing data apply.
- *Date Determination*: Specifies the calendar date as of which the BOM data shall be used. You can choose between the *Current Date* at runtime, or no date determination, that is, you'll have to specify a date manually later on in the process.
- *Set Controlled Object as Default Product*: Indicates whether the specified controlled object shall be used as the top-level object for the *Pull Master Data* function in the *Manage Baselines* app.

6. Once you're done with configuring the baseline profile, choose *Save*.

7. If you're sure that the profile has reached its final state, you can choose *Activate* right away. However, you can postpone this step to a later point in time, for example, after the profile has been checked by other involved parties.

Lifecycle Phase Templates

1. In the *Configuration Management* launchpad group, choose the *Configure Baselines and Configuration Plans* application.
2. From the *Lifecycle Phase Templates* view, choose *Create*.
3. In the *Header* section, provide a unique *Phase Template Name*. To make it easier to understand the purpose of the new baseline profile, we recommend entering a *Description*.
4. In the *Lifecycle Phases* section, specify the different lifecycle phases that shall be provided by the template:
 - *Lifecycle Phase ID*: Enter a numeric identifier for the lifecycle phase.
 - *Phase Description*: Enter a short text to explain the purpose of the phase (for example, "planning" or "construction").
 - *Baseline Profiles*: From the baseline profiles that exist in your system, choose one that you want to associate with the lifecycle phase.

Note

For a baseline profile to be assigned to a lifecycle phase template, the profile must have been activated.

5. Once you're done with configuring the lifecycle phase, choose [Save](#).
6. If you're sure that the lifecycle phase has reached its final state, you can choose [Activate](#) right away. However, you can postpone this step to a later point in time, for example, after the profile has been checked by other involved parties.

Note

For a lifecycle phase template to be assigned to a configuration plan, the template must have been activated.

Note

For both baseline profiles as well as lifecycle templates, the following applies:

Instead of manually maintaining all the settings for the objects you create, you can also select an existing object and choose [Copy](#) to create a new object with the same settings as the source object. You can then modify only those settings where source and target objects differ from each other. Using this feature can save you much effort when it comes to creating lots of similar objects that only differ in certain details.

8.2.2 Configuring Status Management for Configuration Management

Create the status profiles that you need for status-enabled object types in Configuration Management, such as baselines or configuration plans.

Prerequisites

You must be assigned the role `StatusManagementAdmin` as described in [Business Configuration for Status Management \[page 367\]](#).

Use the predefined profile IDs to define the status profile for different objects such as configuration plan, lifecycle phase, and baseline.

The predefined IDs are:

Status Profile IDs for Object Types

Status Profile Description	Status Profile ID
Configuration Plan	CM_CFPL0
Lifecycle Phase	CM_CFLP0
Baseline	CM_BASE0

As an administrator, you must ensure that every object (baseline, configuration plan, lifecycle phase) in Configuration Management is provided with its own status profile.

Follow the steps described in the topics shown in [Business Configuration for Status Management \[page 367\]](#).

8.2.3 What is UI5 flexibility?

UI5 flexibility allows users with the UI5 flexibility key role to customize user interface controls using the [Adapt UI](#) feature, and to manage views (public variant) in the [Manage Baselines](#) and [Manage Configuration Plans](#) apps.

Features

Adapt UI

The [Adapt UI](#) feature is shown in the user profile in [Manage Baselines](#) and the [Manage Configuration Plans](#) apps only for users who have the `FlexKeyUsers` role authorization.

Users with the `FlexKeyUsers` role (key users) can do the following:

- Add new fields.
- Hide fields.
- Rearrange existing fields.
- Rename labels.
- Revert to the UI to its original version.
- Reactivate an existing version of the UI.

Public Variant

- Public views (variants) are visible only to key users to create filter and table views that are available for all authorized users.
- For saving variants, key users can save the view to [Public](#) in the [Manage Views](#) dialog box.
- The Manage Views (public variant) option is available only in the [Manage Baselines](#) app.

Limitations

- The Action buttons are not adaptable (that is, they cannot be modified) in Edit mode in the [Manage Configuration Plans](#) app.
- Only changes created in the most recent version can be applied. Changes saved in a previous version can be used after reactivating it as a new version.
- When you are adapting the UI, you will need to switch from adaptation mode to navigation mode to go to a new screen.

8.2.3.1 UI5 flexibility for Key Users

UI5 flexibility allows users with the UI5 flexibility role to customize the UI using the *Adapt UI* feature, and to manage views (public variant) in the *Manage Baselines* and the *Manage Configuration Plans* apps.

Prerequisites

To use the UI flexibility feature, you must have the `FlexKeyUser` role assigned. For more information, see [Role Templates for Configuration Management \[page 41\]](#).

Note

Users with the `FlexKeyUser` role (key users) must be familiar with using the app and apply changes cautiously. Keep the following in mind:

- As a key user, you have access to all UI controls. When making changes to a UI control, be extra careful because the change could affect many parts of the app. After applying changes, if an error appears, you can revert to the default view of the UI.
- Mandatory fields can't be removed. Removing them causes a validation error.
- The *Adapt UI* feature is supported only for static UI5 controls with stable IDs.
- If you want to add a URL link to embedded content, certain preconditions and security standards must be met.
For more information on editing embedded content, see [Embedding Content](#).

For more information about UI5 flexibility for key users, see [What Is UI5 Flexibility for Key Users?](#)

8.3 Business Configuration for Engineering

The Engineering cloud service for SAP Product Lifecycle Management enables users to use the *Requirements Management and Systems Modeling* app and the Test Management apps.

As the account administrator, you must configure the service for use. For more information, refer to the following sections:

- [Configuring Requirements Management and Systems Modeling \[page 243\]](#)

8.3.1 Configuring *Requirements Management and Systems Modeling*

ⓘ Note

Some of the content in this section may refer to features that are only available in the Web application SAP Enterprise Architecture Designer, cloud edition application.

8.3.1.1 Controlling Repository Access

Access to the SAP EA Designer repository is managed via an identity provider configured in the SAP BTP, but repository privileges and permissions on specific repository folders and documents are controlled by SAP EA Designer administrators through repository user accounts.

Context

Repository privileges give users access to general repository features, while permissions give them access to particular locations in the repository. The following privileges and permissions are available:

Privileges (Entire Repository)

- **Connect** - Connect to the repository and view diagrams in Requirements Management and Systems Modeling.
- **Export from Web** - Export content from Requirements Management and Systems Modeling as a repository Zip file, report or PowerPoint.
- **Edit on Web** - Create and edit diagrams in Requirements Management and Systems Modeling.
- **Edit Extensions on Web** - Create and edit custom properties in Requirements Management and Systems Modeling. Gives access to the *Customize* item in the navigation panel.
- **Manage All Documents** - Perform any action on any document version. Implicitly includes **Full** permission on all repository documents. Gives access to the *Activities/Log* tile.
- **Manage Users & Permissions** - Create, modify, and delete repository users and groups, grant them privileges, and add them to groups. Users with this privilege can list all repository documents and set permissions on them without needing explicit **Full** permission. Gives access to the *Administration/Users*, *Administration/Groups*, and *Activities/Security Log* tiles.
- **Manage Repository** - Gives access to the *Administration/Settings* item.

Permissions (Per Folder or Item)

- **List** - This permission level is not currently in use.
- **Read** - Open and compare documents.
- **Submit** - Also propose changes to the document for review by a user with **Write** permission.
- **Write** - Also review changes by other users and publish changes directly.
- **Full** - Also move and delete documents, and manage permissions granted to users and groups.

Note

Administrators, who have implicit **Full** permission on all repository objects, will only receive models for review if they have been granted explicit **Write** permission on them.

Procedure

1. Ensure that users are provisioned with the **EADesigner_User** in your identity provider (see [Managing Repository Users \[page 246\]](#)).
2. [optional] Prepare user accounts for your users (see [Preparing User Accounts for New Users \[page 246\]](#)).
3. [optional] Create high-level functional groups (see [Creating Repository Groups \[page 247\]](#)) to organize users by type and assign appropriate privileges to them to govern general actions that they can perform in the repository (see [Granting Privileges to Users and Groups \[page 250\]](#)).

For example:

Groups	Privileges
Administrators	Connect, Manage All Documents, Manage Users & Permissions, Manage Repository
Senior Modelers	Connect, Edit on Web, Edit Extensions on Web
Modelers	Connect, Edit on Web
Stakeholders	Connect (to provide read-only access to Requirements Management and Systems Modeling).

Note

There is no requirement to create groups - you can assign privileges and permissions to individual users - but we recommend that in all but the smallest deployments, you do create groups to simplify the process.

4. Create an appropriate folder structure in the repository to enable you to group documents by project or in any other appropriate way, and to simplify the granting of permissions.

In this example, we imagine the following simple folder structure:

- Library
 - EA
 - Process Map
 - Process Diagrams
 - HR
 - Sales
 - Data
5. Determine your review policy either at a global or project by project level. SAP EA Designer supports the following kinds of policy:
 - Simple review - Change lists submitted by users with the **Submit** permission are reviewed by users with the **Write** or **Full** permission.
 - Peer review - Users with the **Write** or **Full** permission voluntarily submit change lists for review.
 - Direct check in - The **Submit** permission and change lists are not used, and users all check in changes without review.
 6. Create development groups and implement your review policies by assigning appropriate permissions to control what actions users and groups can perform on particular repository documents and folders.

In this example, we propose a simple group structure with permissions based on role and line of business:

- Enterprise Architects - Have full control over all documents.
- Process Analysts - Maintain the process map and review business process diagrams for publication in the repository.
- Process Owners - May submit business process diagrams for their domain.
- Data Modelers - Maintain data models.
- Stakeholders - Have read access to all documents by default.

Group	Library	EA	Process Map	Process Dia-grams/HR	Process Dia-grams/Sales	Data
Enterprise Architects	Full	Full	Full	Full	Full	Full
Process Analysts	Submit	Read	Write	Write	Write	Read
Process Owners - HR	Submit	Read	Read	Submit	Read	Read
Process Owners - Sales	Submit	Read	Read	Read	Submit	Read

Group	Library	EA	Process Map	Process Dia-grams/HR	Process Dia-grams/Sales	Data
Data Modelers	Submit	Read	Read	Read	Read	Write
Stakeholders	Read	Read	Read	Read	Read	Read

- Assign users to appropriate groups (see [Adding Users and Groups to a Group \[page 249\]](#)) according to their roles and project responsibilities.

There is no limit to the number of groups to which a user or group can be assigned, and users benefit from the cumulative total of all the privileges and permissions they receive.

8.3.1.1.1 Managing Repository Users

Users cannot connect to SAP EA Designer until an identity provider administrator provisions them with the role collection **EADesigner_User**. Editing privileges and permissions on specific folders and documents in the repository are managed by an SAP EA Designer administrator.

Context

To personalize a user's first connection to SAP EA Designer, we recommend that you pre-create their repository user account and assign appropriate privileges and permissions to them (see [Preparing User Accounts for New Users \[page 246\]](#)).

8.3.1.1.2 Preparing User Accounts for New Users

When a user first connects to SAP EA Designer, a repository user account is created for them, and they are automatically included in the **Public** group. To personalize a user's first connection you can pre-create a repository user account and assign appropriate privileges and permissions, either directly or by assigning them to one or more groups.

Context

The **Public** group has, by default, **Read** permission on the repository root. To optimize the onboarding experience, we recommend that you create additional groups with appropriate privileges and permissions on a structure of sub-folders (see [Controlling Repository Access \[page 243\]](#)) and add your users to these groups.

Procedure

1. Click ► [Administration](#) ► [Users](#) ► in the navigation panel, and then click the + button to create a new user.
2. Enter the user's name in the *Full Name* field, and the login attributed to them in the identity provider in the *Login Name* field.
3. In the *Privileges* panel, select the check boxes corresponding to the privileges you want to assign:
 - **Connect** - Connect to the repository and view diagrams in Requirements Management and Systems Modeling.
 - **Export from Web** - Export content from Requirements Management and Systems Modeling as a repository Zip file, report or PowerPoint.
 - **Edit on Web** - Create and edit diagrams in Requirements Management and Systems Modeling.
 - **Edit Extensions on Web** - Create and edit custom properties in Requirements Management and Systems Modeling. Gives access to the *Customize* item in the navigation panel.
 - **Manage All Documents** - Perform any action on any document version. Implicitly includes **Full** permission on all repository documents. Gives access to the *Activities/Log* tile.
 - **Manage Users & Permissions** - Create, modify, and delete repository users and groups, grant them privileges, and add them to groups. Users with this privilege can list all repository documents and set permissions on them without needing explicit **Full** permission. Gives access to the *Administration/Users*, *Administration/Groups*, and *Activities/Security Log* tiles.
 - **Manage Repository** - Gives access to the *Administration/Settings* item.
4. Click the *Groups* tab and add the user to any appropriate groups (see [Adding Users and Groups to a Group \[page 249\]](#)).
5. Select ► [Menu](#) ► [Push Diagrams to User](#) ► or ► [Menu](#) ► [Push Folder to User](#) ► to make appropriate diagrams and folders available in their homepage (see [Pushing Diagrams and Folders to Users' Homepages \[page 252\]](#)).
6. Click *Save* to complete the creation of the user.

8.3.1.1.3 Creating Repository Groups

The repository administrator is responsible for creating groups of users in the repository. Users are added to groups in order to simplify the granting of privileges and permissions. You can create hierarchies of groups. For example, you could insert the **Designers**, **Quality Assurance**, and **Documentation** groups into the **R&D** group, to which you assign permissions to documents that all these groups must use.

Context

The following standard groups are automatically created in the repository:

- Administrators, [ADMN] - Has, by default, all available privileges and implicit **Full** permission on all repository folders.
- All users [PUBLIC] - Has, by default, **Read** permission on the repository root. All users belong to this group and can thus, by default, browse any diagram.

Procedure

1. Click **Administration > Groups** in the navigation panel, and then click the **+** button to create a new group.
2. Enter the following properties as appropriate:

Property	Description
Name	Specifies the name of the group as it will appear in the interface.
Code	Specifies the internal name of the group, which can be used in scripting.
Comment	Describes the group and its purpose.
Privileges	<p>By default, groups do not have any privileges. Select the checkboxes corresponding to the privileges you want to assign:</p> <ul style="list-style-type: none">• Connect - Connect to the repository and view diagrams in Requirements Management and Systems Modeling.• Export from Web - Export content from Requirements Management and Systems Modeling as a repository Zip file, report or PowerPoint.• Edit on Web - Create and edit diagrams in Requirements Management and Systems Modeling.• Edit Extensions on Web - Create and edit custom properties in Requirements Management and Systems Modeling. Gives access to the <i>Customize</i> item in the navigation panel.• Manage All Documents - Perform any action on any document version. Implicitly includes Full permission on all repository documents. Gives access to the <i>Activities/Log</i> tile.• Manage Users & Permissions - Create, modify, and delete repository users and groups, grant them privileges, and add them to groups. Users with this privilege can list all repository documents and set permissions on them without needing explicit Full permission. Gives access to the <i>Administration/Users</i>, <i>Administration/Groups</i>, and <i>Activities/Security Log</i> tiles.• Manage Repository - Gives access to the <i>Administration/Settings</i> item.

3. Click the *Members* tab and add any appropriate users and groups to the group (see [Adding Users and Groups to a Group \[page 249\]](#)).
4. Click the *Parents* tab and add the group to any appropriate groups (see [Adding Users and Groups to a Group \[page 249\]](#)).
5. Select **Menu > Push Diagrams to Group** or **Menu > Push Folder to Group** to make appropriate diagrams and folders available in group members' homepages (see [Pushing Diagrams and Folders to Users' Homepages \[page 252\]](#)).
6. Click *Save* to complete the creation of the group.

8.3.1.1.3.1 Adding Users and Groups to a Group

You can add users and groups as members of a group from either the user or the group property sheet.

Context

There are three ways to add members to a group:

- To add a user to a group from the user's property sheet, click the *Groups* tab, which lists the groups to which the user belongs. Click the **+** tool to open a list of groups, select one or more, and then click *OK* to add the user to them.
- To add a group to a parent group from the child group's property sheet, click the *Parents* tab, which lists the groups to which the group belongs. Click the **+** tool to open a list of groups, select one or more, and then click *OK* to add the group to them.
- To add a user or group to a group from the parent group's property sheet, click the *Members* tab, which lists the users and groups which are members of the group. Click the *Add* tool to open a list of users and groups, select one or more, and then click *OK* to add them to the group.

8.3.1.1.3.2 Deleting a Group

When you delete a group from the repository you do not delete the members (either users or groups) of the group.

Procedure

1. Click **Administration > Groups** in the navigation panel.
2. Select a group in the list and click the *Delete* tool. The group is removed from the list, and:
 - Any document permissions granted to the group are revoked.
 - Any members of the group lose whatever privileges or permissions they had inherited from the group.
 - The group is removed from membership of any groups to which it belonged.
3. Click *Save* to save your changes.

8.3.1.1.3.3 Specifying Group Managers

In some cases, when you create a group, you may need to be able to delegate the addition and removal of members to some selected members (users or groups) of this group without giving them the **Manage Users & Permissions** privilege. You can select these group members and specify them as **Group Manager**.

Procedure

In order to specify a user or group as a group manager, display the group property sheet, click the *Members* tab, check the appropriate *Name* and *Group Manager* boxes and click *Save*.

Group managers can access the property sheet of the group they manage and use the *Members* tab to add or remove users or groups (see [Adding Users and Groups to a Group \[page 249\]](#)).

Group managers that do not have **Manage Users & Permissions** privilege cannot modify the group privileges and they cannot access or modify properties or privileges of the group members. They can however make some edits in the *Comment* field of the group property sheet.

The **All Users** and **External Users** groups cannot be specified as group manager and cannot be added/removed from the group members by the group manager (only the administrator or user with **Manage Users & Permissions** privilege can do this).

A group manager can remove **Group Manager** status to other group managers for a group he manages, but he cannot remove this status for himself unless there is at least another manager for this group.

8.3.1.1.4 Granting Privileges to Users and Groups

A new user has only the **Connect** privilege assigned by default and belongs only to the **PUBLIC** group. The repository administrator can grant additional privileges to the user either directly or by adding her to other groups.

Context

User privileges are associated with document permissions (see [Granting Access Permissions on Repository Items \[page 251\]](#)) to define the actions a user can effectively perform on a document.

Procedure

1. Click **Administration > Users** (or **Administration > Groups**) in the navigation panel, and then click the appropriate user or group in the list to open its property sheet.

2. Select the check boxes corresponding to the privileges you want to assign:
 - **Connect** - Connect to the repository and view diagrams in Requirements Management and Systems Modeling.
 - **Export from Web** - Export content from Requirements Management and Systems Modeling as a repository Zip file, report or PowerPoint.
 - **Edit on Web** - Create and edit diagrams in Requirements Management and Systems Modeling.
 - **Edit Extensions on Web** - Create and edit custom properties in Requirements Management and Systems Modeling. Gives access to the *Customize* item in the navigation panel.
 - **Manage All Documents** - Perform any action on any document version. Implicitly includes **Full** permission on all repository documents. Gives access to the *Activities/Log* tile.
 - **Manage Users & Permissions** - Create, modify, and delete repository users and groups, grant them privileges, and add them to groups. Users with this privilege can list all repository documents and set permissions on them without needing explicit **Full** permission. Gives access to the *Administration/Users*, *Administration/Groups*, and *Activities/Security Log* tiles.
 - **Manage Repository** - Gives access to the *Administration/Settings* item.
3. Click [Save](#) to save your changes.

8.3.1.1.5 Granting Access Permissions on Repository Items

The repository administrator or a user with **Full** permission on a document or folder can grant permissions on it. Permissions can be granted on the repository root, folders, and models, but not on individual diagrams or objects.

Context

A user wanting to browse and edit documents in the repository must have at least the following permissions:

- Browsing - **Read** permission. When you create a user, she is inserted into the **Public** group, which by default is granted **Read** permission on the repository root.
- Creating or editing a diagram - **Submit** on the target folder to propose a new diagram or edits to an existing diagram, or **Write** to publish them directly.

Note

Object permissions should be viewed in conjunction with the privileges granted to users or groups (see [Granting Privileges to Users and Groups \[page 250\]](#)).

Procedure

1. Click *Repository Explorer* in the navigation panel, navigate to the item, and click its *Permissions* tab.
2. Click the **+** button to open a list of available users and groups, select one or more, and click *OK* to add them to the list.

- For each user or group, select the permission you want to grant in the *Granted Permission* column:
 - List** - This permission level is not currently in use.
 - Read** - Open and compare documents.
 - Submit** - Also propose changes to the document for review by a user with **Write** permission.
 - Write** - Also review changes by other users and publish changes directly.
 - Full** - Also move and delete documents, and manage permissions granted to users and groups.

Note

Administrators, who have implicit **Full** permission on all repository objects, will only receive models for review if they have been granted explicit **Write** permission on them.

The *Effective Permissions* column shows the highest level of permission that each user or group has on the item either directly or via a group.

- [optional] Click the *Copy Permissions to All Children* tool to propagate changes to the item's children.

When you create a folder or diagram, the permissions defined on its parent folder are propagated to it. However, subsequent changes made to the permissions for the parent are not applied to its children unless you click this tool. For example, if you grant **Write** permission on the **Major Project** folder, to the **Development Team 2** group, then they will not automatically be granted **Write** access on its existing contents.

8.3.1.1.6 Pushing Diagrams and Folders to Users' Homepages

The repository administrator can push diagrams and folders to users' homepages to give them personalized entry points to the repository. Diagrams appear as cards in the user's homepage, and folders as entries in the *Quick Links* card. You can push diagrams and folders to individual users or to groups.

Context

Note

Diagrams and folders pushed to groups are received by all the members of the group at the time of the action. Users that are subsequently added to the group will not receive the diagram or folder unless you push it again. If you push a diagram or folder that is already present in a user's homepage, it will not be duplicated.

Procedure

- Click **Administration > Users** (or **Administration > Groups**) in the navigation panel, and then click the appropriate user or group in the list to open its property sheet.

2. To push diagrams to the user or group:
 - a. Select ► *Menu* ► *Push Diagrams to User/Group* ► to open the *Select Diagrams* dialog.
 - b. Navigate to or search for the diagrams you want to push, and select them.
 - c. When your selection is complete, click *Push* to push them to the user or group.
3. To push a folder to the user or group:
 - a. Select ► *Menu* ► *Push Folder to User/Group* ► to open the *Select Folder* dialog.
 - b. Navigate to the folder you want to push, and click *Push* to push it to the user or group.

8.3.1.1.7 Deactivating Users

The repository administrator or a user with the **Manage Users & Permissions** privilege can deactivate users. Inactive users cannot connect to the repository and the information held about them is deleted except for the log of their checkins and other repository actions.

Context

⚠ Caution

A user cannot deactivate himself, even if he has the **Manage Users & Permissions** privilege.

Procedure

1. Click ► *Administration* ► *Users* ► in the navigation panel, and then click the appropriate user in the list to open its property sheet.
2. Select the *Inactive* status and click *OK*.
3. [optional] Click the *Anonymize* button to replace all occurrences of the user's name, code, and email in logs and repository document version histories with an anonymous pseudo-identity. Anonymizing data in this way allows you to retain a history of operations without personally-identifying information.

ℹ Note

This anonymization operation is non-reversible.

4. [optional] Click *Save* to apply changes.

ℹ Note

A confirmation dialog is displayed to inform you that the change lists for the deactivated user can be automatically deleted. Click *OK* to delete the change lists (this deletion is non-reversible) or click *Cancel* to keep the change lists.

8.3.1.2 Configuring the Requirements Management and Systems Modeling Server

The repository administrator is responsible for configuring the Requirements Management and Systems Modeling server.

8.3.1.2.1 Connecting to External Systems

Configure connections between SAP EA Designer and external systems to allow your users to create links between SAP EA Designer model objects and external objects, and to include these external objects in their impact analysis.

Context

For more information about the model object assignments function, see [Assigning Model Objects to External Objects](#) in the user guide.

Configuring External System Environment

Context

To enable the link to SAP EA Designer from your external system, first configure the external system environment. The model object assignments function can be enabled from the following external systems:

- SAP S/4HANA Cloud systems
Follow the set-up instructions provided by SAP S/4HANA Cloud.
Requirements Driven Development(2G4) enable the user to link requirements to product life-cycle management objects such as engineering bills of material, document info records, materials, and configurable BOMs. See [Requirements Driven Development \(2G4\)](#).
Product Structure Template Management (35Q) enables you to build up templates to structure a product as a set of hierarchically ordered objects in SAP S/4HANA. See [Product Structure Template Management \(35Q\)](#).
- SAP S/4HANA (on-premise)
Follow the configuration guide provided by SAP S/4HANA.
Requirements Driven Development enable the user to link requirements to product life-cycle management objects such as engineering bills of material, document info records, materials, and configurable BOMs. For example, for SAP S/4HANA 2021, see [Setting up Requirements Driven Development \(2G4\) \(3E4\)](#).
Product Structure Template Management (35Q) enables you to build up templates to structure a product as a set of hierarchically ordered objects in SAP S/4HANA. For example, for SAP S/4HANA 2021, see [Product Structure Template Management \(35Q\)](#).

- For other external systems where the model object assignments function is not originally offered, a URL pattern is provided to open the external objects in an SAP EA Designer page, where users can view and make assignments. For details, see [\(Optional\) Enabling Model Object Assignments from Custom External Systems \[page 260\]](#).

Activating External Object Types

Context

Before your users can assign model objects to different types of external objects, activate the metamodels for these object types in SAP EA Designer. You can activate object types predefined in the system at one click by selecting an appropriate external system, or create custom object types by uploading your own metadata in a `.json` file.

ⓘ Note

To set up the configuration, you must have an SAP EA Designer user with the *Edit Extensions on Web* right. For details of user rights in the SAP EA Designer, see [Granting Privileges to Users and Groups \[page 250\]](#).

Procedure

1. In SAP EA Designer, click **Administration > Settings** in the navigation panel, and then click the *External Systems* tile.

Two tables are displayed on the page. The left table lists the object types that are currently active, along with system information of the object type, and the number of objects already saved in SAP EA Designer. The table on the right lists the predefined object types and their statuses in the system, grouped by the external systems which provide them.

ⓘ Note

To review the attributes and other details of each object, click the name of the object type in the tables.

2. To activate the predefined object types of an external system:
 - a. Select the appropriate name and version of your external system in the dropdown list above the right table.
 - b. Select *Activate*.

The object types you just activated will now be present in the left table.

For object types that are currently active and marked as *Changed* in the right table, note that after another activation, the associated metamodel will be updated and any objects of this type already saved in SAP EA Designer will be deleted.

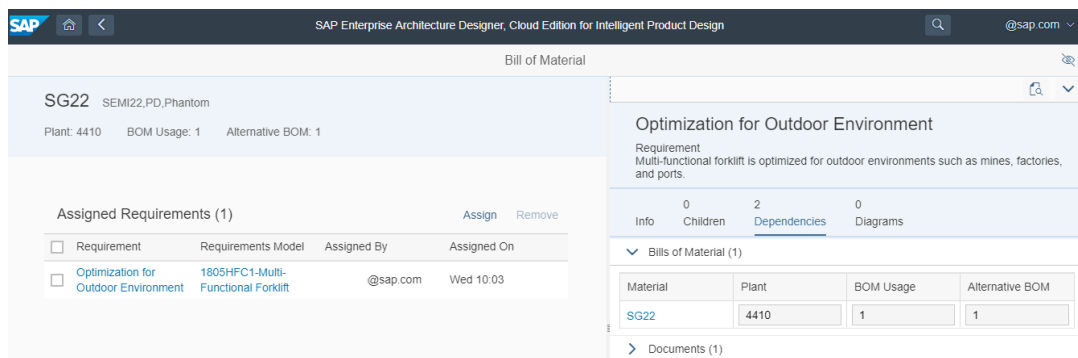
- c. If you have more than one external system connected to SAP EA Designer for model object assignments, switch the system versions in the dropdown list and activate all the relevant object types.

