



Upgrade Guide | PUBLIC

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Common Upgrade Guide for SAP Customer Activity Repository applications bundle 5.0 SPS06

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1 How to Use this Common Upgrade Guide

This guide describes how to upgrade and set up the applications included in SAP Customer Activity Repository applications bundle 5.0 SPS06. Learn what applications are included in this release, and get an overview of the main upgrade steps.

Applications in this Release (Functional View)

⚠ Caution

If you do not have an existing installation of any of these applications, you must perform a **new installation** rather than an upgrade. In this case, see the *Common Installation Guide* at <https://help.sap.com/viewer/p/CARAB>.

Functionally, SAP Customer Activity Repository applications bundle 5.0 SPS06 includes the following applications:

- SAP Customer Activity Repository 5.0 SPS06
- SAP Merchandise Planning 5.0 SPS06
- SAP Assortment Planning 5.0 SPS06
- SAP Promotion Management 5.0 SPS06
- SAP Allocation Management 5.0 SPS06
- SAP Replenishment Planning 5.0 SPS06

Product Documentation

You can find this guide and all product documentation for these applications on SAP Help Portal for SAP Customer Activity Repository applications bundle at <https://help.sap.com/viewer/p/CARAB>.

i Note

You can set up your back-end system to consume documentation directly from SAP Help Portal. For more information, see [Configure Access to Documentation on SAP Help Portal \(Optional for All Applications\)](#) [page 306].

What to Upgrade (Technical View)

Technically, SAP Customer Activity Repository applications bundle 5.0 SPS06 is delivered in the form of two installable **product versions**, one for the back-end and one for the front-end.

Product Versions for this Release	Purpose
SAP CARAB 5.0 SPS06	<p>Back-end product version</p> <p>Contains several software components that provide the ABAP back-end functionality and the business content for all the applications in SAP Customer Activity Repository applications bundle 5.0 SPS06. For example, this includes SAP HANA views and SQLScript procedures, local BI Content, application function libraries, and workbooks, where applicable.</p>
SAP FIORI FOR SAP CARAB 5.0 SPS06	<p>Front-end product version</p> <p>Contains one software component that includes the SAP Fiori apps for the applications in SAP Customer Activity Repository applications bundle 5.0 SPS06. This product version is also referred to as the <i>product-specific SAP Fiori UI component</i>.</p>

Upgrade at a Glance

This guide leads you through the following main activities:

1. First you **prepare** the upgrade. Here you ensure that the technical prerequisites are installed. You also implement mandatory corrections, verify authorizations, and do other preparatory tasks. These steps are described in section [Upgrade the Prerequisites \[page 18\]](#) and section [Prepare the Upgrade \[page 33\]](#).
2. Then you **upgrade** the back-end product version and the front-end product version. These steps are described in section [Upgrade the Software \[page 61\]](#). You must do these steps regardless of the application that you want to set up later on.
3. Now you can **set up** the desired applications. These steps are described in section [Set Up the Applications \[page 79\]](#). First you must do the general setup steps in section [Core \(Mandatory for All Applications\) \[page 80\]](#). You must do these core steps regardless of the application that you want to set up. After the core steps, you only need to do the steps that are required for your application. You do not need to read sections that do not apply to your application.

→ Tip

Get Notified of SAP Note Updates

This guide references several SAP Notes that are regularly updated with new information. If a note is particularly relevant for your scenario and you want to be informed of updates, you can easily set up email notifications. See SAP Note [2478289](#) (How to set up notifications for SAP Notes and/or KBAs with Expert Search filters).

→ Tip

Get SAP Universal ID for Easy Login

With an SAP Universal ID, you get a single user login and profile. You are able to log in once to gain access to all of your authorized SAP platforms and applications.

SAP Universal ID is a free service offered by SAP which requires no software installation. For more information, see <https://discover.sap.com/universalid/en-us/about.html>.

1.1 Naming Conventions

This section explains **important terms** used in this guide. It also explains the meaning of **important variables** (for example, `SAPHANADB`). Additionally, you get an overview of **naming differences** that exist between the consuming applications.

Important Terms

Term	Definition
Common Installation Guide Common Upgrade Guide	<p>These two common guides are your entry points for all the applications and scenarios included in <i>SAP Customer Activity Repository applications bundle</i>. Use the <i>Common Installation Guide</i> if you wish to do a completely new installation. Use the <i>Common Upgrade Guide</i> if you wish to upgrade from a lower release.</p> <p>You can find both guides on SAP Help Portal at https://help.sap.com/viewer/p/CARAB under <i>Implement</i>.</p>
consuming application	<p>An application consuming data from SAP Customer Activity Repository.</p> <p>Examples:</p> <ul style="list-style-type: none">• SAP Allocation Management• SAP Assortment Planning• SAP Merchandise Planning• SAP Promotion Management• SAP Replenishment Planning
back-end server / back-end system	<p>The SAP NetWeaver-based ABAP back-end server</p> <p>Depending on your deployment scenario, this is where you might install the <code>SAP_CARAB</code> back-end product version of SAP Customer Activity Repository applications bundle..</p>
front-end server / front-end system	<p>The SAP NetWeaver-based ABAP front-end server</p> <p>Depending on your deployment scenario, this is where you might install SAP Gateway, the central SAP Fiori UI component (including SAP Fiori launchpad), and the <code>SAP_FIORI_FOR_SAP_CARAB</code> front-end product version of SAP Customer Activity Repository applications bundle.</p>

Term	Definition
logical schema	<p>A term used in the Display Mappings of Database Schemas transaction in SAP Customer Activity Repository.</p> <p>The term is synonymous with the authoring schema concept in SAP HANA studio.</p>
source master data system	<p>SAP Customer Activity Repository applications bundle must be deployed alongside an SAP ERP (SAP Retail, SAP Fashion Management) or SAP S/4HANA (SAP S/4HANA Retail) central component as the single source of truth for all master data.</p> <p>Whenever this guide refers to a <i>source master data system</i>, it refers to the SAP ERP or SAP S/4HANA central component that you choose for your implementation.</p> <p>For more information, see Integration with Source Master Data Systems [page 16].</p>
SAP ERP	<p>Unless otherwise specified, references in this guide to <i>SAP ERP</i> are comprehensive. That is, they apply to SAP Retail and SAP Fashion Management.</p>
SAP S/4HANA	<p>Unless otherwise specified, references in this guide to <i>SAP S/4HANA</i> are comprehensive. That is, they apply to SAP S/4HANA Retail for merchandise management and to SAP S/4HANA for fashion and vertical business.</p>

Important Variables

i Note

Variables are placeholders for objects that have different names in your customer system landscape or are user-defined.

When you come across a variable in this guide, replace it with your customer-specific name of the respective object.

❖ Example

An instruction states to map the authoring schema to the `SAPHANADB` physical schema in your ABAP back-end system.

- In your customer system landscape, this physical schema is called `ABC01`.
- You therefore replace the `SAPHANADB` variable with `ABC01`. That is, you map the authoring schema to the `ABC01` physical schema.

Variable	Description
<p>Depending on the documentation and user interface, you might come across any of the following variables. They all mean the same:</p> <ul style="list-style-type: none"> • SAPHANADB • SAP<SID> • SAPABAP<num> 	<p>Stands for the name of the ABAP back-end system, database schema, or database user in your customer system landscape.</p> <div style="border: 1px solid #ccc; background-color: #f0f0f0; padding: 10px; margin: 10px 0;"> <p>→ Tip</p> <p>If you don't know what the name is in your customer system landscape, there are two easy ways to find it:</p> <ul style="list-style-type: none"> • Log on to your ABAP back-end system using SAP Logon. Choose ► System ► Status ► In the section titled <i>Database data</i>, see the name for <i>Schema</i>. • In SAP HANA studio, log on to your back-end system. The schema name is listed under <i>Catalog</i>. </div> <p>For more information, see SAP Note 2535951 (FAQ: SAP HANA Users and Schemas).</p>
<DBSID>	Database ID in uppercase letters
<dbsid>	Database ID in lowercase letters
<INSTDIR>	Installation directory for the SAP system
<DVD_DIR>	Directory on which a DVD is mounted
<OS>	Operating system name within a path

Naming Differences

Due to naming differences between the underlying technical objects, the following terms are **used interchangeably** in this guide:

SAP Customer Activity Repository (all modules except for UDF and DDF)	Unified Demand Forecast (UDF) and Demand Data Foundation (DDF)	SAP Merchandise Planning	SAP Assortment Planning	SAP Promotion Management	SAP Replenishment Planning	SAP Allocation Management	SAP Retail and SAP S/4HANA
article	product	product	article	material			
article variant	product variant	product variant or product/color/size	article variant				
store	location (used as an umbrella term for stores, distribution centers, etc.)	store	store	site			

1.2 Information Available on SAP Help Portal

Quickly find information on prerequisite platforms and components and get quick links to helpful SAP sites.

Information on Prerequisite Platforms and Components

Information On	Path	Title
Installing SAP HANA	https://help.sap.com/viewer/p/SAP_HANA_PLATFORM ▶ <Version> ▶ Installation and Upgrade ▶ SAP HANA Server Installation and Update Guide ▶	SAP HANA Server Installation and Update Guide

Information On	Path	Title
Installing SAP HANA database clients	https://help.sap.com/viewer/p/SAP_HANA_PLATFORM ▶ <Version> ▶ Installation and Upgrade ▶ SAP HANA Client Installation and Update Guide ▶	SAP HANA Client Installation and Update Guide
Installing SAP HANA studio	https://help.sap.com/viewer/p/SAP_HANA_PLATFORM ▶ <Version> ▶ Installation and Upgrade ▶ SAP HANA Studio Installation and Update Guide ▶	SAP HANA Studio Installation and Update Guide
Installing SAP LT (Landscape Transformation) Replication Server for SAP HANA	https://help.sap.com/viewer/p/SAP_HANA_REAL_TIME_REPLICATION ▶ <Version> ▶ Installation and Upgrade ▶	Installation Guide
Managing major operational aspects of the SAP LT (Landscape Transformation) Replication Server for SAP HANA	https://help.sap.com/viewer/p/SAP_HANA_REAL_TIME_REPLICATION ▶ <Version> ▶	Versions up to 3.0 SP04: Application Operations Guide Version 3.0 SP04: Application Help Version 3.0 SP05 and higher: Getting Started
Using SAP HANA	https://help.sap.com/viewer/p/SAP_HANA_PLATFORM ▶ <Version> ▶ Administration ▶ SAP HANA Administration Guide ▶	SAP HANA Administration Guide for SAP HANA Platform
Using the SAP HANA development tools to create comprehensive analytical models and to build applications with SAP HANA interfaces and integrated development (for developers)	https://help.sap.com/viewer/p/SAP_HANA_PLATFORM ▶ <Version> ▶ Development ▶ SAP HANA Developer Guide (For SAP HANA Studio) ▶	SAP HANA Developer Guide
Defining data models for use in SAP HANA (for modelers, business analysts)	https://help.sap.com/viewer/p/SAP_HANA_PLATFORM ▶ <Version> ▶ Development ▶ SAP HANA Modeling Guide (For SAP HANA Studio) ▶	SAP HANA Modeling Guide for HANA Studio

Information On	Path	Title
Installing Foundation on SAP NetWeaver AS for ABAP 7.52, version for SAP HANA	https://help.sap.com/viewer/p/SAP_NETWEAVER_AS_ABAP_752 ▶ <Version> ▶ Installation and Upgrade ▶ Master Guide ▶	Master Guide
Installing SAP ERP 6.0	https://help.sap.com/viewer/p/SAP_ERP ▶ <Version> ▶ Installation and Upgrade ▶ Installation Guide ▶	Installation Guide
Installing SAP S/4HANA	https://help.sap.com/viewer/p/SAP_S4HANA_ON-PREMISE ▶ <Version> ▶ Implement ▶ Installation Guide ▶	Installation Guide

General Quick Links

SAP Site	Path
SAP Help Portal	https://help.sap.com
Knowledge Base Articles and SAP Notes	https://support.sap.com/en/index.html
Product Availability Matrix (PAM)	https://support.sap.com/pam
Maintenance and release strategy	https://support.sap.com/en/release-upgrade-maintenance.html
SAP Software Download Center	https://support.sap.com/swdc
SAP Solution Manager	https://support.sap.com/solutionmanager
SAP Security Optimization Services Portfolio	https://support.sap.com/en/offerings-programs/support-services/security-optimization-services-portfolio.html
Data Protection and Privacy	2590321 ▶ Upgrade recommendations to support GDPR compliance
Support information (quick access via SAP ONE Support Launchpad; requires login)	https://launchpad.support.sap.com/#/productsearch
Support package stacks, latest versions, patch level requirements	https://support.sap.com/patches
System sizing	https://www.sap.com/about/benchmark/sizing.html

2 Plan your System

Plan your customer landscape so that it best serves your business scenario. Choose the best deployment option, and see from which source master data systems you can replicate data to your SAP Customer Activity Repository applications bundle system.

[System Landscape \[page 13\]](#)

Find out what a typical system landscape for SAP Customer Activity Repository applications bundle looks like. You can see the main layers in the diagram (database, back-end, front-end).

[Deployment Options \[page 15\]](#)

Learn about the two deployment options for your SAP Customer Activity Repository applications bundle solution.

[Integration with Source Master Data Systems \[page 16\]](#)

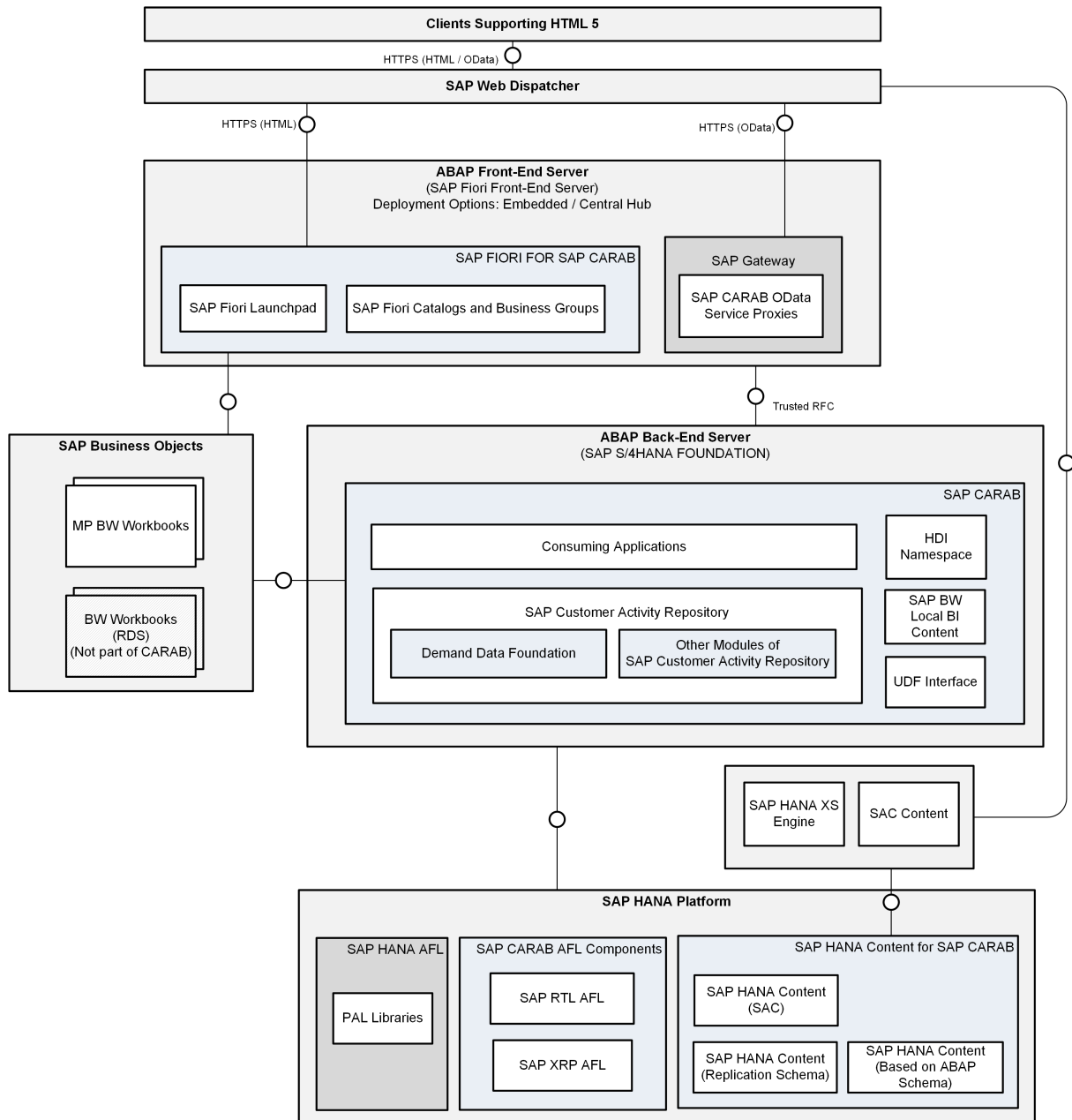
Get an overview of the source master data systems from which you can replicate master data and transactional data to SAP Customer Activity Repository applications bundle.

2.1 System Landscape

Find out what a typical system landscape for SAP Customer Activity Repository applications bundle looks like. You can see the main layers in the diagram (database, back-end, front-end).

System Landscape Example

The applications included in SAP Customer Activity Repository applications bundle require a layered system landscape, as shown in the following example:



System Landscape Example

→ Tip

Planning Help

- For more information on possible deployment scenarios, see [Deployment Options \[page 15\]](#).
- For the minimum versions required for this release, see [Upgrade the Prerequisites \[page 18\]](#).

2.2 Deployment Options

Learn about the two deployment options for your SAP Customer Activity Repository applications bundle solution.

To help you decide on the best deployment option for your scenario, please see SAP Note [2997851](#) (SAP Customer Activity Repository applications bundle 5.0: Front-end deployment options).

What is Central Hub Deployment?

With central hub deployment, you install the back-end product version (SAP CARAB) in your ABAP back-end system, while you install the front-end product version (SAP FIORI FOR SAP CARAB) and the SAP Fiori front-end server in a separate front-end system.

As a result, the SAP Fiori apps are deployed in separate systems (UIs in the front-end system, related OData services in the back-end system).

What is Embedded Deployment?

With the embedded deployment option, you install the SAP Fiori front-end server in the same system as your ABAP back-end server. For your SAP Customer Activity Repository applications bundle solution, this means that you install the back-end product version (SAP CARAB) and the front-end product version (SAP FIORI FOR SAP CARAB) in the same system (that is, your SAP S/4HANA FOUNDATION back-end system).

⚠ Caution

If you wish to use or are already using an embedded deployment scenario for SAP Customer Activity Repository applications bundle **in the same system as the SAPS/4HANA source master data system**, carefully read SAP Note [2948396](#) (*Deployment options for SAP Customer Activity Repository applications bundle and SAP S/4HANA source master data system*).

The note contains important deployment information for the following scenario:

- Your current source master data system is SAP S/4HANA 1709 or 1809.
- You want to install or upgrade to SAP S/4HANA 1909 or higher.
- You are using your source master data system in an embedded deployment scenario. That is, you are also using it as your front-end system for SAP Customer Activity Repository applications bundle. In other words, you have installed the front-end product version SAP FIORI FOR SAP CARAB (containing the software component UICAR001 with the SAP Fiori apps) on your SAP S/4HANA system.

The advantage of this option is that you do not require a separate front-end system.

- Be aware that such an embedded scenario is no longer possible as of **SAP S/4HANA 1909**. For more information and for supported deployment alternatives, please see SAP Note [2948396](#).

More Information

→ Tip

To help you decide on the best deployment option for your scenario, see SAP Note [2997851](#) (SAP Customer Activity Repository applications bundle 5.0: Front-end deployment options).

For more information on deployment options for SAP Fiori, see the following:

- For a system landscape overview showing the ABAP back-end server and the ABAP front-end server, see https://help.sap.com/viewer/p/FIORI_IMPLEMENTATION and choose **Implement** > **Installation and Upgrade** > **SAP Fiori: Setup and Configuration** > **Setup of SAP Fiori System Landscape**.

2.3 Integration with Source Master Data Systems

Get an overview of the source master data systems from which you can replicate master data and transactional data to SAP Customer Activity Repository applications bundle.

Overview

You can deploy your scenario of SAP Customer Activity Repository applications bundle in parallel with one of the following source master data systems:

Source Master Data System	Flavor
SAP ERP	SAP Retail (add-on to SAP ERP)
	SAP Fashion Management (add-on to SAP Retail)
SAP S/4HANA	SAP S/4HANA Retail for merchandise management
	SAP S/4HANA for fashion and vertical business

i Note

Unless otherwise specified, references in this guide to *SAP ERP* are comprehensive. That is, they apply to SAP Retail and SAP Fashion Management.

The same is true for references to *SAP S/4HANA*. That is, they apply to SAP S/4HANA Retail for merchandise management and to SAP S/4HANA for fashion and vertical business.

For more information on these and other important terms used in this guide, see [Naming Conventions \[page 6\]](#).

Prerequisites

For information on what versions of the source master data systems are required for this release, see [Upgrade the Prerequisites \[page 18\]](#).

3 Upgrade the Prerequisites

This section lists all the prerequisite platforms, applications, and components that must be installed and configured to prepare the system landscape for **an upgrade from a previous release**.

i Note

If you are performing a **new installation of this release**, the information in this *Common Upgrade Guide* is not relevant for you. Instead, proceed with the *Common Installation Guide* available at <https://help.sap.com/viewer/p/CARAB> on the *Implement* tab.

The prerequisites are grouped in two categories:

- *Common Prerequisites*, which must be installed regardless of the business scenario you are planning to implement
- *Application-Specific Prerequisites*

⚠ Caution

The prerequisites should be installed and configured by an experienced SAP Basis administrator.

→ Tip

This guide references several SAP Notes that are updated on a regular basis. If you want to be informed of such updates because a note is particularly relevant for your scenario, you can easily set up email notifications for it. For instructions, see SAP Note [2478289](#) (How to set up notifications for SAP Notes and/or KBAs with Expert Search filters).

Common Prerequisites

⚠ Caution

, which are only relevant for specific applications under specificAlways first consult SAP Note [2957259](#) (Latest news on SAP Customer Activity Repository applications bundle 5.0 (any release)) before installing or upgrading any of the prerequisites. There you can find the latest updates on the following:

- information on higher versions of the prerequisites not yet mentioned in this guide
- technology and support updates
- other news and helpful references

You can also find the note on SAP Help Portal at <https://help.sap.com/viewer/p/CARAB> under

▸ *Implement* ▸ *Important SAP Notes* ▸.

SAP S/4HANA FOUNDATION

i Note

SAP S/4HANA foundation is the next-generation business suite foundation platform. It cannot be used standalone but only as a foundation in combination with an add-on (such as the SAP CARAB 5.0 back-end product version).

The minimum requirement for this release is as follows, regardless of the business scenario you are planning to implement:

Minimum Requirement	Installation Information
<ul style="list-style-type: none">SAP S/4HANA FOUNDATION 1909 – SPS05 (11/2021)	<ul style="list-style-type: none">SAP Note 2750164 (SAP S/4HANA FOUNDATION 1909: Release Information Note)
<ul style="list-style-type: none">SAP S/4HANA FOUNDATION 2020 – Initial Shipment Stack	<ul style="list-style-type: none">SAP Note 2912919 (SAP S/4HANA FOUNDATION 2020: Release Information Note)
	<h3>i Note</h3> <p>If you plan to use SAP Assortment Planning, implement the SAP Note 3072121.</p>
<ul style="list-style-type: none">SAP S/4HANA FOUNDATION 2021 – Initial Shipment Stack	<ul style="list-style-type: none">SAP Note 3015497 (SAP S/4HANA FOUNDATION 2021: Release Information Note)
	<h3>i Note</h3> <p>The following are important points to consider:</p> <ul style="list-style-type: none">Unified Demand Forecast (UDF) requires the implementation of the following SAP Notes:<ul style="list-style-type: none">314826331489113140456SAP Replenishment Planning requires the implementation of the SAP Note 3141677.SAP Assortment Planning requires the implementation of the SAP Note 3072121.
<ul style="list-style-type: none">SAP S/4HANA FOUNDATION 2022 – Initial Shipment Stack	<ul style="list-style-type: none">SAP Note 3143630 (SAP S/4HANA FOUNDATION 2022: Release Information Note)

SAP HANA Platform 2.0

- SAP HANA database** component:
The minimum requirement for this release is as follows, regardless of the business scenario you are planning to implement: **SAP HANA database 2.0 SPS05 revision 2.00.059 (sometimes referred to as revision 59)**

⚠ Caution

Guidance for Selecting a Higher Revision than the Minimum Revision

If you wish to use a **higher revision**, we recommend that you select one of the “maintenance revisions”. See SAP Note [2378962](#) (SAP HANA 2.0 Revision and Maintenance Strategy) and consult the information under *Last Released Revision or Maintenance Revision*.

Also use this same strategy if the minimum revision is no longer available for download from the **Software Download Center**. This situation might occur depending on when you perform the actual installation and how long ago the revision was released.

If you wish to use the **latest SAP HANA support package stack**, be aware that there are no maintenance revisions for it. In this case, we recommend the following:

1. To avoid incompatibilities, first consult SAP Note [2818378](#) (Which releases of SAP HANA Platform are supported for which releases of SAP Customer Activity Repository applications bundle (SAP CARAB)?).
Select a supported combination of releases. This applies not only during a new installation or an upgrade, but is equally relevant during operations later on (for example, if you decide to upgrade your SAP HANA Platform to a higher revision or support package stack).
2. Install the latest SAP HANA support package stack in your test system. Test it carefully to evaluate its impact on your customer system landscape. Only roll it out to your production system when you are sure that it integrates well with your day-to-day business processes.

- **SAP HANA AFL** component:

The minimum requirement for this release is the **SAP HANA AFL revision that is compatible with the selected SAP HANA database revision**.

For installation information, see the following:

- SAP Note [2818378](#) (Which releases of SAP HANA Platform are supported for which releases of SAP Customer Activity Repository applications bundle (SAP CARAB)?)
- SAP Note [2378962](#) (SAP HANA 2.0 Revision and Maintenance Strategy, lists the available maintenance revisions)
- SAP Note [2115815](#) (FAQ: SAP HANA Database Patches and Upgrades, helpful information on database upgrades, downgrades, downtimes, patch levels, and more)
- [SAP HANA 2.0 Revision Strategy](#) (what are revisions, what are support package stacks, what is the SAP HANA product availability and maintenance strategy)
- SAP Note [2958224](#) (SAP HANA Revision Release Details, easy entry point to all released revisions)
- SAP Note [2844322](#) (SAP HANA Platform 2.0 SPS 05 Release Note)
- SAP HANA Server Installation and Update Guide for your SAP HANA Platform version at https://help.sap.com/viewer/p/SAP_HANA_PLATFORM
- Overview, important links, and download of SAP HANA Platform 2.0: <http://support.sap.com>
▮ [Software Downloads](#) ▸ [By Alphabetical Index \(A-Z\)](#) ▸ [H](#) ▸ [SAP HANA PLATFORM EDITION](#) ▸ [SAP HANA PLATFORM EDITION 2.0](#) ▸ [INFO](#) ▮
- SAP Note [2339267](#) (HANA Client version and installation manifest file doesn't match currently available HANA server version information)

SAP RTL AFL FOR SAP HANA

i Note

SAP RTL AFL FOR SAP HANA is a back-end software component of SAP Customer Activity Repository applications bundle. However, you must always upgrade this component together with the SAP HANA Platform. You must do this **before** upgrading the SAP CARAB back-end product version. This guide leads you through the correct steps.

The minimum revision for SAP RTL AFL FOR SAP HANA applies regardless of the business scenario you are planning to implement. **There is a minimum AFL revision for each SAP HANA database revision.** Whichever AFL revision you choose, it must be compatible with the SAP HANA database revision.

When you download an AFL revision from the SAP Support Portal, the compatible SAP HANA database revision is always indicated.

The minimum supported revision of SAP RTL AFL FOR SAP HANA is 59.408 (patch 408 of revision 59), and this revision is compatible with SAP HANA database 2.0 Revision 59.04.

⚠ Caution

Criteria for Selecting a Revision

- No matter which AFL revision you choose, always install the **highest patch** available for download.
- Be aware that patches for different revisions can occur at different points in time. For example, an AFL patch for revision 55 might be released after an AFL patch for revision 56.
- If you decide to install a **higher revision** of SAP RTL AFL FOR SAP HANA, it must again be compatible with the SAP HANA database revision.
- For information on higher revisions, see SAP Note [2818378](#) (Which releases of SAP HANA Platform are supported for which releases of SAP Customer Activity Repository applications bundle (SAP CARAB)?).

i Note

SAP RTL AFL FOR SAP HANA contains back-end functionality for two modules of SAP Customer Activity Repository: Unified Demand Forecast (UDF) and On-Shelf Availability (OSA). You must always **install** the component, regardless of the scenario you are planning to implement. You only need to **configure** UDF and/or OSA if you wish to use the functionality in your scenario.

i Note

To avoid issues related to rendering of charts in the SAP Fiori Apps for your forecast scenario ([Analyze Forecast](#), [Analyze Forecast](#), and [Manage Demand Influencing Factors](#)) resulting from SAP HANA content activation, see SAP Note [3266666](#) (SAP Fiori apps for Forecast Scenario: HANA content activation issue (SAP CARAB 5.0, 5.0 FPS01, 5.0 FPS02, 5.0 FPS03, 5.0 FPS04)).

SAP Landscape Transformation Replication Server

We strongly recommend that you install **SAP Landscape Transformation Replication Server for SAP S/4HANA 1.0** as a standalone system.

For installation information and possible dependencies to other components, see the following:

- *Installation Guide for the latest support package (to see all the options of replicating data from a master data system)* at <https://help.sap.com/slts4hana>
- SAP Note [1605140](#) (SAP Landscape Transformation Replication Server (SLT)): This is the central note for enabling trigger-based data replication (functional overview, download, installation, upgrade, corrections, implementation).
- SAP Note [2014562](#) (FAQ: SAP HANA LT Replication Server (SLT))
- SAP Note [2707835](#) (SLT Licensing, licensing and deployment overview by source master data system)
- SAP Note [2572945](#) (DMIS compatibility with S/4HANA, integration of the DMIS component into S4CORE layer, release overview and guidance for SAP S/4HANA source master data systems)

SAP Fiori

i Note

SAP Fiori front-end server is an add-on product version. It contains the front-end software components required to run SAP Fiori apps and the SAP Fiori launchpad.

The minimum requirement for this release is one of the following, regardless of the business scenario you are planning to implement:

Minimum Requirement	Installation Information
<p>SAP FIORI FRONT-END SERVER 6.0 - SAP Frontend Server 7.54 SP02 (05/2020)</p> <p>The minimum SAPUI5 version is 1.71.</p>	<ul style="list-style-type: none"> • SAP Note 2775163 (SAP-Fiori-Frontend-Server 6.0 - General Information) • SAP Note 2825540 (Release of Fiori Product Versions for SAP Fiori front-end server 6.0) • For overall planning and implementation information, see the note below this table.

Minimum Requirement

SAP Fiori front-end server 2020 for SAP S/4HANA SP01 (02/2021)

i Note

SAP FES 2020 SP01 is the front-end server version supporting central hub deployment for the UICAR001 500 front-end component of SAP Customer Activity Repository applications bundle.

SAP FES 2020 SP01 contains SAP_UI 7.55 SP02 (with the SAPUI5 long-term maintenance version 1.84) and UIBAS001 600 SP01.

You can use one of the following instances:

- SAP FIORI FES 2020 FOR S/4HANA - SAP Frontend Server 7.52 (Hub) SP01 (02/2021)
- SAP FIORI FES 2020 FOR S/4HANA - SAP Frontend Server 7.55 SP01 (02/2021)

i Note

Front-end server instances 7.53 and 7.54 are currently not supported. If this situation changes in the future, we will indicate it in SAP Note [2957259](#) (Latest news on SAP Customer Activity Repository applications bundle 5.0 (any release)).

Installation Information

- SAP Note [2919182](#) (SAP Fiori front-end server 2020 for SAP S/4HANA) – main entry note where you can find an overview, prerequisites, and important references
- SAP Note [2977715](#) (Release of Fiori Product Versions for SAP Fiori front-end server 2020 for SAP S/4HANA)
- SAP Note [2935725](#) (General Information: Installation details of SAP Fiori front-end server 2020 for SAP S/4HANA) – overview for setting up systems to run SAP S/4HANA 2020 and SAP Business Suite Fiori apps on SAP Fiori front-end server 2020 for SAP S/4HANA (as hub deployment or embedded)
- For overall planning and implementation information, see the note below this table.

→ Tip

Install the latest support package of the FES version that you wish to use.

i Note

With SAP Fiori front-end server 2020, you can use spaces and pages in SAP Fiori launchpad. For more information and an example, see the [Spaces and Pages](#) section in the SAP Fiori launchpad documentation.

Note that SAP Customer Activity Repository applications bundle does not deliver any spaces and pages by default. However, you can add customer-specific spaces and pages to the launchpad as needed.

SAP Fiori front-end server 2021 for SAP S/4HANA – Initial Shipment Stack

- SAP Note [3085560](#) (General Information: Installation details of SAP Fiori front-end server 2021 for SAP S/4HANA)

SAP Fiori front-end server 2022 for SAP S/4HANA – Initial Shipment Stack

- SAP Note [3237135](#) (General Information: Installation details of SAP Fiori front-end server 2022 for SAP S/4HANA)

i Note

Overall planning and implementation information:

- [SAP Fiori Overview](#) (your entry point to all documentation)

- [SAP Fiori Deployment Options and System Landscape Recommendations](#) (regularly updated, very helpful guidelines and landscape diagrams)
- [Overview of SAP Fiori front-end server components and versions](#)
- SAP Note [2217489](#) (*Maintenance and Update Strategy for SAP Fiori Front-End Server*)
- [SAP Fiori Implementation Information](#) (select your front-end server version at the top)
- SAP Note [2590653](#) (*SAP Fiori front-end server deployment for SAP S/4HANA*)

→ Tip

If you wish to check what SAPUI5 version is currently installed in your system, there is an easy way to do this. See SAP Note [2282103](#) (*How to check the version of SAPUI5 you have installed*).

Source Master Data Systems

- Either SAP ERP or SAP S/4HANA must be installed.

i Note

Unless otherwise specified, references in this guide to *SAP ERP* are comprehensive. That is, they apply to SAP Retail and SAP Fashion Management.

The same is true for references to *SAP S/4HANA*. That is, they apply to SAP S/4HANA Retail for merchandise management and to SAP S/4HANA for fashion and vertical business.

For more information on these and other important terms used in this guide, see [Naming Conventions \[page 6\]](#).

- The minimum requirements for this release are as follows, regardless of the business scenario you are planning to implement:

Source Master Data System	Minimum Requirement	Installation Information
SAP ERP	<ul style="list-style-type: none"> • SAP ERP 6.0 Enhancement Package 7 SP18 or higher • SAP ERP 6.0 Enhancement Package 8 SP12 or higher 	<i>Installation Guide</i> at https://help.sap.com/viewer/p/SAP_ERP

Source Master Data System

Minimum Requirement

Installation Information

SAP S/4HANA

- SAP S/4HANA 1709 SP04 or higher
- SAP S/4HANA 1809 SP01 or higher
- SAP S/4HANA 1909 Initial Shipment Stack or higher
- SAP S/4HANA 2020 Initial Shipment Stack or higher
- SAP S/4HANA 2021 Initial Shipment Stack or higher
- SAP S/4HANA 2022 Initial Shipment Stack or higher

- *Installation Guide* at https://help.sap.com/viewer/p/SAP_S4HANA_ON-PREMISE
- SAP Note [2482453](#) (SAP S/4HANA 1709: Release Information Note)
- SAP Note [2625407](#) (SAP S/4HANA 1809: Release Information Note)
- SAP Note [2769531](#) (SAP S/4HANA 1909: Release Information Note)

⚠ Caution

If you wish to use or are already using an embedded deployment scenario for SAP Customer Activity Repository applications bundle **in the same system as the SAPS/4HANA source master data system**, carefully read SAP Note [2948396](#) (*Deployment options for SAP Customer Activity Repository applications bundle and SAP S/4HANA source master data system*).

The note contains important deployment information for the following scenario:

- Your current source master data system is SAP S/4HANA 1709 or 1809.
- You want to install or upgrade to SAP S/4HANA 1909 or higher.
- You are using your source master data system in an embedded deployment scenario. That is, you are also using it as your front-end system for SAP Customer Activity Repository applications bundle. In other words, you have installed the front-end product version SAP Fiori for SAP CARAB (containing the software component UICAR001 with the SAP Fiori apps) on your SAP S/4HANA system. The advantage of this option is that you do not require a separate front-end system.
- Be aware that such an embedded scenario is no longer possible as of **SAP S/**

i Note

To set up the data replication from SAP S/4HANA 1909 or higher, you need to do some preparatory steps. For more information, see [Create/Replicate Source Master Data System Tables](#) [page 86].

- SAP Note [2884313](#) (SAP S/4HANA 2020: Release Information)
- SAP Note [3015539](#) (SAP S/4HANA 2021: Release Information Note)

i Note

The table MBEW cannot be replicated from the master data system SAP S/4HANA 2021. For more information and to solve this issue, see the SAP Note [3156410](#). Since the views MBV_MBEW and MBV_MBEW_BASE are not relevant for SAP Customer Activity Repository applications bundle, you do not have to manually copy them.

Source Master Data System

Minimum Requirement

Installation Information

4HANA 1909. For more information and for supported deployment alternatives, please see SAP Note [2948396](#).

- SAP Note [3145277](#) (SAP S/4HANA 2022: Release Information Note)

i Note

There are some scenarios that are supported on older source master data systems than the minimum requirements specified above. For more information, see SAP Note [2696488](#) (SAP Customer Activity Repository - Alignment with Source Master Data Versions Outside of the Minimum (SAP Retail, SAP S/4HANA)).

→ Tip

If you are planning to convert from SAP ERP to SAP S/4HANA, you can use the SAP Readiness Check to check the readiness of your SAP ERP system. For more information, see SAP Note [2758146](#) (SAP Readiness Check 2.0 & Next Generation SAP Business Scenario Recommendation).

Application-Specific Prerequisites

SAP Customer Activity Repository

Prerequisites for SAP Customer Activity Repository

Prerequisite	Minimum Requirement	Mandatory/Optional	Installation Information
SAP Customer Relationship Management (SAP CRM)	<p>The minimum requirement for this release is one of the following:</p> <ul style="list-style-type: none"> SAP Enhancement Package 2 for SAP CRM 7.0 SAP Enhancement Package 2 for SAP CRM 7.0, Version for SAP HANA or higher 	Optional, depending on whether or not you choose to implement customer de-termination with SAP CRM.	Installation Guide at https://help.sap.com/viewer/p/SAP_CUSTOMER_RELATIONSHIP_MANAGEMENT

Prerequisite	Minimum Requirement	Mandatory/Optional	Installation Information
SAP Smart Business	SAP Smart Business foundation component 1.0, most recent SPS	Optional, depending on whether or not you choose to implement the SAP Smart Business for Multichannel Sales Analytics dashboard within SAP Customer Activity Repository.	SAP Note 2018360 (Release Information Note for SAP SMART BUSINESS)
<div style="background-color: #f0f0f0; padding: 10px; border: 1px solid #ccc;"> <p>i Note</p> <p>SAP Smart Business is not supported with SAP Fiori front-end server 2020 for SAP S/4HANA (or higher). Instead, you can use the SAP Fiori Launchpad Designer to access and set the configuration parameters required for the analytical apps in the multichannel sales analytics cockpit. For more information, see Using SAP Fiori Launchpad Designer.</p> </div>			
SAP Marketing solution (SAP Marketing or SAP Marketing Cloud)	SAP Marketing 1.10 or higher	Optional, depending on whether or not you choose to implement customer determination with your SAP Marketing solution.	<ul style="list-style-type: none"> For SAP Marketing, see the <i>Installation and Configuration Guide</i> at https://help.sap.com/viewer/p/SAP_HYBRIS_MARKETING. For SAP Marketing Cloud, see https://help.sap.com/viewer/p/SAP_MARKETING_CLOUD.
SAP Commerce	SAP Commerce 1811 or higher (in particular, the Accelerator, the Data Hub, and SAP Asynchronous Order Management)	Optional, depending on whether or not you choose to implement Omnichannel Article Availability and Sourcing (OAA) or Omnichannel Promotion Pricing (OPP) within SAP Customer Activity Repository.	https://help.sap.com/viewer/p/SAP_COMMERCE/

Prerequisite	Minimum Requirement	Mandatory/Optional	Installation Information
SAP Commerce, integration package for SAP for Retail	SAP Commerce, integration package for SAP for Retail 1811 or higher	Optional, depending on whether or not you choose to implement Omnichannel Article Availability and Sourcing (OAA) or Omnichannel Promotion Pricing (OPP) within SAP Customer Activity Repository.	See the <i>Administration Guide</i> delivered with the software package or from https://help.sap.com/viewer/p/IPR .
SAP Analytics Cloud	Content Innovation 12	Optional, depending on whether or not you choose to implement Omnichannel Article Availability and Sourcing (OAA) within SAP Customer Activity Repository. You only need to run and connect this application if you want to use the set of OAA analyses that has been predefined in SAP Analytics Cloud and that is part of the standard delivery of SAP Analytics Cloud. If you are using a different analytics tool, or if you do not run analytics at all, you do not need this application.	System Requirements and Technical Prerequisites

Prerequisite	Minimum Requirement	Mandatory/Optional	Installation Information
	Content Innovation 20	<p>Optional, depending on whether or not you want to use the forecast-related analytics.</p> <p>This is a set of predefined analyses templates for analyzing UDF forecast data. The templates are delivered as part of the standard delivery of SAP Analytics Cloud, in the form of content packages SAP__RT_UDF_DEMANDFORECASTING_LIVE (<i>SAP Retail: Unified Demand Forecast</i>) and SAP__RT_RPL_UDF_DASHBOARD_LIVE (<i>SAP Retail: Replenishment Planning and Unified Demand Forecast Dashboard</i>).</p> <p>For more information, see the <i>Forecast-Related Analytics</i> section in the application help for SAP Customer Activity Repository at https://help.sap.com/viewer/p/CARAB.</p> <p>If you are using a different analytics tool, or if you do not run analytics at all, you do not need SAP Analytics Cloud.</p>	
SAP IQ	SAP IQ 16.0, SP8 or higher	Optional, depending on whether or not you choose to use the <i>Table Content Aging</i> report to move data from SAP Customer Activity Repository to SAP IQ.	https://help.sap.com/viewer/product/SAP_IQ/16.1.latest/en-US?task=implement_task

Prerequisite	Minimum Requirement	Mandatory/Optional	Installation Information
SAP HANA Dynamic Tiering	SAP HANA Dynamic Tiering is delivered with the SAP HANA Platform. See the <i>Common Prerequisites</i> section above.	Optional, depending on whether or not you choose to use the <i>Table Content Aging</i> report to move data from SAP Customer Activity Repository to extended storage using SAP HANA Dynamic Tiering.	<i>SAP HANA Dynamic Tiering: Installation and Update Guide</i> at https://help.sap.com/viewer/p/SAP_HANA_DYNAMIC_TIERING
SAP HANA extended application services, advanced model (XSA)	SAP HANA XSA, version 1.0.88 or higher We recommend that you use the highest version available.	Optional, depending on whether or not you choose to use Omnichannel Promotion Pricing (OPP) within SAP Customer Activity Repository with a central deployment of the promotion pricing service (PPS).	<i>SAP HANA Server Installation and Update Guide</i> at https://help.sap.com/viewer/p/SAP_HANA_PLATFORM,searchforsectionInstallingXSAdvancedRuntime

SAP Merchandise Planning

Prerequisites for SAP Merchandise Planning

Prerequisite	Minimum Requirement	Mandatory/Optional	Installation Information
SAP Analysis	SAP Analysis for Microsoft Office 2.8 SP02	Mandatory	<i>Administrator Guide</i> at https://help.sap.com/viewer/p/SAP_BUSINESS_OBJECTS_ANALYSIS_OFFICE

SAP Assortment Planning

Prerequisites for SAP Assortment Planning

Prerequisite	Minimum Requirement	Mandatory/Optional	Installation Information
SAP Analysis	SAP Analysis for Microsoft Office 2.8 SP02	Mandatory	<i>Administrator Guide</i> at https://help.sap.com/viewer/p/SAP_BUSINESS_OBJECTS_ANALYSIS_OFFICE

SAP Promotion Management

SAP Promotion Management requires only the common prerequisites.

SAP Allocation Management

SAP Allocation Management requires the common prerequisites.

In addition, the bar chart used to display the purchase order quantity by status requires the **SAPUI5 library version 1.71.14 or higher**. In lower library versions, additional color is shown in the bar chart even if the

purchase order quantity is zero. This affects SAP Fiori apps (*My Allocation Workload - Promotional Push*, *My Order Workload - Promotional Buy*, and *My Allocation Plans* for buy plans) in the business scenarios for promotional push and promotional buy.

Accessing the app *My Allocation Plans Version 2* requires UI5 version 1.71.55 or higher. If you are already using a UI5 version higher than 1.71, it is recommended to install the latest patch for that version.

SAP Replenishment Planning

SAP Replenishment Planning requires the SAP XRP AFL.

Note

SAP XRP AFL is a back-end software component of SAP Customer Activity Repository applications bundle. You must upgrade this component **before** using SAP Replenishment Planning for the first time but you can do it after installing or upgrading the SAP CARAB back-end product version. This guide leads you through the correct steps.

The minimum revision of SAP XRP AFL applies regardless of the business scenario you are planning to implement. There is a minimum AFL revision for each SAP HANA database revision. **Whichever AFL revision you choose, it must be compatible with the SAP HANA database revision.**

Compatible Minimum Revisions

Minimum Revision of SAP XRP AFL	Compatible With This Revision of SAP HANA Database
AFL revision 54.0006 (patch 6 of revision 54)	SAP HANA database 2.0 revision 2.00.054
AFL revision 55.0006 (patch 6 of revision 55)	SAP HANA database 2.0 revision 2.00.055
AFL revision 56.0002 (patch 2 of revision 56)	SAP HANA database 2.0 revision 2.00.056
AFL revision 57.0000 (patch 0 of revision 57)	SAP HANA database 2.0 revision 2.00.057
AFL revision 58.0000 (patch 0 of revision 58)	SAP HANA database 2.0 revision 2.00.058
AFL revision 59.0000 (patch 0 of revision 59)	SAP HANA database 2.0 revision 2.00.059

Caution

No matter which AFL revision you choose, always install the **highest patch** available for download.

Be aware that patches for different revisions can occur at different points in time.

Example

The AFL patch 54.0006 might be released later than the AFL patch 55.0006.

If you decide to install a **higher revision** of SAP XRP AFL, it must again be compatible with the SAP HANA database revision.

When you download an AFL revision from the SAP Support Portal, the compatible SAP HANA database revision is always indicated.

SAP Analytics Cloud is optional for SAP Replenishment Planning.

You only need to run and connect the **Content Innovation 20** or later release of this application with SAP Replenishment Planning depending on whether or not you choose to use the set of replenishment-related analyses that has been predefined in SAP Analytics Cloud and that is part of the standard delivery of SAP Analytics Cloud. If you are using a different analytics tool, or if you do not run analytics at all, you do not need this application. For installation information related to SAP Analytics Cloud, see [System Requirements and Technical Prerequisites](#).

4 Prepare the Upgrade

Before you start with the actual upgrade of SAP Customer Activity Repository applications bundle 5.0 SPS06, you must first perform several preparatory tasks.

1. [Implement SAP Notes for the Upgrade \[page 33\]](#)

This section lists SAP Notes (corrections) that you must read and — when appropriate — implement **at different points in the upgrade process**. The section also points you to the release information notes (RINs) for this release. There you can find the back-end and front-end corrections that have become available since the software was released. The RINs complement the SAP Notes listed in this chapter.
2. [Verify Correct Schema Mapping \[page 41\]](#)

In SAP HANA studio, verify that the **authoring schemas** delivered by SAP are mapped to the correct **physical schemas** of your customer landscape. First do an n:1 mapping (all authoring schemas of SAP Customer Activity Repository applications bundle to the same `SAPHANADB` physical schema). Then do a 1:1 mapping (the authoring schema of each source master data system to a unique physical schema for that system). If necessary, create any mappings that are missing.
3. [Verify SAP HANA Users and Privileges \[page 44\]](#)

SAP Customer Activity Repository applications bundle requires a multi-level system landscape: Level 1 is the SAP HANA database. Level 2 is the ABAP back-end server. Level 3 is the ABAP front-end server with SAP Gateway and the SAP Fiori apps. Each level requires specific users with specific privileges. In this procedure, you set up the authorizations for the SAP HANA database (level 1).
4. [Configure AFL Usage \[page 50\]](#)

Perform configuration tasks to enable the usage of application function libraries (such as the PAL and the OFL) for the applications SAP Assortment Planning and SAP Allocation Management.
5. [Prepare for Zero Downtime Upgrades \[page 53\]](#)

Configure and set up SAP Customer Activity Repository so that you can continue regular operations during future system upgrades.
6. [Migrate to New Default Table for Sales Pricing Data \(/DMF/PRC\) \[page 59\]](#)

Verify that the sales pricing data is replicated to the `/DMF/PRC` table in your customer system. If necessary, perform the migration from the old table (`/DMF/PRODLOC_PRC`, used in 4.x releases) to the new table. **This pre-upgrade procedure is mandatory for all scenarios upgrading from a 4.x release. As the migration might be time-consuming, we recommend that you schedule it at a time that is not disruptive to your day-to-day operations.**

4.1 Implement SAP Notes for the Upgrade

This section lists SAP Notes (corrections) that you must read and — when appropriate — implement **at different points in the upgrade process**. The section also points you to the release information notes (RINs) for this release. There you can find the back-end and front-end corrections that have become available since the software was released. The RINs complement the SAP Notes listed in this chapter.

Prerequisites

- Make sure that you have the latest version of *Note Assistant* (transaction `SNNOTE`) installed. This is required so that notes can be implemented correctly. For more information, see the following:
 - Versions of *Note Assistant*: See https://support.sap.com/en/my-support/knowledge-base/note-assistant.html#section_2043200365.
 - Mandatory corrections for *Note Assistant*: See SAP Note [1668882](#) (*Note Assistant: Important notes for SAP_BASIS 730,731,740,750,751,752,753,754,755,756*).
- Make sure that you have the up-to-date version of each SAP Note, which you can always find on the SAP Support Portal at <https://support.sap.com/notes>.

Release Information Notes (RINs) and Performance Note with Latest Corrections for All Applications

After the publication of this guide, additional corrections might become available. You can find these additional corrections in the following SAP Notes:

- Release Information Notes (RINs):
 - For the latest **back-end corrections**, see SAP Note [3375173](#).
 - For the latest **front-end corrections**, see SAP Note [3375192](#).
- Performance note:
 - For the latest **performance corrections and recommendations**, see SAP Note [2958143](#).

The notes are regularly updated if new corrections become available.

→ Tip





If a note is particularly relevant for your scenario and you want to be informed of updates, you can easily set up email notifications. See SAP Note [2478289](#) (*How to set up notifications for SAP Notes and/or KBAs with Expert Search filters*).






⚠ Caution

Always consult the **SAP Notes for SAP Customer Activity Repository**, regardless of your scenario. Notes listed here are often common corrections, applicable to all applications.

SAP Notes for SAP Customer Activity Repository

SAP Notes for SAP Customer Activity Repository

Implement	Area	SAP Note	Description
Prior to the upgrade	Front-end	2436567  <i>UI for Basis Applications - General Information</i>	Only relevant if you are using the <i>Manage Workloads</i> app to create new workloads.
After the upgrade	SAP S/4HANA 1909 back-end	2835297  <i>Missing OAA ATP Change Indicator entries for S/4HANA 1909</i>	Only required if your source master data system is SAP S/4HANA 1909. Mandatory if you are using omnichannel article availability and sourcing (OAA), for both sales channel mode and OAA profile mode. Not required for functions other than OAA and source master data systems other than SAP S/4HANA 1909.
After the upgrade	Back-end	2857334  <i>Unsupported data type DEC-FLOAT34 / D34N when replicating from an SAP S/4HANA 1909 on premise system</i>	Mandatory correction if your source master data system is SAP S/4HANA 1909. In that case, the note is required for all the applications of SAP Customer Activity Repository applications bundle.
Prior to the upgrade	Back-end	3091193  <i>New UDF parameter to select the price interface in SAP CARAB 4.0 FPS02 and higher</i>	Unified Demand Forecast: Mandatory note for any forecast scenario using Unified Demand Forecast (UDF). Implement the note in your back-end system before the upgrade to enable the migration to the new price table <i>/DMF/PRC</i> . The note is available for upgrades from SAP CARAB 4.0 FPS02 or higher. The note is a prerequisite for the Migrate to New Default Table for Sales Pricing Data (/DMF/PRC) [page 59] procedure, to which you'll come later in this guide.






Implement	Area	SAP Note	Description
After the upgrade	Back-end	3212199  <i>PPHY Replication: Dump observed during data replication when a site is unsigned from the location hierarchy in transaction REFSITE</i>	Mandatory correction to replicate the location hierarchy data from the master data system to Demand Data Foundation.
After the upgrade	Back end	3245095  <i>PMAT: Articles with only Price list prices are not replicated through DRFOUT</i>	Mandatory correction to replicate the product data from the master data system to Demand Data Foundation.
After the upgrade	Back end	3252656  <i>PMAT replication is taking more time as prices that are not required are also getting replicated to CARAB</i>	Mandatory correction to replicate the product data from the master data system to Demand Data Foundation.
After the upgrade	SAP ERP or SAP S/4HANA Back-end	3254769  <i>ERP Inbound: buffering of master data</i>	Optional correction to improve performance.
After the upgrade	Back end	3398318  <i>Report /DPL/RE-ORG_DIF_TABLES does not delete all the obsolete DIFs.</i>	Unified Demand Forecast: Optional note to ensure all the obsolete DIFs are deleted on execution of the /DPL/REORG_DIF_TABLES report.

SAP Notes for SAP Merchandise Planning

i Note

Always consult the table for SAP Customer Activity Repository, regardless of your scenario. Notes listed there are often common corrections, applicable to all consuming applications.

SAP Notes for SAP Merchandise Planning

Implement	Area	SAP Note	Description
After the upgrade	Back-end	2913238  <i>Error transferring single key value from variable to SID</i>	If you receive an error when variables are submitted, consult this note for possible solutions.
After the upgrade	Back-end	2938084  <i>Current member and characteristics referencing to OFISC*</i>	Mandatory correction if a figure or structure element isn't calculated correctly.
After the upgrade	Back-end	2950567  <i>BRAIN 629 when Save a Planning Sequence</i>	Mandatory correction if a planning sequence uses a mandatory variable without default value or error <i>Specify a value for variable (BRAIN 629) is received.</i>
After the upgrade	Back-end	2941202  <i>Not required part provider access for current member query</i>	Mandatory correction if a global filter is deleted during query runtime.
After the upgrade	Back-end	2946337  <i>Wrong data in current member query</i>	Mandatory correction if a query shows incorrect data.

SAP Notes for SAP Assortment Planning

i Note

Always consult the table for SAP Customer Activity Repository, regardless of your scenario. Notes listed there are often common corrections, applicable to all consuming applications.

SAP Notes for SAP Assortment Planning

Implement	Area	SAP Note	Description
After the upgrade	Back-end	3395101 <i>LOCCLSTS_V2 - Behavior Change of Cluster & Module Check - Backend</i>	Mandatory correction to prevent an assortment module from being used as both the source and target when scheduling mass location assignments in the <i>Manage Location Clusters</i> app. This note contains the back-end changes. Implement the SAP Note 3397703 for the corresponding front-end changes.
After the upgrade	Back-end	3393023 <i>Bug Fix to Correct Module Status while Copying Statuses in Build Assortment</i>	Mandatory correction in the <i>Manage Assortments</i> app to change the status of assortment modules to <i>In Process</i> when the product statuses are copied over from other modules.
After the upgrade	Back-end	3387453 <i>Bug Fix for Listing with Modules Assigned with No Products</i>	Mandatory correction to handle listing of assortment modules that have no products but have either some locations or location assignments scheduled for a future date.
After the upgrade	Master Data System	3384540 <i>Bug fix to correct the validity dates in WSOP after Listing Integration</i>	Mandatory correction to the listing process so that the validity dates of a product in WSOP and WLK1 tables are updated correctly. This note must be implemented in your master data system (SAP ERP or SAP S/4HANA).
After the upgrade	Back-end	3339971 <i>Bug Fix for 'Net Sales Unit', 'Number of Locations with Sales' and 'Net Margin' KPIs</i>	Mandatory correction to the report <i>/RAP/ALC_RECALCULATE_KPIS</i> for the calculation of <i>Net Sales Unit</i> , <i>Number of Locations with Sales</i> , and <i>Net Margin</i> KPIs.

SAP Notes for SAP Promotion Management

i Note

Always consult the table for SAP Customer Activity Repository, regardless of your scenario. Notes listed there are often common corrections, applicable to all consuming applications.

i Note

There are no mandatory SAP Notes to be implemented for SAP Promotion Management at the time of publishing this guide. For corrections made available after the publication of this guide, see [Release Information Notes \(RINs\) and Performance Note with Latest Corrections for All Applications](#)

SAP Notes for SAP Allocation Management





i Note

Always consult the SAP Notes for SAP Customer Activity Repository, regardless of your scenario. Notes listed there are common corrections, applicable to all consuming applications.

i Note

Some SAP Notes must be implemented **before** the activation of the SAP HANA content. If this is the case, this is indicated in the description of the note. Otherwise, the note must be implemented **after** the activation of the SAP HANA content.

SAP Notes for SAP Allocation Management

Implement	Area	SAP Note
After the upgrade	Back-end	3390910  SAP Allocation Management 5.0 SPS05: /AMR/ BADL_PLN_ITM_AFC_V2 BADI to Enable/Disable Allocation Plan V2 Fields.
After the upgrade	Back-end	3369723  Allocation Management 5.0 - Can not save allocation plan with custom algorithms
After the upgrade	Back-end	3397675  SAP Allocation Management 5.0 SPS05 - Removing "Log changes" from Technical settings of DB tables
After the upgrade	Back-end	3331292  Change of allocation date when doing Additional Push

SAP Notes for SAP Replenishment Planning

i Note

Always consult the table for SAP Customer Activity Repository, regardless of your scenario. Notes listed there are often common corrections, applicable to all consuming applications.

SAP Notes for SAP Replenishment Planning

Implement	Area	SAP Note	Description
After the upgrade	Back-end	3102701 <i>Value 00:00:00 is not accepted as valid time input for man- datory fields.</i>	This note provides a correction to define that 00 : 00 : 00 is a valid input for a mandatory time field.
Prior to the upgrade	Front-end	2436567 <i>UI for Basis Applications - General Infor- mation</i>	Only relevant if you are using the <i>Manage Workloads</i> app to create new workloads.
After the upgrade	Back-end	3078242 <i>Dump AS- SIGN_LENGTH _O in free se- lections WHERE2RANG E if " as literal</i>	Only relevant if you want to use parallel process- ing while executing the <i>Replenishment Calculation (/XRP/ REPLENISHMENT_CALC)</i> and <i>Order Plan Outbound Processing (/XRP/ORDERPLAN_OUTBOUND)</i> reports.
After the upgrade	Back-end	3252753 <i>Order Plan Outbound in Parallel Mode stops with CX_SY_DY- NAMIC_OSQL</i>	Optional correction of errors that occur while transferring order plan items in parallel mode and only relevant if you are using the Process Packaging and Parallelization framework for the order plan outbound.
After the upgrade	Back-end	3258460 <i>Parallel Proc- essing Options for Order Plan Purge</i>	Optional correction to improve performance by using Process Packaging and Parallelization to purge order plan items.
After the upgrade	Back-end	3389819 <i>Replenishment Planning 5.0: Improvement of Service Level at End of Listing</i>	Mandatory correction to ensure meaningful Service Level at End of Listing values when they are close to saturation for the selected order quantity.

Parent topic: [Prepare the Upgrade \[page 33\]](#)

Next: [Verify Correct Schema Mapping \[page 41\]](#)

4.2 Verify Correct Schema Mapping

In SAP HANA studio, verify that the **authoring schemas** delivered by SAP are mapped to the correct **physical schemas** of your customer landscape. First do an n:1 mapping (all authoring schemas of SAP Customer Activity Repository applications bundle to the same `SAPHANADB` physical schema). Then do a 1:1 mapping (the authoring schema of each source master data system to a unique physical schema for that system). If necessary, create any mappings that are missing.

Context

Why Schema Mapping?

- Schema mapping is a prerequisite to activate the SAP HANA content.
- SAP CARAB requires the authoring schema name to be either `SAP_ECC` or `SAP_S4H`. If the corresponding physical schema name in SAP Customer Activity Repository is anything other than `SAP_ECC` or `SAP_S4H`, then this schema mapping is mandatory.

What are Authoring Schemas and Physical Schemas?

The SAP HANA content of SAP Customer Activity Repository applications bundle is delivered with several authoring schemas (for different scenarios and different source master data systems).

- The *authoring schema* is the logical database schema to which the physical schema is mapped to. The authoring schema is listed in each object's properties in SAP HANA studio. Different objects can have different authoring schemas.
- The *physical schema* is the logical database schema of your customer back-end system (referred to as `SAPHANADB`).

In the procedure below, you must map the *authoring schemas* to the *physical schemas* of your customer back-end system.

Prerequisites

- You have set up the authorizations as described in [Verify SAP HANA Users and Privileges \[page 44\]](#).
- You know what the name of the `SAPHANADB` database schema is in your customer back-end system. This is the physical schema name that you need to enter in the mapping procedure below.

i Note

In this guide, `SAPHANADB` is used as a variable. Replace it with the name of the database user or database schema in your ABAP back-end system. You might also come across documentation or user interfaces that use `SAP<SID>`. Both variables mean the same.

For more information and an example, see the *Important Variables* in section [Naming Conventions](#) [page 6].

For more information about database users and schemas, see SAP Note [2535951](#) (FAQ: SAP HANA Users and Schemas).

→ Tip

If you don't know the `SAPHANADB` of your system, there are two easy ways to find it:

- Log on to your back-end system using SAP Logon. Choose **System > Status**. In the section titled *Database data*, see the name for *Schema*.
- Log on to your back-end system in SAP HANA studio. The schema name is listed under *Catalog*.

Authoring Schemas

The following tables show the two sets of authoring schemas that are relevant for this release. In the procedure below, you map these authoring schemas to the physical schemas of your customer system landscape.

Table 1: Authoring Schemas for SAP Customer Activity Repository applications bundle

Schema Name	Required For
SAP_CAR	SAP HANA objects for SAP Customer Activity Repository
SAP_DDF	SAP HANA objects for Demand Data Foundation and Unified Demand Forecast
SAPOSA	SAP HANA objects for On-Shelf Availability
SAP_RAP	SAP HANA objects for consuming applications (for example, SAP Assortment Planning, SAP Merchandise Planning, or SAP Promotion Management)
SAP_RTLRAP_AMR	SAP HANA objects for SAP Allocation Management

Table 2: Authoring Schemas for Source Master Data Systems

Schema Name	Required For
SAP_CRM	SAP Customer Relationship Management
SAP_CUAN	SAP Marketing Cloud
SAP_ECC	SAP ERP (SAP Retail)
SAP_S4H	SAP S/4HANA Retail

Example

The following are a couple of examples of the schema setup and mapping in SAP Customer Activity Repository:

Scenario 1

Authoring Schema	Physical Schema
SAP_ECC	ECC_DATA
SAP_S4H	S4H_DATA

In this example, the physical schema names are different from the authoring schema names and so we map the authoring schemas to the physical schemas.

Scenario 2

Authoring Schema	Physical Schema
SAP_ECC	SAP_ECC
SAP_S4H	SAP_S4H

In this example, the physical schema names are the same as the authoring schema names. In such a setup you do not need to map the authoring schemas to the physical schemas.

Procedure

Note

If you encounter issues during the steps below, see the *SAP HANA Modeling Guide for SAP HANA Studio* at https://help.sap.com/viewer/p/SAP_HANA_PLATFORM. Select your version at the top. Search for section *Map Authoring Schema to Physical Schema* and also consult the subsections.

1. In SAP HANA studio, log on to your back-end system.
2. Choose ► *Window* ► *Perspective* ► *Open Perspective* ► *SAP HANA Modeler* ►.
3. Choose ► *Help* ► *Quick View* ► *Schema Mapping* ►.
4. Select the system and choose *Add*.
5. Enter the authoring schemas and physical schemas that you want to map:

Caution

Make sure that you enter the names correctly.

Make sure there are no leading or trailing spaces before or after a name. Space characters cause issues with schema mapping.

1. Map all authoring schemas from Table 1 to the same physical schema (SAPHANADB) of your customer system. This is the n:1 mapping step. If necessary, add new mappings.

2. Map each authoring schema from Table 2 to a unique physical schema for the respective source master data system in your customer system. This is the 1:1 mapping step. If necessary, add new mappings.

i Note

In this step, each physical schema that you map to must have a different name. Do not map the authoring schemas from Table 2 to the same physical schema (`SAPHANADB`) used in the previous step (a).

6. Choose *OK*.

i Note

If you are using an **SAP HANA system with multiple isolated tenant databases** to perform cross-database access between tenants, you must provide the authoring database name and the physical database name in the schema-mapping definition.

You maintain schema-mapping definitions in the `SYS_BI.M_DATABASE_SCHEMA_MAPPING` table.

Parent topic: [Prepare the Upgrade \[page 33\]](#)

Previous: [Implement SAP Notes for the Upgrade \[page 33\]](#)

Next: [Verify SAP HANA Users and Privileges \[page 44\]](#)

4.3 Verify SAP HANA Users and Privileges

SAP Customer Activity Repository applications bundle requires a multi-level system landscape: Level 1 is the SAP HANA database. Level 2 is the ABAP back-end server. Level 3 is the ABAP front-end server with SAP Gateway and the SAP Fiori apps. Each level requires specific users with specific privileges. In this procedure, you set up the authorizations for the SAP HANA database (level 1).

Overview

In the following diagram, you can see an overview of the three levels and the required authorizations:

i Note

Depending on your deployment scenario, the concrete implementation in your customer system landscape can vary. For example, if you have an embedded deployment scenario, you are using the ABAP back-end server also as your front-end system, and have no separate ABAP front-end server.

For more information, see [Deployment Options \[page 15\]](#). For an overview diagram, see [System Landscape \[page 13\]](#).

Level 3

ABAP Front-End Server (SAP Gateway, SAP Fiori)

Front-end users, roles, groups, and catalogs required to use the SAP Fiori apps that form the user interfaces of the applications in SAP Customer Activity Repository applications bundle.

Level 2

ABAP Back-End Server

Back-end users and roles to access the Customizing activities and use core functionality of the applications in SAP Customer Activity Repository applications bundle.

Level 1

SAP HANA Database

Database users and privileges allowing the applications in SAP Customer Activity Repository applications bundle to access SAP HANA views and procedures that provide access to data and functionality directly on the database level (such as the application function libraries of the SAP RTL AFL FOR SAP HANA component).

Authorization Levels for SAP Customer Activity Repository applications bundle

⚠ Caution

Level 1: You must always set up the SAP HANA users and privileges first, that is, **before** upgrading SAP Customer Activity Repository applications bundle on the ABAP back-end server and the ABAP front-end server. This procedure is described below.

i Note

Level 2 and Level 3: You can only set up these authorizations **after** the actual upgrade. In most cases, you only need to do this if you are doing a new installation. If you are doing an upgrade from a lower support package stack or feature package stack, the authorizations should already be available.

- Level 2: This procedure is described in the *Common Installation Guide* in section *Verify Back-End Users and Roles*.
- Level 3: The required authorizations depend on the consuming application and SAP Fiori apps that you wish to use. For example, the procedures are described in the following sections in the *Common Installation Guide*:
SAP Customer Activity Repository: *Set Up SAP Fiori Apps for SAP Customer Activity Repository*; SAP Assortment Planning: *Assign Roles, Catalogs, and Groups in SAP Fiori Launchpad*; SAP Allocation Management: *Assign Roles, Catalogs, and Groups in SAP Fiori Launchpad*; SAP Replenishment Planning: *Set Up SAP Fiori Apps for SAP Replenishment Planning*

Prerequisites

- You are authorized to maintain users and assign privileges in the SAP HANA system.

i Note

For more information or if you encounter any issues during the procedure below, see the *SAP HANA Administration Guide for SAP HANA Platform* at https://help.sap.com/viewer/p/SAP_HANA_PLATFORM. Select your version at the top and choose the *Operate* tab. In the guide, search for section *Managing SAP HANA Users* and section *User Authorization*.