3. **Optional:** To create custom object types, perform the following steps:

- a. Download a metamodel template by selecting *Object Type Template*. In the downloaded **.json** file, fill in the information of your object types based on the template. You can include multiple object types in the metamodel and import them to SAP EA Designer altogether.

```
[
  {
    "ObjectName": "xx.xxx",
    "SingleName": "",
    "PluralName": "",
    "Facet": {
      "TitleName": "",
      "DisplayOrder": [
        ""
      ]
    },
    "Navigation": "",
    "Attributes": [
      {
        "Name": "",
        "KeyIndex": 1,
        "DisplayName": ""
      }
    ]
  }
]
```

- **ObjectName** - Name of the object type. Start the name with a prefix followed by a dot. For example, **"COMPANY.BillofMaterial"**. Do not use **SAP** as the prefix as it has been reserved for the predefined objects in the system.
- **SingleName / PluralName** - Object type name in the singular/plural forms, used in different places in the application to represent the object type. In this example, the singular name **Bill of Material** is displayed as the page title, and the plural name **Bills of Material** is used in the property sheet of the associated object.
- **TitleName** - Name an attribute of your object type so that its value will be displayed as the title of the object page header during model object assignments. In this example, the **TitleName** is displayed as **SG22**, value of attribute **Material**.
- **DisplayOrder** - Enter an array that contains all the attributes that you want your users to see in the application describing an external object of this type. In this example, the **DisplayOrder** is probably defined as **"Material,Plant,BOMUsage,AlternativeBOM"**. These attributes are displayed in order both in the object page header (attribute that has already been set as the **TitleName** will not appear again) and in the property sheet of the associated object.



- **Navigation** - Define the URL pattern which navigates the user back to the specified page in the external system. The complete navigation URL is the combination of the external system host URL

(see section [Managing External System Connections](#) in this topic) and the pattern you define here. You can reference the actual URL in the external system and replace the attribute values with the placeholder `${AttributeName}`.

Example

```
MaterialBOM-maintenance&//C_BillOfMaterialTP(BillOfMaterial='${BillOfMaterial}',BillOfMaterialCategory='${BillOfMaterialCategory}',BillOfMaterialVariant='${BillOfMaterialVariant}',BillOfMaterialVersion='${BillOfMaterialVersion}',EngineeringChangeDocument='${EngineeringChangeDocument}',Material='${Material}',Plant='${Plant}',DraftUUID=guid${DraftUUID}',IsActiveEntity=${IsActiveEntity})
```

- Attributes of the object type:
 - Name** - Name of an attribute. Do not include any whitespace.
 - Key Index** - The index of the key attributes starting from the number **1**. Enter **0** if it is a non-key attribute.
 - DisplayName** - The display name of the attribute.

In this example, the table shows that the predefined object type has 9 key attributes.

Attributes

Name	Key Index	Display	Display Name
BillOfMaterialVariant	3	true	Alternative BOM
BillOfMaterialVersion	4	false	
BillOfMaterial	5	false	
DraftUUID	6	false	
IsActiveEntity	7	false	
Plant	8	true	Plant
EngineeringChangeDocument	9	false	
BillOfMaterialVariantUsage	0	true	BOM Usage

- Upload the metamodel to create custom object types by selecting [Create Custom Object Types](#). Select the metamodel you created based on the template or other appropriate `.json` file from your local files.
- Select the custom object types that you want to create in the popup box, then select [Activate](#).



You can also update the attributes (except **ObjectName**) of existing custom object types by uploading the modified information.

- A CSV file is automatically downloaded if the activation failed. Check the file containing the error details, fix them in your metamodel, then upload again.

Managing Active External Object Types

Context

Active External Object Types table lists all the available types to link with model objects. In this table, you can manage all the object types with the action bar. The following table shows the specific operations:

Operation Button in the Action Bar	Description
Object Type Template	Get the object type template. For more information, see Activating External Object Types in this topic.
Create Custom Object Types	Create custom object types. For more information, see Activating External Object Types in this topic.
Delete	Select an object type or types and click Delete for deletion.
	Enable or Disable Lineage button. Click it to set the dependency rule to Lineage. It indicates the lineage rule is enabled and the Dependency Rule column adds the Lineage. Clicking it again will disable the lineage. And the Lineage is removed from the Dependency Rule column. For more information, see Impact and Lineage Analysis .
	Enable or Disable Impact button. Click it to set the dependency rule to Impact. It indicates the impact rule is enabled and the Dependency Rule column adds the Impact. Clicking it again will disable the impact. And the impact is removed from the Dependency Rule column. For more information, see Impact and Lineage Analysis .

Note

The lineage and impact can be both enabled at the same time. And the Dependency Rule column turns to Impact and Lineage.

Managing External System Connections

Context

To allow users to navigate back to the original system of an external object, you must specify the external system connection in SAP EA Designer.

Note

To make the configuration you must have an SAP EA Designer user with the *Edit Extensions on Web* right. For details of user rights in the SAP EA Designer, see [Granting Privileges to Users and Groups \[page 250\]](#).

Procedure

1. In SAP EA Designer, click ► *Administration* ► *Settings* ▾ in the navigation panel, click the *External Systems* tile, and then click the *System Connections* tile.
2. Click the *Add* tool to add information of a new external system.
3. Fill the following fields, and click *Save*.

System ID	Host URL	System Description
To connect to the Collaboration apps, enter . Replace <tenantID> with the ID of the Collaboration apps' subaccount.	Host URL of the external system. Reference the application URL of your external system - Usually the host URL starts from the beginning to the character "#".	Enter something that indicates the purpose of this external system.

System ID	Host URL	System Description
		<p>To connect to an SAP S/4HANA or SAP S/4HANA Cloud system, enter a 6-character string in the pattern <systemName><clientName> .</p> <p>You can also find the ID of your system by performing the following steps:</p> <ol style="list-style-type: none"> 1. In your SAP S/4HANA or SAP S/4HANA Cloud system, open an object which has the <i>Model Object Assignments</i> button. For example, open a BOM. Make sure that its object type has been activated in SAP EA Designer (see previous section). 2. Select the <i>Model Object Assignments</i> button to open the object in SAP EA Designer. 3. In the URL of the SAP EA Designer page, copy the value inside the parenthesis after the parameter "SystemID": and enter it in the field.

8.3.1.2.1.1 (Optional) Enabling Model Object Assignments from Custom External Systems

The model object assignments function allows your users to create links between SAP EA Designer model objects and external objects, and to include these external objects in their impact analysis. For external systems where the function is not originally offered, a URL pattern is provided for configuration to open the external objects in an SAP EA Designer page, where users can view and make the assignments.

Reference the URL pattern below for opening external objects in an SAP EA Designer page, where your users can make model object assignments:

```
https://<host_name>/eadesigner/resources/index.html#appPage|
{"id": "ExternalLinkEditor", "viewName": "externalLink.ExternalLinkEditor", "data":
{"SystemID": "${SystemID}", "ObjectType": "${ObjectType}", "RequirementModel": "${
RequirementModel}", "${KeyName}": "${KeyValue}", "Description": "${
Description}", "Properties": {"${AttributeName}": "${AttributeValue}"} } } | 1
```

The format is similar to a JSON format. The placeholder identified by `${ }` should be replaced with the actual value:

- **`${SystemID}`**: Must be consistent with what you defined in SAP EA Designer, see the *Managing External System Connections* section in [Connecting to External Systems \[page 254\]](#).

- `${ObjectType}`: The **ObjectType**, defined in the metamodel of the external object type, see the *Activate External Object Types* section in [Connecting to External Systems \[page 254\]](#).
- `${RequirementModel}`: [optional] The SAP EA Designer model that contains the requirements you want to assign. When this parameter is included in the URL, users are directly navigated inside the specified requirements model when making assignments.
- `${KeyName}` and `${KeyValue}`: The object key name and its value. There may be multiple key-value pairs.
- `${Description}`: The description of the external object.
- `${AttributeName}` and `${AttributeValue}`: The attribute name and its value. There may be multiple key-value pairs.

Example

```
https://hostExample.com/eadesigner/resources/index.html#appPage |
{"id":"ExternalLinkEditor","viewName":"externalLink.ExternalLinkEditor","data":
{"SystemID":"SYS001","ObjectType":"BillofMaterial","Material":"SG22","BillofMater
ial":"00000001","BillofMaterialCategory":"M","BillofMaterialVariant":"1","BillofM
aterialVersion":"","EngineeringChangeDocument":"","Plant":"4410","DraftUUID":"000
0","IsActiveEntity":true,"Description":"SEMI22,PD,Phantom","Properties":
{"Plant":"4410","BillofMaterialVariantUsage":"1"}}}|1
```

8.3.1.3 Monitoring Repository Activities

Users with the appropriate privileges can review lists of repository activities, change lists, and file locks.

To access these lists, click *Activities* in the navigation panel:

- *Log* - [requires the **Manage All Documents** privilege] View events concerning repository documents:
 - **Check In** - User publishes a new document or a new version of a document. This event is also triggered each time a user saves a draft diagram.
 - **Change List Submission** - User submits a diagram for review.
 - **Change List Approval / Rejection / Return for Revision** - A reviewer approves (publishes), rejects, or returns a diagram to the user for revision.
 - **Lock / Unlock** - A document is locked for editing or the lock is released manually or by a check in.
 - **Document Move** - User moves a document from one repository folder to another.
 - **Version Deletion / Document Deletion** - User deletes a version of a document or a document.
 - **Repository Upgrade** - Repository is upgraded to a new version.
- *Security Log* - [requires the **Manage Users & Permissions** privilege] View events concerning user accounts:
 - **User Created** - User's account is created.
 - **Login** - User enters correct user name and password combination.
 - **Logout** - User logs out.
 - **User Deactivated** - User is deactivated by an administrator (see [Deactivating Users \[page 253\]](#)).
 - **User Activated** - User is reactivated by an administrator.
 - **User Accessed** - User's account information is accessed by an administrator.

- **User Updated** - User's account information is updated by an administrator.
- **User Deleted** - User's account is deleted by an administrator
- **Change Lists** - View all your **Draft** and **Submitted** change lists. You can delete your own submitted change list by selecting it and clicking the **Delete** tool.

Note

Users with the **Manage All Documents** or **Manage Users & Permissions** privilege can view all change lists from all users. If the creator of a change list is unavailable and if you have the **Manage All Documents** privilege, you can re-assign this change list using the **Re-Assign** tool or delete it using the **Delete** tool. The list of users to whom you can re-assign the change list is limited to those who have at least **Submit** permission on the diagram.

- **Locks** - View documents that are currently locked in the repository. You can remove a lock from a document that you have locked by selecting it and clicking the **Delete** tool.

Note

Users with the **Manage All Documents** or **Manage Users & Permissions** privilege can remove the lock from any document locked by any user.

- **Retention Policy** - Manage retention of log data (see [Defining a Retention Policy for Log Data \[page 262\]](#))

To reorder any of these lists by values in a column, click in the column header. Some columns also support filtering on their values. To filter the list by values in any of its text fields, enter two or more characters in the search box above it.

8.3.1.3.1 Defining a Retention Policy for Log Data

A repository administrator can specify a retention period for log entries, after which they will be deleted automatically. By default, log entries are kept indefinitely.

Procedure

1. Click **Activities** in the navigation panel, and then click the **Retention Policy** tile.
2. Enter an appropriate value in the **Log data retention period (days)** field.
For example, to retain log entries for only the last four weeks, enter **28**.
3. Click **Save** to save your changes.

8.3.1.4 Using APIs

Developers can make authenticated requests to Requirements Management and Systems Modeling APIs to access its resources.

8.3.1.4.1 Enabling the OAuth 2.0 Client Credentials Flow

Requirements Management and Systems Modeling checks user information in API requests to verify whether the user is permitted to the requested resources. Normally, you can use the OAuth 2.0 authorization grant types Authorization Code or Resource Owner Password Credentials to obtain the access token in JWT format. In cases where these grant types don't fit the situation, use the OAuth 2.0 Client Credentials grant as the alternative authentication type, which doesn't require sending user information. Instead, specify the user information in Requirements Management and Systems Modeling in advance.

Prerequisites

- To configure the required settings in Requirements Management and Systems Modeling, you must have the **Manage Users and Permissions** privilege (see [Controlling Repository Access \[page 243\]](#)).
- You have created a Requirements Management and Systems Modeling user and granted it with the appropriate permissions and privileges (see [Controlling Repository Access \[page 243\]](#)) that match your API requests. This user will be used for authorization check when you send the requests.

Procedure

1. In Requirements Management and Systems Modeling, click **Administration > Settings** in the navigation panel, and then click the *API Settings* tile.
2. In the *Info* tab *General* section, check *Enable Client Credentials*.
3. Click *Select a User* to open the list of all the users.
4. Select the user that you have previously prepared and confirm your selection.
The name and email of the selected user are displayed in the *Technical User Name* and *Technical User Email* fields respectively.
5. Save your changes.

Next Steps

Now you can send API requests to Requirements Management and Systems Modeling using the OAuth 2.0 Client Credentials grant type. Then refer to [Configuration for Using APIs \[page 372\]](#) to create a service and

a service key. With the service key, you can get the parameters **Client ID**, **Client Secret**, and **Access Token URL**. For more information, see [Requirements Management and Systems Modeling Reference](#).

8.3.1.4.2 Exporting Repository Content Using an API

Programmers can use a dedicated API to export repository content.

Requirements Management and Systems Modeling provides an API that lets you export repository content.

In order to be able to use the API, you must be connected to Requirements Management and Systems Modeling or call a `GET` query from the same browser session.

The query syntax for a model is as follows:

```
<Web-client-URL>/api/v1/repositoryDocuments?path=<path to model>&documentType=<model-type>
```

The query syntax for a folder is as follows:

```
<Web-client-URL>/api/v1/repositoryDocuments?path=<path to folder>&documentType=Folder
```

You must encode the path using `encodeURIComponent()` (JavaScript).

Note

The path should not start with `/`. Folder names must be separated with `/` (before encoding). Therefore, if a folder or model name contains the `/` character, you need to encode it with `%2F` first, then encode the path.

documentType indicates the type of path. If the path refers to a folder you must specify **documentType=Folder**, if the path refers to a model you must specify the model type (**EAM**, **BPM**...). **documentType** can be omitted if the path name is unambiguous, but is required if there are several models with different types and the same name.

The query returns a base64 encoded json content as follows:

Sample Code

```
{
  "d": {
    "exportRepositoryApi": "<base64-encoded-content>"
  }
}
```

In order to produce a ZIP result similar to the result obtained when using the [Export to Repository Zip File](#) command from the GUI, you must then decode the exported content (which is a base64 encoded ZIP blob) using your favorite converter tool or method.

The resulting ZIP file can contain folders, model JSON files and extension JSON files.

The possible status codes for the query are:

- **200: Repository document successfully exported**
- **400: Invalid document path or type.** Document path is empty, document path is a non-existing folder or document, or document type is incorrect.

- **401: Permission denied.** User does not have the permission to view or export the document.
- **404: Repository document not found.** The document specified in path does not exist.
- **406: Export is not supported.** Repository folder is root, repository folder contains branch or document does not support export.
- **500: Internal error**

You can access dedicated Swagger page here:

`http://<host-name>:<port-number>/eadesigner/api/v1/docs`

8.3.1.5 Customizing Modeling Objects

Users with the **Edit Extensions on Web** privilege can define custom properties and dependencies for standard types of objects, and can create custom objects.

You can define the following types of customizations:

- Custom properties for objects (see [Creating Custom Properties \[page 265\]](#)).
- Custom dependencies for objects (see [Creating Custom Dependencies \[page 267\]](#)).
- Custom lists of values for object properties (see [Customizing Lists of Values \[page 269\]](#)).
- Customized property sheets (see [Customizing Object Property Sheets \[page 270\]](#)).
- Custom objects (see [Creating Custom Object Types \[page 271\]](#)).

These customizations must be packaged in custom extension files, which can be manually attached to models (see [Creating Custom Extension Files \[page 273\]](#)) or used as a new type of model for selection in the *New Model* dialog (see [Making Your Customizations Available in the New Model Dialog \[page 276\]](#)).

8.3.1.5.1 Creating Custom Properties

Users with the **Edit Extensions on Web** privilege can define custom properties for objects. Custom properties are displayed on the *Info* tab of objects of the specified type, by default in a section entitled *Custom Properties*.

Procedure

1. Click *Customize* in the navigation panel to view the list of extensions.
2. Click the name of the custom extension you want to edit to open it and list the standard types of objects in this type of model.
3. Click the object type for which you want to define a new property to open it in the editor.

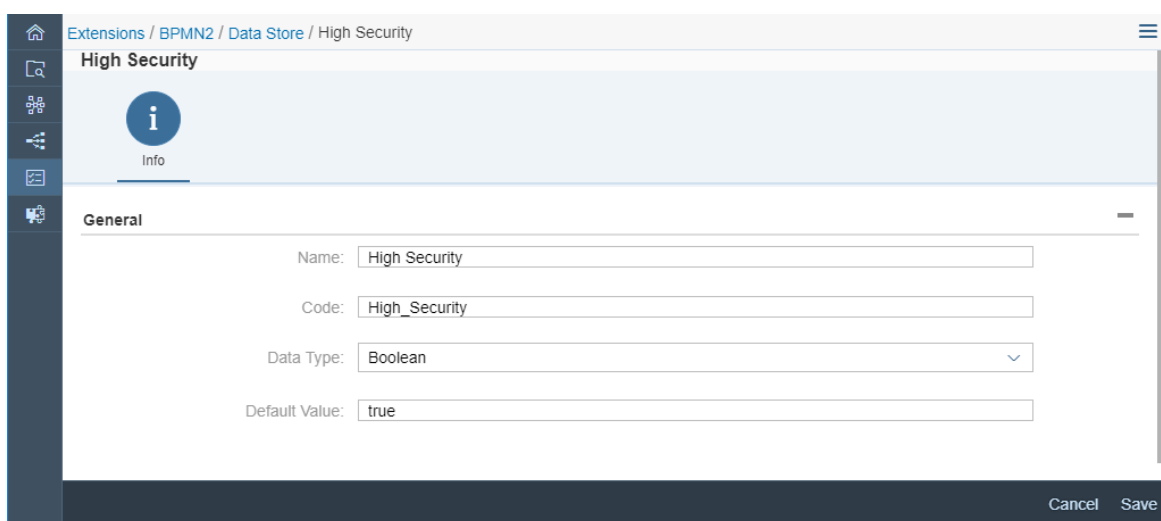
Note

If your object type is not present, click the + button, and then click the object type to add it to the list and open it.

4. In the *Properties* section, click the + button to create a property, and enter:

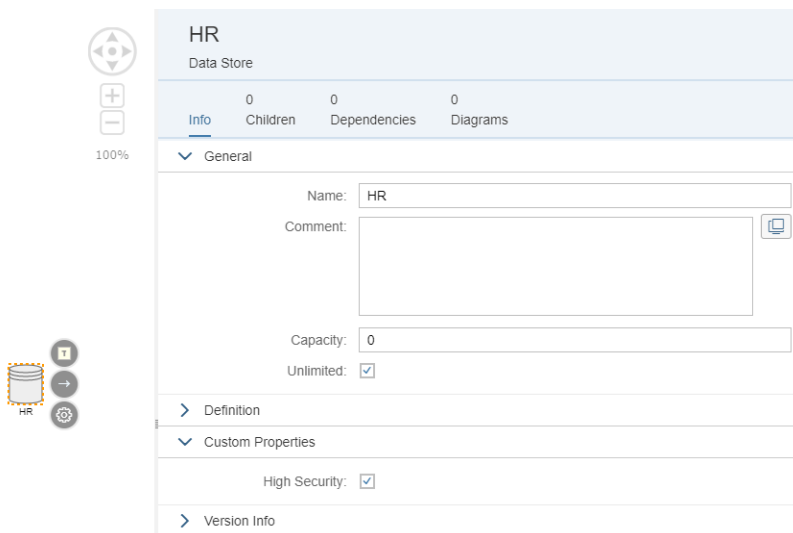
Property	Description
Name	Specifies the name of the property as it will appear in the interface.
Code	Specifies the internal name of the property, which must not contain spaces or the dot character and must be unique for this class of objects.
<div style="border: 1px solid #ccc; background-color: #f9f9f9; padding: 10px;"> <p>⚠ Caution</p> <p>If you change the code after the property is in use, then any values set in models will be lost.</p> </div>	
Data type	<p>You can choose between:</p> <ul style="list-style-type: none"> • Boolean - Yes/No values as checkbox • Integer - Whole number values • Float - Number values that support decimal places • String - Single-line textual values • Text - Multiline textual values • Object - Link to another object • URL - Link to any valid URL • Date - Date with date picker control
Default Value	Specifies the value of the property that will be set in the interface by default.
List of Values	Specifies the list of property values.
Complete	Specifies that only values defined in the <i>List of Values</i> box can be used for this property.
Multi-selection	Specifies that you can enter more than one value for this property.
Object type	[object] Click the <i>Select</i> tool to open a list to choose the type of object with which to populate the property. By default, the object types from the current model type are listed. To select from another type of model, click the <i>More Types</i> button and select the required model type.

In this example, a new boolean property is created for the **Data Store** class:



5. Click [Save](#) to save your changes.
6. Optionally, customize the property sheet to move the new property from the *Custom Properties* section (see [Customizing Object Property Sheets \[page 270\]](#)).

The new property is available to all objects of the specified type on their *Info* tab, by default in a section entitled *Custom Properties*:



8.3.1.5.2 Creating Custom Dependencies

Users with the **Edit Extensions on Web** privilege can define new types of dependencies for modeling objects. Custom dependencies are displayed on the *Dependencies* tab of objects of the specified type.

Procedure

1. Click [Customize](#) in the navigation panel to view the list of extensions.
2. Click the name of the custom extension you want to edit to open it and list the standard types of objects in this type of model.
3. Click the object type for which you want to define a new dependency to open it in the editor.

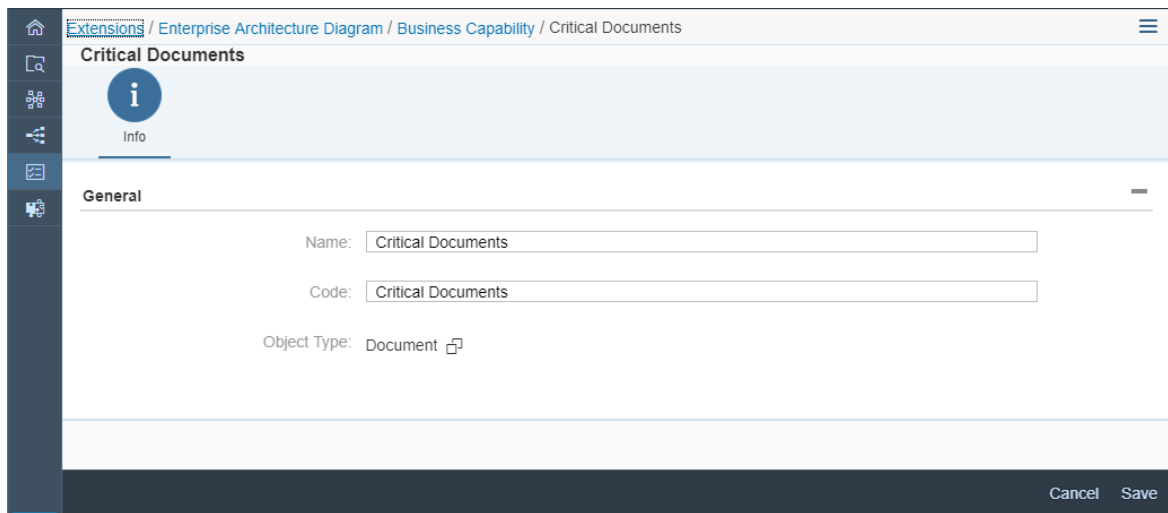
Note

If your object type is not present, click the **+** button, and then click the object type to add it to the list and open it.

4. In the *Dependencies* section, click the **+** button to create a dependency and choose the type of object with which to populate the dependency list. By default, the object types from the current model type are listed. To select from another type of model, click the [More Types](#) button and select the required model type.

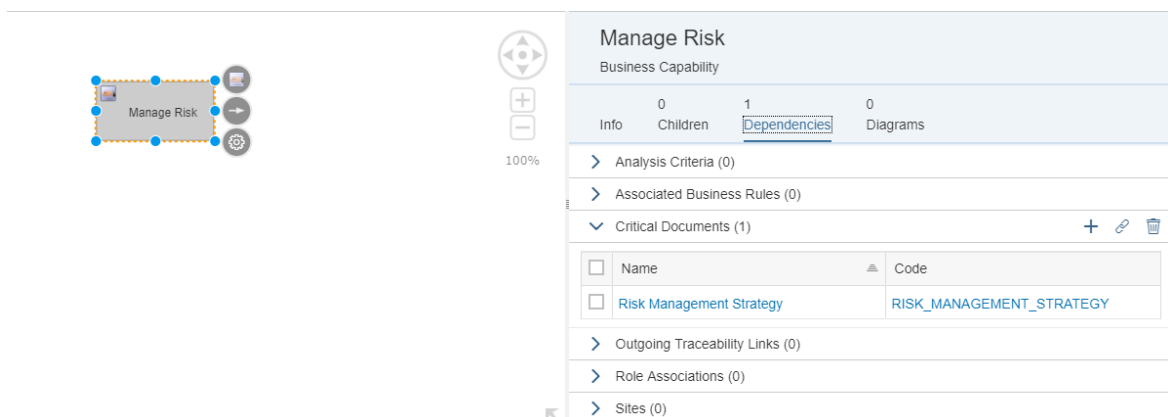
Property	Description
Name	Specifies the name of the dependency list as it will appear in the interface on the <i>Dependencies</i> tab.
Code	Specifies the internal name of the dependency, which must not contain spaces or the dot character and must be unique for this class of objects.
<div style="border: 1px solid #ccc; padding: 10px; background-color: #f9f9f9;"> <p>⚠ Caution</p> <p>If you change the code after the dependency is in use, then any values set in models will be lost.</p> </div>	
Object type	Click the <i>Select</i> tool to change the type of object for the dependency list.

In this example, a new dependency list is created for the **Business Capability** class:



- Click *Save* to save your changes.

The new dependency list is available to all objects of the specified type on their *Dependencies* tab:



8.3.1.5.3 Customizing Lists of Values

Users with the **Edit Extensions on Web** privilege can modify the lists of values available for certain standard object properties, such as the *Type*, *Status*, and *Priority* properties of requirements or the *Development Language*, *Operating System*, and *Type* of applications.

Procedure

1. Click *Customize* in the navigation panel to view the list of extensions.
2. Click the name of the custom extension you want to edit to open it and list the classes.
3. Click the object type whose property you want to edit to display its list of properties.

All the properties with lists of values that can be edited are listed.

4. Click the property you want to edit to display its property sheet, and then click the *Edit* tool to the right of the *List of Values* field.
5. The *Values* dialog lists all the available values for the property as a:
 - *Value* - specifies the internal value, which must respect the datatype of the property.
 - *Label* - specifies how the value is displayed in the UI.

Note

Some values depend on another property, such as the type of parent of the object. In this case, the type of dependency is specified above the list and as an additional column in the list.

6. Modify the list as necessary:
 - Edit existing values or labels.

Note

The order in which labels are displayed in the list in the UI is controlled by the *Value*.

- Delete or add value-label pairs using the tools above the list
7. Click *OK* to save your changes.

The updated list of values is immediately available to all objects of the specified type.

8.3.1.5.4 Renaming Standard Object Types

Users with the **Edit Extensions on Web** privilege can change the name used to identify standard object types in object lists, property sheets, the diagram toolbox, and other places in the UI.

Procedure

1. Click [Customize](#) in the navigation panel to view the list of extensions.
2. Click the name of the custom extension you want to edit to open it and list the standard types of objects in this type of model.
3. Click the object type you want to rename to open it in the editor.

Note

If your object type is not present, click the **+** button, and then click the object type to add it to the list and open it.

4. Enter the new name for the object type in the *Name* field and the new plural form in the *Plural* field.
5. Click [Save](#) to save your changes.

The new object type name replaces the standard name in object lists, property sheets, the diagram toolbox, and other places in the UI.

8.3.1.5.5 Customizing Object Property Sheets

Users with the **Edit Extensions on Web** privilege can customize object property sheets by moving and hiding properties and creating new sections on the *Info* tab.

Procedure

1. Click [Customize](#) in the navigation panel to view the list of extensions.
2. Click the name of the custom extension you want to edit to open it and list the standard types of objects in this type of model.
3. Click the object type for which you want to customize the property sheet to open it in the editor.

Note

If your object type is not present, click the **+** button, and then click the object type to add it to the list and open it.

4. Click the [Edit](#) button to the right of the Property Sheet field to open the *Property Sheet* dialog, which displays the *Info* tab sections and properties in a tree format.

The following actions are available in this dialog:

- Move a property - Drag the property and drop it onto a section or between two properties. Alternatively, select the property, click the *Cut* button, then select a section or other property and click the *Paste* button.

ⓘ Note

You cannot drag and drop properties if any item is selected in the list.

- Hide a property - Click the switch in the *Displayed* column.
- Create a new section - Select the checkbox of the section under which you want to create the new section, click the *New Section* button, and then enter a name for the new section in the *Label* column.

ⓘ Note

You cannot move or manually hide either standard or new sections. However, a section will be hidden if it contains no properties or all its properties are hidden.

5. Click *Save* to save your changes.

The customized property sheet is available to all objects of the specified type.

ⓘ Note

To revert your property sheet customizations, click the *Delete* tool to the right of the property sheet field.

8.3.1.5.6 Creating Custom Object Types

Users with the **Edit Extensions on Web** privilege can define new types of objects to be modeled. Custom object types have their own object lists and, if the *Symbol* option is selected, have a tool displayed in the *Custom Tools* category of the Toolbox.

Procedure

1. Click *Customize* in the navigation panel to view the list of extensions.
2. Click the name of the custom extension you want to edit to open it and list the standard types of objects in this type of model.
3. Click the **+** button, and then click **New Class** to create a new object type in the list and open it.
4. In the *General* section, complete the following properties:

Property	Description
Name	Specifies the name of the object type as it will appear in the interface.
Code	Specifies the internal name of the object type, which must not contain spaces or the dot character and must be unique.

Property	Description
Plural	Specifies the plural form of the object name as it will appear in certain contexts.
Base class	<p>Specifies the standard object type on which the new object type is based. By default the Extended Object class, which has only minimal standard properties, is selected, but you can base your new object on any of the standard objects in this type of model.</p> <p>For example, in an EAM, you could base a new object type, Factory, on the standard Site class. A factory would automatically inherit the standard properties of a site, and you could define additional properties, such as Annual production.</p>
Symbol	<p>Specifies that the custom object can appear in diagrams and can be created from the toolbox. When you select this option, you can also specify a toolbox icon from the UI5 icon library). The icon you choose will also be used inside the object diagram symbol.</p> <div style="border: 1px solid #ccc; padding: 10px; margin-top: 10px;"> <p>Note</p> <p>If you do not select this option, the custom object can only be created in its object list.</p> </div>
Properties	Specify properties as appropriate (see Creating Custom Properties [page 265]).
Dependencies	Specify dependencies as appropriate (see Creating Custom Dependencies [page 267]).

- Click [Save](#) to save your changes.

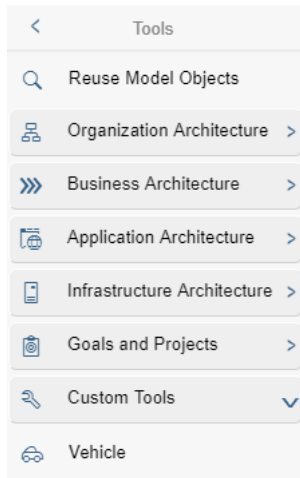
Note

If you want to immediately use the new object type as a property or dependency for another object type, you must refresh your browser tab to make it available for selection.

The custom object is available in its own object list in models of the selected type:

Vehicles <input type="text" value="Search"/>		
(1)	<input type="button" value="+"/> <input type="button" value="↶"/> <input type="button" value="↷"/> <input type="button" value="🗑️"/> <input type="button" value="📄"/> <input type="button" value="⚙️"/>	
<input type="checkbox"/> Name	<input type="checkbox"/> Code	Autonomy (km)
<input type="checkbox"/> Electric Vehicle	ELECTRIC_VEHICLE	150

If the *Symbol* option is selected, a tool is available in the toolbox in the *Custom Tools* category:



8.3.1.5.7 Creating Custom Extension Files

Users with the **Edit Extensions on Web** privilege can define custom extension files to package their customizations, which can then be manually attached to models or added as new types of diagrams in the *New Model* dialog.

Procedure

1. Click *Customize* in the navigation panel to view the list of extensions.
2. Click the **+** button, enter a name and code for your extension file, select the type of model that you want to extend, and then click *Add*.

The custom extension file is created and opens in the editor. The type of the extensions created by users is *User-defined Extension*.

3. Click the **+** button to add the types of object that you want to customize:
 - To customize an existing class of object, select it in the list.
 - To create a new type of object, select **<New Class>** (see [Creating Custom Object Types \[page 271\]](#)).
4. Specify custom properties and dependencies as appropriate.
 - Custom properties (see [Creating Custom Properties \[page 265\]](#))
 - Custom dependencies (see [Creating Custom Dependencies \[page 267\]](#))
5. Click *Save* to save your changes.

You can use your custom extension file in the following way:

- Manually attach it to models (see [Attaching a Custom Extension File to a Model \[page 275\]](#)).
- Add it as a new type of model in the *New Model* dialog (see [Making Your Customizations Available in the New Model Dialog \[page 276\]](#)).

Note

You can only delete a custom extension file if it is not attached to any model. If you need to rename a custom extension, select it and click the [Rename](#) button.

The [Attached Models](#) column shows the number of models that use each extension. You can click the number displayed in this column to open the list of models that are attached to the corresponding extension. In some cases, models attached to the extension may not be displayed in this list due to access restrictions.

8.3.1.5.8 Creating Custom Checks

Users with the [Edit Extensions on Web](#) privilege can define custom checks for objects. Custom checks can be used when verifying diagrams (see [Verifying Diagrams](#)).

Context

For example, you may want to ensure that all Windows applications included in a specific enterprise architecture diagram are developed in Javascript. In that case, the applications will be first checked for operating system (using a pre-condition), and then all the Windows applications that do not meet the verify expression condition (which is being developed in Javascript) will be reported as non-compliant during model verification.

Procedure

1. Click [Customize](#) in the navigation panel to view the list of extensions.
2. Click the name of the custom extension you want to edit to open it and list the standard types of objects in this type of model.
3. Click the object type for which you want to define a custom check to open it in the editor.

Note

If your object type is not present, click the [+](#) button, and then click the object type to add it to the list and open it.

4. In the [Custom Check](#) section, click the [+](#) button to create a custom check, and enter:

Property	Description
Name	Specifies the name custom check.
Message	Specifies the nature of the check done. This message will be displayed in the Errors and Warnings panel (see Verifying Diagrams).

Property	Description
Verify Expression	<p>Specifies the expression that must be satisfied to avoid the display of a warning or error.</p> <p>Click the Edit Verify Expression tool to specify the expression.</p> <p>The following fields are available to specify the expression:</p> <ul style="list-style-type: none"> • Attribute - to select an attribute for which the condition will be evaluated • Operator - to select an evaluation operator (possible operators are: Equal, In List, Not In List, Empty and Not Empty) • Values - to specify a single value (when using the Equal operator) or a list of values (when using the In List or the Not in List operator)
Enabled	Specifies if the custom check is active. Check this box if you want your custom check to be used by the verify model feature.
Severity	Specifies whether the check is designated by default as an Error (major problem that stops generation) or as a Warning .
Pre-Condition Expression	<p>Specifies one or more initial conditions that must be satisfied before the verify expression is evaluated.</p> <p>Click the Edit Pre Condition Expression tool to specify the expressions.</p>

5. Click [Save](#) to save your changes.

8.3.1.5.9 Attaching a Custom Extension File to a Model

You can attach a custom extension file to a model to make the customizations defined in it available in the model.

Procedure

1. Open a diagram in the model to which you want to attach the custom extension file. If it is not already in edit mode, click [Edit](#).
2. On the diagram property sheet [Info](#) tab, expand the [Version Info](#) section, and click the [Model](#) link to go to the model property sheet.
3. Click the [Children](#) tab and expand the [Extensions](#) list.
4. Click the **+** tool, select the custom extension to attach, and click [Select](#).
5. Click [Save](#) to activate the custom extension.

Once the model is saved, the customizations are available for use.

8.3.1.5.10 Making Your Customizations Available in the New Model Dialog

You can associate your custom extensions with new types of diagrams and make them available in the [New Model](#) dialog.

Procedure

1. Create a custom extension file (see [Creating Custom Extension Files \[page 273\]](#)) and define your customizations in it as appropriate.
2. Create a model template:
 - a. In the repository explorer, navigate to the `Library/Resources/Model Templates` folder and click the `+` tile to create a new model.
 - b. In the [New Model](#) dialog, enter the following values and then click [Create](#):
 - [Name](#) - Enter the name that you want to appear as the new model type.
 - [Type](#) - Select the standard model type that your extension file is based on.

Note

You can create a model template in this folder with the same name as an existing model type (as displayed in the [Type](#) list of the [New Model](#) dialog) in order to override the predefined model template.

3. Attach your custom extension file to the model (see [Attaching a Custom Extension File to a Model \[page 275\]](#)).
4. Publish and preview the new model type:
 - a. Select [Publish > Publish](#), enter a comment if appropriate, and click [OK](#).
 - b. Click [Home](#) in the navigation panel to go back to your homepage, and then click your browser's [Refresh](#) button.

Note

You must refresh the page in order to see the new model type. It will be available for other users when they next log in.

- c. Click the [New Model](#) quick link and expand the [Type](#) list to confirm that your new type is included.
5. [optional] Restrict the availability of the new model type to certain groups of users:
 - a. In the repository explorer, navigate to the `Library/Resources/Model Templates` folder and then click the model template name in the [Documents](#) pane to display its property sheet.
 - b. Click the [Permissions](#) tab to display the permissions granted on the model template.
 - c. Remove the **All Users** group from the list.
 - d. Add those groups or users to whom you want to give access to the new model type to the list and assign them **Read** permission.

8.3.1.6 Configuring Concurrent Editing

A repository administrator can use the *Concurrent Editing* tile to manage draft types for editing.

In Requirements Management and Systems Modeling, click ► *Administration* ► *Settings* ▾ in the navigation panel, and then click the *Concurrent Editing* tile.

There are two types provided for editing requirement drafts: *Shared* and *Separate*. By default, the two types are selected so that users can edit requirement models with shared or separate mode.

If only one type is selected, users can edit requirement models with the selected mode only.

If neither of the types is selected, the concurrent editing is disabled. One requirement model can only be edited by only one user.



8.3.1.7 Configuring Reports

A repository administrator can use the *Report Configurations* tile to manage report templates.

Users can customize templates of reports generated from requirements. The templates are only applied to PDF format.

Click ► *Administration* ► *Settings* ▾ in the navigation panel, and then click the *Report Configurations* tile..

The following properties are available:

Properties	Description
Report Templates	Choose a template for editing.  - Click <i>Reset</i> icon to reset the current template.  - Click <i>Preview</i> icon to preview the current template.
Header	Supports rich text and image. For images, only png and jpg formats are supported.
Watermark	Supports image only.
Footer	Supports rich text and image. For images, only png and jpg formats are supported.

Note

For header and footer settings, if the text is blank, the image is placed at the top left of the report.

For image import, image optimization is implemented. If the length-width ratio is less than 1.5, the length is set as 60 pixels with a fixed aspect ratio. If the length-width ratio is more than 1.5, the length is set as 120 pixels with a fixed aspect ratio.

After the properties are set, users can click [Save](#) to save the current template, or click [Save as](#) to save as a new template.

8.3.1.8 Customizing Colors for Impact Analysis

A repository administrator can use the [Color Configurations for Impact Analysis](#) tile to customize object colors and create color templates so that users can differentiate object types.

Procedure

1. Click [Administration](#) [Settings](#) in the navigation panel, and then click the [Color Configuration for Impact Analysis](#) tile.

By default, there is no color template. But you can add colors in the [Configure Colors](#) table and save them as a template. Each color template that you create contains all the colors listed in the table.

2. Choose to customize colors for Requirements Management and Systems Modeling objects or external objects by switching between [EA Designer](#) and [External](#) tabs.

The following steps take the Requirements Management and Systems Modeling as an example.

3. Optionally, choose the [Add](#) icon to add one or more colors for the objects.
4. Configure colors.

Model	Choose a model from the drop-down list.
Object Type	Choose an object type from the drop-down list.
Preview	Check the preview of the object in the target color.
Choose Color	Choose a color for the object from the color palette.

To remove a color, select it and choose [Delete](#).

As the external objects are activated in the [External System](#), you can not add objects in the table, but only choose a color for them. For the information about how to activate the external objects, see [Connecting to External Systems \[page 254\]](#).

5. Choose [Save As](#) to save the current color template, including the colors you've added, as a new template.

The [Save](#) button is used to save the changes to the current template.

8.3.1.9 Configuring Global Identification

A repository administrator can enable the global identification feature and specify the global identification format.

Context

For more information about the global identification feature, see [Assigning Global Identifiers to Model Objects](#).

Procedure

1. Click **Administration** > **Settings** in the navigation panel, and then click the *Global Identification* tile.
2. Check the *Enable Global Identifier* box.
3. Specify the *Prefix* and *Suffix* values.

You can specify any number of the following characters:

```
'a' - 'z', 'A' - 'Z', '0' - '9'
```

The result of your changes is displayed in the *Preview* field.

4. Check the *Allow Manual Edition* box if you want to allow users to manually edit global identifiers.
5. Click *Save* to validate you changes.

If other users are working on the repository when you modify the global identifier format, you might ask them refresh their browser or disconnect/reconnect in order to implement new format.

8.3.1.10 SAP Enterprise Architecture Designer, Cloud Edition Security Guide

This guide provides an overview of the security concepts used and recommended in administering an SAP Enterprise Architecture Designer, Cloud Edition environment. It is aimed at technology consultants, security consultants, and system administrators.

Note

This guide should be read in the context of and as a supplement to the [SAP BTP Security Guide](#).

As it becomes more and more important for organizations to protect their critical data from unauthorized access and to ensure compliance with a growing number of rules and regulations, the demands on security are also on the rise. As a repository for your enterprise metadata, SAP EA Designer can contain sensitive information about your organization and its systems. It is therefore essential that you integrate SAP EA Designer into your infrastructures securely and that you protect your data in SAP EA Designer.

This guide provides an overview of the security-relevant information that applies to SAP Enterprise Architecture Designer, Cloud Edition:

- [Auditing and Logging \[page 280\]](#)
- [Data Protection and Privacy \[page 280\]](#)
- [Identity and Access Management \[page 282\]](#)
- [Cookies \[page 283\]](#)

8.3.1.10.1 Auditing and Logging

Auditing provides you with visibility on who did what in the Requirements Management and Systems Modeling repository (or tried to do what) and when.

Auditing allows you to monitor and record selected actions performed in the Requirements Management and Systems Modeling repository. Although auditing does not directly increase your system's security, if wisely designed, it can help you achieve greater security in the following ways:

- Uncover security holes if too many privileges were granted to some user
- Show attempts to breach security
- Protect the system owner against accusations of security violations and data misuse
- Allow the system owner to meet security standards

For information about viewing lists of events concerning repository documents and user accounts, see [Monitoring Repository Activities \[page 261\]](#).

8.3.1.10.2 Data Protection and Privacy

Data protection is associated with numerous legal requirements and privacy concerns. In addition to compliance with general data privacy acts, it is necessary to consider compliance with industry-specific legislation in different countries.

For general information about data protection and privacy on SAP BTP, see the documentation under [Data Protection and Privacy](#).

ⓘ Note

In the majority of cases, compliance with data privacy laws is not a product feature. SAP software supports data privacy by providing security features and specific functions relevant to data protection, such as functions for the deletion of personal data. SAP does not provide legal advice in any form. The definitions and other terms used in this guide are not taken from any given legal source.

8.3.1.10.2.1 Personal Data

The logins, names, and email addresses of users are stored in their SAP EA Designer repository user accounts, and may be created manually by an administrator or copied from an external identity provider. No consent is

requested for storing this information, as consent is considered to be implied through the user's employment contract. If your organization requires that consent must be explicitly obtained, administrators must put in place their own processes for obtaining such consent.

Note

This product contains open or freely configurable entry fields, which are not intended for storing personal data without additional technical and organizational measures to safeguard data protection and privacy.

Users can view and download the information stored about them at any time by clicking their user name and selecting [User Account](#).

8.3.1.10.2.2 Deletion of Personal Data

If a user is removed from an external identity provider, any information that was copied to SAP EA Designer must be removed manually by deactivating their repository user account.

When a user is deactivated, any information held about them is deleted except for the log of their checkins and other repository actions, which remain available to other users for auditing purposes (see [Deactivating Users \[page 253\]](#)).

Account Termination

After receiving written notice of a customer's intention to terminate their account (or if an account is not renewed), SAP will retain customer data for 60 days, and then will irrevocably delete all data including backups within 14 days as follows:

- Notice Period (30 days) - The account is fully productive and accessible as usual, and the customer may export their data.
- Grace Period (30 days) - Access to the account is blocked, but backups continue and the customer can restore their account to a fully active account without data loss.
- Retention Period (14 days) - All services are deleted and any remaining backups will be deleted before the end of the retention period.

8.3.1.10.2.3 Change Logging for Personal Data

Any time that the information stored in a user's repository account is accessed or modified by an administrator, the event is recorded in the security log.

The security log can only be accessed by an administrator with the [Manage Users & Permissions](#) privilege (see [Monitoring Repository Activities \[page 261\]](#)).

8.3.1.10.3 Identity and Access Management

Every user who wants to work with the repository must have a repository user with the necessary privileges and permissions. After a successful logon, the user's authorization to perform the requested operations on the requested objects is verified.

Repository privileges give users access to general repository features, while permissions give them access to particular locations in the repository. The following privileges and permissions are available:

Privileges (Entire Repository)	Permissions (Per Folder or Item)
<ul style="list-style-type: none">• Connect - Connect to the repository and view diagrams in Requirements Management and Systems Modeling.• Export from Web - Export content from Requirements Management and Systems Modeling as a repository Zip file, report or PowerPoint.• Edit on Web - Create and edit diagrams in Requirements Management and Systems Modeling.• Edit Extensions on Web - Create and edit custom properties in Requirements Management and Systems Modeling. Gives access to the <i>Customize</i> item in the navigation panel.• Manage All Documents - Perform any action on any document version. Implicitly includes Full permission on all repository documents. Gives access to the <i>Activities/Log</i> tile.• Manage Users & Permissions - Create, modify, and delete repository users and groups, grant them privileges, and add them to groups. Users with this privilege can list all repository documents and set permissions on them without needing explicit Full permission. Gives access to the <i>Administration/Users</i>, <i>Administration/Groups</i>, and <i>Activities/Security Log</i> tiles.• Manage Repository - Gives access to the <i>Administration/Settings</i> item.	<ul style="list-style-type: none">• List - This permission level is not currently in use.• Read - Open and compare documents.• Submit - Also propose changes to the document for review by a user with Write permission.• Write - Also review changes by other users and publish changes directly.• Full - Also move and delete documents, and manage permissions granted to users and groups.

Note

Administrators, who have implicit **Full** permission on all repository objects, will only receive models for review if they have been granted explicit **Write** permission on them.

Privileges and permissions can be granted to repository users either directly, or indirectly through groups.

Authentication via Identity Provider

Authentication to the SAP EA Designer repository is delegated to an identity provider configured in the SAP BTP.

See [Identity and Access Management](#) in the SAP BTP documentation.

User Administration Tools

In order to manage repository users and groups, you must have the **Manage Users** privilege. In order to grant permission on a repository folder or document, you must have **Full** permission on the folder or document.

See [Controlling Repository Access \[page 243\]](#).

Standard Users and Groups

No users are created by default in the SAP EA Designer repository.

The following standard groups are automatically created in the repository:

- Administrators, [ADMN] - Has, by default, all available privileges and implicit **Full** permission on all repository folders.
- All users [PUBLIC] - Has, by default, **Read** permission on the repository root. All users belong to this group and can thus, by default, browse any diagram.

Controlling Write Access through Change Lists

SAP EA Designer supports the enforcement of reviewing proposed changes to repository documents through the use of the **Submit** permission, which requires users to pass through a review process before publication.

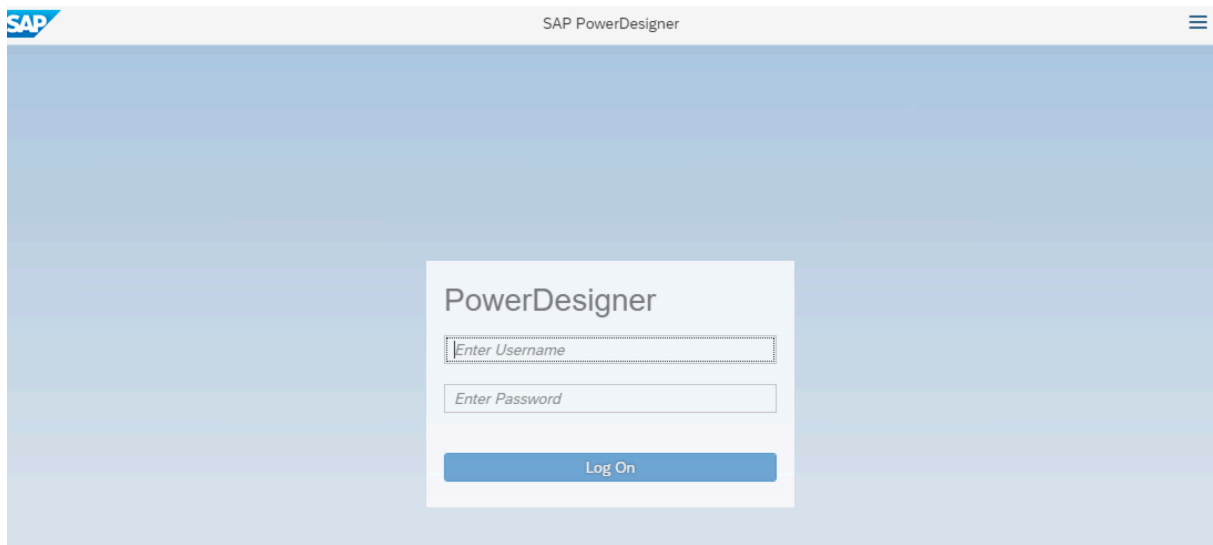
8.3.1.10.4 Cookies

Session cookies are required for each SAP EA Designer client session and are deleted when the session is closed. Additional persistent cookies are used to store the most recent choices for content language and user interface language.

8.3.1.11 Frequently Asked Questions

Failed to Open Requirement Management and Systems Modeling Application

Description: After you choose the *Requirement Management and Systems Modeling* tile in the SAP Fiori launchpad, the *SAP PowerDesigner* logon page is displayed as shown in the following screenshot, instead of the *Requirement Management and Systems Modeling* application page.



Suggestion: Clear the cookie of the browser and reopen the [Requirement Management and Systems Modeling](#) application.

8.4 Business Configuration for Enterprise Product Structure

When integrating via PLMSI, you should carry out the configuration steps as outlined in [Initial Configuration](#) before you proceed to the configuration steps mentioned below.

8.4.1 Configuring BOM Usages

Import BOM usages from a source system to configure them for Enterprise Product Structure. Once configured, the imported BOM usages are available to the users in the [BOM Usage](#) filter options in the [Product Structures](#) app. Only active BOM Usages are displayed to users in the filter.

Prerequisites

- You must be assigned the `StructureAdministrator` role as mentioned in [Role Templates for Enterprise Product Structure \[page 48\]](#).
- You've set up destinations on SAP BTP to connect to your source systems to retrieve data from it. For more details, see [Configuring Connectivity for Enterprise Product Structure \[page 123\]](#).

Procedure

1. Open the *BOM Usages* app from the SAP Fiori launchpad.
2. To import BOM usages from a source system, choose *Import* and select the source system from which you would like to import the BOM usages.

Note

When importing BOM usages, the description of matching BOM usages that are imported from another source system previously, is overwritten with the description of the selected source system.

3. To change the status of the BOM usages, select the BOM usages and choose *Activate*.

Note

The BOM usages imported from a source system are, by default, *Inactive* in status. When a BOM usage is inactive, it doesn't appear in the *BOM Usage* filter. To enable a BOM usage to be available as a filter option, you need to activate them.

4. Once the import is completed, the *BOM Usages* table refreshes and displays the imported BOM usages.

8.4.2 Configuring Plants

Import plants from a source system to configure them for Enterprise Product Structure. Once configured, the imported plants are available to the users in the *Plant* filter options in the *Product Structures* app. Only active plants are displayed to users in the filter.

Prerequisites

- You must be assigned the `StructureAdministrator` role as mentioned in [Role Templates for Enterprise Product Structure \[page 48\]](#).
- You've set up destinations on SAP BTP to connect to your source systems to retrieve data from it. For more details, see [Configuring Connectivity for Enterprise Product Structure \[page 123\]](#).

Procedure

1. Open the *Plants* app from the SAP Fiori launchpad.
2. To import plants from a source system, choose *Import* and select the source system from which you would like to import the plants.

Note

When importing plants, the description of matching plants that are imported from another source system previously, is overwritten with the description of the selected source system.

3. To change the status of the plants, select the plants and choose [Activate](#).

ⓘ Note

The plants imported from a source system are, by default, *Inactive* in status. When a plant is inactive, it doesn't appear in the *Plant* filter. To enable a plant to be available as a filter option, you need to activate them.

4. Once the import is completed, the *Plants* table refreshes and displays the imported plants.

8.4.3 Configuring Document Synchronization

You can configure which document types should be included in synchronization (or excluded from synchronization) through the [Configure Document Synchronization](#) app.

Prerequisites

You must be assigned the `StructureAdministrator` role as mentioned in [Role Templates for Enterprise Product Structure \[page 48\]](#).

Context

Document types are defined in the source system. A document can be assigned to a BOM at different levels such as BOM Header, Product, BOM Component or as a component of document type. During the synchronization of a BOM, the Enterprise Product Structure also enables synchronization of the linked files from the on-premise Content Server to the Document Management system in SAP BTP.

You can choose `toc` during this process. When documents are excluded from synchronization, the documents aren't retrieved from the on-premise Content Server and not uploaded on the SAP BTP Document Management System. However, users can still download those files from the *Files* tab in *Documents* and are fetched from the on-premise Content Server.

ⓘ Note

If no document types are configured as per this section, by default all document types are excluded from synchronization from the on-premise Content Server to the SAP BTP Document Management System.

Procedure

1. Open the [Configure Document Synchronization](#) app from the SAP Fiori launchpad.
2. Choose [Enable Cloud Documents](#).

Note

Once cloud documents are successfully enabled, the *Enable Cloud Documents* option remains disabled.

3. Choose one of the synchronization options from the following:
 - *Exclude from Synchronization*: Choose this option if you want to exclude all the listed document types from the synchronization. The document types that aren't displayed in the list are included in synchronization.
 - *Include in Synchronization*: Choose this option if you want to include all the listed document types in the synchronization. The document types that aren't displayed in the list are excluded from synchronization.
4. To add a document type, choose *Add* and enter the following details:
 - *Code*: Enter the document type that has been defined in your source system.
 - *Description*: Enter a suitable description of the document type.
5. Choose *OK* to add the document type.
6. To switch between synchronization options after adding document types, repeat the actions from Step 3.

8.4.4 Configuring Visualization

You, as a System Administrator, can enable Visualization integration for product structures so that users can generate 3D models and thumbnails for product structures.