- You know what the source master data system is (for example, SAP S/4HANA or SAP Retail).
- You know what the name of the `SAPHANADB` ABAP database schema is in your customer system landscape.

i Note

In this guide, `SAPHANADB` is used as a variable. Replace it with the name of the database user or database schema in your ABAP back-end system. You might also come across documentation or user interfaces that use `SAP<SID>`. Both variables mean the same.

For more information and an example, see the *Important Variables* in section [Naming Conventions \[page 6\]](#).

For more information about database users and schemas, see SAP Note [2535951](#) (FAQ: *SAP HANA Users and Schemas*).

→ Tip

If you don't know the `SAPHANADB` of your system, there are two easy ways to find it:

- Log on to your back-end system using SAP Logon. Choose **System > Status**. In the section titled *Database data*, see the name for *Schema*.
 - Log on to your back-end system in SAP HANA studio. The schema name is listed under *Catalog*.
- Ensure that physical schemas, corresponding to the following authoring schemas of your source master data systems, are created on the SAP HANA database of your SAP Customer Activity Repository back-end system:

Authoring Schema Name	Source Master Data System
SAP_ECC	SAP ERP (SAP Retail)
SAP_S4H	SAP S/4HANA Retail

These are the physical schemas to which the SAP Retail and/or SAP S/4HANA data will be replicated.

i Note

Ensure that the physical schemas that you create have unique names and are different from the name of the `SAPHANADB` ABAP database schema.

Procedure

To set up the authorizations, follow these steps:

1. Open SAP HANA studio and log on to your back-end system.
2. Choose ► *Window* ► *Perspective* ► *Open Perspective* ► *SAP HANA Administration Console* ►.
3. In the *Systems* view, choose ► *Security* ► *Users* ► to display the list of database users.
4. Verify that the following users exist and that they have the required privileges and roles. If necessary, assign any missing privileges and roles.

⚠ Caution

Users marked * must be identical on all three levels. Make sure these users have the same name on the SAP HANA database level, on the ABAP back-end server, and on the ABAP front-end server.

Users

Privileges / Roles

SAPHANADB

This is the generic database user that you need for the connection from the ABAP back-end server to the SAP HANA database.

- Privilege REPO . IMPORT
- Privilege ROLE ADMIN
- Privilege STRUCTUREDPRIVILEGE ADMIN
- Privilege EXECUTE on procedure TRUNCATE_PROCEDURE_OBJECTS
- Privilege EXECUTE on procedure GET_PROCEDURE_OBJECTS
- Privilege CREATE SCHEMA
- Privilege SELECT on the physical schema corresponding to SAP_ECC (required if your source master data system is SAP Retail)

→ Tip

You can also use the following example SQL statement to grant this privilege using the SQL console:

```
GRANT SELECT on SCHEMA <Your physical schema name> TO SAPHANADB;
```

You can do this for other privileges with similar SQL statements.

- Privilege SELECT on the physical schema corresponding to SAP_S4H (required if your source master data system is SAP S/4HANA)
- Role CONTENT_ADMIN
- Role AFLPM_CREATOR_ERASER_EXECUTE
This role enables the user to execute functions of the PAL library (required by SAP Assortment Planning, for example).
For more information, see [Enable Usage of PAL Functions \[page 51\]](#) and SAP Note [2046767](#).
- Role AFL__SYS_AFL_OFI_AREA_EXECUTE
- Additionally, grant the following privileges, with option *Grantable to others*, on these schemas:
On schema `_SYS_BIC`:
 - Privilege CREATE ANY
 - Privilege ALTEROn schema `<your SAP S/4HANA or SAP Retail schema name>`:
 - Privilege SELECT

Users

Privileges / Roles

_SYS_REPO

- Privilege `SELECT`, with option *Grantable to others*, on the following physical database schemas:
 - Physical database schema of your back-end system (referred to as `SAPHANADB` in this guide)
 - Physical database schema that contains the SAP S/4HANA or SAP Retail tables
 - Physical database schema that contains the SAP CRM tables
 - Physical database schema that contains the SAP Marketing Cloud tables
 - Authoring schema `SAP_S4H` (required if your source master data system is SAP S/4HANA)
 - Authoring schema `SAP_ECC` (required if your source master data system is SAP Retail)

→ Tip

You can use the following example SQL statement to grant the privilege:

```
GRANT SELECT ON SCHEMA <Your schema name> TO
_SYS_REPO WITH GRANT OPTION;
```

- Role `UDF_DEPLOY_SYS_REPO`.
For information about the privileges automatically assigned with this role, see the *Set Up Authorizations for Unified Demand Forecast (UDF)* section in the *Common Installation Guide*.
- For SAP Allocation Management, grant the following additional privileges:
 - Privilege `CREATE ANY` on schema `_SYS_BIC`
This privilege enables the user to create a schema in the SAP HANA database.

Users	Privileges / Roles
<Your User Name> *	<ul style="list-style-type: none"> • Privilege <code>SELECT</code> on schema <code>_SYS_BI</code> • Privilege <code>SELECT</code> on schema <code>SAPHANADB</code> • Privilege <code>EXECUTE</code> on procedure <code>REPOSITORY_REST</code> • Privilege <code>SELECT</code> on the physical schema corresponding to <code>SAP_S4H</code> (if your source master data system is SAP S/4HANA) • Privilege <code>SELECT</code> on the physical schema corresponding to <code>SAP_ECC</code> (if your source master data system is SAP Retail) • Set the <i>Session Client</i> of this database user to the correct back-end system client. <p>This step is required to enable the SAP Assortment Planning planning framework, where SAP Analysis for Microsoft Office workbooks obtain data from SAP HANA views.</p> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> <p>i Note</p> <p>If you encounter issues with the steps below, see the <i>Assign Default Client</i> section in the <i>SAP HANA Modeling Guide</i> at https://help.sap.com/viewer/p/SAP_HANA_PLATFORM.</p> </div> <ol style="list-style-type: none"> 1. Still under Security > Users, select the user. 2. On the <i>User</i> tab, set the <i>Session Client</i> to the client number created in the <i>Set Up SAP Client</i> section in the <i>Common Installation Guide</i>.

5. Save your changes.

Result

You have successfully set up the users and privileges in the SAP HANA back-end system. Continue with the next section.

Parent topic: [Prepare the Upgrade \[page 33\]](#)

Previous: [Verify Correct Schema Mapping \[page 41\]](#)

Next: [Configure AFL Usage \[page 50\]](#)

4.4 Configure AFL Usage

Perform configuration tasks to enable the usage of application function libraries (such as the PAL and the OFL) for the applications SAP Assortment Planning and SAP Allocation Management.

1. [Enable Usage of PAL Functions \(SAP Assortment Planning\) \[page 51\]](#)
To enable the usage of the PAL algorithm for SAP Assortment Planning, perform the required setup steps.
2. [Check the OFL Installation \[page 52\]](#)
Confirm that the OFL algorithm was installed successfully as prerequisite for SAP Assortment Planning and SAP Allocation Management.

Parent topic: [Prepare the Upgrade \[page 33\]](#)

Previous: [Verify SAP HANA Users and Privileges \[page 44\]](#)

Next: [Prepare for Zero Downtime Upgrades \[page 53\]](#)

4.4.1 Enable Usage of PAL Functions (SAP Assortment Planning)

To enable the usage of the PAL algorithm for SAP Assortment Planning, perform the required setup steps.

Use

The installation of SAP HANA Platform includes the installation of the PAL algorithm, a prerequisite for SAP Assortment Planning.

To enable the usage of the PAL algorithm, as required by SAP Assortment Planning, perform the following procedure.

i Note

You do not need to create the `AFL_WRAPPER_GENERATOR` or `AFL_WRAPPER_ERASER` procedures, nor do you need to generate any special PAL procedures; this is done automatically.

Procedure

1. To confirm that the PAL functions were installed successfully, you can run `SELECT` statements in the three relevant public views as follows:
 - `SELECT * FROM SYS.AFL_AREAS WHERE AREA_NAME = 'AFLPAL';`
In the case of a successful installation, the statement should return 1 row.
 - `SELECT * FROM SYS.AFL_PACKAGES WHERE AREA_NAME = 'AFLPAL';`
In the case of a successful installation, the statement should return 1 row.
 - `SELECT * FROM SYS.AFL_FUNCTIONS WHERE AREA_NAME = 'AFLPAL';`
In the case of a successful installation, the statement should return many rows. Verify that the function `KMEANS` is part of the list.

```
select * from SYS.AFL_FUNCTIONS WHERE AREA_NAME = 'AFLPAL'
```

	FUNCTION_OID	SCHEMA_NAME	AREA_NAME	PACKAGE_NAME	FUNCTION_NAME	CREATE_TIMESTAMP	INPUT_PARAMETER_COUNT	RE
101	574,505,979	_SYS_AFL	AFLPAL	PAL	KMEANS	Apr 20, 2017 4:45:41.852 AM	2	
102	574,505,980	_SYS_AFL	AFLPAL	PAL	KMEANS_OVERLOAD_2_4	Apr 20, 2017 4:45:41.86 AM	2	
103	574,505,981	_SYS_AFL	AFLPAL	PAL	KMEANS_OVERLOAD_2_5	Apr 20, 2017 4:45:41.869 AM	2	
104	574,505,982	_SYS_AFL	AFLPAL	PAL	KMEDOIDS	Apr 20, 2017 4:45:41.877 AM	2	
105	574,505,983	_SYS_AFL	AFLPAL	PAL	KMEDIANS	Apr 20, 2017 4:45:41.885 AM	2	
106	574,505,984	_SYS_AFL	AFLPAL	PAL	VALIDATEKMEANS	Apr 20, 2017 4:45:41.893 AM	3	

More Information

- Section [Upgrade the Prerequisites \[page 18\]](#) || [Common Prerequisites](#) > [SAP HANA Platform](#) >
- http://help.sap.com/hana_platform > <Version> > [Machine Learning](#) > [SAP HANA Predictive Analysis Library \(PAL\)](#) >

Parent topic: [Configure AFL Usage \[page 50\]](#)

Next: [Check the OFL Installation \[page 52\]](#)

4.4.2 Check the OFL Installation

Confirm that the OFL algorithm was installed successfully as prerequisite for SAP Assortment Planning and SAP Allocation Management.

Use

The installation of SAP HANA Platform includes the installation of the OFL algorithm, a prerequisite for SAP Assortment Planning.

Procedure

1. To confirm that the OFL was installed successfully, you can run `SELECT` statements in the three relevant public views as follows:
 - `SELECT * FROM SYS.AFL_AREAS WHERE AREA_NAME = 'OFL_AREA';`
In the case of a successful installation, the statement should return 1 row.
 - `SELECT * FROM SYS.AFL_PACKAGES WHERE AREA_NAME = 'OFL_AREA';`
In the case of a successful installation, the statement should return 1 row.
 - `SELECT * FROM SYS.AFL_FUNCTIONS WHERE AREA_NAME = 'OFL_AREA';`
In the case of a successful installation, the statement should return 4 rows. Verify that the function `GENIOS_SOLVE` is part of the list.

SQL [Result]

```
SELECT * FROM SYS_AFL_FUNCTIONS WHERE AREA_NAME = 'OFL_AREA'
```

	FUNCTION_OID	SCHEMA_NAME	AREA_NAME	PACKAGE_NAME	FUNCTION_NAME	CREATE_TIMESTAMP	INPUT_PARAMETER_COUNT	RETURN_VALUE_COUNT	FUNCTION_TYPE	TECHNICAL_CATEGORY
1	574.508.051	_SYS_AFL	OFL_AREA	OFL	GENIOS_SOLVE	Apr 20, 2017 4:46:11.926 AM	7	3	LFunc	var_none
2	574.508.052	_SYS_AFL	OFL_AREA	OFL	NETWORK_SIMPLEX_SOLVE	Apr 20, 2017 4:46:11.932 AM	2	1	LFunc	var_none
3	574.508.053	_SYS_AFL	OFL_AREA	OFL	COST_SCALING_SOLVE	Apr 20, 2017 4:46:11.937 AM	2	1	LFunc	var_none
4	574.508.054	_SYS_AFL	OFL_AREA	OFL	LAPIV_SOLVE	Apr 20, 2017 4:46:11.942 AM	2	4	LFunc	var_none

Parent topic: [Configure AFL Usage \[page 50\]](#)

Previous: [Enable Usage of PAL Functions \(SAP Assortment Planning\) \[page 51\]](#)

4.5 Prepare for Zero Downtime Upgrades

Configure and set up SAP Customer Activity Repository so that you can continue regular operations during future system upgrades.

Prerequisite

You have read the SAP Note [2707731](#) (Prerequisites and Restrictions of Zero Downtime Option of SUM for SAP S/4HANA).

Scope

Zero downtime upgrades are applicable for the following modules in SAP Customer Activity Repository:

- Omnichannel Article Availability and Sourcing
- Inventory Visibility
- POS Data Transfer and Audit

During the zero downtime upgrade, the following modules of SAP Customer Activity Repository are not available:

- Multichannel Transaction Data Management
- Unified Demand Forecast
- Demand Data Foundation
- Omnichannel Promotion Pricing
- On-Shelf Availability

The following consuming applications are also not available during the zero downtime upgrade:

- SAP Allocation Management
- SAP Assortment Planning

- SAP Merchandise Planning
- SAP Promotion Management
- SAP Replenishment Planning

Procedures

To prepare the system for zero downtime upgrades, you perform the following procedures that result in SAP Customer Activity Repository being able to consume SAP HANA Deployment Infrastructure (HDI) views. The steps you perform depend on whether you're using SAP ERP (SAP Retail) or SAP S/4HANA Retail as your source master data system. These steps also depend on whether your system landscape includes SAP CRM or an SAP Marketing system (either SAP Marketing Cloud or SAP Marketing on-premise).

i Note

In all procedures, the settings for your main master data system, either SAP ERP (SAP Retail) or SAP S/4HANA Retail, are mandatory.

1. [Map Schemas \[page 55\]](#)
Map the logical (authoring) schemas to the corresponding physical schemas for your master data systems.
2. [Get Database User Authorization \[page 56\]](#)
Use the SQL console in SAP HANA studio to assign the required privileges to the database user. Authorization for SAP ERP (SAP Retail) or SAP S/4HANA Retail is mandatory; authorization for scenarios using SAP CRM or an SAP Marketing system are optional.
3. [Activate and Deploy Logical HDI Containers \[page 57\]](#)
To use views from SAP HANA Deployment Infrastructure (HDI) for zero downtime upgrades, you must first activate the HDI containers in which to deploy the views.
4. [Select a Mode for HDI Views \[page 58\]](#)
Configure SAP Customer Activity Repository to use views from SAP HANA Deployment Infrastructure (HDI) instead of SAP HANA views.

Parent topic: [Prepare the Upgrade \[page 33\]](#)

Previous: [Configure AFL Usage \[page 50\]](#)

Next: [Migrate to New Default Table for Sales Pricing Data \(/DMF/PRC\) \[page 59\]](#)

4.5.1 Map Schemas

Map the logical (authoring) schemas to the corresponding physical schemas for your master data systems.

Prerequisites

You have implemented the steps described in the SAP Note [2981564](#).

Context

You can create a logical database schema as a repository object. This enables you to access data outside the default ABAP database schema whenever the name of the database schema in question varies within the system landscape. For more information, see [Creating a Logical Database Schema and Mapping It to a Physical Database Schema](#) in the **SAP - ABAP for SAP HANA Development User Guide**.

i Note

SAP HANA studio refers to **authoring schemas**. On the other hand, the `DB_SCHEMA_MAP` transaction in SAP Customer Activity Repository refers to **logical schemas**. They are the same thing.

Procedure

1. In SAP Customer Activity Repository, run the transaction `DB_SCHEMA_MAP` (*Display/Edit Mappings for Logical Schemas*).
2. Map the logical (authoring) schemas to physical schemas as described in the following table. You must map each logical schema either to the actual physical schema or the relevant dummy physical schema that you created when implementing SAP Note [2981564](#).

Logical Schema	Mapping Logic
<code>/POSDW/SAP_ECC</code>	<ul style="list-style-type: none">• If you use SAP ERP (SAP Retail), map <code>/POSDW/SAP_ECC</code> to your actual physical schema for SAP ERP (SAP Retail).• If you do not use SAP ERP (SAP Retail), map <code>/POSDW/SAP_ECC</code> to <code>SAP_ERP_DUMMY</code>.
<code>/POSDW/SAP_ECC_CRM</code>	<ul style="list-style-type: none">• If you use SAP CRM, map <code>/POSDW/SAP_ECC_CRM</code> to your actual physical schema for SAP CRM.• If you do not use SAP CRM, map <code>/POSDW/SAP_ECC_CRM</code> to <code>SAP_CRM_DUMMY</code>.

Logical Schema	Mapping Logic
/POSDW/SAP_ECC_CUAN	<ul style="list-style-type: none"> If you use SAP Marketing Cloud, map /POSDW/SAP_ECC_CUAN to your actual physical schema for SAP Marketing Cloud. If you do not use SAP Marketing Cloud, map /POSDW/SAP_ECC_CUAN to SAP_CUAN_DUMMY.
/POSDW/SAP_S4H	<ul style="list-style-type: none"> If you use SAP S/4HANA Retail, map /POSDW/SAP_S4H to your actual physical schema for SAP S/4HANA Retail. If you do not use SAP S/4HANA Retail, map /POSDW/SAP_S4H to SAP_ERP_DUMMY.
/POSDW/SAP_S4H_CRM	<ul style="list-style-type: none"> If you use SAP CRM, map /POSDW/SAP_S4H_CRM to your actual physical schema for SAP CRM. If you do not use SAP CRM, map /POSDW/SAP_S4H_CRM to SAP_CRM_DUMMY.
/POSDW/SAP_S4H_CUAN	<ul style="list-style-type: none"> If you use SAP Marketing Cloud, map /POSDW/SAP_S4H_CUAN to your actual physical schema for SAP Marketing Cloud. If you do not use SAP Marketing Cloud, map /POSDW/SAP_S4H_CUAN to SAP_CUAN_DUMMY.

Task overview: [Prepare for Zero Downtime Upgrades \[page 53\]](#)

Next task: [Get Database User Authorization \[page 56\]](#)

4.5.2 Get Database User Authorization

Use the SQL console in SAP HANA studio to assign the required privileges to the database user. Authorization for SAP ERP (SAP Retail) or SAP S/4HANA Retail is mandatory; authorization for scenarios using SAP CRM or an SAP Marketing system are optional.

Procedure

1. Open SAP HANA studio and log on to your SAP HANA database system.
2. Choose **Window > Perspective > Open Perspective > SAP HANA Modeler**.
3. Open the SQL console.
4. For each of the following master data systems in your landscape, add the following privileges to the database user:

Physical Schema	Privileges
SAP ERP (SAP Retail)	grant select on schema <ECC-PHYSICAL-SCHEMA> TO <DBUSER> WITH GRANT OPTION
SAP S/4HANA Retail	grant select on schema <S4H-PHYSICAL-SCHEMA> TO <DBUSER> WITH GRANT OPTION
SAP CRM (optional)	grant select on schema <CRM-PHYSICAL-SCHEMA> TO <DBUSER> WITH GRANT OPTION
SAP Marketing system (optional)	grant select on schema <CUAN-PHYSICAL-SCHEMA> TO <DBUSER> WITH GRANT OPTION

Task overview: [Prepare for Zero Downtime Upgrades \[page 53\]](#)

Previous task: [Map Schemas \[page 55\]](#)

Next task: [Activate and Deploy Logical HDI Containers \[page 57\]](#)

4.5.3 Activate and Deploy Logical HDI Containers

To use views from SAP HANA Deployment Infrastructure (HDI) for zero downtime upgrades, you must first activate the HDI containers in which to deploy the views.

Procedure

1. In SAP Customer Activity Repository, run *ABAP-Managed HDI Containers* (transaction SCTS_AMHC).
2. Display and activate each of the following, in the order provided:
 - /POSDW/SAP_CAR_DATA
 - /POSDW/SAP_CAR_ECC_HDI
 - /POSDW/SAP_CAR_S4H_HDI
 - /POSDW/SAP_CRM_ECC_HDI
 - /POSDW/SAP_CRM_S4H_HDI
 - /POSDW/SAP_CUAN_ECC_HDI

- /POSDW/SAP_CUAN_S4H_HDI
 - /POSDW/SAP_FMS_ECC_HDI
 - /POSDW/SAP_FMS_S4H_HDI
 - /POSDW/SAP_OAA_ECC_HDI
 - /POSDW/SAP_OAA_S4H_HDI
3. Run *HTA for HDI (Deployment)* (transaction SCTS_HDI_DEPLOY).
 4. Enter each of the following in the *Transport Object Name* field, choose *Execute*, and then select and deploy all instances of `sap.is.retail`:
 - SAP.IS.RETAIL//POSDW/SAP_CAR_DATA
 - SAP.IS.RETAIL//POSDW/SAP_CAR_ECC_HDI
 - SAP.IS.RETAIL//POSDW/SAP_CAR_S4H_HDI
 - SAP.IS.RETAIL//POSDW/SAP_CRM_ECC_HDI
 - SAP.IS.RETAIL//POSDW/SAP_CRM_S4H_HDI
 - SAP.IS.RETAIL//POSDW/SAP_CUAN_ECC_HDI
 - SAP.IS.RETAIL//POSDW/SAP_CUAN_S4H_HDI
 - SAP.IS.RETAIL//POSDW/SAP_FMS_ECC_HDI
 - SAP.IS.RETAIL//POSDW/SAP_FMS_S4H_HDI
 - SAP.IS.RETAIL//POSDW/SAP_OAA_ECC_HDI
 - SAP.IS.RETAIL//POSDW/SAP_OAA_S4H_HDI

Task overview: [Prepare for Zero Downtime Upgrades \[page 53\]](#)

Previous task: [Get Database User Authorization \[page 56\]](#)

Next task: [Select a Mode for HDI Views \[page 58\]](#)

4.5.4 Select a Mode for HDI Views

Configure SAP Customer Activity Repository to use views from SAP HANA Deployment Infrastructure (HDI) instead of SAP HANA views.

Procedure

1. In Customizing for SAP Customer Activity Repository, go to **POS Data Management** > **POS Inbound Processing** > **General Settings** > **Define General Settings**.
2. Under *Further Settings*, choose an option from the *Activate HDI* dropdown list:
 - If you use SAP ERP (SAP Retail), choose *1 Active for HDI ECC release*
 - If you use SAP S/4HANA Retail, choose *2 Active for HDI S4H release*

i Note

If you do not want zero downtime upgrade, choose *Not active*. With this option, SAP Customer Activity Repository continues to use SAP HANA views instead of HDI views.

Task overview: [Prepare for Zero Downtime Upgrades \[page 53\]](#)

Previous task: [Activate and Deploy Logical HDI Containers \[page 57\]](#)

4.6 Migrate to New Default Table for Sales Pricing Data (/DMF/PRC)

Verify that the sales pricing data is replicated to the `/DMF/PRC` table in your customer system. If necessary, perform the migration from the old table (`/DMF/PRODLOC_PRC`, used in 4.x releases) to the new table. **This pre-upgrade procedure is mandatory for all scenarios upgrading from a 4.x release. As the migration might be time-consuming, we recommend that you schedule it at a time that is not disruptive to your day-to-day operations.**

Context

As of SAP Customer Activity Repository applications bundle 5.0, the default table for regular sales pricing data and promotional sales pricing data has changed:

- New default table: `/DMF/PRC` (*Product Pricing Data*)
- Old default table: `/DMF/PRODLOC_PRC` (*Product Location Price Data*)


If you are upgrading from a 4.x release, you must migrate to the new table and adjust the data replication from the source master data system accordingly.

If you are upgrading from a lower 5.x release and the sales pricing data is already replicated to the `/DMF/PRC` table, you can skip this procedure.

i Note

The `/DMF/PRODLOC_PRC` table is still used when replicating purchase pricing data (moving average price). This use case is not affected by the migration described here. Applications requiring knowledge of the moving average price, such as SAP Replenishment Planning, continue to use the data from this table.

Procedure

1. If your scenario uses modeling and forecasting with Unified Demand Forecast (UDF), do the following:
 - If you are upgrading from SAP Customer Activity Repository applications bundle 4.0 FPS02, 4.0 FPS03, 4.0 SPS04, 4.0 SPS05, or 4.0 SPS06:
Implement SAP Note [3091193](#)  (New UDF parameter to select the price interface in SAP CARAB 4.0 FPS02, 4.0 FPS03, 4.0 SPS04, 4.0 SPS05, or 4.0 SPS06). The note introduces the FC_USE_PRC_INTERFACE forecast parameter, which is specifically designed for a smooth migration of your pricing data for UDF.
 - If you are upgrading from SAP Customer Activity Repository applications bundle 4.0 SPS07 or higher:
Check the setting of the FC_USE_PRC_INTERFACE forecast parameter in the [Define Forecasting Control Settings](#) Customizing activity in your customer system. For parameter details and a configuration example, see the [Configure Parameters for Forecasting](#) section of the *SAP Customer Activity Repository Administration Guide (version 4.0 SPS07 or higher)*. Adjust the setting as described, then continue with the actual migration.
2. Migrate the sales pricing data to the new table. Follow the instructions in the *Enable Extended Sales Pricing Data* section of the *SAP Customer Activity Repository Administration Guide*.
3. Check your data replication settings. Make sure that the sales pricing data from the source master data system is replicated to the new table. For instructions, see the *Configure Data Replication from SAP ERP and SAP S/4HANA to DDF* section of the *SAP Customer Activity Repository Administration Guide*.

Parent topic: [Prepare the Upgrade \[page 33\]](#)

Previous: [Prepare for Zero Downtime Upgrades \[page 53\]](#)

5 Upgrade the Software

For a correct **upgrade**, you must first upgrade the required prerequisites and implement the pre-upgrade SAP Notes. Then you install the `SAP RTL AFL FOR SAP HANA` component in your SAP HANA Platform. Next you upgrade the back-end components, verify the SAP Client setup, and upgrade the front-end components. Finally, you implement the SAP Notes that can only be applied after the upgrade.

→ Tip

If you encounter issues during these procedures, see the [Troubleshooting \[page 202\]](#) section for possible solutions.

1. [Verify Prerequisites and SAP Notes \(Pre-Upgrade\) \[page 62\]](#)
Before upgrading to the current release of SAP Customer Activity Repository applications bundle 5.0 SPS06, ensure that your system landscape is fully prepared. In this procedure, you verify that all the prerequisites for your scenario are installed and that all the preparatory SAP Notes have been implemented.
2. [Download and Install SAP RTL AFL FOR SAP HANA \[page 62\]](#)
Install **compatible revisions** of the SAP HANA database and the application function library components (`SAP HANA AFL` and `SAP RTL AFL FOR SAP HANA`). You must do this **before** you upgrade the back-end product version of SAP Customer Activity Repository applications bundle. This procedure is mandatory for all the scenarios.
3. [Download and Install SAP XRP AFL \(Only for SAP Replenishment Planning\) \[page 66\]](#)
This procedure is only required if you want to use SAP Replenishment Planning. Download a revision of the `SAP XRP AFL` component that is compatible with the revision of your SAP HANA database and install it in your SAP HANA system.
4. [Upgrade SAP CARAB Back-End Product Version \[page 69\]](#)
Upgrade your back-end system to the `SAP CARAB 5.0 SPS06` back-end product version of SAP Customer Activity Repository applications bundle 5.0 SPS06. First create a stack XML file with Maintenance Planner. Then install this file with Software Update Manager (SUM).
5. [Verify SAP Client Setup \[page 72\]](#)
In most upgrade scenarios, you do not need to set up an SAP client in your back-end system because you already did this during the initial installation. However, if you are not only upgrading your system to the current release but also **adding** a new scenario, you must check whether the current SAP client setup is still sufficient. For example, you might need to add SLT transformation rules for the client mapping between your source master data system(s) and your ABAP back-end system.
6. [Upgrade SAP FIORI FOR SAP CARAB Front-End Product Version \[page 73\]](#)
Upgrade your front-end system to the `SAP FIORI FOR SAP CARAB 5.0 SPS06` front-end product version of SAP Customer Activity Repository applications bundle 5.0 SPS06. The product version contains the SAP Fiori apps for this release. First create a stack XML file with Maintenance Planner. Then install this file with Software Update Manager (SUM).
7. [Verify SAP Notes and RINs \(Post-Upgrade\) \[page 76\]](#)
There are SAP Notes (corrections) that can only be implemented **after** you have upgraded the back-end product version and the front-end product version. You must therefore do this additional check and implement the required notes, before you move on to the setup steps for the applications.

8. [Run the Migration Report for Point-of-Sale Data \[page 76\]](#)

(Conditional) If you are upgrading from any release prior to SAP Customer Activity Repository 5.0, you need to run the migration report `/DMF/TS_PS_UPDATE_SALES_LOC_ID`. This report populates a new key field in the point-of-sale time series table (`/DMF/TS_PS`), and it changes the key of the record. To ensure that the data behaves consistently for all point-of-sale data (new and old), we recommend that you run this report before the first point-of-sale time series imports.

5.1 Verify Prerequisites and SAP Notes (Pre-Upgrade)

Before upgrading to the current release of SAP Customer Activity Repository applications bundle 5.0 SPS06, ensure that your system landscape is fully prepared. In this procedure, you verify that all the prerequisites for your scenario are installed and that all the preparatory SAP Notes have been implemented.

Procedure

Note

Make sure that you have the up-to-date version of each SAP Note, which you can always find on the SAP Support Portal at <http://support.sap.com/notes>.

1. Verify that you have installed and configured the *Common Prerequisites* and the *Application-Specific Prerequisites*, as described in [Upgrade the Prerequisites \[page 18\]](#).
2. Verify that you have implemented all SAP Notes listed in [Implement SAP Notes for the Upgrade \[page 33\]](#) that are required for your application and that must be implemented **before** the upgrade.
 1. Always see the table for SAP Customer Activity Repository in that section. SAP Notes listed there are often common corrections, applicable to all the applications.
 2. Then see the table for your application.

Parent topic: [Upgrade the Software \[page 61\]](#)

Next: [Download and Install SAP RTL AFL FOR SAP HANA \[page 62\]](#)

5.2 Download and Install SAP RTL AFL FOR SAP HANA

Install **compatible revisions** of the SAP HANA database and the application function library components (SAP HANA AFL and SAP RTL AFL FOR SAP HANA). You must do this **before** you upgrade the back-end product

version of SAP Customer Activity Repository applications bundle. This procedure is mandatory for all the scenarios.

Overview

There is one software component in SAP Customer Activity Repository applications bundle that you must always install (or upgrade) first:

- SAP RTL AFL FOR SAP HANA

You must install (upgrade) this component together with the following components of SAP HANA Platform:

- SAP HANA AFL
- SAP HANA DATABASE

The revision of each AFL component must be **compatible** with the revision of the SAP HANA database. Be aware of the following dependencies.

Dependencies Between AFL Components and the SAP HANA Database

The AFL components (SAP HANA AFL, SAP RTL AFL FOR SAP HANA) run directly in the SAP HANA database. Because of this, they are released in sync with the SAP HANA database.

The releases are called “revisions”. Whenever a new revision of the SAP HANA database is released, a new revision of each AFL component is released. As a result, there are always several revisions of each component available for download.

⚠ Caution

Compatible Revisions

For each revision of an AFL component, there is **only one compatible revision** of the SAP HANA database. Whenever you upgrade the AFL components to a new revision, you must also upgrade the database. Whenever you upgrade the database to a new revision, you must also upgrade the AFL components.

This applies not only during a **new installation** or an **upgrade**, but is equally relevant during **normal business operations**.

Patches for Same Revision

Patches are the sole exception to this rule. Within the same revision, you **can and should** upgrade the AFL components to the **highest available patch**. Here is an example:

- Your current revision is:
SAP RTL AFL FOR SAP HANA revision **55.0004** for SAP HANA database 2.0 SPS05 revision 2.00.055
- A higher patch might be:
SAP RTL AFL FOR SAP HANA revision **55.0005** for SAP HANA database 2.0 SPS05 revision 2.00.055

In this case, you should install the higher patch of the AFL. You do not need to update the database.

→ Tip

You can easily check which revision is currently installed:

1. Execute transaction `DB02` to open the *Diagnostics: Missing Tables and Indexes* screen.
2. Choose ► *Current Status* ► *Overview* ▾ to open the *SAP HANA database* overview.
3. Under ► *Installed Plug-Ins* ▾, choose *RTL* to open the table with the plug-in details.
4. Search for **SAP RTL AFL** and see the values for *rev-number* and *rev-patchlevel*.

Download and Install SAP RTL AFL FOR SAP HANA

→ Tip

When you download AFL components from the SAP Support Portal, the compatible revision of the SAP HANA database is always indicated.

1. Determine which revision of the SAP HANA database and the AFL components you need.
To select the best revision for your scenario, see the *Common Prerequisites* in section [Upgrade the Prerequisites \[page 18\]](#). Carefully read the information under *SAP HANA Platform 2.0* and *SAP RTL AFL FOR SAP HANA*:
 - Note the **minimum revision** of the SAP HANA database and the AFL components. You need at least this revision for the current release.
 - Read the *Caution* to know what to do if you wish to select a **higher revision than the minimum revision**.

Once you have selected a revision, this gives you the compatible revisions of the other components.

2. Download the compatible revisions from the SAP Support Portal at <http://support.sap.com> under ► *Software Downloads* ▾:

→ Tip

Alternatively, you can log in to the SAP ONE Support Launchpad at <https://launchpad.support.sap.com/#/softwarecenter/> and follow the navigation from there.

- **SAP RTL AFL FOR SAP HANA:**
The component is included in the `SAP_CARAB` back-end product version. To download one of the available revisions, choose ► *By Alphabetical Index (A-Z)* ► *C* ► *CAR RETAIL APPLICATIONS BUNDLE* ► *SAP CARAB 5.0* ► *Support Packages and Patches* ► *DOWNLOADS* ► *COMPRISED SOFTWARE COMPONENT VERSIONS* ► *SAP RTL AFL FOR SAP HANA 200* ▾.

→ Tip

If you cannot see the revision you are looking for, select a different *LINUX* option from the dropdown to display more revisions.

⚠ Caution

Always select the **highest available patch** of any revision.

- **SAP HANA AFL and SAP HANA DATABASE:**
These components are part of SAP HANA Platform. To download one of the available revisions, choose [► By Alphabetical Index \(A-Z\) ► H ► SAP HANA PLATFORM EDITION ► SAP HANA PLATFORM EDITION 2.0 ► Support Packages and Patches ► DOWNLOADS ► SAP HANA AFL 2.0 ►](#) and [SAP HANA DATABASE 2.0](#).
3. Upgrade your back-end system to the selected revisions of SAP RTL AFL FOR SAP HANA, SAP HANA AFL, and SAP HANA DATABASE. See the following table for guidance.

Overview of Upgrade Scenarios

You wish to upgrade from a release of...	What you do is...
SAP Customer Activity Repository applications bundle 2.0	<p>You replace the existing revision of SAP RTL AFL FOR SAP HANA with the revision that you have selected for the current release.</p> <p>As described above, you also upgrade the SAP HANA AFL and SAP HANA DATABASE components to the compatible revisions.</p>
SAP Customer Activity Repository applications bundle 4.0	<p>You replace the existing revision of SAP RTL AFL FOR SAP HANA with the revision that you have selected for the current release.</p> <p>As described above, you also upgrade the SAP HANA AFL and SAP HANA DATABASE components to the compatible revisions.</p>
SAP Customer Activity Repository applications bundle 5.0 (lower release than the current one)	<p>You replace the existing revision of SAP RTL AFL FOR SAP HANA with the revision that you have selected for the current release.</p> <p>As described above, you also upgrade the SAP HANA AFL and SAP HANA DATABASE components to the compatible revisions.</p>

See SAP Note [2377894](#) (Install or Upgrade SAP RTL AFL FOR SAP HANA) and carefully follow the steps for the upgrade scenario.

→ Tip

If you encounter issues, see the [Troubleshooting \[page 202\]](#) section for possible solutions.

→ Tip

For installation and upgrade information for SAP HANA Platform, see the following sections of the *SAP HANA Server Installation and Update Guide* (select your release at the top):

- [Installing an SAP HANA System](#)
- [Updating the SAP HANA System](#)

Result

You have successfully upgraded the SAP RTL AFL FOR SAP HANA component.

→ Remember

For future updates of your system landscape, remember that the dependencies between the AFL components and the SAP HANA database still apply:

- For example, should you decide to upgrade your SAP Customer Activity Repository applications bundle scenario to a higher release requiring a higher AFL revision, you will also need to upgrade the SAP HANA database and SAP HANA AFL.
- Likewise, should you decide to upgrade your SAP HANA database to a higher revision (for example, to use new features in SAP HANA), you will need to also upgrade the AFL components.

Parent topic: [Upgrade the Software \[page 61\]](#)

Previous: [Verify Prerequisites and SAP Notes \(Pre-Upgrade\) \[page 62\]](#)

Next: [Download and Install SAP XRP AFL \(Only for SAP Replenishment Planning\) \[page 66\]](#)

5.3 Download and Install SAP XRP AFL (Only for SAP Replenishment Planning)

This procedure is only required if you want to use SAP Replenishment Planning. Download a revision of the SAP XRP AFL component that is compatible with the revision of your SAP HANA database and install it in your SAP HANA system.

Context

i Note

SAP XRP AFL is only required if you use SAP Replenishment Planning.

SAP XRP AFL is the application function library (AFL) component for SAP Replenishment Planning. Basically, it is the calculation engine for your replenishment-related processes.

It is delivered as a component in the SAP CARAB 5.0 SPS06 back-end product version of SAP Customer Activity Repository applications bundle.

SAP XRP AFL runs in the database layer of your system landscape. Because of technical dependencies, the component follows the release cycle of the SAP HANA database. The releases are called “revisions”.

This section describes where to download the correct revision of SAP XRP AFL and how to install it.

Prerequisites

- You are aware of the SAP HANA Platform prerequisites for this release of SAP Customer Activity Repository applications bundle.
See section [Upgrade the Prerequisites \[page 18\]](#) and consult the information under ► [Common Prerequisites](#) ► [SAP HANA Platform 2.0](#) . The information about minimum revisions and maintenance revisions also applies to SAP XRP AFL.
- You know that the SAP XRP AFL revision must always be compatible with the SAP HANA DATABASE revision.
See section [Download and Install SAP RTL AFL FOR SAP HANA \[page 62\]](#) and consult the information under *Dependencies Between AFL Components and the SAP HANA Database*.
- You have already installed compatible revisions of the following components in your SAP HANA system:
 - Components of SAP HANA Platform: SAP HANA DATABASE and SAP HANA AFL
 - Component of SAP Customer Activity Repository applications bundle: SAP RTL AFL FOR SAP HANA

Procedure

To install SAP XRP AFL, follow these steps:

1. Select a revision:

Select the SAP XRP AFL revision that is compatible with your SAP HANA database revision.

i Note

No matter which AFL revision you choose, always install the **highest patch** available for download.

2. Download the revision:

1. Navigate to the SAP Support Portal at <http://support.sap.com> and choose the *Software Downloads* icon.
Alternatively, you can log in to the SAP ONE Support Launchpad at <https://launchpad.support.sap.com/#/softwarecenter/> and follow the navigation from there.
2. Choose ► *By Alphabetical Index (A-Z)* ► *C* ► *CAR RETAIL APPLICATIONS BUNDLE* ► *SAP CARAB 5.0* ► *Support Packages and Patches* ► *DOWNLOADS* ► *COMPRISED SOFTWARE COMPONENT VERSIONS* ► *SAP XRP AFL 1.0* .
3. Download the selected revision (*.sar file).

i Note

The compatible SAP HANA database revision is always indicated.

3. Install the revision:

i Note

Your tool for this step is the **SAP HANA database lifecycle manager (HDBLCM)**.

You have several options for installing or upgrading components with the HDBLCM. For more information, see the *SAP HANA Server Installation and Update Guide* for your SAP HANA Platform version at https://help.sap.com/viewer/p/SAP_HANA_PLATFORM under *Installation and Upgrade*.

In particular, consult the following sections:

- [Choosing the Correct SAP HANA HDBLCM for Your Task](#)
- [Installing or Updating SAP HANA Components](#)
- [Parameter Reference](#)

If you encounter issues using the HDBLCM, see SAP Notes [2078425](#) (Troubleshooting note for SAP HANA platform lifecycle management tool `hdblcmm`) and [2082466](#) (Known Issues in SAP HANA Platform Lifecycle Management (HDBLCM)) for possible solutions.

1. Log in as user `root`.
2. Load the SAP `XRP AFL` revision into your directory (`<download path>`).
3. Change to the SAP HANA resident directory where the HDBLCM is located:

```
cd /<sapmnt>/<SID>/hdblcmm
```

Note

`<SID>` is your customer-defined database system ID.

4. Call the resident HDBLCM tool at command line level with the following option as user `root`:

```
./hdblcmm --action=update_components --component_dirs=/<download path>/SAP_XRP_AFL
```
5. Follow the on-screen instructions.
6. Check that the script server for the SAP HANA database is active. If it isn't, activate it as described in SAP Note [1650957](#) (SAP HANA Database: Starting the Script Server).
7. Check that the SAP `XRP AFL` component is now installed and active in your SAP HANA database:
 - Follow the instructions in SAP Note [2188129](#) (Application Function Library (AFL): Check what AFLs are installed and active in a SAP HANA Database).
 - You should get the message "registration was successful" (for `PLUGIN_NAME = 'xrp'` and `PLUGIN_NAME = 'afl'` in view `M_PLUGIN_STATUS`).
 - If you get the message "registration failed", repeat the installation steps above. Then restart the server and the SAP HANA database.
 - If you encounter other issues, see section [Troubleshooting \[page 202\]](#) for possible solutions.

Result

You have successfully installed the SAP `XRP AFL` component. Continue with the next step.

→ Remember

For future updates of your system landscape, remember that the dependency between the AFL and the SAP HANA database still applies.

For example, should you later decide to upgrade your SAP Replenishment Planning and SAP Customer Activity Repository system to a higher release requiring a higher AFL revision, you will also need to upgrade the revision of the SAP HANA database.

Vice versa, should you decide to upgrade your SAP HANA database to a higher revision (for example, to use new features in SAP HANA), you will also need to upgrade the AFL to the compatible revision.

Parent topic: [Upgrade the Software \[page 61\]](#)

Previous: [Download and Install SAP RTL AFL FOR SAP HANA \[page 62\]](#)

Next: [Upgrade SAP CARAB Back-End Product Version \[page 69\]](#)

5.4 Upgrade SAP CARAB Back-End Product Version

Upgrade your back-end system to the SAP CARAB 5.0 SPS06 back-end product version of SAP Customer Activity Repository applications bundle 5.0 SPS06. First create a stack XML file with Maintenance Planner. Then install this file with Software Update Manager (SUM).

i Note

The back-end product version contains the software components listed below. You can also find the components on the SAP Support Portal, in the [download area for the back-end product version](#):

- RTLCAB 500
- XI CONTENT RTLCAB 500
- XSAC_OPP_PPS_2
- SAP RTL AFL FOR SAP HANA 200: This component requires a separate installation procedure, which you have already done (see [Download and Install SAP RTL AFL FOR SAP HANA \[page 62\]](#)).
- SAP XRP AFL 1.0: This component is only required for SAP Replenishment Planning. If this is your scenario, you have already installed this component as well (see [Download and Install SAP XRP AFL \(Only for SAP Replenishment Planning\) \[page 66\]](#)).

Prerequisites

- A valid start release (add-on product version) must already be installed in your system landscape. It serves as the basis for the upgrade.
- You know how to use SAP Solution Manager to perform uploads into Maintenance Planner on the SAP Support Portal. If you need more information, see the *Maintenance Planner - User Guide* at https://help.sap.com/viewer/product/MAINTENANCE_PLANNER/latest/en-US. Search for section *Uploading Landscape Data Into SAP Support Portal*.
- You have completed all of the previous procedures in this guide. In particular, see section [Prepare the Upgrade \[page 33\]](#).
- You have installed compatible revisions of the SAP HANA database and the mandatory AFL components (SAP HANA AFL and SAP RTL AFL FOR SAP HANA).
- You know which version of SAP S/4HANA FOUNDATION is required for this release. For more information, see [Upgrade the Prerequisites \[page 18\]](#) and consult the *Common Prerequisites*.

i Note

The stack XML file that you create in the procedure below, will contain both the foundation component and, as an add-on, the SAP CARAB back-end product version.

Overview

In the procedures below you do the following:

Use this tool...	To do this...
Maintenance Planner More information: https://help.sap.com/viewer/p/MAINTENANCE_PLANNER	Create a stack XML file based on the required product versions. This stack XML will include the foundation component and the SAP CARAB add-on component that you select in the procedure below.
Software Update Manager (SUM) More information: https://support.sap.com/en/tools/software-logistics-tools/software-update-manager.html	Install or upgrade components using the stack XML file.

i Note

It may be possible to install or upgrade components using the SAP Add-On Installation Tool (transaction SAINT) or the Support Package Manager (transaction SPAM). However, these alternative procedures are not described in this guide. For information on whether they are supported for your implementation scenario and on how to proceed in this case, see SAP Note [1803986](#).

Create Stack XML File With Maintenance Planner

i Note

If you encounter issues with Maintenance Planner, see the following sources for possible solutions:

- [Maintenance Planner Troubleshooting Guide](#) on the SAP Community Wiki
- SAP Note [2535751](#): *Can not select the higher release for Netweaver in Maintenance Planner*
- SAP Note [2314463](#): *Required file K-XXXXxxxxxxx.SAR is not visible for your user Sxxxxxxx*

1. Navigate to the SAP Support Portal at <https://support.sap.com/en/alm/solution-manager/processes-72/maintenance-planner.html>.
2. Upload the current system state of your installed ABAP back-end server (with a valid add-on product version installed for the upgrade) into Maintenance Planner.
3. Choose [Access Maintenance Planner](#).
4. Choose [Plan](#).
5. Determine whether you need to update your target software level for the current release of SAP Customer Activity Repository applications bundle.

i Note

This can vary, depending on your upgrade scenario, the stack currently installed on your back-end server, and the minimum version required for this release.

For information on the minimum versions required, see [Upgrade the Prerequisites \[page 18\]](#) and consult the *Common Prerequisites*.

Depending on your decision, select either the update option or the maintenance option.

6. Select a product version and a support package stack of your foundation component.
7. Select a product version instance.
8. Choose *Confirm Selection*.
9. Choose *Install or Maintain an Add-On*.
10. As target software, select the back-end product version SAP CARAB 5.0 and the support package stack SPS06 (11/2023).
11. Choose *Confirm Selection*.
12. Choose *Next*.
13. Select the operating system and database for your scenario.
14. Choose *Confirm Selection*.
15. Review the details of your stack dependent and stack independent files. If everything is OK, choose *Next*.
16. Choose *Download Stack XML*.

You have now created the stack XML file.

Install Stack XML File With Software Update Manager (SUM)

1. Download and install the SUM tool:
 1. Navigate to the SAP Support Portal at <https://support.sap.com/en/tools/software-logistics-tools/software-update-manager.html>.
 2. Consult the information for SUM 2.0 SP xx and follow the instructions.
2. In SUM, install your add-on product using the stack XML file that you have created in the first procedure.

Result

You have successfully upgraded the back-end product version.

Note

With this upgrade, several SAP HANA content packages have already been activated automatically. This saves you manual activation steps later on.

Continue with the next section.

Parent topic: [Upgrade the Software \[page 61\]](#)

Previous: [Download and Install SAP XRP AFL \(Only for SAP Replenishment Planning\) \[page 66\]](#)

Next: [Verify SAP Client Setup \[page 72\]](#)

5.5 Verify SAP Client Setup

In most upgrade scenarios, you do not need to set up an SAP client in your back-end system because you already did this during the initial installation. However, if you are not only upgrading your system to the current release but also **adding** a new scenario, you must check whether the current SAP client setup is still sufficient. For example, you might need to add SLT transformation rules for the client mapping between your source master data system(s) and your ABAP back-end system.

Example

Let's assume you are currently using any of the following scenarios of SAP Customer Activity Repository applications bundle:

- Unified Demand Forecast (UDF) module of SAP Customer Activity Repository
- Omnichannel Promotion Pricing (OPP) module of SAP Customer Activity Repository
- SAP Allocation Management
- SAP Assortment Planning
- SAP Merchandise Planning
- SAP Promotion Management
- SAP Replenishment Planning

With this upgrade, you now want to add one of the following modules of SAP Customer Activity Repository to your overall implementation:

- POS Data Transfer and Audit
- Multichannel Transaction Data Management
- Inventory Visibility (including Omnichannel Article Availability and Sourcing, OAA)
- On-Shelf Availability

Procedure

Whenever you wish to add a scenario or module, you must verify the current SAP client setup in your back-end system.

1. See the [Set Up SAP Client](#) section in the *Common Installation Guide*. It describes the setup for different scenarios.
2. Carefully read the information for the scenario that you wish to add. Check whether your current setup of the SAP client is sufficient. If not, follow the instructions.

Parent topic: [Upgrade the Software \[page 61\]](#)

Previous: [Upgrade SAP CARAB Back-End Product Version \[page 69\]](#)

Next: [Upgrade SAP FIORI FOR SAP CARAB Front-End Product Version \[page 73\]](#)

5.6 Upgrade SAP FIORI FOR SAP CARAB Front-End Product Version

Upgrade your front-end system to the SAP FIORI FOR SAP CARAB 5.0 SPS06 front-end product version of SAP Customer Activity Repository applications bundle 5.0 SPS06. The product version contains the SAP Fiori apps for this release. First create a stack XML file with Maintenance Planner. Then install this file with Software Update Manager (SUM).

Note

The front-end product version contains the software component `UICAR001 500`. You can also find the component on the SAP Support Portal. See the [download area for the front-end product version](#) and choose [SAP FIORI FOR SAP CARAB](#) > [SAP FIORI FOR SAP CARAB 5.0](#) > [COMPRISED SOFTWARE COMPONENT VERSIONS](#).

Prerequisites

- A valid start release (add-on product version) is already installed in your system landscape. It serves as the basis for the upgrade.
- You have completed the previous procedures in this guide.
- You know how to use SAP Solution Manager to perform uploads into Maintenance Planner on the SAP Support Portal. If you need more information, see the *Maintenance Planner – User Guide* at https://help.sap.com/viewer/product/MAINTENANCE_PLANNER/latest/en-US. Search for section *Uploading Landscape Data Into SAP Support Portal*.

Overview

In the procedures below you do the following:

Use this tool...	To do this...
Maintenance Planner More information: https://help.sap.com/viewer/p/MAINTENANCE_PLANNER	Plan your system landscape and create a stack XML file based on the required product versions.

Use this tool...

To do this...

Software Update Manager (SUM)

More information: <https://support.sap.com/en/tools/software-logistics-tools/software-update-manager.html>

Install or upgrade components using the stack XML file.

i Note

It may be possible to install or upgrade components using the SAP Add-On Installation Tool (transaction SAINT) or the Support Package Manager (transaction SPAM). However, these alternative procedures are not described in this guide. For information on whether they are supported for your implementation scenario and on how to proceed in this case, see SAP Note [1803986](#).

Create Stack XML Using Maintenance Planner

i Note

If you encounter issues with Maintenance Planner, see the following sources for possible solutions:

- [Maintenance Planner Troubleshooting Guide](#) on the SAP Community Wiki
- SAP Note [2535751](#): *Can not select the higher release for Netweaver in Maintenance Planner*
- SAP Note [2314463](#): *Required file K-XXXxxxxxxx.SAR is not visible for your user Sxxxxxxx*

1. Navigate to the SAP Support Portal at <https://support.sap.com/en/alm/solution-manager/processes-72/maintenance-planner.html>.
2. Upload the current system state of your installed front-end server (with a valid add-on product version installed for the upgrade) into Maintenance Planner.
3. Choose *Access Maintenance Planner*.
4. Choose *Plan*.
5. Determine whether you need to update your target software level for the current release of SAP Customer Activity Repository applications bundle.

i Note

This can vary, depending on your upgrade scenario, the stack currently installed on your back-end server, and the minimum version required for this release.

For information on minimum versions, see [Upgrade the Prerequisites \[page 18\]](#) under *SAP Fiori*.

Depending on your decision, select either the update option or the maintenance option.

6. Select a product version and a support package stack.
7. Select a product version instance.
8. Choose *Confirm Selection*.
9. Choose *Install or Maintain an Add-On*.
10. Select the front-end product version SAP Fiori for SAP CARAB 5.0 and the support package stack SPS06 (11/2023).

11. Select an instance of SAP Fiori front-end server.
12. Choose *Confirm Selection*.
13. Choose *Next*.
14. Select the operating system and database for your scenario.
15. Choose *Confirm Selection*.
16. Review the details of your stack dependent and stack independent files. If everything is OK, choose *Next*.
17. Choose *Download Stack XML*.
You have now created the stack XML file.

Install Stack XML File Using Software Update Manager (SUM)

1. Download and install the SUM tool:
 1. Navigate to the SAP Support Portal at <https://support.sap.com/en/tools/software-logistics-tools/software-update-manager.html>.
 2. Consult the information for SUM 2.0 SP xx and follow the instructions.
2. In SUM, install your add-on product using the stack XML file that you have created in the first procedure.

Result

You have successfully upgraded to the front-end product version for this release.

Continue with the next section.

Parent topic: [Upgrade the Software \[page 61\]](#)

Previous: [Verify SAP Client Setup \[page 72\]](#)

Next task: [Verify SAP Notes and RINs \(Post-Upgrade\) \[page 76\]](#)

5.7 Verify SAP Notes and RINs (Post-Upgrade)

There are SAP Notes (corrections) that can only be implemented **after** you have upgraded the back-end product version and the front-end product version. You must therefore do this additional check and implement the required notes, before you move on to the setup steps for the applications.

Prerequisites

Make sure that you have the up-to-date version of each SAP Note, which you can always find on the SAP Support Portal at <http://support.sap.com/notes>.

Procedure

Check whether there are SAP Notes that can only be implemented *after the upgrade*. See the [Implement SAP Notes for the Upgrade \[page 33\]](#) section and do the following:

- a. Always check the release information notes (RINs) indicated there. The RINs list the installation- and upgrade-relevant corrections that have become available since this guide was published and the software was released. Implement any corrections from the RINs that are required for your scenario.
- b. Always check the table for SAP Customer Activity Repository. SAP Notes listed there are often common corrections, applicable to all consuming applications.
- c. Then check the SAP Notes for your consuming application. Implement any corrections required for your scenario.

Task overview: [Upgrade the Software \[page 61\]](#)

Previous: [Upgrade SAP FIORI FOR SAP CARAB Front-End Product Version \[page 73\]](#)

Next: [Run the Migration Report for Point-of-Sale Data \[page 76\]](#)

5.8 Run the Migration Report for Point-of-Sale Data

(Conditional) If you are upgrading from any release prior to SAP Customer Activity Repository 5.0, you need to run the migration report `/DMF/TS_PS_UPDATE_SALES_LOC_ID`. This report populates a new key field in the point-of-sale time series table (`/DMF/TS_PS`), and it changes the key of the record. To ensure that the data behaves consistently for all point-of-sale data (new and old), we recommend that you run this report before the first point-of-sale time series imports.

Procedure

To update the field <SALES_LOC_ID> in the table /DMF/TS_PS, perform the following steps as part of the upgrade process.

Begin the update process during the downtime phase of the upgrade.

1. Backup the original /DMF/TS_PS table by exporting it to a disk in SAP HANA, in the binary format. You can do this by using the export functionality of SAP HANA Studio.
2. Copy the original /DMF/TS_PS table structure to a new table:

```
ET SCHEMA <SCHEMA_NAME>;  
CREATE TABLE "/DMF/TS_PS_OLD_NO_DATA" LIKE "/DMF/TS_PS" WITH NO DATA;
```

3. Add the column <SALES_LOC_ID> to the original /DMF/TS_PS table. The column is added to the end of the table structure, which is inconsistent with the Data Dictionary where the column is placed in an upfront position (as the last primary key column). The column position will be corrected in step 9 [page 77] of this procedure.

```
ALTER TABLE "/DMF/TS_PS" ADD ("SALES_LOC_ID" VARBINARY(16) CS_RAW NOT NULL  
DEFAULT '00000000000000000000000000000000');
```

Note

If you are upgrading from any release prior to CARAB 4.0, you need to execute the following commands to add the required, additional columns:

```
ALTER TABLE "/DMF/TS_PS" ALTER ("SEASON_ID" NVARCHAR(10) );
```

```
ALTER TABLE "/DMF/TS_PS" ALTER ("COLLECTION_ID" NVARCHAR(10) );
```

```
ALTER TABLE "/DMF/TS_PS" ALTER ("THEME_ID" NVARCHAR(10) );
```

```
ALTER TABLE "/DMF/TS_PS" ADD ("OOS_PCT" DECIMAL(11,3) CS_FIXED DEFAULT 0  
NOT NULL);
```

4. Remove the old primary key from the modified /DMF/TS_PS table.

```
ALTER TABLE "/DMF/TS_PS" DROP PRIMARY KEY;
```

5. Export the modified /DMF/TS_PS table, which has the wrong column order, to a disk in SAP HANA, in binary format, using a folder that is different from the one used for backup, in step 1 [page 77] of this procedure. You can perform the export by using the export functionality of SAP HANA Studio.
6. Delete the modified /DMF/TS_PS table that has the wrong column order.

```
DROP TABLE "/DMF/TS_PS" ;
```

7. Prepare for the upgrade by renaming the empty /DMF/TS_PS table that has the old structure.

```
RENAME TABLE "/DMF/TS_PS_OLD_NO_DATA" TO "/DMF/TS_PS" ;
```

8. Start the automatic steps within the downtime phase. As the /DMF/TS_PS table is empty, migration of this table will be done quickly. The automatic steps in the downtime phase are completed.
9. Adjust the column order within the metadata of the binary table that was exported in step 5 [page 77].

1. Navigate to the folder that you have chosen as the target while exporting the table in step 5 [page 77].
2. Browse the sub folders to locate the folder that contains the table name.
3. Within the folder, modify the file named "create.sql":
 1. Adjust the column order according to the empty but converted /DMF/TS_PS table.

i Note

To avoid any inconsistencies, you need to ensure that the column order and column lengths in the `create.sql` file are the same as that of the /DMF/TS_PS table. Also, make sure that if there are any custom fields, they are inserted at the correct position in the `create.sql` file.

2. Remove the default value of the field <SALES_LOC_ID>.
10. Delete the empty /DMF/TS_PS table.

```
DROP TABLE "/DMF/TS_PS" ;
```

11. Import the modified /DMF/TS_PS table with the correct column order. You can perform the import by using the import functionality of SAP HANA Studio.
The downtime phase ends.
12. Execute the report /DMF/TS_PS_UPDATE_SALES_LOC_ID to update the field <SALES_LOC_ID> with the LOC_ID value.
13. Create the primary key for table /DMF/TS_PS.

```
ALTER TABLE "/DMF/TS_PS" ADD CONSTRAINT "/DMF/TS_PS~0" PRIMARY KEY ("MANDT",  
"PROD_ID", "LOC_ID", "SALES_ORG_ID", "DISTR_CHNL_ID", "ORDER_CHNL_ID",  
"TSTFR", "TIME_GRAN", "OFR_ID", "PRC_TCD", "RETURNED_SALE", "SALES_LOC_ID")
```

Parent topic: [Upgrade the Software \[page 61\]](#)

Previous task: [Verify SAP Notes and RINs \(Post-Upgrade\) \[page 76\]](#)

6 Set Up the Applications

You have upgraded the back-end components and front-end components of SAP Customer Activity Repository applications bundle. Now you must first do the setup steps under [▶ SAP Customer Activity Repository > Core \(Mandatory for All Applications\) ▾](#). These steps are required for **all the applications**. Then you either continue with the setup steps under [▶ SAP Customer Activity Repository > Advanced \(Optional\) ▾](#) or do the setup steps for your application.

For **SAP Allocation Management**, first consult the information in section [SAP Allocation Management \[page 292\]](#). Then do the setup steps under [▶ SAP Customer Activity Repository > Core \(Mandatory for All Applications\) ▾](#).

[SAP Customer Activity Repository \[page 79\]](#)

Set up SAP Customer Activity Repository after the upgrade. The *Core* steps are always mandatory. You must do them for any application or scenario of SAP Customer Activity Repository applications bundle.

[SAP Merchandise Planning \[page 221\]](#)

Post-upgrade setup for SAP Merchandise Planning

[SAP Assortment Planning \[page 229\]](#)

Post-upgrade setup for SAP Assortment Planning

[SAP Promotion Management \[page 290\]](#)

Post upgrade setup for SAP Promotion Management

[SAP Allocation Management \[page 292\]](#)

Post-upgrade setup for SAP Allocation Management

[SAP Replenishment Planning \[page 302\]](#)

Post-upgrade setup for SAP Replenishment Planning

[Configure Access to Documentation on SAP Help Portal \(Optional for All Applications\) \[page 306\]](#)

In transaction SR13, configure your ABAP back-end system to access documentation on SAP Help Portal.

[Enable In-App Help \[page 308\]](#)

In-app help is available for several SAP Fiori apps of SAP Customer Activity Repository applications bundle. To enable the in-app help, you need to make it available in the SAP Fiori launchpad by setting up the underlying framework.

6.1 SAP Customer Activity Repository

Set up SAP Customer Activity Repository after the upgrade. The *Core* steps are always mandatory. You must do them for any application or scenario of SAP Customer Activity Repository applications bundle.

[Core \(Mandatory for All Applications\) \[page 80\]](#)

Perform the core steps to set up SAP Customer Activity Repository as the common platform. The core steps are mandatory **for SAP Customer Activity Repository** and **for all the consuming applications**.

[Advanced \(Optional\) \[page 109\]](#)

After you have completed the core steps, perform the advanced steps that are relevant to your scenario. The advanced steps are optional. They enable specific functionality in SAP Customer Activity Repository.

[Troubleshooting \[page 202\]](#)

Diagnose and resolve issues that may arise when you install, upgrade, and set up your scenario. If you need to report a customer incident, see the information at the end of this section.

6.1.1 Core (Mandatory for All Applications)

Perform the core steps to set up SAP Customer Activity Repository as the common platform. The core steps are mandatory **for SAP Customer Activity Repository** and **for all the consuming applications**.

Caution

Always do the core steps first. Then you can continue with the *Advanced (Optional)* steps for SAP Customer Activity Repository or with the setup steps for your application.

1. [Verify Authorizations for On-Shelf Availability \(OSA\) \[page 81\]](#)

In SAP HANA studio, verify that the `AFL__SYS_AFL_POSDM_AREA_EXECUTE` role has been granted to the `SAPHANADB` user in your back-end system. If it hasn't, grant the role as described below. This short procedure is mandatory for **all the applications**, because it is required for the successful activation of the SAP HANA content later on.
2. [Verify Authorizations for Unified Demand Forecast \(UDF\) \[page 82\]](#)

In an upgrade scenario, the authorizations should already be available in your back-end system. Perform this check in SAP HANA studio to verify that the roles for UDF exist, that they have the required privileges, and that they are assigned to the required users. If any authorizations are missing, set them up as described here. This procedure is **mandatory for all the applications** because the authorizations are needed for the successful activation of the SAP HANA content later on.
3. [Create/Replicate Source Master Data System Tables \[page 86\]](#)

Create the tables in SAP Customer Activity Repository that are required for replicating data from your source master data system. Then perform the actual replication of the data. You need SAP HANA studio and the SAP Landscape Transformation Replication Server (SLT) for this procedure. For reference, you can download a spreadsheet that lists the required tables for each source master data system (SAP Retail, SAP S/4HANA).
4. [Activate SAP HANA Content \[page 90\]](#)

Activate the SAP HANA content for your scenario by running the `/CAR/ACTIVATE_HTA` report in the back-end system. This procedure is mandatory for all the applications. You can run the report as many times as required. For example, if you choose to extend your scenario at a later point in time, simply run the report again to activate the SAP HANA content for the added options.
5. [Activate SAP HANA Content for Demand Data Foundation \(DDF\) \[page 93\]](#)

If your scenario includes DDF services such as the calculation of distribution curves or the similar products search, do the steps described here to activate and deploy the required SAP HANA content packages. All steps are mandatory.
6. [Verify that SAP HANA Script Server Is Active \[page 96\]](#)

Verify that the script server for the SAP HANA database is still active. If necessary, restart it manually. This step is mandatory for all the applications.

7. [Configure SAP Gateway \[page 97\]](#)

Perform several configuration steps for SAP Gateway and activate the OData services for the SAP Fiori apps. The steps to follow depend on the SAP NetWeaver version on your front-end server.

6.1.1.1 Verify Authorizations for On-Shelf Availability (OSA)

In SAP HANA studio, verify that the `AFL__SYS_AFL_POSDM_AREA_EXECUTE` role has been granted to the `SAPHANADB` user in your back-end system. If it hasn't, grant the role as described below. This short procedure is mandatory for **all the applications**, because it is required for the successful activation of the SAP HANA content later on.

Context

The `AFL__SYS_AFL_POSDM_AREA_EXECUTE` role enables the `SAPHANADB` user to call the OSA application function library (part of the `SAP_RTL_AFL_FOR_SAP_HANA` component) in the SAP HANA database.

Prerequisites

- You have mapped authoring schemas to physical schemas as described in [Verify Correct Schema Mapping \[page 41\]](#).
- You have installed the `SAP_RTL_AFL_FOR_SAP_HANA` component as described in [Download and Install SAP_RTL_AFL_FOR_SAP_HANA \[page 62\]](#).
- You have database administrator rights so that you can grant roles to users.
- You have an `SAPHANADB` user and an `SAPHANADB` physical schema in your SAP HANA database. **The names must be identical.**

i Note

The name `SAPHANADB` is used as a variable. Replace it with the name of the database user or database schema in your ABAP back-end system. Instead of `SAPHANADB`, you might also come across documentation or user interfaces that mention `SAPHANADB`. Both variables mean the same.

For more information and an example, see the *Important Variables* in [Naming Conventions \[page 6\]](#).

If you need more information on database users and schemas, see section [Verify Correct Schema Mapping \[page 41\]](#).

Procedure

→ Tip

- If you encounter issues related to authorization or authentication, see section *Security-Related Issues* of the *SAP HANA Troubleshooting and Performance Analysis Guide*, which you can find at https://help.sap.com/viewer/p/SAP_HANA_PLATFORM for your SAP HANA Platform version.
- We have provided an example SQL statement below that you can adapt as needed for your system landscape.

1. In SAP HANA studio, access your back-end system and open the *SAP HANA Administration Console*.
2. Choose ► *Security* ► *Users* ▾.
3. Select your *SAPHANADB* user and open the user details (or double-click the user).
4. On the *Granted Roles* tab, choose the plus icon and select **AFL__SYS_AFL_POSDM_AREA_EXECUTE** as the role name.

❁ Example

```
SQL example: grant AFL__SYS_AFL_POSDM_AREA_EXECUTE to SAPHANADB;
```

5. Save your changes by choosing the *Deploy (F8)* icon at the top right.

Result

You have successfully set up the authorizations for OSA. Continue with the next section.

Parent topic: [Core \(Mandatory for All Applications\) \[page 80\]](#)

Next: [Verify Authorizations for Unified Demand Forecast \(UDF\) \[page 82\]](#)

6.1.1.2 Verify Authorizations for Unified Demand Forecast (UDF)

In an upgrade scenario, the authorizations should already be available in your back-end system. Perform this check in SAP HANA studio to verify that the roles for UDF exist, that they have the required privileges, and that they are assigned to the required users. If any authorizations are missing, set them up as described here. This procedure is **mandatory for all the applications** because the authorizations are needed for the successful activation of the SAP HANA content later on.

Context

The three roles for UDF have the following purpose:

Role	Purpose
UDF_EXECUTE	Required to execute UDF. Enables the SAPHANADB user to call the UDF application function library (AFL) in the SAP HANA database.
UDF_DEPLOY	Required to activate the SAP HANA content for UDF. Enables the SAPHANADB user to deploy the SAP HANA content for UDF.
UDF_DEPLOY_SYS_REPO	Required to activate the SAP HANA content. Defines additional privileges for the _SYS_REPO standard user.

i Note

If you need more information on standard users (such as _SYS_REPO), see the following guides for your SAP HANA Platform version at https://help.sap.com/viewer/p/SAP_HANA_PLATFORM:

- *SAP HANA Security Guide*: Search for section *SAP HANA User Management*.
- *SAP HANA Security Checklists and Recommendations*: Search for section *Recommendations for Database Users, Roles, and Privileges*.