Prerequisites


- You must be assigned the `StructureAdministrator` role as mentioned in [Role Templates for Enterprise Product Structure \[page 48\]](#).
- You must be subscribed to the Visualization SaaS application. For more details, see [Subscribing to the SaaS Applications \[page 19\]](#).
- You're assigned the appropriate visualization roles like `ProjectCreator` role to create the visualization root folder, `ContentReader` to view the 3D models, and `ContentCreator` to generate visualizations. For more details, see [Role Templates for Visualization \[page 70\]](#).
- You've set up destinations on SAP BTP to connect to your source systems to retrieve data from it. For more details, see [Configuring Connectivity for Enterprise Product Structure \[page 123\]](#).
- Your source system must have an on-premise integration with [SAP Engineering Control Center](#) or [SAP Teamcenter by Siemens](#) system.

Procedure

1. Launch the *Common Functions* SaaS application on SAP Fiori launchpad and choose the *Manage Teams* app to create a group of users who can have access to the Visualization SaaS application. For more details, see [Manage Teams](#).

→ Tip

It's recommended that you create two user groups, for example, **Enterprise Product Structure Users** and **Enterprise Product Structure Administrators**. The **Enterprise Product Structure Users** group must be assigned the *Create* and *Read* permissions to the root folder (that you create in Step 3) and enclosed content. **Enterprise Product Structure Administrators** must be assigned *Create*, *Read*, *Update*, *Delete*, and *Admin* on the root folder and enclosed content.

2. Launch the Visualization SaaS application in SAP Fiori launchpad and choose the *Browse* app.
3. Create a root folder, such as, Enterprise Product Structure and choose **...** (*More*) and then choose  (*Access and Permissions*).
The *Access and Permissions* window opens.
4. Add the group you created and select the access permissions for the users of the group. For more details, see [Access Control \[page 339\]](#).

ⓘ Note

For users to access the visualizations of products, you must assign them the *Create* and *Read* permissions.

5. Open the Enterprise Product Structure SaaS application on the SAP Fiori launchpad and choose the *Configure Visualizations* app.
6. Select the visualization folder that you created in Step 3 as the root folder.

ⓘ Note

Once you've set the root folder in the *Visualization* tab, you shouldn't change your selection to another folder. If you change the root folder, you need to delete the older root folder or delete the visualization within it. You must also assign the permissions to access the new root folder to the user group as mentioned in Step 4. If these actions aren't performed, then the system starts to show warnings about duplicate visualizations when viewing dynamic visualizations.

7. Turn on the *Enable Visualization Integration* toggle.
8. Select the *Engineering BOM Usages* that your organization uses for BOMs that reference CAD files.
9. Choose *Create* to configure the document types and file name patterns for the CAD files.

The *Create Document Type* window displays. You can enter the document types, description, and their name pattern.

ⓘ Note

- You must configure all the CAD document types that you want to use for visualization, otherwise some parts in the visualization aren't generated. If the system fails to find or generate some parts, a warning message is displayed.

- Enterprise Product Structure supports dynamic visualization only which means that you can configure file types that contain CAD part files only. It's recommended to not configure CAD assembly file types.

Related Information

[Troubleshooting and Common Errors \[page 290\]](#)

8.4.5 Configuring Product Types

Import product types from a source system so that you can assign a product type to an early product. You can also import a codelist to Enterprise Product Structure so that a description is displayed next to the product type, instead of only product type codes. Additionally, you can choose if a product type can be configurable or not.

Prerequisites

- You must be assigned the `StructureAdministrator` role as mentioned in [Role Templates for Enterprise Product Structure \[page 48\]](#).
- You've set up destinations on SAP BTP to connect to your source systems to retrieve data from it. For more details, see [Configuring Connectivity for Enterprise Product Structure \[page 123\]](#).

Procedure

1. Open the *Product Types* app from the SAP Fiori launchpad.
2. To import product types from a source system, choose *Import* and select the source system from which you would like to import product types.

Note

When importing product types, the description of matching product types that are imported from another source system previously, is overwritten with the description of the selected source system.

3. To change the status of a product type, select the product type and choose *Activate*.

Note

The product types imported from a source system are, by default, *Inactive* in status. When a product type is inactive, it doesn't appear in the *Product Type* filter. To enable a product type to be available as a filter option, you need to activate them.

4. Once the import is completed, the [Product Types](#) table refreshes and displays the imported product types.
5. To make a product type configurable, select the product type and choose [Configurable](#).

A configurable product is a product of which different variants are available. It consists of interwoven structures of classification and decomposition, and can further contain individual and complex objects.

6. To make a product type nonconfigurable, select the product type and choose [Nonconfigurable](#).

8.4.6 Troubleshooting and Common Errors

Configuring Visualization Errors

Errors	Reason	Solution
In the Configure Product Structure app, the Visualization tab is displaying following message: <i>The system has a configured visualization folder ID '<XX-XX-XX>', but it isn't one of the folders accessible to the current user. Refer to the Administration Guide for further information.</i>	You don't have the Read access to the visualization root folder.	To configure visualization, you must have the administrative permission on the Enterprise Product Structure root folder created for visualization. For more details, see Configuring Visualization [page 287] .

Note

Don't change the configured root folder, it can break the integration for the existing users.

Errors	Reason	Solution
	<p>The usage code that is assigned to the Visualization root folder has been edited or removed, or the folder has been deleted.</p>	<p>Enterprise Product Structure locates the Visualization root folder by searching for the folder with a known folder ID. The root folder ID is the code that is displayed in the error message.</p> <p>To fix this error, you need to do the following:</p> <ol style="list-style-type: none"> 1. Copy the root folder ID displayed in the error message. 2. Go to the Browse app in the Visualization SaaS application and find the root folder. If required, create a new root folder, see Configuring Visualization [page 287] for more information. 3. Choose the ••• (Details) icon to go to the Folder Details screen. 4. Choose Edit. 5. Choose the Add Usage button and choose Product Structure Root Folder as the usage key from the dropdown menu. 6. Enter the root folder ID (that you copied in Step 1) displayed in the error message as ID.

Errors	Reason	Solution
Multiple folders configured as root: [folder name 1, folder name 2]. Please see Administration Guide for information on how to resolve this.	Multiple folders have been found that are identified as the visualization root folder. There should only be one folder.	<p>The folders that are being identified as the Visualization root folder, are mentioned in the error message. You need to perform the following steps to remove these folders as Visualization root folders:</p> <ol style="list-style-type: none"> 1. Go to the Browse app in the Visualization SaaS application and find the correct folder that should continue to be the Visualization root folder. 2. Find the other folder that need to be removed as a Visualization root folder. 3. Choose the ••• (Details) icon to go to the Folder Details screen. 4. Choose Edit. 5. Delete the Product Structure Root Folder usage. <p>Alternatively, you can also delete the folder if you have permissions. For more information on how to delete a folder, see Working with Folders.</p>

Generating Visualizations

Errors	Reason	Solution
Choosing the Generate Visualizations button in the Product screen displays the following message: <i>'0' parts queued for 3D processing.</i>	The visualizations have already been generated and there are no document changes detected by the system, so there's no processing required.	<p>Check if the visualizations are displaying and have been generated before by viewing the 3D model for the BOM.</p> <p>Go to the product structure details table and choose the 3D button to view 3D model.</p> <p>If the 3D viewport isn't showing visualizations, check if the visualization configuration for the Engineering BOM Usages and Document type and file name pattern have been configured correctly. For more details, see Configuring Visualization [page 287].</p>

Errors	Reason	Solution
	The product doesn't have any parts that match the configuration profile.	Check if the visualization configuration for the <i>Engineering BOM Usages</i> and <i>Document type</i> and file name pattern have been configured correctly. For more details, see Configuring Visualization [page 287] .
<p>Choosing the <i>Generate Visualizations</i> button in the <i>Product</i> screen displays the following message: <i>'n' parts queued for 3D processing</i>.</p> <p>However, the visualizations haven't been generated and the same message displays if you repeat the action.</p>	You don't have access to the root folder in visualization where the models are stored.	Ask your administrator to check the <i>Task Monitoring</i> tab and see if there are any errors or warnings. It can be that the system isn't configured correctly or it could be that your user account doesn't have access. For more details, see Task Monitoring .

Viewing Visualization

Errors	Reason	Solution
Choosing 3D button displays the viewport containing warning: <i>Unable to find a visualization and no geometry is loaded in the 3D viewport</i> .	You don't have permission to read the visualization data.	Check if you're added to the group created by your system administrator that has the <i>Read</i> permission to the visualization folder. For more details, see Configuring Visualization [page 287] .
Some parts are missing from the viewport and there are a few warnings displaying the message: <i>Unable to find a visualization</i> .	Visualizations haven't been generated for these parts.	Go to the <i>Product</i> screen for the top-level component and choose the <i>Generate Visualizations</i> button.
On viewing a visualization, warnings are displaying following message: <i>Multiple Visualizations are found</i> .	Your system administrator has moved the <i>Enterprise Product Structure</i> root folder in EPD visualization. The system doesn't know which visualization to choose.	Delete the duplicate visualizations from the older folder.

Errors	Reason	Solution
	<p>Access permissions have been set incorrectly to the visualization root folder.</p>	<ul style="list-style-type: none"> • Check the permissions as set correctly for Product Structure users. For more details, see Configuring Visualization [page 287]. • Locate and delete the duplicate visualizations by performing the following steps: <ol style="list-style-type: none"> 1. Launch the Visualization SaaS application in SAP Fiori launchpad and choose the Browse app. 2. Choose Show Filter Bar to display your selection of filter options. 3. Search for relevant visualizations by entering the visualization's usages, product name, minor version in the search filters. You can access the details mentioned previously from the Details window of the Task Monitoring tab, see Task Monitoring. 4. In the search results, you can either: <ul style="list-style-type: none"> • Edit the duplicate visualizations to remove the assigned ID usage, see Editing Visualizations and ID Usages Panel for details, or. • Delete the duplicate visualization, see Deleting Visualizations for details.

8.5 Business Configuration for Intelligent Handover

Describes the various business configurations to be performed in order to work with the various apps in the Intelligent Handover cloud service for SAP Product Lifecycle Management.

Prerequisites

You must be assigned the **Handover_Admin** role mentioned in [Role Templates for Intelligent Handover \[page 53\]](#).

Business Configurations

As a handover administrator, you must set up the business configurations that are essential for working with handovers. For more information, see [Configuring Handover \[page 295\]](#).

8.5.1 Configuring Handover

You can use the [Configure Handover](#) app to define the BOM attributes. To work with the handover, you must configure the BOM attributes (BOM usage, plant, item category).

Prerequisites

The production engineer has the role of `Handover_Admin`.

For more information, see [Role Templates for Intelligent Handover \[page 53\]](#).

Note

You can view the [Configure Handover](#) tile on the launchpad only if you have the role of the `Handover_Admin`.

Procedure

1. Launch the [Configure Handover](#) app.
2. Select any of the following BOM attributes to configure:
 - [BOM Usages](#)

- [Item Categories](#)
- [Plants](#)

ⓘ Note

Initially, there are no values associated with the BOM attributes until you configure them.

3. Choose [Add](#).
4. Enter the values of the BOM attributes as follows:

BOM Attribute	User Action	Comments
BOM Usage	Search for the BOM usages and choose the required BOM usage that you want to provide to the production engineers to work on the handover.	The app displays the BOM usages maintained in the SAP S/4HANA system. <div style="border: 1px solid #ccc; background-color: #f9f9f9; padding: 5px;">ⓘ Note Only nonversioned BOM usages are supported.</div>
Item Categories	Add the required item categories.	You can add the following item categories: <ul style="list-style-type: none"> • Stock Item (L) • Variable-Size Item • Text Only the item category (stock item) is supported.
Plants	Maintain the plants that you want to associate with the handover.	You can maintain the number of plants based on your requirement.

5. Choose [Remove](#) if you want to remove any values of the BOM attributes.

8.6 Business Configuration for Specification Management

This chapter describes the business configuration to be performed before product developers can work with the various apps within the Specification Management SaaS application of SAP Product Lifecycle Management.

Prerequisites

- Your user must have the proper roles as described in the following document: [Role Templates for Specification Management \[page 62\]](#).
- You must be familiar with the central components that the solution uses, see [Configuring Connectivity for Specification Management \[page 132\]](#).

- Read through and adhere to the following document regarding Unit of Measure: [Implementing UoM \[page 330\]](#).

Overview









For an overview of the business flow, see [Overview of Process Flow \[page 297\]](#).

For an overview of the data model, see [Overview of Data Model \[page 301\]](#).

The following video explains the tasks of the administrator in detail.

8.6.1 Overview of Process Flow

Here is an overview of the activities that you as an administrator have to perform before product developers can start working with specifications.

- 1 Decide on Data Model 
- 2 Define Specification Types 
- 3 Decide on Composition Item Types 
- 4 Create Composition Items and Groups 
- 5 (Optional) Define Allowed Values 
- 6 Create Properties 
- 7 Define Property Trees 
- 8 (Optional) Define Product Categories 

- [#unique_243/unique_243_Connect_42_subs02 \[page 299\]](#)
- [#unique_243/unique_243_Connect_42_subs03 \[page 299\]](#)
- [#unique_243/unique_243_Connect_42_subs04 \[page 299\]](#)
- [#unique_243/unique_243_Connect_42_subs04b \[page 300\]](#)
- [#unique_243/unique_243_Connect_42_subs05 \[page 300\]](#)
- [#unique_243/unique_243_Connect_42_subs06 \[page 300\]](#)
- [#unique_243/unique_243_Connect_42_subs06b \[page 301\]](#)
- [#unique_243/unique_243_Connect_42_subs01 \[page 299\]](#)

Click the elements on the left side to see the steps the administrator takes for configuring Specification Management.

1. Decide on the Data Model

Based on the needs of your company, you need to decide on how to model your business data. Below you can find examples for a recommended way of data modelling, however, you may have different use cases.

See [Overview of Data Model \[page 301\]](#).

2. Define Specification Types

Specification type is the main differentiator for specifications. It affects the following:

- The used property trees - and implicitly: which properties are displayed
- The status profile for the specification

→ Recommendation

The recommended categorization logic is the logistic layers, for example semi-finished product, unpackaged product, packaged product, etc.

See [Using Specification Types \[page 303\]](#).

3. Decide on Composition Item Types

You can describe in a specification different compositional constituents, for example chemical composition, standard composition, nutrient composition, heavy metal composition and so on.

You have to decide which business objects will be modelled as composition items, and create the respective composition item types.

→ Recommendation

It is recommended to model composition types to those simple elements, pure substances that do not change often and you want to measure in your product, for example allergens, nutrients, hazardous substances, etc.

Composition type properties are the ones where a list is displayed with the product's constituents.

See [Defining a Composition \[page 304\]](#).

4. Create Composition Items and Group Them

After you have decided on which substances to model as composition, you can create the individual composition items.

→ Recommendation

It is ideal if you as an administrator inquire about possible composition items and composition item groups that are needed by product developers already in configuration time. Of course these items can be created later, but then you have to be careful with the statuses of objects.

Composition item groups are an arbitrary group where composition items of the same type are gathered. There are multiple aspects you can use for grouping, for example product line, declaration requirements, etc.

ⓘ Note

In a specification's composition property, you can choose composition item types for your property, and filter down by group. That is why it is important to define composition item groups based on the product developer's need.

See [Composition Items \[page 307\]](#) and [Composition Item Groups \[page 308\]](#).

(Optional) Define Allowed Values for Additional Attributes of Composition Properties

These so-called value sets, allowed values can later be used by composition properties. There are three objects and their respective grouping apps. You can define the following objects and their groups based on the needs of your company, in any order:

- Roles in composition: A value that indicates the role of the substance in the standard composition of a specification, such as active ingredient or impurity. This classification is used mostly for compliance purposes. See [Roles in Composition \[page 310\]](#)
- Qualitative statements: A declared value that indicates whether a specification contains a certain substance, for example: trace elements, contains, doesn't contain, unknown. See [Qualitative Statements for Compositions \[page 311\]](#)
- Value qualifiers: A collection of values that are used as qualifiers for composition items within a specification, for example: measured, certified, warning. See [Value Qualifiers for Compositions \[page 313\]](#)

5. Create Properties

There are two types of properties: **attribute properties** and **composition properties**.

Composition properties can use either of the following sources:

- Data from Composition Configuration (for less complex constituents that change less frequently)

ⓘ Note

You must give a composition item type and can filter down by composition item groups.

- Data from Specifications (for actual composition of raw substances)

ⓘ Note

You can use all specification types or filter down to a subset of specification types.

Attribute properties have fields that use the following field types: numeric, character-based, date-time, URL, or Boolean.

ⓘ Note

For character-based attribute fields, you can also define allowed values based on phrase collections.

See [Properties \[page 315\]](#).

6. Create Property Trees

Property trees are a hierarchical view of a collection of properties. Property trees are assigned to specification types.

Create property trees based on which properties you want your product developer to see for a specification of a given specification type.

Properties can be organized under property nodes for better structuring. These nodes are unique to the property tree.

After a property tree is created, you can assign it to a specification type in the *Specification Types* app.

See [Property Trees \[page 321\]](#).

(Optional) Define Product Categories

Create a product category tree by creating first the high-level categories and then create lower-level categories under them.

Note

The product category tree can be maximum 10 levels deep.

You can use product categories to give users access to just a subset of specifications. In the *Authorization Contexts* app, you can set up an authorization context based on product categories for a previously defined set of users and user groups - these users will only see those specifications they are allowed to based on the product category.

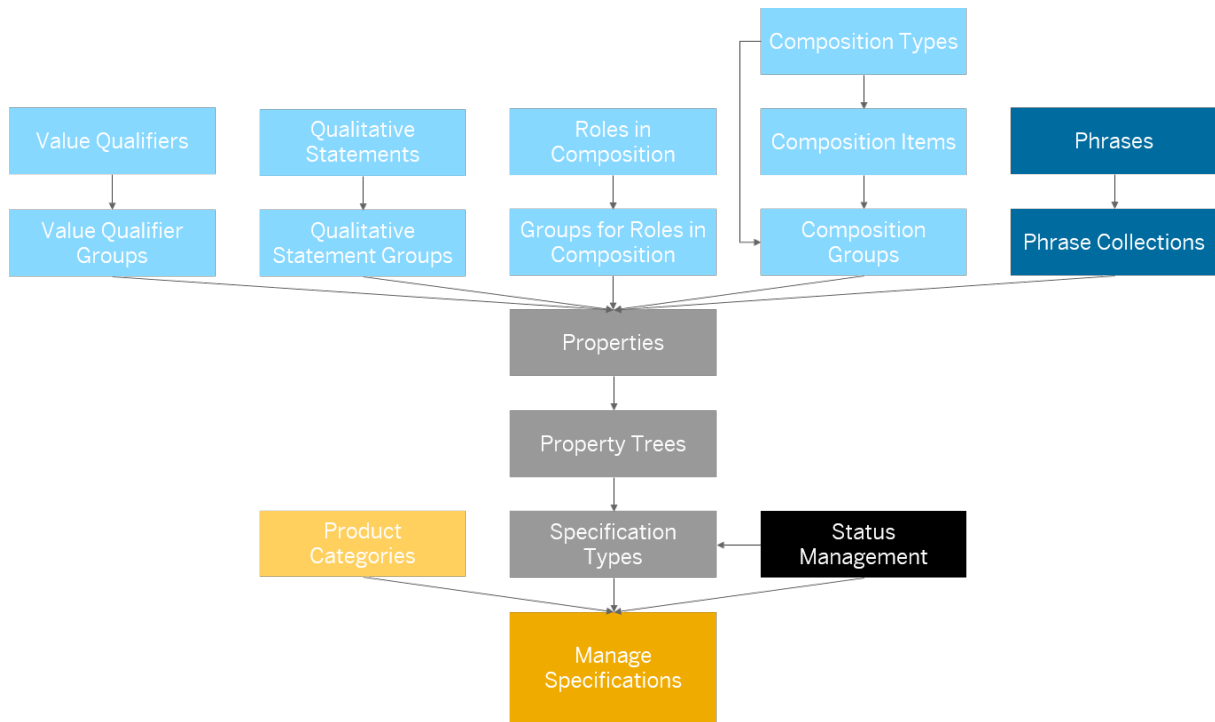
See [Managing Product Categories \[page 324\]](#) and [Handling Authorizations \[page 326\]](#).

8.6.2 Overview of Data Model

The following image explains the data model of the Specification Management SaaS application. The arrows point to where the given business object is consumed.

Note

Select a business object to navigate to its topic.



- [Composition Item Types \[page 306\]](#)
- [Value Qualifiers for Compositions \[page 313\]](#)
- [Value Qualifiers for Compositions \[page 313\]](#)
- [Qualitative Statements for Compositions \[page 311\]](#)
- [Qualitative Statements for Compositions \[page 311\]](#)
- [Roles in Composition \[page 310\]](#)
- [Roles in Composition \[page 310\]](#)
- [Composition Items \[page 307\]](#)
- [Composition Item Groups \[page 308\]](#)
- [Phrases](#)
- [Phrase Collections](#)
- [Properties \[page 315\]](#)
- [Property Trees \[page 321\]](#)
- [Using Specification Types \[page 303\]](#)
- [Managing Product Categories \[page 324\]](#)
- [Business Configuration for Status Management \[page 367\]](#)
- [Working with Specifications](#)

8.6.3 Using Specification Types

A specification type defines a specification's place in a company's overall business lifecycle.

When you create a specification, it must belong to a specification type, so that the right properties are offered for you to choose from. These properties come from an assignment between a property tree and the specification type you define in the *Specification Types* app.

To create a specification type, perform the following steps:

1. Choose *Create*, or select an existing specification type to *copy* from.
2. Provide an ID and a name for the specification type.
3. Assign a status profile to select the status network your specification type can use. Status profiles can be configured in the *Status Management* app.
4. (Optional) Add translations of the specification type's name.
5. (Optional) You can prevent non-administrator users from creating or editing specifications with this specification type if you select *Locked for Users*.
6. Assign at least one property tree to your specification type. You can only assign property trees with *Released* status.

Note

A specification type can have multiple property trees and one property tree can be assigned to multiple specification types.

7. *Release* your specification type.

Note

Specifications can only be created with specification types that are in *Released* status.

8.6.3.1 Linking to a Product Master

Describes how to create a link between specifications and product masters in an external system.

Prerequisites

Establish connectivity to the external system, for example S/4HANA. For more information, see [Configuring Connectivity for Specification Management \[page 132\]](#).

Specification Types

A product master in an external system can be linked to a specification if the assignment is allowed for its specification type. To enable product master assignments for a specification type, select the *Product Master Link* checkbox in the *Specification Types* app.

If this checkbox is selected, you can assign product masters to specifications created with this particular type. By choosing a product master on the *Related Objects* tab of the *Manage Specifications* app, the link is established to the specification.

Note

Only one specification can be assigned to a product master.

More Information

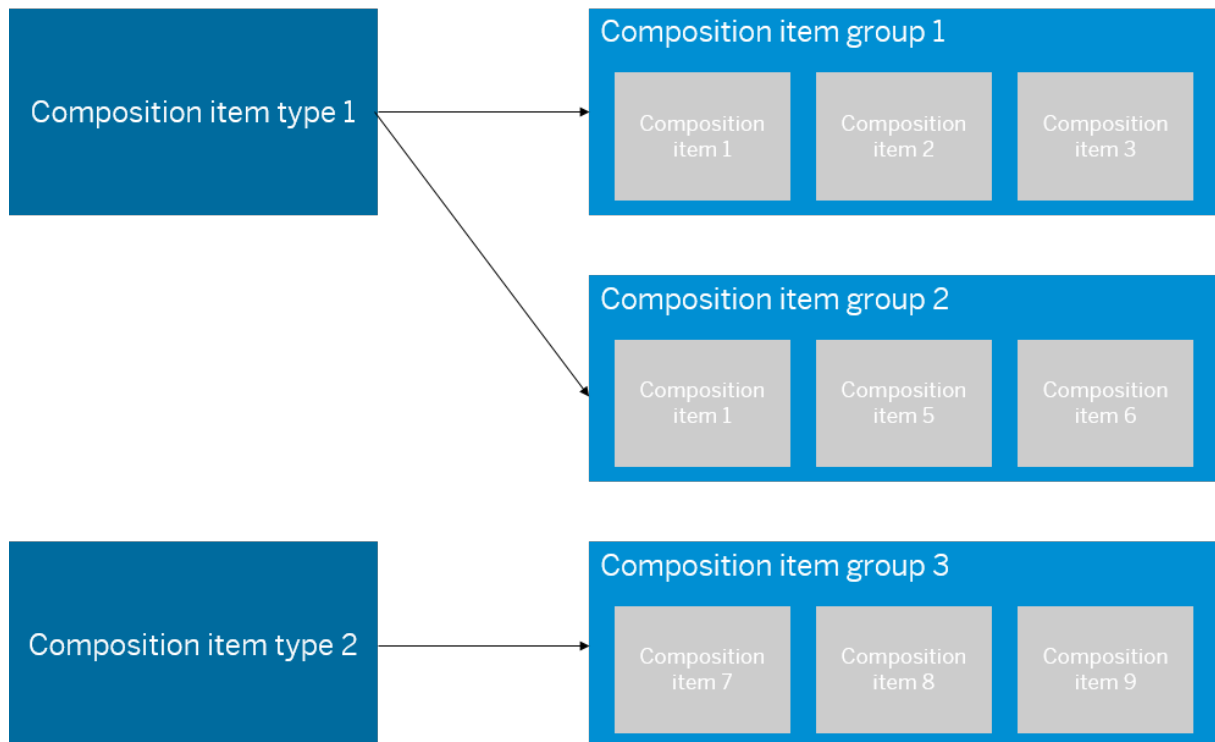
[Integrating Specification Management with Other Products](#)

8.6.4 Defining a Composition

A composition is a list of ingredients or constituents used to describe what a mixture is made up of. A composition appears in specifications as a type of property. You can use different types of compositions based on your line of business.

The following video explains in detail how the composition apps are related:

The following image shows the suggested way to define the objects related to compositions.



One *composition item type* can be assigned to multiple composition item groups, but a *composition item group* is always assigned to only one *composition item type*.

Composition items can exist in multiple composition item groups, whereas composition items of different composition item types can't be added to a composition item group.

Example

Here are examples of how the business objects of composition can be related:

- Composition item type: **Nutrients**
 - Composition item group that's associated with composition item type **Nutrients**: **Vitamins**
 - Composition items added to this group: Vitamin A, Vitamin C, Vitamin D, and so on.
 - Another composition item group associated with composition item type **Nutrients**: **Top eight nutrients**
 - Composition items added to this group: Fat, Protein, Fibers, Carbohydrates, and so on.
- Composition item type: **Heavy metals**
 - Composition item group that's associated with composition item type **Heavy metals**: **Trace heavy metals**
 - Composition items added to this group: arsenic, lead, cadmium, mercury, and so on.

Some examples of value sets include:

- *Roles in composition*: active ingredient, solvent, stabilizer, impurity.
- *Groups for roles in composition*: chemical roles.
- *Value qualifiers*: measured, certified, warning, supplier provided, and so on.

- *Value qualifier groups*: internal handling, validations, compliance info, and so on.
- *Qualitative statements*: trace elements, contains, not contains, unknown.
- *Qualitative statement groups*: allergen, diet, package, and so on.

More Information

For the different steps of defining composition-related objects, see the following sections:

1. [Roles in Composition \[page 310\]](#)
2. [Qualitative Statements for Compositions \[page 311\]](#)
3. [Value Qualifiers for Compositions \[page 313\]](#)
4. [Composition Item Types \[page 306\]](#)
5. [Composition Items \[page 307\]](#)
6. [Composition Item Groups \[page 308\]](#)

8.6.4.1 Composition Item Types

The *Composition Item Types* app enables you to create and release item types in configuration.

To create and maintain *composition items* in the system, one or more *composition item types* must be released. A *composition item type* links *composition items* and *composition item groups*.

❁ Example

Standard item types: nutrient, diet, allergen.

To create a *composition item type*, you need to enter the following information:

- Enter valid name and ID.

ⓘ Note

You can enter alphanumeric values up to 100 characters in the Name field and 30 characters in the ID field.