Prerequisites

- You have mapped the authoring schemas to the physical schemas as described in [Verify Correct Schema Mapping \[page 41\]](#).
- You have installed the SAP RTL AFL FOR SAP HANA component as described in [Download and Install SAP RTL AFL FOR SAP HANA \[page 62\]](#).
- You have database administrator rights so that you can grant roles to users.
- You have an SAPHANADB user and an SAPHANADB physical schema in your SAP HANA database. **The names must be identical.**

i Note

SAPHANADB is used as a variable. Replace it with the name of the database user or database schema in your ABAP back-end system.

Instead of SAPHANADB, you might also come across documentation or user interfaces that mention SAP<SID>. Both variables mean the same.

For more information and an example, see the *Important Variables* in [Naming Conventions \[page 6\]](#).

If you need more information on database users and schemas, see [Verify Correct Schema Mapping \[page 41\]](#).

Procedure

→ Tip

- If you encounter issues related to authorization or authentication, see the *Security-Related Issues* section of the *SAP HANA Troubleshooting and Performance Analysis Guide*, which you can find at https://help.sap.com/viewer/p/SAP_HANA_PLATFORM under *Operate*. Select your version at the top.
- We have provided example SQL statements below that you can adapt as needed for your system landscape.

1. In SAP HANA studio, log on to your back-end system and open the *SAP HANA Administration Console*.
2. Navigate to ► *Security* ► *Roles* and select *New Role* from the context menu.
3. In the *Role Name* field, enter `UDF_EXECUTE`.

❁ Example

SQL example: `create role UDF_EXECUTE;`

4. Make the following settings for this role:
 - On the *Granted Roles* tab: Choose the plus icon and select the `AFL__SYS_AFL_UDFCORE_AREA_EXECUTE` role from the list.

❁ Example

SQL example: `grant AFL__SYS_AFL_UDFCORE_AREA_EXECUTE to UDF_EXECUTE;`

- On the *Object Privileges* tab: Add the following catalog objects and grant them the following privileges:
 - Catalog object (schema name) `SAPHANADB`: privileges *SELECT, INSERT, UPDATE, DELETE*

❁ Example

SQL example: `grant SELECT, INSERT, UPDATE, DELETE on schema SAPHANADB to UDF_EXECUTE;`

- Catalog object (schema name) `_SYS_BIC`: privileges *SELECT, EXECUTE*

❁ Example

SQL example: `grant SELECT, EXECUTE on schema _SYS_BIC to UDF_EXECUTE;`

- On the *Analytic Privileges* tab: Add the `_SYS_BI_CP_ALL` privilege.

❁ Example

SQL example: `call GRANT_ACTIVATED_ANALYTICAL_PRIVILEGE('_SYS_BI_CP_ALL', 'UDF_EXECUTE');`

5. Save your changes by choosing the *Deploy (F8)* icon at the top right.
6. Navigate to ► *Security* ► *Users*.
7. Select the `SAPHANADB` user from the list and open the details screen (or double-click the user).
8. On the *Granted Roles* tab, add the `UDF_EXECUTE` role.

❖ Example

SQL example: `grant UDF_EXECUTE to SAPHANADB`

9. Save your changes by choosing the *Deploy (F8)* icon at the top right.

i Note

You have created the first role with the required privileges and granted the role to the SAPHANADB user.

10. Now create the second role. Navigate again to **► Security ► Roles ▾** and select *New Role* from the context menu.
11. In the *Role Name* field, enter UDF_DEPLOY.

❖ Example

SQL example: `create role UDF_DEPLOY;`

12. Make the following settings for this role:
 - On the *Granted Roles* tab: Choose the plus icon and select the CONTENT_ADMIN role from the list.

❖ Example

SQL example: `grant CONTENT_ADMIN to UDF_DEPLOY;`

- On the *System Privileges* tab: Add the CATALOG_READ privilege.

❖ Example

SQL example: `grant CATALOG_READ to UDF_DEPLOY;`

13. Save your changes by choosing the *Deploy (F8)* icon at the top right.
14. Navigate again to **► Security ► Users ▾**.
15. Select the SAPHANADB user from the list and open the details screen (or double-click the user).
16. On the *Granted Roles* tab, add the UDF_DEPLOY role.

❖ Example

SQL example: `grant UDF_DEPLOY to SAPHANADB;`

17. Save your changes by choosing the *Deploy (F8)* icon at the top right.

i Note

You have created the second role and granted the role to the SAPHANADB user.

18. Now create the third role. Navigate again to **► Security ► Roles ▾** and select *New Role* from the context menu.
19. In the *Role Name* field, enter UDF_DEPLOY_SYS_REPO.

❖ Example

SQL example: `create role UDF_DEPLOY_SYS_REPO;`

20. On the *Object Privileges* tab, make these settings:

Add the catalog object (schema name) *SAPHANADB* and grant the privileges *SELECT*, *INSERT*, *UPDATE*, and *DELETE*.

❖ Example

```
SQL example: grant SELECT, INSERT, UPDATE, DELETE on schema SAPHANADB to
UDF_DEPLOY_SYS_REPO;
```

21. Save your changes by choosing the *Deploy (F8)* icon at the top right.

22. Navigate again to **Security > Users**.

23. Select the *_SYS_REPO* user from the list and open the details screen (or double-click the user).

24. On the *Granted Roles* tab, add the *UDF_DEPLOY_SYS_REPO* role.

❖ Example

```
SQL example: grant UDF_DEPLOY_SYS_REPO to _SYS_REPO;
```

25. Save your changes by choosing the *Deploy (F8)* icon at the top right.

i Note

You have created the third role with the required privileges and granted the role to the *_SYS_REPO* user.

Result

You have successfully set up the authorizations for UDF.

Parent topic: [Core \(Mandatory for All Applications\) \[page 80\]](#)

Previous: [Verify Authorizations for On-Shelf Availability \(OSA\) \[page 81\]](#)

Next task: [Create/Replicate Source Master Data System Tables \[page 86\]](#)

6.1.1.3 Create/Replicate Source Master Data System Tables

Create the tables in SAP Customer Activity Repository that are required for replicating data from your source master data system. Then perform the actual replication of the data. You need SAP HANA studio and the SAP Landscape Transformation Replication Server (SLT) for this procedure. For reference, you can download a spreadsheet that lists the required tables for each source master data system (SAP Retail, SAP S/4HANA).

Prerequisites

- You have completed the previous procedures in this guide.
- You have installed the SAP Landscape Transformation Replication Server. For the minimum version required, installation, and implementation information, see [Upgrade the Prerequisites \[page 18\]](#) and consult the *Common Prerequisites*.
- To be able to replicate the data from an SAP S/4HANA 1909 (or higher) system, you have performed the steps in [SAP S/4HANA 1909 or Higher: Prepare Data Replication with SAP Landscape Transformation Replication Server \[page 90\]](#).

Context

The applications in SAP Customer Activity Repository applications bundle can use data originating from a single or multiple source master data systems.

The list of tables to create and replicate depends on your leading source master data system:

- **SAP Retail:** for installations based on the `SAP_ECC` schema
- **SAP S/4HANA Retail:** for installations based on the `SAP_S4H` schema

In this procedure, you first create and then replicate the required tables.

i Note

It is possible to combine the steps *create* and *replicate*.

Procedure

1. **Download the spreadsheet with the SLT tables for your version of SAP Customer Activity Repository applications bundle:**
 - a. Navigate to SAP Help Portal at <https://help.sap.com/viewer/p/CARAB> and select your version at the top.
 - b. Choose **Implement** > **Implementation Help** > **SLT Tables for SAP Customer Activity Repository applications bundle 5.0** and download the archive.
 - c. Extract the spreadsheet and see the tables listed for your source master data system.

2. ⚠ Caution

You must always create and replicate **all the tables** listed for your source master data system in the spreadsheet. This is necessary not only for the data replication itself but also for the successful activation of the SAP HANA content later on.

Create all the tables listed for your source master data system.

- a. Configure access from the SAP Landscape Transformation Replication Server to the source SAP Retail or SAP S/4HANA Retail system (RFC connection), and from the SAP Landscape Transformation

Replication Server to the target SAP HANA database of your SAP Customer Activity Repository back-end system.

For more information, see the *Installation Guide* at <https://help.sap.com/slts4hana>. If necessary, select a different version at the top.

- b. Ensure that your SAP Customer Activity Repository back-end system is connected to SAP HANA studio.

If necessary, set the connection as follows:

1. Log on to SAP HANA studio.
 2. Right-click in the *Navigator* pane and select *Add System*.
 3. In the *Specify System* dialog, enter the *Host Name*, *Instance Number*, and *Description*.
 4. In the *Connection Properties* dialog, enter your system *User Name* and *Password*.
 5. Save your changes.
- c. Ensure that the database schemas are created on the SAP HANA database of your back-end system. These are the schemas on your SAP HANA database to which the SAP Retail and/or SAP S/4HANA data will be replicated.

i Note

For more information, see the [Create a Schema](#) section of the *SAP HANA Developer Guide*.

- d. Create **all the tables** for your source master data system.
 1. Log on to the SAP Landscape Transformation Replication Server.
 2. Execute transaction **LTRC** (*SAP LT Replication Server Cockpit*).
 3. Define and select your replication configuration.

i Note

For more information, see *SAP Library* at <https://help.sap.com/slts4hana>. Search for section *Creating a Configuration*.

4. Choose **Execute (F8)**. A screen opens that shows the details of this replication configuration.
5. Select the *table overview* tab. You can now see the *data provisioning* function.
6. Execute the *table overview* function. On the subsequent pop-up, select the function for table creation.
7. Choose the multiple selection push-button next to the table name field.
8. In the next screen, you can either enter the table names manually or upload a text file with the table names (recommended):
Create this text file from the spreadsheet that you downloaded before. Make sure that the text file contains only the table names and no other data. Then upload the text file.
9. Choose **Copy (F8)** to return to the previous screen.
10. Choose **Execute (F8)** to trigger the creation of the tables.

You have successfully created the tables in your SAP Customer Activity Repository back-end system.

3. **Replicate all the tables listed for your source master data system.**

i Note

If your SAP Retail or SAP S/4HANA Retail system and your back-end SAP Customer Activity Repository system are co-deployed on the same SAP HANA database, you do not need to replicate the tables.

- a. Save a CSV file of the required tables. You will later load the tables from this file.
- b. In SAP HANA studio, choose ► *Window* ► *Perspective* ► *Open Perspective* ► *SAP HANA Modeler* ►.
- c. In the *Quick View* panel, choose *Data Provisioning* to open the *Data Provisioning Editor* for your system.

If the *Quick View* panel is not displayed, choose ► *Help* ► *Quick View* ►.

- d. In the *Data Provisioning Editor*, make any necessary adjustments: remove or add tables, select the appropriate source system, and select the target schema for the replication.
- e. Choose *Replicate* to open the *Replicate Request* screen.
- f. Choose *Load from file*, browse to the location where you saved the CSV file, and select it.
- g. The tables in the file are added to the *Selected* column on the right-hand side. Choose *Finish*.

i Note

In the *Data Provisioning Editor*, you can monitor the action status of the tables using *Data Load Management*.

Results

You have successfully replicated the tables from your source master data system into your SAP Customer Activity Repository back-end system. Continue with the next section.

Task overview: [Core \(Mandatory for All Applications\) \[page 80\]](#)

Previous: [Verify Authorizations for Unified Demand Forecast \(UDF\) \[page 82\]](#)

Next task: [Activate SAP HANA Content \[page 90\]](#)

6.1.1.3.1 SAP S/4HANA 1909 or Higher: Prepare Data Replication with SAP Landscape Transformation Replication Server

Only perform this procedure if your source master data system is SAP S/4HANA 1909 or higher. If so, you must do the steps described here before doing the actual replication.

Context

To be able to replicate data from your SAP S/4HANA system into SAP Customer Activity Repository, you first need to prepare the replication as described below.

This preparation has the added advantage that it gives you the option to use a standalone SAP LT Replication Server.

Procedure

Prepare data replication from SAP S/4HANA 1909 or higher to SAP Customer Activity Repository, using an embedded or a standalone SAP LT Transformation Server:

1. Pause your current SLT replication routine with the SAP LT Replication Server.
2. Upgrade your source master data system to SAP S/4HANA 1909 or higher as described in the corresponding product documentation. For more information, see [SAP Help Portal for SAP S/4HANA 1909](#). Consult the *Upgrade Guide* and, if applicable, also the *Conversion Guide*. If necessary, select a different version at the top.
3. If you use SAP Landscape Transformation Replication Server 2.0 (DMIS 2011) or SAP Landscape Transformation Replication Server 3.0 (DMIS 2018) as a standalone system, then implement SAP Note [2857334](#) (Unsupported data type DECFLOAT34 / D34N when replicating from a S/4 HANA OP1909 system) in your SAP S/4HANA system.
4. Adjust your SLT configuration as described in the note.
5. Now you can resume the data replication. Return to section [Create/Replicate Source Master Data System Tables \[page 86\]](#) and follow the instructions.

6.1.1.4 Activate SAP HANA Content

Activate the SAP HANA content for your scenario by running the `/CAR/ACTIVATE_HTA` report in the back-end system. This procedure is mandatory for all the applications. You can run the report as many times as required. For example, if you choose to extend your scenario at a later point in time, simply run the report again to activate the SAP HANA content for the added options.

Prerequisites

You have successfully completed all the previous procedures in this guide.

Context

The `/CAR/ACTIVATE_HTA` report activates the SAP HANA Transport for ABAP (HTA) objects for your scenario. For more information on the report, see the accompanying documentation in transaction `SE38`.

→ Tip

If you encounter issues during the activation, see the [Troubleshooting \[page 202\]](#) section for possible solutions.

Procedure

1. Start transaction `SE38`.
2. Enter `/CAR/ACTIVATE_HTA` as the program (report) and choose *Execute* (`F8`).
3. On the *Activate SAP HANA Content for SAP CARAB* screen, select all the options for which you wish to activate the SAP HANA content. Use the following table for reference:

⚠ Caution

Always activate the SAP HANA content for SAP Customer Activity Repository first. This content must be active before you can activate the content for additional options.

→ Tip

If the SAP HANA content is already active for an option, you can see this directly on the screen.

To activate the SAP HANA content for... Select at least these options...

To activate the SAP HANA content for...	Select at least these options...
SAP Customer Activity Repository	<ul style="list-style-type: none">• <i>ECC Mode</i>: Select your source master data system.• <i>Scenario Options</i>:<ul style="list-style-type: none">• If your system landscape includes more than one SAP ERP or SAP S/4HANA system, select either <i>Multiple SAP ERP</i> or <i>Multiple S/4HANA</i>, respectively.• If you want to use multichannel sales analytics apps, then select <i>Multichannel Sales Analytics</i>.• <i>Business Scenarios Activation</i>: Select <i>Customer Activity Repository</i>.

To activate the SAP HANA content for... Select at least these options...

SAP Allocation Management	Follow the instructions in Activate SAP HANA Content for SAP Allocation Management [page 297] .
Demand Data Foundation (DDF services such as the similar products search or the calculation of distribution curves without using SAP Allocation Management)	<ol style="list-style-type: none"> Run the report with these settings: <ul style="list-style-type: none"> ECC Mode: Select your source master data system. Scenario Options: If your system landscape includes more than one SAP ERP or SAP S/4HANA system, select either <i>Multiple SAP ERP</i> or <i>Multiple S/4HANA</i>, respectively. Business Scenarios Activation: Select <i>Customer Activity Repository</i> and <i>Demand Data Foundation</i>. Follow the instructions in Activate SAP HANA Content for Demand Data Foundation (DDF) [page 93].
SAP Assortment Planning	<p>No action required.</p> <p>The SAP HANA content was already activated automatically during the upgrade of the back-end product version.</p>
Unified Demand Forecast (UDF) and SAP Fiori apps for demand forecasting	<p>No action required.</p> <p>The SAP HANA content was already activated automatically during the upgrade of the back-end product version.</p>
On-Shelf Availability	<ul style="list-style-type: none"> ECC Mode: Select your source master data system. Business Scenarios Activation: Select <i>On-Shelf Availability</i> and <i>Customer Activity Repository</i>.
Omnichannel Article Availability and Sourcing (OAA)	<ul style="list-style-type: none"> ECC Mode: Select your source master data system. Business Scenarios Activation: Select <i>Omnichannel Article Availability</i>.
SAP Merchandise Planning	<p>No action required.</p> <p>The SAP HANA content was already activated automatically during the upgrade of the back-end product version.</p>
SAP Replenishment Planning	<p>There is no specific SAP HANA content for SAP Replenishment Planning. However, if you use the real-time inventory, select at least these options:</p> <ul style="list-style-type: none"> ECC Mode: Select your source master data system. Scenario Options: If your system landscape includes more than one SAP ERP or SAP S/4HANA system, select either <i>Multiple SAP ERP</i> or <i>Multiple S/4HANA</i>, respectively. Business Scenarios Activation: Select <i>Customer Activity Repository</i> and <i>Demand Data Foundation</i>.
SAP Promotion Management	No action required.

4. Do a test run to verify your selections:
 - a. Select *Perform Prerequisite Check* and choose *Execute* (**F8**).

- b. Read the system log and first resolve any issues found during the check. See the [Troubleshooting \[page 202\]](#) section for possible solutions.
5. Activate the SAP HANA content for real:
 - a. Deselect *Perform Prerequisite Check*.
 - b. Choose *Execute* (F8) to run the report again.
6. Verify that the activation was successful. There are three ways how you can do this:
 - a. Simply rerun the report. You can see all the options that are now active.
 - b. Or: Start transaction SCTS_HTA_DEPLOY. Specify an SAP HANA content package (for example, `sap.is.retail`), select *Include subpackages*, and choose *Execute* (F8). You can get a list of all the packages and objects, including their respective status, activation date, and more.
 - c. Or: Navigate to the desired package in SAP HANA studio or SAP Web IDE and check whether all its views are active.

Results

You have successfully activated the SAP HANA content for your scenario. Continue with the next section.

→ Remember

You can run the report again whenever you need to activate additional SAP HANA content packages.

Task overview: [Core \(Mandatory for All Applications\) \[page 80\]](#)

Previous task: [Create/Replicate Source Master Data System Tables \[page 86\]](#)

Next: [Activate SAP HANA Content for Demand Data Foundation \(DDF\) \[page 93\]](#)

6.1.1.5 Activate SAP HANA Content for Demand Data Foundation (DDF)

If your scenario includes DDF services such as the calculation of distribution curves or the similar products search, do the steps described here to activate and deploy the required SAP HANA content packages. All steps are mandatory.

⚠ Caution

If you wish to calculate distribution curves for SAP Allocation Management (that is, for the “distribution curve analysis”), skip the steps below and follow the instructions in [Activate SAP HANA Content for SAP Allocation Management \[page 297\]](#).

Run the Report for Creating the Dummy Schema and Dummy Tables

The `/DMF/CREATE_SLT_TABLES` (*Create SLT Tables*) report checks for a missing physical schema and, if necessary, creates this as a dummy schema together with the corresponding dummy tables.

Prerequisites

You have an SAP HANA database user in the ABAP back-end system with the authorization to create the dummy schema (that is, the `SAPHANADB` user requires the `CREATE ANY` privilege on `schema _SYS_BIC`). This should already be the case if the authorizations were set up as described in section [Verify SAP HANA Users and Privileges \[page 44\]](#).

Procedure

1. Run the report `/DMF/INSERT_SLT_TABLES_TO_DB` (*Insert SLT Table Entries to Database* in insert mode (by deselecting the simulation setting).
2. In your ABAP back-end system, start transaction `SE38`. Enter `/DMF/CREATE_SLT_TABLES` as the program and choose *Execute*.
3. Select your source master data system. For SAP S/4HANA, also select the version.
4. For the *Physical Source Schema*, enter the name of the physical schema into which your SLT tables should be replicated.

i Note

If the physical source schema already exists in the SAP HANA database, only the dummy tables in this schema are created when you execute the report.

5. For the *Physical Dummy Schema*, enter the name of the schema to be created.
6. Select the simulation mode for a test run and execute the report. Check for errors in the application log and resolve them.
7. Run the report again, this time without simulation mode.

Maintain Schema Mapping

Check the name of your physical schema:

1. If it is one of the default names below, no further action is required:
 - `SAP_S4H`, for SAP S/4HANA
 - `SAP_ECC`, for SAP Retail and SAP Fashion Management
2. If your physical schema has a **different name**, do the following:
In SAP HANA studio, create a schema mapping where your customer-specific name is used as the authoring schema for the physical schema. For instructions, see [Verify Correct Schema Mapping \[page 41\]](#).

Set PREWORK_DONE Indicator for DDF Packages

Demand Data Foundation (DDF) has a number of SAP HANA content packages that are relevant:

- `sap.is.ddf.ecc`
- `sap.is.ddf.fms`
- `sap.is.ddf.fms_s4h`
- `sap.is.ddf.cross.ecc`
- `sap.is.ddf.cross.fms`
- `sap.is.ddf.cross.fms_s4h`
- `sap.is.ddf.cross`
- `sap.is.ddf.deps`
- `sap.is.ddf.dc`

These packages have the activation mode `P` (*Package and its objects deployed only after prework done*). In this procedure, you confirm that the prework has been done. You do this by setting the `PREWORK_DONE` indicator in the `CTS_HOT_PREWORK` table to `X` for all the packages above.

Procedure

1. Start transaction `SE16`, enter `CTS_HOT_PREWORK` as the table, and choose *Execute*.
2. Enter `sap.is.ddf.*` as `ABAP_HANA_PACKAGE_ID` and choose *Execute*.
3. You now see a list that includes the DDF packages above. Switch to change mode to edit the entries.
4. Check whether all of the DDF packages above have the `PREWORK_DONE` indicator set to `X`.
5. If the setting is still missing for one of the DDF packages above, double-click the entry and set `PREWORK_DONE` to `X`.
6. Save your changes.

Note

Here is how you can always check the current settings and display details for each package:

1. Start transaction `SE16`, enter `CTS_HOT_PACKAGE` as the table, and choose *Execute*.
2. Enter `sap.is.ddf.*` as `ABAP_HANA_PACKAGE_ID` and choose *Execute*.
3. You now see a list that includes the DDF packages above. For each of the DDF packages above, double-click the entry to display the package details.
4. For each package, verify the current setting in field `HOT_ACTIVATION_MODE` (Set to `P`).

Check and Activate the SAP HANA Content for Demand Data Foundation (DDF)

Depending on your scenario, there might still be inactive DDF packages even though you have already activated the content as described in the previous section ([Activate SAP HANA Content \[page 90\]](#)).

Now you make sure that those packages are activated as well.

Procedure

1. Execute transaction SCTS_HTA_DEPLOY (*SAP HANA Transport for ABAP - Deployment*).
2. Deploy each of the following packages **in exactly the same order** as listed below. One by one, enter the package ID in *SAP HANA Repository Package* and choose *Execute*.

⚠ Caution

Do not select the *Include subpackages* option.

1. `sap.is.ddf.ecc`
2. `sap.is.ddf.fms`
3. `sap.is.ddf.fms_s4h`
4. `sap.is.ddf.cross.ecc`
5. `sap.is.ddf.cross.fms`
6. `sap.is.ddf.cross.fms_s4h`
7. `sap.is.ddf.cross`
8. `sap.is.ddf.deps`
9. `sap.is.ddf.dc`

Result

You have successfully activated and deployed the SAP HANA content packages for Demand Data Foundation.

Parent topic: [Core \(Mandatory for All Applications\) \[page 80\]](#)

Previous task: [Activate SAP HANA Content \[page 90\]](#)

Next task: [Verify that SAP HANA Script Server Is Active \[page 96\]](#)

6.1.1.6 Verify that SAP HANA Script Server Is Active

Verify that the script server for the SAP HANA database is still active. If necessary, restart it manually. This step is mandatory for all the applications.

Context

The script server is an auxiliary SAP HANA server that is required to execute application function libraries (AFLs). For example, this applies to the `SAP_HANA_AFL` component (which includes the SAP HANA Predictive Analysis Library (PAL) and other libraries) and to the `SAP_RTL_AFL_FOR_SAP_HANA` component (which includes the libraries for Unified Demand Forecast and On-Shelf Availability).

i Note

- The service name is `scriptserver`.
- The operating system process is `hdbscriptserver`.
- The operating system process can be started while the SAP HANA database is already running.

Procedure

1. In SAP HANA studio, verify that the script server is active.
2. If the script server is not active, restart it manually as described in SAP Note [1650957](#) (SAP HANA Database: Starting the Script Server).

Task overview: [Core \(Mandatory for All Applications\) \[page 80\]](#)

Previous: [Activate SAP HANA Content for Demand Data Foundation \(DDF\) \[page 93\]](#)

Next: [Configure SAP Gateway \[page 97\]](#)

6.1.1.7 Configure SAP Gateway

Perform several configuration steps for SAP Gateway and activate the OData services for the SAP Fiori apps. The steps to follow depend on the SAP NetWeaver version on your front-end server.

i Note

If you have an upgrade scenario where you hadn't configured SAP Gateway before and now want to use SAP Fiori apps for the first time, you must do a full configuration of SAP Gateway. See the *Common Installation Guide* for this release and search for the *Configure SAP Gateway* section. Do all the procedures listed there.

Parent topic: [Core \(Mandatory for All Applications\) \[page 80\]](#)

Previous task: [Verify that SAP HANA Script Server Is Active \[page 96\]](#)

6.1.1.7.1 Connect SAP Gateway to Your Back-End System

Set up the connection between SAP Gateway on your front-end server and your back-end system. In other words, set up the OData Channel (ODC).

Use

The steps are not specific to this guide and are described in the product documentation for your SAP NetWeaver version.

Note

As of SAP NetWeaver 7.40, the major components of SAP Gateway have been integrated into the SAP NetWeaver system as SAP Gateway Foundation (SAP_GWFND). SAP Gateway Foundation has since been an integral part of SAP NetWeaver.

Procedure

1. Determine the SAP NetWeaver version on your front-end server.
2. Set up the OData Channel as described in the *SAP Gateway Foundation Configuration Guide* for your SAP NetWeaver version.
Use [SAP Help Portal for SAP NetWeaver](#) as your entry point and navigate to the guide for your version. Here are two examples:

Example

For SAP Gateway on Foundation for ABAP Platform, see the [SAP Gateway Foundation Configuration Guide](#).

If required, select a different version at the top.

Search for section *Connection Settings for the SAP Gateway Hub System* and follow the instructions.

Example

For SAP Gateway for SAP NetWeaver 7.52, see https://help.sap.com/viewer/p/SAP_NETWEAVER_AS_ABAP_752.

Select your version at the top and choose [Application Help](#) > [SAP Gateway Foundation \(SAP_GWFND\)](#) > [SAP Gateway Foundation Configuration Guide](#) > [SAP Gateway Configuration](#) > [User, Developer, and Administrator Roles](#) and [Connection Settings for the SAP Gateway Hub System](#).

3. Set up the required roles on the front-end server and assign your user to these roles.
4. Specify the connection settings on the SAP Gateway hub system:
 - Connection from SAP Gateway to consumer systems

These settings allow you to connect the SAP Gateway host to the consumer systems (clients from which you access the SAP Fiori apps).

- Connection from SAP Gateway to SAP back-end system

These settings allow you to connect SAP Gateway to your back-end system. They include the following steps:

- Creating a type 3 connection from the SAP Gateway host to your back-end system
- Defining a trust relationship between your back-end system and the SAP Gateway host
- Configuring your back-end system to accept SAP assertion tickets from the SAP Gateway host
- Configuring your SAP Gateway host to accept SAP assertion tickets from your back-end system
- Configuring the necessary system aliases

6.1.1.7.2 Activate SAP Gateway

Before you can use SAP Gateway, you must activate it globally on your front-end server.

Use

The steps are not specific to this guide and are described in the product documentation for your SAP NetWeaver version.

i Note

As of SAP NetWeaver 7.40, the major components of SAP Gateway have been integrated into the SAP NetWeaver system as SAP Gateway Foundation (SAP_GWFND). SAP Gateway Foundation has since been an integral part of SAP NetWeaver.

Procedure

1. Determine the SAP NetWeaver version on your front-end server.
2. Follow the steps in the *Activating SAP Gateway* section of the *SAP Gateway Foundation Configuration Guide* for your SAP NetWeaver version.
Use [SAP Help Portal for SAP NetWeaver](#) as your entry point and navigate to the guide for your version.
Here are two examples:

❁ Example

For SAP Gateway on Foundation for ABAP Platform, see the [SAP Gateway Foundation Configuration Guide](#).

If required, select a different version at the top.

Search for section *Activating SAP Gateway* and follow the instructions.

❖ Example

For SAP Gateway for SAP NetWeaver 7.52, see https://help.sap.com/viewer/p/SAP_NETWEAVER_AS_ABAP_752.

Select your version at the top and choose ► *Application Help* ► *SAP Gateway Foundation (SAP_GWFND)* ► *SAP Gateway Foundation Configuration Guide* ► *SAP Gateway Configuration* ► *Activating SAP Gateway* ►.

6.1.1.7.3 Verify that OData Services are Active

First verify that all the common OData services for SAP Fiori are active. Then verify that the OData services for your specific application and SAP Fiori apps are active as well.

Context

For security reasons, the OData services are delivered in an inactive state:

- The **common OData services** are delivered as part of the SAP Fiori front-end server. They are required for the SAP Fiori launchpad and you must always activate them.
- The **application-specific OData services** are delivered with SAP Customer Activity Repository applications bundle. You only need to activate the services that are relevant for your application and scenario.

Procedures

Mandatory: Verify that Common OData Services for SAP Fiori are Active

1. Log on to your front-end server (your SAP Gateway system).
2. In transaction `SPRO`, navigate to ► *SAP Reference IMG* ► *SAP NetWeaver* ► *SAP Gateway* ► *OData Channel* ► *Administration* ► *General Settings* ► *Activate and Maintain Services* ► and execute the Customizing activity.

→ Tip

As a shortcut to the same screen, use transaction `/n/IWFND/MAINT_SERVICE`.

The *Service Catalog* shows you all the services that are currently active in your SAP Gateway system.

3. Verify that all the common OData services for SAP Fiori are active:

Common OData Services for SAP Fiori

/UI2/PAGE_BUILDER_CONF

/UI2/PAGE_BUILDER_CUST

/UI2/PAGE_BUILDER_PERS

/UI2/TRANSPORT

/UI2/INTEROP

4. If a service is not active, activate it as follows:
 1. Choose *Add Service*.
The *Add Selected Services* screen is displayed.
 1. In *System Alias*, select the alias of your local back-end system.
This is the alias that you have created in [Connect SAP Gateway to your Back-End System \[page 98\]](#).
For example, LOCAL.
 2. In *Technical Service Name*, specify **/UI2***.
 3. Choose *Get Services* (or press).
 4. Choose *Add Selected Services* and follow the instructions.

Result

The common OData services are now active in your SAP Gateway system.

Verify that Application-Specific OData Services for SAP Customer Activity Repository applications bundle are Active

1. Log on to your front-end server (your SAP Gateway system).
2. In transaction SPRO, navigate to [SAP Reference IMG](#) > [SAP NetWeaver](#) > [SAP Gateway](#) > [OData Channel](#) > [Administration](#) > [General Settings](#) > [Activate and Maintain Services](#) and execute the Customizing activity.

→ Tip

As a shortcut to the same screen, use transaction `/n/IWFND/MAINT_SERVICE`.

The *Service Catalog* shows you all the services that are currently active in your SAP Gateway.

3. Activate the services that are required for your application:
 1. Choose *Add Service*.
The *Add Selected Services* screen is displayed.
 2. In *System Alias*, select the alias of your back-end system.
 3. Choose *Get Services* (or press).
The available services are displayed.

4. Use the following table for reference and verify that the services for your application are active:

For this Application... Activate These OData Services...

For this Application...	Activate These OData Services...
SAP Customer	<ul style="list-style-type: none"> For POS Data Transfer and Audit: No OData services for SAP Gateway
Activity Repository	<ul style="list-style-type: none"> For Multichannel Transaction Data Management: No OData services for SAP Gateway For Unified Demand Forecast and the apps for demand forecasting (<i>Analyze Forecast</i>, <i>Adjust Forecast</i>, <i>Manage Demand Influencing Factors</i>): <ul style="list-style-type: none"> /DMF/ANALYZEFORECAST_SRV /DMF/DEMAND_PLAN_UTILITIES_SRV /DPL/OD_ADJUST_FORECAST_SRV /DPL/OD_DEMAND_PLANNING_SRV /DMF/OD_FC_TIME_SERIES_VIZ_SRV For Demand Data Foundation (optional; alternative to using the DRF data replication framework for importing master data): <ul style="list-style-type: none"> /DMF/API_DOCUMENT /DMF/API_GENERIC_TIME_SERIES /DMF/API_INVENTORY /DMF/API_LOCATION /DMF/API_LOCATION_HIERARCHY /DMF/API_PRODUCT /DMF/API_PRODUCT_HIERARCHY /DMF/API_PRODUCT_LOCATION /DMF/API_SALES_HISTORY /DMF/API_TRANSPORTATION_LANE /DMF/API_ATTRIBUTES /DMF/API_IMAGES /DMF/API_MERCHANDISE_PLAN_KPI /DMF/API_PHPS For the <i>Manage Product Attributes</i> app: <ul style="list-style-type: none"> /DMF/API_ATTRIBUTES_SRV (optional, to import external attributes for integration scenarios with non-SAP source master data systems) For the <i>Manage Alerts</i>, <i>Manage Alert Profiles</i>, and <i>Manage Configuration Assignments</i> apps: <ul style="list-style-type: none"> /DMF/MANAGE_RTLPLNG_ALERTS_SRV APS_CHANGE_DOCUMENTS_SRV /DMF/MANAGE_RTLPLNG_ALERT_PRFL_SRV /DMF/PARAMETER_ASSIGNMENT_SRV For the <i>Manage Workloads</i> app: <ul style="list-style-type: none"> /DMF/PCPMNGWRKLD_SB APJ_JOB_MANAGEMENT_SRV APL_LOG_MANAGEMENT_SRV For Omnichannel Promotion Pricing: none

For this Application... Activate These OData Services...

- For Omnichannel Article Availability and Sourcing (part of Inventory Visibility):
 - With SAP S/4HANA back-end:
 - /OAA/F3391_MSN_SRV
 - /OAA/F2586_MSS_SRV
 - /OAA/F2659_MSC_SRV
 - /OAA/F3392_MS_SRV
 - With SAP Retail back-end:
 - /OAA/F2530_MSN_SRV
 - /OAA/F2586_MSS_SRV
 - /OAA/F2659_MSC_SRV
 - /OAA/F3003_MS_SRV
 - For On-Shelf Availability:
 - /OSA/ON_SHELF_AVAILABILITY
 - For SAP Smart Business for Multichannel Sales Analytics: none
-

Distribution Curves For the *Configure Distribution Curves* app and the calculation of distribution curves:

- /DMF/DIST_CURVE
-

SAP Allocation
Management

- /AMR/OD_ALLOCATIONPLAN_SRV
 - /AMR/OD_COMMON_SRV
 - /AMR/OD_MARKETUNIT_SRV
 - /AMR/OD_PARAM_SRV
 - /AMR/OD_WORKLOAD_SRV
 - /AMR/OD_PRODUCT_FLOW_SRV
 - /AMR/OD_KPI_CONFIG_SRV
 - /AMR/OD_ALLOCATIONRESULT_SRV
 - /AMR/OD_BASKET_SRV
 - /AMR/OD_ALLOCATIONPLAN_SEARCH_SRV
 - /AMR/OD_CAPACITYMANAGEMENT_SRV
-

For this Application... Activate These OData Services...

SAP Assortment Planning	<ul style="list-style-type: none"> • /DMF/CURRENCY_LIST_SRV • /DMF/LOCATION_CLUSTERSET_SRV • /DMF/MASTER_DATA_SRV • /DMF/MODULE_MANAGEMENT_SRV • /DMF/OBJ_ATTRIBUTE_SRV • /DMF/PLAN_CONFIG_SRV • /DMF/SEARCH_LOCATIONS_SRV • /DMF/SEARCH_PRODUCTS_SRV • /DMF/SEASONS_SRV • /RAP/ASSORTMENT_LIST_SRV • /RAP/OPTION_PLAN_SRV • /RAP/PHP_MATCH_SRV • /RAP/VALIDITY_PERIOD_SRV • /RAP/V_OP_KPI_Q_CDS_CDS • /RAP/OPT_PLN_KPI_SRV • /RAP/V_OP_OCLST_PRSL_Q_CDS_CDS • For the <i>Manage Style Lists</i> app: <ul style="list-style-type: none"> • /RAP/STYLE_PLAN_SRV • For the <i>Manage Ranking Keys</i> app: <ul style="list-style-type: none"> • /DMF/RANKING_KEY_SRV • For the <i>Manage Business Rules</i> app: <ul style="list-style-type: none"> • /DMF/OD_BUSINESS_RULE_SRV • For the <i>Manage Placeholder Products</i> app: <ul style="list-style-type: none"> • /DMF/MANAGE_PROD_DETAILS • /RAP/MANAGE_PROD_DETAILS_PLAN • For the <i>Manage Assortment Modules</i> app: <ul style="list-style-type: none"> • /DMF/MODULE_ASSORTMENT_SRV • For the <i>Manage Assortments</i> app: <ul style="list-style-type: none"> • /RAP/GENERIC_ASSORTMENT • /DMF/MASTER_DATA • /RAP/ASSORTMENT_LIST • /DMF/SEARCH_PRODUCTS • /DMF/MODULE_MANAGEMENT • /DMF/OBJ_ATTRIBUTE • For the <i>Manage Planning Periods</i> app: <ul style="list-style-type: none"> • /DMF/PLN_CALENDAR
----------------------------	--

SAP Merchandise Planning	Not applicable (this application does not have SAP Fiori apps)
-----------------------------	--

For this Application...	Activate These OData Services...
SAP Promotion Management	<ul style="list-style-type: none"> • /DMF/PROD_MD_SRV (<i>Master Data Retrieval</i>) • /DMF/OFFER_MANAGEMENT_V2_SRV (<i>Manage Promotional Offers</i>) • /DMF/PRODUCT_GROUP_SRV (<i>Manage Product Groups</i>) • /DMF/LOCATION_SUBGROUP_SRV (<i>Manage Location Subgroups</i>) • /PRM/OFFER_CONTENT_SRV (<i>Offer Content Assignment</i>) • /PRM/ EVENT_PREVIEW_SRV (<i>Event Preview</i>)
SAP Replenishment Planning	For information about the OData services for SAP Replenishment Planning, see Set Up SAP Fiori Apps for SAP Replenishment Planning and refer to subsection <i>Activate Application-Specific OData Services for SAP Replenishment Planning</i> .

4. If a required service is not active, select it and choose [Add Selected Services](#). Follow the instructions.

Note

User roles are only needed if you want to have connections to multiple back-end systems or multiple clients on the same back-end. The user roles are system-specific and are not delivered by default. If required, you must create them manually. If you define multiple user roles for different connections, make sure you have only one role assigned to your user at any time. If you need to change roles, first remove the old role from your user, then assign the new role.

Result

The application-specific OData services that you have selected are now active in your SAP Gateway system.

→ Tip

To ensure that your apps start quickly from the launchpad, you can schedule a report to enable regular updating of cached OData metadata. For more information, see [Scheduling Update of OData Metadata Caching](#).

6.1.1.7.4 Calculate SAPUI5 Application Index for SAP Fiori Apps

Configure and run the /UI5/APP_INDEX_CALCULATE (*Calculation of SAPUI5 Application Index for SAPUI5 Repositories*) report in your front-end system. The report updates the SAPUI5 application index. If the index is up-to-date, the system can find data related to SAP Fiori apps significantly faster.

Use

The SAPUI5 application index provides indexing and caching for data related to SAP Fiori apps, components, and libraries. This data is contained in SAPUI5 repositories on the SAP NetWeaver Application Server for ABAP.

Initially, the index is empty. It is calculated and updated each time you run the report.

Prerequisites

You are familiar with the prerequisites, configuration options, and requirements of the `/UI5/APP_INDEX_CALCULATE` report. For more information, see the following:

- SAP Note [2227577](#) (Recalculation of the SAPUI5 Application Index After Implementing an SAP Note)
- Report documentation in transaction `SE38`
- *SAPUI5: UI Development Toolkit for HTML5*: Here you can find detailed information on the SAPUI5 application index and the report.
For more information, see [SAPUI5 Application Index](#).

Configuration

To configure how the index should be calculated, you can choose from several options in the `/UI5/APP_INDEX_CALCULATE` report:

- Tab *Complete Index*, option *Depending on Expiry Period and Import of Transport Requests*:
This option updates those SAPUI5 repositories and the distribution layer where either the specified expiration period (in hours and minutes) has elapsed or where a transport has changed the content of the repositories and the distribution layer since the last update.

Note

This is the default mode with an expiration period of 24 hours. We recommend that you use this mode when scheduling the report for periodic execution.

- Tab *Complete Index*, option *Full Calculation*:
This option performs a full update of all SAPUI5 repositories and the distribution layer regardless of any expiration dates.
- *Single SAPUI5 Repository Only*: Here you select the repository for which you wish to update the index.
- *SAPUI5 Distribution Layer Only*: Here you update the index only based on the distribution layer.

Operation

Configure and run the report in all your front-end systems.

→ Tip

You can run the report manually, but we recommend the following best practices:

- **Schedule** the report as a periodic job for all follow-on systems to which the changes are transported. This ensures that the application index is updated based on the transports imported by each system. For example, you can use transaction `SM36` for this purpose.
For more information, see [Scheduling the Creation of the SAPUI5 Application Index](#).
- **Always run** the report in the following situations:
 - after any changes to the content of SAPUI5 ABAP repositories (for example, implementation of SAP Notes, upgrades, changes to SAP Gateway systems)

- after installing a new version of the distribution layer
- after implementing an SAP Note containing changes to an SAP Fiori app

Procedure

i Note

If you experience issues, see the following troubleshooting tips for possible solutions:

- SAP Note [2364579](#) (SAPUI5 application index is not calculated, is outdated or contains errors)
- SAP Community at [Fiori - How to Troubleshoot SAPUI5 Application Index Specific Issues](#)

1. Log on to your front-end system.
2. Execute transaction `SE38`, specify `/UI5/APP_INDEX_CALCULATE` as the program (report), and choose `Execute` (`F8`).
3. Configure the report.
4. Choose `Execute` (`F8`) again to run the report manually.

→ Tip

Schedule the report to run on a regular basis in all your front-end systems.

Result

The SAPUI5 application index is updated based on your settings.

6.1.1.7.5 Invalidate Caches for SAP Fiori Apps

Run several reports in your front-end system to invalidate different caches. This ensures that the SAP Fiori launchpad and SAP Fiori apps run correctly after an upgrade and load quickly.

Context

Web browsers store static resources, like JavaScript files, stylesheets, and images in the browser cache. When these resources are changed in a software upgrade, you want the browser to load the new resources from the server rather than from the cache, without having to manually clear the browser cache.

Procedure

1. Log on to your front-end server.
2. In transaction SE38, execute the following reports one after the other to invalidate the corresponding caches:

Reports for Invalidating Caches on Front-End Server

Report	What It Does	Read this Information Before Executing the Report
<code>/UI2/INVALIDATE_GLOBAL_CACHES</code> <i>(Global Cache Invalidation)</i>	Invalidates all UI2 caches (caches of <code>/UI2/*</code> services).	See the report documentation in transaction SE38.
<code>/UI2/INVALIDATE_CLIENT_CACHES</code> <i>(Client Cache Invalidation)</i>	Invalidates the client caches for selected resources / users.	See SAP Help Portal for SAP Fiori launchpad at https://help.sap.com/viewer/product/DRAFT/SAP_FIORI_LAUNCHPAD/EXTERNAL/en-US . Choose SAP Fiori Launchpad in SAP NetWeaver with SAP_UI Component > <your SAP NetWeaver version on the front-end server> > <i>Administration Guide</i> > <i>Operations</i> > <i>Performance</i> > <i>Client-Side Cache</i> > <i>Cache Buster for SAP Fiori Launchpad and SAP Fiori Apps</i> and the subsection <i>Invalidating Client Caches</i> .
<code>/UI2/DELETE_CACHE_AFTER_IMP</code> <i>(Delete UI2 Cache after import of a Support Package)</i>	Clears the UI2 cache on the front-end server after upgrading to a new support package stack.	See the report documentation in transaction SE38. After executing the report, you can see how many entries have been deleted, for how many users, and for how many clients.

Note

You only need to run this report in exceptional cases, that is, if you are using the SAPUI5 cache busting mechanism for your SAP Fiori launchpad.

Report	What It Does	Read this Information Before Executing the Report
/UI5/UPD_ODATA_METADATA_CACHE (<i>Update Caching of OData Metadata</i>)	Updates cache tokens for OData services of connected back-end systems.	<p>See the report documentation in transaction SE38.</p> <p>Run this report after custom development changes and upgrades of your SAP Gateway and/or SAP Fiori system.</p> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> <p>→ Tip</p> <p>To ensure the cache buster tokens are up-to-date, execute the report periodically. We recommend an hourly execution interval.</p> </div>

6.1.2 Advanced (Optional)

After you have completed the core steps, perform the advanced steps that are relevant to your scenario. The advanced steps are optional. They enable specific functionality in SAP Customer Activity Repository.

Prerequisites

You have completed the steps in [Core \(Mandatory for All Applications\) \[page 80\]](#).

Advanced Steps

[Replicate Optional Tables \[page 110\]](#)

Set up the table replication from your SAP CRM source system and from your SAP Marketing Cloud source system. Both procedures are optional.

[Configure Multichannel Sales Analytics \[page 115\]](#)

Do these procedures if you wish to use the multichannel sales analytics cockpit. The cockpit provides you with an overview of the most important key performance indicators for a category manager. The KPI tiles are provided using SAP Smart Business or SAP Fiori Launchpad Designer.

[Configure Process Packaging and Parallelization \[page 116\]](#)

You only need to do this if you want to use Forecast-Related Analytics that has been predefined in SAP Analytics Cloud and that is part of the standard delivery of SAP Analytics Cloud and/or execute Replenishment Calculation in parallel.

[Configure SAP Analytics Cloud for Forecast-Related Analytics \[page 117\]](#)

You only need to do this if you want to use Forecast-Related Analytics that has been predefined in SAP Analytics Cloud and that is part of the standard delivery of SAP Analytics Cloud. If you are using a different analytics tool, or if you do not run analytics at all, you may skip this section.

[Install Alternate Storage \[page 117\]](#)

You only need to implement this procedure if you plan on using the *Table Content Aging* report delivered with SAP Customer Activity Repository. This report allows you to copy your transaction log (TLOG) data and its extensions from your SAP HANA database to an alternate storage technology (such as SAP IQ or Apache Hadoop), thereby reducing your total cost of hardware ownership.

[Adjust Totals When Excluding Post-Voided Transactions \[page 127\]](#)

This procedure is relevant for the POS Data Transfer and Audit module. You must perform the procedure if you have existing transactional data prior to the upgrade.

[Partition /POSDW/TLOGF and Aggregation Tables \[page 127\]](#)

If you wish to use the POS Data Transfer and Audit module, we recommend that you partition the /POSDW/TLOGF table and several aggregation tables (such as /POSDW/TLOGF_EXT). This improves standard database operations (such as inserting, updating, deleting, and reading) and mass operations (such as archiving or index merging).

[Complete UDF Setup \[page 128\]](#)

Set up the Unified Demand Forecast (UDF) module in SAP Customer Activity Repository to enable demand modeling and forecasting for different scenarios and consuming applications. To be able to use UDF, you must at least do the mandatory steps. Additionally, you can choose from several optional steps. We also point you to helpful performance information for UDF.

[Set Up SAP Fiori Apps for SAP Customer Activity Repository \[page 137\]](#)

Perform common setup steps that are required for the apps in SAP Customer Activity Repository. For example, check that the prerequisites are installed and prepare the system landscape. Then set up the apps that you want to use in your scenario.

[Configure On-Shelf Availability \[page 152\]](#)

Configure the On-Shelf Availability (OSA) module in SAP Customer Activity Repository. All steps are **optional** and depend on your implementation scenario.

[Configure Omnichannel Article Availability and Sourcing for Use with SAP Customer Activity Repository \[page 154\]](#)

To set up the OAA module, you need to integrate the source master data system (SAP S/4HANA or SAP Retail), SAP Customer Activity Repository, SAP Commerce, and SAP Commerce, integration package for SAP for Retail. You also need to set up asynchronous order management and the data replication between SAP S/4HANA or SAP Retail, SAP Commerce, and SAP Customer Activity Repository.

[Configure Omnichannel Promotion Pricing for Use with SAP Customer Activity Repository \[page 164\]](#)

To use the OPP module, you need to activate the functionality in Customizing and configure it for your specific scenario.

6.1.2.1 Replicate Optional Tables

Set up the table replication from your SAP CRM source system and from your SAP Marketing Cloud source system. Both procedures are optional.

6.1.2.1.1 Replicate SAP CRM Tables (Optional)

Set up the replication of tables from your SAP CRM source system. You only need to perform this procedure if you have an SAP CRM system in your SAP Customer Activity Repository landscape and you are planning to use the standard SAP implementation of customer identification delivered with the SAP Customer Activity Repository.

Procedure

1. Ensure that the SAP LT Replication Server is installed and that a user with the appropriate authorizations is set up in the target SAP HANA database.

If you have already ensured proper installation of the SAP LT Replication Server during previous procedures, skip to the next step. Otherwise, refer to one of the following for more information:

- <http://help.sap.com/hana> > SAP HANA > SAP HANA Options > SAP HANA Real-Time Replication > SAP HANA Trigger-Based Data Replication Using SAP LT Replication Server > Installation Information
- <http://help.sap.com/hana> > SAP HANA > SAP HANA Options > SAP HANA Real-Time Replication > SAP HANA Trigger-Based Data Replication Using SAP LT Replication Server > System Administration and Maintenance Information > Technical Prerequisites and Authorization Aspects

2. Set up a user in the source SAP CRM system and grant relevant authorizations to this user.

For more information, see <http://help.sap.com/hana> > SAP HANA > SAP HANA Options > SAP HANA Real-Time Replication > SAP HANA Trigger-Based Data Replication Using SAP LT Replication Server > System Administration and Maintenance Information > Configuration Information and Replication Concepts > System Connections and Authorizations

3. Specify a configuration in SAP LT Replication Server, which contains the definition of the connections between:

- The source SAP CRM system and the SAP LT Replication Server
- The SAP LT Replication Server and the target SAP HANA database

For more information, see <http://help.sap.com/hana> > SAP HANA > SAP HANA Options > SAP HANA Real-Time Replication > SAP HANA Trigger-Based Data Replication Using SAP LT Replication Server > System Administration and Maintenance Information > Accessing the Configuration and Monitoring Dashboard

The name that you assign to your configuration will be also be used as the name of the database catalog schema that is automatically created on the target SAP HANA database. This is the schema to which you will replicate the tables from the source SAP CRM system.

Once you save the configuration, a schema GUID and a mass transfer ID are automatically created and assigned to the configuration. Furthermore, several dictionary tables are automatically replicated from your source system to your target SAP HANA database.

For more information, see <http://help.sap.com/hana> > SAP HANA > SAP HANA Options > SAP HANA Real-Time Replication > SAP HANA Trigger-Based Data Replication Using SAP LT Replication Server > System Administration and Maintenance Information > Important Transactions and Control Tables

4. Define client transformation rules for all the SAP CRM tables that you plan to replicate.

In most cases, you need to apply transformation rules to map the client of the source SAP CRM system to the client on the target SAP Customer Activity Repository system.

⚠ Caution

Transformation rules must be defined **prior** to replicating tables.

For more information, refer to one of the following:

- *Set Up SAP Client* section in the *Common Installation Guide*.
 - <http://help.sap.com/hana> ► SAP HANA ► SAP HANA Options ► SAP HANA Real-Time Replication ► SAP HANA Trigger-Based Data Replication Using SAP LT Replication Server ► System Administration and Maintenance Information ► Important Transactions and Control Tables ► Data Transformation Capabilities within SAP Landscape Transformation Replication Server ►
 - SAP Note [1733714](#)
5. Specify which SAP ERP tables to replicate using information from one of the two following sources:
- SAP Note [2538135](#), for installations based on the SAP_ECC schema
 - SAP Note [2538187](#), for installations based on the SAP_S4H schema

For more information, see:

- <http://help.sap.com/hba> ► Installation, Security, Configuration, and Operations Information ► Administrator's Guide ► Configuration Steps ► Replicate Data (Side-by-Side Only) ►
 - <http://help.sap.com/hana> ► SAP HANA ► SAP HANA Options ► SAP HANA Real-Time Replication ► SAP HANA Trigger-Based Data Replication Using SAP LT Replication Server ► System Administration and Maintenance Information ► Configuration Information and Replication Concepts ► (<Managing the Replication Process Using the SAP HANA Studio> and <Important Transactions and Control Tables>) ►
6. Map the authoring schema SAP_CRM to your particular physical database schema which contains the SAP CRM tables. If the physical database schema is already named SAP_CRM, this schema mapping is not required.

Authoring Schema	Physical Schema
SAP_CRM	<Name of Your Schema for Storing SAP_CRM Data>

For more information, see http://help.sap.com/hana_platform ► Development and Modeling ► SAP HANA Modeling Guide ► Importing Table Definitions and Data ► Map Authoring Schema to the Physical Schema ►.

i Note

Every time you make changes to the schema mapping, the SAP HANA content must be redeployed.

You can do this using one of two methods:

- Execute the `/CAR/ACTIVATE_HANA_CONTENT` report as described in SAP Note [2330386](#).
- Manually redeploy only those SAP HANA objects which are impacted by your schema mapping change.

6.1.2.1.2 Replicate SAP Marketing Cloud Tables (Optional)

Set up the replication of tables from your SAP Marketing Cloud source system. You only need to perform this procedure if you have a SAP Marketing Cloud system in your SAP Customer Activity Repository landscape and you are planning to use the standard SAP implementation of customer identification delivered with the SAP Customer Activity Repository.

Procedure

1. If you plan to implement SAP Marketing Cloud co-deployed with SAP Customer Activity Repository, the SAP Marketing Cloud tables will not be replicated because they already exist in the same SAP HANA database and the same database schema.

i Note

Client transformation is not possible without table replication, therefore a co-deployed scenario is only possible if the client numbers in the two back-end systems are identical.

For more information, see *Set Up SAP Client* section in the *Common Installation Guide*.

2. If you plan to implement SAP Marketing Cloud side-by-side with SAP Customer Activity Repository, do the following:
 1. Define client transformation rules for all the SAP Marketing Cloud tables that you plan to replicate. In most cases, you need to apply transformation rules to map the client of the source SAP Marketing Cloud system to the client on the target SAP Customer Activity Repository system.

⚠ Caution

Transformation rules must be defined **prior** to replicating tables.

For more information, refer to one of the following:

- *Set Up SAP Client* section in the *Common Installation Guide*.
 - <http://help.sap.com/hana> > SAP HANA > SAP HANA Options > SAP HANA Real-Time Replication > SAP HANA Trigger-Based Data Replication Using SAP LT Replication Server > System Administration and Maintenance Information > Important Transactions and Control Tables > Data Transformation Capabilities within SAP Landscape Transformation Replication Server >
 - SAP Note [1733714](#)
2. Specify which SAP ERP tables to replicate using information from one of the two following sources:
 - SAP Note [2538135](#), for installations based on the SAP_ECC schema
 - SAP Note [2538187](#), for installations based on the SAP_S4H schema

For more information, see:

- <http://help.sap.com/hba> > Installation, Security, Configuration, and Operations Information > Administrator's Guide > Configuration Steps > Replicate Data (Side-by-Side Only) >
- <http://help.sap.com/hana> > SAP HANA > SAP HANA Options > SAP HANA Real-Time Replication > SAP HANA Trigger-Based Data Replication Using SAP LT Replication Server > System Administration and Maintenance Information > Configuration Information and Replication

[Concepts](#) > (<Managing the Replication Process Using the SAP HANA Studio> and <Important Transactions and Control Tables>)

3. Regardless of whether you implement SAP Marketing Cloud co-deployed or side-by-side with SAP Customer Activity Repository, map the authoring schema `SAP_CUAN` to your particular physical database schema that contains the SAP CRM tables. If the physical database schema is already named `SAP_CUAN`, this schema mapping is not required.

Authoring Schema	Physical Schema
<code>SAP_CUAN</code>	<Name of Your Schema for Storing SAP Marketing Cloud Data>

For more information, see http://help.sap.com/hana_platform > [Development and Modeling](#) > [SAP HANA Modeling Guide](#) > [Importing Table Definitions and Data](#) > [Map Authoring Schema to the Physical Schema](#).

Note

Every time you make changes to the schema mapping, the SAP HANA content must be redeployed.

You can do this using one of two methods:

- Execute the `/CAR/ACTIVATE_HANA_CONTENT` report as described in SAP Note [2330386](#).
- Manually redeploy only those SAP HANA objects that are impacted by your schema mapping change.

Side-by-Side Scenario (SLT)

1. Define client transformation rules for all the SAP Marketing Cloud tables that you plan to replicate. In most cases, you need to apply transformation rules to map the client of the source SAP Marketing Cloud system to the client on the target SAP Customer Activity Repository system.

Caution

Transformation rules must be defined **prior** to replicating tables.

For more information, refer to one of the following:

- *Set Up SAP Client* section in the *Common Installation Guide*.
 - <http://help.sap.com/hana> > [SAP HANA](#) > [SAP HANA Options](#) > [SAP HANA Real-Time Replication](#) > [SAP HANA Trigger-Based Data Replication Using SAP LT Replication Server](#) > [System Administration and Maintenance Information](#) > [Important Transactions and Control Tables](#) > [Data Transformation Capabilities within SAP Landscape Transformation Replication Server](#)
 - SAP Note [1733714](#)
2. Read SAP Note [1897025](#) and replicate the tables listed in the `.txt` file attached to this SAP Note. For more information, see <http://help.sap.com/hana> > [SAP HANA](#) > [SAP HANA Options](#) > [SAP HANA Real-Time Replication](#) > [SAP HANA Trigger-Based Data Replication Using SAP LT Replication Server](#) > [System Administration and Maintenance Information](#).

6.1.2.2 Configure Multichannel Sales Analytics

Do these procedures if you wish to use the multichannel sales analytics cockpit. The cockpit provides you with an overview of the most important key performance indicators for a category manager. The KPI tiles are provided using SAP Smart Business or SAP Fiori Launchpad Designer.

Use

The steps in this section are optional and depend on your specific implementation requirements.

i Note

For more information about the cockpit, see the application help for SAP Customer Activity Repository at <https://help.sap.com/docs/CARAB>. Search for section *Multichannel Sales Analytics*.

6.1.2.2.1 Configure SAP Web Dispatcher for Multichannel Sales Analytics Apps

SAP Web Dispatcher lies between the Internet and your SAP system. It is the entry point for HTTP(s) requests into your system. As a “software web switch”, SAP Web Dispatcher can reject or accept connections. It contributes to security and also balances the load in your SAP system.

Where to Find Configuration Information

To find the SAP Web Dispatcher information for your SAP NetWeaver release, see the following:

- Central SAP Web Dispatcher note: [908097](#)  *SAP Web Dispatcher: Release, Installation, Patches, Documentation*
- Product documentation: https://help.sap.com/viewer/p/SAP_NETWEAVER. Choose your SAP NetWeaver Platform and select the support package stack at the top right.
For configuration information, search for “*Administration of the SAP Web Dispatcher*”.
For a configuration example, search for “*SAP Web Dispatcher Configuration Reference*”.
For architecture information, search for “*Architecture and Functions of the SAP Web Dispatcher*”.

How to Configure SAP Web Dispatcher for Multichannel Sales Analytics Apps

The following parameters values are required:

- Source master data system: SAP ECC
Parameter `wdisp/system_542` requires the following URL: `/sap/is/retail/car/mcsa/odata`

Resulting setting: `wdisp/system_542 /sap/is/retail/car/mcsa/odata`




- Source master data system: SAP S/4HANA
Parameter `wdisp/system_542` requires the following URL: `/sap/is/retail/car_s4h/mcsa/odata`
Resulting setting: `wdisp/system_542 /sap/is/retail/car_s4h/mcsa/odata`

Other Solutions

If you use any other reverse proxy, see the manufacturer's documentation for more information.

6.1.2.3 Configure Process Packaging and Parallelization

You only need to do this if you want to use Forecast-Related Analytics that has been predefined in SAP Analytics Cloud and that is part of the standard delivery of SAP Analytics Cloud and/or execute Replenishment Calculation in parallel.

- You maintain values for the settings used by process packaging and parallelization in the Customizing *Maintain Basic Settings* under **▶ SAP Customer Activity Repository ▶ Demand Data Foundation ▶ Basic Settings ▶ Process Packaging and Parallelization** .
- You maintain the size of each workload task (*Task Size*) and the maximum work processes (*Max WP*) you wish to run in parallel for SAP-delivered workload types in the Customizing *Define Parameters for Workload Types* under **▶ SAP Customer Activity Repository ▶ Demand Data Foundation ▶ Basic Settings ▶ Process Packaging and Parallelization** .
- You maintain the job catalogs `/DMF/PCP_WRKLD_GENERATE_JOB` and `/DMF/PCP_WRKLD_PROC_JOB` as entries in the Customizing *Activation of Scope-Dependent Application Job Catalog Entries* under **▶ SAP NetWeaver ▶ Application Server ▶ System Administration** .
- To use the Dispatcher Daemon for processing of workloads, you must execute the one-time report *Set up Start Up Configuration* (transaction `/DMF/PCP_DISP_START`) in the system.

For more information, see the sections *Process Packaging and Parallelization* and *Manage Workloads* in the application help for SAP Customer Activity Repository at https://help.sap.com/viewer/product/CARAB/latest/en-US?task=use_task.

6.1.2.4 Configure SAP Analytics Cloud for Forecast-Related Analytics

You only need to do this if you want to use Forecast-Related Analytics that has been predefined in SAP Analytics Cloud and that is part of the standard delivery of SAP Analytics Cloud. If you are using a different analytics tool, or if you do not run analytics at all, you may skip this section.

Prerequisites

- You run and connect the **Content Innovation 20** or later release of **SAP Analytics Cloud** with SAP Customer Activity Repository to use the predefined set of forecast-related analyses. For installation information related to SAP Analytics Cloud, see [System Requirements and Technical Prerequisites](#).
- You can use the *Adjust Forecast* app to manually adjust the system forecast calculated by Unified Demand Forecast (UDF). To use the adjusted forecasts thus created in your analyses, you must execute the report *Persist Forecast Corrections* (/DMF/FCC_PERSIST) using transaction SE38 in the system. This report should be scheduled after your forecast run is complete.

→ Tip

You can delete persisted forecast corrections created exclusively for your analyses using the *Persist Forecast Corrections* report by executing the report *Delete Forecast Corrections* (/DMF/FCC_DELETE) using transaction SE38 in the system.

These reports make use of the Process Packaging and Parallelization Framework. For more information, see [Configure Process Packaging and Parallelization \[page 116\]](#).

Set Up Live Connection Between SAP Customer Activity Repository and SAP Analytics Cloud

1. Configure SAP Customer Activity Repository to support cross-origin resource sharing (CORS), for cross-domain communication from the browser.
For more information, see the application help for SAP Analytics Cloud at https://help.sap.com/viewer/product/SAP_ANALYTICS_CLOUD and search for the *Live Data Connection to SAP HANA On-Premise Using a Direct Connection* topic.
2. In SAP Analytics Cloud, navigate to ► *Home* ► *Connection* ▾ and select live connection *SAPRTCARAB (SAP Replenishment Planning and Unified Demand Forecast)*. This connection is part of the standard delivery.
3. Click *Edit Connection* and enter your custom details for *Host*, *HTTPS Port*, and *Client*.

6.1.2.5 Install Alternate Storage

You only need to implement this procedure if you plan on using the *Table Content Aging* report delivered with SAP Customer Activity Repository. This report allows you to copy your transaction log (TLOG) data and its

extensions from your SAP HANA database to an alternate storage technology (such as SAP IQ or Apache Hadoop), thereby reducing your total cost of hardware ownership.

Use

For more information, see SAP Help Portal at <https://help.sap.com/viewer/p/CARAB> |> <Version> |> Use |> Application Help |> SAP Customer Activity Repository |> POS Data Transfer and Audit |> Implementing a POS Transaction Data Storage Strategy |> Using the Table Content Aging Report |>.

i Note

If your scenario includes demand modeling and forecasting with the Unified Demand Forecast (UDF) module, we recommend retaining the historical sales data in memory.

Process Flow

In order to successfully install alternate storage, you must execute the following procedures:

1. Do one of the following:
 - Install and set up integration with SAP IQ, **or**
 - Install and set up integration with Apache Hadoop, **or**
 - Install and set up integration with SAP HANA Dynamic Tiering
2. Create the remote source in SAP HANA studio (not applicable for integration with SAP HANA Dynamic Tiering).
3. Create the virtual table.
4. Set the deploy mode in SAP HANA Transport for ABAP.

i Note

As an alternative to the *Table Content Aging* report (/CAR/TABLE_CONTENT_AGING), you could consider using SAP HANA Native Storage Extension, which does not require any additional installation steps because it comes with SAP HANA Platform 2.0 SPS 05 Revision 050.00 or higher. For more information, see [Using SAP HANA Native Storage Extension](#).

6.1.2.5.1 Install and Set Up Integration with SAP IQ

You use these procedures to install and set up SAP IQ to support the *Table Content Aging* report (transaction /CAR/TABLE_AGING) delivered with SAP Customer Activity Repository.

The SAP HANA database points to your SAP IQ database using SAP HANA smart data access (SDA), which exposes data from SAP IQ remote sources as virtual tables.

For more information, see SAP Help Portal at <https://help.sap.com/viewer/p/CARAB> ► <your release> ► *Use Application Help* ► *SAP Customer Activity Repository* ► *POS Data Transfer and Audit* ► *Implementing a POS Transaction Data Storage Strategy* ► *Using the Table Content Aging Report* ►.

Install SAP IQ

A detailed procedure is described in the *SAP IQ Installation and Update Guide*.

For more information, see SAP Help Portal at https://help.sap.com/viewer/p/SAP_IQ ► *Implement Installation and Upgrade* ► *SAP IQ Installation and Update Guide for <your operating system>* ►.

Configure SAP IQ

1. Allocate sufficient space into which your data will be loaded.

i Note

The default DBSpaces provided during installation are intended to be used for SAP IQ system management. You should create your own DBSpace under the *Main* store with a DB File that is large enough to satisfy your sizing requirements.

For more information, see SAP Help Portal at https://help.sap.com/viewer/p/SAP_IQ ► *Use Reference* ► *SAP IQ SQL Reference* ► *SQL Statements* ► *CREATE DBSPACE Statement* ►.

2. Create an in-memory row-level versioning (RLV) store.

For more information, see SAP Help Portal at https://help.sap.com/viewer/p/SAP_IQ ► *Operate Administration* ► *SAP IQ Administration: In-Memory Row-Level Versioning* ► *About In-Memory Row-Level Versioning* ►.

i Note

Click *View All* if topic does not appear in initial list.

3. Create a database under the content created at the beginning of this procedure.

i Note

Ensure the following:

- The SAP IQ stores are configured with a large enough cache configuration, main memory, and temporary memory.
- The page size should be set to 128KB.
- The concurrency aligns with the amount of processes that will be triggered during the data copy.

For more information, see SAP Help Portal at https://help.sap.com/viewer/p/SAP_IQ ► *Implement Configuration* ► *Performance and Tuning Guide* ►.

4. Create the following tables in the DBSpace created at the beginning of the procedure:

- /POSDW/TLOGF
- /POSDW/TLOGF_EXT
- /POSDW/TLOGF_X
- /POSDW/PLOGF

Note

These tables should have the same structure as the tables in your SAP HANA system. One possible way is to export the table structure via Export SQL on the SAP HANA side, and import it on the SAP IQ side using the SQL console.

The SQL statement requires some modifications, such as:

- Converting all the column names in the exported SQL statement to lower case (for example, "RETAILSTOREID becomes "retailstoreid").
You can simply convert the entire SQL statement into lower case and then only convert the table name to upper case to keep the table name unchanged.
- Renaming of NVARCHAR to VARCHAR.
- Removing references to CS_* (for example, CS_FIXED).

5. Enable the RLV for the tables you just created.

6. Set the snapshot versioning property of the transaction to row-level.

Example

```
set option Snapshot_Versioning = 'Row-level';
```

7. Enable connection blocking and set the blocking timeout threshold.

Example

```
set option blocking = 'On';  
set option blocking_timeout = '0';
```

Install SAP IQ Drivers

Install and configure the ODBC database drivers required to connect to the remote source.

Note

Each data source driver setup is described in its own section. The prerequisites are given as a simple guide; you will need to consult the original driver documentation provided by the driver manufacturer for more detailed information.

A detailed procedure is described in the *SAP HANA Administration Guide*.

For more information, see SAP Help Portal at http://help.sap.com/viewer/p/SAP_HANA_PLATFORM
► *Administration* ► *SAP HANA Administration Guide for SAP HANA Platform* ► *Data Access* ► *SAP HANA Smart Data Access* ► *Setting Up ODBC Drivers* ► *SAP IQ ODBC Driver* ►

6.1.2.5.2 Install and Set Up Integration with Apache Hadoop

You use these procedures to install and set up Apache Hadoop to support the *Table Content Aging* report (transaction /CAR/TABLE_AGING) delivered with SAP Customer Activity Repository.

The SAP HANA database points to your Hadoop cluster using SAP HANA smart data access (SDA), which exposes data from Hadoop remote sources as virtual tables.

For more information, see SAP Help Portal at <http://help.sap.com/viewer/p/CARAB> > <Version> > Use > Application Help > SAP Customer Activity Repository > POS Data Transfer and Audit > Implementing a POS Transaction Data Storage Strategy > Using the Table Content Aging Report >.

Process Flow

To successfully install and set up integration with Apache Hadoop, you must execute the following procedures:

1. Install Apache Hadoop.
2. Do one of the following:
 - Install and set up the Apache Hive ODBC driver, **or**
 - Install and set up the SAP HANA Spark controller.
3. Create and partition tables in Apache Hive.
4. Create a NFS mount on SAP NetWeaver.

Install Apache Hadoop

According to the *SAP HANA Administration Guide for SAP HANA Platform*, SAP HANA smart data access is supported by Hortonworks Distribution for Apache Hadoop: version 2.3 (supported on Intel-based hardware platforms only).

For more information on integration between SAP HANA and Apache Hadoop, see SAP Help Portal at http://help.sap.com/viewer/p/SAP_HANA_PLATFORM > Administration > SAP HANA Administration Guide for SAP HANA Platform > Data Access > SAP HANA Smart Data Access >.

For more information on installing Apache Hadoop, see <http://docs.hortonworks.com> > All > HDP > 2.3 > HDP 2.3.0 (GA) >.

Install and Set Up Apache Hive ODBC Driver

Note

Integration between SAP HANA and Apache Hadoop requires **either** an Apache Hive ODBC driver **or** an SAP HANA Spark controller.

Implement this procedure only if you wish to integrate SAP HANA with Apache Hadoop via the Apache Hive ODBC driver.

1. According to the *SAP HANA Administration Guide for SAP HANA Platform*, SAP HANA smart data access is supported by Hortonworks Distribution for Apache Hadoop: version 2.3 (This includes Apache Hadoop version 1.0.3 and Apache Hive 0.9.0; supported on Intel-based hardware platforms only).
For more information on integration between SAP HANA and Apache Hadoop, see SAP Help Portal at http://help.sap.com/viewer/p/SAP_HANA_PLATFORM Administration > SAP HANA Administration Guide for SAP HANA Platform > Data Access > SAP HANA Smart Data Access .
For more information on installing the Apache Hive ODBC driver, see <http://docs.hortonworks.com> All > HDP > 2.3 > HDP 2.3.0 (GA) .
2. Set up the driver as described in the *SAP HANA Administration Guide for SAP HANA Platform* at http://help.sap.com/viewer/p/SAP_HANA_PLATFORM Administration > SAP HANA Administration Guide for SAP HANA Platform > Data Access > SAP HANA Hadoop Integration .

Install and Set Up the SAP HANA Spark Controller

Note

Integration between SAP HANA and Apache Hadoop requires **either** an Apache Hive ODBC driver **or** an SAP HANA Spark controller.

Implement this procedure only if you wish to integrate SAP HANA with Apache Hadoop via the SAP HANA Spark controller.

1. Confirm the right combination of versions required between SAP HANA, Apache Spark, and the SAP HANA Spark controller. Use the *SAP HANA Spark Controller Compatibility Matrix* to do this. This document is available under https://help.sap.com/viewer/p/SAP_HANA_SPARK_CONTROLLER. Navigate to Additional Information > SAP HANA Spark Controller Compatibility Matrix .
2. Install and set up the SAP HANA Spark controller as described in SAP Note [2273047](#) .

For more information on installing and setting up the SAP HANA Spark controller, see SAP Help Portal at http://help.sap.com/viewer/p/SAP_HANA_PLATFORM Administration > SAP HANA Administration Guide for SAP HANA Platform > Data Access > SAP HANA Hadoop Integration .

Create and Partition Tables

Create the SAP schema, tables, and table partitions as described in SAP Note [2317597](#) .

Create a NFS Mount on SAP NetWeaver

The TLOG data and its extensions are copied from your SAP HANA database to Hadoop using the HDFS NFS Gateway on your Hadoop system. To enable this you must create a mount point on your SAP NetWeaver system for the data files to be created directly in the Hadoop File System (HDFS).

i Note

The following steps are only **guidelines** which provide an example of how to mount Network File System (NFS) on an SAP NetWeaver Linux-based client.

1. Make sure the NFS client is installed based on the examples provided:

Operating System	Command
Red Hat, CentOS	<code>sudo yum install nfs-utils</code>
Ubuntu	<code>sudo apt-get install nfs-common</code>
SUSE	<code>sudo zypper install nfs-client</code>

2. List the NFS shares exported on the server.

Example

```
showmount -e <host>
```

3. Set up a mount point for an NFS share.

Example

```
sudo mkdir <folder>
```

i Note

You must ensure that the folder paths share the same naming conventions, as follows:

Temporary data folder	<code>/tmp/tct_csv_out/temp</code>
Data folder	<code>/tmp/tct_csv_out/data</code>

4. Mount the cluster using NFS.

Example

```
sudo mount -o hard, nolock <host> <folder>
```

On your HDFS, the different tables are stored under a folder using the following convention:

```
<data_directory>/<schema>/<table>/<businessdaydate=partition_value>/{files}
```

On the SAP NetWeaver file system, the Hadoop files are stored under a physical path and file name that is derived from a customer-definable logical path or file name. The configuration is provided via the `FILE` transaction. Inside the `FILE` transaction, you also need to make use of parameters `PARAM_1` and `PARAM_2`. `PARAM_1` will be populated during runtime by the program (generated file name) and `PARAM_2` will be populated by the program during runtime `<schema>/<table>/<businessdaydate=partition_value>`.

Example (Data Directory)

If the Hadoop data files are stored in Unix/Linux folder ,<schema>/<table>/businessdaydate=partition_value/{files}PARAM_1 . CSV and physical directory /tmp/tct_csv_out/data/hdp/apps/hive/warehouse/<PARAM_2><FILENAME>.

You create the following logical path in the FILE transaction as follows:

Logical path	/CAR/HDFS_DATA
Name	HDFS Data
Syntax group	UNIX
Physical path	/tmp/tct_csv_out/data/hdp/apps/hive/warehouse/<PARAM_2><FILENAME>

You create the following logical file in the FILE transaction as follows:

Logical file	/CAR/HDFS_DATA
Name	HDFS Data
Physical file	<PARAM_1> . CSV
Data format	WK1
Application area	IS
Logical path	/CAR/HDFS_DATA

Example (Temporary Directory)

/tmp/tct_csv_out/data/hdp/apps/hive/warehouse/On top of the Hadoop data files, you also need to provide a temporary directory in which the program will populate script files and also temporarily store data files to be compressed.

If the temporary files are stored in Unix/Linux folder /tmp/tct_csv_out/temp/{files}, you create the following logical path in the FILE transaction as follows:

Logical path	/CAR/HDFS_TEMP
Name	HDFS Temp
Syntax group	UNIX
Physical path	/tmp/tct_csv_out/temp/<FILENAME>

You create the following logical file in the FILE transaction as follows:

Logical file	/CAR/HDFS_TEMP
Name	HDFS Temp

Physical file	<PARAM_1>.SH
Data format	
Application area	IS
Logical path	/CAR/HDFS_TEMP

6.1.2.5.3 Install and Set Up Integration with SAP HANA Dynamic Tiering

You use these procedures to install and set up SAP HANA Dynamic Tiering to support the *Table Content Aging* report (transaction /CAR/TABLE_AGING) delivered with SAP Customer Activity Repository.

SAP HANA Dynamic Tiering adds the SAP HANA dynamic tiering service to your SAP HANA system. You use this service to create the extended store and extended tables. Extended tables behave like all other SAP HANA tables, but their data resides in the disk-based extended store.

For more information, see SAP Help Portal at <http://help.sap.com/viewer/p/CARAB> >> <your release> > Use > Application Help > SAP Customer Activity Repository > POS Data Transfer and Audit > Implementing a POS Transaction Data Storage Strategy > Using the Table Content Aging Report >.

Install SAP HANA Dynamic Tiering

A detailed procedure is described in the *SAP HANA Dynamic Tiering: Installation and Update Guide*.

For more information, see SAP Help Portal at http://help.sap.com/hana_options_dt >> Implement > Installation and Upgrade >.

Create Extended Storage

A detailed procedure is described in the *SAP HANA Dynamic Tiering: Administration Guide*.

For more information, see SAP Help Portal at http://help.sap.com/hana_options_dt >> Operate > Administration > SAP HANA Dynamic Tiering: Administration Guide > and consult the following subsections:

- >> System Administration > Managing Extended Storage >
- >> System Administration > Managing Tables > Extended Store Tables > Convert HANA Tables to Extended Store Tables Using the SAP HANA Cockpit >

6.1.2.5.4 Create the Remote Source in SAP HANA Studio

i Note

This step is not applicable if you are integrating the alternate storage feature with SAP HANA Dynamic Tiering.

Create a remote source by selecting the appropriate adapter and configuring the connection properties and user credentials.

A detailed procedure is described in the *SAP HANA Administration Guide for SAP HANA Platform*.

For more information, see SAP Help Portal at <http://help.sap.com/viewer/p/>

[SAP_HANA_PLATFORM](#) > Administration > SAP HANA Administration Guide for SAP HANA Platform > Data Access > SAP HANA Smart Data Access > Managing Remote Sources > Creating a Remote Source > .

6.1.2.5.5 Create the Virtual Table

Create the following virtual tables to access the data stored in remote tables:

Virtual Table	Remote Table
VT_TLOGF_NLS	/POSDW/TLOGF
VT_TLOGF_X_NLS	/POSDW/TLOGF_X
VT_TLOGF_EXT_NLS	/POSDW/TLOGF_EXT
VT_PLOGF_NLS	/POSDW/PLOGF

A detailed procedure is described in the *SAP HANA Administration Guide for SAP HANA Platform*.

For more information, see SAP Help Portal at <http://help.sap.com/viewer/p/>

[SAP_HANA_PLATFORM](#) > Administration > SAP HANA Administration Guide for SAP HANA Platform > Data Access > SAP HANA Smart Data Access > Managing Virtual Tables > .

6.1.2.5.6 Activate Alternate Storage

1. In your back-end system, execute report /CAR/ACTIVATE_HTA.
2. Confirm or set the following:
 - In the *ECC Mode* section, choose the relevant ECC mode for your system.
 - In the *External Systems* section, choose *Nearline Storage*.
3. Press *Execute*.

This deploys package `sap.is.retail.car.nls` for ECC mode SAP ERP, or `sap.is.retail.car_s4h.nls` for ECC mode S/4HANA. Each package contains views that combine TLOG data from SAP HANA with TLOG data from the alternate storage system.

6.1.2.6 Adjust Totals When Excluding Post-Voided Transactions

This procedure is relevant for the POS Data Transfer and Audit module. You must perform the procedure if you have existing transactional data prior to the upgrade.

Procedure

1. Run transaction `/POSDW/REFI` against all relevant stores and posting dates to adjust the displayed totals when post-voided transactions are filtered out of search results.

⚠ Caution

This process is time- and performance-intensive. We recommend that you carefully choose the best time when to run the transaction.

6.1.2.7 Partition /POSDW/TLOGF and Aggregation Tables

If you wish to use the POS Data Transfer and Audit module, we recommend that you partition the `/POSDW/TLOGF` table and several aggregation tables (such as `/POSDW/TLOGF_EXT`). This improves standard database operations (such as inserting, updating, deleting, and reading) and mass operations (such as archiving or index merging).

Use

SAP Customer Activity Repository contains the POS Data Transfer and Audit module, which is used to receive a large volume of data from your connected stores. POS Data Transfer and Audit, or more specifically, its POS Inbound Processing Engine (PIPE), processes the incoming transactions and stores them in the `/POSDW/TLOGF` table.

Since every point-of-sale transaction line item is stored as a separate row in the `/POSDW/TLOGF` table, the table can quickly grow to become very large and should therefore be partitioned.

Also, you can select to store extension segments in a dedicated `/POSDW/TLOGF_EXT` table using the [Store Extensions in Separate Table](#) option of the [Define General Settings](#) Customizing activity. The `/POSDW/TLOGF_EXT` table should be partitioned in the same way as the `/POSDW/TLOGF` table.

For more information about extension segments, see the *Appendix* section in the *SAP Customer Activity Repository Administration Guide*.

i Note

Partitioning is typically used in distributed systems, but it may also be beneficial for single-host systems.

Procedure

1. Read the *Table Partitioning in the SAP HANA Database* section of the *SAP HANA Administration Guide for SAP HANA Platform* at https://help.sap.com/viewer/p/SAP_HANA_PLATFORM.
2. Plan your **partition specifications** in accordance to the following guidelines:
 - A single partition should not contain more than 1 billion rows.
 - The total number of partitions of a single table should not exceed 1000.
 - Because the actual act of partitioning a table also uses system resources, do not start partitioning the `/POSDW/TLOGF` table until its volume has surpassed 250 million rows.
3. Partition the `/POSDW/TLOGF` table as required according to SAP Note [1719282](#) (POS TLOG Table Partitioning Information).
4. Depending on your requirements, you may also optionally partition the following tables. The same SAP Note is relevant for these as well.
 - `/POSDW/TLOGF_EXT`
 - `/POSDW/AGGR01`
 - `/POSDW/ACCRTB`

6.1.2.8 Complete UDF Setup

Set up the Unified Demand Forecast (UDF) module in SAP Customer Activity Repository to enable demand modeling and forecasting for different scenarios and consuming applications. To be able to use UDF, you must at least do the mandatory steps. Additionally, you can choose from several optional steps. We also point you to helpful performance information for UDF.

Use

UDF supports the following scenarios:

Scenario	Setup and Configuration of UDF
Apps for demand forecasting (<i>Analyze Forecast, Adjust Forecast, Manage Demand Influencing Factors</i>)	Mandatory for all the apps

Scenario	Setup and Configuration of UDF
<i>Manage Alerts</i> app	Mandatory if you wish to use the <i>High Forecast</i> alert Optional in all other cases
SAP Replenishment Planning	Mandatory
SAP Promotion Management	Mandatory (if you want to use UDF to generate what-if forecasts for offer planning) Optional (without what-if forecasts)
SAP Assortment Planning	Optional in general, but depends on your customer scenario
SAP Allocation Management	Both applications offer functionality that can use UDF forecast data. For more information, see SAP Help Portal at https://help.sap.com/viewer/p/CARAB and consult the <i>Application Help</i> and <i>Administration Guide</i> of either application.
Forecast-related analytics	Forecast-related analytics can help you to analyze your UDF forecast data over certain time periods to identify patterns and monitor trends that influence your business. <div data-bbox="826 1037 911 1070" style="background-color: #e0e0e0; padding: 5px;">i Note</div> <div data-bbox="826 1093 1382 1503" style="background-color: #e0e0e0; padding: 5px;">As a part of the standard delivery of SAP Analytics Cloud, SAP provides a set of predefined analyses templates. These templates are not part of the delivery of SAP Customer Activity Repository but are delivered separately with SAP Analytics Cloud, in the form of content packages <code>SAP__RT_UDF_DEMANDFORECASTING_LIVE</code> (<i>SAP Retail: Unified Demand Forecast</i>) and <code>SAP__RT_RPL_UDF_DASHBOARD_LIVE</code> (<i>SAP Retail: Replenishment Planning and Unified Demand Forecast Dashboard</i>). The content packages contain stories that require a live connection to SAP Customer Activity Repository applications bundle (SAP CARAB).</div>
	For more information on this scenario, see the <i>Forecast-Related Analytics</i> section in the application help for SAP Customer Activity Repository at https://help.sap.com/viewer/p/CARAB .

Scenario

SAP Forecasting and Replenishment

Setup and Configuration of UDF

UDF is required if you wish to retrieve the UDF forecasts via the `/DMF/UFC_RETRIEVE_RESULTS` function module. For more information on this scenario, see the *UDF and SAP Forecasting and Replenishment* section in the application help for SAP Customer Activity Repository at <https://help.sap.com/viewer/p/CARAB>.

i Note

SAP Forecasting and Replenishment is not part of SAP Customer Activity Repository applications bundle.

i Note

There is currently no integration between UDF and SAP Merchandise Planning.

Prerequisites

- If you are upgrading from a release of SAP Customer Activity Repository applications bundle 4.0: You have performed the migration to the new default table for pricing data (`/DMF/PRC`) and have adjusted your data replication settings accordingly. For instructions, see [Migrate to New Default Table for Sales Pricing Data \(/DMF/PRC\) \[page 59\]](#). The section also describes how you can use the `FC_USE_PRC_INTERFACE` forecast parameter to ensure a smooth migration of your pricing data for UDF.
- You have set up the users, roles, and privileges for UDF as described in [Verify Authorizations for Unified Demand Forecast \(UDF\) \[page 82\]](#).
- You have configured the DDF module as described in [Configure Demand Data Foundation](#).

Procedure

→ Tip

If you encounter issues during the setup, see the [Troubleshooting \[page 202\]](#) section for possible solutions.

Perform Mandatory Setup Steps

1. Log on to your ABAP back-end system.
2. Only relevant if you are upgrading **from a release prior to** SAP Customer Activity Repository 3.0 FP1 (released as part of SAP Customer Activity Repository applications bundle 2.0 SPS2):
Read SAP Note [2449880](#) to decide whether you need to implement the redesigned Customizing for modeling and forecasting.

3. In transaction SPRO, do the Customizing for UDF that is required for all the scenarios:

i Note

For more information about each Customizing activity, see the accompanying system documentation in SPRO.

Customizing for UDF (All Scenarios)

Do These Steps	Here in Customizing
<p>Define the time series source with historical demand data that you wish to import to DDF and use as input for UDF.</p>	<p>▶ Cross-Application Components ▶ Demand Data Foundation ▶ Imported Data ▶ Time Series ▶ Define Time Series for Key Figure Configuration ▶</p> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> <p>⚠ Caution</p> <p>Additional Customizing for SAP Promotion Management</p> <p>If you wish to use what-if forecasts in SAP Promotion Management, additionally configure this second activity:</p> <p>▶ Cross-Application Components ▶ Demand Data Foundation ▶ Data Maintenance ▶ Define Time Series Source ▶</p> </div>
<p>Define settings for modeling and forecasting.</p>	<p>▶ Cross-Application Components ▶ Demand Data Foundation ▶ Modeling and Forecasting ▶</p> <p>See all the activities under this node.</p>

Review the default settings of the business exceptions that UDF can raise; adjust the settings as required for your scenario.

▶ [Cross-Application Components](#) ▶ [Demand Data Foundation](#) ▶ [Basic Settings](#) ▶ [Alert and Exception Management](#) :

- [Maintain Configuration Data for High Level Exceptions](#)
 1. Execute the activity to display the table of exceptions.

i Note

You might need to scroll to the right to see all table columns.

2. Filter the table by the application area `/DMF/UDF_BUSINESS`. Here you can find the business exceptions for UDF. You can configure the behavior of each exception and switch it on or off as needed. If such an exception is raised for a UDF job, you will get a corresponding message, which you can then review in the [Monitor Exceptions](#) service in transaction `NWBC`.

i Note

You can see the message numbers and short texts in the table. If you wish to display details, select the message in the table and double-click [Assignment Business Area](#).

If you wish to display the long text of a message, execute transaction `SE91` and enter `/DMF/UDF_BUSINESS` as the message class. Select the message that you are interested in and choose [Long Text](#).

3. In the [Default Priority](#) column, verify the priority setting of each exception. If required, change to edit mode and adjust the setting. If an exception is not relevant for your scenario, set it to [Not Relevant/ Switched Off](#).

→ Tip

There are 3 messages (exceptions) for which we recommend that you switch them off for best performance. Only switch them on if you really need them for your scenario. The messages are:

- Message 019: [No historical demand data for product &1 location &2 using priors](#)
- Message 020: [No demand model for product &1 location &2 multi-channel &3 using priors](#)
- Message 060: [Product &1 and location &2 removed from service due to MRP type](#)

Context: The messages indicate issues in the input data (such as the time series source with historical demand data). Depending on the quality of this data, the messages might be raised for a great many product locations, and this can impact performance.

It's best to check the integrity of the input data before running UDF jobs. For example, you can use the data validation report described in SAP Note [2161484](#).

Behavior: Note that the messages have a different default priority depending on your release of SAP Customer Activity Repository. Adjust the configuration as follows:

- For any release of SAP Customer Activity Repository 4.0 or for SAP Customer Activity Repository 5.0 Initial Shipment Stack: The messages are switched on by default. If you have upgraded from any of these releases, now set the default priority of each message that you don't need to *Not Relevant/ Switched Off*.
- As of SAP Customer Activity Repository 5.0 FPS01, the messages are switched off by default. We recommend that you only switch on those messages that you actually need for your scenario.

4. Save your changes.

- **Maintain Configuration Data for Low Level Exceptions:**

(Optional) This activity works similarly to the previous one. Here you can find the technical exceptions for UDF in the application area `/DMF/UDF_TECHNICAL`.

Each technical exception is already assigned to a business exception. Technical exceptions typically indicate issues that need to be solved by system administrators.

→ Tip

We recommend that you keep the default settings.

- **Define Customer-Specific Replacement Messages:**

(Optional) Configure this activity if you wish to use different message texts than the ones provided by default.

- **Define Customizable Message Status:**

(Optional) Configure this activity if you wish to use different or additional statuses than the ones provided by default.

4. Check and, if necessary, change the setting for how the covariance matrix is generated during modeling.
 1. Navigate to **► Cross-Application Components ► Demand Data Foundation ► Modeling and Forecasting ► Define Modeling Control Settings ►** and execute the Customizing activity.
 2. Check that the `MOD_COV_REDUCED` parameter is configured correctly for your scenario.

The parameter controls whether the “full covariance matrix” (default) or the “reduced covariance matrix” should be generated:

For These Scenarios	Use this Setting
<p>You want to use UDF to generate the forecast confidence index (FCI) for SAP Promotion Management.</p>	<p>The full covariance matrix is mandatory for the FCI.</p> <div data-bbox="639 504 1398 656" style="background-color: #f0f0f0; padding: 10px; border: 1px solid #ccc;"> <p>i Note</p> <p>Be aware that the generation of the full covariance matrix is performance-intensive.</p> </div> <p>Correct setting of MOD_COV_REDUCED:</p> <ul style="list-style-type: none"> • Either the parameter is not listed at all under <i>Configuration Type Code</i>. • Or the parameter is listed under <i>Configuration Type Code</i> and the <i>Configuration Value</i> is empty. <p>Either setting activates the default (full covariance matrix is generated).</p>
<p>All other scenarios, that is:</p> <ul style="list-style-type: none"> • You want to calculate hierarchical priors (HPRs). • You want to use SAP Promotion Management, but without generating the FCI. • You want to use other consuming applications, but not SAP Promotion Management. 	<p>The reduced covariance matrix is sufficient for those scenarios and also saves runtime.</p> <p>Correct setting of MOD_COV_REDUCED:</p> <ul style="list-style-type: none"> • The parameter is listed under <i>Configuration Type Code</i> and the <i>Configuration Value</i> is set to x. <p>This setting overrides the default.</p>

3. Make any other settings as required for your scenario and save your changes.

5. Configure the modeling and forecasting features that you wish to use in your scenario. See the *Configure Unified Demand Forecast (UDF)* section of the *SAP Customer Activity Repository Administration Guide*.

→ Tip

You can find detailed configuration information for a number of UDF features in this section. Here you can fine-tune UDF for your customer scenario and requirements.

i Note

Please also take note of the following parameter changes that might be relevant for your upgrade scenario:

Changed Parameter Defaults

Parameter	Purpose	Old Default	New Default
REF_INF_WGT_FACTOR	Controls the influence of reference product locations in modeling.	1 (older releases)	0 (as of SAP Customer Activity Repository 5.0 FPS02)
FC_TREND_DAMP	Controls the dampening of the trend in forecasting.	10000 (older revisions)	1 (as of revision 54.0000 of SAP RTL AFL FOR SAP HANA)

What to do:

- If you had configured either parameter in your older release, please reevaluate the setting now and adjust the value if needed. For parameter details and configuration instructions, see the *Configure Parameters for Modeling* and *Configure Parameters for Forecasting* sections of the *SAP Customer Activity Repository Administration Guide*.

6. Set up your forecast scenario for best performance.
See the following sections of the *SAP Customer Activity Repository Administration Guide*:
 1. Optimize the performance of modeling, forecasting, and the calculation of hierarchical priors. See *Optimize UDF Performance*.
 2. Set up routines for regular data housekeeping. For example, schedule reports to regularly delete obsolete data. See *Performance — Optimize the Data Lifecycle* and *Administration Tools*.

→ Tip

We highly recommend that you read this information carefully and implement any performance tips that are relevant for your scenario.

7. Set up the integration and data replication between your source master data system and your SAP Customer Activity Repository system.
See the following sections of the *SAP Customer Activity Repository Administration Guide*:
 - For integration information for UDF and DDF, see *Introduction to SAP Customer Activity Repository* and *Configure DDF Integration Scenarios*.
 - For setup information on the data replication framework (DRF, transaction DRFOU) for replicating master and transactional data, see *Configure Data Replication from SAP ERP and SAP S/4HANA to DDF*.
8. Verify that the pricing data is replicated correctly:


⚠ Caution

This step is particularly important if you are upgrading from a release of SAP Customer Activity Repository 4.0. This is because as of SAP Customer Activity Repository applications bundle 5.0, the default table for pricing data has changed:

- Old default table: /DMF/PRODLOC_PRC (*Product Location Price Data*)
- New default table: /DMF/PRC (*Product Pricing Data*)

The benefit of this table is that you can provide extended pricing data to modeling and forecasting. All UDF features that require pricing data use the new table.

You must do two steps, **preferably before you start with the upgrade**:

1. In Customizing for [► Cross-Application Components ► Demand Data Foundation ► Modeling and Forecasting ► Define Forecasting Control Settings](#) , set the FC_USE_PRC_INTERFACE parameter. The parameter controls from which table the information about product prices is taken. Set the parameter to either 0 or 2 (that is, a setting that supports the new pricing table):
 - 0: Compatibility setting. Both /DMF/PRODLOC_PRC and /DMF/PRC are used.
 - 1: Only /DMF/PRODLOC_PRC is used.
 - 2: Only /DMF/PRC is used.
 2. Migrate to the new pricing table and adjust the data replication settings accordingly. Follow the instructions in the [Enable Extended Sales Pricing Data](#) section in the *SAP Customer Activity Repository Administration Guide*.
9. In the future development of your scenario, you might implement custom code or change UDF output tables. Carefully read the following information to ensure that such adaptations will continue to function correctly for your scenario:

Caution

With the release of SAP Customer Activity Repository 4.0 FPS03, the UDF database storage design was refactored to enhance system performance. Be aware that as a result, the following open SQL statements are no longer supported for the following UDF tables:

Do not use any of these SQL statements...	... with any of these tables
UPDATE FROM wa	/DMF/UMD_TSD
UPDATE FROM TABLE itab	/DMF/UMD_TS
DELETE FROM wa	/DMF/UFC_TSD
DELETE FROM TABLE itab	/DMF/UFC_TS
DELETE WHERE UP TO N ROWS	/DMF/UFC_TRC
MODIFY FROM wa	/DMF/UMD_PAR
MODIFY FROM TABLE itab	/DMF/UMD_PAR_COV
ORDER BY PRIMARY KEY	/DMF/UMD_PRI
SELECT SINGLE FOR UPDATE	/DMF/TS_PS
Usage of Table Buffer	
EXPORT/IMPORT	

You have now completed the mandatory setup steps for UDF.

Perform Optional Setup Steps

You have the following additional options:

1. (Highly recommended) Set up the apps for demand forecasting (*Analyze Forecast*, *Adjust Forecast*, *Manage Demand Influencing Factors*) and the *Manage Alerts* app.
See the [Set Up SAP Fiori Apps for SAP Customer Activity Repository \[page 137\]](#) section.
2. Verify the data replication results that are relevant for UDF:
For example, verify that the following data is replicated correctly from the source master data system: product hierarchy, location hierarchy, product prices, delisting information for product locations (table `/DMF/PRODLOC_TD`), closing days and public holidays for locations (tables `/DMF/LOC`, `/DMF/TSTRM`, `/DMF/LOC_TSTRM`, and `/DMF/TSTRM_DAY`).

Note

For more information on the data replication, see *Configure Data Replication from SAP ERP and SAP S/4HANA to DDF* section in the *SAP Customer Activity Repository Administration Guide*.

3. To achieve a high forecast accuracy right from the beginning, provide ample promotional data:
 - Load the historical promotions into UDF (if this data is available).
 - Define user DIFs in the past to account for the historical promotions.
 - Check the offer lift type codes of offers that were created in SAP Promotion Management and transferred (translated) to UDF. In particular, check for the offer lift type codes 98 and 99 and solve the underlying issues. For more information, see [Verify Integration with SAP Promotion Management](#).
4. Implement SAP Note [2161484](#): Here you can find information about an ABAP validation report that you can use to check the input data for modeling and forecasting and solve potential issues.
5. Implement SAP Note [2560853](#): This note is relevant if you are upgrading from a release prior to SAP Customer Activity Repository applications bundle 2.0 SPS03 (SAP Customer Activity Repository 3.0 FP2) and have existing data in the modeling and forecasting tables. The note explains how to update the time granularity entries in UDF output tables to prevent modeling and forecasting issues.

6.1.2.9 Set Up SAP Fiori Apps for SAP Customer Activity Repository

Perform common setup steps that are required for the apps in SAP Customer Activity Repository. For example, check that the prerequisites are installed and prepare the system landscape. Then set up the apps that you want to use in your scenario.

Context

You can find a list of the apps included in SAP Customer Activity Repository in the [SAP Fiori for SAP Customer Activity Repository](#) section in the application help.

For a diagram of a typical SAP Fiori system landscape, see the [UI Content and Authorization Concept](#) section in the *SAP Fiori: App Implementation*.

i Note

Depending on your scenario, some of the following prerequisites might already be available in your system landscape. If so, you can skip the corresponding step.

General Prerequisites

- **SAP Fiori front-end server:** You have installed the `SAP_FIORI_FRONT-END_SERVER` add-on product version for this release. For the minimum requirement, see section [Upgrade the Prerequisites \[page 18\]](#) and consult the information under [Common Prerequisites > SAP Fiori](#).

→ Tip

There is a quick way how you can check the SAPUI5 version currently installed in your system. See SAP Note [2282103](#) (*How to check the version of SAPUI5 you have installed*).

- **SAP Fiori launchpad:** You have set up the launchpad as described in the *Common Installation Guide*, in section [Configure SAP Fiori Launchpad](#).
- **SAP Fiori launchpad designer:** You have set up the designer as described in the product documentation of SAP Fiori launchpad, in section [Initial Setup of the Launchpad Designer](#). Depending on your front-end system, select a different version at the top.
- **SAP Gateway:** You have done the general SAP Gateway configuration and you have activated the common OData services and Internet Communication Framework (ICF) services. For instructions, see the following:
 - Section [Configure SAP Gateway \[page 97\]](#) in this guide, including the subsections
 - SAP Note [1560585](#) (*SAP Gateway 2.0 Release Note*)

Prerequisites Specific to SAP Customer Activity Repository applications bundle

1. You have installed the correct revision of the `SAP_RTL_AFL_FOR_SAP_HANA` component in the SAP HANA database. See section [Download and Install SAP RTL AFL FOR SAP HANA \[page 62\]](#).
2. You have upgraded the back-end product version. This ensures that all app features of the current release are supported by the back-end. See section [Upgrade SAP CARAB Back-End Product Version \[page 69\]](#).
3. You have upgraded the front-end product version. This ensures that you get the newest app UIs on the front-end. See section [Upgrade SAP FIORI FOR SAP CARAB Front-End Product Version \[page 73\]](#).
4. You have implemented any SAP Notes (back-end and front-end corrections) for the apps that you wish to set up. See section [Implement SAP Notes for the Upgrade \[page 33\]](#) and consult the release information notes (RINs) mentioned there and also the table for SAP Customer Activity Repository.
5. You have performed all mandatory setup steps for SAP Customer Activity Repository. For example, this includes activating the OData services for the apps and calculating the SAPUI5 application index. For instructions, see section [Core \(Mandatory for All Applications\) \[page 80\]](#).

6. You have set up the system connections:
 - You have set up the following dedicated RFC connections in transaction SM59 (*Configuration of RFC Connections*):
 - between your front-end system and your back-end system
 - between your front-end system and your source master data system
 - You have defined a system alias for your back-end system. See section [Verify that OData Services are Active \[page 100\]](#) and search for *alias*.
7. (Optional) If you wish to set up the apps included in OAA, follow the steps in section *Configure Omnichannel Article Availability and Sourcing for Use with SAP Customer Activity Repository* in this guide.

Result

After you have prepared the system landscape in this way, you can now set up the apps that you wish to use.

→ Tip

If you encounter issues during the setup, see the [Troubleshooting SAP Fiori Apps](#) section in the *SAP Fiori: Operations* documentation.

[Set Up the Apps for Demand Forecasting \[page 139\]](#)

Upgrade the *Analyze Forecast*, *Adjust Forecast*, and *Manage Demand Influencing Factors* apps to the current release.

[Set Up the Apps for Demand Data Foundation \(DDF\) \[page 144\]](#)

Do this procedure to set up the DDF apps for standalone scenarios. The DDF apps are: *Configure Distribution Curves*, *Manage Location Clusters*, *Manage Product Attributes*, *Manage Product Groups*, *Manage Promotional Offers*. To access any of these apps, you need to assign the required role(s) to your front-end user. This gives you access to the relevant business catalogs and business catalog groups so that you can then open the apps in SAP Fiori launchpad.

6.1.2.9.1 Set Up the Apps for Demand Forecasting

Upgrade the *Analyze Forecast*, *Adjust Forecast*, and *Manage Demand Influencing Factors* apps to the current release.

Context

The apps for demand forecasting help you manage forecast scenarios with Unified Demand Forecast (UDF). UDF is the common forecasting engine in the back-end. The apps and UDF are all delivered as part of SAP Customer Activity Repository. The apps are sometimes also referred to as the “forecast apps” or the “UDF apps”.

i Note

If you need information on the app features, see the [SAP Fiori Apps for Your Forecast Scenario](#) section in the application help for SAP Customer Activity Repository.

Procedures

1. Set the `APPSTATE_TRANSIENT` parameter to `false` in SAP Fiori Customizing:
The parameter controls whether app state data for navigation is kept in the browser memory only (transient) or stored in the database of the front-end server. With this setting, you can ensure that your selection of products and locations will be kept when you navigate between the apps.
 1. Log on to your front-end system.
 2. Execute transaction `/UI2/FLP_CUS_CONF` to open the "*FLP Configuration*": *Overview* screen.
 3. Choose **FLP Configuration > New Entries** and make the following settings:
 - *FLP Property ID*: `APPSTATE_TRANSIENT`
 - *Property Value*: `false`

→ Tip

You can find a detailed description of the parameter in the [Launchpad Configuration Parameters](#) section of the *SAP Fiori Launchpad* documentation. If necessary, select a different version at the top.

If you encounter any issues, see the configuration instructions in the [Setting Parameters in SAP Fiori Customizing](#) section of the *SAP Fiori Launchpad* documentation.

4. Save your changes.

→ Tip

We recommend that you schedule a report to clean up expired app states on a daily basis. For more information, see the [Cleanup of Expired Application State](#) section of the *SAP Fiori Launchpad* documentation.

2. Continue with the app-specific setup as described in the following sections.

[Upgrade Procedures \[page 141\]](#)

Upgrade the *Analyze Forecast*, *Adjust Forecast*, and *Manage Demand Influencing Factors* apps to the current release. The steps to follow depend on the release of SAP Customer Activity Repository that you wish to upgrade **from**.

[Adjust Forecast App and Manage Demand Influencing Factors App: Schedule Reports to Delete Obsolete Drafts \[page 143\]](#)

When a user creates or updates a forecast correction in the *Adjust Forecast* app, the system automatically saves a draft in the background. The same is true when a user creates or updates a DIF assignment in the *Manage Demand Influencing Factors* app. The drafts remain available as user-specific working versions. For performance reasons, you should delete obsolete drafts on a regular basis. The two reports `/DPL/REORG_DRAFT_TABLES` and `/DPL/REORG_DIF_DRAFT_TABS` are available for this.

6.1.2.9.1.1 Upgrade Procedures

Upgrade the *Analyze Forecast*, *Adjust Forecast*, and *Manage Demand Influencing Factors* apps to the current release. The steps to follow depend on the release of SAP Customer Activity Repository that you wish to upgrade **from**.

Prerequisites

- You have migrated the pricing data to the `/DMF/PRC` table and adjusted the data replication as described in [Migrate to New Default Table for Sales Pricing Data \(/DMF/PRC\) \[page 59\]](#).
- You have set up Unified Demand Forecast in your back-end system as described in [Complete UDF Setup \[page 128\]](#). You must at least do the mandatory steps.
- You have verified the prerequisites and prepared the system landscape as described in [Set Up SAP Fiori Apps for SAP Customer Activity Repository \[page 137\]](#).

Upgrade from Any Release of SAP Customer Activity Repository 2.0, 3.0, or 4.0

These upgrade scenarios require a new setup of the apps. This is because of technical changes in the back-end and the front-end as of SAP Customer Activity Repository 5.0. Follow the instructions in the [Set Up the Apps for Demand Forecasting \[page 139\]](#) section in the *Common Installation Guide*.

Upgrade from a Lower Release of SAP Customer Activity Repository 5.0

This upgrade scenario has only a few mandatory steps. Additionally, you can choose from several optional steps.

→ Tip

If you encounter any issues, see the detailed instructions in the [Set Up the Apps for Demand Forecasting \[page 139\]](#) section of the *Common Installation Guide*.

Mandatory Steps

1. At this point in the guide, you have already upgraded your back-end system and your front-end system to the product versions of the current release. Additionally, you have verified the prerequisites listed above. With these steps, you can already access the latest version of each app from the SAP Fiori launchpad.
2. Assign areas of responsibility (AORs):

⚠ Caution

As of SAP Customer Activity Repository applications bundle 5.0 FPS02, AOR assignments are required not only for **product hierarchies** but also for **location hierarchies**. In previous releases, AORs were

already required for product hierarchies, and these assignments might already exist in your scenario. Revisit the AORs assignments now and add new assignments for location hierarchies.

You assign AORs in transaction `NWBC` under **Services > Maintain Area of Responsibility**. For information on the supported hierarchy types and instructions, see the [Maintain Area of Responsibility](#) section in the application help for SAP Customer Activity Repository.

3. Set the `APPSTATE_TRANSIENT` parameter to `false` in SAP Fiori Customizing:
The parameter controls whether app state data for navigation is kept in the browser memory only (transient) or stored in the database of the front-end server. With this setting, you can ensure that your selection of products and locations will be kept when you navigate between the apps.
 1. Log on to your front-end system.
 2. Execute transaction `/UI2/FLP_CUS_CONF` to open the *"FLP Configuration": Overview* screen.
 3. Choose **FLP Configuration > New Entries** and make the following settings:
 - *FLP Property ID*: `APPSTATE_TRANSIENT`
 - *Property Value*: `false`

→ Tip

You can find a detailed description of the parameter in the [Launchpad Configuration Parameters](#) section of the *SAP Fiori Launchpad* documentation. If necessary, select a different version at the top.

If you encounter any issues, see the configuration instructions in the [Setting Parameters in SAP Fiori Customizing](#) section of the *SAP Fiori Launchpad* documentation.

4. Save your changes.

→ Tip

We recommend that you schedule a report to clean up expired app states on a daily basis. For more information, see the [Cleanup of Expired Application State](#) section of the *SAP Fiori Launchpad* documentation.

4. Now take a look at the optional steps below. We highly recommend them for all the apps for demand forecasting. Check whether there are any steps that you have not yet implemented and that would now be helpful in your scenario.

Optional Steps - Highly Recommended

Perform any of the following optional steps that are helpful for your scenario:

- **Enable the in-app help:**
Enable this feature so users can display on-screen help directly in the app. Set up SAP Web Dispatcher and the In-App Help plug-in as described in [Enable In-App Help \[page 308\]](#).

→ Tip

After a successful setup, you can see the Help icon (question mark) at the top of the app. Simply choose this icon (or press `F1`) to display the in-app help and call up a detailed app description.

- **Set up the related apps:**
See [Set Up the Apps for Demand Forecasting \[page 139\]](#).
- **Set up single sign-on (SSO):** Set up the single sign-on between the front-end server and the back-end server.

The authentication concept for SAP Fiori apps comprises initial user authentication on the ABAP front-end server, followed by authentication of all requests to back-end systems. The available SSO mechanisms may differ depending on your customer system landscape. For more information, see [SAP Fiori: Security](#), select your version, and choose ► [User Authentication and Single Sign-On \(SSO\)](#) ▾.

You have successfully upgraded the apps for demand forecasting.

6.1.2.9.1.2 *Adjust Forecast App and Manage Demand Influencing Factors App: Schedule Reports to Delete Obsolete Drafts*

When a user creates or updates a forecast correction in the *Adjust Forecast* app, the system automatically saves a draft in the background. The same is true when a user creates or updates a DIF assignment in the *Manage Demand Influencing Factors* app. The drafts remain available as user-specific working versions. For performance reasons, you should delete obsolete drafts on a regular basis. The two reports `/DPL/REORG_DRAFT_TABLES` and `/DPL/REORG_DIF_DRAFT_TABS` are available for this.

Concept

“Drafts” are a general SAP Fiori concept. A draft is an interim version of a business entity that has not yet been explicitly saved as an active version. Drafts support a stateless communication. They enable field validation and dynamic field control and provide default values for fields based on recent entries and selections. Drafts ensure that users don't inadvertently lose any of their changes.

Autosave of Drafts

The autosave function does the following:

- Keeps unsaved changes if editing is interrupted, even when the data for a forecast correction or a DIF assignment is not complete. Users can resume editing later on.
- Prevents data loss if the app terminates unexpectedly.
- Prevents multiple users from editing the same object concurrently (locking mechanism).
- Makes one user aware of parallel unsaved changes by another user.

⚠ Caution

An autosaved draft is only a personal working version. Users still need to save the draft so that their changes become active (via the [Save](#) button in either app).

Lifecycle of Drafts

The lifecycle of drafts is managed by CDS annotations. Drafts of forecast corrections and DIF assignments have the following settings:

- Time frame after which a draft can be deleted.
- Time frame after which the draft assignment to a user expires.

- Time frame for which a draft is locked (en queue).

i Note

If you need more information on the draft concept, see the following:

- In the SAP Fiori Design Guidelines, see [Draft Handling](#).
- In the ABAP Programming Model for SAP Fiori, see [ObjectModel Annotations](#).

Procedure

1. Delete obsolete drafts on a regular basis using the following reports:
 - For the *Adjust Forecast* app, schedule the `/DPL/REORG_DRAFT_TABLES` report as a regular background job. The report deletes forecast correction drafts.
 - For the *Manage Demand Influencing Factors* app, schedule the `/DPL/REORG_DIF_DRAFT_TABS` report as a regular background job. The report deletes DIF assignment drafts.

→ Tip

We recommend that you schedule both reports to run **outside of regular working hours**. This is because the autosave of drafts is blocked in either app while the report is running.

6.1.2.9.2 Set Up the Apps for Demand Data Foundation (DDF)

Do this procedure to set up the DDF apps for standalone scenarios. The DDF apps are: *Configure Distribution Curves*, *Manage Location Clusters*, *Manage Product Attributes*, *Manage Product Groups*, *Manage Promotional Offers*. To access any of these apps, you need to assign the required role(s) to your front-end user. This gives you access to the relevant business catalogs and business catalog groups so that you can then open the apps in SAP Fiori launchpad.

Context

The DDF apps are available as part of SAP Customer Activity Repository. They support different scenarios and consuming applications.

Different Scenarios for DDF Apps

- **Standalone scenarios:** You can use the apps standalone, that is, to support generic scenarios in SAP Customer Activity Repository.
- **Integrated scenarios:** Or you can integrate the apps with the consuming application installed on top of SAP Customer Activity Repository (for example, SAP Assortment Planning, SAP Allocation Management, or SAP Promotion Management).

i Note

Some apps support only specific consuming applications. For more information, see the product documentation of the application that you wish to use.

Procedure

i Note

The steps are always the same, regardless of how many of the DDF apps you wish to use.

1. Determine the scenario for which you want to use the apps. Follow the instructions for your scenario:

Scenario	Instructions
Standalone — SAP Customer Activity Repository	Continue with step 2 below.
Integrated — SAP Assortment Planning	Assign Roles, Catalogs, and Groups in SAP Fiori Launchpad
Integrated — SAP Allocation Management	Assign Roles, Catalogs, and Groups in SAP Fiori Launchpad
Integrated — SAP Promotion Management	Activate Internet Communication Framework (ICF) Services

2. Log on to your front-end system.
3. Execute transaction `SU01` to open the *User Maintenance* screen.
4. Enter your front-end user name in the *User* field and choose *Change*.
5. On the *Roles* tab, assign the *Demand Data Foundation Administrator* (`SAP_ISR_BR_DDF_ADMIN`) role to your user.
6. Save your changes.
7. Execute transaction `LPD_CUST` to open the *Overview of Launchpads*.
8. Verify that the following two roles are listed:
 - `UIPMR001`
 - `UIRAP001`
9. Open SAP Fiori launchpad and verify that you can see and access the tiles for the apps.

→ Tip

If you already have an SAP Fiori launchpad open, clear your browser cache to see the changes.

10. If your app is *Manage Product Attributes*, continue with the [Set Up the Manage Product Attributes App \[page 146\]](#) section and do any steps not covered here.

6.1.2.9.2.1 Set Up the Manage Product Attributes App

Perform several tasks on the front-end server and the back-end server to set up the transactional app *Manage Product Attributes*. This is one of the Demand Data Foundation (DDF) apps included in SAP Customer Activity Repository.

Use

The *Manage Product Attributes* app enables planning administrators to create, configure, assign, and maintain product attributes for a selected product hierarchy. The app supports different scenarios and consuming applications. For example, this includes SAP Allocation Management, SAP Assortment Planning, the similar products search, or the calculation of distribution curves.

Prerequisites

- You are aware of the technical implementation information for the app in the SAP Fiori apps reference library:
For the latest delivery (latest wave), see: <https://fioriappslibrary.hana.ondemand.com/sap/fix/externalViewer/index.html?appld=F0829A>
- You have performed all setup tasks under *Core (Mandatory for All Applications)* in this guide.
- You have checked whether there are any corrections for the app in the current release:
See section [Implement SAP Notes for the Upgrade \[page 33\]](#). Implement any corrections relevant for the app.
- You have done the general setup for the DDF apps. See [Set Up the Apps for Demand Data Foundation \(DDF\) \[page 144\]](#).

i Note

To set up the app, do the steps in the following sections.

If your scenario includes SAP Allocation Management or SAP Assortment Planning, some steps might already have been performed in your system landscape. If so, skip the step and continue with the next one.

Verify that ICF Services are Active

Context

After an upgrade, you must ensure that the Internet Communication Framework (ICF) services required for the app are still active.

Procedure

1. Log on to your front-end server.

2. Execute transaction SICF.
3. In the *Define Services* screen, make the following selections:
 - *Hierarchy Type*: **SERVICE**
 - *Virtual Host*: **DEFAULT_HOST**
 - *Service Path*: **/sap/bc/ui5_ui5/sap/attribmgmt_v2/**
4. Choose *Execute* (F8).
5. Under *Virtual Hosts / Services*, double-click the **attribmgmt_v2/** service to open the *Create/Change a Service* screen.
6. To activate a service, choose **Service/Host > Activate**.

i Note

You can check the activation status by selecting the service and opening the context menu. If the *Activate Service* option is grayed out, this means the service is already active.

7. Repeat steps 3 to 6, this time using **/sap/bc/ui5_ui5/sap/ddfreuse_v2/** as the service path.

Verify that OData Services are Active

1. See section [Verify that OData Services are Active \[page 100\]](#) and consult the table for SAP Customer Activity Repository.
2. Make sure that all mandatory OData services for the app are active.

Enable the App for SAP Fiori Launchpad

Context

To be able to access the app from the SAP Fiori launchpad, your front-end system user must have the necessary role(s) assigned. This allows you to access the business catalogs and business catalog groups required for the app.

The app requires the following business role: *Demand Data Foundation Administrator* (SAP_ISR_BR_DDF_ADMIN)

i Note

Should you wish to use the app for SAP Allocation Management or SAP Assortment Planning, use the *Planning Administrator* (SAP_RAP_BCR_PLANNING_ADMIN) business role instead.

Procedure

1. Log on to your front-end system.
2. Execute transaction SU01 to open the *User Maintenance* screen.
3. Enter your front-end user name in the *User* field and choose *Change*.
4. On the *Roles* tab, assign the *Demand Data Foundation Administrator* (SAP_ISR_BR_DDF_ADMIN) role to your user.

5. Save your changes.

→ Tip

If you already have an SAP Fiori launchpad open, clear your browser cache or you won't be able to see the changes.

6. Verify role settings for SAP Fiori launchpad.
 1. Execute transaction `LPD_CUST` to open the *Overview of Launchpads*.
 2. Double-click the role `UIRAP001` to view the role details.
 3. Expand the role *Planning Administrator* and select the *Manage Product Attributes* app.
 4. Display the advanced parameters and check that the app has all the mandatory settings listed below. You do not need to make any additional settings.
 - *Link Text: Manage Product Attributes*
 - *Application Type: URL*
 - *URL: /sap/bc/ui5_ui5/sap/attribmgmt_v2*
 - *Application Alias: AssignProductAttribute*
 - *Additional Information: SAPUI5.Component=retail.ddf.attributemgmtv2*
 - *Navigation Mode: EXT_HEAD Leaderless Portal Window*
 - *History Mode: 1 Navigation Entry can Occur Once in History*
 - *Parameter Forwarding: G Get Parameters*
- If you have updated any settings, save your changes.

Assign Area of Responsibility (AOR) to ABAP Back-End User

You can only display and select product hierarchies in the app that have been assigned as the area of responsibility to your ABAP back-end user. The main steps are as follows:

1. Log on to your ABAP back-end system.
2. Execute transaction `NWBC` to open the SAP NetWeaver Business Client.
3. Choose **► Services ► Maintain Area of Responsibility ► Product Hierarchy ►**.
4. Select your ABAP back-end user, choose *Continue*, and define the AOR.

→ Tip

For step-by-step instructions, see the application help for SAP Customer Activity Repository at <https://help.sap.com/viewer/p/CARAB>. Search for section *Maintain Area of Responsibility* and follow the instructions.

6.1.2.9.2.2 Set Up the Manage Workloads App

Manage Workloads. This is a generic Demand Data Foundation (DDF) app available to different scenarios. transactional app

Context

The *Manage Workloads* app makes use of the Process Packaging and Parallelization framework, which supports different scenarios and consuming applications. For example, the framework enables replenishment planners to use this app to manage the workloads used in replenishment calculation.

Prerequisites

- Perform several tasks on the front-end server and the back-end server to set up the You have verified the prerequisites and prepared the system landscape as described in [Set Up SAP Fiori Apps for SAP Customer Activity Repository \[page 137\]](#).
- You know where to find additional information on *Manage Workloads* if necessary:
 - Technical details for each delivery of the app are available in the SAP Fiori apps reference library. For the latest delivery (latest wave), see <https://fioriappslibrary.hana.ondemand.com/sap/fix/externalViewer/index.html#?appId=F5640>.
 - If you need information on the app features see <https://help.sap.com/viewer/p/CARAB>. Choose your version at the top, open the application help for SAP Customer Activity Repository, and search for section *Manage Workloads*.

i Note

To create new workloads, this app makes use of a job template in the *Application Job* app. For the *Create* button to be available in the *Manage Workloads* app, implement the SAP Note [2436567](#), *UI for Basis Applications - General Information*.

Verify that ICF Services are Active

Context

After an upgrade, you must ensure that the Internet Communication Framework (ICF) services required for the app are still active.

Procedure

1. Log on to your front-end server.
2. Execute transaction SICF.

3. In the *Define Services* screen, make the following selections:
 - *Hierarchy Type*: **SERVICE**
 - *Virtual Host*: **DEFAULT_HOST**
 - *Service Path*: **/sap/bc/ui5_ui5/sap/PCPWRKLDMNG**
4. Choose *Execute* (F8).
5. Under *Virtual Hosts / Services*, double-click the PCPWRKLDMNG service to open the *Create/Change a Service* screen.
6. To activate a service, choose **Service/Host > Activate**.

i Note

You can check the activation status by selecting the service and opening the context menu. If the *Activate Service* option is grayed out, this means the service is already active.

Verify that OData Services are Active

1. See section [Verify that OData Services are Active \[page 100\]](#) and consult the table for SAP Customer Activity Repository.
2. Make sure that all mandatory OData services for the app are active.

Front-End Server

Component	Technical Name
OData Service (Version Number)	/DMF/PCPMNGWRKLD_SB (1)
OData Service (Version Number)	APJ_JOB_MANAGEMENT_SRV (1)
OData Service (Version Number)	APL_LOG_MANAGEMENT_SRV (1)

Enable the App for SAP Fiori Launchpad

Context

To be able to access the app from the SAP Fiori launchpad, your front-end system user must have the necessary role(s) assigned. This allows you to access the business catalogs and technical catalogs required for to access the app.

The app requires the following business role SAP_BR_DDF_PCP and technical catalog.

Front End Server: Catalog Details

Component	Technical Name
Technical Catalog	SAP_DDF_TC_T

i Note

As of SAP Customer Activity Repository 5.0 FPS02, the business role and technical catalog were respectively changed from `SAP_XRP_TCR_T` and `SAP_XRP_TC_REPL` to `SAP_BR_DDF_PCP` and `SAP_DDF_TC_T`.

i Note

You can select the *Manage Workloads* tile manually from the technical catalog to add it to the SAP Fiori launchpad.

Procedure

1. Log on to your front-end system.
2. Execute transaction `ST01` to open the *User Maintenance* screen.
3. Enter your front-end user name in the *User* field and choose *Change*.
4. On the *Roles* tab, assign the (`SAP_BR_DDF_PCP`) role to your user.
5. Save your changes.

→ Tip

If you already have an SAP Fiori launchpad open, clear your browser cache or you won't be able to see the changes.

Back-End Server: Set Up Authorizations

Context

For the *Manage Workloads* app, the following authorization objects are relevant:

Authorization Object	Authorization Object Description	Field	Value	Field Description
/DMF/PCPWL	Authorization to execute parallel processing and to display and change workloads in the <i>Manage Workloads</i> app.	ACTVT	Execute Display Change Delete	Activity

6.1.2.10 Configure On-Shelf Availability

Configure the On-Shelf Availability (OSA) module in SAP Customer Activity Repository. All steps are **optional** and depend on your implementation scenario.

i Note

The configuration of OSA is **mandatory** if you want to generate intraday forecasts. For this feature, you need the combined functionality of OSA and Unified Demand Forecast (UDF). For more information, see <https://help.sap.com/viewer/p/CARAB> and open the application help for SAP Customer Activity Repository. Search for the *Generate Intraday Forecasts* section.

→ Tip

If you encounter any issues, see the [Troubleshooting \[page 202\]](#) section for possible solutions.

[Generate Run IDs for OSA Processing Steps \[page 152\]](#)

Define the range of run IDs for the four processing steps of On-Shelf Availability (OSA): Intraweek Pattern, Estimation, Monitoring, and Analysis.

[Check Field Contents in SAP HANA Content for On-Shelf Availability \[page 153\]](#)

Check the fields of the customizable SAP HANA views for OSA.

6.1.2.10.1 Generate Run IDs for OSA Processing Steps

Define the range of run IDs for the four processing steps of On-Shelf Availability (OSA): Intraweek Pattern, Estimation, Monitoring, and Analysis.

Use

Each scheduled run of a processing step of On-Shelf Availability (OSA) has a generated run ID. This is the unique identifier of a job.

The run ID is used to distinguish several runs within one period. Each processing step has its own ID generator:

Processing Step	Transaction for the ID Generator
Intraweek Pattern	/OSA/NR_IWP
Estimation	/OSA/NR_EST
Monitoring	/OSA/NR_MON
Analysis	/OSA/NR_ANA

For each of the four ID generator transactions, you must define the range of run IDs.

Procedure

Do the following steps for each transaction:

1. Log on to your back-end system.
2. Execute the transaction by specifying either `/n<transaction>` or `/o<transaction>`.

❁ Example

For the first transaction: `/n/OSA/NR_IWP`

3. Choose *Intervals* in change mode.
4. In the first row of the table, enter the following values for the following fields:
 - Field *No*: `01`
 - Field *From No.*: `0000000000000001`
 - Field *To Number*: `9999999999999999`
5. Save your changes.

6.1.2.10.2 Check Field Contents in SAP HANA Content for On-Shelf Availability

Check the fields of the customizable SAP HANA views for OSA.

Use

There are two OSA-specific SAP HANA views that can be customized:

- AN_TRANSACTION
- PROMOTION_TRANS

You must check if the fields in these views contain the mappings or formulas you need.

⚠ Caution

If you need to modify a view, be aware that a new installation will rewrite the modifications. We therefore recommend that you perform a back-up of the modified views.

Procedure

To change the mapping or the formula of a field, follow these steps:

1. Define the data foundation that is the source for the view, that is, the table `/POSDW/TLOGF`.
2. Define filters for the view.

3. Map the fields from source to target.
4. Create measures and calculation fields.

For more information, see the documentation under https://help.sap.com/viewer/p/SAP_HANA_PLATFORM

▶ <Version> ▶ Development ▶

❁ Example

Example: Definitions for the AN_TRANSACTION View

The following definitions are set by default for the AN_TRANSACTION view:

- The source of the view is the table /POSDW/TLOGF.
- Examples of filters for the views:
 - RECORDQUALIFIER = '5': Only sales records are used.
 - DATASTATUS in ('2', '3'): Only those records are used that passed the SAP Customer Activity Repository validation.
 - RETAILQUANTITY > 0.0: Negative quantities are not used by On-Shelf Availability.
 - VOIDEDLINE = '': Canceled transactions are not used by On-Shelf Availability.
- Examples of fields mappings:
 - MANDT: Client ID. This field is mapped to the MANDT column of the /POSDW/TLOGF table.
 - STORE_ID: Store ID. This field is mapped to the RETAILSTOREID column of the /POSDW/TLOGF table.
 - BUSINESSDAYDATE: Business day. This field is mapped to the BUSINESSDAYDATE column of the /POSDW/TLOGF table.
- Examples of measures:
 - RETAILQUANTITY: Amount of units sold. Refers to the SALESUOM (Sales Unit of Measure) field that is also defined in the /POSDW/TLOGF table. Contains the value of the RETAILQUANTITY field.
 - PRICE: Price specified in the store currency. Contains the value of the ACTUALUNITPRICE field.
- Examples of calculated fields:
 - TRANS_TIME_DBL: Value of the TRANS_TIME output field of type DOUBLE. The format of the transaction time that is stored in BEGINTIMESTAMP and ENDTIMESTAMP is <YYYYMMDDhhmmss>.
 - DISCOUNT: Total relative discount applied on the item (product).
Calculated as $(ITEMDISC + DISTDISC) / (RETAILQUANTITY * ACTUALUNITPRICE)$. If the price is not a positive number, 0 is returned.
Definitions:
 - DISTDISC: global discount on the whole purchase; currently not used.
 - ITEMDISC: item-specific discount; currently used.

6.1.2.11 Configure Omnichannel Article Availability and Sourcing for Use with SAP Customer Activity Repository

To set up the OAA module, you need to integrate the source master data system (SAP S/4HANA or SAP Retail), SAP Customer Activity Repository, SAP Commerce, and SAP Commerce, integration package for SAP

for Retail. You also need to set up asynchronous order management and the data replication between SAP S/4HANA or SAP Retail, SAP Commerce, and SAP Customer Activity Repository.

6.1.2.11.1 Set up Data Replication Between SAP S/4HANA or SAP Retail, and SAP Commerce

In SAP S/4HANA or SAP Retail, and SAP Commerce, set up the **asynchronous order management scenario** as follows:

1. Set up **asynchronous replication of articles** via the Data Hub from SAP S/4HANA or SAP Retail to SAP Commerce.
For more information, see the documentation for SAP Commerce at <https://help.sap.com/viewer/50c996852b32456c96d3161a95544cdb/latest/en-US/8bc6b884866910148532f2e1e500f95f.html> *Getting Started with SAP S/4HANA or SAP ERP Integration*. Follow the steps for the asynchronous order management scenario.
2. Set up **asynchronous replication of orders** via the Data Hub from SAP Commerce to SAP S/4HANA or SAP Retail (see link above).
3. Configure asynchronous order management.
For more information, see the documentation for SAP Commerce at <https://help.sap.com/viewer/50c996852b32456c96d3161a95544cdb/latest/en-US/e2be57a501da41cc9ebdf7cf7d3aa229.html> *Configuring Order Management for SAP Commerce with One or More SAP Back Ends*.

6.1.2.11.2 Set Up Data Replication Between SAP Commerce and SAP Customer Activity Repository

1. In SAP Commerce, in the Backoffice application under ► *SAP Integration* ► *HTTP Destination*], create the HTTP destination of SAP Customer Activity Repository that is used for availability calculation and sourcing.
2. In SAP Commerce, in the Backoffice application under ► *SAP Integration* ► *SAP Global Configuration* ► *Backend Connectivity*], enter the HTTP destination of SAP Customer Activity Repository created before.

i Note

In the standard Solr configuration for products in SAP Commerce, `ProductStoreStockValueProvider` is used to replicate the store availability situation from the SAP Commerce database into the Solr index.

If you use OAA, availability information is provided through synchronous calls into SAP Customer Activity Repository for every article/store combination instead. If your product catalog is rather large, this is why indexing the complete product catalog can take very long. In this case, we recommend to either deactivate the value provider or to create a custom one. If you deactivate the value provider, faceted search according to store availability is not possible in the product catalog. OAA functionality is not affected.

6.1.2.11.3 Set Up Live Connection Between SAP Customer Activity Repository and SAP Analytics Cloud

This step is optional. You only need to execute it if you want to use the set of OAA analyses that has been predefined in SAP Analytics Cloud and that is part of the standard delivery of SAP Analytics Cloud. If you are using a different analytics tool, or if you do not run analytics at all, you may skip this step.

Context

Procedure

1. Configure SAP Customer Activity Repository to support cross-origin resource sharing (CORS), for cross-domain communication from the browser.

For more information, see [Live Data Connection to SAP BW Using a Direct Connection and Password Authentication](#), steps 1 and 2 of the procedure.

2. In SAP Analytics Cloud, navigate to ► [Home](#) ► [Connection](#) ▾ and select live connection `SAPRTOAA` ([SAP Retail Omnichannel Article Availability and Sourcing](#)). This connection is part of the standard delivery.
3. Click [Edit Connection](#) and enter your custom details for *Host*, *HTTPS Port*, and *Client*.

6.1.2.11.4 Check Version of SAP Customer Activity Repository in SAP Commerce

SAP Commerce can be connected against different versions of SAP Customer Activity Repository. As there were incompatible changes in the OAA REST service APIs, a Spring profile property in SAP Commerce controls the mapping to the different API versions.

Context

Check the `spring.profiles.active` property in the `local.properties` file of your SAP Commerce installation, for example from `<hybris_installation_path>/hybris/config/local.properties`.

The following profiles are supported:

Version of SAP Customer Activity Repository	Profile Value
CAR 3.0 (CARAB 2.0) or higher	sapooa_carApiVersionLatest
CAR 2.0 FP3 (CARAB 1.0 FP3)	sapooa_carApiVersion1

As of SAP Commerce, integration package for SAP for Retail 2.4 / SAP Commerce 6.4, the property is set automatically to `sapooa_carApiVersionLatest`.

6.1.2.11.5 Adapt Customizing for Eligible Sources in OAA Profile

Context

If you have used OAA in version 2.0 FP3 of SAP Customer Activity Repository already and are upgrading to version 3.0 or higher, and if you want to continue using OAA profile mode, you need to adapt your Customizing for the eligible sources assigned to the OAA profile (Customizing path: ► [SAP Customer Activity Repository](#) ► [Omnichannel Article Availability and Sourcing \(OAA\)](#) ► [OAA Profile Mode](#) ► [Define OAA Profiles](#) ►) at the start of your project using report `/OAA/SPLIT_SOURCES`. This report enables you to continue using your 2.0 FP3 Customizing settings for eligible sources. In version 2.0 FP3, there was one single Customizing view that covered DCs and stores alike, while in version 3.0, this view was replaced with three new views, one each for DCs, stores, and external vendors. The report moves your entries to the new views.

Procedure

1. In transaction **SE38**, execute report `/OAA/SPLIT_SOURCES`.

The report checks your entries for eligible sources in the old view and transfers those for DCs to the new view for DCs and those for stores to the new view for stores.

2. Check the error log.

For all entries that do not fall into either category, the system issues an error message.

3. Process the entries in the error log manually.

6.1.2.11.6 Adapt Customizing for RFC Destination (SAP S/4HANA Only)

As of SAP S/4HANA 1709 FPS2, setting the RFC destination that is used for the replication of the ATP snapshot from SAP S/4HANA to SAP Customer Activity Repository was moved to the new Customizing activity [Define System Connections](#).

Context

If you have used OAA in combination with a version of **SAP S/4HANA 1709 prior to FPS2** and want to upgrade to **SAP S/4HANA 1709 FPS2** or higher, you need to manually adapt your Customizing for the RFC destination.

In **Customizing for SAP S/4HANA**, proceed as follows:

Procedure

1. Go to ► [Sales and Distribution](#) ► [Basic Functions](#) ► [Availability Check and Transfer of Requirements](#) ► [Availability Check](#) ► [Availability Check with ATP Logic or Against Planning](#) ► [Retail: Omnichannel Article Availability and Sourcing \(OAA\)](#) ► [Define System Connections](#) ►.
2. Create a system connection ID for the RFC destination that is used for the replication of the ATP snapshot from SAP S/4HANA to SAP Customer Activity Repository.
3. Go to ► [Sales and Distribution](#) ► [Basic Functions](#) ► [Availability Check and Transfer of Requirements](#) ► [Availability Check](#) ► [Availability Check with ATP Logic or Against Planning](#) ► [Retail: Omnichannel Article Availability and Sourcing \(OAA\)](#) ► [Define ATP Parallelization Profiles for DC Articles](#) ►.
4. Enter the system connection ID into your ATP parallelization profile.

6.1.2.11.7 Activate BAdI Implementation for Using OAA with Vendor Articles

If you use vendors from SAP S/4HANA or SAP Retail as sources in OAA and want to benefit from the automatic creation of purchase requisitions, BAdI implementation `VENDOR_OAA_SALES_PUR_REQ` of BAdI `BADI_SD_SALES_ME_REQ` must be set to active.

Context

The implementation serves to enter the fixed vendor, the net price of the article, and the purchasing organization into the purchase requisition that is automatically created for the vendor articles, from the sales order. As a default, this BAdI implementation is delivered in an inactive state.