- (Optional) You can translate the name of the object into a different language. This ensures that the object is displayed in the language that users log on with.

ⓘ Note

You can add one translation per language.

If you want to translate the object, go to the *Translations* section and select the language code from the list, then add the translation.

Statuses for Composition Item Types

Once the *composition item type* is created, you can set following statuses:

- By default, the status is set to *In Work*.
- You can set the status to *Released* once the required information is entered.
 - You can set the status to *In Work* or *Obsolete* if it isn't required.

Note

You can't create a new composition item or group if the composition item type is set to *Obsolete*.

- You can *Edit* or *Delete* the *composition item type* object when the status is set to *In Work* or *Released*.

Note

You can't delete a *composition item type* if it's used in *composition item* or *composition item group*.

8.6.4.2 Composition Items

The *Composition Items* app enables you to create items based on released composition item types in the system.

To create a *composition item*, you need to enter the following information:

- Enter a valid name and ID.

Note

You can enter alphanumeric values up to 100 characters in the Name field and 30 characters in the ID field.

- Select a *composition item type* from the list.

Note

The composition item type associated with the composition item can't be changed once it's created.

- (Optional) You can enter a legally binding description about the composition item per country/region.
 - Choose *Create*, select a language from the list, and enter the respective description. You can also add the country/region information to it. You can create only one description per country/region.

Note

Legal description cannot exist without assigning a country/region to it.

- (Optional) You can translate the name of the object into a different language. This ensures that the object is displayed in the language that users log on with.

Note

You can add one translation per language.

If you want to translate the object, go to the [Translations](#) section and select the language code from the list, then add the translation.

- (Optional) You can also select [Default UoM](#) from the Value help list. To assign [Restricted List of UoM](#) choose [Enable UoM Restriction](#).

Note

You can't delete a default UoM from restriction list.

Statuses for Composition Items

Once a [composition item](#) is created, you can set the following statuses:

- By default, the status is [In Work](#).
- You can set the composition item to [Released](#) once the required information is entered.
 - You can set the status to [In Work](#) or [Obsolete](#) if it's no longer required.

Note

You can't select or add composition item in a composition item group, that is set to [Obsolete](#) or [In Work](#).

- You can [Edit](#) or [Delete](#) the [composition item](#) object when the status is set to [In Work](#) or [Released](#).

Note

You can't delete a composition item if it's used in [composition item group](#).

8.6.4.3 Composition Item Groups

The [Composition Item Groups](#) app enables you to create item groups based on released composition item types in the system.

These groups are linked to a composition item type and allow you to add composition items only of the same type as the group itself.

Example

A nutrient group **U.S. Label** will contain the nutrients on the U.S. nutrition label.

You can't combine composition items with different composition item types in a group.

Example

Allergens can't be assigned to a nutrient group.

To create a [composition item group](#), you need to enter the following information:

- Enter valid name and ID.

Note

You can enter alphanumeric values up to 100 characters in the Name field and 30 characters in the ID field.

- Select a *composition item type* from the value help.
- In the *Items* section, add or assign composition items in a table format.
- (Optional) You can translate the name of the object into a different language. This ensures that the object is displayed in the language that users log on with.

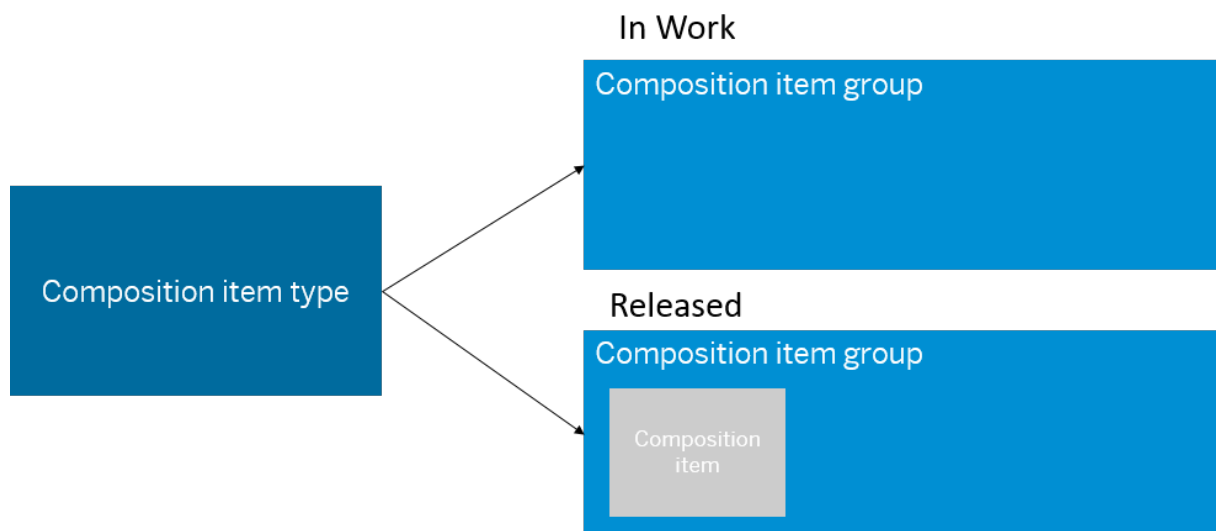
Note

You can add one translation per language.

If you want to translate the object, go to the *Translations* section and select the language code from the list, then add the translation.

Statuses for Composition Item Groups

A *composition item group* can exist without adding a *composition item* in the status *In Work*. The following image explains the different statuses.



To set the *composition item group* to *Released*, you need to assign at least one *composition item*. Composition items can exist in multiple composition item groups.

Example

If nutritional groupings are divided into regulatory labeling jurisdictions, fat is a common nutrient that can be used.

You can *Edit* or *Delete* the object when the status is set to *Released*.

ⓘ Note

You can't delete a *composition item group* if it's used in a property.

You can set the *composition item group* to *Obsolete* if it's no longer required.

8.6.4.4 Roles in Composition

Roles in Composition is a value set app that enables you to maintain necessary item roles for the composition items in the product specification.

🔗 Example

Active ingredient, solvent, stabilizer, impurity.

To create a *role in composition* object, you need to enter the following information:

- Enter valid name and ID.

ⓘ Note

You can enter alphanumeric values up to 100 characters in the Name field and 30 characters in the ID field.

- (Optional) You can add a *Description* up to 1000 characters to your object.
- (Optional) You can translate the name of the object into a different language. This ensures that the object is displayed in the language that users log on with.

ⓘ Note

You can add one translation per language.

If you want to translate the object, go to the *Translations* section and select the language code from the list, then add the translation.

Once the object is created, you can *Edit* it (or *Delete* it if no longer required.)

ⓘ Note

You can't delete a *role in composition* object if it's used in *groups for roles in composition*.

Statuses for Roles in Composition

See [Status Management for Value Set Apps \[page 314\]](#)

ⓘ Note

You can't select or add a role in composition in a *group for roles in composition* that is set to *Obsolete*.

Groups for Roles in Composition

Groups for Roles in Composition is a value set app that enables you to group all the *roles in composition*. It's used in the *Properties* app.

To create a *group for roles in composition* object you need to enter following information:

- Valid name and ID.
- Add *roles in composition* as items in a table format.
- (Optional) You can translate the name of the object into a different language. This ensures that the object is displayed in the language that users log on with.

Note

You can add one translation per language.

If you want to translate the object, go to the *Translations* section and select the language code from the list, then add the translation.

Once the *roles in composition* object is created, you can *Edit* it (or *Delete* it if no longer required).

Note

You can't delete a *group for roles in composition* if it's already used in a property.

Statuses for Group for Roles in composition

See [Status Management for Value Set Apps \[page 314\]](#)

Note

You can't add or select a *group for roles in composition* object in a property, that is set to *Obsolete*.

8.6.4.5 Qualitative Statements for Compositions

Qualitative Statements for Compositions is a value set app that enables you to maintain necessary qualitative statements for the composition items in the specification.

Qualitative statement is an exception value on premise, that basically holds certain values indicating the presence of composition inside another product.

Example

Trace elements, contains, not contains, unknown.

To create a qualitative statement, you need to enter the following information:

- Enter valid name and ID.

Note

You can enter alphanumeric values up to 100 characters in the Name field and 30 characters in the ID field.

- (Optional) You can add a *Description* up to 1000 characters to your object.
- (Optional) You can translate the name of the object into a different language. This ensures that the object is displayed in the language that users log on with.

Note

You can add one translation per language.

If you want to translate the object, go to the *Translations* section and select the language code from the list, then add the translation.

Once the *qualitative statement* object is created, you can *Edit* it (or *Delete* it if no longer required).

Note

You can't delete a qualitative statement if it's used in qualitative statement groups.

Statuses for Qualitative statements

See [Status Management for Value Set Apps \[page 314\]](#)

Note

You can't add or select a qualitative statement to a qualitative statement group that is set to *Obsolete*.

Qualitative Statement Groups for Compositions

Qualitative Statement Groups for Compositions is a value set app that enables you to group all the qualitative statements. It will be used in the *Properties* app.

To create a *qualitative statement group* object, you need to enter following information:

- Enter a valid name and ID.
- Add qualitative statements in a table format.
- (Optional) You can translate the name of the object into a different language. This ensures that the object is displayed in the language that users log on with.

Note

You can add one translation per language.

If you want to translate the object, go to the *Translations* section and select the language code from the list, then add the translation.

Once the *qualitative statement* object is created, you can *Edit* it (or *Delete* it if no longer required).

ⓘ Note

You can't delete a *qualitative statement group* if it's used in a *property*.

Statuses for Qualitative statement groups for compositions

See [Status Management for Value Set Apps \[page 314\]](#)

ⓘ Note

You can't add or select a qualitative statement group in a property that is set to *Obsolete*.

8.6.4.6 Value Qualifiers for Compositions

Value Qualifiers for Compositions is a value set app that enables you to maintain value qualifiers for composition items in the product specification.

Value qualifier determines how the value should be interpreted in the composition values, the data source of it and how it should be treated later.

🔗 Example

Measured, certified, warning, supplier provided, not validated, validated, calculated, compliance provided.

To create a value qualifier, you need to enter the following information:

- Enter a valid name and ID.

ⓘ Note

You can enter alphanumeric values up to 100 characters in the Name field and 30 characters in the ID field.

- (Optional) You can add a *Description* up to 1000 characters to your object.
- (Optional) You can translate the name of the object into a different language. This ensures that the object is displayed in the language that users log on with.

ⓘ Note

You can add one translation per language.

If you want to translate the object, go to the *Translations* section and select the language code from the list, then add the translation.

Once the *value qualifier* object is created, you can *Edit* it (or *Delete* it if no longer required).

ⓘ Note

You can't delete a *value qualifier* if it's used in *value qualifier groups*.

Statuses for Value qualifiers

See [Status Management for Value Set Apps \[page 314\]](#)

ⓘ Note

You can't add or select value qualifier to a value qualifier group that is set to *Obsolete*.

Value Qualifier Groups for Compositions

Value Qualifier Groups for Compositions is a value set app that enables you to group all value qualifiers for composition items in a product specification.

It's used in the *Properties* app.

To create a *value qualifier group* object, you need to enter the following information:

- Enter a valid name and ID.
- Add value qualifiers in a table format.
- (Optional) You can translate the name of the object into a different language. This ensures that the object is displayed in the language that users log on with.

ⓘ Note

You can add one translation per language.

If you want to translate the object, go to the *Translations* section and select the language code from the list, then add the translation.

Once the *value qualifier group* object is created, you can *Edit* it (or *Delete* it if no longer required).

ⓘ Note

You can't delete a *value qualifier group* if it's used in a *property*.

Statuses for value qualifier groups for compositions

See [Status Management for Value Set Apps \[page 314\]](#)

ⓘ Note

You can't add or select value qualifier group to a property that is set to *Obsolete*.

8.6.4.7 Status Management for Value Set Apps

You can set the status for an object once it's created.

- By default, the status is *In Work*.
- You can set the object to *Released* once the required information is entered.
 - You can *Edit* or *Delete* the object when the status is set to *Released*.
- You can set the object status to *Obsolete* if it's no longer required.

8.6.5 Handling Properties

The most important aspect of maintaining specifications is to be able to define their respective properties.

The recommended order for defining these business objects is the following:

1. First, properties are defined in the Properties app, see [Properties \[page 315\]](#).
2. Properties are organized into a hierarchical structure called a *property tree*, see [Property Trees \[page 321\]](#).
3. Specification types are created, and then assigned to property trees, see [Using Specification Types \[page 303\]](#).

When creating a specification, the product developer assigns a specification type to it, which uses the connected property tree with the assigned properties.

❖ Example

The product developer wants to create a raw specification for silicone-free shampoo. The company administrator defined unpackaged product as a specification type, and the associated property tree is "Properties for healthcare products". This way, all properties relevant for a shampoo will be displayed.

8.6.5.1 Properties

With the *Properties* app, you can create and maintain all the properties.

A *property* records the details on a specification in numeric or textual form. Depending on different business cases, you can define *Attribute Property*, *Composition Property*, and *Information Property*.

Attribute Property

A type of property that describes the characteristics of an object or entity in more detail. Each attribute property groups a set of fields depending on the requirement to describe a given property. See the following table for an example.

pH	
pH Value	7.1
Method of Measure	Paper Strip

Composition Property

A type of property that contains a list of properties sourced from a composition configuration or specification. You can't maintain the content of compositions freely, but you can select data from a composition configuration or specification instead. Here's an example.

Nutrient Composition					
Nutrient	Value	Min	Max	Target	UoM
Vitamin C	10	5	15	10	mg

Nutrient Composition

Carbohydrate	2000	100	5000	1500	mg
--------------	------	-----	------	------	----

Information Property

A type of property that contains rich-text information to provide more details. For example, your users can change font size. Unlike the other two types of property providing plain-text information, the *Information Property* can help your users format the property content.

For example, the output of the *Information Property* can be an introduction to a product briefing, which contains marketing and product requirements, offering emphasis on the most important product changes or on the new requirements.

8.6.5.1.1 Creating Properties

You can create properties with the *Properties* app.

Prerequisites

1. You need administrator rights for this action.
2. For composition properties: at least one composition item group or one specification type is defined in the system.

Procedure

1. Open the *Properties* app and choose *Create*.
2. Enter a *Name* and an *ID* for your property.
3. Choose *Property Type*.

You can choose a single type, or any ones of the types as a combined property type.

4. Choose whether to enable *Validity* to indicate geographic or manufacturing information for the property.
5. Choose whether to enable *Multiple Rows* and define a *Maximum Row Number* if so.
6. Choose whether to enable *Allow for Not Applicable* and *Allow for No Data Available*.

If you enable the two options, users can set the property as *Not applicable* or *No Data Available* in specifications.

7. Enter a description to provide more details.
8. Choose *Save and Continue*.

The detail page of a new property appears, with the status *In Work*.

8.6.5.1.2 Editing and Deleting Properties

After creating a property, you can edit and delete the property as well as enable translation for the property.

- For the *In Work* property, you can edit header section, release, and delete the property.
- If the *Released* property is not used by any specification, you can delete the property and set it to *In Work*. Otherwise, you cannot delete the property or set it to *In Work*.

Editing Attribute Property

Go to the *Attribute Settings* tab and create attribute fields. For more information on creation, see [Creating Attribute Fields \[page 319\]](#).

You can also edit fields, delete fields, and adjust the fields' order to be displayed in the specifications.

Editing Composition Property

Go to the *Composition Settings* tab and choose *Edit* to enable settings as shown in the below table.

Number Format	Integer / Decimal	Choose to create integer or decimal data.
	Precision	Only applicable to the decimal data.
	User defined	Let users define the decimal number within the maximum range. Input a number in <i>Maximum Number of Decimals</i> to set the maximum decimal number for users.
	Predefined	Define a fixed decimal number in <i>Number of Decimals to Use</i> . If users set a decimal number larger than the value, the extra numbers will be deducted.

Header Unit of Measure

Header Unit of Measure

Choose a UoM behavior for composition column headers from three options:

No header UoM info/check There is no UoM check for the column headers.

Analytical composition (UoM is fixed to Proportion dimension) The dimension for the UoM is set to the *Proportion* type, and later you can check whether each composition column reaches the defined proportion as a whole.

Composition has reference quantity The composition headers have a default reference quantity and UoM that is set to provide end users a suggested UoM. You can use it to specify how much of a composition item should be applied.

Has UoM

Choose whether to use the unit of measure.

UoM

Choose a unit of measure.

If you select the *Enforced UoM* checkbox, the dimension is fixed depending on the UoM.

Dimension

Choose a dimension.

Range Expression

Single Input

If you select this option, your users can enter an expression to indicate data range. For example, > 5 - <= 15.

Multi Inputs

You choose multiple restrictions for the data range, for example, whether to set a minimum value.

Define Interval

Define an interval for all the numeric values.

General Composition Data

Has Comment

Select the check boxes to choose whether to enable comment.

Qualitative Statement Group

For example, contains, does not contain, unknown.

	Role in Composition Group	For example, <code>Active Ingredient</code> .
	Value Qualifier Group	For example, <code>Validated</code> .
Data Source Information	Source of Data	<p>Choose the source of composition property data, from composition configuration or from specification.</p> <p>For the data from specifications, you can choose all the specification types or select part of the types.</p> <p>For more information, see Defining a Composition [page 304] and Working with Specifications.</p>

Editing Information Property

Go to the [Information Property](#) tab and choose [Edit](#). You can customize property content format by the following functions:

- Customize fonts
- Insert a list
- Add hyperlinks

Translating Property

Go to the [Translation](#) tab and maintain translations. The [Property](#) table lists the translations for the property name and description. The [Attribute Fields](#) table lists the translations for the name of attribute fields.

Choose [Show Empty](#) to filter the language items whose translation is missing. Choose [Edit](#) to add or remove languages for translation.

For more information, see [Translation of Data \[page 329\]](#).

8.6.5.1.3 Creating Attribute Fields

Attribute fields are the detailed property characteristics used to define and store specific data of different types.

To create an attribute field, go to the [Attribute Settings](#) tab and choose [Create](#). In the pop-up window, enter a name and ID, and choose a field type. For different field types, you need to input different values.

Creating a Key Figure Field

The *Key Figure* field type allows you to create the numeric data that you want to maintain.

Configure the key figure field as follows:

Integer / Decimal	Choose to create integer or decimal data.
Precision	Only applicable to the decimal data. You can leave it and the decimal precision depends on the user's input. Or you can define how many numbers to use.
Has UoM	Choose whether to use the unit of measure.
UoM	Choose a unit of measure. If you select the <i>Enforced UoM</i> checkbox, the dimension is fixed depending on the UoM.
Dimension	Choose a dimension.
Range Expression	<ul style="list-style-type: none">• Single Input: if you select this option, your users can enter an expression to indicate data range. For example, > a - <= b.• Multi Inputs: you choose multiple restrictions for the data range, for example, whether to set a minimum value.
Define Interval	Define an interval for the numeric value.

Creating a Character-based Field

The *Character-based* field type allows you to create the character data that you want to maintain.

Choose a restriction type for the character base fields.

Upper Limit	Set an upper limit for the number of characters.
Standard List	Choose a predefined template from the list. For example, <i>Country/Region</i> .
Phrase Collection	Choose a phrase collection from the system. For more information, see Phrase Collections .

Creating a DateTime Field

The *DateTime* field type allows you to create the date and time data that you want to maintain.

Choose to create a field data that only contains the date, or contains both date and time.

Creating a Boolean Field

The *Boolean* field type allows you to create the Boolean data that you want to maintain. For example, *True*.

Creating a URL Field

The *URL* field type allows you to create the URL data that you want to maintain, including the link and the texts that define the link.

8.6.5.2 Property Trees

A *property tree* is a collection of properties organized into a structure.

A property tree contains properties, organized into *property nodes*. Property nodes are defined within the *Property Trees* application and are valid only for the given property tree.

Note

Each property can be present only once in a property tree but one property can be included in multiple property trees.

You can have up to five levels of property nodes. The order of properties and property nodes on a level is arbitrary.

After you've added properties, you can assign the property tree to a *specification type* in the *Specification Types* app. When the product developer creates a new specification, they select a specification type for it. This specification type and the assigned property tree determine which properties are visible in the specification.

For more information on specification types, see [Using Specification Types \[page 303\]](#).

Property Tree Status

When a property tree is created, its status is *In Work*. After adding properties and property nodes to it, you can release it. Only released properties can be assigned to specification types.

If you no longer need the property tree, and you haven't assigned it to a specification type, you can delete it. After it's assigned to a specification type, you can only set it to *Obsolete*. Obsolete property trees are displayed in specifications, but can't be added to specification types and can't be modified.

More Information

[Creating Property Trees \[page 322\]](#)

[Modifying Property Trees \[page 323\]](#)

8.6.5.2.1 Creating Property Trees

You can create property trees with the *Property Trees* app.

Prerequisites

1. You need administrator rights for this action.
2. Properties are defined in the system.
3. At least one released specification type is defined in the system.

Context

If you want to create a new property tree, follow these steps:

Procedure

1. Open the *Property Trees* app and choose *Create*.
2. Enter an *ID* and a *Name* for your property tree.
3. Add property nodes to the property tree by clicking the *Add* button and selecting the *Add Property Node* option. Enter an *ID* and a *Name* for your property node. Property nodes can be for example: Physical-Chemical Properties, Compositions, Statements, and so on.

Note

A property node is defined and valid only for the particular property tree it's created in.

4. Add properties to your property tree by clicking the *Add* button on the desired level and selecting the *Add Properties* option. You can select one or more properties to add.

ⓘ Note

If you select the [Add](#) button next to a property node, then the properties will be added under the respective property node. If you choose the [Add](#) button at the top of the table, the properties will be added to the root level, without any parent.

5. Save your property tree.

8.6.5.2.2 Modifying Property Trees

Prerequisites

You can modify a property tree only if it isn't in [Obsolete](#) status.

Adding and Removing Properties

You can remove properties with the [Remove](#) button. This deletes only the association between the property and the property tree, not the property itself.

ⓘ Note

If you remove a property from the property tree while the property tree is already released, there may already be a specification that has data maintained for the given property. In this situation, removing a property can cause data to be hidden from the UI.

You can add properties in the following ways:

- If you want to add a property under a node, choose the [Add](#) button in the respective row, then select [Add Properties](#).
- If you want to add a property to the root (so it has no parent node), choose the [Add](#) button in the table header, then select [Add Properties](#).

Adding and Removing Property Nodes

You can remove property nodes with the [Remove](#) button. This deletes the property node, and removes the association between the underlying properties and the property tree.

📘 Note

If you delete a property node from the property tree while the property tree is already released, it may happen that there's already a specification that has data maintained for the underlying properties and therefore the change can cause data to be hidden from the UI.

You can add property nodes in the following way:

- If you want to add a property node under another node, choose the [Add](#) button in the respective row, then select [Add Property Node](#).
- If you want to add a property node to the root (so it has no parent node), choose the [Add](#) button in the table header, then select [Add Property Node](#).

Cutting and Pasting

You can cut and paste whole branches of the property tree hierarchy as follows:

1. Select the items you want to place elsewhere in the property tree. You can select a whole hierarchy with underlying properties and nodes as well, or you can select individual properties on any level.
2. Choose [Cut](#).
3. Select the item where you want to paste your cut items. Depending on the target, you can paste before, after, or into it. Select the [Paste](#) menu option, and then the respective button (for example, [Paste Before](#)).

📘 Note

A property tree can have a maximum of **five levels of property nodes**, therefore the paste is successful only if you don't exceed this limit with your action.

If you change your mind and don't want to place your cut items elsewhere, you can restore the original state of the property tree with the [Restore](#) button.

The following video shows the functionality in detail:

8.6.6 Managing Product Categories

A [product category](#) is a classification of products based on the collection of properties that are relevant for the given product or product line.

When creating new specifications, the product developer can assign a product category to it, and this information can be used for searching and categorization.

→ Tip

You can use product categories with adherence to industry standards like GS1 or FDA.

A product category can also filter down the properties that are provided by the property tree, so the user only sees the properties relevant for the given product category.

You can order your product categories into a hierarchical list, with a maximum of 10 levels. You can define only one product category hierarchy.

Product categories contain the following information:

- Short name
- Description
- Properties

More Information

[Creating a Product Category Hierarchy \[page 325\]](#)

[Modifying a Product Category \[page 325\]](#)

8.6.6.1 Creating a Product Category Hierarchy

A default product category hierarchy appears when the app is first opened, which you can rename and create new categories in the Product Categories app.

Each customer can have only one product category hierarchy. When the app is first opened, the product category root is created.

Note

The product category root can be renamed according your company's needs.

If you want to create a new product category, follow these steps:

1. Open the *Product Categories* app.
2. Select the product category under which you would like to create the new category, then choose *Create*. If you want to create a main product category right under the root, select the root.
3. Enter a name and description, then save your work.

Note

The system suggests an automatic ID for your product category, but you can use an ID of your own.

8.6.6.2 Modifying a Product Category

You can edit the name and description of a product category, as follows:

1. Open the *Product Categories* app, then select the respective property.
2. Choose *Edit*.
3. Apply any changes, then save.

8.6.6.3 Adding Properties to Product Categories

Any released property can be assigned to a product category.

Property trees are a broader, more generic collection of properties. This is then filtered down by the product category when the product developer creates a specification, so that only the relevant properties show up.

❖ Example

For example, you can create a property tree for food products in the European Union. Then you can define a product category that filters this down, such as infant food or dairy, and add the corresponding properties to it.

If you then create a specification with the product category dairy, the property tree only shows the subset of properties relevant for dairy products.

Inheritance

Inheritance means that properties assigned to a parent product category are also visible for its subcategories. You can enable or disable inheritance for each product category.

- If inheritance is *enabled*, then the product category has the same properties assigned as its parent. If the parent also inherits, then this goes all the way up to the first parent that doesn't inherit, such as the product category root.
- If inheritance is *disabled*, you can assign a completely new set of properties to that product category, regardless of which properties the parent has. To disable inheritance, select the *Enable Overwrite* button. You can also turn off the overwrite function by selecting *Disable Overwrite*, in which case property inheritance from the parent category is restored.

Filtering

After you've added properties to a product category, the *Properties* tab of the *Manage Specifications* app only displays the assigned properties. It indicates that the properties are filtered by product category, but the filtering can be switched off by clicking ↶ *Undo*.

You can also choose to filter by maintained properties in the property tree by choosing ▾ *Filter*.

8.6.7 Handling Authorizations

You can control who can view and edit specifications by creating *authorization contexts* that regulate access, based on certain attributes.

Your business may need to control who can view and edit certain specifications. Access to specifications can be controlled within an entity called an authorization context.

You can set up an authorization context for previously defined *users* and *user groups*. They can be allowed to see only specifications that belong to one or a combination of the following:

- *specification types*
- *product categories*
- *specification versions*

The specified users and user groups can then access specifications with all combinations of the specification types, product categories, and specification versions that are included in the authorization context. This can be further refined on an operation level, by individually granting viewing, changing, or deleting rights.

You can also add a note to describe the goal of the authorization context or to provide other language-independent information.

Example

A user group from a department of a company can be authorized to see and edit specifications of one specification version of a finished product in a product category, but not delete them.

8.6.7.1 Creating Authorization Contexts

If you want to create a new authorization context to control access to specifications, do the following:

1. Open the *Authorization Contexts* app, then choose *Create*.
2. Enter an *ID* for your context, and add a *note* if necessary.
3. Specify *users* or *user groups*.

Note

You can create user groups in the *Manage Teams* app.

4. Select the product categories and specification types that you want the specified users or user groups to access.
You can add only released specifications to the authorization context.
5. Save your authorization context.

8.6.7.2 Granting Operation-Level Access

Companies may want to make sure that sensitive data can only be changed or seen by the right people. In the *Authorization Contexts* app, this is why you can grant operation-level access to specifications.

Operations mean *creating*, *copying*, *reading*, *updating*, *deleting*, and *creating new versions* of specifications with certain types, versions, or product categories.

Example

To allow users to create, copy, read, and add new versions to, but not delete a specification with a product category, do the following:

1. Open an authorization context with users already assigned, and choose *Edit*.
2. Add a product category and a specification type to the context by choosing *Create* both under *Product Category* and *Specification Type*.

Note

If users are granted *Create* access, they are also allowed to copy specifications.

3. Select checkboxes *Create*, *Read*, *Update*, and *New Version*.
4. Save the authorization context.

The users assigned to this authorization context can now create, read, and update specifications, as well as add new versions. However, they aren't allowed to delete any specifications in the selected product category.

Access Types

You can grant the following operation-level access types:

- Authorization based on the combination of specification type and product category. Both of these must be added to the authorization context, unless the specification is only defined by specification type.
- Authorization directly to specification versions

Note

Only *Read*, *Update*, and *Delete* authorizations are allowed for specification versions, because granting *Create* access to existing specification versions isn't possible.

You can also combine the two access types in one context by adding specification types, product categories, and specification versions to it.

The system then evaluates their union so that users see the following:

- All specifications based on the specification type and product category
- All specification versions listed in the context

8.6.8 Synchronization of Data

Use the *Synchronize Data* app to load data from external services to work with Specification Management.

The *Synchronize Data* app lists all the data that you need to synchronize from other services in the card view. Each card represents a type of data.

You can load the following data:

- *Unit of Measure Data*
- *Plants*

Unit of Measure Data

The following information is available in the *Unit of Measure Data* card.

Last Loaded	Specifies the latest time and date when the data was loaded.
-------------	--

Number of Units of Measure	Specifies the number of UoMs that you've loaded.
----------------------------	--

Number of Dimensions	Specifies the number of dimensions you've loaded.
----------------------	---

After creating your own UoM, you need to choose [Load](#) to load the latest unit of measure data.

⚠ Restriction

If you are using the EU11 landscape, the Load button is not available. In this case, please create a customer incident to the SAP application component PLM-EPD-SPM and request a sample file in which you can send us the UoM content that you would like to use in Specification Management.

Plants

Choose [Download Template](#) to download a template file, enter your data in the file, and choose [Upload](#) in the [Plants](#) card.

- By choosing [Download Template](#) > [Download Plants Template](#), you download a blank template, where you can fill in the plants.
- By choosing [Download Template](#) > [Download Current Plants](#), you download a file containing the existing plants. In the file, you can update current plants or add more plants. Also, you can delete the plants that are not used by any specification. If you delete plants that have been used, the file cannot be uploaded.

The following information is available in the card.

Last Loaded	Specifies the latest time and date when the plant is uploaded.
-------------	--

Number of Plants	Specifies the number of plants that you've uploaded.
------------------	--

8.6.9 Translation of Data

When entering configuration data to the system, you can provide the name and description in other languages as well. This way, if users use the apps of Specification Management in one of the supported languages, they can see the respective configuration data in that language.

📌 Note

If no translation is given for the used language, the system falls back to the given name and description.

The following administrator apps have translation functionality:

- Composition Items

- Composition Item Types
- Composition Item Groups
- Groups for Roles in Composition
- Product Categories
- Properties
- Property Trees
- Qualitative Statement Groups for Composition Items
- Qualitative Statements for Composition Items
- Roles in Composition
- Specification Types
- Value Qualifier Groups for Composition Items
- Value Qualifiers for Composition Items

8.6.10 Cross-Product Features used in Specification Management

Specification Management uses the following cross-product features:

- Unit of Measure, see [Implementing UoM \[page 330\]](#)
- Status Management, see [Business Configuration for Status Management \[page 367\]](#)
- Common Functions

For the appropriate roles to handle these, see [Role Templates for Specification Management \[page 62\]](#).

8.6.10.1 Implementing UoM

Specification Management is used to store property information about products and substances in a variety of ways. To accurately describe and interpret this data, Specification Management must use *Unit of Measurement*.

Context

For more information about the UoM service, see [Units of Measurement](#).

After creating your own UoM, you need to choose *Load* to load the latest unit of measure data in the *Synchronize Data* application. For more information, see [Synchronization of Data \[page 328\]](#).

Procedure

1. In the SAP BTP cockpit, open your subaccount and navigate to ► [Security](#) ► [Role Collections](#) ▾.
2. Choose [Create New Role Collection](#) and enter a name for the collection. For example, unit-of-measure.
3. In the [Roles](#) tab of the role collection detail page, add two roles: `UoM_Configuration_Expert` and `UoM_Data_Access_User`.
4. In the [Users](#) tab of the role collection detail page, add target users.
5. Create a role collection and assign roles and users for it.

The users have the access to the UoM apps.

8.6.10.2 Using Status Management

Status Management is a central solution within SAP Product Lifecycle Management. It's used to create status profiles that you need for your specifications.

You create status profiles with the [Status Management](#) app. For more information, see [Business Configuration for Status Management \[page 367\]](#).

8.6.11 Glossary

This section contains the most commonly used terms in Specification Management.

Term	Definition
attribute	A property that describes an object or entity in more detail and affects how it is processed.
authorization context	A technical object that controls access to specifications based on certain parameters.
attribute property	A type of property where you can precisely define and fine-tune attribute fields of Boolean, character-based, date-time, or key figure type.
business role	A template of access rights that can be assigned to business users, who are to perform similar business tasks.

Term	Definition
business status	A status that can be created manually for a particular processing step to provide more detailed status information for that step. You can assign the business status you have created for the step to a specific process. The business status appears alongside the processing status for that step in the process browser.
composition	A listing of all constituents found in a product, used to compare specification content.
composition item	An individual item of a type of composition. Good examples are individual nutrients, for example vitamin C.
composition item type	A type of ingredient that has a certain function in a product. Good examples are nutrients, allergens, and so on.
composition item group	Arbitrary grouping of composition items of one composition type. Composition groups must always be assigned to a composition type.
composition property	A type of property that contains a list of properties sourced from composition configuration or specification. The value, min, max, and target of compositions can be maintained freely by users, but other fields can only be selected from composition configurations or specifications.
configuration entity	All objects that help the setting up of master data, for example composition items, groups, and types, and so on.
phrase	A standard text. Phrases can be used, for example, for value assignment of characteristic fields in the property tree, or value assignment of certain input fields. Phrases are managed in libraries. A phrase can group the same text in several languages.
phrase collection	A grouping of phrases for a special purpose. Phrase collections are used to specify the available phrases when configuring properties with a certain set of allowed phrase values.
product category	A hierarchical list of all the products a company produces. Product categories are used to define the portfolio of a company and affect the relevant properties that a product specification will have. A product category can be a general one with more specific underlying product categories or can be an individual category without any underlying categories as well.

Term	Definition
product category tree	The product categories of the company arranged in a structural way. The product category tree includes all of the product categories of a company and their hierarchical structure.
property	The details on a specification in the form of numeric values including the appropriate unit of measure, or in the form of textual information.
property association	The link between a property and another business object. For example, a property can be associated with property trees and product categories.
property node	A logical group within a property tree, which can contain properties under it. A property node helps with structuring the properties within a property tree.
property tree	A collection of properties organized into a clear structure. A property tree contains all the properties for a specification type, and is filtered down by product category.
property type	An exact grouping of properties based on whether the property is used for composition or not.
qualitative statement	A declared value that indicates whether a specification contains a certain substance, for example: trace elements, contains, doesn't contain, unknown.
restriction list for UoM	A multi-input field for selecting different units of measure. It must have a default UoM on the list.
role in composition	A value that indicates the role of the substance in the standard composition of a specification, such as active ingredient or impurity. This classification is used mostly for compliance purposes.
specification	A description that uses identifiers and value assignments such as physical and chemical properties, medical notes, and details on transport and storage. Specifications can be managed for different categories, such as: Substances, Agents, Packaging, Waste codes, Dangerous goods classifications.
specification type	An exact grouping of specifications based on their use and significance in companies, such as real substance or listed substance.

Term	Definition
specification type association	A property tree can be assigned to a specification type. A specification type can have only one property tree but one property tree can be assigned to multiple specification types.
substance	A chemical element, compound, or mixture of both.
validity	Certain geographical or manufacturing locations where a specification's data may be applicable.
value qualifier	A collection of values that are used as qualifiers for composition items within a specification, for example: measured, certified, warning.

8.7 Business Configuration for Product Innovation Management

Describes the various business configurations to be performed in order to work with the various apps in the Product Innovation Management for SAP Product Lifecycle Management.

As an administrator, you need to set up the business configurations that are essential for working with Product Innovation Management.

8.7.1 Defining Evaluation Questionnaires

Evaluation questionnaires provide a method for the experts to evaluate ideas.

Context

Define evaluation questionnaires in the *Settings for Product Innovation Management* app so that your users can use a questionnaire to evaluate ideas.

Procedure

1. Launch the *Settings for Product Innovation Management* app from the SAP Fiori launchpad.
2. Switch to the *Define Evaluation Questionnaires* tab.

3. Choose the [Create](#) button to create a questionnaire.
4. Enter a name and description for the questionnaire in the [New Questionnaire](#) page.
5. Define questions.
 - a. Go to the [Questions](#) tab to create score type questions.
 - b. Define a score range for the questions, for example, 0 to 100.

When evaluating, experts can only give a score within the range defined here.
 - c. Choose the [Add](#) button.
 - d. Input the question and give the question a weight to indicate how important it is among all the questions.

📌 Note

The weights of all the questions should sum up to 100%.

You can also remove questions or adjust the order of the questions.

6. Define additional questions.
 - a. Go to the [Additional Questions](#) tab.

You can use the [Additional Questions](#) tab to create text type questions.
 - b. Choose the [Add](#) button.
 - c. Define a question so that your users can provide an answer to the question.

You can also remove questions or adjust the order of the questions.
7. Choose [Save](#) to save the current questionnaire.

8.7.2 Defining Phases

The phase is the sequence of progress for a campaign indicating to which extent the innovation ideas are handled.

Procedure

1. Launch the [Settings for Innovation Management](#) app from the SAP Fiori launchpad.
2. Switch to the [Define Phases](#) tab.
3. Choose the [Create](#) button to create a phase.
4. Enter a phase name and description in the [New Phase](#) pop-up window.
5. Choose [Create](#) to confirm creation.

After created, the phase is displayed in the [Phases](#) table, where you can check how many campaigns use the phase in the [Number of Linked Campaigns](#) column.

Next Steps

You can choose the [Edit](#) button to change the name and description of multiple phases at the same time. Also, you can choose the [Delete](#) button to delete the selected phases.

8.7.3 Defining Tags

You can define different tags to categorize ideas.

Context

Define tags in the [Settings for Product Innovation Management](#) app so that your users can use tags to group ideas more easily.

Procedure

1. Launch the [Settings for Product Innovation Management](#) app.
2. Switch to the [Define Tags](#) tab.
3. Choose the [Create](#) button to create a tag.
4. In the [New Tag](#) pop-up dialog box, enter a tag name and choose [Create](#).
5. Optionally, choose [Edit](#) to update the names of the tags that are created in the tag list.

The created tag is added to the tag list in which your users can set tags.

8.7.4 Defining Status Profiles

You can define status profiles to let your users manage statuses.

Procedure

1. Launch the [Status Management](#) app.
2. Choose [Add](#) to create a status profile.

For more information on how to create status profiles, see .

Note

We recommend adding at least three status types, including *Initial*, *Obsolete*, and any of the rest of the types.

The *Initial* type is used for the draft idea status, and the *Obsolete* type is used for the deleted idea status. The next status after the *Initial* type that you choose is used as the status for the published idea. The other types you set are used by the Product Manager to manage idea statuses.

3. Choose [Save](#).

8.7.5 Defining Additional Idea Fields

Additional idea fields let the idea submitters provide more information on ideas.

Context

Define additional idea field in the [Settings for Innovation Management](#) app so that your users can use the fields to submit more details for ideas.

Procedure

1. Launch the [Settings for Product Innovation Management](#) app.
2. Switch to the [Define Additional Idea Fields](#) tab.
3. Choose the [Create](#) button to create an additional field.
4. Enter a name for the new field.
5. Choose a type and enter a description for the new field.
 - [Date](#): the field is related with date, for example, a date when submitters want to implement the idea. The format of the date varies depending on different languages.
 - [Integer](#): the field is related with integer value, for example, the cost of the idea.
 - [Numeric Value](#): the field is related with numeric value with floating numbers, for example, the calorie of products.
 - [Text](#): free-text field for submitters to provide more details.
 - [Multiple Choice - One Answer](#): multiple choice field and idea submitters can provide only one answer.
 - [Multiple Choice - Multiple Answers](#): multiple choice field and idea submitters can provide more than one answer.
6. Choose [Save](#).

8.7.6 Configuring Email Notifications

Procedure

1. [Subscribe to SAP Build Process Automation](#).
2. Configure destinations, see [Configuring Connectivity for SAP Build Process Automation \[page 139\]](#).
3. Download the templates of the assignment or evaluation process projects from [SAP Note](#).
4. Import the templates to SAP Build Process Automation. For more information about how to import, see [Import a Project](#).
5. Define a business process project. For more information, see [Business Process Projects](#).
6. Release and deploy the projects, see [Release a Project](#) and [Deploy a Project](#).

Note

Remember to choose the `innovation_management_service` destination as a variable when you deploy the evaluation project.

Define Variables

"innovation_managemen..." in "Send Email Notifications to Ex... 1.0.0" Data type: Destination

[Set new value](#) [Use existing value](#)

Destination:

innovation_management_service



Results

The status of all the projects are now monitored in SAP Build Process Automation.

8.8 Business Configuration for Visualization

Describes the various business configurations to be performed in order to work with the various apps in the Visualization cloud service for SAP Product Lifecycle Management.

Prerequisites

You must be assigned the **SecurityAdministrator** role mentioned in the **Visualization** section in [Defining and Bundling Roles](#).

Business Configurations

As an administrator, you must set up the following business configurations that are essential for working with visualizations:

- Configure your malware scanning settings
- Configure content caching.

8.8.1 Access Control

Access control lets you decide which specific Visualization content users can access and what they can do with it.

You can configure access to folders, as well as to individual visualizations.

You can also grant access to individual IdP users, or to IdP groups, when you want to give the same access to a collection of users.

All Visualization applications and APIs enforce access control, and prevent unauthorized access to your content.

Concepts

It's important to understand the following concepts.

Ownership

The initial creator of a folder or a visualization is the Owner of it. An owner is someone who has access to the content without having to be explicitly added to the permission list for the content.

Additionally, only the Owner (or someone with the SecurityAdministrator role), is able to modify the permission list of a folder or visualization.

Ownership can be transferred to another user. Only IdP users can be owners. IdP groups can't be assigned ownership.

Once ownership is transferred, the previous owner loses access to the content unless they're explicitly in the permission list, or in an IdP group that is in the permission list.

Permissions

Permissions define the actions that users can perform on visualization content like folders or visualizations.

The following permissions are supported:

- **Create:** This permission applies to folders. When someone has the **Create** permission on a folder, they're permitted to create new subfolders or upload new visualizations into that folder.
- **Read:** This permission applies to folders and visualizations. When someone has the **Read** permission on a folder, they're able to see the folder in lists of folders, or search for it, and also able to navigate into the folder. When someone has the **Read** permission on a visualization, they're able to see the visualization in lists of visualizations, view it, copy it, search for it, and view its details.
- **Update:** This permission applies to folders and visualizations. When someone has the **Update** permission on a folder, they're able to rename the folder. When someone has the **Update** permission on a visualization, they're able to rename the visualization or, create new versions of it, or delete existing versions

Note

You're unable to delete the visualization itself unless you also have the **Delete** permission.

- **Delete:** This permission applies to folders and visualizations. When someone has the **Delete** permission on a folder, they're able to delete the folder and all of its contents (except for any content that has overridden permission, which removes their access to that content). When someone has the **Delete** permission on a visualization, they're able to delete the visualization.
- **Admin:** This permission applies to folders and visualizations. It can be used by the owner to delegate the ability to grant, modify or remove access to a folder or visualization. When someone has the **Admin** permission on a folder, they're able to change who has access to the folder. When someone has the **Admin** permission on a visualization, they're able to change who has access to the visualization.

Custom Permissions / Inheritance

When a new top-level folder is created, it has no permission list by default, and only the Owner can access it. The Owner has to add users or groups to the permission list before anyone else can see it or upload content into it.

When someone has the **Create** permission on a folder, and creates a subfolder or uploads new content into it, the new content has the same permission as the folder it was created in, and they're the Owner of it.


If the owner of content changes the permission list in the **Access and Permissions** window, the permissions are overridden, and any future changes to the permission list of the container folder don't apply.

For example, if a folder grants access to user A, and the owner of a visualization in that folder removes user A from the permission list of that visualization, any future changes to folder permissions aren't reflected in the visualization permission list, as it now has Overridden Permissions.

The owner of the folder can remove all overridden permissions by editing the permission list of the parent folder, and checking **Apply** to enclosed content, which removes all overridden permissions from child content.

8.8.1.1 User Interface Overview - Access and Permissions

The *Access and Permissions* user interface has the following components:

Component	Description
<i>Object</i>	Describes the object (folder or visualization) for which access and permissions are being shown.
<i>Owner</i>	Shows the user who owns the object.
<i>Change ownership</i>	<p>If displayed, allows the current user to change the owner of the object to another user.</p> <p>To change ownership for a folder and its contents, choose <i>Apply to enclosed</i>.</p>
<i>My Permissions</i>	Shows the permissions that the current user has on the object.
<i>Permissions List</i>	If displayed, shows the permissions that have been configured for the object.
<i>Add user or group permissions</i>	<p>If displayed, allows the current user to add IdP users or groups to the Permissions List.</p> <p>To apply the current permissions recursively to all contents (folders only), choose <i>Apply to enclosed</i>.</p> <p>To delete a permission, click  for the user or group.</p>
<i>Anonymous Access</i>	<p>If displayed, shows the anonymous access permissions that apply to the object.</p> <div><p>Note</p><p>Anonymous access is subject to approval and is controlled at folder level. The anonymous access status of a visualization is inherited from its parent folder and cannot be modified for individual visualizations.</p></div>
<i>Status</i>	If displayed, allows the current user to request or suspend anonymous access.

User/Group Selection

When selecting users when changing ownership, or users/groups when editing the permission list, the combo box lists users that have already logged into the system, or known IdP groups.

This list may not be the complete set of IdP users or groups that are available.

Opening the Access and Permissions Window

The **⋮ (More)** and **🔑 (Access and Permissions)** buttons on the Visualization Card open the *Access and Permissions* window.

If the current user has the `Project Creator` role, they can add a new top-level folder in the browse application.

Whenever a user creates a new folder or uploads visualizations into a folder, they become the Owner of that folder or visualization.

Searching only lists folders and visualizations for which the current user has at least the *Read* permission.

For information on setting access and permissions, see [Setting Access and Permissions](#).

8.8.2 Security Administration

The *Security Administration* application allows an administrator to determine the way in which malware scanning and content caching is handled. In addition, you have options to transfer ownership of content in specific folder hierarchies from one owner to another, and options to configure allowed origins and role collections. Finally, you have options to enable anonymous access for specific folders and the visualizations they contain.

Malware Scanning

You can control malware scanning behavior, based on your security needs. Options include the following:

- Scanning user-uploaded files for malware, using the Malware Scanning Service.
- Turning scanning off entirely.
- Turning scanning off only for files that exceed the Malware Scanning Service file size limit of 400 MB.
- Aborting an import job if any malware is found in a file, even if other files have no malware.
- Continuing if malware is found, with appropriate messages and corrective actions taken. For example, deletion of the affected files before processing.

Content Caching

Content caching improves performance when loading previously loaded visualizations, but must not be used when visualizations contain sensitive data.

Transfer Ownership

You can transfer ownership of content in a specific folder or folder hierarchy from one user to another. You may wish to use this function to recover from a situation where the owner of content is no longer an IdP user, or is no longer an employee, but the content is still recorded as owned by them. You need to select the original user, and the new user, and then select the required folder.

Allowed Origins

You can add allowed origins so that cross-origin requests from the origin hosts can be made to visualization services. By default, such calls are not permitted.

Role Collections

You can configure role collections to not be shown when choosing an identity for a permission entry.

You can specify whether attempts are made to retrieve role collections from the tenant subaccount.

Anonymous Access

You can enable anonymous access for a folder and the visualizations it contains. You can:

- View folders that have anonymous access requested, enabled, or suspended
- Enable, disable, or suspend anonymous access for folders

8.8.2.1 Configuring Malware Scanning for Visualization

The features of the Visualization SaaS application let you upload visualizations from external sources to SAP Product Lifecycle Management. Before you use these features, configure the necessary malware scanning settings in the [Security Administration](#) app

You've options to control how malware scanning proceeds when you import files. The options are either enabled (On) or disabled (Off).

Prerequisites

You must be assigned the **SecurityAdministrator** role mentioned in the **Visualization** section in [Defining and Bundling Roles](#).

Procedure

1. Launch the *Security Administration* application from the SAP Fiori launchpad.
2. Choose the *Malware Scanning* tab.
3. Set your options as required. The available settings are as follows:

Settings

Button	Description
<i>Malware Scanning</i>	<p>Checks uploaded files for known malware before they're processed and made available for download.</p> <p>If this option is set to <i>Off</i>, no scanning is performed, and Malware Scanning Service file size limits don't apply.</p> <div><p>→ Recommendation</p><p>We recommend that you don't switch this off.</p></div>
<i>Allow Unscannable Files</i>	<p>Allows files that are either too large to scan (greater than 400 MB), or contain encrypted content to be processed.</p> <p>When set to <i>On</i>, large or encrypted files are permitted, but an Audit Log Service log message is recorded, containing details about the file being skipped for scanning.</p> <div><p>ⓘ Note</p><p>This option is applicable only when <i>Malware Scanning</i> is set to <i>On</i>.</p></div>
<i>Abort on Detection</i>	<p>Aborts the entire import job when a malware scan issue is found.</p> <p>When this option is set to <i>Off</i> for iOS, the affected files are deleted, but the import activity proceeds, displaying error messages for the affected files. When set to <i>On</i>, the import is aborted as soon as a file with malware is found, and no further scanning or processing of remaining files occurs.</p> <div><p>ⓘ Note</p><p>This option is applicable only when <i>Malware Scanning</i> is set to <i>On</i>.</p></div>

8.8.2.2 Configuring Content Caching

You can configure your content caching settings in your Security Administration application. You have an option to control whether content caching proceeds when you import files. The options are either enabled (On) or disabled (Off).

Prerequisites

You must be assigned the **SecurityAdministrator** role mentioned in the **Visualization** section in [Defining and Bundling Roles](#).

Procedure

1. Launch the *Security Administration* application from the SAP Fiori launchpad.
2. Choose the *Content Caching* tab.
3. Set your options as required. The available settings are as follows:

Settings

Button	Description
<i>Content Caching</i>	<p>Improves performance when loading previously loaded visualizations, but must not be used when visualizations contain sensitive data.</p> <p>When <i>Content Caching</i> is set to <i>On</i>, web browsers store visualization data locally in the browser cache. When set to <i>Off</i>, web browsers are requested not to store visualization data locally in the browser cache.</p>

ⓘ Note

This setting takes up to 30 minutes to take effect.

8.8.2.3 Transferring Ownership

Prerequisites

You're assigned the **SecurityAdministrator** role mentioned in the **Visualization** section in [Defining and Bundling Roles](#).

Context

You can use the [Transfer Ownership](#) tab to transfer ownership of content from the top-level folders. You select the current user, and the new user, and then select the required folder.

Note

The **Security Administrator** user can't transfer ownership to themselves.

Procedure

1. Launch the [Security Administration](#) application from the SAP Fiori launchpad.
2. Choose the [Transfer Ownership](#) tab.
3. In the [From](#) field, select the current owner of the content you wish to transfer ownership. The [From](#) field must contain the user name or email address to transfer ownership from. If the user has been deleted, the virtual Deleted User user can be selected to transfer ownership from all deleted users.
4. In the [To](#) field, select the required new owner of the content you wish to transfer ownership.
5. In the [Folders](#) section, select one or more top-level folders in which the content that you wish to transfer ownership reside, and click [Apply](#).

Ownership transfer executes on all of the selected folders, recursively changing ownership within those folders from the [From](#) user to the [To](#) user.

8.8.2.4 Configuring Allowed Origins

You can configure allowed origins in your [Security Administration](#) application. When you add an allowed origin, by specifying a URL, requests from that origin (for example, an application hosted on an external website making visualization service API calls) can be made to visualization services. By default, such calls are not permitted.

Prerequisites

You have the **SecurityAdministrator** role mentioned in the **Visualization** section in [Defining and Bundling Roles](#).

Procedure

1. Launch the *Security Administration* application from the SAP Fiori launchpad.
2. Choose the *Allowed Origins* tab.
3. Click **+** (*Add*) to add the URL for an allowed origin.

Note

You can only add URLs for the `HTTP` and `HTTPS` protocols. The URL must not include special characters or a path but must include at least a hostname.

Caution

Although wildcards can be used to support testing, they must not be used in a production environment due to the inherent security risk.

When you enter a URL, **✓** (*Accept changes*) is only enabled if the URL is valid.

You can add as many URLs as required. You can edit and delete existing URLs.

Note

Changes may take up to 30 minutes to take effect.

8.8.2.5 Configuring Group Management

You can configure the usage of teams and identity provider (IdP) groups for access control in your *Security Administration* application. The options are either enabled (On) or disabled (Off).

Prerequisites

You must be assigned the **SecurityAdministrator** role mentioned in the **Visualization** section in [Defining and Bundling Roles](#).

Procedure

1. Launch the *Security Administration* application from the SAP Fiori launchpad.
2. Choose the *Group Management* tab.
3. Set your options as required. The available settings are as follows:

Settings

Button	Description
<i>Teams</i>	<p>Specifies whether teams are shown when choosing an identity for a permission entry.</p> <p>When set to <i>Off</i>, teams are not shown when choosing an identity for a permission entry.</p> <p>For more information about teams, see Managing Teams.</p>
<i>Identity Provider Groups</i>	<p>Specifies whether identity provider (IdP) groups are shown when choosing an identity for a permission entry.</p> <p>When set to <i>Off</i>, identity provider (IdP) groups are not shown when choosing an identity for a permission entry.</p>

For information on setting access and permissions, see [User Interface Overview - Access and Permissions \[page 341\]](#).

8.8.2.6 Configuring Anonymous Access

You can configure anonymous access in your *Security Administration* application. When you enable anonymous access for a folder, the visualizations contained in the folder can be viewed without authentication.

Requests for anonymous access are subject to approval processes and are subsequently assigned a status, as follows:

- *Requested*: anonymous access has been requested for the folder but not yet approved
- *Enabled*: anonymous access has been approved for the folder, and unauthenticated users have read access to the visualizations it contains
- *Disabled*: anonymous access has not been approved for this folder
- *Suspended*: anonymous access has been temporarily suspended, but can be enabled without further approval

If an anonymous access request for a folder is approved and the status is *Enabled*, the following happens:

- The status is inherited by the visualizations contained in the folder. Unauthenticated users have read-access to the visualizations, but cannot modify or delete them.
- The status is **not** inherited by existing subfolders or the visualizations contained in them.

Note

Existing subfolders won't inherit the folder's status, but new subfolders will. New subfolders and their contents will inherit anonymous access. If a folder is moved to a new parent folder, the anonymous access status is derived from the new parent folder once the subfolder is moved there.

If an anonymous access request is rejected and the status is *Disabled*, the folder won't be listed on the *Anonymous Access* tab.

Prerequisites

You must be assigned the **SecurityAdministrator** role mentioned in the **Visualization** section in [Defining and Bundling Roles](#).

Procedure

1. Run the *Security Administration* application from the SAP Fiori launchpad.
2. Choose the *Anonymous Access* tab.
All folders with an anonymous access status of *Enabled*, *Requested*, or *Suspended* are listed. Folders with a *Disabled* status are not displayed.
3. Select the required status for the folder.

Note

Whenever the anonymous access status of a folder is changed, the details are stored in the Audit Log Service.