As of the following versions of your back-end application you can activate this BAdI implementation via a Customizing activity, from the following path: ► [Sales and Distribution](#) ► [Basic Functions](#) ► [Availability Check and Transfer of Requirements](#) ► [Availability Check](#) ► [Availability Check with ATP Logic or Against Planning](#) ► [Retail: Omnichannel Article Availability and Sourcing \(OAA\)](#) ► [Implementation: Data Required for Purchase Requisitions for Vendor Articles](#) :

- SAP S/4HANA 1709 SPS3
- SAP Retail 6.0 EHP7 SP17
- SAP Retail 6.0 EHP8 SP11

If you currently use a lower version of SAP S/4HANA or SAP Retail and want to upgrade to an SP that is still lower than the SPs mentioned above, you need to manually activate this BAdI implementation. Proceed as follows:

Procedure

1. Go to transaction `SE19`.
2. Enter `VENDOR_OAA_SALES_PUR_REQ` as enhancement implementation and choose [Edit](#).
3. Select [Implementation is active](#) and save your changes.

Results

You need to activate this BAdI implementation again using transaction `SE19` each time you implement a new support package of SAP S/4HANA or SAP Retail.

Only when you reach the support package that holds the new Customizing activity (see above) do you activate the BAdI implementation directly in Customizing. This setting will then last with all future upgrades.

6.1.2.11.8 Check the REST Services of Your Implementation

Context

As of SAP Customer Activity Repository 3.0, the REST services for omnichannel article availability and sourcing were modified. For more information, see SAP Note [2434053](#).

6.1.2.11.9 Activate OData Services for Omnichannel Article Availability and Sourcing

A number of OData services are required to run the SAP Fiori apps for omnichannel article availability and sourcing (OAA).

Context

Make sure that you have activated the OData services required for OAA, as described and listed in [Verify that OData Services are Active \[page 100\]](#). Depending on your back end, different services are required.

6.1.2.11.10 Upgrade Data Structures of Sources

Sales channel mode only: With SAP Customer Activity Repository 4.0, the OAA data structures for sources, for the SAP Fiori app [Manage Sources](#), were changed. You need to run two reports to upgrade the data structures.

Prerequisites

You have not used the SAP Fiori app [Manage Sources](#) with SAP Customer Activity Repository 4.0 or higher productively yet.

Context

Execution of the reports is mandatory for all upgrade scenarios where you upgrade from a version prior to 4.0 to version 4.0 or higher. You need to execute the reports once only.

Procedure

1. In SAP Customer Activity Repository, in transaction `SE38`, execute report `/OAA/CREATE_TRIGGERS`.

In addition to the trigger that updates temporary reservations, this report now also creates a trigger that creates and exposes data structures for the source properties you maintain in the SAP Fiori app [Manage Sources](#). Each time a new source becomes available in SAP Customer Activity Repository, the trigger is set off.

2. In SAP Customer Activity Repository, in transaction `SE38`, execute report `/OAA/SOURCE_UPGRADE`.

- If you have not used the app in an earlier version of SAP Customer Activity Repository yet, report /OAA/SOURCE_UPGRADE creates and exposes the new data structures for the sources that are already available in the system, thus enabling use of the enhanced app.
- If you have already used the app in an earlier version of SAP Customer Activity Repository, the report moves the source properties, such as status, general capacity, capacity exceptions for weekdays and individual dates, from the old data structures to the new data structures. This enables you to seamlessly continue using the app and the data already available in the app.

6.1.2.11.11 Use New Apps (SAP S/4HANA Only)

With SAP Customer Activity Repository 4.0, the *Manage Sources* and *Manage Sourcing Networks* apps were renamed and duplicated, in order to split apps between back ends.

Context

The functional scope of each pair of apps is identical. The apps are called as follows:

Old App	Split Into
<i>Manage Sources</i> (Fiori ID F3003)	<i>Manage Sources -SAP S/4HANA</i> (Fiori ID F3392) <i>Manage Sources - SAP Retail</i> (Fiori ID F3003)
<i>Manage Sourcing Networks</i> (Fiori ID F2530)	<i>Manage Sourcing Networks -SAP S/4HANA</i> (Fiori ID F3391) <i>Manage Sourcing Networks - SAP Retail</i> (Fiori ID F2530)

Procedure

If your back end is SAP S/4HANA, use the new apps. Your existing data was migrated to the new apps automatically.

i Note

Make sure that the corresponding OData services have been activated before. For more information, see [Verify that OData Services are Active \[page 100\]](#).

If your back end is SAP Retail, you may continue using the former apps.

6.1.2.11.12 Use New Tracing Tables for Analytics

With SAP Customer Activity Repository 4.0 FPS01, the programming tables introduced in version 4.0 and used to store tracing information were rendered obsolete and were replaced with new tables that are better suited for analytics.

Context

The tables were replaced as follows:

Trace Table in SAP Customer Activity Repository 4.0	Replaced with Trace Table in SAP Customer Activity Repository 4.0 FPS01
/OAA/TRC_DS_ES Trace table for building block <i>Read Sources</i>	/OAA/TRC_SRC_ES New trace table for sources
/OAA/TRC_BO_1DEL Trace table for business objective <i>Apply Rule: One Consignment Today</i>	/OAA/TRC_REASON Failure reason trace table
/OAA/TRC_BO_AFC Trace table for business objective <i>Apply Rule: As Few Consignments as Fast as Possible</i>	/OAA/TRC_REASON + /OAA/TRC_BO_CONS Failure reason and consignments trace tables
/OAA/TRC_BO_AFCA Trace table for business objective <i>Apply Rule: As Few Consignments as Fast as Possible (Advanced)</i>	/OAA/TRC_REASON + /OAA/TRC_BO_CONS Failure reason and consignments trace tables

The old trace tables are not filled any longer. Instead, the new tables are used.

Procedure

1. If you have used tracing for custom analytics in version 4.0 of SAP Customer Activity Repository and want to continue using this functionality when upgrading to version 4.0 FPS01 or higher, adapt your custom coding for analytics so that the new tables are referenced instead of the old ones.
2. If you want to continue using your historic tracing data, adapt your custom coding for analytics so that historic trace data and new trace data can be analyzed together.

6.1.2.11.13 Use New Tables for ATP Snapshot and Reservations and Delete Obsolete Entries

With SAP Customer Activity Repository 4.0 FPS02, the programming tables used to store ATP snapshot data and temporary reservations were rendered obsolete and were replaced with new tables, to allow integration of the *Context* field and to improve performance.

Context

i Note

If you have not used OAA in a version of SAP Customer Activity Repository earlier than 4.0 FPS02, you may skip this step.

The tables were replaced as follows:

Table in SAP Customer Activity Repository 4.0 FPS01 and Earlier	Replaced with Table in SAP Customer Activity Repository 4.0 FPS02
<code>/OAA/ATP_SNP_HDR</code> and <code>/OAA/ATP_SNP_ITM</code> Header table and item table for ATP snapshot data	<code>/OAA/ATP_SNPSHOT</code> Both old tables were merged into this new one.
<code>/OAA/ATP_RESV_H</code> and <code>/OAA/ATP_RESV_I</code> Header table and item table for temporary reservations	<code>/OAA/ATP_RESV</code> Both old tables were merged into this new one.

The old tables are not filled any longer. Instead, the new tables are used. Existing data is copied automatically to the new tables during the upgrade, without being deleted from the old tables. If you have enhanced the tables with custom fields, this makes sure that entries in these fields are preserved.

Procedure

- If you have not enhanced the ATP snapshot tables or the temporary reservation tables with custom fields, run report `/OAA/MIGRATED_DATA_DELETION` to delete all obsolete table entries.
- If you have enhanced the ATP snapshot tables or the temporary reservation tables with custom fields, migrate this data to the new tables, if required. Then run report `/OAA/MIGRATED_DATA_DELETION` to delete all obsolete table entries.

6.1.2.11.14 Schedule Report for Deletion of Temporary Reservations

With SAP Customer Activity Repository 4.0 FPS02, the deletion logic for temporary reservations was changed.

Context

Outdated temporary reservations are no longer deleted while the ATP snapshot is generated but are deleted through a dedicated report.

Schedule report `/OAA/ATP_OUTDATED_RESV_CLEANUP` (*Deletion of Outdated Temporary Reservations*).

i Note

Scheduling this report is a mandatory prerequisite for running omnichannel article availability and sourcing (OAA).

6.1.2.11.15 Trigger Initial Full Run of ATP Snapshot Replication (SAP S/4HANA 1909 Only, Sales Channel Mode Only)

Sales channel mode only; SAP S/4HANA 1909 only: With SAP Customer Activity Repository 4.0 FPS02, the delta mode of the ATP snapshot replication was changed.

Context

The delta mode of the ATP snapshot replication works correctly only after an initial full run of the replication.

Trigger a full run of report `/OAA/ATP_SNP_CALC` (*Generation and Replication of ATP Snapshot*).

6.1.2.12 Configure Omnichannel Promotion Pricing for Use with SAP Customer Activity Repository

To use the OPP module, you need to activate the functionality in Customizing and configure it for your specific scenario.

→ Tip

For information on how to configure the promotion pricing service in SAP Commerce, see the *Administrator Guide* of SAP Commerce, integration package for SAP for Retail on SAP Help Portal

under <https://help.sap.com/docs/IPR> ► <Version> ► Administration ► Omnichannel Promotion Pricing ► Configuration ►.

Related Information

[Activate Omnichannel Promotion Pricing \(OPP\) \[page 165\]](#)

[Activate the Data Replication Framework \(DRF\) \[page 167\]](#)

[Configure the Transformation of Offers into OPP Promotions \[page 165\]](#)

[Configure the Local Deployment of the Promotion Pricing Service \[page 166\]](#)

[Configure the Central Deployment of the Promotion Pricing Service \[page 182\]](#)

[Update the PPS SAP HANA XSA Application \[page 198\]](#)

[Use the Extended Sales Pricing Model \(DDF\) \[page 199\]](#)

6.1.2.12.1 Activate Omnichannel Promotion Pricing (OPP)

To use omnichannel promotion pricing for the calculation of the effective sales price, you have to activate the functionality.

In Customizing for SAP Customer Activity Repository, choose ► [Omnichannel Promotion Pricing](#) ► [Configure Omnichannel Promotion Pricing](#) ► [Activate OPP](#) ►.

6.1.2.12.2 Configure the Transformation of Offers into OPP Promotions

Related Information

[Enforce the Compatibility to Transform Offers into OPP Promotions \[page 166\]](#)

[Enable Offers with Enhanced Product Groups \[page 166\]](#)

[Enable Offers with Zero Discount \[page 166\]](#)

6.1.2.12.2.1 Enforce the Compatibility to Transform Offers into OPP Promotions

To transform offers into OPP promotions, it is recommended to enforce the compatibility to make sure that an offer can only be set to an operative status, for example *Approved*, if the transformation into an OPP promotion was successful.

In Customizing for SAP Customer Activity Repository under ► *Omnichannel Promotion Pricing (OPP)* ► *Configure Omnichannel Promotion Pricing* ► *Enforce Compatibility* ⌵.

6.1.2.12.2.2 Enable Offers with Enhanced Product Groups

If you want to include or exclude product groups from your offers or use them in mix-and-match offers, you have to enable enhanced product groups.

In Customizing for SAP Customer Activity Repository under ► *Omnichannel Promotion Pricing (OPP)* ► *Configure Omnichannel Promotion Pricing* ► *Enable Product Groups* ⌵.

Additionally, you have to enable product groups for the promotion pricing service. For more information about the configuration of product groups, see the *Development and Extension Guide for OPP* on SAP Help Portal at <https://help.sap.com/docs/CARAB> ► *<Version>* ► *Development* ► *Development and Extension Guide for Omnichannel Promotion Pricing* ⌵ under ► ► *Promotion Pricing Service* ► *PPS Module calcengine-gk* ► *Default Settings and Properties* ⌵.

6.1.2.12.2.3 Enable Offers with Zero Discount

By default offers with discount type *Everyday Low Price (EDLP)* are transformed into OPP promotions like offers with discount type *Regular Price*. If a monetary discount of zero should be applied to the previous price, you can enable the discount type *Zero Discount*. In this case, a retail price modifier is returned in the calculation response, but the previous price does not change.

You can enable this discount type in Customizing for SAP Customer Activity Repository under ► *Omnichannel Promotion Pricing (OPP)* ► *Configure Omnichannel Promotion Pricing* ► *Enable Zero Discount* ⌵.

6.1.2.12.3 Configure the Local Deployment of the Promotion Pricing Service

For a local deployment scenario, you have to replicate regular prices and OPP promotions from the central price and promotion repository (SAP Customer Activity Repository) to an external system to create a local storage for prices and promotions. This replication can be done via IDocs. For that, you have to configure application link enabling (ALE) and Data Replication Framework (DRF). For OPP promotions, there are two

options to configure this replication: the promotion-centric outbound processing and the location-specific outbound processing.

Prerequisites

- You have defined receiving systems and clients in the system landscape directory (SLD).

Procedure

1. Activate OPP functionality as described in [Activate Omnichannel Promotion Pricing \(OPP\) \[page 165\]](#).
2. Activate DRF functionality as described in [Activate the Data Replication Framework \(DRF\) \[page 167\]](#).
3. Define number ranges as described in [Define Number Ranges \[page 167\]](#).
4. Configure the Application Link Enabling for the outbound processing of regular prices and OPP promotions (promotion-centric or location-specific outbound processing):
 - [Configure Application Link Enabling for the outbound processing of regular prices and promotion-centric OPP promotions. \[page 168\]](#)
 - [Configure Application Link Enabling for the location-specific outbound processing of OPP promotions \[page 177\]](#)
5. Configure the Data Replication Framework for the outbound processing of regular prices and OPP promotions (promotions-centric or location-specific outbound processing):
 - [Configure the data replication for the outbound processing of regular prices and OPP promotions \(promotion-centric outbound processing\) \[page 171\]](#)
 - [Configure the data replication for OPP promotions \(location-specific outbound processing\) \[page 180\]](#)

6.1.2.12.3.1 Activate the Data Replication Framework (DRF)

To send regular prices and OPP promotion to an external system via IDocs, you have to activate the Data Replication Framework (DRF) functionality.

In transaction **SPFW5**, activate business function `DRF_FOUNDATION`.

6.1.2.12.3.2 Define Number Ranges

To send OPP promotions to an external system via IDocs, you can define number ranges to generate unique identifiers for all promotion-related entities.

In Customizing for SAP Customer Activity Repository, choose ► [Omnichannel Promotion Pricing \(OPP\)](#)
► [Define Number Ranges](#) ►.

6.1.2.12.3.3 Configure the Outbound Processing for Regular Prices and OPP Promotions

Configuration of the outbound processing of regular prices and promotion-centric OPP promotions.

Application Link Enabling

In Customizing for *SAP NetWeaver*, under [▶ Application Server ▶ IDoc Interface / Application Link Enabling \(ALE\) ▾](#), see the system documentation to check the settings for distributing data between application systems based on Application Link Enabling and IDoc interface technology. With omnichannel promotion pricing, this functionality is used to distribute OPP promotions and regular prices from SAP Customer Activity Repository to an external system, for example an SAP Commerce system. You need to perform the following steps:

Transaction **BD54**: Defining a Logical System

With ALE IDoc distribution, you can exchange data between logical systems. You use the logical system name to identify a system uniquely within the network. If you already use ALE IDoc distribution, the logical system for the sending system has already been defined. In this case, you only need to define a logical system for the receiving system. In SAP Customer Activity Repository, do the following:

In *Display View "Logical System": Overview*, create a new logical system. Enter the following values:

Field Name	Value
<i>Log. System</i>	<receiving system>
<i>Name</i>	<receiving system>

Transaction **SM59**: Defining an RFC Destination

1. Create the RFC destination in the *HTTP Connections to External Server* folder and enter the following values:

Field Name	Value
<i>RFC Destination</i>	<name of the RFC destination>
<i>Connection Type</i>	Enter connection type <i>G HTTP Connection to External Server</i> .
<i>Description</i>	Enter at least <i>Description 1</i> in the description section.

- In *Technical Settings*, enter the following values for *Target System Settings*:

Field Name	Value
<i>Target Host</i>	<name of the target host>
<i>Path Prefix</i>	/sappspricing/idocinbound
<i>Port</i>	<service number for https or http connection>

i Note
With OPP, an https connection is recommended.

- In *Logon and Security*, select *Basic Authentication* for *Logon with User*, and enter the following values:

Field Name	Value
<i>User</i>	<user name that you have created in SAP Commerce Backoffice >
<i>Password</i>	<password that you have created in SAP Commerce Backoffice >

In *Security Options* select *SSLActive* to send your data via https connection and enter an appropriate certificate.

i Note

We strongly recommend to use Secure protocols (SSL, SCN) whenever possible.

For more information, see *Transport Layer Security and Web Services Security* in the *SAP NetWeaver Security Guide*.

Transaction WE21: Defining a Port

- Create this ALE port in the *XML HTTP* folder and enter the following values:

Field Name	Value
<i>Port</i>	<name of port>
<i>Description</i>	<description of port>
<i>RFC destination</i>	<name of the RFC destination created in the previous step>

- Select *Text/XML* for Content Type.

Transaction WE20: Defining a Partner Profile

A partner profile contains parameters that define the electronic interchange of data between systems using the IDoc interface. There is only one partner profile required for the receiving system and it needs to contain all the parameters that your scenario requires for sending OPP promotions and regular prices to that receiving system.

Basic Partner Profile Information

To set up the basic partner profile information, do the following:

1. In *Partner Profiles*, create a logical system partner. Enter the following values:

Field Name	Value
<i>Partner No.</i>	<partner number> , which must be the same as the receiving system that you defined in section <i>Defining a Logical System</i>
<i>Partner Type</i>	LS for regular prices and OPP promotions sent via promotion-centric outbound processing

2. In the *Post processing: permitted agent* tab, enter the following values:

Field Name	Value
<i>Ty.</i>	US (for User)
<i>Agent</i>	<users to be notified> should be an agent who can process IDocs with errors
<i>Lang.</i>	<notification language>

Outbound Parameters

Field Name	Value
<i>Message Type</i>	<ul style="list-style-type: none">• /ROP/BASE_PRICE for regular prices• /ROP/PROMOTION for OPP promotions
<i>Outbound Options tab</i>	
<i>Receiver port</i>	<receiver port> as defined in section <i>Defining a Port</i>

Field Name	Value
<i>Output Mode</i>	<ul style="list-style-type: none"> • <i>Pass IDoc Immediately</i> <ul style="list-style-type: none"> • Select this option to transfer IDocs directly after creation for a better integration to the DRF transfer log. • Select this option to make sure that IDocs are sent in the same order in which they have been created. • <i>Collect IDocs</i> <ul style="list-style-type: none"> • Select this option to collect IDocs and transfer them sequentially with transaction WE14.
<i>IDoc Type</i>	<ul style="list-style-type: none"> • /ROP/BASE_PRICE01 for regular prices • Depending on the receiving system /ROP/PROMOTION01, /ROP/PROMOTION02, /ROP/PROMOTION03, or /ROP/PROMOTION04 for OPP promotions
<i>Cancel Processing After Syntax Error</i>	Ensure that this field is selected to avoid sending erroneous IDocs.

Data Replication Framework

In Customizing for *Cross-Application Components* under [► Processes and Tools for Enterprise Applications](#) [► Master Data Governance, Central Governance](#) [► General Settings](#) [► Data Replication](#) [► Overall Information](#), see the system documentation to check how data is sent to one or more target systems. With OPP, the Data Replication Framework functionality is used to send regular prices and OPP promotions from an SAP Customer Activity Repository system to external systems. You need to perform the following steps:

Transaction **DRFIMG**: Defining Custom Settings for Data Replication

In Customizing, you have to perform the following configuration steps under [► Data Replication](#) [► Define Custom Settings for Data Replication](#):

1. In Customizing activity *Define Technical Settings for Business Systems*, define a business system and a logical system for the receiving systems. The following business object types are available to send OPP promotions and regular prices, and can be assigned to the business system:

Business Object Type	Description	Communication Channel
ROP_PROMO	OPP promotion	Replication via IDoc
ROP_PRICE	Regular price	Replication via IDoc

2. In Customizing activity *Define Replication Models*, specify the content of the replication model (regular prices or OPP promotions), the outbound implementation that is to be used, and the business system to which this object is to be sent. You can specify a different destination system for each outbound

implementation that contains business object, filter object, and business logic. You can also add an expiration time for the log. The following predefined outbound implementations exist:

Outbound Implementation	Description	Supported Replication Model	Filter Object
ROP_PRICE	Outbound implementation for regular prices	Initialization, Change, and Manual	ROP_PRICE
ROP_PROMO	Outbound implementation for OPP promotions sent via promotion-centric outbound processing	Initialization, Change, and Manual	ROP_PROMO
ROP_PRC_MG	<p>Outbound implementation for multi-level generated regular prices</p> <p>Use this additional outbound implementation for regular prices instead of ROP_PRICE to support the extended sales pricing model for Demand Data Foundation (DDF).</p> <p>For more information, see Use the Extended Sales Pricing Model (DDF) [page 199].</p>	Initialization, Change, and Manual	ROP_PRICE

i Note
 For this outbound implementation, the filter application time needs to be set to *Filter Before Change Analysis*.

i Note
 For this outbound implementation, the filter application time needs to be set to *Filter Before Change Analysis*.

Outbound Parameters

The following outbound parameters must be assigned to each replication model:

Outbound Parameter for Regular Prices	Description	Typical Value*
/ROP/PACK_SIZE_BULK	<p>This parameter sets the maximum number of regular prices that are processed per IDoc. This is an approximate value because regular prices are assigned to different IDocs for each group of business unit with items and prices.</p> <p>i Note</p> <p>If this parameter is set to 0, restricting regular prices is not possible and it is only the number of products that determines the IDoc size.</p>	20,000-100,000
PACK_SIZE_BULK	<p>This parameter controls the number of products for which regular prices can be stored in a compressed format at the same time, and sets the maximum number of products that are processed per IDoc.</p> <p>i Note</p> <p>If this parameter is not set, the default is 1. If you increase this value, performance at runtime is improved since fewer IDocs need to be processed.</p>	200-1,000
TASK_SIZE_PROCMMSG	<p>This parameter is only relevant if you execute the data replication using parallel processing . This parameter sets the maximum number of products that are processed per parallel package. It must be greater or equal to the PACK_SIZE_BULK parameter.</p> <p>i Note</p> <p>This parameter value does not define the number of regular prices per package. If this parameter is set to 0, all products are processed in one package. This means that parallel processing is not possible.</p>	400-2,000
/ROP/SEQ_READ_SIZE	<p>This parameter sets the maximum number of products for which the regular prices are read in one select statement. In this way you can limit memory consumption for products with a large number of regular prices.</p> <p>i Note</p> <p>If this parameter is set to 0, all products of the corresponding package are read within one call.</p>	100-200

Outbound Parameter for Regular Prices	Description	Typical Value*
/ROP/DAY_OFFSET_PAST	<p>This parameter is only used, if the selection of prices in the past is restricted with the validity end date as a filter criteria and if the validity end date is not too far in the past.</p> <p>During a delta replication, this parameter defines a time range in days that lies before the date of the last replication run. The system subtracts this value from the last replication date and uses the resulting date to construct the select-option for the validity end date.</p> <p>During an initial replication the system calculates a date (current date minus the time range in days defined in this parameter). If the date that you entered for the validity end is earlier than the calculated date, the calculated date is used automatically.</p> <p>In this way you ensure that also regular prices with a validity end date in the specified past time range are transferred.</p> <div data-bbox="526 936 1165 1122" style="background-color: #f0f0f0; padding: 5px;"> <p>i Note</p> <p>If this parameter is not set, relevant regular prices might not be transferred. See SAP Note 2338714. In this case the default is set to 30 days.</p> </div>	30
/ROP/PACK_SIZE_LOC	<p>This parameter sets the maximum number of business units grouped in an outbound IDoc under one IDoc segment of type /ROP/E1_BASE_PRICE. If you want to transfer regular prices for a large amount of business units, you can use this parameter to group your business units into smaller packages. In this case, the evaluation of parameter /ROP/PACK_SIZE_BULK works more precisely so that you can reduce the number of regular prices in one IDoc as well.</p> <div data-bbox="526 1406 1165 1556" style="background-color: #f0f0f0; padding: 5px;"> <p>i Note</p> <p>If this parameter is not set or set to 0, then the program behavior remains unchanged.</p> </div>	200-1000

Outbound Parameter for OPP Promotions	Description	Typical Value*
PACK_SIZE_BULK	This parameter sets the maximum number of OPP promotions that are processed per IDoc. It must be smaller than the TASK_SIZE_PROCMMSG parameter and is relevant for both, the sequential and the parallel execution of DRF outbound.	100-1,000
<p>i Note</p> <p>If this parameter is not set, the default is 1. If you increase this value, performance at runtime is improved since fewer IDocs need to be processed.</p>		
TASK_SIZE_PROCMMSG	This parameter is only relevant with parallel processing . It sets the maximum number of OPP promotions that are processed per parallel package. It must be greater or equal to the PACK_SIZE_BULK parameter.	100-5,000
<p>i Note</p> <p>This parameter value does not define the number of OPP promotions per package. If this parameter is set to 0, independently of the value that you enter in transaction DRFOUT, parallel processing is not possible.</p>		
/ROP/Generic_ENH_MAP	This parameter activates the automatic mapping of customer-specific fields that are stored in the CI-Includes of promotional entities to the corresponding extension segments in the OPP promotion IDocs.	x
<p>i Note</p> <p>Internal tables, structures, and so on, are not supported.</p>		

*This value gives you an idea of usable values for the replication of regular prices and OPP promotions, it is not a recommendation.

- Optional: In Customizing activity *Define Business Object Settings*, specify the application link enabling (ALE) message type that is to be used for each business object. In this way, you can determine the retention period for change pointers that are related to the business object. For the outbound processing of regular prices, no change pointers are used and the retention period is not relevant. The following message types are relevant for the outbound processing of regular prices and OPP promotions from the central price and promotion repository:

Business Object Type	Message Type
ROP_PRICE	/ROP/BASE_PRICE

Business Object Type	Message Type
ROP_PROMO	/ROP/PROMOTION

For more information, see Customizing for [Cross Application Components](#) under [Processes and Tools for Enterprise Applications](#) > [Master Data Governance, Central Governance](#) > [General Settings](#) > [Data Replication](#) > [Overall Information](#) .

Transaction DRFF: Defining Filter Criteria

In [Define Filter Criteria](#), specify your data selection for each replication model and business object. The filter criteria are valid for [Initial](#) replication and [Change](#) replication.

Parallel Processing for Regular Prices and OPP Promotions

DRF enables outbound implementations to be executed by using parallel tasks. This feature is supported for both, the outbound implementation for regular prices and the outbound implementation for OPP promotions. You can transfer the different tasks to different servers by defining and choosing server groups. Before replicating the data, you can define the maximum number of work processes that can run in parallel. These parameters combined with the outbound parameters mentioned above provide a flexible configuration.

6.1.2.12.3.4 Overview of IDoc Types

IDoc Type	Enhancements
/ROP/BASE_PRICE01	Initial version
/ROP/PROMOTION01	Initial version
/ROP/PROMOTION02	Merchandise set added
/ROP/PROMOTION03	Additional bonus added
/ROP/PROMOTION04	Merchandise set header and name added

i Note

The entire merchandise set header was added to the new IDoc type. The merchandise set name is part of the header.

i Note

The table does not include all features offered with omnichannel promotion pricing. It only lists those features that require a specific IDoc type.

All IDoc types mentioned above are supported. However, if you want to use newer features, you must use the IDoc type that supports the respective feature.

The system automatically detects if the correct IDoc type has been entered for the OPP promotion to be sent.

6.1.2.12.3.5 Configure the Location-Specific Outbound Processing of OPP Promotions

The location-specific outbound processing of OPP promotions enables you to distribute a location-specific view of OPP promotions. With this outbound option OPP promotions are sent from the central price and promotion repository to its assigned locations. You can use this option if you, for example, want to send OPP promotions to POS systems in your physical stores. This section describes how to configure the Application Link Enabling (ALE) layer and Data Replication Framework (DRF) for the sending of IDocs.

Application Link Enabling

In Customizing for *SAP NetWeaver*, under [▶ Application Server ▶ IDoc Interface / Application Link Enabling \(ALE\) ▶](#), see the system documentation to check the settings for distributing data between application systems based on Application Link Enabling and IDoc interface technology. With omnichannel promotion pricing, this functionality is used to distribute OPP promotions and regular prices from SAP Customer Activity Repository to an external system, for example an SAP Commerce system. You need to perform the following steps:

Transaction **SM59**: Defining an RFC Destination

For each receiving system that initially receives the created IDocs, you have to create an RFC destination. If you use a middleware, this RFC destination refers to the host in which the middleware is running. If you use a 1:1 connection, all receiving systems require a separate RFC destination. The attributes of the RFC destination are determined by the receiving system. In the following we assume that we want to setup a location-specific outbound processing to a local promotion pricing service in a SAP Commerce system that is directly connected to the SAP Customer Activity Repository.

1. In *Technical Settings*, enter the following values for *Target System Settings*:

Field Name	Value
<i>Target Host</i>	<name of the target host>
<i>Path Prefix</i>	/sapppspricing/idocinbound
<i>Port</i>	<service number for https or http connection>

i Note
With OPP, an https connection is recommended.

- In *Logon and Security*, select *Basic Authentication* for *Logon with User*, and enter the following values:

Field Name	Value
<i>User</i>	<user name that you have created in SAP Commerce Backoffice >
<i>Password</i>	<password that you have created in SAP Commerce Backoffice >

In *Security Options* select *SSLActive* to send your data via https connection and enter an appropriate certificate.

Note

We strongly recommend to use Secure protocols (SSL, SCN) whenever possible.

For more information, see *Transport Layer Security and Web Services Security* in the *SAP NetWeaver Security Guide*.

Transaction WE21: Defining a Port

- Create this ALE port in the *XML HTTP* folder and enter the following values:

Field Name	Value
<i>Port</i>	<name of port>
<i>Description</i>	<description of port>
<i>RFC destination</i>	

- Text/XML*.

Transaction WE20: Defining a Partner Profile

A partner profile contains parameters that define the electronic interchange of data between systems using the IDoc interface. There is only one partner profile required for the receiving system and it needs to contain all the parameters that your scenario requires for sending OPP promotions and regular prices to that receiving system.<name of the RFC destination created in the previous step>

Basic Partner Profile Information

To set up the basic partner profile information, do the following:

- In *Partner Profiles*<, create a logical system partner. Enter the following values:

Field Name	Value
<i>Partner No.</i>	External ID of the receiving DDF location

Field Name	Value
<i>Partner Type</i>	LO for OPP promotions replicated via location-specific outbound processing

i Note

For this partner type, only the first 10 characters of the DDF location ID are taken into account, the location type and logical system are ignored. If you want to use a different logic, use transaction **WE44** to define a different partner type or to change the validation logic.

Select a content type supported with the receiving system. If you configure a locallf you need a different implementation of BAdI `/ROP/PROMO_STORE_OUTBOUND`, see Customizing for SAP Customer Activity Repository and choose [► Omnichannel Promotion Pricing \(OPP\)](#) [► Business Add-Ins \(BAdIs\)](#) [► Outbound Processing of OPP Promotions](#) [► BAdI: Location-Specific Outbound Processing](#) [►](#).

- In the *Post processing: permitted agent* tab, enter the following values:

Field Name	Value
<i>Ty.</i>	US (for User)
<i>Agent</i>	<users to be notified> , which should be an agent who can process IDocs with errors.
<i>Lang.</i>	<notification language>

Outbound Parameters

Field Name	Value
<i>Message Type</i>	<code>/ROP/PROMOTION</code> for OPP promotions
<i>Outbound Options tab</i>	
<i>Receiver port</i>	<receiver port> as defined in section <i>Defining a Port</i>
<i>Output Mode</i>	<ul style="list-style-type: none"> • Pass IDoc Immediately <ul style="list-style-type: none"> • Select this option to transfer IDocs directly after creation for a better integration to the DRF transfer log. • Select this option to make sure that IDocs are sent in the same order in which they have been created. • Collect IDocs <ul style="list-style-type: none"> • Select this option to collect IDocs and transfer them sequentially with transaction WE14.
<i>IDoc Type</i>	Depending on the receiving system <code>/ROP/PROMOTION01</code> , <code>/ROP/PROMOTION02</code> , <code>/ROP/PROMOTION03</code> , or <code>/ROP/PROMOTION04</code> for OPP promotions

Field Name	Value
Cancel Processing After Syntax Error	Ensure that this field is selected to avoid sending erroneous IDocs.

Data Replication Framework

In Customizing for *Cross-Application Components* under [► Processes and Tools for Enterprise Applications ► Master Data Governance, Central Governance ► General Settings ► Data Replication ► Overall Information](#), see the system documentation to check how data is replicated to one or more target systems. With OPP, the Data Replication Framework functionality is used to send regular prices and OPP promotions from an SAP Customer Activity Repository system to external systems. You need to perform the following steps:

Transaction **DRFIMG**: Defining Custom Settings for Data Replication

In Customizing, you have to perform the following configuration steps under [► Data Replication ► Define Custom Settings for Data Replication](#):

1. In Customizing activity [Define Technical Settings for Business Systems](#), define a business system and a logical system for the receiving systems. The following business object types are available to replicate OPP promotions and regular prices, and can be assigned to the business system:

Business Object Type	Description	Communication Channel
ROP_PRO_ST	Location-specific outbound processing of OPP promotions	Replication via IDoc

2. In Customizing activity [Define Replication Models](#), specify the content of the replication model (regular prices or OPP promotions), the outbound implementation that is to be used, and the business system to which this object is to be sent. You can specify a different destination system for each outbound implementation that contains business object, filter object, and business logic. You can also add an expiration time for the log. The following predefined outbound implementations exist:

Outbound Implementation	Description	Supported Replication Model	Filter Object
ROP_PRO_ST	Outbound implementation for OPP promotions sent via location-specific outbound processing	Initialization, Change, and Manual	ROP_PRO_ST

Outbound Parameters

The following outbound parameters must be assigned to each replication model:

Outbound Parameter for OPP Promotions	Description	Typical Value*
PACK_SIZE_BULK	This parameter sets the maximum number of OPP promotions that are processed per IDoc. It must be smaller than the TASK_SIZE_PROCMMSG parameter and is relevant for both, the sequential and the parallel execution of DRF outbound.	100-1,000
<p>i Note</p> <p>If this parameter is not set, the default is 1. If you increase this value, performance at runtime is improved since fewer IDocs need to be processed.</p>		
TASK_SIZE_PROCMMSG	This parameter is only relevant with parallel processing . It sets the maximum number of OPP promotions that are processed per parallel package. It must be greater or equal to the PACK_SIZE_BULK parameter.	100-5,000
<p>i Note</p> <p>This parameter value does not define the number of OPP promotions per package. If this parameter is set to 0, independently of the value that you enter in transaction DRFOUT, parallel processing is not possible.</p>		
/ROP/Generic_ENH_MAP	This parameter activates the automatic mapping of customer-specific fields that are stored in the CI-Includes of promotional entities to the corresponding extension segments in the OPP promotion IDocs.	x
<p>i Note</p> <p>Internal tables, structures, and so on, are not supported.</p>		

*This value gives you an idea of usable values for the replication of regular prices and OPP promotions, it is not a recommendation.

- Optional: In Customizing activity *Define Business Object Settings*, specify the application link enabling (ALE) message type that is to be used for each business object. In this way, you can determine the retention period for change pointers that are related to the business object. For the outbound processing of regular prices, no change pointers are used and the retention period is not relevant. The following message

types are relevant for the outbound processing of regular prices and OPP promotions from the central price and promotion repository:

Business Object Type	Message Type
ROP_PRICE	/ROP/BASE_PRICE
ROP_PROMO	/ROP/PROMOTION

For more information, see Customizing for [Cross Application Components](#) under [Processes and Tools for Enterprise Applications](#) > [Master Data Governance, Central Governance](#) > [General Settings](#) > [Data Replication](#) > [Overall Information](#) .

Transaction **DRFF**: Defining Filter Criteria

In [Define Filter Criteria](#), specify your data selection for each replication model and business object. The filter criteria are valid for [Initial](#) replication and [Change](#) replication.

6.1.2.12.4 Configure the Central Deployment of the Promotion Pricing Service

The promotion pricing service (PPS) is an SAP HANA XS advanced (XSA) application. Therefore the configuration of, for example, database services and back-end connection information, is done before or during the deploy time. The needed configuration settings are provided via command line interface, or in an extension descriptor file. Authentication configuration and authorization configuration is done after deploy time.

Prerequisites

- You have installed SAP HANA XSA version 1.0.88 or higher.
- You have access to the XSA command-line tool version 1.0.82 or higher.
- You have an XSA user with the following role collections:
 - XS_CONTROLLER_ADMIN
 - XS_USER_ADMIN
 - XS_USER_PUBLIC
 - XS_AUTHORIZATION_ADMIN

i Note

In the following documentation this user will be referred to as **XSA PPS admin user**.

- You have an XSA user with the business role XS_USER_PUBLIC.

i Note

In the following documentation this user will be referred to as **XSA PPS business user**.

- You have a database user that can access the standard schema of your SAP Customer Activity Repository system via the SQL port, in which the database tables of the PPS are located.
- You have created and configured the organization and the space in which you want to install the promotion pricing service application.
- You have downloaded the SCV file `XSACOPPPPS04_<patch_level>-80004642.ZIP` (for example patch level `0` for the initial delivery) for the PPS from the SAP Support Portal at <https://support.sap.com>.

Used XSA Services

The PPS application uses the following XSA services:

Service Instance	Service	Plan	Resource Type	Description
ppeHANA	User-defined	n/a	org.cloudfoundry.existing-service	Service to access the database.
ppServiceUaa	xsuaa	space	com.sap.xs.uaa-space	Service for authentication and authorization services. Plan space allows the installation of the PPS app in different XSA spaces.
ppServiceAuditLog	auditlog	free	com.sap.xs.auditlog	Audit log broker on the XSA platform.

Note

The services `ppServiceUaa` and `ppServiceAuditLog` are created and bound automatically during the installation of the PPS application.

Procedure

1. [Create the ppeHana Database Service \[page 184\]](#)
2. [Create the Extension Descriptor File \[page 186\]](#)
3. [Configure Authentication and Authorization Settings \[page 188\]](#)
4. [Advanced Configuration Settings \[page 190\]](#)

Related Information

- For more technical information about SAP HANA XS advanced, see the *SAP HANA Developer Guide for SAP HANA XS Advanced Model* on SAP Help Portal at https://help.sap.com/docs/SAP_HANA_PLATFORM **>** [<Version>](#) **>** [Development](#) **>** [SAP HANA Developer Guide](#) **>**
- For more information about the installation of SAP HANA XS advanced, see the *SAP HANA Server Installation and Update Guide* on SAP Help Portal at https://help.sap.com/docs/SAP_HANA_PLATFORM **>** [<Version>](#) **>** [Installation and Upgrade](#) **>** [SAP HANA Server Installation and Upgrade Guide](#) **>** [Installing an SAP HANA System](#) **>** [Installing XS Advanced Runtime](#) **>**
- For more administration information about SAP HANA XS advanced, see the *SAP HANA Administration Guide for SAP HANA Platform* on SAP Help Portal at https://help.sap.com/docs/SAP_HANA_PLATFORM **>** [<Version>](#) **>** [Administration](#) **>** [SAP HANA Administration Guide for SAP HANA Platform](#) **>** [Application Run-Time Services](#) **>** [Maintaining the SAP HANA XS Advanced Model Run Time](#) **>**

6.1.2.12.4.1 Create the ppeHana Database Service

To make the PPS run, you have to create the database service *ppeHana*. How to create this service depends on your SSL (Secure Socket Layer) configuration settings in your SAP HANA database.

SSL Not Activated in SAP HANA

If SSL is not activated in SAP HANA, proceed as follows:

1. Execute the following xs command to create the database service depending on your local environment
For Windows Command Line use:

Source Code

```
xs create-user-provided-service ppeHana -p
"{\"user\": \"<DB_USER>\", \"password\": \"<DB_USER_PASSWORD>\", \"url\": \"jdbc
:sap://<HOSTNAME>:<PORT>/?
sessionVariable:APPLICATION=SAP_OPP_PPS_HRA\", \"driver\": \"com.sap.db.jdbc.
Driver\"}"
```

For Linux Shell use:

Source Code

```
xs create-user-provided-service ppeHana -p
'{"user": "<DB_USER>", "password": "<DB_USER_PASSWORD>", "url": "jdbc:sap://
<HOSTNAME>:<PORT>/?
sessionVariable:APPLICATION=SAP_OPP_PPS_HRA", "driver": "com.sap.db.jdbc.Driv
er"}'
```


2. Adjust the following entries in angle brackets (<...>) in the command line:

Entry	Comment
<DB_USER>	Replace this entry with a valid database user of your SAP Customer Activity Repository system. With this user, you must be able to access the standard schema of your SAP Customer Activity Repository system via the SQL port, in which the database tables of the PPS are located.
<DB_USER_PASSWORD>	Replace this entry with the password of your database user (in clear text) in your SAP Customer Activity Repository system. Note If your password policy forces a password change after the first login, it must be changed before you create ppeHana.
<HOSTNAME>	Replace this entry with the database host name of your SAP Customer Activity Repository system.
<PORT>	Replace this entry with the database SQL port of your SAP Customer Activity Repository system.

→ Tip

When you have created the database service, clear the command history to prevent unauthorized disclosure of the password.

SSL Activated in SAP HANA

If SSL is activated in SAP HANA proceed as follows:

1. Execute the following xs command to create the database service depending on your local environment
For Windows Command Line use:

Source Code

```
xs create-user-provided-service ppeHana -p  
"{"user\":"<DB_USER>\","password\":"<DB_USER_PASSWORD>\","url\":"jdbc  
:sap://<HOSTNAME>:<PORT>/?  
encrypt=true"&"validateCertificate=<VALUE>"&"sessionVariable:APPLICATION=S  
AP_OPP_PPS_HRA\","driver\":"com.sap.db.jdbc.Driver\","certificate\":"  
-----BEGIN CERTIFICATE-----\nMIIFpzCww[...]-----END CERTIFICATE-----\n\"}"}"
```

For Linux Shell use:

Source Code

```
xs create-user-provided-service ppeHana -p
'{"user": "<DB_USER>", "password": "<DB_USER_PASSWORD>", "url": "jdbc:sap://
<HOSTNAME>:<PORT>/?
encrypt=true&validateCertificate=true&sessionVariable:APPLICATION=SAP_OPP_P
PS_HRA", "driver": "com.sap.db.jdbc.Driver", "certificate": "-----BEGIN
CERTIFICATE-----\nMIIFpzCww[...]-----END CERTIFICATE-----\n"}'
```

2. If you want to validate the server certificate, set `<VALUE>` of `validateCertificate` to `true`. In this case, you either have to ensure that your Java VM trusts the server certificate, or you must set the parameter certificate as shown in the following example of a ppeHana service instance:

Sample Code

```
{
  "name" : "ppeHana",
  "credentials" : {
    "password" : "<DB_USER_PASSWORD>",
    "driver" : "com.sap.db.jdbc.Driver",
    "port" : "<PORT>",
    "host" : "<HOSTNAME>",
    "user" : "<DB_USER>",
    "url" : "jdbc:sap://<HOSTNAME>:<PORT>/?
encrypt=true&validateCertificate=true",
    "certificate" : "-----BEGIN CERTIFICATE-----\nMIIFpzCww[...]-----END
CERTIFICATE-----\n"
  }
}
```

→ Tip

When you have created the database service, clear the command history to prevent unauthorized disclosure of the password.

6.1.2.12.4.2 Create the Extension Descriptor File

To store the PPS-specific configuration settings, you must create an extension descriptor file.

1. Create a text file with suffix `.mtaext`, for example `config-op.mtaext`.
2. To create the extension descriptor file, copy the following content to the new file that you have created in step 1:

i Note

This content includes the minimum settings that are necessary to create the extension descriptor file. Further configuration settings, for example settings for caching, can be added to this file as required.

Source Code

```
_schema-version: "2.0.0"
ID: com.sap.retail.ppsservice.XSAC_OPP_PPS
```

```

extends: com.sap.retail.ppservice.XSAC_OPP_PPS
modules:
  - name: ppservice-approuter
    parameters:
      memory: 128M
  - name: ppservice-webapp-central
    parameters:
      memory: 1024M
    properties:
      sap.dataaccess-common.db.client: "<DB_CLIENT>"
      sap.dataaccess-common.logSys: "<LOGSYS>"
      DISABLE_SUCCESSFUL_LOGIN_AUDIT_LOG: "<AUDIT_LOG_FLAG>"
      JBP_CONFIG_RESOURCE_CONFIGURATION: "[ 'tomcat/
webapps/ROOT/WEB-INF/classes/ppe-schema-orm.xml': { 'sap.dataaccess-
common.schema': '<DB_SCHEMA>' }, 'tomcat/webapps/ROOT/META-INF/context.xml':
{ 'ppeHana-service-name': 'ppeHana' } ]"
      JBP_CONFIG_JAVA_OPTS: 'java_opts: -D'
    provides:
      - name: java

```

i Note

This configuration is written in YAML format. Make sure that you copy the format of the code block correctly.

- Adjust the following entries in angle brackets (<...>) in the file:

Entry	Comment	Example
<DB_CLIENT>	Replace this entry with the client of your SAP Customer Activity Repository system.	400
<LOGSYS>	Replace this entry with the logical system ID of your master data system that is connected to your SAP Customer Activity Repository client. If you want to support multiple master data systems in your SAP Customer Activity Repository client, you need one promotion pricing service for each system (in different spaces).	XYZCLNT400
<AUDIT_LOG_FLAG>	If you set this flag to true, the system creates audit log messages only for failed login attempts. If you set this flag to false, every login is recorded. This is of limited use for an A2A communication. To achieve optimal performance, it is recommended to set this flag to true.	true

Entry	Comment	Example
<DB_SCHEMA>	Replace this entry with the standard database schema of your SAP Customer Activity Repository system.	SAPHANADB

→ Tip

If you need higher values for default memory settings, especially for `ppservice-webapp-central`, you can choose larger cache sizes.

- Assuming that your extension descriptor file is called `config-op.mtaext` and that the command is called from the directory in which your extension descriptor file is stored, execute the following command to install the application:

≡ Source Code

```
xs install <pathToScvFile>/XSACOPPPPS<software_component_version>.ZIP -e
config-op.mtaext
```

- Save the extension descriptor file for later update or patch activities.

i Note

If you want to reinstall the same software component version, add the following parameter to the install command: `-o ALLOW_SC_SAME_VERSION`

For more information about possible additional parameters, see the documentation of this install command.

6.1.2.12.4.3 Configure Authentication and Authorization Settings

To use the central promotion pricing service, you must have the necessary roles created and assigned.

Creating and Assigning a PPS Role Collection

Execute the following steps with your XSA PPS admin user.

- Create a role collection for the PPS with the following `xs` command:

≡ Source Code

```
xs create-role-collection <NAME> [<DESCRIPTION>]
e.g., xs create-role-collection PPE_ROLE_COLLECTION "PPE ROLE COLLECTION"
```

- Navigate to the organisation and space in which the PPS has been installed.

→ Tip

You can change organisations and spaces with the `xs` command `xs target -o <ORG_NAME> -s <SPACE_NAME>`.

- Check if the role template `ppservice-webapp-central` is listed in the space.

i Note

If the installation has been successful, this role template must be listed in this space. You can verify this by listing all role templates with `xs` command `xs role-templates`.

- Create a role with the PPS role template:

≡ Source Code

```
xs create-role <APP> <ROLE_TEMPLATE> <ROLE_NAME> <DESCRIPTION>
e.g., xs create-role ppservice-webapp-central PPE_ROLE_TEMPLATE
PPE_ROLE_XYZ "PPE role for xyz"
```

- Add the new role to the new role collection:

≡ Source Code

```
xs update-role-collection <ROLE_COLLECTION> --add-role <ROLE>
e.g., xs update-role-collection PPE_ROLE_COLLECTION --add-role PPE_ROLE_XYZ
```

- Assign the new role collection to the XSA PPS business user:

≡ Source Code

```
xs assign-role-collection <ROLE_COLLECTION> <USER>
e.g., xs assign-role-collection PPE_ROLE_COLLECTION PPSUSER
```

→ Tip

You can call `xs help -a` to get an overview of other `xs` commands regarding role management.

- Verify that the PPS user that you have created in the prior step is working. For this, you have to enter the following request details in your REST Client (like Postman for Chrome) to send a calculation request:

Request Details	Value
HTTP Request Method	<code>POST</code>
Authorization	<code>Type = Basic Authentication</code> <code>User name = <name of the XSA PPS business user></code>

Request Details	Value
	<p><i>Password</i> = <code><password of the XSA PPS business user></code></p> <div style="border: 1px solid #ccc; padding: 5px; background-color: #f9f9f9;"> <p>i Note</p> <p>If your password policy prompts users to change their password when they log on to the system for the first time, this needs to be done before a request is sent via Rest Client.</p> </div>
Headers	<p><i>Accept</i> = <code>application/xml</code></p> <hr/> <p><i>Content-Type</i> = <code>application/xml</code></p>
URL	<ol style="list-style-type: none"> 1. Call the command <code>xs apps</code> and check for the URL of the <code>ppservice-approuter</code> app. 2. Append <code>/restapi/</code> to the URL and enter this information in your REST Client.
Body	<pre><PriceCalculate xmlns="http://www.sap.com/IXRetail/namespace/"></pre>

i Note

If you send this request, you get HTTP response code *400 (Bad Request)* because you send an empty request body.

If you receive HTTP response code *401 (Unauthorized)* or *403 (Forbidden)*, there is something wrong with your service user, or application. Double-check all steps that you have performed in this chapter.

6.1.2.12.4.4 Advanced Configuration Settings

The following settings are not mandatory in a default setup but help you to adapt the PPS to your specific needs. Some settings become mandatory if you use the Demand Data Foundation (DDF) extended sales pricing model.

Recommended Settings

By default, all database accesses to OPP promotion and regular price entities are cached. You can use the following two types of caches:

- Object cache based on JPA
In this case, OPP promotions and their child entities (price derivation rules, texts, and so on) are stored in the L2 object cache of the JPA provider.
- Query result cache based on Spring Framework

In this case, regular prices and the results of search queries for IDs of price derivation rule eligibilities are stored in a cache. This cache is used via Spring cache abstraction. The cache provider determines the settings for the query result cache (regular prices, eligibility IDs). Google Guava is the default cache provider and allows the configuration of the cache via a cache specification string per cache region.

Query Result Caches for OPP Promotions and Regular Prices

The following example shows the setting of the query caches for OPP promotions and regular prices:

Source Code

```
# Use Spring caching for promotions and regular prices - true is the default
setting
sap.dataaccess-common.cachenamedqueries=true
# Spring cache for promotions
sap.dataaccess-common.promocachespec=maximumSize=10000,expireAfterWrite=20m
# Spring cache for regular prices
sap.dataaccess-
common.basepricecachespec=maximumSize=10000,expireAfterWrite=20m
```

To apply these settings, they must be part of the extension descriptor (MTAEXT file) in the `properties` section. Even if you do not want to use caching, it is **not** recommended to set `sap.dataaccess-common.cachenamedqueries` to false. Instead, set the `expireAfterWrite` to a short timeframe (such as 10 s), which leads to a more optimized processing internally.

Further recommended settings are:

- Enabling dynamic weaving leads to optimized database accesses. This is done by activating the spring profile `sapweaving`.
- Enabling merchandise sets. For reasons of backward compatibility, this is disabled by default. It is a PCE configuration property that must be set differently than non-PCE configuration properties.

In the following example, merchandise sets are supported and dynamic weaving is activated. It also shows how multiline strings can be set in the MTAEXT file, which follows the YAML syntax:

```
properties:
  sap.dataaccess-common.db.client: "<DB_CLIENT>"
  sap.dataaccess-common.logSys: <LOGSYS>
  sap.dataaccess-common.cachenamedqueries: "true"
  sap.dataaccess-common.promocachespec: "maximumSize=10000,expireAfterWrite=20m"
  sap.dataaccess-common.basepricecachespec: "maximumSize=10000,expireAfterWrite=20m"
  SPRING_PROFILES_ACTIVE: sapweaving
  JBP_CONFIG_JAVA_OPTS: >
    java_opts: -DmerchandiseSetsEnabled=true
```

Note

- It is also possible to set the PPS configuration properties via `-D` in the `java_opts` element of `JBP_CONFIG_JAVA_OPTS`. In this case, changing the environment variables, for example via `xs set-env` followed by a restart of the application, has no effect. In this case, you would need to restage the application. It is recommended to add them to the `properties` section of the MTAEXT file as shown in the previous code sample.
- The PCE-related configurations, such as enabling the support of merchandise sets, must be set in the `java_opts` element of `JBP_CONFIG_JAVA_OPTS` as shown in the previous code sample. They are not recognized in the `properties` section of the MTAEXT file. The list of configuration properties is part of

Extended Sales Pricing Model

If you want to use the Demand Data Foundation (DDF) extended sales pricing model for OPP, you have to activate the spring profile `sapmultilevelprc`, which supports multilevel generated regular prices. This can be done in addition to other spring profiles such as `sapweaving`.

```
properties:
  sap.dataaccess-common.db.client: "<DB_CLIENT>"
  sap.dataaccess-common.logSys: <LOGSYS>
  sap.dataaccess-common.cachenamedqueries: "true"
  sap.dataaccess-common.promocachespec:
"maximumSize=10000,expireAfterWrite=20m"
  sap.dataaccess-common.basepricecachespec:
"maximumSize=10000,expireAfterWrite=20m"
  SPRING_PROFILES_ACTIVE: sapmultilevelprc, sapweaving
  JBP_CONFIG_JAVA_OPTS: >
    java_opts: -DmerchandiseSetsEnabled=true
```

For more information on the DDF extended sales pricing model, see [Use the Extended Sales Pricing Model \(DDF\) \[page 199\]](#).

Enhanced Unit of Measure Evaluation

If you want to enable the enhanced evaluation of unit of measure codes during the promotion calculation, set the PCE configuration property `enhancedUomEvaluationEnabled` to `true`. By default, this is turned off.

```
properties:
  sap.dataaccess-common.db.client: "<DB_CLIENT>"
  sap.dataaccess-common.logSys: <LOGSYS>
  sap.dataaccess-common.cachenamedqueries: "true"
  sap.dataaccess-common.promocachespec:
"maximumSize=10000,expireAfterWrite=20m"
  sap.dataaccess-common.basepricecachespec:
"maximumSize=10000,expireAfterWrite=20m"
  SPRING_PROFILES_ACTIVE: sapmultilevelprc, sapweaving
  JBP_CONFIG_JAVA_OPTS: >
    java_opts: -DmerchandiseSetsEnabled=true
               -DenhancedUomEvaluationEnabled=true
```

i Note

Enabling this property can lead to a different behavior during the evaluation of existing promotions in which a unit of measure is set on merchandise hierarchy node level or merchandise set level. A promotional rule may be applied in fewer cases. In former releases, the unit of measure on merchandise hierarchy node level or merchandise set level was ignored.

Related Information

- For more information about optional properties that can be set via the extension descriptor, see the module descriptions and the corresponding property files in the *Development and Extension Guide for*

Omnichannel Promotion Pricing on SAP Help Portal at <https://help.sap.com/docs/CARAB> > <Version> > Development > Development and Extension Guide > .

- For more information about caching options, see the *Development and Extension Guide for Omnichannel Promotion Pricing* on SAP Help Portal at <https://help.sap.com/docs/CARAB> > <Version> > Development > under > Promotion Pricing Service > PPS Module dataaccess-common > .
- *Functional Guide for the Promotion Calculation Engine* on SAP Help Portal at <https://help.sap.com/docs/CARAB> > <Version> > Development > Functional Guide for the Promotion Calculation Engine > .

6.1.2.12.4.5 Configure Generic Attributes

To use generic attributes on line item level or transaction level as triggers for promotions, you must define an attribute configuration.

Overview

You can use line item-related generic attributes to maintain product groups (merchandise sets), which are used, for example, to define eligibilities for a promotion. They are used as eligibilities or as items that receive a reward in mix-and-match promotions. You can create custom attributes, for example `BRAND` or `SCREEN_SIZE` and use them in product groups.

You can use transaction-related generic attributes to define eligibilities for a promotion on transaction header level. These generic attributes are defined as part of the transaction. If the transaction (that means the calculation request) contains the defined generic attribute and the attribute value matches the value defined in the promotion data, the corresponding eligibility is activated. Instead of defining a value that requires an exact match (`EQ` (equals)), you can also define a logical expression for the generic attribute value (`JE` (logical expression)) in the promotion. If the transaction (that means the calculation request) contains the defined generic attribute and the attribute value fulfills the expression defined in the eligibility, the corresponding eligibility is activated.

You can use transaction-related generic attributes if you, for example, want to offer a certain reward only on Mondays. In this case, customers get a reward if their transaction includes the generic attribute `WEEKDAY` with the exact value `Monday` (expression type `EQ`). Or, you want to offer a certain reward whenever the temperature is below 5 degrees. In this case, customers get a reward if the transaction includes the generic attribute `TEMPERATURE` and the value fulfills the expression `x < 5` (expression type `JE`). The variable `x` represents the value of the generic attribute. Whenever a generic attribute value that is part of the calculation request fulfills the condition of the expression (`true`), the reward is granted.

Generic Attribute Metadata

If you create promotions that contain generic attributes, you must define an attribute configuration. The attribute configuration is required by the price calculation. If you use a local deployment of the promotion pricing service, the attribute configuration is also required by the promotion inbound processing (IDoc upload

of promotions). For each used generic attribute, the configuration contains metadata, such as the data type, maximum length and so on. The following table indicates, which metadata information can be specified.

Field	Description	Relevance for Data Types	Default Value
name	<p>Unique identifier for the attribute.</p> <p>Must match with the regular expression pattern: ^[A-Z][A-Z0-9_]*\$</p> <p>(only uppercase characters, digits, and underscore. Must start with an uppercase character.)</p>	all	-
description	Language-independent description of the attribute.	all	(empty string)
location	<p>Location in the calculation request.</p> <p>Allowed values:</p> <ul style="list-style-type: none"> • 0 (line item) • 1 (transaction) 	all	0
expressionType	<p>Defines how matching attribute values are specified in the promotion definition.</p> <p>Allowed values:</p> <ul style="list-style-type: none"> • EQ (equals) • JE (logical expression) 	<p>EQ: all</p> <p>JE: long</p> <p>Only relevant for transaction-related attributes (location = 1).</p>	EQ
type	<p>The data type used for the generic attribute value.</p> <p>Allowed values:</p> <ul style="list-style-type: none"> • 0 (string) • 1 (long/64-bit integer) • 2 (boolean) • 3 (decimal) • 4 (fixed value) 	n/a	0
maxLength	Maximum length	string	60
pattern	Regular expression pattern. Defines which values are allowed.	string	(empty string)

Field	Description	Relevance for Data Types	Default Value
minLongValue	Minimum value	long Not relevant for transaction-related attributes with expression type JE (logical expression) and data type long.	-2⁶³
maxLongValue	Maximum value	long Not relevant for transaction-related attributes with expression type JE (logical expression) and data type long.	2⁶³ - 1
negativeValuesAllowed	Defines if negative values are allowed	decimal	false
precision	Maximum number of relevant digits	decimal	15
decimals	Maximum number of decimals	decimal	2
fixedValues	List of predefined fixed values	fixed values	(empty)

Note

Attribute names starting with **SAP_** are reserved for SAP-internal use. Do not add such attributes in your attribute configuration.

Attribute Configuration Options

You can define the attribute configuration with a JSON string. There are two options:

1. Setting the Location of the Configuration File

You can set the location of the file that stores the attribute configuration as a JSON string via the configuration property `sap.dataaccess-common.attributeconfiglocation`. This requires a standard Spring resource syntax. With this approach, you can define a single attribute configuration that is used by several deployments of the PPS. However, the location of the JSON file must be accessible for all deployments. Alternatively, you can store the JSON file in a custom extension.

Example: `sap.dataaccess-common.attributeconfiglocation=classpath:/myOwnAttributeConfig.json`.

2. Setting the JSON String as Configuration Property

You can set the JSON string for the attribute configuration directly via the configuration property `sap.dataaccess-common.attributeconfiguration`. With this approach, you can change the attribute configuration without redeploying the calculation and without affecting other deployments. If set, this configuration property has priority over the property `sap.dataaccess-common.attributeconfiglocation`.

For an example, see section *Example* at the end.

Both configuration properties can be set just like other configuration properties. This means, it is set within your Multitarget Application (MTA) extension descriptor (.mtaext file) via the xs command-line interface.

Procedure

The following code snippet shows how you can set the attribute configuration within the MTA extension descriptor file. Note that typically only one of the possible configuration properties for the attribute configuration can be contained in the MTA extension descriptor file. This example only demonstrates the syntax.

```
_schema-version: "2.0.0"
ID: com.sap.retail.ppservice.XSAC_OPP_PPS
extends: com.sap.retail.ppservice.XSAC_OPP_PPS
modules:
  - name: ppservice-approuter
    parameters:
      memory: 128M
      port: 54978
  - name: ppservice-webapp-central
    parameters:
      memory: 1024M
    properties:
      sap.dataaccess-common.db.client: "006"
      sap.dataaccess-common.logSys: "XYZCLNT800"
      sap.dataaccess-common.attributeconfiglocation: "classpath:/myConfig.json"
      sap.dataaccess-common.attributeconfiguration: |
        [
          <Valid JSON respecting the YAML indentation.
          The square brackets are already part of the attribute definition
          See below for example JSON payloads>
        ]
      someOtherProperty: ...
      ...
```

You set the configuration properties in the XS command-line interface as follows:

```
xs set-env ppservice-webapp-central sap.dataaccess-common.attributeconfiguration
"<valid JSON string>"
```

i Note

The proper escaping of special characters (such as quotes) within the configuration property depends on your operating system and shell. To avoid escaping issues, you should store the attribute configuration in a local file on your computer and set the attribute configuration as follows:

```
xs set-env ppservice-webapp-central sap.dataaccess-
common.attributeconfiguration --from-file <file name>
```

The changes become effective after restarting the application:

```
xs restart ppservice-webapp-central
```

Example

The following JSON example demonstrates the configuration of different line item-related generic attribute types:

Sample Code

```
[
  {
    "_comment": "String attribute with a pattern",
    "name": "BRAND",
    "description": "Brand Name",
    "pattern": "^[a-zA-Z0-9]+$",
    "maxLength": "20",
    "location": "0"
  },
  {
    "_comment": "Long attribute with min value",
    "name": "REFRESH_RATE",
    "description": "Screen refresh rate in Hz",
    "location": "0",
    "type": "1",
    "minLongValue": "60",
    "maxLongValue": "600",
    "expressionType": "EQ"
  },
  {
    "_comment": "Boolean attribute",
    "name": "WALL_MOUNT",
    "description": "Indicator: Wall mount possible",
    "type": "2"
  },
  {
    "_comment": "Decimal attribute with precision and decimals set",
    "name": "SCREEN_SIZE",
    "description": "Screen size [in]",
    "type": "3",
    "precision": "4",
    "decimals": "1",
    "negativeValuesAllowed": "false"
  },
  {
    "_comment": "Fixed values",
    "name": "HDMI_STANDARD",
    "description": "Supported HDMI Standard",
    "type": "4",
    "fixedValues": [
      "1.4",
      "1.4a",
      "2.0",
      "2.1"
    ]
  }
]
```

Example

The following JSON example demonstrates the configuration of transaction-related generic attribute types with expression type EQ (equals) and JE (logical expression):

Sample Code

```
[
  {
    "_comment": "Transaction attribute with fixed values",
    "name": "TX_ATR5",
    "type": "4",
    "location": "1",
    "fixedValues": [
      "TxFixedValue1",
      "TxFixedValue2",
      ""
    ]
  },
  {
    "_comment": "Transaction attribute of type JE",
    "name": "TX_ATTR_JE",
    "location": "1",
    "type": "1",
    "expressionType": "JE"
  }
]
```

Related Information

- For more information about the standard Spring resource syntax, see the official Spring documentation at [Built-In Resource Implementations](#).

6.1.2.12.4.6 Update the PPS SAP HANA XSA Application

The promotion pricing service is an SAP HANA XS advanced (XSA) application. Therefore, you have to download the latest XSA component to update or patch the service.

Procedure

The following steps describe how to update the XSA component from an older version to a newer version.

Note

The versions in this procedure are exemplary and do not necessarily portray the latest version. For a detailed version overview, see [Overview of OPP-Related Versions](#).

1. Check the current version of your XSA component with the following command:

Source Code

```
xs list-components
```

The following output is displayed:

Source Code

```
Getting software components in org "<ORG>" / space "<SPACE>" as <USER>...
Found software components:
software component      version
-----
XSAC_OPP_PPS (sap.com)  2.2.1
```

2. Download the latest SCV file XSACOPPPPS04_<patch level>-80004642.ZIP from the SAP Support Portal at <https://support.sap.com>.
3. Assuming that your extension descriptor file is called config-op.mtaext and that the command is called from the directory in which your extension descriptor file is stored, execute the following command to install the new or patched application:

Source Code

```
xs install <pathToScvFile>/XSACOPPPPS04_<patch level>-80004642.ZIP -e
config-op.mtaext
```

4. Execute the command used in step 1 and the following output is displayed:

Source Code

```
Getting software components in org "<ORG>" / space "<SPACE>" as <USER>...
Found software components:
software component      version
-----
XSAC_OPP_PPS (sap.com)  2.4.0
```

6.1.2.12.5 Use the Extended Sales Pricing Model (DDF)

To use the Demand Data Foundation (DDF) extended sales pricing model for omnichannel promotion pricing, you have to perform several steps for the central and local deployment scenario.

Overview

As of CARAB 5.0, omnichannel promotion pricing (OPP) supports the DDF extended sales pricing model. Pricing data available in the DDF module of SAP Customer Activity Repository (CAR) has been extended to include additional levels of sales prices created in the master data system. The former model stores

prices on product location level only. For more information on the extended sales pricing model, see the DDF documentation: [Enable Extended Sales Pricing Data](#).

Omnichannel promotion pricing supports the following retention levels:

- location (01)
- price list (02)
- distribution chain (03)

You must activate the extended sales pricing model and using it is highly recommended. To facilitate a smooth migration for you, the old model is still available. If you want to use the old model during your migration phase, prices are replicated for both the extended and old pricing model and stored twice in SAP Customer Activity Repository. The OPP pricing model itself remains the same as in previous releases because the DDF pricing model is mapped to the OPP pricing model. Both central and local deployment scenarios for OPP are compatible with the extended sales pricing model.

i Note

If you are setting up OPP for the first time, you don't migrate as such but you still have to perform the following steps.

As of CARAB 5.0 FPS2, if you specify the business unit and distribution chain in the calculation request (client API), OPP reads the regular price for this specific distribution chain (and no longer the default distribution chain) to determine the regular price. For more information, see [Distribution Chain for Prices and Promotions](#).

Prerequisites

- You have migrated to the DDF extended sales pricing model for the replication of sales prices from SAP ERP or S/4HANA to SAP Customer Activity Repository as described in [Enable Extended Sales Pricing Data](#). This part is not OPP-specific and concerns your configuration of SAP Customer Activity Repository.
- If you want to use the old pricing model for the local or central deployment of the promotion pricing service (PPS), the regular prices must be replicated on product location level from SAP ERP or S/4HANA .

Procedure

To migrate from the old to the extended sales pricing model, you have to differentiate between the local and central deployment scenario.

Migration in the Local Deployment Scenario

In a local deployment scenario, the price data replication from the central price and promotion repository (SAP Customer Activity Repository) to an external system, for example SAP Commerce system, takes place. This data replication is done via iDocs and the Data Replication Framework (DRF) using replication models and outbound implementations.

To migrate to the extended sales pricing model, you have to use the Data Replication Framework (DRF) with the outbound implementation for regular prices `ROP_PRC_MG` (outbound implementation for multi-level generated regular prices) instead of `ROP_PRICE` (outbound implementation for regular prices). For a migration in one go,

you have to use the DRF replication model `Initialization` for all locations (stores). Afterwards, you can apply the replication model `Changes` as usual. This one-step migration must be handled just as if you would start with the data replication from the beginning.

For instructions, see [Configure the Outbound Processing for Regular Prices and OPP Promotions → Data Replication Framework \[page 171\]](#).

Alternatively, you can do the migration in stages. This is recommended if you have a high data volume. A common approach is to start with a small amount of data and then gradually increase the data volumes in an iterative manner until all necessary data has been included. Here, you migrate only groups of locations stage by stage. For this, you also have to use the DRF replication model `Initialization` for each location of the group you want to migrate.

Migration in the Central Deployment Scenario

In a central deployment scenario, the SAP HANA XS advanced (XSA) application for the promotion pricing service (PPS) is concerned. To use the extended sales pricing model for the central deployment, you have to deploy the PPS to XSA again and apply a specific configuration for caches. With the spring profile `sapmultilevelprc`, you can migrate to the extended sales pricing model. This setting is part of the extension descriptor in the `properties` section. For instructions, see [Advanced Configuration Settings \[page 190\]](#).

You can deploy the XSA application for the PPS twice to use either the extended or old pricing model per deployment according to your price requests. The migration is managed by DDF based on the SAP ERP or S/4HANA replication scenario.

For more information on the central deployment process, see [Configure the Central Deployment of the Promotion Pricing Service \[page 182\]](#).

i Note

During your migration phase, you can decide which pricing model you want to use for the respective deployment scenarios. For example, you can migrate to the extended sales pricing model for the local scenario and keep using the old model for applying XSA (central deployment).

For more information, see the *Development and Extension Guide* at <https://help.sap.com/docs/CARAB>
▶ <Version> ▶ Develop ▶ *Development and Extension Guide for Omnichannel Promotion Pricing* ▶

6.1.2.12.6 Create Merchandise Set Header Entries

If you create a new offer, the merchandise set header database table is created automatically during the mapping of the offer into an OPP promotion. However, existing OPP promotions that were created with SAP Customer Activity Repository 5.0 FPS03 or older releases must be enhanced manually via a migration report.

Overview

The database table represents the header of a merchandise set. A merchandise set represents a product group in an OPP promotion. During the mapping of an offer into an OPP promotion, the merchandise set header is created automatically. Existing OPP promotions that were created with SAP Customer Activity Repository 5.0 FPS03 or older releases must be enhanced manually by this information.

Prerequisites

- You have activated **enhanced product groups** as described in [Enable Offers with Enhanced Product Groups \[page 166\]](#).
- You use the central promotion pricing service and have configured it as described in [Configure the Central Deployment of the Promotion Pricing Service \[page 182\]](#).

Procedure

i Note

You only need to execute the migration report for OPP promotions that were created with SAP Customer Activity Repository 5.0 FPS03 or older releases.

Run transaction **SA38** and execute the migration report `/ROP/R_MIGRATE_TO_50_FP03` for all clients relevant for OPP promotions.

i Note

- You can execute the migration report several times for the same OPP promotion. If no migration is required, the corresponding promotion is not considered by the report.
- Existing database entries are not changed and custom data are not overwritten.
- No change pointers are written. This means that this program has no impact on the data volume of a DRFOUT change run.

For more information, see the system documentation of the report.

6.1.3 Troubleshooting







Diagnose and resolve issues that may arise when you install, upgrade, and set up your scenario. If you need to report a customer incident, see the information at the end of this section.

→ Tip

For quick access to support information, log in to the SAP ONE Support Launchpad at <https://launchpad.support.sap.com/#/productsearch>. Search for SAP CARAB (back-end product version) or SAP FIORI FOR SAP CARAB (front-end product version). Find related SAP Knowledge Base articles, documentation, guided answers, questions & blogs, and download information — all on one page.

Troubleshoot Installation, Upgrade, and Implementation Issues

Installation, Upgrade, and Implementation Issues


Area	Symptom	Cause	Possible Solutions
Installation / Upgrade	You want to upgrade the on-shelf availability dispatcher (transaction /OSA/ DISPATCH). However, you get the error <i>SQL Error Code 274 : inserted value too large for column.</i>	Local temporary tables (LOCAL_EXCL_PRODUCT, LOCAL_LISTED_PRODUCT, and LOCAL_PS_CONF), which are created and used by OSA for internal dispatcher processing, are not dropped automatically during runtime. As a result, new tables (such as any containing CHAR40 fields) cannot be created. This causes an SQL error when a CHAR40 material is supplied. If the tables already exist, subsequent structural changes to their definition require a manual intervention.	SAP Note 2576497 
Installation / Upgrade	When upgrading to SAP Customer Activity Repository 5.0 using the zero downtime option, you get the following error in the log file: <i>Error when deploying HDI objects; see SAPC-* INRTL CAR and SAP Note 2602571.</i>	Not relevant, as the error doesn't impact functionality and can be ignored.	The error doesn't impact functionality and can be ignored.
Installation / Upgrade	You want to download a revision of software component SAP RTL AFL FOR SAP HANA.	You need the exact download path on the SAP Support Portal at http://support.sap.com  .	See section Download and Install SAP RTL AFL FOR SAP HANA [page 62] .
Installation / Upgrade	You want to know which revision of the SAP RTL AFL FOR SAP HANA component is currently installed.	You are looking for an easy way to look up the revision information.	<ol style="list-style-type: none"> Execute transaction <code>db02</code> to open the <i>Diagnostics: Missing Tables and Indexes</i> screen. Choose  <i>Current Status</i>  <i>Overview</i>  <i>Installed Plug-Ins</i>  and click on <i>RTL</i>.

Area	Symptom	Cause	Possible Solutions
Installation / Upgrade	You get an error indicating that software component SAP RTL AFL FOR SAP HANA is not compatible.	You must install compatible releases ("revisions") of the following: <ul style="list-style-type: none"> SAP RTL AFL FOR SAP HANA SAP HANA DATABASE SAP HANA AFL 	<ul style="list-style-type: none"> Section Download and Install SAP RTL AFL FOR SAP HANA [page 62]. SAP Note 2818378 (Which releases of SAP HANA Platform are supported for which releases of SAP Customer Activity Repository applications bundle (SAP CARAB)?)
Installation / Upgrade	You want to know what AFLs (application function libraries) are installed and active in your SAP HANA database.	For example, you want to check if an AFL was installed or upgraded correctly.	SAP Note 2188129
Installation / Upgrade	You want to uninstall add-on software components from your scenario. For example, when upgrading to a new major release, you might need to uninstall older software components.	You need information on uninstalling ABAP add-ons.	SAP Note 2011192 (Uninstallation of ABAP add-ons)
Installation / Upgrade	You have upgraded to compatible revisions of the following components but are still experiencing issues: SAP RTL AFL FOR SAP HANA, SAP HANA AFL, SAP HANA DATABASE	Something went wrong during the upgrade.	Revisit SAP Note 2377894 and make sure that you have carefully followed all the steps for your scenario.
Installation / Upgrade	You want to install or upgrade an application function library (such as SAP RTL AFL FOR SAP HANA) and are experiencing issues with the SAP HANA Lifecycle Management tool (hdblcm, hdblcmgui).	You need information on possible causes and solutions.	<ul style="list-style-type: none"> SAP Note 2078425 SAP Note 2082466 SAP HANA Server Installation and Update Guide for your SAP HANA Platform version under <a href="https://help.sap.com/viewer/p/SAP_HANA_PLATFORM/<Version>">https://help.sap.com/viewer/p/SAP_HANA_PLATFORM/<Version> Installation and Upgrade

Area	Symptom	Cause	Possible Solutions
Installation / Upgrade	You have upgraded from a lower release and replicated the point-of-sale data from the source master data system into Demand Data Foundation (DDF). You suddenly have double entries for the same sales values in the /DMF/TS_PS table (for the TS_PS time series source).	As of SAP Customer Activity Repository applications bundle 5.0, the table contains a new location key field.	A migration report (/DMF/TS_PS_UPDATE_SALES_LOC_ID) is available that populates the new key field to prevent double entries in upgrade scenarios. For more information, see the Set Up Dummy Store in DDF section in the <i>SAP Customer Activity Repository Administration Guide</i> .
Installation / Upgrade	You get the error <i>CAR RETAIL APPLSAP DBTech JDBC: [258]: insufficient privilege: Not authorized.</i>	You are using the SAP HANA AFL software component and have performed an upgrade of your SAP HANA Platform. Previously assigned privileges might have been lost during the upgrade.	SAP Note 2022080
Installation / Upgrade	In an upgrade, you get the following error when running program RUTDDLSCREATE: <i>3 ETW678Xstart export of R3TRDDL<CDS view name> ...</i> <i>3WETW000 DDL<CDS view name> is not activated.</i> <i>2EETW190 "DDL" <CDS view name> has no active version.</i> <i>4 ETW679 end export of R3TRDDL<CDS view name>.</i>	An issue with CDS views must be fixed.	SAP Note 2340418
Installation / Upgrade	You need information about the Software Provisioning Manager.	For example, you have a question regarding the installation, copy, transformation, or deletion of a system based on SAP NetWeaver ABAP on SAP HANA.	SAP Note 2568783 (<i>Release Note for Software Provisioning Manager 2.0 (recommended: SWPM 2.0 SP05)</i>)

Area	Symptom	Cause	Possible Solutions
Installation / Upgrade	You have implemented an SAP Note with a correction for the SAPUI5 application or for the calculation of the application index. The SAPUI5 application index is not recalculated automatically.	You need to start the recalculation manually.	SAP Note 2227577
Installation / Upgrade	<p>You want to install or upgrade to a release of SAP Customer Activity Repository applications bundle using the Software Update Manager (SUM). During the SAP HANA deployment phase, you get errors such as the following:</p> <ul style="list-style-type: none"> <i>Datatype string(1333) of JOIN\$A""TTRIBUTE_VAL UE\$IMAGE_ID does not match to datatype raw(16) of "" attribute IMAGE_ID in node CLTT</i> 	As of SAP HANA Platform 2.0 SPS04, a message that was considered a "warning" in older releases is now considered an "error". This error prevents the SUM process from completing.	<ul style="list-style-type: none"> Workaround: SAP Note 2789289 (<i>Activation of Calculation View Fails With Error "column store error: [34011] Inconsistent calculation model"</i>) Alternative: Convert the SAP HANA error message back into a warning, then rerun SUM: <ol style="list-style-type: none"> Execute the following SQL statement: <pre>ALTER SYSTEM ALTER CONFIGURATION ('indexserver .ini', 'SYSTEM') SET ('calcengine' , 'enable_deprecated_component_flags') = '8192' WITH RECONFIGURE ;</pre> Restart SUM and repeat the installation or upgrade step.

Area	Symptom	Cause	Possible Solutions
Installation / Upgrade	<p>You want to install or upgrade to a release of SAP Customer Activity Repository applications bundle using the Software Update Manager (SUM). You get the following error:</p> <ul style="list-style-type: none"> <i>Could not create catalog object: invalid name of function or procedure; no procedure with name UDFCORE_AREA_FORE CAST_15_PROC.</i> 	<p>The software component SAP RTL AFL FOR SAP HANA that is currently installed in your back-end system is not up to date.</p>	<p>You must install a higher revision of SAP RTL AFL FOR SAP HANA. For the minimum revision required for this release, see the <i>Common Prerequisites</i> in Upgrade the Prerequisites [page 18]. Consult the requirements for <i>SAP HANA Platform 2.0</i> and for <i>SAP RTL AFL FOR SAP HANA</i>.</p>
SAP HANA Platform	<p>You are experiencing performance issues after installing or upgrading to a new SAP HANA revision.</p>	<p>You need performance recommendations to investigate the issue and improve the SAP HANA performance in your customer scenario.</p>	<p>See the Performance — Optimize Processes in SAP HANA section of the <i>SAP Customer Activity Repository Administration Guide</i>.</p>
SAP HANA Platform	<p>You want to optimize the SAP HANA startup times for your scenario.</p>	<p>You need troubleshooting and performance tips.</p>	<p>SAP Note 2222217 (How-To: Troubleshooting SAP HANA Startup Times)</p> <p>The note also points you to a detailed blog and other helpful references.</p>
SAP HANA content	<p>You have run the /CAR/ACTIVATE_HTA activation report but the selected SAP HANA content is not activated.</p>	<p>You want to know which objects have not been activated correctly and what errors have occurred.</p>	<ul style="list-style-type: none"> Execute transaction SLG1 to display the report log: Towards the bottom of the log you will generally find a section that lists the objects with activation errors. Keep in mind, though, that those objects might not have any issues themselves but that the root cause can also be in dependent objects. In transaction SCTS_HTA_DEPLOY, try to reproduce the errors by manually redeploying the objects.

Area	Symptom	Cause	Possible Solutions
SAP HANA content	You want to perform schema mapping in SAP HANA studio. That is, you want to map the authoring schemas of this release to the physical schemas of your customer system landscape. However, you are encountering issues and the mapping doesn't work.	Different causes are possible that can lead to mapping issues in SAP HANA studio.	<ul style="list-style-type: none"> Check that you have entered the correct schema names. In particular, make sure that there are no leading or trailing spaces before or after the schema names. Space characters cause issues during schema mapping. For step-by-step instructions, see Verify Correct Schema Mapping [page 41].
SAP HANA content	You have run the /CAR/ACTIVATE_HTA activation report but get the error <i>Insufficient privilege: Not authorized</i> .	The SAP HANA user needs additional authorizations (privileges).	SAP Note 2586850 
SAP HANA content	You have run the /CAR/ACTIVATE_HTA activation report but the selected SAP HANA content is not activated.	You might have an authorization issue.	<ul style="list-style-type: none"> Check if SAP HANA database user <code>_SYS_REPO</code> has been assigned privilege <code>SELECT</code> with option <i>Grantable to others</i>. If not, you can grant the missing privilege using the following example SQL statement: <pre>GRANT SELECT ON SCHEMA <your schema name> TO _SYS_REPO WITH GRANT OPTION;</pre> Check that other required authorizations have been set up correctly. For more information, see section <i>Verify Back-End Users and Roles of the Common Installation Guide</i>.

Area	Symptom	Cause	Possible Solutions
SAP HANA content	You have run the /CAR/ ACTIVATE_HTA activation report but the selected SAP HANA content is not activated.	You might have a circular dependency issue. In particular, you get an error that a SQLScript procedure (such as SP_SR_GET_PROD_HR_XR_BY_DATE) cannot be activated.	SAP Note 2404872
SAP HANA content	You have run the /CAR/ ACTIVATE_HTA activation report but the selected SAP HANA content is not activated.	You might have a deployment error in SAP HANA Transport for ABAP (HTA).	<ul style="list-style-type: none"> SAP Note 2109690 (<i>Error in SAP HANA repository deployment import step</i>) SAP Note 2321486 (<i>Troubleshooting for SAP HANA Transport for ABAP (HTA) deployment</i>)
SAP HANA content	You want to activate SAP HANA content for scenarios of SAP Customer Activity Repository applications bundle using the /CAR/ ACTIVATE_HTA report in transaction SE38. However, you are getting errors.	<p>Several causes are possible. Open the error log file and search for udf.cor. For example, the following errors can occur:</p> <ul style="list-style-type: none"> <i>Could not create catalog object</i> <i>Invalid name of function or procedure</i> <i>No procedure with name UDFCORE_AREA_MODE L_POS_XX_PRO</i> 	<p>Check that you have done the following tasks as described in this guide:</p> <ul style="list-style-type: none"> Have you installed compatible revisions of the SAP HANA database and the AFL components (SAP HANA AFL, SAP RTL AFL FOR SAP HANA)? See the <i>Common Prerequisites</i> in section Upgrade the Prerequisites [page 18]. See also section Download and Install SAP RTL AFL FOR SAP HANA [page 62]. Have you done the schema mapping as described in this guide? See Verify Correct Schema Mapping [page 41].

Area	Symptom	Cause	Possible Solutions
SAP HANA content	You want to activate SAP HANA content for scenarios of SAP Customer Activity Repository applications bundle using the /CAR/ACTIVATE_HTA report in transaction SE38. However, you are getting errors.	Several causes are possible. Open the error log file and search for udf.cor . For example, the following errors can occur: <ul style="list-style-type: none"> <i>There is neither a default value nor a data input mapping for ..."</i> A2EESCTS_HOT 532 	<ul style="list-style-type: none"> Workaround and list of affected SAP HANA database revisions: SAP Note 2525644 (Input Variables are set to an Empty String When not Mapped in Top-Level Calculation Scenario) If possible for your scenario, consider upgrading to an SAP HANA database revision not affected by the issue.
SAP HANA content	After running the /CAR/ACTIVATE_HTA activation report, you get two conflicting messages: <ul style="list-style-type: none"> <i>The following scenario was deployed successfully...</i> <i>But returned error/warning/information message(s)...</i> 	You want to know whether the activation was successful and whether any additional action is required.	SAP Note 2467113
SAP HANA content	You want to generate pre-season sales projections in SAP Assortment Planning but get an error.	You might not have activated all the required SAP HANA content.	When you run the /CAR/ACTIVATE_HTA activation report, make sure to select the required options. See Activate SAP HANA Content [page 90] .
SAP HANA content	You want to check the dependencies of a specific view.	You might need this information to solve a dependency or activation issue for SAP HANA views.	<ul style="list-style-type: none"> In SAP HANA studio: Select the view and choose Auto Documentation from the context menu. This generates a file with detailed information on the view. Consult the Cross References section. If you are using the SAP HANA Live View Browser app: Select the view and choose Cross References.

Area	Symptom	Cause	Possible Solutions
SAP HANA content	You have a question regarding users or schemas in SAP HANA.	For example, you want to know what the names of the standard SAP HANA users and schemas are.	<ul style="list-style-type: none"> In this guide, search for <i>schema mapping</i>. SAP Note 2535951  (FAQ: SAP HANA Users and Schemas)
SAP HANA content	You get an error indicating that you are attempting to access inactive or invalid SAP HANA content.	You have not installed software component SAP_RTL_AFL_FOR_SAP_HANA. The component contains back-end functionality for the Unified Demand Forecast module and the On-Shelf Availability module in SAP Customer Activity Repository. If you don't intend to use those modules, you don't need to configure them. However, you must always install the software component.	See section Download and Install SAP RTL AFL FOR SAP HANA [page 62] .
SAP HANA content	You get the error <i>Table ABAP:/DMF_ORG_ASSIGN not found</i> .	A program error must be fixed.	<ul style="list-style-type: none"> SAP Note 2218875  SAP Note 2224582 
SAP HANA content	You get the error <i>Object DDF_ORG_ASSIGN (Calculation View), package sap.is.ddf.udf.data_validation, was processed with errors</i> .	A program error must be fixed.	SAP Note 2224582 
SAP HANA content	You get the error <i>SQLScript: Could not derive table type for variable "UDF_FC_HORIZON"</i> .	A program error must be fixed.	SAP Note 2125672 
SAP HANA content	SAP HANA views in the sap.is.ddf.fms package do not activate properly.	A program error must be fixed.	SAP Note 2203930 

Area	Symptom	Cause	Possible Solutions
SAP HANA content	You need to manually deploy SAP HANA objects and packages.	The automatic deployment to the SAP HANA repository of the target system has failed.	<ul style="list-style-type: none"> Search for the following sections in the product documentation of your SAP NetWeaver platform at https://help.sap.com/viewer/p/SAP_NETWEAVER:SAP_HANA_Transport_for_ABAP_and_Manually_Deploying_SAP_HANA_Objects_and_Packages. Follow the instructions. Execute transaction SCTS_HTA_DEPLOY for the manual deployment of SAP HANA content and consult the accompanying system documentation.
SAP HANA content	<p>You get any of the following errors:</p> <ul style="list-style-type: none"> <i>View "/AMR/..." does not exist in data base</i> <i>"DDL Source" "/AMR/..." could not be activated</i> <i>"DDL Source" "/DMF/DIST_..." could not be activated</i> 	The root cause is the usage of CDS (Core Data Services) on top of external views.	You can ignore the error messages and continue with the installation or upgrade process. For explanations, see SAP Note 2330184 .
SAP HANA content	You get the error <i>SQL Script message: invalid table name: Could not find table/view /AMR/V.</i>	The root cause is the usage of CDS (Core Data Services) on top of external views.	You can ignore the error messages and continue with the installation or upgrade process. For explanations, see SAP Note 2441184 .


Area	Symptom	Cause	Possible Solutions
SAP HANA content	You get the error <i>View with par. <CDS view name>: data element <data element> par. & does not exist or not active.</i>	A data element that is new or has been redefined is used in the new definition in a Core Data Services (CDS) view with parameters for the definition of a parameter. The system does not consider the dependency between data elements and the type definition of the parameters for views with parameters.	SAP Note 2289913
SAP HANA content	When doing ATC (ABAP Test Cockpit) checks of database objects or runtime objects, you get errors related to reference tables and reference fields: <ul style="list-style-type: none"> • Priority 1 error: <i>View <view_name> is not consistent</i> • Priority 1 error: <i><view_name-field> is not consistent</i> • Inconsistencies in fields related to reference tables and reference fields 	The system does not consider base information of the AMDP table function entity.	SAP Note 2374190
SAP HANA Platform	You cannot install the SAP HANA XS advanced (XSA) runtime. For example, you need XSA to use the Omnichannel Promotion Pricing (OPP) module in SAP Customer Activity Repository.	You cannot install XSA as long as SAP HANA dynamic tiering is active on the same host.	SAP Note 2388443

Area	Symptom	Cause	Possible Solutions
SAP HANA Platform	You are experiencing performance issues in the SAP HANA Platform.	Several causes are possible.	<ul style="list-style-type: none"> SAP Note 2600030 (Parameter Recommendations in SAP HANA Environments) SAP Note 2100040 (FAQ: SAP HANA CPU) SAP HANA Troubleshooting and Performance Analysis Guide for your SAP HANA Platform version under https://help.sap.com/viewer/p/SAP_HANA_PLATFORM
SAP HANA Platform	You want to perform an SAP HANA database analysis to investigate a complex issue. The information that you want to retrieve is not or is only partially available in standard tools (such as SAP HANA studio).	You need information on special SQL statements for such an analysis.	<p>SAP Note 1969700 (SQL Statement Collection for SAP HANA)</p> <div style="border: 1px solid #ccc; padding: 5px; background-color: #f9f9f9;"> <p>i Note</p> <p>For additional troubleshooting and performance tips, see the FAQ: ... notes under References.</p> </div>
SAP HANA Platform	You are not sure if the installed SAP HANA revision is compatible with the installed SAP HANA studio version.	You need a list of the compatible revisions.	SAP Note 2375176 (SAP HANA Revisions and Compatible SAP HANA Studio Versions)
SAP HANA Platform	You are experiencing network or performance issues in your SAP HANA environment.	You need information on network settings and analyses in SAP HANA environments.	SAP Note 2222200 (FAQ: SAP HANA Network)

Area	Symptom	Cause	Possible Solutions
Hierarchies	You get errors when creating or updating location hierarchies and/or product hierarchies.	The system does not generate the flat structures for the hierarchies. You need to do some configuration steps so that the hierarchies get flattened automatically.	<ul style="list-style-type: none"> See section <i>Configure Automatic Flattening of Hierarchies</i> of the <i>Common Installation Guide</i>. See the following sections of the <i>SAP Customer Activity Repository Administration Guide</i> at https://help.sap.com/viewer/p/CARAB: <ul style="list-style-type: none"> <i>Configure Demand Data Foundation (DDF)</i> <i>Configure Data Replication from SAP ERP to DDF</i>
Hierarchies	You get errors when importing article hierarchies (product hierarchies) from your master data system.	A program error must be fixed.	<ul style="list-style-type: none"> SAP Note 2244521 SAP Note 2245134
Hierarchies	You want to know which locations are included in each version of an offer.	You can implement an easy enhancement for table <code>/DMF/OFR_LG_LOC</code> .	SAP Note 2208619
Hierarchies	An error occurs for a DDL SQL view when you execute the <code>CREATE VIEW</code> statement.	A program error must be fixed.	SAP Note 2377525
DRF data replication framework (transaction DRFOUT)	You have deleted a vendor from the <code>/DMF/D_VENDOR</code> table but this deletion is not replicated to the master data system.	A program error must be fixed.	SAP Note 1872136

Area	Symptom	Cause	Possible Solutions
DRF data replication framework (transaction DRFOUT)	You get an error when using the DRF with the PMPD SAP ERP outbound implementation.	A program error must be fixed.	<ul style="list-style-type: none"> SAP Note 1904782 SAP Note 2167629 See the application help for SAP Customer Activity Repository at https://help.sap.com/viewer/p/CARAB >> <Version> <ul style="list-style-type: none"> > Application Help > SAP Customer Activity Repository > Demand Data Foundation > Integration Information > Master Data Replication from SAP ERP to Demand Data Foundation >
DRF data replication framework (transaction DRFOUT)	You get the error <i>Product &1, location &2: The Valid From time for &3 must be 00:00:00</i> (message 364 in message class /DMF/MSG_HL).	A program error must be fixed.	SAP Note 2163602
DRF data replication framework (transaction DRFOUT)	You have changed the listing information in your source master data system and replicated the changes to your SAP Customer Activity Repository system. However, the listing information there is not updated correctly.	A program error must be fixed.	SAP Note 1932525
Performance	You are experiencing performance issues in your SAP HANA database.	You need information on how to troubleshoot and resolve those issues and how to enhance performance in general.	See the <i>SAP HANA Troubleshooting and Performance Analysis Guide</i> under https://help.sap.com/viewer/p/SAP_HANA_PLAT-FORM >> <Version> <ul style="list-style-type: none"> > Administration >

Area	Symptom	Cause	Possible Solutions
Performance	You get a runtime error or exit message and need information about possible causes and solutions.	Different causes are possible.	Use the ABAP dump analysis (transaction ST22) to search for short dumps and call up detailed error information.
Performance	You are using the <i>Update Sales Projection</i> function in SAP Assortment Planning (workbooks <i>Product Planning</i> and <i>Size Planning</i>). You are experiencing performance issues when using the function with large data volumes.	You can enhance the performance by implementing an SAP Note.	SAP Note 2080423
OData	During the execution of an OData service based on SADL with CDS, an assertion fails in class <code>CL_SADL_SQL_STATEMENT</code> , method <code>EXECUTE_PREPARED_STATEMENT</code> . The OData request uses the system query option <code>\$count</code> .	The Core Data Services (CDS) view uses a table function that is not active in the database. The trigger that is supposed to activate it fails because of missing parameters if only <code>\$count</code> is queried.	SAP Note 238998
Support	You have a customer incident and need to set up a service connection to SAP.	You need information on how to set up the service connection.	<ul style="list-style-type: none"> SAP Note 35010 (overview) SAP Note 1634848 (service connection for SAP HANA database) SAP Note 1592925 (service connection for SAP HANA studio)
Source Master Data Systems	You get the error <i>SYSTEM_ABAP_ACCESS_DENIED</i> .	The error is caused by the "Blacklist Monitor" in SAP S/4HANA.	SAP Note 2249880
SAP Fiori	<ul style="list-style-type: none"> You want to start an SAP Fiori app for a key user and get the error <i>Application is not configured</i>. Find details in SAP Note 2283716. You want to activate extensibility for key users. 	You must set up the adaptation transport organizer (ATO) to be able to transport key user extensions.	SAP Note 2283716

Area	Symptom	Cause	Possible Solutions
SAP Fiori	You want to check the SAP Fiori version installed in your system.	There are several methods how you can check the version.	SAP Note 2282103 

Area	Symptom	Cause	Possible Solutions
SAP Fiori	You cannot open the Analyze Forecast app.	Several reasons are possible. See the checklist at the right and verify that the app is set up correctly.	<p>Use section <i>Set Up the Analyze Forecast App</i> in the <i>Common Installation Guide</i> for reference and check the following:</p> <ol style="list-style-type: none"> <li data-bbox="1107 562 1402 898">1. In transaction SE80, navigate to package UICAR001, subpackage UISCAR01. Check that the BSP Applications for the app (ANALYZFCST_V2) and the reuse library (UDFREUSE) are deployed. <li data-bbox="1107 909 1402 1178">2. In <i>Launchpad Customizing</i> (transaction LPD_CUST), check that the Internet Communication Framework (ICF) services for ANALYZFCST_V2 and for UDFREUSE are active. <li data-bbox="1107 1189 1402 1921">3. Clear the cache on the server side by running the following reports in transaction SE38: <ul style="list-style-type: none"> <li data-bbox="1161 1335 1402 1637">• /UI5/ APP_INDEX_CALCULATE: Select <i>Single SAPUI5 Repository Only</i> and run the report once for ANALYZFCST_V2 and once for UDFREUSE. <li data-bbox="1161 1648 1402 1816">• /UI2/ INVALIDATE_GLOBAL_CACHES: Run this report in execution mode. <li data-bbox="1161 1827 1402 1921">• /UI2/ INVALIDATE_CLIENT_CACHES: Run

Area	Symptom	Cause	Possible Solutions
			<p>this report for all users.</p> <ol style="list-style-type: none"> 4. Clear the browser cache. 5. Check if you can now access the app.
Support	You have an issue that involves modeling and forecasting with the Unified Demand Forecast (UDF) module in SAP Customer Activity Repository. You cannot debug the issue yourself. You need assistance from SAP via a remote support session.	Various causes are possible. For example, the issue might be in the ABAP layer, the foundation component (such as SAP S/4HANA foundation), or in the SAP HANA database.	<p>For a successful remote support session, make sure that the required authorizations and debugging privileges for UDF are all set up. Otherwise, the support team cannot access your UDF system environment.</p> <p>See SAP Note 2920776.</p>
Help Portal	<p>You cannot access the content on the SAP Help Portal. For example, you might get one of the following errors:</p> <ul style="list-style-type: none"> • <i>We're sorry, but this content is not accessible</i> • <i>HTTP 403 forbidden</i> 	Customers and partners need to log on with their S-user IDs (NOT their email address) to see content authorized specifically for customers/partners.	See SAP Note 2499831 (<i>SAP Help Portal S-User Management</i>).

Troubleshoot Operation Issues

You also may experience issues during the day-to-day running of your application. For troubleshooting information, see the application-specific *Administration Guides* at <https://help.sap.com/viewer/p/CARAB>:

- *SAP Customer Activity Repository Administration Guide*: section *Troubleshooting for SAP Customer Activity Repository Modules*
- *SAP Allocation Management Administration Guide*: section *Troubleshooting*
- *SAP Assortment Planning Administration Guide*: section *Troubleshooting*
- *SAP Merchandise Planning Administration Guide*: section *Troubleshooting*
- *SAP Promotion Management Administration Guide*: section *Management of SAP Promotion Management*

Report a Customer Incident

- If you experience an issue with your back-end or front-end system, we recommend that you first search for existing solutions in the SAP Support Portal at <http://support.sap.com/>. There you can find SAP Notes (corrections), SAP Knowledge Base articles, and a wealth of information in the SAP Community.

- To view or report an incident, see again <http://support.sap.com/> and choose ► *My Support* ► *Product Support* ► *Report an Incident* .
- For more information on reporting incidents for SAP Customer Activity Repository, see the *Support Desk Management* section of the *SAP Customer Activity Repository Administration Guide*.

6.2 SAP Merchandise Planning

Post-upgrade setup for SAP Merchandise Planning

This upgrade guide describes upgrading from SAP Merchandise Planning 5.0 Initial Shipment Stack to SAP Merchandise Planning 5.0 FPS03. You must have completed the upgrade activities in this guide under ► *SAP Customer Activity Repository* ► *Core (Mandatory for All Applications)* .

6.2.1 Verify SAP HANA Content for SAP Merchandise Planning

Verify all SAP HANA Transport for ABAP (HTA) objects that are required for SAP Merchandise Planning application.

Prerequisites

As a mandatory prerequisite for a successful activation of SAP HANA content for SAP Merchandise Planning, you must have successfully completed all of the procedures listed in the previous sections of this guide as pertains to ► *SAP Customer Activity Repository* ► *Core (Mandatory for All Applications)* . In particular, you must have created all the necessary tables, as described in [Create/Replicate Source Master Data System Tables \[page 86\]](#).

You must also have mapped all the necessary schemas, as described in [Verify Correct Schema Mapping \[page 41\]](#).

Context

In this procedure you perform the final activation of SAP HANA content (views and stored procedures) required by the SAP Merchandise Planning application. This final activation results in a **full** activation of the SAP HANA content for SAP Merchandise Planning. Several SAP HANA views depend on local BI Content objects. The SAP HANA views must be in active state before activating the BI Content objects as described in [Activate Application BI Content Upgrade \[page 222\]](#) .

For more information, see https://help.sap.com/viewer/p/SAP_HANA_PLATFORM, choose the *SAP HANA Developer Guide* and search for section *Activating Objects*.

Procedure

1. Log on to SAP HANA studio.
2. Open the *Modeler* and use the *Navigator* to access your back-end system.
3. Expand the *Content* folder located under your system name in the *Navigator*.
4. Expand the listed packages to verify the underlying folders listed below are active.

Based on the selected *ECC Mode* in the above report the following packages should exist:

- *SAP ERP*:
 - `sap.is.ddf.ecc`
 - *Fashion Management*:
 - `sap.is.ddf.ecc`
 - `sap.is.ddf.fms`
 - *S/4HANA*:
 - `sap.is.ddf.fms_s4h`
5. The following packages should exist resulting from the standard installation:
 - `sap.is.ddf.ddf`
 - `sap.is.retail.rap.ap`
 - `sap.is.retail.rap.common_bw`
 - `sap.is.retail.rap.mpr`
 - `sap.is.retail.rap.mpr_oc`

If any of these packages are missing, you must activate those relative to the order above due to dependencies. Use transaction `SCTS_HTA_DEPLOY` to activate each missing package, don't include sub-packages in case you decide to activate the above mentioned packages using this transaction .

6.2.2 Activate Application BI Content Upgrade

⚠ Caution

Proper authorization is required to complete these steps.

These instructions are to activate content under the *Merchandise Planning Omni Channel* (/RAP /MPOC) InfoArea for the following objects types:

- Advanced DataStore Objects
- Workbooks (will automatically activate):
 - Composite Providers
 - Aggregation Levels
 - Queries
 - Planning Sequences
 - Reactivate Advance Datastore Objects (aDSOs)

Activation Steps

The object types must be activated in the order above. Each object type and the detail objects are listed in the tables below and should be compared to the activated objects in your environment. To activate, use transaction `RSOR` to launch the BW workbench.

1. Verify transport connections.
 1. Select *Transport Connection* in the left-hand frame.
 2. Select *Object Types*.
 3. Locate and expand *Source System*.
 4. Double click *Select Objects* to ensure that the back-end system is selected as the source system in the pop up window.
 5. Choose *Transfer Selections* in the same window.
 6. In the title bar of the right-hand frame, above the list of *Collected Objects*, choose *Grouping* and select *Only Necessary Objects* in the context menu.
 7. At the top of the right-hand frame, choose *Collection Mode* and select *Collect Automatically*.
2. If you have modified standard `/RAP/* BI Content` objects in your local environment, you must enable the *Match (X) or copy* option. Otherwise go to step 3.
 1. During the activation of each *BI Content* object type, you will be asked to carry out an additional *Transfer selections* step. In this step, select to install the *Active Version* (that is, your modified version) or the *Content Version* (that is, the SAP delivered, and possibly updated version of the object). The project implementation team should advise you on which option is required for each object.
3. Activate the InfoObject catalog. If at any point during the installation of *BI Content* objects you are presented with a dialog asking you to add objects to a personal list, we recommend that you select **No**.

→ Remember

You can ignore activation warnings listed under [Activation Warnings \[page 250\]](#).

Activate Advanced DataStore Objects

i Note

A window being referenced, may be hidden. Use the *Data Warehousing Workbench* menu in the main window title bar to hide/unhide the following windows: *Navigation*, *All Objects*, and *Collected Objects*.

- Use transaction `RSOR` to launch the BW workbench Transport Connection.
- In the navigation window, locate and select *Object Types*. In the window *All Objects According to Types*, expand node *DataStore Objects (advanced)* and double click *Select Objects*. In the popup window, select the following objects and select button *Transfer Selections*.

DataStore Object (advanced)

aDSO Description	aDSO
Market Hierarchy CR based on Planning Configuration Set	/RAP/MHDS1
Market Hierarchy CR aDSO for LY and LLY	/RAP/MHDS2

aDSO Description	aDSO
aDSO for actuals of LY and LLY KPIs	/RAP/MPDS0
MP - Regional Month Sales Target for Omni Channel	/RAP/MPDS1
MP - Local Month Sales Inventory Targets for Retail and E-Co	/RAP/MPDS2
MP - Local Month Sales and Inventroy Targets for Whol-sale	/RAP/MPDS3
Product Hierarchy CR based on Planning Configuration Set	/RAP/PHDS1
Product Hierarchy CR aDSO for LY and LLY	/RAP/PHDS2
Merchandise Plan YSCT Characteristic Relationship	/RAP/SCTDS

- Select *Yes* to the system prompt *Do you want to add the objects to the personal list.*
- When prompted for *Source System*, do not choose any and select *OK*.
- For each aDSO, right click on the object and select option *Install All Below*.
- *Install* and *Activate* each aDSO.

Activate Analysis Office Excel Workbooks 2.0

In this section you will continue from the above step and activate the workbooks.

- From the left navigation panel for *BI Content* locate and expand folder *More Types*. Expand *Analysis Office Excel Workbook* and double click *Select Objects*. Use the filter in the popup window to define a filter on column *Object Name* having values of */RAP/MP_**.
In the pop up window, select the following objects and select button *Transfer Selections*.

Workbooks

Workbook Object Name
/RAP/MP_ECOM_PHN5_WB_01
/RAP/MP_OTB_OTB_PHN5_WB_01
/RAP/MP_OTB_OTB_PHN5_WB_02
/RAP/MP_RTL_PHN5_WB_01
/RAP/MP_RT_PHN5_M_WB_01
/RAP/MP_RT_PHN7_WB_01
/RAP/MP_RT_SSN_PHN5
/RAP/MP_WHS_PHN5_M_WB_01

- Select *Yes* to the system prompt *Do you want to add the objects to the personal list.*

- For each workbook, right click and select option *Install All Below*.
- *Install* and *Activate* each workbook.

Verify Installed Objects

In addition to the *advanced DataStore Objects* in the above steps, see the tables below to verify all expected objects are installed.

Expand *Composite Provider* and double click *Select Objects*.

Composite Providers

Composite Provider Description	Composite Provider
Merchandise Financial Plan Omni Channe	/RAP/CP15

Expand ► *Planning* ► *Aggregation Level* ► and double click *Select Objects*.

Aggregation Levels

Aggregation Description	Aggregation Name
MP Regional Targets Sales Mix - PHN 5	/RAP/C15A01
MP Regional Targets SSN Sales Mix - PHN 5	/RAP/C15A02
MP Regional Targets SSN Sales Mix - PHN 7	/RAP/C15A03
MP Local Targets - ECommerce - Sales Mix - PHN 5	/RAP/C15A11
MP Local Targets - ECommerce - Sales Mix - PHN 5 - PF	/RAP/C15A12
MP Local Targets - Retail - Sales Mix - PHN 5	/RAP/C15A21
MP Local Targets - Retail - Sales Mix - PHN 5 - PF	/RAP/C15A22
MP Local Targets - WHS - Sales Mix - PHN 5	/RAP/C15A31
MP Local Targets - WHS - Sales Mix - PHN 5 - PF	/RAP/C15A32
MP - OTB - Retail - ECom - WHS	/RAP/C15A41
AL for Market Hier CR for LY and LLY	/RAP/MHDSA2
Product Hierarchy CR based on Planning Configuration Set	/RAP/PHDSA1
SCT CR based on Planning Configuration Set	/RAP/SCTDA1
AL for Product Hier CR for LY and LLY	/RAP/PHDSA2
Market Hierarchy Aggregation Level	/RAP/MHDSA1

Aggregation Description	Aggregation Name
AL for Actuals of LY and LLY KPIs	/RAP/MPDSA0

Expand  [Query Elements](#)  [Query](#)  and double click [Select Objects](#).

Queries

Query Name	Technical Name
MP - Regional Targets - Prompt Query - PHN5	/RAP/CP15A01_Q01
MP - Regional Targets - Sales Mix - PHN5	/RAP/CP15A01_IRQ01
MP - Regional Targets - Season Prompt Query - PHN5	/RAP/CP15A02_Q01
MP - Regional Targets - Season Flow - PHN5	/RAP/CP15A02_IRQ00
MP - Regional Targets - Season Sales Mix - PHN5	/RAP/CP15A02_IRQ01
MP - Regional Targets - Season Flow Chart - PHN5	/RAP/CP15A02_Q00
MP - Regional Targets - Season Flow - PHN7	/RAP/CP15A03_IRQ00
MP - Regional Targets - Season Sales Mix - PHN7	/RAP/CP15A03_IRQ01
MP - Regional Targets - Season Flow Chart - PHN7	/RAP/CP15A03_Q00
MP - Regional Targets - Prompt Query - PHN7	/RAP/CP15A03_Q01
MP - Local Targets - ECom - Sales Mix - PHN5	/RAP/CP15A11_IRQ01
MP - Local Targets - ECom - Inventory Mix - PHN5	/RAP/CP15A11_IRQ02
MP - Local Targets - ECom - Prompt Query - PHN5	/RAP/CP15A11_Q01
MP - Local Targets - Rtl - Sales Mix - PHN5	/RAP/CP15A21_IRQ01
MP - Local Targets - Rtl - Inventory Mix - PHN5	/RAP/CP15A21_IRQ02
MP - Local Targets - Rtl - Prompt Query - PHN5	/RAP/CP15A21_Q01
MP - Local Targets - WHS - Sales Mix - PHN5	/RAP/CP15A31_IRQ01
MP - Local Targets - WHS - Inventory Mix - PHN5	/RAP/CP15A31_IRQ02
MP - Local Targets - WHS - Prompt Query - PHN5	/RAP/CP15A31_Q01
MP - OTB Reconciliation Report - Prompt Query	/RAP/CP15_Q001
MP - OTB Reconciliation Report	/RAP/CP15_Q01
MP - OTB Reconciliation Season Prompt Query	/RAP/CP15_Q002

Query Name	Technical Name
MP - OTB Reconciliation Report - Season	/RAP/CP15_Q02

Expand ► [Planning](#) ► [Planning Sequence](#) ► and double click [Select Objects](#).

Planning Sequences

Planning Sequence

/RAP/MHDS2_A3_PS01
/RAP/MHDS2_A3_PS02
/RAP/MPDS0_A0_PS01
/RAP/MPDS0_A0_PS02
/RAP/MPDS0_A0_PS03
/RAP/MPDS0_A2_PS01
/RAP/MPDS1_A1_PS01
/RAP/MPDS1_A1_PS02

Expand ► [More Types](#) ► [Analysis Office Excel Workbook](#) ► and double click [Select Objects](#).

Merchandise Planning Workbooks

Workbook Description	Workbook Technical Name
1.1 Regional Monthly Plan	/RAP/MP_RT_PHN5_M_WB_01
1.2 Regional Seasonal Plan	/RAP/MP_RT_SSN_PHN5
1.3 Regional Seasonal Plan	/RAP/MP_RT_PHN7_WB_01
2.1 Retail Monthly Plan	/RAP/MP_RTL_PHN5_WB_01
3.1 Wholesale Monthly Plan	RAP/MP_WHL_PHN5_M_WB_01
4.1 Ecommerce Monthly Plan	/RAP/MP_ECOM_PHN5_WB_01
5.1 OTB & OTS Reconciliation	/RAP/MP_OTB_OTS_PHN5_WB_01
5.2 OTB & OTS Sseason Reconciliation	/RAP/MP_OTB_OTS_PHN5_WB_02

Change aDSO Behavior

You must change the loading behavior for each aDSO. Select the InfoProvider node under Modeling. Locate the central InfoProvider column and expand the ► [Merchandise Planning Omni Channel](#) ► change the loading

behavior for each aDSO. To change the loading the behavior, locate each object in the DataStore (advanced) table above and then right click to select ► *Planning-Specific Properties* ► *Change Real-Time Load Behavior*. ► Select radio button *Real-Time Target Can Be Planned; Data Loading Not Allowed*.

Verify Planning Application Kit (PAK)

You must verify if the Planning Application Kit (PAK) is enabled to be able to use the SAP Analysis for Microsoft Office workbooks provided as part of the SAP Assortment Planning planning framework content. For more information, see [Enable the Planning Application Kit \(PAK\)](#) (*Common Installation Guide*).

→ Remember

BI Content developed on top of aggregation levels /RAP/T15A23, /RAP/T15A24, /RAP/T15A25, /RAP/T15A27, /RAP/T15A34 and /RAP/T15A35 are for internal testing and do not need to be activated.

6.2.3 Verify Time Data

Ensure that the previously generated calendar time data is still for running your SAP Merchandise Planning process.

Procedure

Ensure that the time data for the *Fiscal* calendar has been generated far enough into the past and future.

For more information, see the following:

- *Maintain Fiscal Year Variants* section of the *Common Installation Guide*

6.2.4 Migrate Procurement Transaction Data

Ensure that the previously generated SAP ERP procurement transaction data is migrated.

Context

SAP ERP procurement transaction data generated so far is stored in the database table /RAP/MPR_ECC_KPI. This table has now been replaced by the database table /RAP/MPR_POGRKPI. The table /RAP/MPR_POGRKPI contains a few primary keys in addition to the ones in the table /RAP/MPR_ECC_KPI. These additional keys allow you to store data related to currency, season, collection, theme, and calendar date, which are necessary to handle multiple currencies and for seasonal planning.

Prerequisites

Previously generated procurement transaction data must exist in the table `/RAP/MPR_ECC_KPI`.

Procedure

Use transaction SE38 to execute report `/RAP/MPR_MIGRTN_ECC_KPI` (*Migrate Procurement Transaction Data to Table /RAP/MPR_POGRKPI*). For more information, refer to the report documentation.

Result

Procurement transaction data is read from the table `/RAP/MPR_ECC_KPI` and migrated to the table `/RAP/MPR_POGRKPI`.

6.3 SAP Assortment Planning

Post-upgrade setup for SAP Assortment Planning

This guide describes how you can upgrade to SAP Assortment Planning 5.0 SPS06. You must have completed the upgrade activities described in this guide under [▶ SAP Customer Activity Repository ▶ Core \(Mandatory\) ▶](#).

6.3.1 4.0 (or Higher) to 5.0 SPS06

This section is intended for existing SAP Assortment Planning customers who have installed and configured SAP Assortment Planning 4.0, 4.0 FPS01, 4.0 FPS02, 4.0 FPS03, 4.0 SPS04, 4.0 SPS05, 4.0 SPS06, 4.0 SPS07, 4.0 SPS08, 4.0 SPS09, 4.0 SPS10, 5.0, 5.0 FPS01, 5.0 FPS02, 5.0 FPS03, 5.0 FPS04, or 5.0 SPS05 and would like to upgrade to SAP Assortment Planning 5.0 SPS06.

6.3.1.1 Perform Core Steps for SAP Customer Activity Repository

To set up this application, you must first perform the **Core (Mandatory)** steps for SAP Customer Activity Repository. The core steps are mandatory for all the consuming applications.

Procedure

Perform all steps listed under [Core \(Mandatory for All Applications\) \[page 80\]](#).

6.3.1.2 Initialize KPI Periods

Initialize KPI periods of all existing assortment lists.

The *Manage Assortments* app has been enhanced with additional features for the key performance indicators (KPI) in SAP Assortment Planning 5.0 FPS03. In order for the app to work correctly, you must run the report `/RAP/AL_UPDATE_KPI_DATES` to initialize the KPI periods of all the existing assortment lists. This report must be run exactly once after upgrading to SAP Assortment Planning 5.0 FPS03 (or higher) from a lower release.

After running this report:

- The estimated KPI periods of all the existing assortment lists are initialized as follows:
 - Start date is initialized to the start of the fiscal week that includes the assortment list's validity start date.
 - End date is initialized to 52 weeks after the start date.
 - Number of weeks from the start date is initialized to 52.
- The referenced KPI periods of all the existing assortment lists are initialized as follows:
 - Number of weeks from the start date is initialized to 52.

i Note

The start date and end date of the referenced KPI periods are already saved in the database. And so, there's no need to initialize them.

6.3.1.3 Adjust Customizing Settings

Customizing to maintain following an upgrade to SAP Assortment Planning 5.0 SPS06.

Context

Following the upgrade, you need to make settings in Customizing to be able to use SAP Assortment Planning 5.0 SPS06.

Procedure

1. Log on to your back-end system.
2. If you use the Retail SAP BW Structure and you don't want to use planning configuration, do the following:
 - a. Disable *Use Planning Configuration* and *Prompt in Manage Location Clusters* (using transaction SPRO) under [Cross-Application Components](#) > [Assortment Planning](#) > [Imported Demand Data Foundation Settings](#) > [Basic Settings](#) > [Define Default Values](#).

You must disable this Customizing setting to continue using the Retail SAP BW Structure. For more information, see section *Reactivate Planning Framework Content (SAP Assortment Planning)*.

- b. Disable the implementation of *BAdI: Read Merchandise Planning KPI Data* under [Cross-Application Components](#) > [Demand Data Foundation](#) > [Data Maintenance](#) > [Planning Configuration](#) > [Enhancements Using Business Add-Ins](#).

You must disable the implementation of this BAdI to continue using the Retail SAP BW Structure. For more information, see section *Reactivate Planning Framework Content (SAP Assortment Planning)*.

If you use the Omnichannel SAP BW structure, make sure that *Use Planning Configuration* is enabled.

3. Maintain the monthly fiscal year variant (using transaction SPRO) under [Cross-Application Components](#) > [Assortment Planning](#) > [Imported Demand Data Foundation Settings](#) > [Basic Settings](#) > [Define Default Values](#) > [Monthly FY Variant](#). This is necessary to use the view *Sales & Inventory Analysis* in the *My Assortment Lists* app.

For more information, see [Fiscal Year Variant](#).

4. Define the business week (using transaction SPRO) under [Cross-Application Components](#) > [Demand Data Foundation](#) > [Basic Settings](#) > [Define Business Week](#).
5. Maintain number ranges for planning configurations under [Cross-Application Components](#) > [Assortment Planning](#) > [Number Ranges](#) > [Maintain Number Range for Planning Configuration](#).
6. Maintain number ranges for parameter configurations under [Cross-Application Components](#) > [Assortment Planning](#) > [Number Ranges](#) > [Maintain Number Range for Parameter Configuration](#).
7. Make sure that the settings in Customizing activity *Assortment List Settings* fit to your planning process.

The *Assortment List Settings* activity is available in Customizing under [Cross-Application Components](#) > [Assortment Planning](#) > [Assortment Lists](#).

8. If you want to allow users access to the *Analyze Forecast* app via links from the *My Assortment Lists* app, enable the *Create* option to generate a location hierarchy out of every location cluster set **activated** in SAP Assortment Planning. This option is available in the *Location Clustering Settings* Customizing activity under [▶ Cross-Application Components ▶ Assortment Planning for Retail ▶ Imported Demand Data Foundation Settings ▶ Data Maintenance ▶ Location Clustering ▶ Location Clustering Settings ▶](#).

If the *Create* option is not visible, choose *New Entries*.

9. To use forecasted values in the *Sales & Inventory Analysis* view within the *My Assortment Lists* app, configure Unified Demand Forecast (UDF). For more information, see the *SAP Customer Activity Repository Administration Guide*, section *Configure Unified Demand Forecast (UDF)*.
10. Verify default implementation of *BAdI: Determine Product Season Classification* and, if necessary, provide a custom implementation.

The BAdI, *BAdI: Determine Product Season Classification* is available under [▶ Cross-Application Components ▶ Assortment Planning ▶ Enhancements Using Business Add-Ins ▶](#).

6.3.1.4 Verify Fiscal Calendar

Verify that the previously generated calendar time data is still running following an upgrade to SAP Assortment Planning 5.0 SPS06.

Context

The generation of time data (*Fiscal* calendar) is required for using the *Sales & Inventory Analysis* view in the *My Assortment Lists* app. The fiscal calendar is also required to initialize the SAP Assortment Planning BW structure, as it allows for planning on fiscal periods.

Procedure

If required and not already done, ensure that the time data has been generated far enough into the past and future for SAP Assortment Planning 5.0 SPS06.

For more information, see the following:

- *Generate Time Data - Fiscal Calendar* section of the *Common Installation Guide*
- *Management* section of the *SAP Assortment Planning Administration Guide*

6.3.1.5 Reactivate Planning Framework Content (SAP Assortment Planning)

There are two distinct BW structures supported in SAP Assortment Planning:

Omnichannel SAP BW Structure

⚠ Caution

New functionality will be only available for the Omnichannel SAP BW structure. Therefore, we recommend to use the Omnichannel SAP BW structure which provides an extensive feature set.

- If you already use the Omnichannel SAP BW structure, reactivate it.
- If you were using the previously existing Retail SAP BW structure, we recommend that you reactivate it during the upgrade. If later you would like to switch to the new Omnichannel SAP BW structure, please contact SAP for assistance with your upgrade project.

Make sure that you have enabled the optimized in-memory planning capabilities of the integrated planning engine in SAP Business Warehouse. For more information, see the *Common Installation Guide*, section *Enable Optimized In-Memory Planning Capabilities of SAP BW Integrated Planning*.

Prerequisite

To use the Omnichannel SAP BW structure, the following prerequisites must be met:

- Enable the usage of planning configurations under [Cross-Application Components > Assortment Planning > Imported Demand Data Foundation Settings > Basic Settings > Define Default Values](#). The Omnichannel SAP BW structure only works when planning configurations are used.
- Enable the implementation of *BAdI: Read Merchandise Planning KPI Data* under [Cross-Application Components > Demand Data Foundation > Data Maintenance > Planning Configuration > Enhancements Using Business Add-Ins](#).

The Omnichannel SAP BW structure consists of local BI Content only. To create workbooks on top of the Omnichannel SAP BW structure, contact SAP Digital Business Services for a custom implementation project.

Retail SAP BW Structure

⚠ Caution

If you were using the Retail SAP BW Structure in a previous release, we recommend that you reactivate this structure during the upgrade. The Retail SAP BW Structure will be supported with maintenance, however no new functionality will be developed for this structure. If later you would like to switch to the new Omnichannel SAP BW structure, please contact SAP for assistance with your upgrade project.

Prerequisite

To use the Retail SAP BW structure, the following prerequisites must be met:

- Disable the usage of planning configurations under ► [Cross-Application Components](#) ► [Assortment Planning](#) ► [Imported Demand Data Foundation Settings](#) ► [Basic Settings](#) ► [Define Default Values](#) ►. You cannot use the Retail SAP BW structure with planning configurations.
- Disable the implementation of *BAdI: Read Merchandise Planning KPI Data* under ► [Cross-Application Components](#) ► [Demand Data Foundation](#) ► [Data Maintenance](#) ► [Planning Configuration](#) ► [Enhancements Using Business Add-Ins](#) ►.

6.3.1.6 Upgrade from Omnichannel SAP BW Structure

If you already use the Omnichannel SAP BW structure, activate the local BI Content objects as described in subsection [Activate Application BI Content \(Omnichannel SAP BW Structure\)](#).

6.3.1.6.1 Activate Application BI Content (Omnichannel SAP BW Structure)

Context

In this procedure, you perform a sequential, step-by-step activation of the local BI Content objects delivered in the **Omnichannel SAP BW structure** of the SAP Assortment Planning application. SAP Assortment Planning uses this application BI Content to consume data stored in the back-end system

i Note

To ensure correct activation of the BI Content objects, carry out the activation sequentially, as specified in the following procedures. Resolve any activation warnings, except for the ones listed under [Result \[page 242\]](#), which can be ignored.

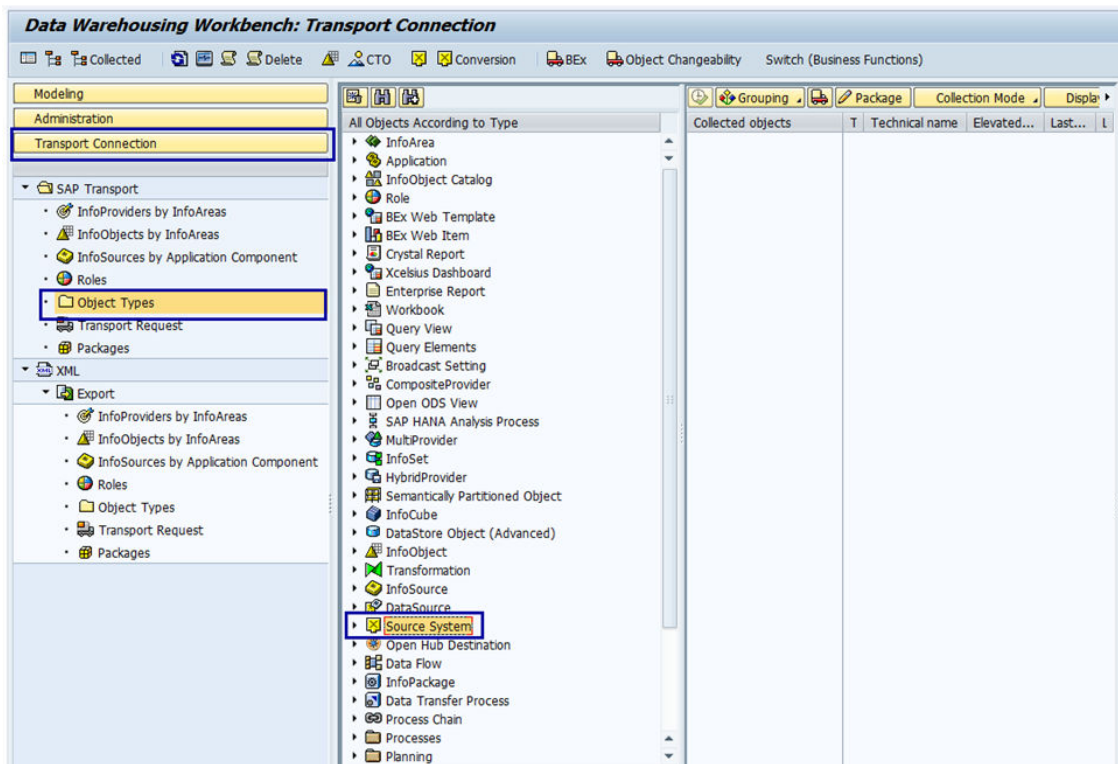
Also, do not disable the default BI setting to collect and activate all dependencies. The instructions below activate a minimum subset of objects, and it is assumed that all their dependencies are collected and activated.

The consumed data from the back-end system can be created by the SAP Assortment Planning application, or be replicated from a source master data system. In both cases, beware of limitations with regard to the characters allowed by SAP BW. For more information, see:

- [SAP Assortment Planning Administration Guide](#) under [Initial Load of Data to DDF Using DRFOUT](#)
- [173241](#) ►
- Customizing activity [Maintain permitted extra characters](#) under ► [SAP NetWeaver](#) ► [Business Warehouse](#) ► [General Settings](#) ►.

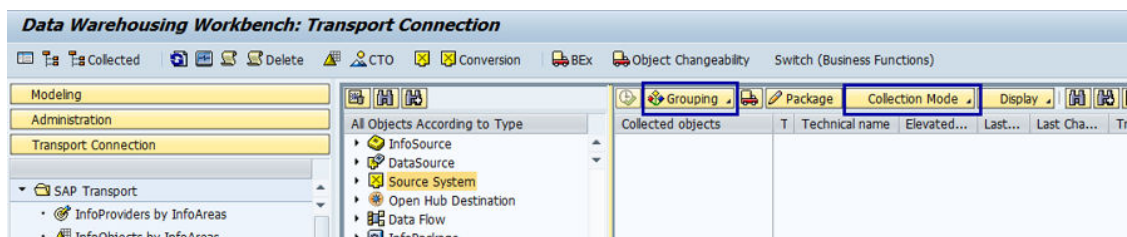
Procedure

1. On your back-end SAP Assortment Planning system, open the Data Warehousing Workbench (transaction RSA1).
2. Verify transport connections.
 1. Select *Transport Connection* in the left-hand frame.
 2. Select *Object Types*.
 3. Expand *Source System*.



Selecting Source Systems

4. Use *Select Objects* to ensure that the back-end system is selected as the source system.
5. Choose *Transfer Selections*.
6. At the top of the right-hand frame, above the list of *Collected objects*, choose *Grouping* and select *Only Necessary Objects*.
7. At the top of the right-hand frame, choose *Collection Mode* and select *Collect Automatically*.



Grouping and Collection Settings

- Determine if you need to enable to *Match (X) or copy* option for the BI Content, which you will activate in the subsequent steps.

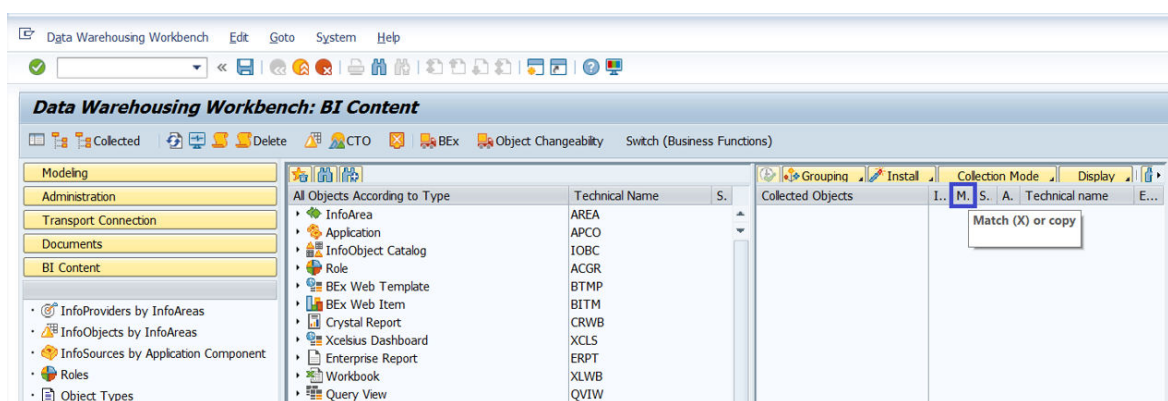
Match(X) or copy Selection

Installation Type	Selection	
New Installation	Do not enable the <i>Match (X) or copy</i> option for any of the BI Content objects.	
Upgrade (Previously installed/activated any of the /RAP/ * BI Content)	Standard /RAP/ * BI Content objects have not been modified in your local environment¹	Standard /RAP/ * BI Content objects have been modified in your local environment¹
	Do not enable the <i>Match (X) or copy</i> option for any of the BI Content objects.	Enable the <i>Match (X) or copy</i> option. During the activation of each BI Content object type, you will be asked to carry out an additional <i>Transfer selections</i> step. In this step, select to install the <i>Active Version</i> (that is, your modified version) or the <i>Content Version</i> (that is, the SAP delivered, and possibly updated version of the object). The project implementation team should advise you on which option is required for each object.

⚠ Caution

When you choose to install the *Content Version*, the SAP delivered objects included in the current release will be installed regardless of any modifications made to the currently existing BI Content objects.

¹ As a system administrator, you may need to contact the SAP Assortment Planning project implementation team to learn if standard, SAP-delivered, BI Content objects have been modified in your local environment.



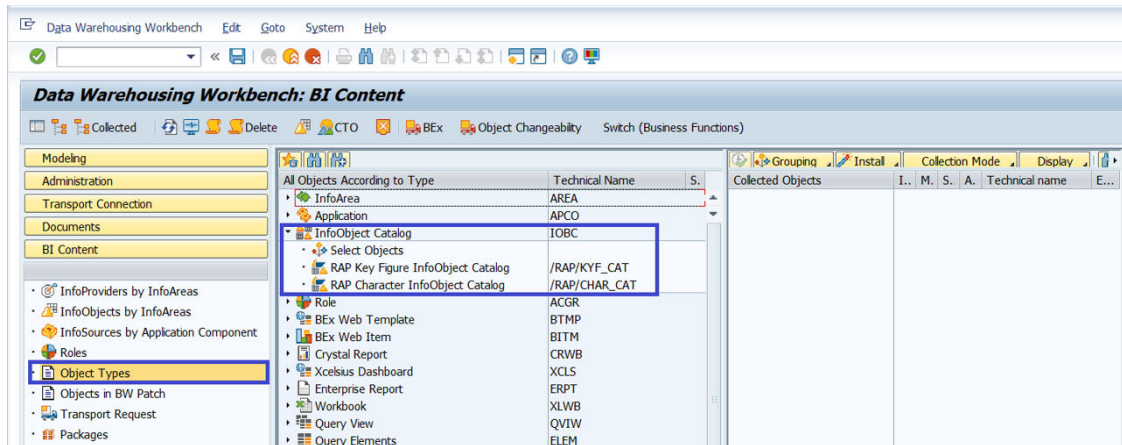
- Activate InfoObject catalogs.

If at any point during the installation of BI Content objects you are presented with a dialog asking you to add objects to a personal list, we recommend that you select **No**.

→ Remember

You can ignore activation warnings listed under [Result \[page 242\]](#).

1. Select *BI Content* in the left-hand frame.
2. Select *Object Types* and expand *InfoObject Catalog*.

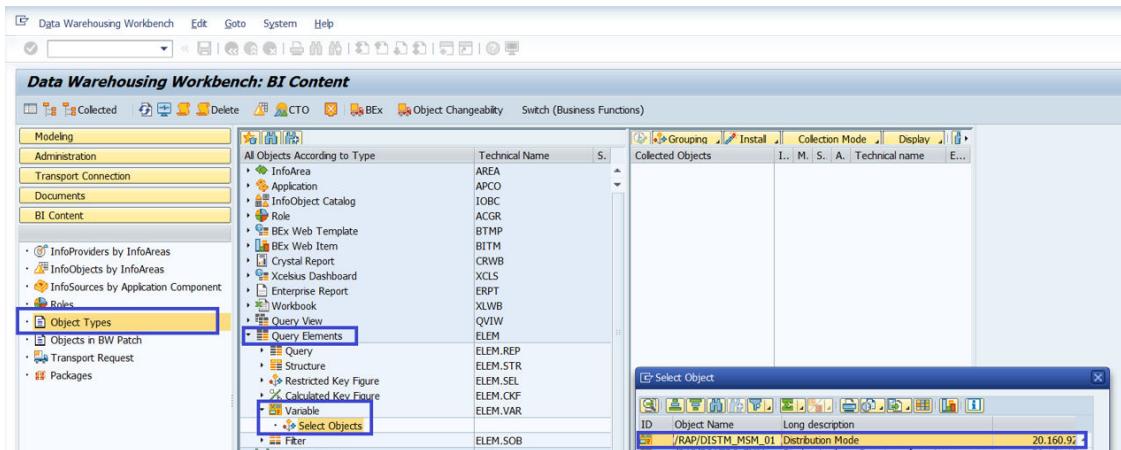


3. Use *Select Objects* to select the */RAP/CHAR_CAT* and the */RAP/KYF_CAT* catalogs.
 4. Choose *Transfer Selections*.
 5. In the right-hand frame, in the list of *Collected objects*, verify that both InfoObject catalogs are listed.
 6. Right-click on each of the InfoObject catalogs, and choose *Install all Below*.
 7. Choose *Install*.
If an information dialog box appears, choose *Continue*. Choose *Local Object* or enter a package if you need to transport the objects.
5. Activate *Variables*.

→ Remember

You can ignore activation warnings listed under [Result \[page 242\]](#).

1. Select *BI Content* in the left-hand frame.
2. Select *Object Types* and expand *Query Elements* followed by *Variable*.
3. Use *Select Objects* to select the following variables:
 - */RAP/PLCND_ESM_02*
 - */RAP/PLCSET_ESM_02*
 - */RAP/PCYCLE_EMM_01*
 - */RAP/PLNHR_MSO_01*
 - */RAP/PLNHN1_MSO_01* to */RAP/PLNHN9_MSO_01* (inclusive)
 - */RAP/PRDHN1_MMO_01* to */RAP/PRDHN9_MMO_01* (inclusive)



4. Choose *Transfer Selections*.
 5. In the right-hand frame, in the list of *Collected objects*, verify that all of the selected variables are listed and that the option in the *Install* column is enabled .
 6. Choose *Install*.
If an information dialog box appears, choose *Continue*. Choose *Local Object* or enter a package if you need to transport the objects.
6. Maintain version master data.
1. In the left-hand frame, select **Modeling > InfoObjects** .
 2. In the right-hand frame under **Assortment Planning for Retail > RAP Character InfoObject Catalog** , search in the object list for the InfoObject `/RAP/VERSN`.
 3. Right-click the InfoObject `/RAP/VERSN`, choose *Maintain Master Data* from the context menu, and maintain the following entries on the *Time Independent* tab:

Version	Short description
#	An empty version value that you must maintain
ALV	Assortment List Vsn
APF	Vsn of final plan

i Note

Save your changes and activate them.

7. Activate Advanced DataStore Objects.

If during the installation, you are presented with a message stating that your source system is not active, navigate to the *Modeling* tab, locate your source system under *Source Systems*, and activate it by right-clicking and selecting *Activate*. If prompted, choose *Only Activate* .

→ Remember

You can ignore activation warnings listed under [Result \[page 242\]](#).