8.8.3 System Administration

The *System Administration* application allows an administrator to create Visualization categories and different types of usages so that visualizations can be grouped together by the purpose for which they're intended.

Visualization Categories

A Visualization Category is a mechanism that allows an administrator to centrally manage a set of named categories. Any single Visualization can have one of the Visualization categories assigned by a user.

These categories are useful when there are multiple visualizations for the same product, and serve as a mechanism to identify visualizations for a particular purpose.

ID Usages

Visualization Usages provide a template for storing business application identifiers in a consistently managed way. The data is stored as Visualization metadata.

The user and application APIs allow for searching for visualizations without exposing the internal Visualization metadata structures.

The advantages of using a usage template over just putting values directly into metadata are as follows:

- The system ensures that the data uses consistent names for the metadata values.
- The UI and APIs allow an administrator to specify identifiers in terms that make sense to the users of the business application.
- It's necessary for the business application to store the Visualization ID. Instead, an administrator can configure a usage.

8.8.3.1 Configuring Visualization Categories

A visualization category lets an administrator centrally manage a set of named categories. Any single visualization can have one of the visualization categories assigned to it. These categories are useful when there are multiple visualizations for the same product, and they also serve as a mechanism to identify visualizations for a particular purpose.

Prerequisites

You must be assigned the `ConfigurationManager` role. For more information, see the Visualization section in [Defining and Bundling Roles](#).

Procedure

1. From the SAP Fiori launchpad, run the *System Administration* app .
2. Choose the *Categories* tab.
3. To add a new Visualization Category, choose *Add*.

The *Add Category* window opens.

4. Enter the required information as follows:

Field	Description
Name	The name of the category.
Description	A detailed description of the type of category.

8.8.3.2 Configuring Visualization Usages

The Visualization Usages feature provides a template for storing business application identifiers in a consistently managed way. The data from Visualization Usages is stored as visualization metadata. The feature allows users to search for visualizations, based on the application data, without exposing the internal visualization data identifiers. There are several preloaded usages, such as, As-Built, As-Designed, As-Installed, and so on. These usages are designed to cover the most common usage scenarios, but system administrators can always create more usages in the *System Administration* application. For example, in the application, you can select an As-Installed usage to assign Equipment Number to a visualization to represent an installed piece of equipment. The equipment number number can be used to search, view, or update a visualization. Usages can be assigned to markers and to individual objects in 3D models. In the case of markers, usages are used to show additional information in the info cards, or to navigate to external applications that provide correct application information. In case of 3D model objects, in the Viewer, you can use the search functionality to find such objects in the 3D scenes.

Prerequisites

You must be assigned to the `ConfigurationManager` role. For more information, see the Visualization section in [Defining and Bundling Roles](#).

Procedure

1. From the SAP Fiori launchpad, run the *System Administration* app .
2. Choose the *Visualization Usages* tab.
3. To add a new visualization usage, choose *Add*.

The *Integration* window opens, with the *Visualization Usage* tab displayed.

4. Enter the required information

Field	Description
Name	The name that users associate with this type of identifier.
Source	The value entered here is used as the Visualization metadata source when a value is added to an object. Typically, this value identifies the name of the business application that provides the ID.
Category	The value entered here is used as the Visualization metadata category when storing a value.
Keys	Each key represents a part of the business application identifier. The <i>Name</i> supplied is used as the metadata name when storing a value. The <i>Display Name</i> is used by the user.

Field	Description
	<div style="border: 1px solid #ccc; padding: 10px; background-color: #f9f9f9;"> <p>Note</p> <p>It is possible to assign multiple usages to a visualization or to an object in a visualization. The usages are displayed when there is a UI for adding and editing a usage ID.</p> </div>

8.8.3.3 Configuring Intent Navigation

Intent navigation enables integration with related data for a visualization or folder.

Prerequisites

You must be assigned the `ConfigurationManager` role mentioned in the Visualization section in [Defining and Bundling Roles](#).

You have created a usage ID using [Configuring Visualization Usages \[page 351\]](#).

Context

You can specify that the same application is launched in different views or modes depending on the end user's role. To allow this, navigation between launchpad applications is based on abstract representations (intents) that are resolved to concrete navigation targets. For example, Connected Products users who create visualizations for their operated equipment, can link visualizations to corresponding sensor and equipment data stored in Connected Products and Asset Central.

Procedure

1. Launch the *System Administration* application from the SAP Fiori launchpad.
2. Choose the *Visualization Usages* tab.
3. To define a new navigation intent, click *Add*.

The *integration* window opens.

4. Choose the *Intent Navigation* tab, and then click the *Add Intent Navigation* button.
5. Enter the required information:

Field	Description
Display Name	The name that the user associates with this type of navigation.
Semantic Object	Represents a business entity such as a customer, a sales order, or a product. Using semantic objects, you can bundle applications that reflect a specific scenario. They allow you to refer to objects in a standardized way, abstracting from concrete implementations of these objects. You can either use existing semantic objects or create a new one.
Action	Describes which operation (such as display or approve) is intended to be performed on a semantic object (such as a product).

- Choose the [Add Parameters](#) button to define parameters for use.
- Enter the required information:

Field	Description
App Specific Route	Some applications may use this mechanism to specify the application destination. If used enter the value here.

- Choose [OK](#) to save the navigation intent.

Results

Any visualization or folder with the assigned usage ID now contains a [Navigation to](#) option from the visualization or folder card.

8.8.3.4 Configuring Visualization Import Settings

Setting up Visualization Import Options Set

As an administrator, you can configure import options sets. You can add, edit, delete, or change any other option in a import option set as per your requirements. Once configured, these import options set are available for the users on the [Import](#) app when they upload CAD files in Visualization. You can also set one import option set as the default option. Once set as default, the option is selected by default as an [Import Options Set](#) in the [Import](#) app. Also, this default import setting can't be deleted by the users.

If a file contains import properties which can be configured at import time, you can modify the global settings and apply them to the format. They are then applied to all files of the same format when you process the files in Visualization.

When modifying import settings, the options differ depending on the selected file format; others are identical across different file formats. For more information about specific import options, see [CAD File Formats](#).

Note

Some of the file formats and import options mentioned in the link above is not available for Visualization.

8.8.3.5 Configuring Workflow Settings

You can configure a workflow instance for when importing visualizations is being started, completed, and published in the Visualization.

Prerequisites

You must be assigned the `ConfigurationManager` role mentioned in the Visualization section in [Defining and Bundling Roles](#).

Context

You can create workflows through the workflow Capability Within the SAP Workflow Management and the Visualization and the SAP Workflow Management integration lets you configure workflows. For more information, see [Workflow in the Cloud Foundry Environment](#).

Procedure

1. Launch the *System Administration* application from the SAP Fiori launchpad.
2. Choose the *Workflow Settings* tab.
3. Select the *Import* option for workflows that you want to be available to users when they're importing a visualization.

The workflows that you select for import are displayed as the *Workflow* options in the *Imports* app to users.

4. Select the *Publish* option for workflows that you want to be available to users when they're publishing a visualization.

The workflows that you select for publishing are displayed as the *Workflow* options in *Author* screen to users.

5. The *Events* section displays the message that is sent to the import workflow once importing visualizations is completed.

Workflows can be configured to wait for such message before performing some other actions.

8.8.3.6 Configuring Scripts

You, as a System Administrator, can create, and manage scripts. Using a scripting engine, you can write and execute scripts to implement correct workflows and perform automatic visualization modifications.

Prerequisites

You must be assigned the `ConfigurationManager` role mentioned in the Visualization section in [Defining and Bundling Roles](#).

Context

You can create scripts in Javascript or Typescript.

Procedure

1. Launch the *System Administration* application from the SAP Fiori launchpad.
2. Choose the *Scripts* tab.
3. To create a new script, choose *Add*.

The *Script* window opens.

4. Enter the required information:

Field	Description
Name	The name of the script.
Description	A detailed description of the action that the script is going to perform.
Script	Write your script here in Javascript or Typescript. For more details on how to write a script, see Writing a Script [page 356] .

5. Choose *Save* to create the script.

Results

The script is now saved in the backend and is now available to the workflow for execution.

8.8.3.6.1 Writing a Script

This topic includes guidelines for system administrators on how to write a script for the automation service, details about the APIs that are available to execute a script, and how to invoke scripts using the REST API.

Calling an Endpoint for Script Execution

You need to call an endpoint to execute a script.

Request

- Path: `v1/scripts/{script_name}/execute`, for example, `https://subscription.automation.ingress.eu20.ve.shoot.live.k8s-hana.ondemand.com/app/v1/scripts/renameVisualization/execute`
- HTTP method: **POST**
- Request body: It can be empty if the script doesn't expect any parameters, otherwise the request body should be a valid JSON value. For example:
 - A string value: `"a_string_value"`
 - A numeric value: `123`
 - A boolean value: `true`
 - An object: `{ "visualizationId": "123" }`
 - An array of JSON values: `["a_string", 123, { "visualizationId": "123" }]`

Response

If the script execution is successful, then the endpoint can return the following response:

- Status: **200 OK**
- Response Body: a valid JSON value

OR,

- Status: **204 No Content**
- Response Body: empty

If the script execution has failed, then the endpoint can return the following response:

- Status: **500 Internal Server Error**
- Response Body: a JSON object describing the error

If the script calls `exit(false)` then the return value is as follows:

Sample Code

```
{
  "result": "failure", // The constant enum value "failure".
  "message": "Script returned error.",
  "events": [
    {
      "code": 300, // 300 - script explicitly called `exit(false[,
error])`.
      "values": {}
    }
  ]
}
```

```

    }
  ]
}

```

If the script calls `exit(false, errorObject)` then the return value is as follows:

Sample Code

```

{
  "result": "failure", // The constant enum value "failure".
  "message": "Script returned error.",
  "events": [
    {
      "code": 300, // 300 - script explicitly called `exit(false[,
error])`.
      "values": {
        "error": "string" // The stringified `errorObject` parameter.
      }
    }
  ]
}

```

If the script fails due to JavaScript error, such as `SyntaxError` or an unhandled exception the return value is as follows:

Sample Code

```

{
  "result": "failure",
  "events": [
    {
      "code": 302,
      "values": {
        "error": "{\"code\":2,\"details\":{\"formattedMessage\":\"Some error
description from JavaScript\"}"
      }
    }
  ],
  "message": "Script failed."
}

```

The `events[0].values.error` property contains a stringified object that can be parsed to display the error. It has the following structure:

Sample Code

```

{
  "code": 2, // `2` -
  "details": {
    "formattedMessage": "Some error description from JavaScript" // An error
description from the JavaScript engine.
  }
}

```

Additionally, the endpoint can return other usual error statuses such as `404 Not Found` and so on, if the script doesn't exist.

Script Execution through Script Engine

Scripts can be written in JavaScript and TypeScript.

The `.d.ts` files for the API provided by Visualization's scripting engine.

The scripting engine is a backend extensibility mechanism for Visualization which allows a high degree of workflow customization as per the customer requirements.

Scripts can use any modern JavaScript features but you must be aware of the differences between the built-in features of JavaScript and Web API.

Note

The scripting engine doesn't provide Web APIs.

The scripting engine provides two system modules:

- `sys:runtime/v1`: This system is for objects and functions useful for all scripts and modules.
- `sys:data_sources/v1Manage Data Sources` app in Visualization.

To have access to the system modules, import them in user scripts as shown below:

Sample Code

```
import { console, exit, fetch, params } from 'sys:runtime/v1'  
import { fetchData } from 'sys:data_sources/v1'
```

User scripts can import other user modules. Use the `usr:` prefix in the import statement as shown below:

Sample Code

```
import { myFunc } from 'usr:my_shared_lib'
```

Module `sys:runtime/v1`

The `sys:runtime/v1` module provides functionality required by any script.

- Type `JsonValue`: The JSON Value type is defined as follows:

Sample Code

```
type JsonValue = JsonPrimitive | JsonObject | JsonArray  
type JsonPrimitive = string | number | boolean | null  
type JsonObject = { [key: string]: JsonValue }  
type JsonArray = JsonValue[]
```

Examples:

Sample Code

```
const a: JsonValue = 123  
const b: JsonValue = 'abc'  
const c: JsonValue = true  
const d: JsonValue = null  
const e: JsonValue = {
```

```

a: 123,
b: 'abc',
d: true,
e: null,
f: {
  k: 42,
  l: 'yes',
  m: false,
  n: null,
},
g: [123, 'abc', true, null, { a: 777 }]
}
const f: JsonValue = [333, 'xyz', true, [false, 99], { xyz: 'qwerty' }]

```

- Object **params**: The **params** object is defined as follows:

Sample Code

```
const params: JsonValue | undefined
```

If a valid JSON value is passed to the script in the `v1/scripts/{script_name}/execute` request body, then it's available in the **params** object. Otherwise, the **params** object is **undefined**.

Sample Code

```
import { console, params } from 'sys:runtime/v1'
console.info('params = ', params)
```

- Object **console**: The **console** API can be used to log messages, such as for debugging purposes and so on.

Sample Code

```
interface Console {
  error: (...args: any[]) => void
  warn: (...args: any[]) => void
  info: (...args: any[]) => void
  debug: (...args: any[]) => void
  trace: (...args: any[]) => void
  log: (...args: any[]) => void // This is an alias for `info`.
}
const console: Console
```

The **console** object is not a part of the JavaScript's built-in features, but is a Web API.

The messages written via the **console** API are stored in the storage database.

The script execution log can be fetched via endpoint `v1/scripts/{script_name}/executions/latest?log=true`.

- Function **fetch**: The **fetch** function can be used to make requests to other services.

Note

The **fetch** API only supports requests to Visualization services.

Sample Code

```
async function fetch (resource: string, options?: RequestInit):
Promise<Response>
```

```

interface RequestInit {
  method?: string
  headers?: Record<string, string>
  body?: string | ArrayBuffer
}
interface Response {
  get status (): number
  get headers (): Record<string, string>
  json: () => Promise<JsonValue>
  text: () => Promise<string>
  arrayBuffer: () => Promise<ArrayBuffer>
}

```

The **fetch** API mimics the Fetch Web API.

- **fetch** parameters
 - **resource**: This defines the resource that you wish to fetch. It is not an arbitrary URL, but it should be a string in the form **service:path[?query]**.
The **path** component is an endpoint (such as **v1/scenes/123/meshes**) when the **service** is a name of one of the Visualization services, such as authoring, automation, business data, conversion, storage, vb-renderer, visualization, and so on.
 - **options**: An object containing any custom settings that you want to apply to the request. The possible options are:
 - **method**: It's the request method, such as **DELETE, GET, PATCH, POST, PUT**. The default is **GET**.
 - **headers**: It's like any header that you can add to your request, contained within an object literal with string values.
If the script makes a **PATCH, POST** or **PUT** request and passes a JSON value as the request body, it's the script's responsibility to set the **Content-Type: application/json** header.
 - **body**: Any body that you want to add to your request, can be a string or an **ArrayBuffer** object. The string body is encoded as UTF-8. The request using the **GET** or **HEAD** method can't have a body, while a request using the **PATCH, POST,** or **PUT** method must have a body.
- **fetch** result: The **fetch** function starts the process of fetching a resource from the network, returning a **Promise** which is fulfilled once the response is available.
The **Promise** resolves to the **Response** object representing the following response to your request:
 - **status**: This read-only property of the **Response** interface contains the HTTP status code of the response.
 - **headers**: This read-only property of the **Response** interface contains the headers associated with the response.

The following methods of the **Response** interface are asynchronous and they consume the **Request** body (which means you can't call them more than once) are:

 - **arrayBuffer()**: This method returns a **Promise** that resolves with an **ArrayBuffer**. If the request body is empty the **ArrayBuffer**'s length is zero.
 - **text**: This method returns a **promise** that resolves with a string. If the request body is empty the string length is zero.
 - **json()**: This method returns a **promise** that resolves with a **JsonValue**. If the request body is empty the **promise** results in a rejected status with an error.
- Function **exit**: The **exit** function can be used by scripts to return a value from the **v1/scripts/{script_name}/execute** endpoint.

Sample Code

```
function exit (succeeded: boolean = true, resultOrError?: JsonValue): never
```

If the `resultOrError` parameter is not `undefined`, it's returned as the response body.
If the script does not call the `exit` function, then it is called by the Script Executors when the script finishes with `succeeded` equal to `true` and `resultOrError` equal to `undefined`.

Note

If the script calls the `exit` method, the script finishes its execution and doesn't return the control flow back to the script. You can take it as `process.exit()` in Node.js.

If the `exit` function is called with parameter `succeeded` equal to `true` then the `v1/scripts/{script_name}/execute` endpoint returns the following HTTP statuses:

- **200 OK**: This status is returned when the `resultOrError` parameter is not `undefined`.
- **204 No Content**: This status is returned when the `resultOrError` parameter is `undefined`.

If the `exit` function is called with parameter `succeeded` equal to `false`, then the `v1/scripts/{script_name}/execute` endpoint returns **500 Internal Server Error** with a JSON object describing the error.

Module `sys:data_sources/v1`

The `sys:data_sources/v1` module provides function `fetchData` to request data from the data sources created in the *Manage Data Sources* app in Visualization.

Sample Code

```
async function fetchData (dataSourceName: string, params: Record<string, JsonPrimitive> | null): Promise<JsonValue>
```

- `dataSourceName`: It's a name of the data source as defined in the *Manage Data Sources* app.
- `params`: It's an object whose properties define the parameters and their values used in the data source mapping.

If the function is successful, it returns a `Promise` that resolves with a JSON value fetched from the data source.

If the function fails, it returns a `Promise` that rejected status with an `Error` object containing an error description.

Script and Module Examples

Rename Visualization

Sample Code

```
import { console, exit, fetch, params } from 'sys:runtime/v1'  
console.debug(`Rename visualization (id = ${params.id}) to '${params.newName}'`)  
const response = await fetch(`visualization:v1/visualizations/${params.id}`, {  
  method: 'PUT',
```

```

    body: JSON.stringify({
      name: params.newName
    }),
    headers: {
      'Content-Type': 'application/json'
    }
  })
}
const responseJson = await response.json();
console.debug(`${JSON.stringify(responseJson)}`)
if (200 <= response.status && response.status < 300) {
  console.info(`Visualization (id = ${params.id}) has been renamed.`)
  exit(true, { result: responseJson.result })
} else {
  console.error(`Renaming visualization (id = ${params.id}) failed with
status ${response.status}`)
  exit(false, { result: responseJson.result })
}
}

```

Find Last Public Visualization Version

This module exports a function which finds the last public visualization version.

Sample Code

```

import { console, fetch } from 'sys:runtime/v1'
export interface VisualizationVersion {
  sceneId: string,
  version: string
}
export async function findLastPublicVisualizationVersion (visualizationId:
string): Promise<VisualizationVersion> {
  const response = await fetch(`visualization:v1/visualizations/${
visualizationId}`)
  console.debug('findLastPublicVisualizationVersion', response.status)
  const json = await response.json()
  const versions = json.versions
  let lastVersion = versions[0]
  for (let i = 1, count = versions.length; i < count; ++i) {
    if (versions[i].index > lastVersion.index) {
      lastVersion = versions[i]
    }
  }
  return {
    sceneId: lastVersion.sceneId,
    version: lastVersion.version
  }
}
}: This sytem is for accessing external services defined as data sources in
the

```

The module can be imported by other script or module. If you add the name `last_visualization_version` in a module in the code mentioned above, you can import and use it as follows:

Sample Code

```

import { fetch, exit, params } from 'sys:runtime/v1'
import { findLastPublicVisualizationVersion } from
'usr:last_visualization_version'
try {
  const sceneIdAndVersion = await
findLastPublicVisualizationVersion(params.visualizationId)
  exit(true, { visualizationId, ...sceneIdAndVersion })
} catch (e) {

```

```

    exit(false, e.message)
  }
}

```

Create Private Visualization Version

↔ Sample Code

```

import { console, fetch } from 'sys:runtime/v1'
export async function createPrivateVisualizationVersion (visualizationId:
string): Promise<VisualizationVersion> {
  const response = await fetch(`visualization:v1/visualizations/${
visualizationId}/versions`, {
    method: 'POST',
    headers: {
      'Content-Type': 'application/json'
    },
    body: JSON.stringify({
      status: 'private',
      modificationToken: 'SAP 3D Visualization Authoring'
    })
  })
  console.debug('createPrivateVisualizationVersion', response.status)
  const json = await response.json()
  return {
    sceneId: json.version.sceneId,
    version: json.version.version
  }
}

```

Copy Associations from One Scene to Another

↔ Sample Code

```

: This system is for accessing external services defined as data sources in
theimport { console, fetch } from 'sys:runtime/v1'
export async function copyAssociations (fromSceneId: string, toSceneId:
string): Promise<void> {
  const response = await fetch(`authoring:v1/associations/copy`, {
    method: 'POST',
    headers: {
      'Content-Type': 'application/json'
    },
    body: JSON.stringify({
      sceneToSceneCopyRequests: [
        {
          fromSceneId: fromSceneId,
          toSceneId: toSceneId
        }
      ]
    })
  })
  console.debug('copyAssociations', response.status)
  const json = await response.json()
  if (json.result !== 'success') {
    throw new Error(`Failed to copy associations from scene (id = $
{fromSceneId}) to scene (id = ${toSceneId})`)
  }
}

```

Start New Authoring Session

Sample Code

```
import { console, fetch } from 'sys:runtime/v1'
export async function createAuthoringSession (visualizationId: string,
version: string, sceneId: string): Promise<string> {
  const response = await fetch(`authoring:v1/sessions?sceneId=${sceneId}`, {
    method: 'POST',
    headers: {
      'Content-Type': 'application/json'
    },
    body: JSON.stringify({
      assetId: `${visualizationId}`,
      assetVersion: `${version}`,
      type: 'authoring',
      sessionContentType: 'model3D'
    })
  })
  console.debug('createAuthoringSession', response.status)
  const json = await response.json()
  return json.session.sessionToken
}
```

Close Authoring Session

Sample Code

```
import { console, fetch } from 'sys:runtime/v1'
export async function closeAuthoringSession (sessionToken: string):
Promise<void> {
  const response = await fetch('authoring:v1/sessions/current', {
    method: 'PUT',
    headers: {
      'Content-Type': 'application/json',
      'Session-Token': sessionToken
    },
    body: JSON.stringify({
      state: 'CLOSED'
    })
  })
  console.debug('closeAuthoringSession', response.status)
  if (response.status >= 200 && response.status < 300) {
    const json = await response.json()
    if (json.result !== 'success') {
      throw new Error(`Failed to close authoring session ${sessionToken}`)
    }
  } else {
    throw new Error(`Failed to close authoring session ${sessionToken}`)
  }
}
```

Publish Visualization

Sample Code

```
import { console, fetch } from 'sys:runtime/v1'
export async function publishVisualization (visualizationId: string, version:
string): Promise<void> {
  console.info('publishVisualization', visualizationId, version)
  const response = await fetch(`visualization:v1/visualizations/${
visualizationId}/versions/${version}`, {
```

```

    method: 'POST',
    headers: {
      'Content-Type': 'application/json'
    },
    body: JSON.stringify({
      status: 'public',
      clearModificationTokenIfNotSet: true
    })
  })
  console.debug('publishVisualization', response.status)
  const json = await response.json()
  if (json.result !== 'success') {
    throw new Error(`Failed to publish visualization (id = ${
      visualizationId}, version = ${version})`)
  }
}
}

```

Add Prefix to All Node Names

If you are putting all the previously defined functions into a module called `my_shared_lib`, you can implement a script that renames all nodes, such as by adding a prefix.

Sample Code

```

import { console, exit, fetch, params } from 'sys:runtime/v1'
import {
  findLastPublicVisualizationVersion,
  createPrivateVisualizationVersion,
  copyAssociations,
  createAuthoringSession,
  closeAuthoringSession,
  publishVisualization
} from 'usr:my_shared_lib'
// Returns new `sceneId`.
async function addPrefixToNodeNames (visualizationId: string, prefix:
string): Promise<string> {
  const lastVersion = await
findLastPublicVisualizationVersion(visualizationId)
  console.info('lastVersion', lastVersion)
  const privateVersion = await
createPrivateVisualizationVersion(visualizationId)
  console.info('privateVersion', privateVersion)
  await copyAssociations(lastVersion.sceneId, privateVersion.sceneId)
  const sessionToken = await createAuthoringSession(visualizationId,
privateVersion.version, privateVersion.sceneId)
  console.info('sessionToken', sessionToken)
  let response = await fetch(`storage:v1/scenes/${privateVersion.sceneId}`)
  console.debug('getNodeNames', response.status)
  const json = await response.json()
  const nodes = json.tree.nodes.map(node => ({ sid: node.sid, name: `${prefix}
${node.name}`}))
  response = await fetch(`storage:v1/scenes/${privateVersion.sceneId}`, {
    method: 'POST',
    headers: {
      'Content-Type': 'application/json'
    },
  },
  body: JSON.stringify({
    tree: {
      nodes
    }
  })
  console.debug('updateNodeNames', response.status)
  await closeAuthoringSession(sessionToken)
  await publishVisualization(visualizationId, privateVersion.version)
  return privateVersion.sceneId
}

```

```
}  
const sceneId = await addPrefixToNodeNames(params.visualizationId, 'ABC - ')  
exit(true, { sceneId })
```

8.8.4 Collaboration and Markup

Overview

You use the Collaboration cloud service to collaborate on 2D drawings, 2D images and 3D models in Visualization by adding markup and comments to Visualization objects. You can use redline tools to add overlay shapes and lines on top of a 2D or 3D object. You can add comments relating to an object or to redline elements.

This section describes the interaction between Collaboration and Visualization with regards to folders, templates, and access and permissions.

Folder for Collaborations

A folder named *Collaborations* is available in the *Visualization Browser*. When you create a collaboration and add a visualization in *Shared Documents*, a sub-folder with the name of the collaboration is created in the *Collaborations* folder. The visualization is added to *Design Models* and to the sub-folder.

Templates for Collaborations

Three templates named *Collaboration* are provided, one each for the content types *2D Drawing*, *2D Image* and *3D Model*. These templates are used when a user opens a visualization from a collaboration, in the *My Collaborations* app. You can configure these templates but you should not disable the *Markup* button or change the data source settings.

Access and Permissions for Collaborations

In the *My Collaborations* app, you can control the users who have permissions for adding markup to a visualization by assigning the roles *Reader*, *Contributor* and *Administrator* to users in *Participants*. These roles correspond to access and permissions in *Visualization* and are applied to the sub-folder that is created for a collaboration in the *Collaborations* folder:

- *Reader* users are assigned *Read* permission on the sub-folder.

- *Contributor* users are assigned *Create*, *Read*, *Delete*, and *Update* permissions on the sub-folder.
- *Administrator* users are assigned *Create*, *Read*, *Delete*, *Update*, and *Admin* permissions on the sub-folder.

Creating a Collaboration for Markup

1. In *Collaboration*, open the *My Collaborations* app.
2. Create a collaboration. This creates a sub-folder with the same name as the collaboration in the *Collaborations* folder in Visualization.
3. In *Shared Documents*, upload a 2D or 3D file. *Collaboration* processes the file and adds the visualization to *Design Models* and to the sub-folder.
4. In *Participants*, select users and roles for those users to determine access and permissions in Visualization.

Data Sources

Two data sources are supplied and configured when the system is provisioned: *GetCollaborationSession* and *SaveCollaborationSession*. These are used to read and save markup information, and are selected as the data sources in the collaboration templates.

Note

You must not change or delete these data sources.

8.9 Business Configuration for Status Management

Describes the configuration settings to be made in the *Status Management* app.

As an administrator, you must define the status profiles to be used across multiple capabilities. For more information, see .

Prerequisites

You have been assigned the necessary authorization for using the *Status Management* app as described in the role template documentation for your capability. See [Defining and Bundling Roles \[page 27\]](#).

Overview

A status profile that contains individual user statuses and rules defined for those statuses. Defining a status profile lets you create a status network for different business processes. For more information, see .

Actions are user-defined tasks for each status. It is also possible to have multiple actions for a single status. For more information, see .

8.9.1 Editing a Status Profile

Use the *Status Management* app to edit header section of a status profile, or status network.

Prerequisites

See the **Prerequisites** section in [Business Configuration for Status Management \[page 367\]](#).

Procedure


1. From the SAP Fiori launchpad, open the *Status Management* app.
2. On the *Status Profile* tab, choose a status profile.
3. Choose *Edit*.
4. Edit the following values:

Field	User Action	Comments
Status Profile ID	(The field is read only.)	-
Status Profile Description	Overwrite the English text with the text in the language that you selected.	-
Select Language	Select the language that you want to use for the translation. For the information about the supported languages, see Overview [page 6] . The default language is English. Your business users see the text in the default language if you don't configure a different language.	The selected language is added to the <i>Display Language</i> list. For more information, see Filtering Texts by Language [page 188] .

5. The table in the *Status Network* section displays the list of status IDs, status description, and its status types:

Field	User Action	Comments
Status ID	(The field is read only.)	-
Status Description	Overwrite the English text with the text in the language that you selected.	-
Status Type	Select the status type In the <i>Initial</i> status, the field is read only.	-
Next Status	(The field is optional)	-
Action	(The field is optional) The actions are the action IDs, which are created in the <i>Actions</i> tab for a status profile.	-
Select Language	Select the language that you want to use for the translation. For the information about the supported languages, see Overview [page 6] . The default language is English. Your business users see the text in the default language if you don't configure a different language.	The selected language is added to the <i>Display Language</i> list. For more information, see Filtering Texts by Language [page 188] .

Note

- You can edit or delete a status profile only if there are no objects linked to it.
- When you edit a status profile, the changes are visible in the relevant capability items that are used by any capability.
- Choose  (*Delete*), to delete a status ID from the status network.

6. Save your changes.


8.9.2 Deleting a Status in the Status Network

Use the *Status Management* app to delete a status from the status network.

Prerequisites

See the **Prerequisites** section in [Business Configuration for Status Management \[page 367\]](#).

Procedure

1. From the SAP Fiori launchpad, open the *Status Management* app.
2. Choose a status profile.
3. Select the desired status profile and choose *Edit*.
4. Under the *Status Network* tab, choose  (*Delete*), to delete the status ID.
5. Confirm the warning message.

Note

You cannot delete a status in the following cases:

- The status is being used by the object from other SaaS applications.
- A value has been maintained for its next status.
- The status is being used as a next status.


8.9.3 Editing an Action

Use the *Status Management* app to edit actions of a status profile.

Prerequisites

See the **Prerequisites** section in [Business Configuration for Status Management \[page 367\]](#).

Procedure

1. From the SAP Fiori launchpad, open the *Status Management* app.
2. Choose the *Actions* tab.
3. Choose  *Edit*.

In the dialog *Edit Custom Action* that is displayed, enter the following values:

Field	Values to Be Entered	Comments
Select Language	Select the language that you want to use for the translation. For the information about the supported languages, see Overview [page 6] . The default language is English. Your business users see the text in the default language if you don't configure a different language.	The selected language is added to the <i>Display Language</i> list. For more information, see Filtering Texts by Language [page 188] .
Action ID	(The field is read only)	-
Action Description	Enter a description for the action	-
Display ID	Enter a text value	Overwrite the English text with the text in the language that you selected.

4. Choose *Display Language* for your business users to view texts in a selected language.
The language preference for the action ID is saved.

8.9.4 Deleting an Action

Use the *Status Management* app to delete custom actions from a status profile.

Prerequisites

See the **Prerequisites** section in [Business Configuration for Status Management \[page 367\]](#).

Procedure

1. From the SAP Fiori launchpad, open the *Status Management* app.
2. Choose the *Actions* tab.
3. For the relevant action, choose **×** *Delete*.

The action ID with the action description is deleted.

9 Configuration for Using APIs

Sometimes the standard functions that are provided by the apps for the SaaS applications of SAP Product Lifecycle Management don't map completely to the way you do your business. To enable you to adapt and extend the standard business processes, SAP Product Lifecycle Management provides public APIs on the SAP Business Accelerator Hub.

As part of the entitlement for SAP Product Lifecycle Management, in each of your subaccounts, you can subscribe not only to each SaaS application but also create a service for using a application-specific API. For the created service, you have two options to use the service:

- Create a service key to obtain the credential
- Bind the service to a BTP application

The following SaaS applications provide public APIs:

- Collaboration
- Visualization
- Engineering including two functions: *Requirements Management and Systems Modeling* and *Test Management*
- Common Functions
- Product Innovation Management

To add the service plans needed for the public APIs, in the SAP BTP Cockpit, search for and select the relevant service:

SaaS Application	Service	Option to Choose for Service Plan
Collaboration	<i>Collaboration</i>	<i>standard</i>
Visualization	<i>Visualization</i>	<i>standard</i>
Engineering	You need to add the following two services: <ul style="list-style-type: none">• <i>Engineering</i>• <i>SAP EA Designer, cloud edition</i> for the <i>Requirements Management and Systems Modeling</i>	<ul style="list-style-type: none">• For <i>Engineering</i>, choose <i>standard</i>.• For <i>SAP EA Designer, cloud edition</i>, choose <i>system-modeling</i>.
Common Functions	To use Common Functions, you need add <i>Authorization and Trust Management</i> service.	<i>standard</i>
Product Innovation Management	<i>Product Innovation Management</i>	<i>standard</i>

For general information about how to enable APIs, see [Administration and Operations in the Cloud Foundry Environment](#)

For detailed information about each API, see the [SAP Business Accelerator Hub](#).

Settings Specific to the Visualization SaaS Application

Instance Parameters

Visualization allows service instances to link to the data used by the Visualization SaaS application, which uses the same data partition that is used by the Visualization front end applications.

There is a legacy behaviour that allows a service instance to have its own distinct data partition. The ability to create a service instance that has a distinct data partition will be deprecated in a future release.

When creating a service instance, you can use the `link_to_saas_subscription` property in the provided JSON parameters to control data partition. For example:

Sample Code

```
{
  "link_to_saas_subscription": true
}
```

Note

You cannot change the value of `link_to_saas_subscription` property after creating a service instance.

Visualization service credentials currently contain two sets of endpoint URLs.

One set of endpoints in the `endpoints` object always links to the SaaS application data regardless of whether the service instance is created with `link_to_saas_subscription` set to `true`.

The URLs for these endpoints have `/app` as the first path component following the origin component of the URL.

Sample Code

```
{
  //...
  "endpoints": {
    "automation": {
      "url": "https://vb-renderer.ingress.eu20.ve.shoot.live.k8s-
hana.ondemand.com/app",
      //...
    },
    //...
    "storage": {
      "url": "https://storage.ingress.eu20.ve.shoot.live.k8s-
hana.ondemand.com/app",
      //...
    },
    //...
    "asset": {
      "url": "https://visualization.ingress.eu20.ve.shoot.live.k8s-
hana.ondemand.com/app",
      //...
    },
    //...
  },
}
```

```
} //...
```

Currently, the credentials JSON object also contains a set of top-level properties with names that have an `-url` suffix. These endpoints will be deprecated in a future release.

These endpoints point to a data partition specific to the service instance unless the service instance is created with `link_to_saas_subscription` set to `true`.

10 Delivery Schedule and Dates

Dates for planned deliveries of new or changed features for SAP Product Lifecycle Management in 2024.

Minor changes to the calendar may take place nearing the dates. In addition, ad hoc deliveries may also take place to meet urgent customer needs.

The delivery of any new or changed features is announced 2 weeks before the delivery in the [What's New Viewer for SAP Product Lifecycle Management](#). To receive email notifications for the early announcement of changes, subscribe to the What's New Viewer by using the [Subscribe](#) button in the toolbar on the What's New Viewer page on the SAP Help Portal.

For more information about how to subscribe, see [How to Use the What's New Viewer for SAP Product Lifecycle Management](#).

Note

These dates are for informational purposes only. The information is subject to change without notice. *SAP makes no warranties, express or implied, or of merchantability, or fitness for a particular purpose.*


Delivery Timeline

Delivery	Date
2401	Jan 19, 2024
2402	Feb 17, 2024*
2403	Mar 15, 2024
2404	Apr 19, 2024
2405	May 18, 2024*
2406	Jun 21, 2024
2407	Jul 19, 2024
2408	Aug 16, 2024
2409	Sep 20, 2024
2410	Oct 18, 2024
2411	Nov 15, 2024
2412	Dec 13, 2024

* - indicates weekend deployment

Maintenance Windows and Major Upgrade Windows for SAP Cloud Services

Monthly deliveries generally do not require any downtime. However, if a downtime is needed, you will be notified well in advance.

You can find the details here for standard maintenance and upgrade windows: [Maintenance Windows and Major Upgrade Windows for SAP Cloud Services](#).

11 Offboarding

Provides you with information about user offboarding from SAP Product Lifecycle Management, and tenant offboarding.

User Offboarding

To offboard users so they can no longer access the application, unassign the relevant role collections for the users in Identity Authentication.

Tenant Offboarding

In the event that you notify SAP to terminate your account, or you choose not to renew your account, tenant offboarding is supported.

Important: If you have used the Collaboration cloud service for SAP Product Lifecycle Management, contact SAP to help you perform the following actions before terminating your account or unsubscribing.

- Delete the workflow instances in your subaccount.
- Delete the collaboration repository in your subaccount.

In order to delete all customer data managed by the SaaS applications, simply unsubscribe from the applications. This triggers an automated deletion process, which destroys the data within 90 days.

⚠ Caution

Deletion cannot be reversed once it has been initiated.

If you wish to receive an export of the customer data before destroying it, please contact SAP by referring to [Getting Support \[page 392\]](#).

Data Export, Data Deletion and Data Anonymization

For information about data export, data deletion and data anonymization, see [Data Export and Data Deletion \[page 377\]](#).

11.1 Data Export and Data Deletion

The SaaS applications of SAP Product Lifecycle Management provide you with user interfaces for performing data export and data deletion.

For more information, see the following topics:

- [Collaboration: Deletion of Personal Data \[page 378\]](#)
- [Collaboration: Data Export \[page 379\]](#)
- [Provisional Specifications: Data Export and Anonymization \[page 380\]](#)
- [Engineering: Data Export, Deletion, and Anonymization \[page 383\]](#)
- [Visualization: Data Export and Deletion of Personal Data \[page 387\]](#)
- [Intelligent Handover: Data Export and Data Anonymization \[page 386\]](#)
- [Deleting Data from SAP Asset Intelligence Network and Asset Central Foundation](#)

11.1.1 Collaboration: Deletion of Personal Data

Provides you with information about how to retrieve personal data about a data subject in Collaboration, and also delete the data.


Prerequisites

Your user is assigned the **CollaborationDPPAdmin** role. For more information about roles, see the **Collaboration** section in [Defining and Bundling Roles](#).

Context

Collaboration provides you with a UI that allows you to retrieve and delete personal data about a data subject participating in collaborations.

Procedure

1. Launch the *Collaboration - Data Security* app from the SAP Fiori launchpad.
2. Choose the *Data Protection and Privacy* tab.
3. Enter the email ID of the data subject (collaboration user), and choose  (*Search*).

The list displays the collaboration objects where the user data is present. The list includes collaborations created by the user, collaborations in which the user is a participant.

→ Remember

- Remove the user from the user group before deleting the data.

4. Choose *Delete*.

This action results in the following:

- The user is removed from collaborations in which the user was a participant.
- Work items assigned to the user (if any) are unassigned.
- User details are deleted from the Collaboration database.

Note

Deleting the user data from the Collaboration will also automatically remove the user from Product Package Exchange.

11.1.2 Collaboration: Data Export

You can export all data created in the Collaboration apps before a certain date, from the subaccount to your local system. The exported file is saved to a ZIP file.

Prerequisites

You must be assigned the `CollaborationDPPAdmin` role. For more information about roles, see [Role Templates for Collaboration \[page 29\]](#).

Context

The Collaboration capability allows you to export all data including the following user data: first name, last name, and the email address in the Collaboration apps.

Procedure

1. On the SAP Fiori launchpad, open the *Collaboration - Data Security* app.
2. On the *Data Export* tab, select an end date.

Note

- The start date is by default the date when the first collaboration was created in your subaccount. Based on the end date, the date range for the data export is calculated.
- Data that is older than the given date is not exported.

3. Select one of the export options: *Include User Data* or *Exclude User Data*.
4. Choose *Export*.

The ZIP file is downloaded to your local system.

11.1.3 Collaboration: Data Delete

You can delete collaboration data, including data history, from your subaccount.

Prerequisites

You have been assigned the `CollaborationDPPAdmin` role. For more information about roles, see [Role Templates for Collaboration \[page 29\]](#).

Context

The Collaboration user interface allows you to delete the collaboration and product package exchange data from the subaccount.

Procedure

1. Open the *Collaboration - Data Security* app from the SAP Fiori launchpad.
2. To delete all the data, choose *Delete*.
3. Select the checkbox and choose *Yes* to delete.

⚠ Caution

Once you delete the data, it cannot be restored.

11.1.4 Provisional Specifications: Data Export and Anonymization

With the help of the *Specification - Data Security* app, you as an administrator can perform the following activities:

- Export provisional specification data
- Anonymize data of a user

Data Export

You can export all the data created in the PLM Foundation applications before a certain date to your local system. The exported file is saved in a .zip file with the prefix **Data_Older_Than** in its title.

To export the required data, perform the following steps:

1. Open the *Specification - Data Security* app.
2. Navigate to *Data Export*.
3. Select the date before which all data should be exported.

Note

Data on the given date is not exported, only those older than the given date.

4. Select whether you want to include or exclude user data.
5. Click *Export*. The .zip file is downloaded to your local system.

Data Anonymization

You can erase the information of a certain user from all the associated provisional specifications. After the erasure, the user will be displayed as **Unknown** in the *Created By* and *Modified By* fields.

To anonymize all information regarding a specific user, perform the following steps:

1. Open the *Specification - Data Security* app.
2. Navigate to *Data Anonymization*.
3. Enter the ID of the respective user.
4. Click *Anonymize*.

Caution

The instance-based authorization happens with the help of IDs. If you anonymize a user, that user loses their access to any objects.

11.1.5 Configuration Management: Data Export and Data Anonymization

With the help of the *Data Security for Configuration Management* app, you as an administrator can perform the following activities:

- Export provisional intelligent handover data
- Anonymize data of a user

Data Export

You can export all the data created in the PLM Foundation applications before a certain date to your local system. The exported file is saved in a .zip file with the prefix **Data_Older_Than** in its title.

To export the required data, perform the following steps:

1. Open the [Data Security for Configuration Management](#) app.
2. Navigate to [Data Export](#).
3. Select the date before which all data should be exported.

Note

Data on the given date is not exported, only those older than the given date.

4. Select whether you want to include or exclude user data.
5. Click [Export](#). The .zip file is downloaded to your local system.

Data Anonymization

You can erase the information of a certain user from all the associated provisional specifications. After the erasure, the user will be displayed as **Unknown** in the [Created By](#) and [Modified By](#) fields.

To anonymize all information regarding a specific user, perform the following steps:

1. Open the [Data Security for Configuration Management](#) app.
2. Navigate to [Data Anonymization](#).
3. Enter the ID of the respective user.
4. Click [Anonymize](#).

Caution

The instance-based authorization happens with the help of IDs. If you anonymize a user, that user loses their access to any objects.

11.1.6 Engineering: Data Export, Deletion, and Anonymization

Provides you with the information on how to export all the business data to your local system, delete data in apps, or anonymize the information of a certain user.

Test Management

Context

As an app administrator, you can export all the data created before a certain date to your local system, and delete it completely in the Test Management apps. You can also anonymize the information of a certain user in the associated test cases.

User data anonymization:

In the *My Tests* app, the Quality Engineers in your organization assign one or more test cases to themselves, in order to run them and enter the test results (see [Entering Test Case Results](#)). When a Quality Engineer user leaves the organization, you can remove this user from all the test cases that have been assigned to this user. After the anonymization, this user will be displayed as **Unknown** in the *Quality Engineer* field of all the associated test cases.

Procedure

1. Launch the *Test Management - Data Security* app from your SAP Fiori launchpad.

Note

To launch this app, you must have the **EPDT_ConfigExp_RT** role.

This role is contained in the predefined role collection **EPD - Test Management - Configuration Expert**.

2. To delete data, select the *Data Deletion* tab. Perform the following steps:
 1. In the *Data Older Than:* field, select a date to specify that the data to be deleted or exported is created this date.
 2. If you want to export data first, in the *Export Options* field, select an option to specify whether you also want to export the associated user data.
 3. Select *Export* to export the selected data.
A .zip file containing the selected data is downloaded to your computer.
 4. Select *Delete* to delete the selected data from the Test Management apps.
3. To anonymize a user, select the *User Data Anonymization* tab. Perform the following steps:
 1. In the *User* field, select a user as appropriate.
 2. Select *Anonymize* and confirm your action.
The selected user is now displayed as **Unknown** in the *Quality Engineer* field of all the associated test cases.

Requirements Management and Systems Modeling

Data Export

- [Sharing, Printing, Reporting On, and Exporting Diagrams](#)
- [Exporting Requirements to a ReqIF File](#)
- [Importing and Exporting SysML Models with XMI Files](#)
- [Transferring Content Between Repositories](#)
- [Exporting Repository Content Using an API \[page 264\]](#)

Data Deletion

[Deletion of Personal Data \[page 281\]](#)

Data Anonymization

[Deactivating Users \[page 253\]](#)

11.1.7 Enterprise Product Structure: Data Export and Data Anonymization

As an app administrator, this topic provides you with information how to retrieve the personal data of a data subject in Enterprise Product Structure, as well as anonymization of this data.

Prerequisites

- You've completed the steps in [Configurations for Using APIs \[page 372\]](#) in the Administration Guide, and created a Cloud Foundry service instance of `epd-product-structure-service`.
- You've created a service key for this service.
- You're able to perform GET API calls.

Data Export

A REST API exists for retrieving the data that has been added to the Enterprise Product Structure service. To retrieve the token needed for authorizing the call, you need to use the credentials from the service key created previously.

The `clientid` and `clientsecret` credentials can be found inside the service key of the Enterprise Product Structure instance. Using the credentials, the `GET <service url>/odata/v4/DataManagementService/exportData()` API can be called.

The response of this API call is a binary zip file, which should be saved with the `.zip` extension. The zip contains all the data entities currently in the Enterprise Product Structure database.

Data Anonymization

You can erase the information of a certain user from all the associated entity sets. This action can be performed using a API call to `DataManagementService/adminAnonymizeUser` endpoint of Enterprise Product Structure service.

To anonymize all information regarding a specific user, perform the following steps:

1. Obtain the credentials for a user with administration privileges.
2. Execute the following query: `POST <service url>/odata/v4/DataManagementService/adminAnonymizeUser` with request body `{"user": "<username or email>"}`

In the response, the API returns a list of attended entity sets and statistical information on any changes that have been applied. Anonymizable fields in the database is replaced with **Anonymous**. These fields are **Created By**, **Modified By**, and other fields containing username or email address.

11.1.8 Product Innovation Management: Data Export, Deletion, and Anonymization

Provides you with the information on how to export all the business data to your local system, delete data in apps, or anonymize the information of a certain user.

As an app administrator, you can export all the business data modified before a certain date to your local system, and delete it completely from the Innovation Management apps. You can also anonymize the information of a certain user.

1. Open the *Innovation Management - Data Security* app from your SAP Fiori launchpad.

Note

To launch this app, you must have the **Engineering Administrator** role.

This role is contained in the predefined role collection **EPD Administrator**.

2. To delete data, select the *Data Deletion* tab. Perform the following steps:
 1. In the *Data Older Than*: field, select a date to specify that the data to be deleted or exported is modified this date.
 2. If you want to export data first, in the *Export Options* field, select an option to specify whether you also want to export the associated user data.
 3. Select *Export* to export the selected data.
A .zip file containing the selected data is downloaded to your computer.
 4. Select *Delete* to delete the selected data from the Innovation Management apps.
3. To anonymize a user, select the *User Data Anonymization* tab. Perform the following steps:
 1. In the *User* field, select a user as appropriate.
 2. Select *Anonymize* and confirm your action.

11.1.9 Insights: Content Deletion

If you unsubscribe from the Insights SaaS application, you must manually uninstall the content packages that you installed previously in SAP Build Work Zone, advanced edition. For more information, see [the documentation for SAP Build Work Zone, advanced edition](#).

11.1.10 Intelligent Handover: Data Export and Data Anonymization

With the help of the *Manage Data Security* app, you as an administrator can perform the following activities:

- Export provisional intelligent handover data
- Anonymize data of a user

Data Export

You can export all the data created in the PLM Foundation service applications before a certain date to your local system. The exported file is saved in a .zip file with the prefix **Data_Older_Than** in its title.

To export the required data, perform the following steps:

1. Open the *Manage Data Security* app.
2. Navigate to *Data Export*.
3. Select the date before which all data should be exported.

Note

Data on the given date is not exported, only those older than the given date.

4. Select whether you want to include or exclude user data.
5. Click *Export*. The .zip file is downloaded to your local system.

Data Anonymization

You can erase the information of a certain user from all the associated provisional specifications. After the erasure, the user will be displayed as **Unknown** in the *Created By* and *Modified By* fields.

To anonymize all information regarding a specific user, perform the following steps:

1. Open the *Manage Data Security* app.
2. Navigate to *Data Anonymization*.
3. Enter the ID of the respective user.
4. Click *Anonymize*.

⚠ Caution

The instance-based authorization happens with the help of IDs. If you anonymize a user, that user loses their access to any objects.

11.1.11 Specification Management: Data Export

If you want to export existing data as part of the offboarding process, create a customer incident to the following SAP application component: `PLM-EPD-SPM`.

📄 Note

You get the data in CSV format and the description of the CSV structure in XML format.

11.1.12 Visualization: Data Export and Deletion of Personal Data

As an app administrator, this topic provides you with information how to retrieve the personal data of a data subject in Visualization, as well as deletion of this data.

Prerequisites

- You've completed the steps in [Configurations for Using APIs \[page 372\]](#) in the Administration Guide, and created a Cloud Foundry service instance of `epd-visualization` with the `link_to_saas_subscription` parameter set to `true`.
- You've created a service key for this service.
- You have the `asset-url` parameter from the service key for the `epd-visualization` service.
- You're able to perform POST API calls.

Listing the Personal Data Stored Against a Data Subject

In order to see the personal data held on a data subject, the data subject can perform one of the following actions:

Via the Launchpad

When logged in to SAP Product Lifecycle Management, the logged-in user can click the user icon, and then [Settings](#). This window displays their name and email address.

This is the information that the Visualization SaaS application of SAP Product Lifecycle Management holds on the user, for the current IdP.

Via API

Once logged in, the logged-in user can execute the `/v1/dpp/personal-data` API, which returns all personal data held from all the IdPs with which they've logged in.

This API can be executed by the user by taking the application URLs, and combining it the API path.

Following, is an example of such a URL:

```
https://CONSUMER.epd.cfapps.eu20.hana.ondemand.com/  
sapvis3dvisualization.sapvisualenterprisewebappsbrowse/api/asset/v1/dpp/personal-  
data
```

Deleting the Personal Data Stored Against a Data Subject

An administrator with the **Security Administrator** role can execute this function, using the credentials from the service key created previously, and the `asset-url` from the service key.

Finding the Data Subject ID

Execute the `GET /v1/identities` endpoint:

```
/v1/identities?$filter=email eq 'EMAIL-ADDRESS'
```

The `ID` field in the returned identities array contains the data subject ID.

Deleting the Personal Data of a Data Subject

Using the credentials from the service key created previously, and the `asset-url`, the `POST /v1/dpp/data-subject-delete` API is called, with a JSON payload as follows:

```
{"dataSubjectId": "123"}
```

If the subject was found, personal data of the subject is overwritten, and the subject is no longer displayed in lists of users. Any data that was owned by the subject displays anonymized values for their name, email address, and any other personal data held on them.

Exporting Visualizations

For each API call below, you need to use the credentials from the service key created previously, and the `asset-url` from the service key as the base URL for your API calls.

Finding the Visualizations to Export

In order to perform an export, you need to know the visualization ID and version for each visualization you want to export. If you want to export the latest version, then you don't need to know the current version.

You can list the visualizations that exist in the system by calling `GET /v1/visualizations`, which returns a JSON response similar to the following response - note that some fields have been omitted for brevity:

```
[
  {
    "id": 12,
    "versions": [
      {
        "version": "v1",
      }
    ]
  }
]
```

Starting the Export Process

To start export, invoke `POST /v1/exports` with a JSON payload in the body, where `ID` is the `id` field of the visualization returned by the `GET /v1/visualizations` call earlier, and `VERSION` is the `version` field.

```
{
  "visualizationId": "ID",
  "version": "VERSION",
  "compress": false
}
```

If you omit `version`, the latest version is exported.

Compression is turned off so that the downloadable file is a file you can open with a SQLite database reading tool.

Mass export isn't supported. If the API call succeeds, a JSON response as follows is returned:

```
{
  "id": 123,
  "status": "active",
  "progress": 75,
  "visualizationId": "ID",
  "visualizationVersionId": "VERSION"
}
```

The `id` field in the response is the ID of the export task, which is running in the background. You need this ID to check the status later as well as to determine how to download the results.

Checking Export Status

To check the status of an active export, you can call `GET /v1/exports/ID`, where `ID` is the `id` field returned when you started the export.

This call returns a JSON response in the same format as when you started the export.

```
{
  "id": 123,
  "status": "completed",
  "outputs": [
    {
      "externalId": "b4f0a7a0-f76a-4f1c-9a3f-611bab0cd4b1",
    }
  ]
}
```

The export task has finished when `status` is `completed` or `error`. Only when `status` is `completed` is there a downloadable file, otherwise, the `message` field contains more details about why the export failed.



Downloading Exported Data

To download an export, simply perform a `GET /v1/files/ID`, where ID is the value from the `externalId` field in the export status response.

The file contents are returned inline as a SQLite database (if you turned off compression), which you can then save and open in the tool of your choice.

12 Giving Feedback

You can give feedback about your user experience from any screen in the solution. Currently we provide two methods to give feedback.

- Enter specific suggestions about the features of your SaaS application. To do this, open an app from an SaaS application and choose the  *Request Improvement* icon on the top right of the screen. The *Request Improvement Ideas* window asks you to fill in the following information:
 - *SaaS Application*: choose a SaaS application for which you want to submit feedback.
 - *Title*: enter a title for your topic.
 - *Content*: describe your feedback here.
- Complete a quick feedback questionnaire that asks you to rate your user experience. To do this, open an app from an SaaS application and choose the  *Give feedback* icon on the top right of the screen. You can answer questions like the following:
 - How satisfied you are with the solution as a whole
 - Whether the app from which you open the questionnaire meets your requirements and is easy to use
 - Whether you have any additional feedback that could help us to improve your user experience (freetext entry field)

13 Getting Support

Provides you the information you need to contact SAP in case of any issues.

If you require support or encounter any technical issues, contact SAP by reporting an incident on the [Support Portal](#).


Report issues under the following components:

Collaboration	PLM-CLOUD-COL
Common Functions	PLM-CLOUD-COM
Configuration Management	PLM-CLOUD-CM
Engineering	PLM-CLOUD-ENG
Enterprise Product Structure	PLM-CLOUD-PSR
Insights	PLM-CLOUD-INS
Intelligent Handover	PLM-CLOUD-IH
Product Innovation Management	PLM-CLOUD-INM
Product Package Exchange	PLM-CLOUD-COL
Specification Management	PLM-CLOUD-SPM
Visualization	PLM-CLOUD-VIZ

Built-In Support

Built-In Support helps you to get support in real-time within the applications that you are working with. Different from the traditional support model, it provides efficient, simplified and guided support channels: you can search for knowledge, ask for needed information, get help from recommended solutions, or communicate with SAP support experts.

Currently we provide Built-In Support for the Common Functions SaaS application:



To use the service, open an app of the SaaS application and choose the  [Built-In Support](#) icon at the right top of the screen. You can then ask questions and get answers based on SAP Help Portal content or create tickets direct. For more information, see [Built-In Support](#).

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