1. Select *BI Content* in the left-hand frame.
2. Select *Object Types* and expand *DataStore Object (advanced)*.
3. Use *Select Objects* to select all DataStore Objects starting with */RAP/DS**.
4. Choose *Transfer Selections*.
5. In the list of *Collected objects*, verify that the option in the *Install* column is enabled for each of the objects.
6. Choose **► Display ► List ▾**.
7. Right-click the tree node *DataStore Object (advanced)* and choose *Install all Below*.
8. Choose *Install*. If an information dialog box appears, choose *Continue*. Choose *Local Object* or enter a package if you need to transport the objects.
9. Remodel the following Advanced DataStore Objects if a corresponding message appears: */RAP/DS40*, */RAP/DS42*, */RAP/DS54*, and */RAP/DS55*.

i Note

Set all affected Advanced DataStore Objects to *Load Mode* before starting the remodeling process. After the remodeling process, make sure that all new Advanced DataStore Objects are set to *Planning Mode*.

→ Tip

To set an Advanced DataStore Object to Load Mode:

1. Select *Modeling* in the left-hand frame.
2. Select *InfoProvider* in the left-hand frame.
3. Right-click the Advanced DataStore Object that you want to set to *Load Mode*.
4. Choose **► Planning-Specific Properties ► Change Real-Time Load Behavior ▾**.
5. Choose *Real-Time Data Target Can Be Loaded With Data; Planning Not Allowed* and confirm.

→ Tip

To remodel an Advanced DataStore Object:

1. Select *Modeling* in the left-hand frame.
2. Select *InfoProvider* in the left-hand frame.
3. Right-click the Advanced DataStore Object that you want to remodel.
4. Choose **► Additional Functions ► Remodeling Monitor ▾**.
5. Select a remodeling rule.
6. Choose *Start Request*. The *Start Time* window opens.
7. In the *Start Time* window, select a start time for the remodeling request and confirm.

8. Activate CompositeProviders.

→ Remember

You can ignore activation warnings listed under [Result \[page 242\]](#).

1. Select *BI Content* in the left-hand frame.

2. Select *Object Types* and expand *CompositeProvider*.
 3. Use *Select Objects* to select all CompositeProviders from /RAP/CP40 to /RAP/CP46 (inclusive).
 4. Choose *Transfer Selections*.
 5. In the list of *Collected objects*, verify that the option in the *Install* column is enabled for each of the objects.
 6. Choose **► Display ► List**.
 7. Right-click the tree node *DataStore Object (advanced)* and choose *Install all Below*.
 8. Choose *Install*. If an information dialog box appears, choose *Continue*. Choose *Local Object* or enter a package if you need to transport the objects.
9. Activate Aggregation Levels.

→ Remember

You can ignore activation warnings listed under [Result \[page 242\]](#).

1. Select *BI Content* in the left-hand frame.
2. Select *Object Types* and expand **► Planning ► Aggregation Level**.
3. Use *Select Objects* to select the following Aggregation Level:

Aggregation Levels

Aggregation Levels

/RAP/C44A01

/RAP/C44A02

/RAP/C44A03

/RAP/C44A04

/RAP/C46A02

4. Choose *Transfer Selections*.
 5. In the list of *Collected objects*, verify that the option in the *Install* column is enabled for each of the objects.
 6. Choose *Install*. If an information dialog box appears, choose *Continue*. Choose *Local Object* or enter a package if you need to transport the objects.
10. Activate Planning Sequence Objects.

→ Remember

You can ignore activation warnings listed under [Result \[page 242\]](#).

1. Select *BI Content* in the left-hand frame.
2. Select *Object Types* and expand **► Planning ► Planning Sequence**.

- Use *Select Objects* to select the following Planning Sequences:

Planning Sequences

Planning Sequences

/RAP/D50A01_PS01

/RAP/D57A01_PS01

/RAP/C40A01_PS01

/RAP/C40A05_PS01

/RAP/C46A01_PS01

/RAP/C46A03_PS01

/RAP/C46A04_PS01

/RAP/C46A04_PS02

- Choose *Transfer Selections*.
- In the list of *Collected objects*, verify that the option in the *Install* column is enabled for each of the objects.
- Choose *Install*. If an information dialog box appears, choose *Continue*. Choose *Local Object* or enter a package if you need to transport the objects.

- Activate Planning Function Type Objects.

→ Remember
 You can ignore activation warnings listed under [Result \[page 242\]](#).

- Select *BI Content* in the left-hand frame.
- Select *Object Types* and expand **► Planning ► Function Type for Planning ►**.
- Use *Select Objects* to select the following Planning Function:

Planning Functions

Planning Functions

/RAP/OP_BUFFER_DATA

- Choose *Transfer Selections*.
- In the list of *Collected objects*, verify that the option in the *Install* column is enabled for each of the objects.
- Choose *Install*. If an information dialog box appears, choose *Continue*. Choose *Local Object* or enter a package if you need to transport the objects.

- Choose *Exit* to leave the transaction.

Results

If activation warnings similar to the ones displayed below appear, you can ignore them.

- CMP problem occurred in characteristic <CHAR> for InfoProvider <INFO_PROV>
- Rounding inaccuracies occur with data type FLOAT for AMOUNT and QUANTITY
- Characteristic <CHAR>: Lower case makes selection of char. values difficult
- Data type of char. <CHAR> (<TYPE1>) is not equal to data type of attribute <ATTR> (<TYPE2>)
- Length of characteristic <TEXT CHAR> (<LENGTH1>) and assigned attribute <ATTR> (<LENGTH2>) not same
- The short text of DataSource <SOURCE> is not maintained in language <LANG>
- Skip key figure <KYF>: aggregation type NO2 not supported
- Attribute <ATTR>: Conversion routine <CONV> ignored
- Attribute <ATTR>: Compounding ignored
- Datatype FLTP for datafield <FIELD> of the DSO is not allowed
- Conversion problems possible for source field <FIELD1> / target field <FIELD2>

6.3.1.7 Upgrade from Retail SAP BW Structure

If you were using the previously existing Retail SAP BW structure, activate the local BI Content objects and ensure that the previously generated time data (*Gregorian* calendar) is sufficient.

For detailed information, see the subsections *Activate Application BI Content (Retail SAP BW Structure)* and *Verify Gregorian Calendar*.

6.3.1.7.1 Activate Application BI Content (Retail SAP BW Structure)

Context

In this procedure, you perform a sequential, step-by-step activation of the local BI Content objects delivered in the **Retail SAP BW structure** of the SAP Assortment Planning application. SAP Assortment Planning uses this application BI Content to consume data stored in the back-end system.

Caution

As of SAP Assortment Planning 2.0 FP2, a new (Omnichannel) SAP BW Structure has been introduced. Please contact SAP for assistance with your upgrade project.

Note

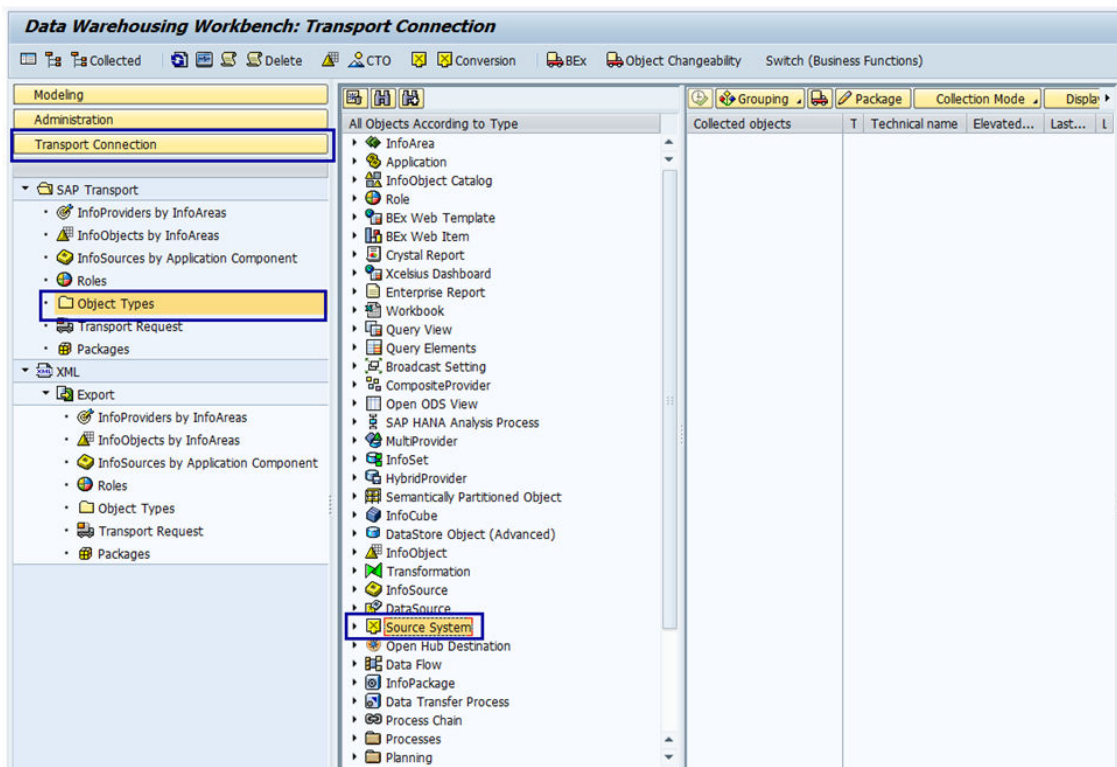
To ensure correct activation of the local BI Content objects, carry out the activation sequentially, as specified in the following procedures. Resolve any activation warnings, except for the ones listed under [Activation Warnings \[page 250\]](#), which can be ignored.

Also, the default BI setting to collect and activate all dependencies must not be disabled by the user. The instructions below activate a minimum subset of objects, and it assumed that all their dependencies will be collected and activated.

The consumed data from the back-end system can be created by the SAP Assortment Planning application, or be replicated from a source master data system. In both cases, beware of limitations with regard to the characters allowed by SAP BW. For more information, see [173241](#) and Customizing activity *Maintain permitted extra characters* under **SAP NetWeaver > Business Warehouse > General Settings**.

Procedure

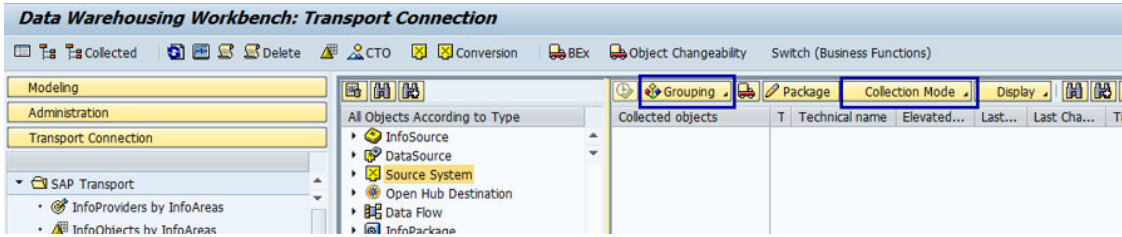
1. On your back-end SAP Assortment Planning system, open the Data Warehousing Workbench (transaction RSA1).
2. Verify transport connections.
 1. Select *Transport Connection* in the left-hand frame.
 2. Select *Object Types*.
 3. Expand *Source System*.



Selecting Source Systems

4. Use *Select Objects* to ensure that the back-end system is selected as the source system.
5. Choose *Transfer Selections*.
6. At the top of the right-hand frame, above the list of *Collected objects*, choose *Grouping* and select *Only Necessary Objects*.

7. At the top of the right-hand frame, choose *Collection Mode* and select *Collect Automatically*.



Grouping and Collection Settings

3. Determine if you need to enable to *Match (X) or copy* option for the BI Content which you will activate in the subsequent steps.

Match(X) or copy Selection

Installation Type	Selection		
New Installation	Do not enable the <i>Match (X) or copy</i> option for any of the BI Content objects.		
Upgrade	<table border="0"> <tr> <td style="vertical-align: top;"> <p>Standard /RAP/ * BI Content objects have not been modified in your local environment¹</p> </td> <td style="vertical-align: top;"> <p>Standard /RAP/ * BI Content objects have been modified in your local environment¹</p> </td> </tr> </table>	<p>Standard /RAP/ * BI Content objects have not been modified in your local environment¹</p>	<p>Standard /RAP/ * BI Content objects have been modified in your local environment¹</p>
<p>Standard /RAP/ * BI Content objects have not been modified in your local environment¹</p>	<p>Standard /RAP/ * BI Content objects have been modified in your local environment¹</p>		

(Previously installed/activated any of the /RAP/ * BI Content)

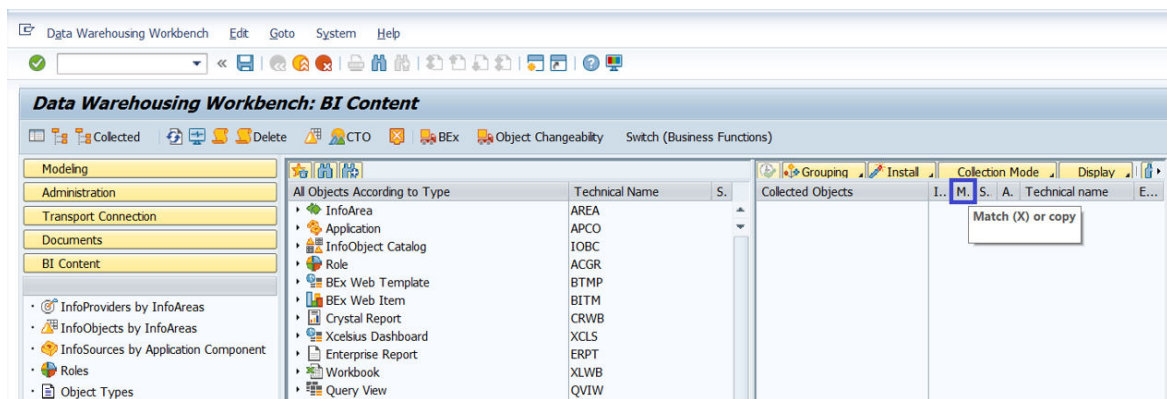
Do not enable the *Match (X) or copy* option for any of the BI Content objects.

Enable the *Match (X) or copy* option.
 During the activation of each BI Content object type, you will be asked to carry out an additional *Transfer selections* step. In this step, select to install the *Active Version* (that is, your modified version) or the *Content Version* (that is, the SAP delivered, and possibly updated version of the object). The project implementation team should advise you on which option is required for each object.

⚠ Caution

When you choose to install the *Content Version*, the SAP delivered objects included in the current release will be installed regardless of any modifications made to the currently existing BI Content objects.

¹ As a system administrator, you may need to contact the SAP Assortment Planning project implementation team to learn if standard, SAP-delivered, BI Content objects have been modified in your local environment.



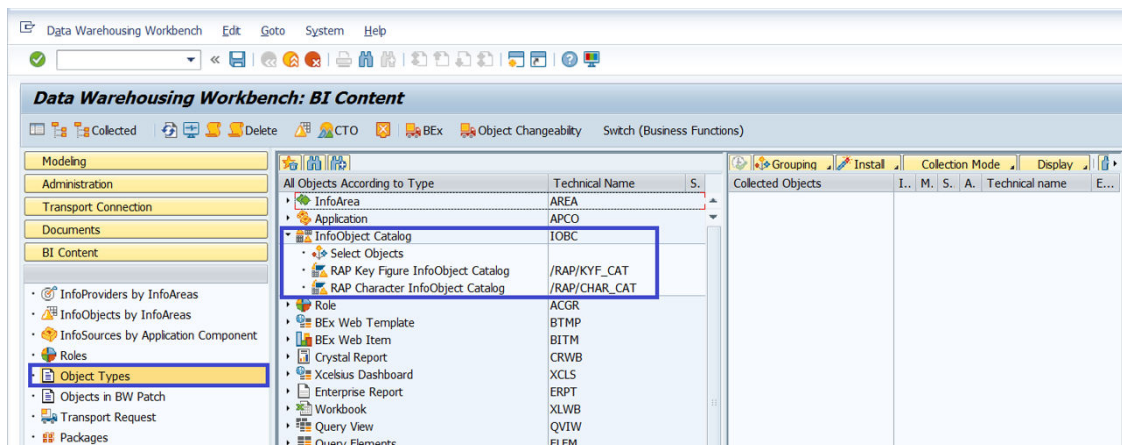
4. Activate InfoObject catalogs.

If at any point during the installation of BI Content objects you are presented with a dialog asking you to add objects to a personal list, we recommend that you select **No**.

→ Remember

You can ignore activation warnings listed under [Activation Warnings \[page 250\]](#).

1. Select *BI Content* in the left-hand frame.
2. Select *Object Types* and expand *InfoObject Catalog*.



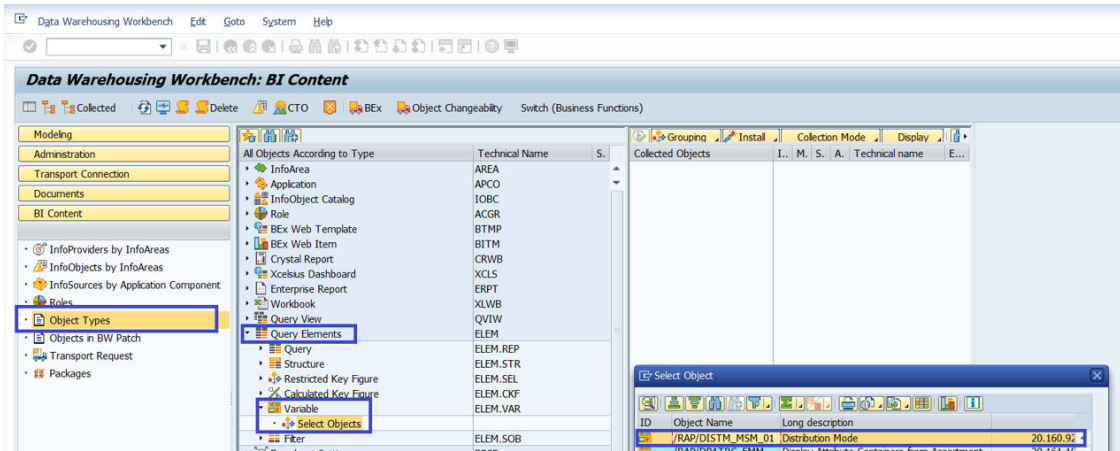
3. Use *Select Objects* to select the /RAP/CHAR_CAT and the /RAP/KYF_CAT catalogs.
 4. Choose *Transfer Selections*.
 5. In the right-hand frame, in the list of *Collected objects*, verify that both InfoObject catalogs are listed.
 6. Right-click on each of the InfoObject catalogs, and choose *Install all Below*.
 7. Choose *Install*.
If an information dialog box appears, choose *Continue*. Choose *Local Object* or enter a package if you need to transport the objects.
5. Activate *Variable* /RAP/DISTM_MSM_01.

→ Remember

You can ignore activation warnings listed under [Activation Warnings \[page 250\]](#).

1. Select *BI Content* in the left-hand frame.

2. Select *Object Types* and expand *Query Elements*.
3. Use *Select Objects* to select the */RAP/DISTM_MSM_01* Variable.



4. Choose *Transfer Selections*.
 5. In the right-hand frame, in the list of *Collected objects*, verify that the */RAP/DISTM_MSM_01* Variable is listed and that the option in the *Install* column is enabled.
 6. Choose *Install*.
If an information dialog box appears, choose *Continue*. Choose *Local Object* or enter a package if you need to transport the objects.
6. Maintain version master data.
1. Select *Modeling* in the left-hand frame.
 2. Expand *InfoObjects*.
 3. Search for InfoObject */RAP/VERSN*, located under **Assortment Planning** **RAP Character InfoObject Catalog**.
 4. Right-click the InfoObject */RAP/VERSN*, choose *Maintain Master Data* from the context menu, and maintain the following entries on the *Time Independent* tab:

Version

- An empty version value that you must maintain

000

AP1

AP2

APF

AW1

AW2

OP1

OP2

Version

PRJ

REF

Search: Version

Results List: 76 results found for Version

[Personal Value List](#) [Show Search Criteria](#)  

Version	Short description
#	Not assigned
0	Actuals
AP1	Plan Version 1
AP2	Plan Version 2

The supported planning versions are described in detail in the *Maintain Customizing Table /RAP/RS_VARCUST* section of the *Common Installation Guide*.

Note

Save your changes and activate them.

7. Activate DataStore Objects.

→ Remember

You can ignore activation warnings listed under [Activation Warnings \[page 250\]](#).

1. Select *BI Content* in the left-hand frame.
2. Select *Object Types* and expand *DataStore Object (Classic)*.
3. Use *Select Objects* to select all DataStore Objects starting with */RAP/**.
4. Choose *Transfer Selections*.
5. In the list of *Collected objects*, verify that the option in the *Install* column is enabled for each of the objects.
6. Choose *Install*. If an information dialog box appears, choose *Continue*. Choose *Local Object* or enter a package if you need to transport the objects.
If during the installation, you are presented with a dialog asking you to add objects to a personal list, select **No**.

8. Activate InfoCubes.

→ Remember

You can ignore activation warnings listed under [Activation Warnings \[page 250\]](#).

1. Select *BI Content* in the left-hand frame.
2. Select *Object Types* and expand *InfoCube*.
3. Use *Select Objects* to select all InfoCubes starting with */RAP/RC**.
4. Similarly, select InfoCubes */RAP/VC20* and */RAP/VC21*.
5. Choose *Transfer Selections*.

6. In the list of *Collected objects*, verify that the option in the *Install* column is enabled for each of the objects.
 7. Choose *Install*. If an information dialog box appears, choose *Continue*. Choose *Local Object* or enter a package if you need to transport the objects.
9. Activate CompositeProviders.

→ Remember

You can ignore activation warnings listed under [Activation Warnings \[page 250\]](#).

1. Select *BI Content* in the left-hand frame.
 2. Select *Object Types* and expand *CompositeProvider*.
 3. Use *Select Objects* to select all CompositeProviders from */RAP/CP20* to */RAP/CP37* (inclusive).
 4. Choose *Transfer Selections*.
 5. In the list of *Collected objects*, verify that the option in the *Install* column is enabled for each of the objects.
 6. Choose *Install*. If an information dialog box appears, choose *Continue*. Choose *Local Object* or enter a package if you need to transport the objects.
10. Activate Aggregation Levels.

→ Remember

You can ignore activation warnings listed under [Activation Warnings \[page 250\]](#).

1. Select *BI Content* in the left-hand frame.
2. Select *Object Types* and expand **► Planning ► Aggregation Level ▾**.
3. Use *Select Objects* to select the following Aggregation Levels:
These should be active from the previous installation, if not, select them to be installed again:

Aggregation Levels

Aggregation Level

/RAP/D20A01

/RAP/R20A02

/RAP/R20A06

/RAP/R20A08

/RAP/R20A11

/RAP/R20A12

/RAP/R20A15

/RAP/R20A17

/RAP/R23A01

4. Choose *Transfer Selections*.

5. In the list of *Collected objects*, verify that the option in the *Install* column is enabled for each of the objects.
6. Choose *Install*. If an information dialog box appears, choose *Continue*. Choose *Local Object* or enter a package if you need to transport the objects.

11. Reactivate Planning Sequence Objects.

→ Remember

You can ignore activation warnings listed under [Activation Warnings \[page 250\]](#).

1. Select *BI Content* in the left-hand frame.
2. Select *Object Types* and expand **▶ Planning ▶ Planning Sequence ▶**.
3. Use *Select Objects* to select the following Planning Sequences:
These should be active from the previous installation, if not, select them to be installed again:

Planning Sequences

Planning Sequence

/RAP/C21A01_PS01

/RAP/C25A03_PS01

/RAP/D23A01_PS01

/RAP/D24A01_PS01

/RAP/R20A08_PS01

4. Choose *Transfer Selections*.
5. In the list of *Collected objects*, verify that the option in the *Install* column is enabled for each of the objects.
6. Choose *Install*. If an information dialog box appears, choose *Continue*. Choose *Local Object* or enter a package if you need to transport the objects.

12. Reactivate Workbooks.

→ Remember

You can ignore activation warnings listed under [Activation Warnings \[page 250\]](#).

1. Select *BI Content* in the left-hand frame.
2. Select *Object Types* and expand **▶ More Types ▶ Analysis Office Excel Workbook ▶**.

- Use *Select Objects* to select the following workbooks:
These should be active from the previous installation, if not, select them to be installed again:

Workbooks

Workbook

/RAP/PLANASSORTMENT

/RAP/PLANOPTIONS

- Choose *Transfer Selections*.
 - In the list of *Collected objects*, verify that the option in the *Install* column is enabled for each of the objects.
 - Choose *Install*. If an information dialog box appears, choose *Continue*. Choose *Local Object* or enter a package if you need to transport the objects.
13. Choose *Exit* to leave the transaction.

Activation Warnings

If activation warnings similar to the ones displayed below appear, you can ignore them.

- CMP problem occurred in characteristic <CHAR> for InfoProvider <INFO_PROV>
- Rounding inaccuracies occur with data type FLOAT for AMOUNT and QUANTITY
- Characteristic <CHAR>: Lower case makes selection of char. values difficult
- Data type of char. <CHAR> (<TYPE1>) is not equal to data type of attribute <ATTR> (<TYPE2>)
- Length of characteristic <TEXT CHAR> (<LENGTH1>) and assigned attribute <ATTR> (<LENGTH2>) not same
- The short text of DataSource <SOURCE> is not maintained in language <LANG>
- Skip key figure <KYF>: aggregation type NO2 not supported
- Attribute <ATTR>: Conversion routine <CONV> ignored
- Attribute <ATTR>: Compounding ignored
- Datatype FLTP for datafield <FIELD> of the DSO is not allowed
- Conversion problems possible for source field <FIELD1> / target field <FIELD2>

6.3.1.7.2 Verify Gregorian Calendar

Ensure that the previously generated time data (*Gregorian* calendar) is sufficient for the current release of SAP Assortment Planning.

Context

Execute this procedure to generate time data (**Gregorian** calendar).

Procedure

1. Log on to SAP HANA studio.
2. In the *SAP HANA Modeler* perspective, on the *Quick Launch* tab, select your ABAP back-end system and choose *Generate Time Data*.
3. Select *Gregorian* as the *Calendar Type*.

For example, SAP HANA views included in the SAP HANA content for SAP Customer Activity Repository require the presence of time data in `_SYS_BI.TIME_DIMENSION*` SAP HANA database tables.

4. Enter a range of years that includes all the years of data that you plan to store in SAP Customer Activity Repository.

Example: If you plan to start using SAP Assortment Planning on January 1, 2014, enter 2014 as your starting year. But if you plan to access sales documents created in SAP ERP that date from January 2013, specify 2013 as your starting year.

5. Define the granularity as *Day*, which is the minimum granularity required by SAP Customer Activity Repository. You can choose a finer level of granularity, for example *Hour*, if necessary.
6. Choose the day that is the first day of the week in your company.
7. Choose *Finish*.

For more information, see:

- https://help.sap.com/viewer/p/SAP_HANA_LIVE ► *Installation and Upgrade* ► *Administrator's Guide* ► *Configuration Steps* ► *Generate Time Data* ►
- https://help.sap.com/viewer/p/SAP_HANA_PLATFORM ► *<Version>* ► *Development* ► *SAP HANA Modeling Guide (for SAP HANA studio)* ► *Creating Information Views and Previewing its Output* ► *Generate Time Data* ►

6.3.1.8 Verify that Data Replication Is Running Following the Upgrade

Following the upgrade, ensure that all of the data replication described in the *Configure Data Replication* section of the *Common Installation Guide* is still running.

⚠ Caution

The data you replicate in this step is consumed by the SAP Assortment Planning application through local BI Content. Only a subset of ASCII characters is considered valid by SAP BW. As a result, object identifiers, which are mapped to external IDs in DDF (for example, `EXT_LOC_ID` or `EXT_PROD_ID`), should only consist of valid characters.

We recommend that you avoid the usage of invalid characters in the source master data system. This is controlled by the system administrator or the implementation team who define the value ranges and formatting for object identifiers (for example, product or location IDs).

If the recommended approach is not possible, then in your SAP Assortment Planning back-end system, you need to allow for additional special characters in Customizing activity *Maintain permitted extra characters* under [SAP NetWeaver > Business Warehouse > General Settings](#). For more information, see [173241](#).

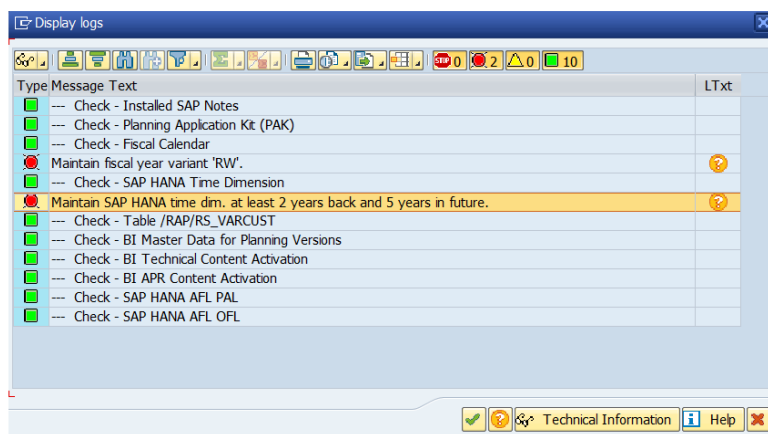
In particular, following the upgrade, you need to pay attention to the following:

- SAP Assortment Planning supports the use of time-dependent article hierarchies. This is enabled by implementing SAP Note [2196323](#) in the **connected SAP Retail or SAP S/4HANA system**. Following the implementation of these notes in SAP Retail or SAP S/4HANA, if your hierarchy is already a time-dependent hierarchy, you need to re-import the product hierarchies into SAP Assortment Planning using the `DRFOUT` framework.
 - SAP Retail Description: Article Hierarchy
 - DRFOUT Outbound Implementation: `PAHY`
 - DDF Inbound Interface: `/DMF/MDIF_PROD_HIER_INBOUND`
- All the tables listed in the spreadsheet of the *CARAB 5.0 - SLT Tables* archive for your version of SAP Customer Activity Repository applications bundle (SAP Assortment Planning) are being replicated. For more information, see the *Create/Replicate Source Master Data System Tables* section in the *Common Installation Guide*.
- Ensure that season classification data is being loaded from the appropriate source. For more information, see the *Load Season Classification Data* section in the *SAP Assortment Planning Administration Guide*.
- Ensure that wholesale data is being loaded. Set up the *Mapping report to convert sales orders into /DMF/TS_WS table* report (`/DMF/WHOLESALE_SO_SHP_TO_TS_WS` in transaction `SE38`) to run as a background job to regularly import replicated sales order and shipment data into DDF. For more information, see the *Load Wholesale Data* section in the *SAP Assortment Planning Administration Guide*.

6.3.1.9 Run the Validation Report

1. Run transaction `/DMF/VAL_CAR_INSTALL`.
Alternatively, run transaction `SE38` and execute the `/DMF/VALIDATE_CAR_INSTALLATION` report.
2. Select the *Assortment Planning* scenario and select *Execute*.
In the dialog that appears, select whether to validate the Retail SAP BW structure, the Omnichannel SAP BW structure, or both. The SAP BW structure to validate depends on the structure that you have selected to reactivate during the upgrade in a previous step, see section *Reactivate SAP Assortment Planning Planning Framework Content*.

Running this report allows you to verify the success of the installation, providing a log of potential issues. For example, you may be presented with the following results:



Validation Report Results

View the long text associated with each message to see the link to the documentation describing the procedure you have to troubleshoot.

6.3.1.10 Activate SAP Assortment Planning ICF Services

Use

Following an upgrade, you must ensure that all ICF services required for the SAP Assortment Planning SAP Fiori apps are activated.

Procedure

1. Log on to your front-end server.
2. Open service maintenance (transaction SICF).
3. In the *Define Services* screen, select the Location Clustering service by specifying the following:
 - Hierarchy Type: **SERVICE**
 - Virtual Host: **DEFAULT_HOST**
 - Service Path: **/sap/bc/ui5_ui5/sap/locclsts_v2/**
4. Choose *Execute*.
5. To activate the service, choose *Service/host Activate*.

6. Repeat steps 3 to 5 to ensure that **all** of the following services are activated:

- /sap/bc/ui5_ui5/sap/attribmgmt_v2/
- /sap/bc/ui5_ui5/sap/assortlist/
- /sap/bc/ui5_ui5/sap/ddfreuse_v2/
- /sap/bc/ui5_ui5/sap/locclsts_v2/
- /sap/bc/ui5_ui5/sap/modulegmt_v2/
- /sap/bc/ui5_ui5/sap/optionplan_v2/
- /sap/bc/ui5_ui5/sap/phpmatch_v2/
- /sap/bc/ui5_ui5/sap/plnconfig/
- /sap/bc/ui5_ui5/sap/optionplanning
- /sap/bc/ui5_ui5/sap/styleplan
- /sap/bc/ui5_ui5/sap/rankingkey
- /sap/bc/ui5_ui5/sap/businessrule
- /sap/bc/ui5_ui5/sap/manageproddt1
- /sap/bc/ui5_ui5/sap/plancalendar

6.3.1.11 Define System Alias for Back-End Transactions

Use

A number of SAP Fiori apps, installed on your front-end system, launch transactions directly on the back-end system. For example, the *Manage Products* tile actually launches the Demand Data Foundation (DDF) POWL_EASY WebDynpro application.

Following an upgrade, you must ensure that all required RFC connections and system alias definitions remain set.

Procedure

1. Log on to your front-end system, that is, the system where you have installed the user interface (UI) components of your application.
2. Launch *Configuration of RFC Connections* (transaction SM59).
3. Create an RFC connection with the following settings:

- *RFC Destination*: SAP_ISR_CARAB
Connection Type: H (HTTP connection)

Ensure to maintain all of the settings required to connect to your back-end system, in particular, the *Target Host* entry on the *Technical Settings* tab.

4. Save your changes.
5. Create another RFC connection with the following settings:
 - *RFC Destination*: SAP_ERP_ISR_CARAB
Connection Type: H (HTTP connection)

Ensure to maintain all of the settings required to connect your front-end system to the source master data system, in particular, the *Target Host* entry on the *Technical Settings* tab.

6. Save your changes.
7. Open *SAP Fiori Launchpad Designer* using transaction /N/UI2/FLPD_CONF.
8. Search for the catalog SAP_RAP_TC_T, choose *Target Mappings*, and map the semantic objects and actions to the system aliases as indicated in the following table:

Catalog	App	Semantic Object	Action	System Alias	Description
SAP_RAP_TC_T	<i>My Assortment Lists</i>	<i>MasterAssortment</i>	<i>displayLog</i>	SAP_ISR_C ARAB	This setting allows the <i>My Assortment Lists</i> app to launch transaction SLG1 on the back-end system.
					<p>i Note</p> <p>This application is only used to configure a link to the back-end system, you do not need to add this app to your SAP Fiori launchpad.</p>
	<i>My Assortment Lists</i>	<i>MasterAssortment</i>	<i>displayListingCondition</i>	SAP_ERP_I SR_CARAB	This setting allows the <i>My Assortment Lists</i> app to launch transaction WSL10 on the connected SAP Retail or SAP S/4HANA system.
					<p>i Note</p> <p>This application is only used to configure a link to the SAP Retail or SAP S/4HANA system, you do not need to add this app to your SAP Fiori launchpad. In order for the link to work, you must maintain the <i>HTTP Destination</i> for the <i>Assortment Planning</i> application in the customizing activity ► SAP Customizing Implementation Guide ► SAP Customer Activity Repository ► Demand Data Foundation ► Basic Settings ► Integration ► Sending System and Master Data System Coupling ►.</p>

Catalog	App	Semantic Object	Action	System Alias	Description
	My Assortment Lists	MasterAssortment	displayExtAssortment	SAP_ERP_I SR_CARAB	<p>This setting allows the My Assortment Lists app to launch:</p> <p>Transaction <code>WRF_WS0A3</code> on the connected SAP Retail system</p> <p>Transaction <code>WS0A3</code> on the connected SAP S4HANA system.</p> <div style="border: 1px solid #ccc; padding: 10px; background-color: #f9f9f9;"> <p>i Note</p> <p>This application is only used to configure a link to the SAP Retail or SAP S/4HANA system, you do not need to add this app to your SAP Fiori launchpad. In order for the link to work, you must maintain the HTTP Destination for the Assortment Planning application in the customizing activity ▶ SAP Customizing Implementation Guide ▶ SAP Customer Activity Repository ▶ Demand Data Foundation ▶ Basic Settings ▶ Integration ▶ Sending System and Master Data System Coupling ▶.</p> </div>
	Manage Category Responsibilities	AreaOfResponsibility	maintain	SAP_ISR_C ARAB	This setting allows the Manage Category Responsibilities app to launch the corresponding DDF WebDynpro application.
	Manage Market Responsibilities	AreaOfResponsibility	maintain_mh	SAP_ISR_C ARAB	This setting allows the Manage Market Responsibilities app to launch the corresponding DDF WebDynpro application.
	Manage Products	Product	maintain	SAP_ISR_C ARAB	This setting allows the Manage Products app to launch the corresponding DDF WebDynpro application.

Catalog	App	Semantic Object	Action	System Alias	Description
	Manage Locations	Location	maintain	SAP_ISR_C ARAB	This setting allows the Manage Locations app to launch the corresponding DDF WebDynpro application.

6.3.1.12 Troubleshoot Front-End Server Upgrade

Use

Following the upgrade of the product version on the front-end server, you may not be able to see some of the SAP Assortment Planning SAP Fiori tiles in your launchpad. This section outlines how to troubleshoot these issues, should you experience them.

These steps are also listed in the *Troubleshooting* section of the *SAP Assortment Planning Administrator's Guide* available on the SAP Help Portal at <http://help.sap.com/viewer/p/CARAB> >> <Your Version> > *Administration* > *SAP Assortment Planning Administration Guide* >.

Process

Do the following:

1. Check that all of the required BSP applications are listed in the UIRAP001 package.
 1. Log on to your front-end system (your SAP Gateway system).
 2. Launch the *Object Navigator* (transaction SE80).
 3. In the *Repository Browser*, open package UIRAP001.
 4. Expand all of the embedded packages of embedded package CONTENT_RAP_TRANS.

5. Verify that the following *BSP Applications* are listed:

Object Name	Description
UICAR001	Structure package for Customer Activity Repository
Subpackages	
UIAMR001	Structure package for Allocation Management Retail
UIOAA001	Omnichannel Article Availability
UIPMR001	Structure package for Promotion Management Retail
UIRAP001	Structure package for UIRAP
Subpackages	
CONTENT_RAP_COMMON	Main package for common objects for RAP
CONTENT_RAP_TRANS	Main package for transactional for RAP
Subpackages	
RETAIL_DDF	Package for DDF
BSP Library	
BSP Applications	
ATTRIBMGMT_V2	Manage Product Attributes: Fiori ID F0829A
DDFREUSE_V2	Fiori Reuse Components for DDF: Fiori ID F0854A
LOCCLSTS_V2	Location Clustering: Fiori ID F0550A
MODULEMGMT_V2	Module Management: Fiori ID F1682A
PLNCONFIG	Planning configuration
RETAIL_RAP_AP	Package for RAP AP
BSP Library	
BSP Applications	
ASSORTLIST	Assortment List: Fiori ID F1567B
OPTIONPLAN_V2	Option Plan: Fiori ID F0830A
PHPMATCH_V2	PHP Matching: Fiori ID F0831A
UISCAR01	Structure Package for Customer activity repository

BSP Applications

6. If you do not see one or more of the BSP applications listed above, right-click on each of the RETAIL_DDF and RETAIL_RAP_AP packages, and select **Other Functions > Rebuild Object List**.

⚠ Caution

Do not rebuild objects on a higher package level.

2. Clean the cache.
 1. Log on to your front-end system (your SAP Gateway system).
 2. In Customizing (transaction SPRO), navigate to **SAP NetWeaver > UI Technologies > SAP Fiori > Data Administration > Invalidate Caches**.
This activity launches the /UI2/INVALIDATE_GLOBAL_CACHES report. This report invalidates all server-side caches in SAP NetWeaver user interface services, which can become out-of-date following an upgrade.
 3. If necessary, implement instructions listed in SAP Note [2147669](#).
3. Remove any previously customized versions of the UIRAP001 launchpad.
 1. Log on to your front-end system (your SAP Gateway system).
 2. Launch the *Overview for Launchpads* (transaction LPD_CUST).

3. Search for *Role* UIRAP001, and see whether any instances exist where the *User Name* is not *SAP*. If so, this means that customized versions of the UIRAP001 launchpad exist, and these take precedence over the standard launchpad instance delivered by SAP.
 4. Delete all but the launchpad instance delivered by SAP.
4. Recalculate SAPUI5 application index, following any changes to the content of the SAPUI5 ABAP repository (for example, installation of a new version of the SAPUI5 distribution layer or implementation of an SAP Note containing changes to an SAPUI5 app).
For more information, see the *Configure Index Calculation* section in the *Common Installation Guide* and SAP Note [2227577](#).

6.3.2 2.0 SPS6 (or Higher Support Package Stacks) to 5.0 SPS06

This section is intended for existing SAP Assortment Planning customers who have installed and configured SAP Assortment Planning 2.0 SPS6, 2.0 SPS7, 2.0 SPS8, 2.0 SPS9, 2.0 SPS10, 2.0 SPS11, or 2.0 SPS12 and would like to upgrade to SAP Assortment Planning 5.0 SPS06.

6.3.2.1 Quick Guide

Upgrade to SAP Assortment Planning 5.0 SPS06.

Checklist

Prerequisites

Ensure that you have carried out all the steps listed in the previous sections of this guide.

Follow-Up Activities

Mandatory Steps

- Perform mandatory core steps for SAP Customer Activity Repository. See [Core \(Mandatory for All Applications\) \[page 80\]](#).
- Verify SAP HANA and back-end system roles. See *Verify Users, Privileges, and Roles*.
- Adjust Customizing settings.
- Reactivate SAP Assortment Planning planning framework content.
- Verify that data replication is running following the upgrade.
- Run the validation report.
- Run the SAP Assortment Planning 4.0 update report.
- If you want to purge assortment lists using the `/DMF/PURGE_AGENT` report, you must execute the `/DMF/WUF_MIGRATE_ASRTLIST` report **once** using transaction SE38.

For detailed information, read the system documentation associated with the report.

- Verify that all SAP Assortment Planning OData services are active following the upgrade. For detailed information, see [Verify that OData Services are Active \[page 100\]](#).
- Verify that all the ICF services relevant to SAP Assortment Planning are active following the upgrade.
- Verify the definition of system aliases for back-end transactions.
- Troubleshoot front-end server upgrade.

6.3.2.2 Perform Core Steps for SAP Customer Activity Repository

To set up this application, you must first perform the **Core (Mandatory)** steps for SAP Customer Activity Repository. The core steps are mandatory for all the consuming applications.

Procedure

Perform all steps listed under [Core \(Mandatory for All Applications\) \[page 80\]](#).

6.3.2.3 Initialize KPI Periods

Initialize KPI periods of all existing assortment lists.

The [Manage Assortments](#) app has been enhanced with additional features for the key performance indicators (KPI) in SAP Assortment Planning 5.0 FPS03. In order for the app to work correctly, you must run the report `/RAP/AL_UPDATE_KPI_DATES` to initialize the KPI periods of all the existing assortment lists. This report must be run exactly once after upgrading to SAP Assortment Planning 5.0 FPS03 (or higher) from a lower release.

After running this report:

- The estimated KPI periods of all the existing assortment lists are initialized as follows:
 - Start date is initialized to the start of the fiscal week that includes the assortment list's validity start date.
 - End date is initialized to 52 weeks after the start date.
 - Number of weeks from the start date is initialized to 52.
- The referenced KPI periods of all the existing assortment lists are initialized as follows:
 - Number of weeks from the start date is initialized to 52.

i Note

The start date and end date of the referenced KPI periods are already saved in the database. And so, there's no need to initialize them.

6.3.2.4 Adjust Customizing Settings

Customizing to maintain following an upgrade to SAP Assortment Planning 5.0 SPS06.

Context

Following the upgrade, you need to make settings in Customizing to be able to use SAP Assortment Planning 5.0 SPS06.

Procedure

1. Log on to your back-end system.
2. If you use the Retail SAP BW Structure and you don't want to use planning configuration, do the following:
 - a. Disable *Use Planning Configuration* and *Prompt in Manage Location Clusters* (using transaction SPRO) under [Cross-Application Components](#) > [Assortment Planning](#) > [Imported Demand Data Foundation Settings](#) > [Basic Settings](#) > [Define Default Values](#).

You must disable this Customizing setting to continue using the Retail SAP BW Structure. For more information, see section *Reactivate Planning Framework Content (SAP Assortment Planning)*.

- b. Disable the implementation of *BAdI: Read Merchandise Planning KPI Data* under [Cross-Application Components](#) > [Demand Data Foundation](#) > [Data Maintenance](#) > [Planning Configuration](#) > [Enhancements Using Business Add-Ins](#).

You must disable the implementation of this BAdI to continue using the Retail SAP BW Structure. For more information, see section *Reactivate Planning Framework Content (SAP Assortment Planning)*.

If you use the Omnichannel SAP BW structure, make sure that *Use Planning Configuration* is enabled.

3. Maintain the monthly fiscal year variant (using transaction SPRO) under [Cross-Application Components](#) > [Assortment Planning](#) > [Imported Demand Data Foundation Settings](#) > [Basic Settings](#) > [Define Default Values](#) > [Monthly FY Variant](#). This is necessary to use the view *Sales & Inventory Analysis* in the *My Assortment Lists* app.

For more information, see [Fiscal Year Variant](#).

4. Define the business week (using transaction SPRO) under [Cross-Application Components](#) > [Demand Data Foundation](#) > [Basic Settings](#) > [Define Business Week](#).
5. Maintain number ranges for planning configurations under [Cross-Application Components](#) > [Assortment Planning](#) > [Number Ranges](#) > [Maintain Number Range for Planning Configuration](#).
6. Maintain number ranges for parameter configurations under [Cross-Application Components](#) > [Assortment Planning](#) > [Number Ranges](#) > [Maintain Number Range for Parameter Configuration](#).
7. Make sure that the settings in Customizing activity *Assortment List Settings* fit to your planning process.

The *Assortment List Settings* activity is available in Customizing under [Cross-Application Components](#) > [Assortment Planning](#) > [Assortment Lists](#).

8. If you want to allow users access to the *Analyze Forecast* app via links from the *My Assortment Lists* app, enable the *Create* option to generate a location hierarchy out of every location cluster set **activated** in SAP Assortment Planning. This option is available in the *Location Clustering Settings* Customizing activity under [▶ Cross-Application Components ▶ Assortment Planning for Retail ▶ Imported Demand Data Foundation Settings ▶ Data Maintenance ▶ Location Clustering ▶ Location Clustering Settings ▶](#).

If the *Create* option is not visible, choose *New Entries*.

9. To use forecasted values in the *Sales & Inventory Analysis* view within the *My Assortment Lists* app, configure Unified Demand Forecast (UDF). For more information, see the *SAP Customer Activity Repository Administration Guide*, section *Configure Unified Demand Forecast (UDF)*.
10. Verify default implementation of *BAdI: Determine Product Season Classification* and, if necessary, provide a custom implementation.

The BAdI, *BAdI: Determine Product Season Classification* is available under [▶ Cross-Application Components ▶ Assortment Planning ▶ Enhancements Using Business Add-Ins ▶](#).

6.3.2.5 Verify Fiscal Calendar

Verify that the previously generated calendar time data is still running following an upgrade to SAP Assortment Planning 5.0 SPS06.

Context

The generation of time data (*Fiscal* calendar) is required for using the *Sales & Inventory Analysis* view in the *My Assortment Lists* app. The fiscal calendar is also required to initialize the SAP Assortment Planning BW structure, as it allows for planning on fiscal periods.

Procedure

If required and not already done, ensure that the time data has been generated far enough into the past and future for SAP Assortment Planning 5.0 SPS06.

For more information, see the following:

- *Generate Time Data - Fiscal Calendar* section of the *Common Installation Guide*
- *Management* section of the *SAP Assortment Planning Administration Guide*

6.3.2.6 Reactivate Planning Framework Content (SAP Assortment Planning)

There are two distinct BW structures supported in SAP Assortment Planning:

Omnichannel SAP BW Structure

⚠ Caution

New functionality will be only available for the Omnichannel SAP BW structure. Therefore, we recommend to use the Omnichannel SAP BW structure which provides an extensive feature set.

- If you already use the Omnichannel SAP BW structure, reactivate it.
- If you were using the previously existing Retail SAP BW structure, we recommend that you reactivate it during the upgrade. If later you would like to switch to the new Omnichannel SAP BW structure, please contact SAP for assistance with your upgrade project.

Make sure that you have enabled the optimized in-memory planning capabilities of the integrated planning engine in SAP Business Warehouse. For more information, see the *Common Installation Guide*, section *Enable Optimized In-Memory Planning Capabilities of SAP BW Integrated Planning*.

Prerequisite

To use the Omnichannel SAP BW structure, the following prerequisites must be met:

- Enable the usage of planning configurations under [Cross-Application Components > Assortment Planning > Imported Demand Data Foundation Settings > Basic Settings > Define Default Values](#). The Omnichannel SAP BW structure only works when planning configurations are used.
- Enable the implementation of *BAdI: Read Merchandise Planning KPI Data* under [Cross-Application Components > Demand Data Foundation > Data Maintenance > Planning Configuration > Enhancements Using Business Add-Ins](#).

The Omnichannel SAP BW structure consists of local BI Content only. To create workbooks on top of the Omnichannel SAP BW structure, contact SAP Digital Business Services for a custom implementation project.

Retail SAP BW Structure

⚠ Caution

If you were using the Retail SAP BW Structure in a previous release, we recommend that you reactivate this structure during the upgrade. The Retail SAP BW Structure will be supported with maintenance, however no new functionality will be developed for this structure. If later you would like to switch to the new Omnichannel SAP BW structure, please contact SAP for assistance with your upgrade project.

Prerequisite

To use the Retail SAP BW structure, the following prerequisites must be met:

- Disable the usage of planning configurations under ► [Cross-Application Components](#) ► [Assortment Planning](#) ► [Imported Demand Data Foundation Settings](#) ► [Basic Settings](#) ► [Define Default Values](#) ►. You cannot use the Retail SAP BW structure with planning configurations.
- Disable the implementation of *BAdI: Read Merchandise Planning KPI Data* under ► [Cross-Application Components](#) ► [Demand Data Foundation](#) ► [Data Maintenance](#) ► [Planning Configuration](#) ► [Enhancements Using Business Add-Ins](#) ►.

6.3.2.7 Upgrade from Omnichannel SAP BW Structure

If you already use the Omnichannel SAP BW structure, activate the local BI Content objects as described in subsection [Activate Application BI Content \(Omnichannel SAP BW Structure\)](#).

6.3.2.7.1 Activate Application BI Content (Omnichannel SAP BW Structure)

Context

In this procedure, you perform a sequential, step-by-step activation of the local BI Content objects delivered in the **Omnichannel SAP BW structure** of the SAP Assortment Planning application. SAP Assortment Planning uses this application BI Content to consume data stored in the back-end system

i Note

To ensure correct activation of the BI Content objects, carry out the activation sequentially, as specified in the following procedures. Resolve any activation warnings, except for the ones listed under [Result \[page 242\]](#), which can be ignored.

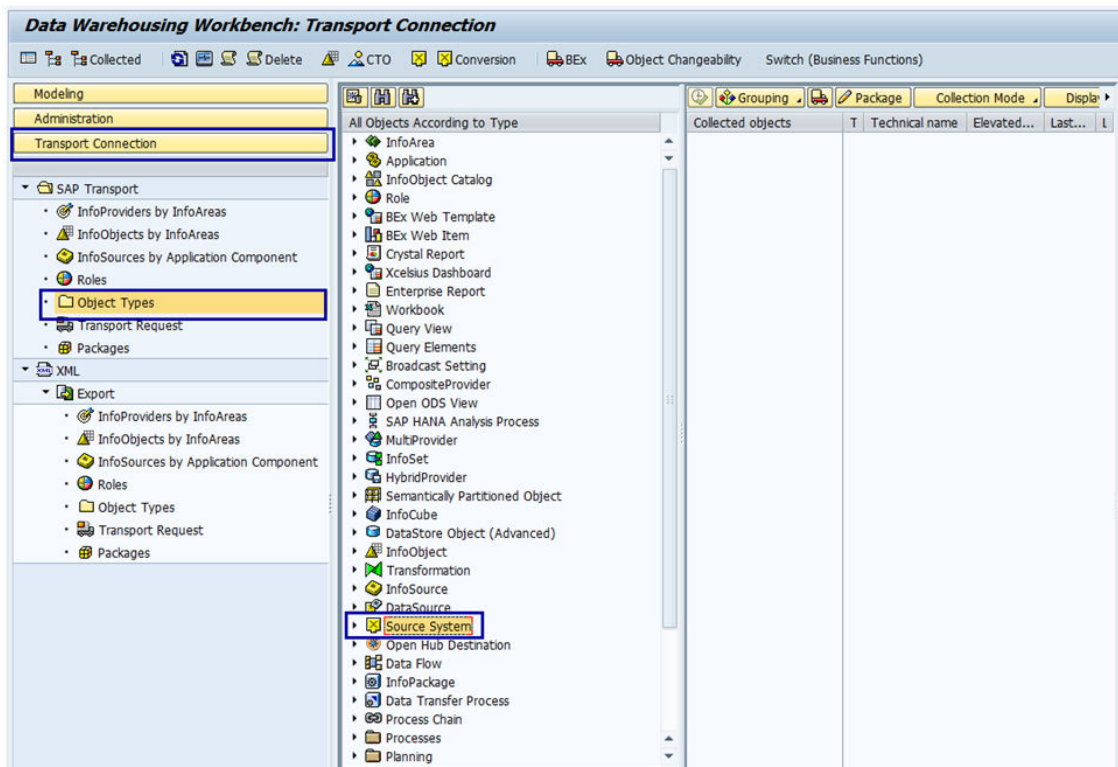
Also, do not disable the default BI setting to collect and activate all dependencies. The instructions below activate a minimum subset of objects, and it is assumed that all their dependencies are collected and activated.

The consumed data from the back-end system can be created by the SAP Assortment Planning application, or be replicated from a source master data system. In both cases, beware of limitations with regard to the characters allowed by SAP BW. For more information, see:

- [SAP Assortment Planning Administration Guide](#) under [Initial Load of Data to DDF Using DRFOUT](#)
- [173241](#) ►
- Customizing activity [Maintain permitted extra characters](#) under ► [SAP NetWeaver](#) ► [Business Warehouse](#) ► [General Settings](#) ►.

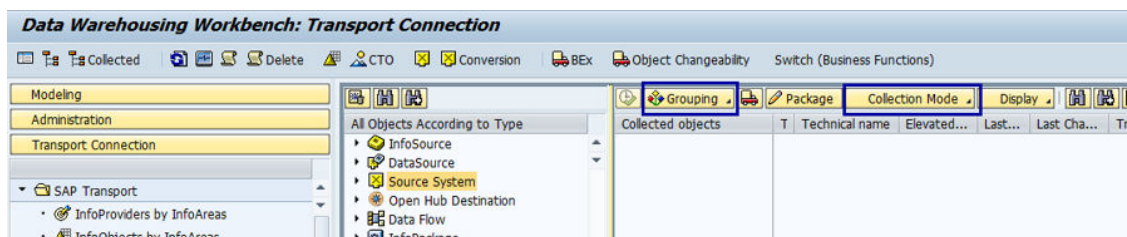
Procedure

1. On your back-end SAP Assortment Planning system, open the Data Warehousing Workbench (transaction RSA1).
2. Verify transport connections.
 1. Select *Transport Connection* in the left-hand frame.
 2. Select *Object Types*.
 3. Expand *Source System*.



Selecting Source Systems

4. Use *Select Objects* to ensure that the back-end system is selected as the source system.
5. Choose *Transfer Selections*.
6. At the top of the right-hand frame, above the list of *Collected objects*, choose *Grouping* and select *Only Necessary Objects*.
7. At the top of the right-hand frame, choose *Collection Mode* and select *Collect Automatically*.



Grouping and Collection Settings

- Determine if you need to enable to *Match (X) or copy* option for the BI Content, which you will activate in the subsequent steps.

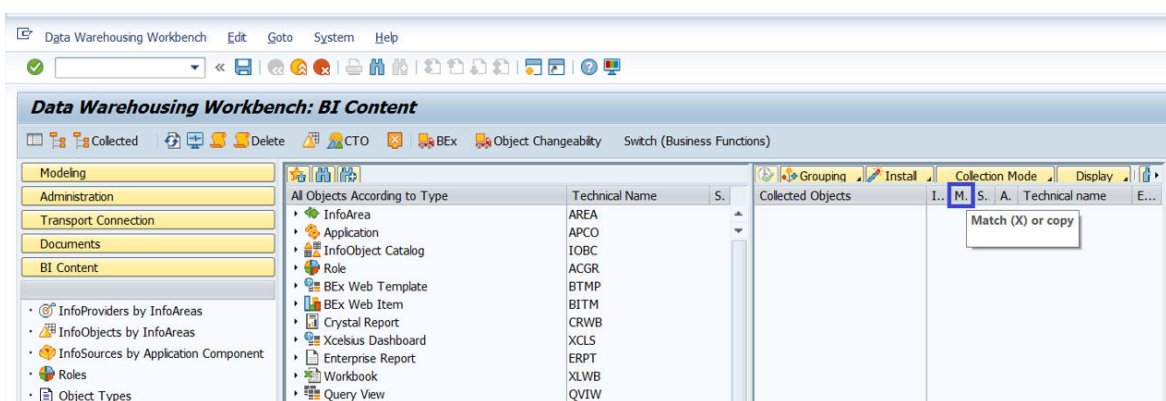
Match(X) or copy Selection

Installation Type	Selection	
New Installation	Do not enable the <i>Match (X) or copy</i> option for any of the BI Content objects.	
Upgrade (Previously installed/activated any of the /RAP/* BI Content)	Standard /RAP/* BI Content objects have not been modified in your local environment¹ Do not enable the <i>Match (X) or copy</i> option for any of the BI Content objects.	Standard /RAP/* BI Content objects have been modified in your local environment¹ Enable the <i>Match (X) or copy</i> option. During the activation of each BI Content object type, you will be asked to carry out an additional <i>Transfer selections</i> step. In this step, select to install the <i>Active Version</i> (that is, your modified version) or the <i>Content Version</i> (that is, the SAP delivered, and possibly updated version of the object). The project implementation team should advise you on which option is required for each object.

⚠ Caution

When you choose to install the *Content Version*, the SAP delivered objects included in the current release will be installed regardless of any modifications made to the currently existing BI Content objects.

¹ As a system administrator, you may need to contact the SAP Assortment Planning project implementation team to learn if standard, SAP-delivered, BI Content objects have been modified in your local environment.



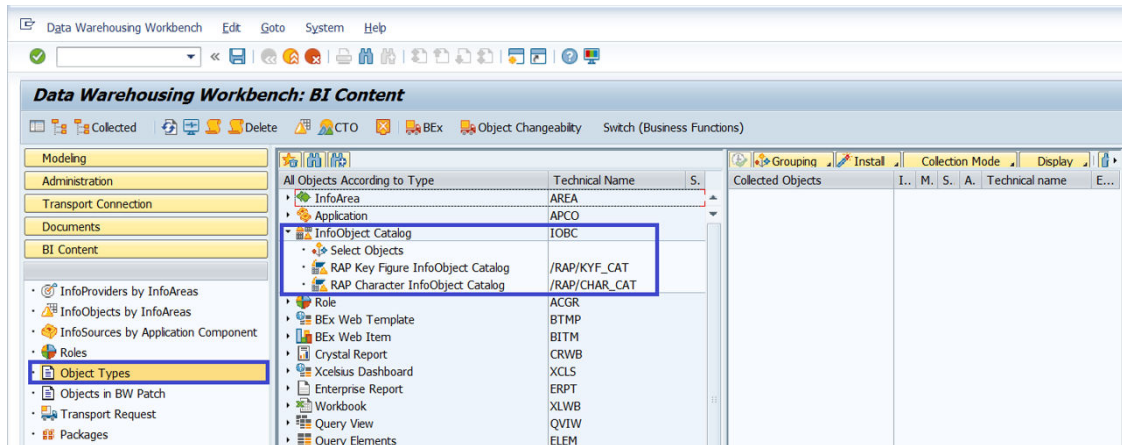
- Activate InfoObject catalogs.

If at any point during the installation of BI Content objects you are presented with a dialog asking you to add objects to a personal list, we recommend that you select **No**.

→ Remember

You can ignore activation warnings listed under [Result \[page 242\]](#).

1. Select *BI Content* in the left-hand frame.
2. Select *Object Types* and expand *InfoObject Catalog*.

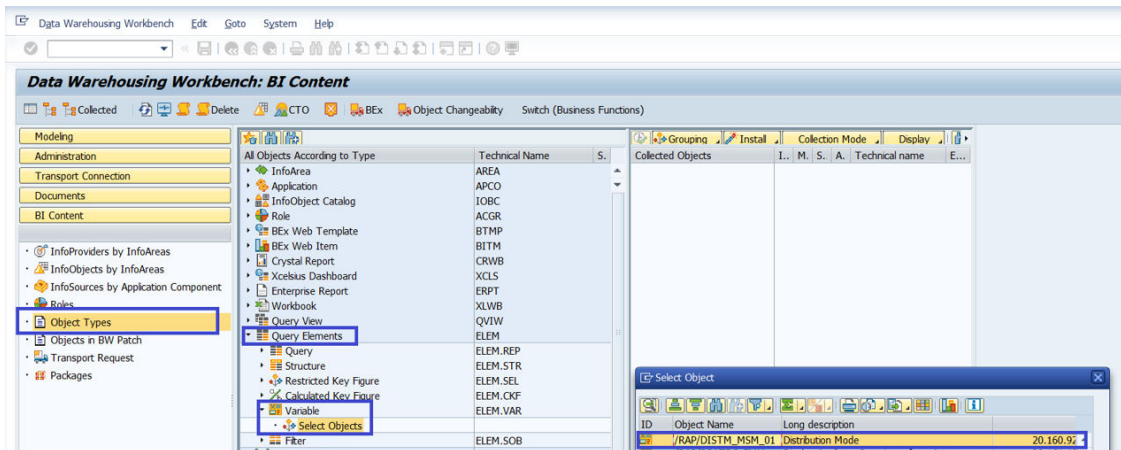


3. Use *Select Objects* to select the */RAP/CHAR_CAT* and the */RAP/KYF_CAT* catalogs.
 4. Choose *Transfer Selections*.
 5. In the right-hand frame, in the list of *Collected objects*, verify that both InfoObject catalogs are listed.
 6. Right-click on each of the InfoObject catalogs, and choose *Install all Below*.
 7. Choose *Install*.
If an information dialog box appears, choose *Continue*. Choose *Local Object* or enter a package if you need to transport the objects.
5. Activate *Variables*.

→ Remember

You can ignore activation warnings listed under [Result \[page 242\]](#).

1. Select *BI Content* in the left-hand frame.
2. Select *Object Types* and expand *Query Elements* followed by *Variable*.
3. Use *Select Objects* to select the following variables:
 - */RAP/PLCND_ESM_02*
 - */RAP/PLCSET_ESM_02*
 - */RAP/PCYCLE_EMM_01*
 - */RAP/PLNHR_MSO_01*
 - */RAP/PLNHN1_MSO_01* to */RAP/PLNHN9_MSO_01* (inclusive)
 - */RAP/PRDHN1_MMO_01* to */RAP/PRDHN9_MMO_01* (inclusive)



4. Choose *Transfer Selections*.
 5. In the right-hand frame, in the list of *Collected objects*, verify that all of the selected variables are listed and that the option in the *Install* column is enabled .
 6. Choose *Install*.
If an information dialog box appears, choose *Continue*. Choose *Local Object* or enter a package if you need to transport the objects.
6. Maintain version master data.
1. In the left-hand frame, select **Modeling > InfoObjects** .
 2. In the right-hand frame under **Assortment Planning for Retail > RAP Character InfoObject Catalog** , search in the object list for the InfoObject /RAP/VERSN.
 3. Right-click the InfoObject /RAP/VERSN, choose *Maintain Master Data* from the context menu, and maintain the following entries on the *Time Independent* tab:

Version	Short description
#	An empty version value that you must maintain
ALV	Assortment List Vsn
APF	Vsn of final plan

i Note

Save your changes and activate them.

7. Activate Advanced DataStore Objects.

If during the installation, you are presented with a message stating that your source system is not active, navigate to the *Modeling* tab, locate your source system under *Source Systems*, and activate it by right-clicking and selecting *Activate*. If prompted, choose *Only Activate* .

→ Remember

You can ignore activation warnings listed under [Result \[page 242\]](#).

1. Select *BI Content* in the left-hand frame.
2. Select *Object Types* and expand *DataStore Object (advanced)*.
3. Use *Select Objects* to select all DataStore Objects starting with */RAP/DS**.
4. Choose *Transfer Selections*.
5. In the list of *Collected objects*, verify that the option in the *Install* column is enabled for each of the objects.
6. Choose **► Display ► List ▾**.
7. Right-click the tree node *DataStore Object (advanced)* and choose *Install all Below*.
8. Choose *Install*. If an information dialog box appears, choose *Continue*. Choose *Local Object* or enter a package if you need to transport the objects.
9. Remodel the following Advanced DataStore Objects if a corresponding message appears: */RAP/DS40*, */RAP/DS42*, */RAP/DS54*, and */RAP/DS55*.

i Note

Set all affected Advanced DataStore Objects to *Load Mode* before starting the remodeling process. After the remodeling process, make sure that all new Advanced DataStore Objects are set to *Planning Mode*.

→ Tip

To set an Advanced DataStore Object to Load Mode:

1. Select *Modeling* in the left-hand frame.
2. Select *InfoProvider* in the left-hand frame.
3. Right-click the Advanced DataStore Object that you want to set to *Load Mode*.
4. Choose **► Planning-Specific Properties ► Change Real-Time Load Behavior ▾**.
5. Choose *Real-Time Data Target Can Be Loaded With Data; Planning Not Allowed* and confirm.

→ Tip

To remodel an Advanced DataStore Object:

1. Select *Modeling* in the left-hand frame.
2. Select *InfoProvider* in the left-hand frame.
3. Right-click the Advanced DataStore Object that you want to remodel.
4. Choose **► Additional Functions ► Remodeling Monitor ▾**.
5. Select a remodeling rule.
6. Choose *Start Request*. The *Start Time* window opens.
7. In the *Start Time* window, select a start time for the remodeling request and confirm.

8. Activate CompositeProviders.

→ Remember

You can ignore activation warnings listed under [Result \[page 242\]](#).

1. Select *BI Content* in the left-hand frame.

2. Select *Object Types* and expand *CompositeProvider*.
 3. Use *Select Objects* to select all CompositeProviders from /RAP/CP40 to /RAP/CP46 (inclusive).
 4. Choose *Transfer Selections*.
 5. In the list of *Collected objects*, verify that the option in the *Install* column is enabled for each of the objects.
 6. Choose **► Display ► List**.
 7. Right-click the tree node *DataStore Object (advanced)* and choose *Install all Below*.
 8. Choose *Install*. If an information dialog box appears, choose *Continue*. Choose *Local Object* or enter a package if you need to transport the objects.
9. Activate Aggregation Levels.

→ Remember

You can ignore activation warnings listed under [Result \[page 242\]](#).

1. Select *BI Content* in the left-hand frame.
2. Select *Object Types* and expand **► Planning ► Aggregation Level**.
3. Use *Select Objects* to select the following Aggregation Level:

Aggregation Levels

Aggregation Levels

/RAP/C44A01

/RAP/C44A02

/RAP/C44A03

/RAP/C44A04

/RAP/C46A02

4. Choose *Transfer Selections*.
 5. In the list of *Collected objects*, verify that the option in the *Install* column is enabled for each of the objects.
 6. Choose *Install*. If an information dialog box appears, choose *Continue*. Choose *Local Object* or enter a package if you need to transport the objects.
10. Activate Planning Sequence Objects.

→ Remember

You can ignore activation warnings listed under [Result \[page 242\]](#).

1. Select *BI Content* in the left-hand frame.
2. Select *Object Types* and expand **► Planning ► Planning Sequence**.

- Use *Select Objects* to select the following Planning Sequences:

Planning Sequences

Planning Sequences

/RAP/D50A01_PS01

/RAP/D57A01_PS01

/RAP/C40A01_PS01

/RAP/C40A05_PS01

/RAP/C46A01_PS01

/RAP/C46A03_PS01

/RAP/C46A04_PS01

/RAP/C46A04_PS02

- Choose *Transfer Selections*.
- In the list of *Collected objects*, verify that the option in the *Install* column is enabled for each of the objects.
- Choose *Install*. If an information dialog box appears, choose *Continue*. Choose *Local Object* or enter a package if you need to transport the objects.

- Activate Planning Function Type Objects.

→ Remember

You can ignore activation warnings listed under [Result \[page 242\]](#).

- Select *BI Content* in the left-hand frame.
- Select *Object Types* and expand **► Planning ► Function Type for Planning ►**.
- Use *Select Objects* to select the following Planning Function:

Planning Functions

Planning Functions

/RAP/OP_BUFFER_DATA

- Choose *Transfer Selections*.
- In the list of *Collected objects*, verify that the option in the *Install* column is enabled for each of the objects.
- Choose *Install*. If an information dialog box appears, choose *Continue*. Choose *Local Object* or enter a package if you need to transport the objects.

- Choose *Exit* to leave the transaction.

Results

If activation warnings similar to the ones displayed below appear, you can ignore them.

- CMP problem occurred in characteristic <CHAR> for InfoProvider <INFO_PROV>
- Rounding inaccuracies occur with data type FLOAT for AMOUNT and QUANTITY
- Characteristic <CHAR>: Lower case makes selection of char. values difficult
- Data type of char. <CHAR> (<TYPE1>) is not equal to data type of attribute <ATTR> (<TYPE2>)
- Length of characteristic <TEXT CHAR> (<LENGTH1>) and assigned attribute <ATTR> (<LENGTH2>) not same
- The short text of DataSource <SOURCE> is not maintained in language <LANG>
- Skip key figure <KYF>: aggregation type NO2 not supported
- Attribute <ATTR>: Conversion routine <CONV> ignored
- Attribute <ATTR>: Compounding ignored
- Datatype FLTP for datafield <FIELD> of the DSO is not allowed
- Conversion problems possible for source field <FIELD1> / target field <FIELD2>

6.3.2.8 Upgrade from Retail SAP BW Structure

If you were using the previously existing Retail SAP BW structure, activate the local BI Content objects and ensure that the previously generated time data (*Gregorian* calendar) is sufficient.

For detailed information, see the subsections *Activate Application BI Content (Retail SAP BW Structure)* and *Verify Gregorian Calendar*.

6.3.2.8.1 Activate Application BI Content (Retail SAP BW Structure)

Context

In this procedure, you perform a sequential, step-by-step activation of the local BI Content objects delivered in the **Retail SAP BW structure** of the SAP Assortment Planning application. SAP Assortment Planning uses this application BI Content to consume data stored in the back-end system.

Caution

As of SAP Assortment Planning 2.0 FP2, a new (Omnichannel) SAP BW Structure has been introduced. Please contact SAP for assistance with your upgrade project.

Note

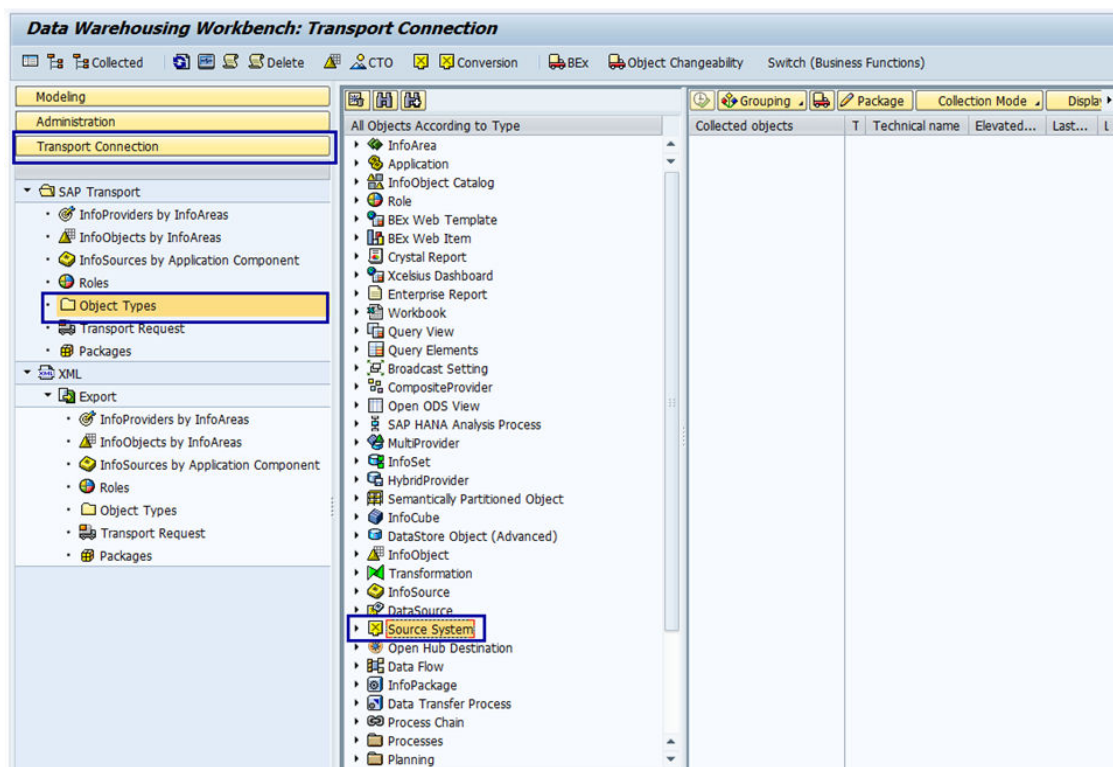
To ensure correct activation of the local BI Content objects, carry out the activation sequentially, as specified in the following procedures. Resolve any activation warnings, except for the ones listed under [Activation Warnings \[page 250\]](#), which can be ignored.

Also, the default BI setting to collect and activate all dependencies must not be disabled by the user. The instructions below activate a minimum subset of objects, and it assumed that all their dependencies will be collected and activated.

The consumed data from the back-end system can be created by the SAP Assortment Planning application, or be replicated from a source master data system. In both cases, beware of limitations with regard to the characters allowed by SAP BW. For more information, see [173241](#) and Customizing activity *Maintain permitted extra characters* under **SAP NetWeaver > Business Warehouse > General Settings**.

Procedure

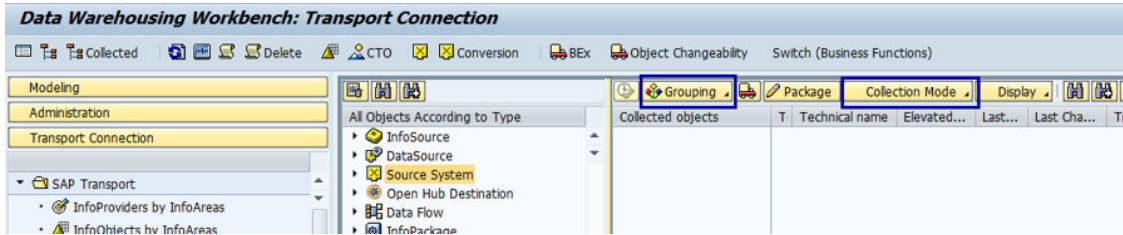
1. On your back-end SAP Assortment Planning system, open the Data Warehousing Workbench (transaction RSA1).
2. Verify transport connections.
 1. Select *Transport Connection* in the left-hand frame.
 2. Select *Object Types*.
 3. Expand *Source System*.



Selecting Source Systems

4. Use *Select Objects* to ensure that the back-end system is selected as the source system.
5. Choose *Transfer Selections*.
6. At the top of the right-hand frame, above the list of *Collected objects*, choose *Grouping* and select *Only Necessary Objects*.

7. At the top of the right-hand frame, choose *Collection Mode* and select *Collect Automatically*.



Grouping and Collection Settings

3. Determine if you need to enable to *Match (X) or copy* option for the BI Content which you will activate in the subsequent steps.

Match(X) or copy Selection

Installation Type	Selection		
New Installation	Do not enable the <i>Match (X) or copy</i> option for any of the BI Content objects.		
Upgrade	<table border="0"> <tr> <td>Standard /RAP/ * BI Content objects have not been modified in your local environment¹</td> <td>Standard /RAP/ * BI Content objects have been modified in your local environment¹</td> </tr> </table>	Standard /RAP/ * BI Content objects have not been modified in your local environment¹	Standard /RAP/ * BI Content objects have been modified in your local environment¹
Standard /RAP/ * BI Content objects have not been modified in your local environment¹	Standard /RAP/ * BI Content objects have been modified in your local environment¹		

(Previously installed/activated any of the /RAP/ * BI Content)

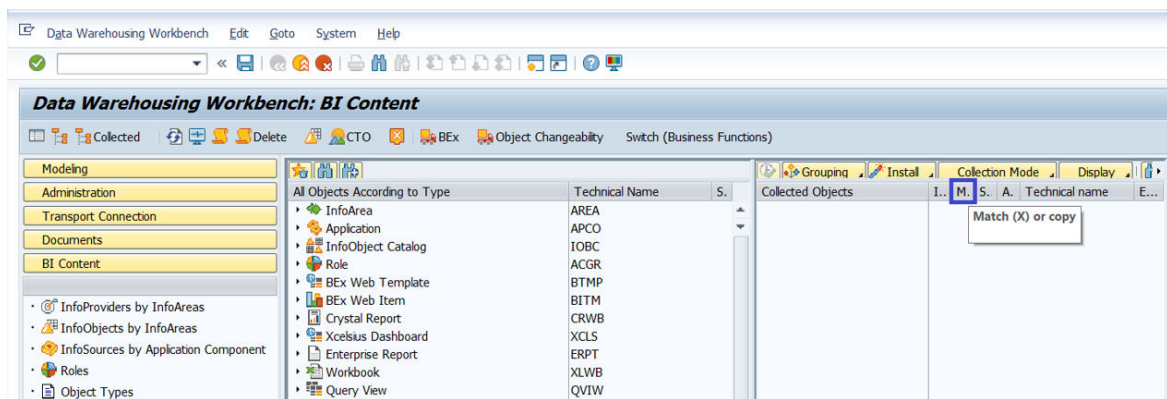
Do not enable the *Match (X) or copy* option for any of the BI Content objects.

Enable the *Match (X) or copy* option.
 During the activation of each BI Content object type, you will be asked to carry out an additional *Transfer selections* step. In this step, select to install the *Active Version* (that is, your modified version) or the *Content Version* (that is, the SAP delivered, and possibly updated version of the object). The project implementation team should advise you on which option is required for each object.

⚠ Caution

When you choose to install the *Content Version*, the SAP delivered objects included in the current release will be installed regardless of any modifications made to the currently existing BI Content objects.

¹ As a system administrator, you may need to contact the SAP Assortment Planning project implementation team to learn if standard, SAP-delivered, BI Content objects have been modified in your local environment.



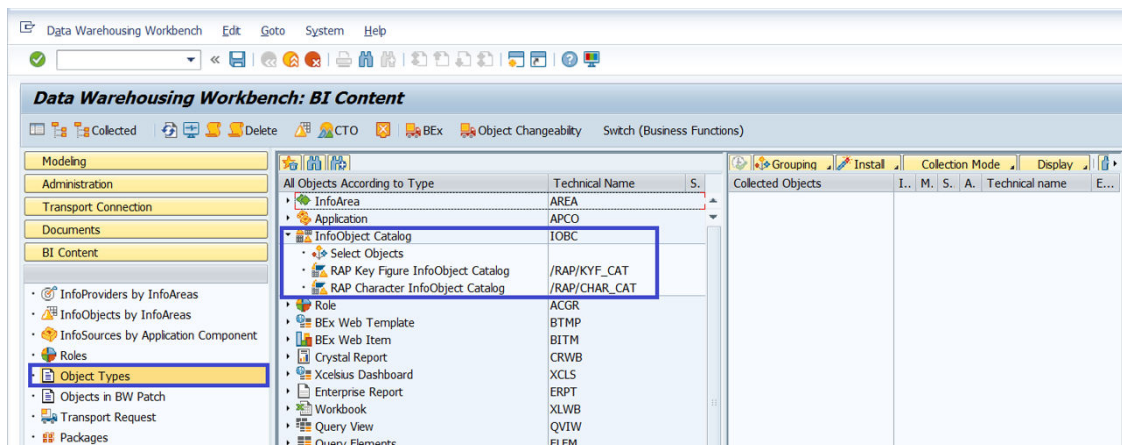
4. Activate InfoObject catalogs.

If at any point during the installation of BI Content objects you are presented with a dialog asking you to add objects to a personal list, we recommend that you select **No**.

→ Remember

You can ignore activation warnings listed under [Activation Warnings \[page 250\]](#).

1. Select *BI Content* in the left-hand frame.
2. Select *Object Types* and expand *InfoObject Catalog*.



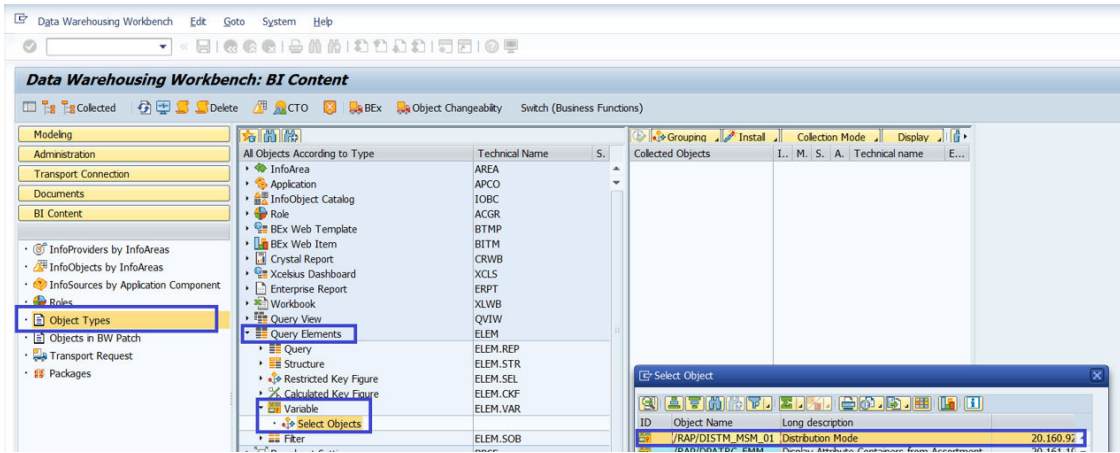
3. Use *Select Objects* to select the `/RAP/CHAR_CAT` and the `/RAP/KYF_CAT` catalogs.
 4. Choose *Transfer Selections*.
 5. In the right-hand frame, in the list of *Collected objects*, verify that both InfoObject catalogs are listed.
 6. Right-click on each of the InfoObject catalogs, and choose *Install all Below*.
 7. Choose *Install*.
If an information dialog box appears, choose *Continue*. Choose *Local Object* or enter a package if you need to transport the objects.
5. Activate *Variable* `/RAP/DISTM_MSM_01`.

→ Remember

You can ignore activation warnings listed under [Activation Warnings \[page 250\]](#).

1. Select *BI Content* in the left-hand frame.

2. Select *Object Types* and expand *Query Elements*.
3. Use *Select Objects* to select the */RAP/DISTM_MSM_01* Variable.



4. Choose *Transfer Selections*.
 5. In the right-hand frame, in the list of *Collected objects*, verify that the */RAP/DISTM_MSM_01* Variable is listed and that the option in the *Install* column is enabled.
 6. Choose *Install*.
If an information dialog box appears, choose *Continue*. Choose *Local Object* or enter a package if you need to transport the objects.
6. Maintain version master data.
1. Select *Modeling* in the left-hand frame.
 2. Expand *InfoObjects*.
 3. Search for InfoObject */RAP/VERSN*, located under **Assortment Planning** **RAP Character InfoObject Catalog**.
 4. Right-click the InfoObject */RAP/VERSN*, choose *Maintain Master Data* from the context menu, and maintain the following entries on the *Time Independent* tab:

Version

- An empty version value that you must maintain

000

AP1

AP2

APF

AW1

AW2

OP1

OP2

Version

PRJ

REF

Search: Version

Results List: 76 results found for Version

[Personal Value List](#) [Show Search Criteria](#)  

Version	Short description
#	Not assigned
0	Actuals
AP1	Plan Version 1
AP2	Plan Version 2

The supported planning versions are described in detail in the *Maintain Customizing Table /RAP/RS_VARCUST* section of the *Common Installation Guide*.

i Note

Save your changes and activate them.

7. Activate DataStore Objects.

→ Remember

You can ignore activation warnings listed under [Activation Warnings \[page 250\]](#).

1. Select *BI Content* in the left-hand frame.
2. Select *Object Types* and expand *DataStore Object (Classic)*.
3. Use *Select Objects* to select all DataStore Objects starting with */RAP/**.
4. Choose *Transfer Selections*.
5. In the list of *Collected objects*, verify that the option in the *Install* column is enabled for each of the objects.
6. Choose *Install*. If an information dialog box appears, choose *Continue*. Choose *Local Object* or enter a package if you need to transport the objects.
If during the installation, you are presented with a dialog asking you to add objects to a personal list, select **No**.

8. Activate InfoCubes.

→ Remember

You can ignore activation warnings listed under [Activation Warnings \[page 250\]](#).

1. Select *BI Content* in the left-hand frame.
2. Select *Object Types* and expand *InfoCube*.
3. Use *Select Objects* to select all InfoCubes starting with */RAP/RC**.
4. Similarly, select InfoCubes */RAP/VC20* and */RAP/VC21*.
5. Choose *Transfer Selections*.

6. In the list of *Collected objects*, verify that the option in the *Install* column is enabled for each of the objects.
 7. Choose *Install*. If an information dialog box appears, choose *Continue*. Choose *Local Object* or enter a package if you need to transport the objects.
9. Activate CompositeProviders.

→ Remember

You can ignore activation warnings listed under [Activation Warnings \[page 250\]](#).

1. Select *BI Content* in the left-hand frame.
 2. Select *Object Types* and expand *CompositeProvider*.
 3. Use *Select Objects* to select all CompositeProviders from */RAP/CP20* to */RAP/CP37* (inclusive).
 4. Choose *Transfer Selections*.
 5. In the list of *Collected objects*, verify that the option in the *Install* column is enabled for each of the objects.
 6. Choose *Install*. If an information dialog box appears, choose *Continue*. Choose *Local Object* or enter a package if you need to transport the objects.
10. Activate Aggregation Levels.

→ Remember

You can ignore activation warnings listed under [Activation Warnings \[page 250\]](#).

1. Select *BI Content* in the left-hand frame.
2. Select *Object Types* and expand ► *Planning* ► *Aggregation Level* ▾.
3. Use *Select Objects* to select the following Aggregation Levels:
These should be active from the previous installation, if not, select them to be installed again:

Aggregation Levels

Aggregation Level

/RAP/D20A01

/RAP/R20A02

/RAP/R20A06

/RAP/R20A08

/RAP/R20A11

/RAP/R20A12

/RAP/R20A15

/RAP/R20A17

/RAP/R23A01

4. Choose *Transfer Selections*.

5. In the list of *Collected objects*, verify that the option in the *Install* column is enabled for each of the objects.
6. Choose *Install*. If an information dialog box appears, choose *Continue*. Choose *Local Object* or enter a package if you need to transport the objects.

11. Reactivate Planning Sequence Objects.

→ Remember

You can ignore activation warnings listed under [Activation Warnings \[page 250\]](#).

1. Select *BI Content* in the left-hand frame.
2. Select *Object Types* and expand **▶ Planning ▶ Planning Sequence ▶**.
3. Use *Select Objects* to select the following Planning Sequences:
These should be active from the previous installation, if not, select them to be installed again:

Planning Sequences

Planning Sequence

/RAP/C21A01_PS01

/RAP/C25A03_PS01

/RAP/D23A01_PS01

/RAP/D24A01_PS01

/RAP/R20A08_PS01

4. Choose *Transfer Selections*.
5. In the list of *Collected objects*, verify that the option in the *Install* column is enabled for each of the objects.
6. Choose *Install*. If an information dialog box appears, choose *Continue*. Choose *Local Object* or enter a package if you need to transport the objects.

12. Reactivate Workbooks.

→ Remember

You can ignore activation warnings listed under [Activation Warnings \[page 250\]](#).

1. Select *BI Content* in the left-hand frame.
2. Select *Object Types* and expand **▶ More Types ▶ Analysis Office Excel Workbook ▶**.

3. Use *Select Objects* to select the following workbooks:
These should be active from the previous installation, if not, select them to be installed again:

Workbooks

Workbook

/RAP/PLANASSORTMENT

/RAP/PLANOPTIONS

4. Choose *Transfer Selections*.
 5. In the list of *Collected objects*, verify that the option in the *Install* column is enabled for each of the objects.
 6. Choose *Install*. If an information dialog box appears, choose *Continue*. Choose *Local Object* or enter a package if you need to transport the objects.
13. Choose *Exit* to leave the transaction.

Activation Warnings

If activation warnings similar to the ones displayed below appear, you can ignore them.

- CMP problem occurred in characteristic <CHAR> for InfoProvider <INFO_PROV>
- Rounding inaccuracies occur with data type FLOAT for AMOUNT and QUANTITY
- Characteristic <CHAR>: Lower case makes selection of char. values difficult
- Data type of char. <CHAR> (<TYPE1>) is not equal to data type of attribute <ATTR> (<TYPE2>)
- Length of characteristic <TEXT CHAR> (<LENGTH1>) and assigned attribute <ATTR> (<LENGTH2>) not same
- The short text of DataSource <SOURCE> is not maintained in language <LANG>
- Skip key figure <KYF>: aggregation type NO2 not supported
- Attribute <ATTR>: Conversion routine <CONV> ignored
- Attribute <ATTR>: Compounding ignored
- Datatype FLTP for datafield <FIELD> of the DSO is not allowed
- Conversion problems possible for source field <FIELD1> / target field <FIELD2>

6.3.2.8.2 Verify Gregorian Calendar

Ensure that the previously generated time data (*Gregorian* calendar) is sufficient for the current release of SAP Assortment Planning.

Context

Execute this procedure to generate time data (**Gregorian** calendar).

Procedure

1. Log on to SAP HANA studio.
2. In the *SAP HANA Modeler* perspective, on the *Quick Launch* tab, select your ABAP back-end system and choose *Generate Time Data*.
3. Select *Gregorian* as the *Calendar Type*.

For example, SAP HANA views included in the SAP HANA content for SAP Customer Activity Repository require the presence of time data in `_SYS_BI.TIME_DIMENSION*` SAP HANA database tables.

4. Enter a range of years that includes all the years of data that you plan to store in SAP Customer Activity Repository.

Example: If you plan to start using SAP Assortment Planning on January 1, 2014, enter 2014 as your starting year. But if you plan to access sales documents created in SAP ERP that date from January 2013, specify 2013 as your starting year.

5. Define the granularity as *Day*, which is the minimum granularity required by SAP Customer Activity Repository. You can choose a finer level of granularity, for example *Hour*, if necessary.
6. Choose the day that is the first day of the week in your company.
7. Choose *Finish*.

For more information, see:

- https://help.sap.com/viewer/p/SAP_HANA_LIVE ► *Installation and Upgrade* ► *Administrator's Guide* ► *Configuration Steps* ► *Generate Time Data* ►
- https://help.sap.com/viewer/p/SAP_HANA_PLATFORM ► *<Version>* ► *Development* ► *SAP HANA Modeling Guide (for SAP HANA studio)* ► *Creating Information Views and Previewing its Output* ► *Generate Time Data* ►

6.3.2.9 Verify that Data Replication Is Running Following the Upgrade

Following the upgrade, ensure that all of the data replication described in the *Configure Data Replication* section of the *Common Installation Guide* is still running.

⚠ Caution

The data you replicate in this step is consumed by the SAP Assortment Planning application through local BI Content. Only a subset of ASCII characters is considered valid by SAP BW. As a result, object identifiers, which are mapped to external IDs in DDF (for example, `EXT_LOC_ID` or `EXT_PROD_ID`), should only consist of valid characters.

We recommend that you avoid the usage of invalid characters in the source master data system. This is controlled by the system administrator or the implementation team who define the value ranges and formatting for object identifiers (for example, product or location IDs).

If the recommended approach is not possible, then in your SAP Assortment Planning back-end system, you need to allow for additional special characters in Customizing activity [Maintain permitted extra characters](#) under [SAP NetWeaver > Business Warehouse > General Settings](#). For more information, see [173241](#).

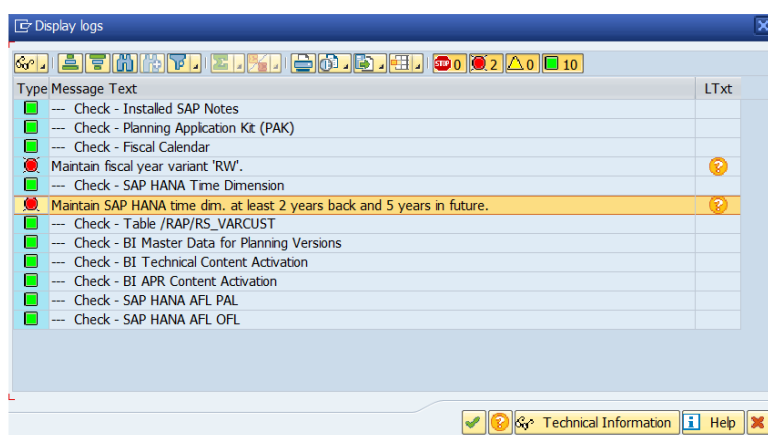
In particular, following the upgrade, you need to pay attention to the following:

- SAP Assortment Planning supports the use of time-dependent article hierarchies. This is enabled by implementing SAP Note [2196323](#) in the **connected SAP Retail or SAP S/4HANA system**. Following the implementation of these notes in SAP Retail or SAP S/4HANA, if your hierarchy is already a time-dependent hierarchy, you need to re-import the product hierarchies into SAP Assortment Planning using the DRFOUT framework.
 - SAP Retail Description: Article Hierarchy
 - DRFOUT Outbound Implementation: PAHY
 - DDF Inbound Interface: /DMF/MDIF_PROD_HIER_INBOUND
- All the tables listed in the spreadsheet of the *CARAB 5.0 - SLT Tables* archive for your version of SAP Customer Activity Repository applications bundle (SAP Assortment Planning) are being replicated. For more information, see the *Create/Replicate Source Master Data System Tables* section in the *Common Installation Guide*.
- Ensure that season classification data is being loaded from the appropriate source. For more information, see the *Load Season Classification Data* section in the *SAP Assortment Planning Administration Guide*.
- Ensure that wholesale data is being loaded. Set up the [Mapping report to convert sales orders into /DMF/TS_WS table](#) report (/DMF/WHOLESALE_SO_SHP_TO_TS_WS in transaction SE38) to run as a background job to regularly import replicated sales order and shipment data into DDF. For more information, see the *Load Wholesale Data* section in the *SAP Assortment Planning Administration Guide*.

6.3.2.10 Run the Validation Report

1. Run transaction /DMF/VAL_CAR_INSTALL.
Alternatively, run transaction SE38 and execute the /DMF/VALIDATE_CAR_INSTALLATION report.
2. Select the [Assortment Planning](#) scenario and select [Execute](#).
In the dialog that appears, select whether to validate the Retail SAP BW structure, the Omnichannel SAP BW structure, or both. The SAP BW structure to validate depends on the structure that you have selected to reactivate during the upgrade in a previous step, see section [Reactivate SAP Assortment Planning Planning Framework Content](#).

Running this report allows you to verify the success of the installation, providing a log of potential issues. For example, you may be presented with the following results:



Validation Report Results

View the long text associated with each message to see the link to the documentation describing the procedure you have to troubleshoot.

6.3.2.11 Run the SAP Assortment Planning for Retail 4.0 Update Report

Context

Run this report to carry out back-end server changes required by the SAP Assortment Planning 5.0 SPS06 release.

Procedure

1. Run transaction SE38.
2. Execute the /RAP/40_UPGRADE_APR report.

Read the documentation associated with the report for important information on updates performed by the report.

6.3.2.12 Activate SAP Assortment Planning ICF Services

Use

Following an upgrade, you must ensure that all ICF services required for the SAP Assortment Planning SAP Fiori apps are activated.

Procedure

1. Log on to your front-end server.
2. Open service maintenance (transaction SICF).
3. In the *Define Services* screen, select the Location Clustering service by specifying the following:
 - Hierarchy Type: **SERVICE**
 - Virtual Host: **DEFAULT_HOST**
 - Service Path: **/sap/bc/ui5_ui5/sap/locclsts_v2/**
4. Choose *Execute*.
5. To activate the service, choose *Service/host Activate*.
6. Repeat steps 3 to 5 to ensure that **all** of the following services are activated:
 - **/sap/bc/ui5_ui5/sap/attribmgmt_v2/**
 - **/sap/bc/ui5_ui5/sap/assortlist/**
 - **/sap/bc/ui5_ui5/sap/ddfreuse_v2/**
 - **/sap/bc/ui5_ui5/sap/locclsts_v2/**
 - **/sap/bc/ui5_ui5/sap/modulegmt_v2/**
 - **/sap/bc/ui5_ui5/sap/optionplan_v2/**
 - **/sap/bc/ui5_ui5/sap/phpmatch_v2/**
 - **/sap/bc/ui5_ui5/sap/plnconfig/**
 - **/sap/bc/ui5_ui5/sap/optionplanning**
 - **/sap/bc/ui5_ui5/sap/styleplan**
 - **/sap/bc/ui5_ui5/sap/rankingkey**
 - **/sap/bc/ui5_ui5/sap/businessrule**
 - **/sap/bc/ui5_ui5/sap/manageproddtl**
 - **/sap/bc/ui5_ui5/sap/plancalendar**

6.3.2.13 Define System Alias for Back-End Transactions

Use

A number of SAP Fiori apps, installed on your front-end system, launch transactions directly on the back-end system. For example, the *Manage Products* tile actually launches the Demand Data Foundation (DDF) POWL_EASY WebDynpro application.

Following an upgrade, you must ensure that all required RFC connections and system alias definitions remain set.

Procedure

1. Log on to your front-end system, that is, the system where you have installed the user interface (UI) components of your application.
2. Launch *Configuration of RFC Connections* (transaction SM59).
3. Create an RFC connection with the following settings:

- *RFC Destination*: SAP_ISR_CARAB
Connection Type: H (HTTP connection)

Ensure to maintain all of the settings required to connect to your back-end system, in particular, the *Target Host* entry on the *Technical Settings* tab.

4. Save your changes.
5. Create another RFC connection with the following settings:

- *RFC Destination*: SAP_ERP_ISR_CARAB
Connection Type: H (HTTP connection)

Ensure to maintain all of the settings required to connect your front-end system to the source master data system, in particular, the *Target Host* entry on the *Technical Settings* tab.

6. Save your changes.
7. Open *SAP Fiori Launchpad Designer* using transaction /N/UI2/FLPD_CONF.
8. Search for the catalog SAP_RAP_TC_T, choose *Target Mappings*, and map the semantic objects and actions to the system aliases as indicated in the following table:

Catalog	App	Semantic Object	Action	System Alias	Description
SAP_RAP_TC_T	<i>My Assortment Lists</i>	<i>MasterAssortment</i>	<i>displayLog</i>	SAP_ISR_CARAB	This setting allows the <i>My Assortment Lists</i> app to launch transaction SLG1 on the back-end system.

i Note

This application is only used to configure a link to the back-end system, you do not need to add this app to your SAP Fiori launchpad.

Catalog	App	Semantic Object	Action	System Alias	Description
	<i>My Assortment Lists</i>	<i>MasterAssortment</i>	<i>displayListingCondition</i>	SAP_ERP_I SR_CARAB	This setting allows the <i>My Assortment Lists</i> app to launch transaction WSL10 on the connected SAP Retail or SAP S/4HANA system.

i Note

This application is only used to configure a link to the SAP Retail or SAP S/4HANA system, you do not need to add this app to your SAP Fiori launchpad. In order for the link to work, you must maintain the *HTTP Destination* for the *Assortment Planning* application in the customizing activity ► *SAP Customizing Implementation Guide* ► *SAP Customer Activity Repository* ► *Demand Data Foundation* ► *Basic Settings* ► *Integration* ► *Sending System and Master Data System Coupling* ►.

Catalog	App	Semantic Object	Action	System Alias	Description
	My Assortment Lists	MasterAssortment	displayExtAssortment	SAP_ERP_I SR_CARAB	<p>This setting allows the My Assortment Lists app to launch:</p> <p>Transaction WRF_WS0A3 on the connected SAP Retail system</p> <p>Transaction WS0A3 on the connected SAP S4HANA system.</p>
<div style="background-color: #f0f0f0; padding: 10px; border: 1px solid #ccc;"> <p>i Note</p> <p>This application is only used to configure a link to the SAP Retail or SAP S/4HANA system, you do not need to add this app to your SAP Fiori launchpad. In order for the link to work, you must maintain the HTTP Destination for the Assortment Planning application in the customizing activity ▶ SAP Customizing Implementation Guide ▶ SAP Customer Activity Repository ▶ Demand Data Foundation ▶ Basic Settings ▶ Integration ▶ Sending System and Master Data System Coupling ▶.</p> </div>					
	Manage Category Responsibilities	AreaOfResponsibility	maintain	SAP_ISR_C ARAB	<p>This setting allows the Manage Category Responsibilities app to launch the corresponding DDF WebDynpro application.</p>
	Manage Market Responsibilities	AreaOfResponsibility	maintain_mh	SAP_ISR_C ARAB	<p>This setting allows the Manage Market Responsibilities app to launch the corresponding DDF WebDynpro application.</p>
	Manage Products	Product	maintain	SAP_ISR_C ARAB	<p>This setting allows the Manage Products app to launch the corresponding DDF WebDynpro application.</p>

Catalog	App	Semantic Object	Action	System Alias	Description
	<i>Manage Locations</i>	<i>Location</i>	<i>maintain</i>	SAP_ISR_C ARAB	This setting allows the <i>Manage Locations</i> app to launch the corresponding DDF WebDynpro application.

6.3.2.14 Troubleshoot Front-End Server Upgrade

Use

Following the upgrade of the product version on the front-end server, you may not be able to see some of the SAP Assortment Planning SAP Fiori tiles in your launchpad. This section outlines how to troubleshoot these issues, should you experience them.

These steps are also listed in the *Troubleshooting* section of the *SAP Assortment Planning Administrator's Guide* available on the SAP Help Portal at <http://help.sap.com/viewer/p/CARAB> >> <Your Version> > *Administration* > *SAP Assortment Planning Administration Guide* >.

Process

Do the following:

1. Check that all of the required BSP applications are listed in the UIRAP001 package.
 1. Log on to your front-end system (your SAP Gateway system).
 2. Launch the *Object Navigator* (transaction SE80).
 3. In the *Repository Browser*, open package UIRAP001.
 4. Expand all of the embedded packages of embedded package CONTENT_RAP_TRANS.

5. Verify that the following *BSP Applications* are listed:

Object Name	Description
UICAR001	Structure package for Customer Activity Repository
Subpackages	
UIAMR001	Structure package for Allocation Management Retail
UIOAA001	Omnichannel Article Availability
UIPMR001	Structure package for Promotion Management Retail
UIRAP001	Structure package for UIRAP
Subpackages	
CONTENT_RAP_COMMON	Main package for common obejcts for RAP
CONTENT_RAP_TRANS	Main package for transactional for RAP
Subpackages	
RETAIL_DDF	Package for DDF
BSP Library	
BSP Applications	
ATTRIBMGMT_V2	Manage Product Attributes: Fiori ID F0829A
DDFREUSE_V2	Fiori Reuse Components for DDF: Fiori ID F0854A
LOCCLSTS_V2	Location Clustering: Fiori ID F0550A
MODULEMGMT_V2	Module Management: Fiori ID F1682A
PLNCONFIG	Planning configuration
RETAIL_RAP_AP	Package for RAP AP
BSP Library	
BSP Applications	
ASSORTLIST	Assortment List: Fiori ID F1567B
OPTIONPLAN_V2	Option Plan: Fiori ID F0830A
PHPMATCH_V2	PHP Matching: Fiori ID F0831A
UISCAR01	Strucutre Package for Customer activity repository

BSP Applications

6. If you do not see one or more of the BSP applications listed above, right-click on each of the RETAIL_DDF and RETAIL_RAP_AP packages, and select **Other Functions > Rebuild Object List**.

Caution

Do not rebuild objects on a higher package level.

2. Clean the cache.

1. Log on to your front-end system (your SAP Gateway system).
2. In Customizing (transaction SPRO), navigate to **SAP NetWeaver > UI Technologies > SAP Fiori > Data Administration > Invalidate Caches**.
This activity launches the /UI2/INVALIDATE_GLOBAL_CACHES report. This report invalidates all server-side caches in SAP NetWeaver user interface services, which can become out-of-date following an upgrade.

3. If necessary, implement instructions listed in SAP Note [2147669](#).

3. Remove any previously customized versions of the UIRAP001 launchpad.

1. Log on to your front-end system (your SAP Gateway system).
2. Launch the *Overview for Launchpads* (transaction LPD_CUST).

3. Search for *Role* UIRAP001, and see whether any instances exist where the *User Name* is not *SAP*. If so, this means that customized versions of the UIRAP001 launchpad exist, and these take precedence over the standard launchpad instance delivered by SAP.
4. Delete all but the launchpad instance delivered by SAP.
4. Recalculate SAPUI5 application index, following any changes to the content of the SAPUI5 ABAP repository (for example, installation of a new version of the SAPUI5 distribution layer or implementation of an SAP Note containing changes to an SAPUI5 app).
For more information, see the *Configure Index Calculation* section in the *Common Installation Guide* and SAP Note [2227577](#).

6.4 SAP Promotion Management

Post upgrade setup for SAP Promotion Management

This upgrade guide describes upgrading SAP Promotion Management to version 5.0 FPS06. You must have completed the upgrade activities described in this guide under ► [SAP Customer Activity Repository](#) ► [Core \(Mandatory\)](#) ►.

SAP Promotion Management 4.0/4.0 FPS01/FPS02/FPS03/SPS04/SPS05/SPS06/SPS07/SPS08/SPS09/SPS10/5.0/5.0 FPS01/5.0 FPS02/5.0 FPS03/5.0 FPS04/5.0 FPS05 to SAP Promotion Management 5.0 SPS06

There are no upgrade activities for SAP Promotion Management 5.0 SPS06

SAP Promotion Management 8.2 FP3 to SAP Promotion Management 4.0


There are no post-installation updates required for this release.

SAP Promotion Management 8.2 FP1 to SAP Promotion Management 8.2 FP3

Prerequisites


- Ensure that you have carried out all the steps listed in the previous sections of this guide.
- Please follow the instructions for RTLAPPS in SAP Note [2592695](#).

Follow-Up Activities


1. Perform all the mandatory core steps for SAP Customer Activity Repository under [Core \(Mandatory for All Applications\) \[page 80\]](#).
2. Activate the following OData services:
 - /DMFOFFER_MANAGMENT_V2_SRV
 - /DMF/LOCATION_SUBGROUP_SRV
3. Update to the latest version of the UI by installing [2606408](#)

SAP Promotion Management 8.2 FP 2.0 to SAP Promotion Management 8.2 FP3

Prerequisites


- Ensure that you have carried out all the steps listed in the previous sections of this guide.
- Please follow the instructions for `RTLAPPS` in the following [259265](#)

Follow-Up Activities


1. Perform all the mandatory core steps for SAP Customer Activity Repository under [Core \(Mandatory for All Applications\) \[page 80\]](#).
2. Activate the following OData services:
 - /DMFOFFER_MANAGMENT_V2_SRV
 - /DMF/LOCATION_SUBGROUP_SRV
3. Update to the latest versions of the UI by installing [2606408](#)

SAP Promotion Management 8.2 SP4 to SAP Promotion Management 8.2 FP3

Prerequisites

- Ensure that you have carried out all the steps listed in the previous sections of this guide.
- Please follow the instructions for the `STLAPPS` in the following [2606408](#)

Follow-Up Activities

1. Perform all the mandatory core steps for SAP Customer Activity Repository under [Core \(Mandatory for All Applications\) \[page 80\]](#).
2. Activate the following OData services:
 - /DMFOFFER_MANAGMENT_V2_SRV
 - /DMF/LOCATION_SUBGROUP_SRV
3. Update to the latest version of the UI by installing [2606408](#)

6.5 SAP Allocation Management

Post-upgrade setup for SAP Allocation Management

[1.5 \(CARAB 2.0 SPS0\) to 4.0, 4.0 FPS02 / FPS03 / SPS04 - SPS08, 5.0, 5.0 FPS01 - FPS04/SPS05 and SPS06 \[page 292\]](#)

Summary of follow-up activities to upgrade your SAP Allocation Management installation from release 1.5 to release 4.0, 4.0 FPS02 /FPS03, 4.0 SPS04 - SPS08, 5.0, 5.0 FPS01 - FPS04/SPS05 and SPS06.

[2.0 FP1 to 4.0, 4.0 FPS02 / FPS03 / SPS04 - SPS08, 5.0, 5.0 FPS01 - FPS04/SPS05 and SPS06 \[page 294\]](#)

Summary of follow-up activities to upgrade your SAP Allocation Management installation from release 2.0 FP1 to release 4.0, 4.0 FPS02, 4.0 FPS03, 4.0 SPS04 - SPS08, 5.0, 5.0 FPS01 - FPS04/SPS05 and SPS06.

[2.0 FP2 and FP3 to 4.0, 4.0 FPS02 / FPS03 / SPS04 - SPS08, 5.0, 5.0 FPS01 - FPS04/SPS05 and SPS06 \[page 296\]](#)

Summary of follow-up activities to upgrade your SAP Allocation Management installation from release 2.0 FP2 and 2.0 FP3 to release 4.0, 4.0 FPS02, 4.0 FPS03, 4.0 SPS04 - SPS08, 5.0, 5.0 FPS01 - FPS04/SPS05 and SPS06.

[Activate SAP HANA Content for SAP Allocation Management \[page 297\]](#)

Once all previous steps are successfully completed, you can activate SAP HANA content for SAP Allocation Management.

[Check Procedure Associated with Function GENIOS_SOLVE Is Active \[page 301\]](#)

For SAP Allocation Management, confirm that the procedure associated with function GENIOS_SOLVE is active in the _SYS_AFL catalog.

[Implement BAdI for Real-Time Inventory \[page 302\]](#)

You must implement a BAdI to use real-time inventory in SAP Allocation Management.

[Troubleshooting for SAP Allocation Management \[page 302\]](#)

During the upgrade, several issues might arise in the context of CDS activation, SAP HANA content activation, external view activation, and usage, static ABAP generation, and so on. Then you can perform the troubleshooting activities. Please also refer to the notes listed in section **SAP Notes for the Upgrade**.

6.5.1 1.5 (CARAB 2.0 SPS0) to 4.0, 4.0 FPS02 / FPS03 / SPS04 - SPS08, 5.0, 5.0 FPS01 - FPS04/SPS05 and SPS06

Summary of follow-up activities to upgrade your SAP Allocation Management installation from release 1.5 to release 4.0, 4.0 FPS02 /FPS03, 4.0 SPS04 - SPS08, 5.0, 5.0 FPS01 - FPS04/SPS05 and SPS06.

i Note

SAP Allocation Management release 1.5 was included in the SAP Customer Activity Repository applications bundle 2.0 SPS0 release.

The following steps are required to upgrade your SAP Allocation Management system:

- Perform all mandatory core steps for SAP Customer Activity Repository
- Run SAP Allocation Management reports
- Prepare follow-on system

Perform Mandatory Core Steps for SAP Customer Activity Repository

First do the mandatory core steps for SAP Customer Activity Repository. The **core** steps are also mandatory for SAP Allocation Management.

i Note

To upgrade SAP Allocation Management from release 1.5 to 4.0, consider the following **major changes**:

- No matter which source master data system you are using (ECC or S4H), you must run the SLT table creation programs that create dummy tables in the schema you are not using. Tables for both schemas, ECC and S4H, need to be available **before you can activate the SAP HANA content**.
- The transport handling of HANA content has been migrated from HTC (HANA Transport Container) to HTA (HANA Transport for ABAP). Report `/AMR/ACTIVATE_HANA_CONTENT` has been deprecated. Instead, you must use report `/CAR/ACTIVATE_HTA` *Activate SAP HANA Content for SAP CARAB*.

Perform all steps listed under [Core \(Mandatory for All Applications\) \[page 80\]](#).

Verify that all SAP Allocation Management OData services are active following the upgrade. Especially check the following new OData services:

- `/AMR/OD_PRODUCT_FLOW_SRV` Product Flow OData Service
- `/AMR/OD_KPI_CONFIG_SRV` KPI Configuration
- `/AMR/OD_ALLOCATIONRESULT_SRV` Fiori App Allocation Results
- `/AMR/OD_BASKET_SRV` Allocation Basket
- `/AMR/OD_ALLOCATIONPLAN_SEARCH_SRV` Fiori App Allocation Plan Search
- `/AMR/OD_CAPACITYMANAGEMENT_SRV` Store Areas and Capacities

Run Migration and Update Reports

- There are additional reports for the migration of market units:
 1. Run report `/AMR/MIGRATE_MARKET_UNITS_V20` to default the source type for given market units.
 2. If you are upgrading to **4.0 FPS02**, you must run report `/AMR/MIGRATE_MARKET_UNITS_V42`.
 3. If you are upgrading to **4.0 FPS03**, you must run report `/AMR/MIGRATE_MARKET_UNITS_V43`.


⚠ Caution


These reports must be run **before any new market unit** is created in SAP Allocation Management 2.0 and must be executed exactly once in the system.

No market unit should be accessed in parallel while running these reports.

- For the integration to SAP Assortment Planning, run the following two reports. The structure of the location cluster sets has changed from release to release. Check the report long texts for further instructions.
 1. To update location cluster set data created in SAP Assortment Planning 2.0 SPS1 to a format consumable by SAP Assortment Planning 2.0 FP1, run report [Update Location Clusters for SAP Assortment Planning for Retail 2.0 FP01](#) /DMF/CLSTS_UPDATE_2_0_FP1.
 2. To update location cluster set data created in SAP Assortment Planning 2.0 FP1 to a format consumable by SAP Assortment Planning 2.0 FP2, run report [Update Location Clusters for SAP Assortment Planning for Retail 2.0 FP2](#) /DMF/CLSTS_UPDATE_2_0_FP02.

Prepare Follow-On System

In the follow-on system, use the **new and enhanced** RFC function module for the creation of allocation tables in an **ECC** system. Follow the instructions in SAP Note [2416853](#)  *RFC function module to create allocation table for SAP Allocation Management.*

You can also transfer data to an **SAP S/4HANA** follow-on system. Follow the instructions in SAP Note [2524857](#)  *RFC function module to create allocation table for SAP Allocation Management in S4H system.*

Related Information

[Core \(Mandatory for All Applications\) \[page 80\]](#)

[Advanced \(Optional\) \[page 109\]](#)

6.5.2 2.0 FP1 to 4.0, 4.0 FPS02 / FPS03 / SPS04 - SPS08, 5.0, 5.0 FPS01 - FPS04/SPS05 and SPS06

Summary of follow-up activities to upgrade your SAP Allocation Management installation from release 2.0 FP1 to release 4.0, 4.0 FPS02, 4.0 FPS03, 4.0 SPS04 - SPS08, 5.0, 5.0 FPS01 - FPS04/SPS05 and SPS06.

The following steps are required to upgrade your SAP Allocation Management system:

- Perform all mandatory core steps for SAP Customer Activity Repository
- Prepare follow-on system

Perform Mandatory Core Steps for SAP Customer Activity Repository

First do the mandatory core steps for SAP Customer Activity Repository. The **core** steps are also mandatory for SAP Allocation Management.

i Note

For upgrade of SAP Allocation Management from version 2.0 FP1 to 4.0, please consider the following **major change**:

No matter which source master data system you are using (ECC or S4H), you must run the SLT table creation programs that create dummy tables in the schema you are not using. Tables for both schemas, ECC and S4H, need to be available **before you can activate the SAP HANA content**.

Perform all steps listed under [Core \(Mandatory for All Applications\) \[page 80\]](#).


Verify that all SAP Allocation Management OData services are active following the upgrade. Especially check the following new OData services:


- /AMR/OD_PRODUCT_FLOW_SRV Product Flow OData Service
- /AMR/OD_KPI_CONFIG_SRV KPI Configuration
- /AMR/OD_ALLOCATIONRESULT_SRV Fiori App Allocation Results
- /AMR/OD_BASKET_SRV Allocation Basket
- /AMR/OD_ALLOCATIONPLAN_SEARCH_SRV Fiori App Allocation Plan Search
- /AMR/OD_CAPACITYMANAGEMENT_SRV Store Areas and Capacities

Run Migration and Update Reports

- If you are upgrading to **4.0 FPS02**, you must run report /AMR/MIGRATE_MARKET_UNITS_V42.
- If you are upgrading to **4.0 FPS03**, you must run report /AMR/MIGRATE_MARKET_UNITS_V43.
- The structure of the location cluster sets has changed from the previous release. To update location cluster set data created in SAP Assortment Planning 2.0 FP1 to a format consumable by SAP Assortment Planning 2.0 FP2, run report [Update Location Clusters for SAP Assortment Planning for Retail 2.0 FP2](#) /DMF / CLSTS_UPDATE_2_0_FP02.

Prepare Follow-On System

In the follow-on system, use the **new and enhanced** RFC function module for the creation of allocation tables in an **ECC** system. Follow the instructions in SAP Note [2416853](#)  *RFC function module to create allocation table for SAP Allocation Management*.

You can also transfer data to an **SAP S/4HANA** follow-on system. Follow the instructions in SAP Note [2524857](#)  *RFC function module to create allocation table for SAP Allocation Management in S4H system*.

Related Information

[Core \(Mandatory for All Applications\) \[page 80\]](#)

[Advanced \(Optional\) \[page 109\]](#)

6.5.3 2.0 FP2 and FP3 to 4.0, 4.0 FPS02 / FPS03 / SPS04 - SPS08, 5.0, 5.0 FPS01 - FPS04/SPS05 and SPS06

Summary of follow-up activities to upgrade your SAP Allocation Management installation from release 2.0 FP2 and 2.0 FP3 to release 4.0, 4.0 FPS02, 4.0 FPS03, 4.0 SPS04 - SPS08, 5.0, 5.0 FPS01 - FPS04/SPS05 and SPS06.

The following steps are required to upgrade your SAP Allocation Management system:

- Refer to the information and procedure description for SAP HANA content activation for SAP Allocation Management in section [Activate SAP HANA Content for SAP Allocation Management \[page 297\]](#).

i Note

No matter which source master data system you are using (ECC or S4H), you must run the SLT table creation programs that create dummy tables in the schema you are not using. Tables for both schemas, ECC and S4H, need to be available **before** you can activate the SAP HANA content.

- Perform all mandatory core steps for SAP Customer Activity Repository
- Prepare the follow-on system.

Perform Mandatory Core Steps for SAP Customer Activity Repository

First do the mandatory core steps for SAP Customer Activity Repository. The **core** steps are also mandatory for SAP Allocation Management.

Perform all steps listed under [Core \(Mandatory for All Applications\) \[page 80\]](#).


Verify that all SAP Allocation Management OData services and Core Data Services (CDS) views are active following the upgrade:


- For a list of required OData services, refer to the SAP Allocation Management *Administration Guide*.
- For CDS views, see [Troubleshooting: Missing Views in Database \[page 301\]](#).

Run Migration Reports

- If you are upgrading to **4.0 FPS02**, you must run report /AMR/MIGRATE_MARKET_UNITS_V42.
- If you are upgrading to **4.0 FPS03**, you must run report /AMR/MIGRATE_MARKET_UNITS_V43.

Prepare Follow-On System

In the follow-on system, use the **new and enhanced** RFC function module for the creation of allocation tables in an **ECC** system. Follow the instructions in SAP Note [2416853](#)  *RFC function module to create allocation table for SAP Allocation Management*.

You can also transfer data to an **SAP S/4HANA** follow-on system. Follow the instructions in SAP Note [2524857](#)  *RFC function module to create allocation table for SAP Allocation Management in S4H system.*

Related Information

[Core \(Mandatory for All Applications\) \[page 80\]](#)



[Advanced \(Optional\) \[page 109\]](#)

6.5.4 Activate SAP HANA Content for SAP Allocation Management

Once all previous steps are successfully completed, you can activate SAP HANA content for SAP Allocation Management.

Prerequisites

Before starting with the activation of the SAP HANA content for SAP Allocation Management, you must do the following:

- Ensure that you have at least one of the `SAP_ECC` or `SAP_S4H` schemas in the SAP HANA database. Based on your source system for all SAP ERP data, you have either an `SAP_ECC` schema or an `SAP_S4H` schema (either physical schemas with these names, or at least authoring schemas). If you have both these systems, you must have two schemas.
- Ensure that all tables listed for SLT replication are available in the relevant schemas. The spreadsheet with tables that are relevant for replication and SAP HANA content activation is available on SAP Help Portal at <https://help.sap.com/viewer/p/CARAB>. Select the relevant version of SAP Customer Activity Repository at the top and choose *Implement*. Download the *SLT Tables for SAP Customer Activity Repository applications bundle 5.0* archive and extract the spreadsheet. Also ensure that you have implemented SAP Note [2916915](#)  (*Error when Activating HANA Content for Distribution Curves after Executing Report /DMF/CREATE_SLT_TABLES*) and SAP Note [3003750](#)  (*SAP Allocation Management - Corrections for using S4H 2020 as Source System*). Ensure that you have successfully set up the SLT tables in the schemas.

SAP HANA Content Activation Steps

1. Run the report `/AMR/INSERT_SLT_TABLES_TO_DB` (*Insert SLT Table Entries to Database*) in insert mode (by deselecting the simulation setting).
2. Deploy SAP Allocation Management delivered procedures, functions, and views. SAP Allocation Management delivers several native HANA objects as a part of the application. These objects are delivered via HANA transport for ABAP (HTA) and must be explicitly deployed into the SAP

HANA database. Without this deployment, you do not see these objects in the SAP HANA database. Once deployed, you can find the content via the path `sap.is.retail.rap.amr.db`.

3. Activate SAP Customer Activity Repository and Demand Data Foundation (DDF) SAP HANA content.

i Note

If the SAP Customer Activity Repository and DDF SAP HANA content is already active, you can skip this step.

SAP Allocation Management depends on active SAP HANA content for SAP Customer Activity Repository and DDF. Therefore, it is recommended that you first activate the SAP HANA content for SAP Customer Activity Repository and DDF.

Run the program *Activate SAP HANA Content for SAP CARAB* (`/CAR/ACTIVATE_HTA`) and select the *ECC Mode* relevant to your installation. Under *Business Scenario Activation*, select the *Customer Activity Repository* and *Demand Data Foundation* options.

Run the activation report. As a result, you have successfully activated and deployed the SAP HANA content for SAP Customer Activity Repository and DDF.

⚠ Caution

Do not select *Allocation Management* in this activation run for a simultaneous activation of SAP Allocation Management SAP HANA content. Simultaneous activation leads to activation problems.

4. Check and maintain schema mapping.

Check the names you use for your physical schema. If you are using the default names below, no further action is required:

- `SAP_S4H`, for your S/4HANA schema
- `SAP_ECC`, for your ECC or FMS schema

If the names you have chosen for your physical schema are **different from the names above**, you must do the following:

Maintain a schema mapping in your SAP HANA database, where your customer-specific names are used as authoring schemas for the physical schema.

5. Run the dummy schema and dummy table creation reports.

The reports check for a missing physical schema and create this physical schema and the corresponding dummy tables in the schema if necessary. The successful completion of this step is a prerequisite for a successful SAP HANA content activation for SAP Allocation Management.

i Note

The running of the report requires a database user in the ABAP system with the authorization to create the dummy schema. Check the application log for the report if there were errors.

In your back-end system, start transaction `SE38` and execute the following two reports, in the **sequence** in which they are listed:

- `/DMF/CREATE_SLT_TABLES` (*Create SLT Tables*)
 1. Select your source system. For *S/4HANA*, enter the release.
 2. Enter the physical source and dummy schema names. For the *Physical Source Schema*, enter the physical schema name into which your SLT tables are replicating. For the *Physical Dummy Schema*, enter the name for the schema to be created. If the physical source schema already exists in the SAP HANA database, then only the dummy tables in this schema are created when you execute the report.

3. Select the simulation mode for a test run. After the simulation run, you can check for errors in the application log.
4. Run the report again, this time without simulation mode.
5. If you have chosen a dummy schema name that is neither `SAP_ECC` nor `SAP_S4H`, maintain schema mapping for the dummy schema. Follow the guidelines mentioned in Step 4.
 - `/AMR/CREATE_DYNAMIC_SLT_TABLES` (*Create SLT Tables Dynamically*)
1. Select your source system. For *S/4HANA*, enter the release.
2. Enter the physical source and dummy schema names. For the *Physical Source Schema*, enter the physical schema name into which your SLT tables are replicating. For the *Physical Dummy Schema*, enter the name for the schema to be created. If the physical source schema already exists in the SAP HANA database, then only the dummy tables in this schema are created when you execute the report.
3. Select the simulation mode for a test run. After the simulation run, you can check for errors in the application log.
4. Run the report again, this time without simulation mode.
5. If you have chosen a dummy schema name that is neither `SAP_ECC` nor `SAP_S4H`, maintain schema mapping for the dummy schema. Follow the guidelines mentioned in Step 4.
6. Activate relevant inactive SAP HANA content for DDF.

Based on your scenario, there may be inactive packages in DDF, even though you have activated the content earlier via the report `/CAR/ACTIVATE_HTA` (*Activate SAP HANA Content for SAP CARAB*).

For the following packages in DDF, perform these actions:

 - In the table `CTS_HOT_PREWORK`, set the `PREWORK_DONE` indicator to **X** for these packages.
 - Call up transaction `SCTS_HTA_DEPLOY` (*SAP HANA Transport for ABAP - Deployment*) to check and to deploy (if not already deployed) these packages, **strictly in the sequence** they are listed. Do **not** select the option to *Include subpackages*:
 - `sap.is.ddf.ecc`
 - `sap.is.ddf.fms`
 - `sap.is.ddf.fms_s4h`
 - `sap.is.ddf.cross.ecc`
 - `sap.is.ddf.cross.fms`
 - `sap.is.ddf.cross.fms_s4h`
 - `sap.is.ddf.cross`

Note

The package names are case-sensitive.

If your SAP Retail release has tables that do not contain any FMS fields, some views might not be activated successfully in the `fms` and `fms_s4h` packages. You can nevertheless continue with further activation steps.

7. Grant authorization.

The two SLT table creation reports use the database user maintained in the ABAP system to create the dummy schemas. The `_SYS_REPO` user needs the exact same authorizations on the newly created dummy schema that this user already has on the physical source schema. In addition, to display the schema in the navigator, a `SELECT` authorization on the schema (with `GRANT` option) must be provided to the database user for the content activation.

i Note

This step must be performed by the SAP HANA database administrator who has the authorization for these activities.

8. Set *Prework Done* for SAP Allocation Management packages.

A precondition for SAP HANA Transport for ABAP (HTA) activation is that the `PREWORK_DONE` indicator is set for all packages with activation mode `P - prework needed`. You can check this setting in the table `CTS_HOT_PACKAGE` in field `HOT_ACTIVATION_MODE`.

You can set the `PREWORK_DONE` indicator for all packages relevant for SAP Allocation Management manually or by implementing an SAP Note. To make the setting manually, follow the additional steps listed in this step. Alternatively, implement SAP Note [2861929](#) (Setting the `PREWORK_DONE` flag in table `CTS_HOT_PREWORK` for AMR HANA Content packages) instead of setting the indicator manually.

The manual steps are as follows:

1. Set the `PREWORK_DONE` indicator to **X** for all packages in the `CTS_HOT_PREWORK` table. The indicator shows that the SAP HANA content in all packages relevant for SAP Allocation Management is ready for deployment.
 2. Call transaction `SE16 (Data Browser)` and display the content of table `CTS_HOT_PACKAGE`. Search for package names `sap.is.retail.rap.amr*` in the field `HANA_PACKAGE_ID`. Please note that the package names are case-sensitive. You should find 163 entries that match the search criterion. Copy the package names from the result list of your search.
 3. Run the program *Activate SAP HANA Content for SAP CARAB* (`/CAR/ACTIVATE_HTA`) with the following settings:
 - Select the relevant setting under *ECC Mode*.
 - Under *Business Scenario Activation*, select the *Allocation Management* option.
 - Under *Processing Control*, select *Perform Prerequisite Check*.
 4. Display the selection screen of table `CTS_HOT_PREWORK`. Enter the `HANA_PACKAGE_ID` for all packages from the result list of your search in table `CTS_HOT_PACKAGE`.
 5. Ensure that all 163 entries have been successfully updated with `PREWORK_DONE` indicator to **x** in the `CTS_HOT_PREWORK` table.
9. Once you have successfully deployed all content as described in the previous steps, call up transaction *SAP HANA Transport for ABAP - Deployment* (`SCTS_HTA_DEPLOY`). To deploy the SAP Allocation Management packages, enter package name `sap.is.retail.rap.amr*` and choose *Execute*.

i Note

With this step, the SAP HANA content for SAP Allocation Management is finally deployed. This is the last and most critical activation step.

Checking for Missing Views

If content activation errors occur, check for missing views in the database. For more information, see [Troubleshooting: Missing Views in Database \[page 301\]](#).

Related Information

[Create/Replicate Source Master Data System Tables \[page 86\]](#)

[Activate SAP HANA Content \[page 90\]](#)

6.5.4.1 Troubleshooting: Missing Views in Database

After the SAP HANA content activation, you can check for missing views in transaction `DB02`.

Check if SAP Allocation Management views are highlighted as objects missing in the database. There could be some missing objects, despite having received success messages from the previous step of activating SAP Allocation Management SAP HANA content.

1. Call up transaction *Diagnostics: Missing Tables and Indexes* (`DB02`)
2. Select **► Diagnostics ► Tables/Views ►** and enter the technical name.
3. Check if any SAP Allocation Management views are displayed as missing in the database.
4. If there are views missing in the database, raise a support ticket.

6.5.5 Check Procedure Associated with Function GENIOS_SOLVE Is Active

For SAP Allocation Management, confirm that the procedure associated with function `GENIOS_SOLVE` is active in the `_SYS_AFL` catalog.

Prerequisites

You have configured the AFL usage and confirmed that the OFL algorithm was installed successfully as described in section [Check the OFL Installation \[page 52\]](#).

Context

Procedure

1. Go to `SAP HANA Systems` view in the `SAP HANA Development Perspective`.
2. In your system, filter for catalog `_SYS_AFL`.

3. In the `_SYS_AFL` catalog, filter on procedures to search for `OFL_AREA_GENIOS_SOLVE_PROC`
4. Confirm that this procedure `OFL_AREA_GENIOS_SOLVE_PROC` is available.

6.5.6 Implement BAdI for Real-Time Inventory

You must implement a BAdI to use real-time inventory in SAP Allocation Management.

As of SAP Customer Activity Repository applications bundle 5.0, a BAdI implementation is required to obtain real-time data inventory data for SAP Allocation Management.

You can implement a BAdI using standard logic or implement your own logic. For more information and detailed steps, please see SAP Note [2982741](#) - *SAP Allocation Management - BAdI Implementation for Real-Time Inventory View*.

6.5.7 Troubleshooting for SAP Allocation Management

During the upgrade, several issues might arise in the context of CDS activation, SAP HANA content activation, external view activation, and usage, static ABAP generation, and so on. Then you can perform the troubleshooting activities. Please also refer to the notes listed in section **SAP Notes for the Upgrade**.

After the SAP HANA content activation, some Core Data Services (CDS) views may not be active. In this case, you can run program `RADMASG0` in transaction **SE38** for the collective activation of CDS views and external views. Select *Direct Objects* and enter `/AMR/V*` in the *View Name* selection field. Then execute the report.

Related Information

[Implement SAP Notes for the Upgrade \[page 33\]](#)

6.6 SAP Replenishment Planning

Post-upgrade setup for SAP Replenishment Planning

[5.0 to 5.0 FPS01 / 5.0 FPS02 / 5.0 FPS03 / 5.0 FPS04 / 5.0 SPS05 / 5.0 SPS06 \[page 303\]](#)

Summary of follow-up activities to upgrade your SAP Replenishment Planning installation from the releases 5.0, 5.0 FPS01, 5.0 FPS02, 5.0 FPS03 to release 5.0 FPS04.

[Create Exception Profiles \[page 305\]](#)

To enable the reporting of specific exceptions and to configure when they are raised, create at least one exception profile and assign it to all product locations.

6.6.1 5.0 to 5.0 FPS01 / 5.0 FPS02 / 5.0 FPS03 / 5.0 FPS04 / 5.0 SPS05 / 5.0 SPS06

Summary of follow-up activities to upgrade your SAP Replenishment Planning installation from the releases 5.0, 5.0 FPS01, 5.0 FPS02, 5.0 FPS03 to release 5.0 FPS04.

i Note

If you have installed SAP Replenishment Planning for the first time, make sure that all setup steps for SAP Replenishment Planning have been performed as described in the section *SAP Replenishment Planning of the Common Installation Guide* at <https://help.sap.com/viewer/p/CARAB>.

The following steps are required to upgrade your SAP Replenishment Planning system:

- Ensure that the SAP XRP AFL component is installed using a compatible minimum revision. For more information, see *SAP Replenishment Planning* under [Upgrade the Prerequisites \[page 18\]](#) and [Download and Install SAP XRP AFL \(Only for SAP Replenishment Planning\) \[page 66\]](#).
- Perform all mandatory core steps for SAP Customer Activity Repository. For more information, see [Core \(Mandatory for All Applications\) \[page 80\]](#).
- To set up the *Review Order Plan Items* app, you must activate also the `/IWBEP/MESSAGE_TEXT` OData service. For more information, see *Activate Application-Specific OData Services for SAP Replenishment Planning* under section *Set Up SAP Fiori Apps for SAP Replenishment Planning* in the *Common Installation Guide* at <https://help.sap.com/viewer/p/CARAB>.
- If you want to use tools reports, assign the respective authorization objects for these tools reports to the desired roles. For more information, see section *Display of Data with Tools Reports* in the *SAP Replenishment Planning Administration Guide* at <https://help.sap.com/viewer/p/CARAB>.

Specific steps for the upgrade from 5.0 to 5.0 FPS02:

- Implement the *Manage Exception Profiles* app as described in the section *App Implementation: Manage Exception Profiles* of the *Common Installation Guide* at <https://help.sap.com/viewer/p/CARAB>.
- [Create Exception Profiles \[page 305\]](#).
- If you want to use the following transactions and reports that have been added in the releases 5.0 FPS01 and 5.0 FPS02, assign the respective authorization objects to the desired roles:
 - Generating alerts with report `/DMF/GENERATE_ALERTS`
 - Execute the remote function call `/DMF/AGGR_ORDER_PLAN_READ`. For more information about the `/DMF/AGGR_ORDER_PLAN_READ` function module, see the [Provide Aggregated Order Plan Data to External Systems](#) section in the application help for SAP Customer Activity Repository.
 - Purging order plan items for aggregation with the *Purge Order Plan Items for Aggregation* (`/DMF/ORDERPLAN_4_AGG_PURGE`) report.
 - Execute parallel processing as well as display and change workloads in the *Manage Workloads* app.
 - Purge performance monitoring data using the *Purging of Performance Monitoring Measurements* (`/DMF/PERFORMANCE_MONITOR_PURGE`) report.
 - Display or maintain settings for the *Performance Monitoring Configuration* (transaction `/DMF/PERFMON_CONFIG`).
 - Display and change order plan items externally. For more information, see section *External Review of Order Plan Items* in the *SAP Replenishment Planning Administration Guide* at <https://help.sap.com/viewer/p/CARAB>.

- Fetch the aggregated schedule line quantities of the purchase order items with the *Store Order Plan Information for Analytics* (/XRP/OPI_PO_DATA_UPD) report.

If you want to create and manage alert profiles, implement the *Manage Alert Profiles* app as described in the section *App Implementation: Manage Alert Profiles* of the *Common Installation Guide* at <https://help.sap.com/viewer/p/CARAB>.

Specific steps for the upgrade from 5.0 FPS01 to 5.0 FPS02:

- If you want to use the following transactions and reports that have been added in the release 5.0 FPS02, assign the respective authorization objects to the desired roles:
 - Execute the remote function call /DMF/AGGR_ORDER_PLAN_READ. For more information about the /DMF/AGGR_ORDER_PLAN_READ function module, see the *Provide Aggregated Order Plan Data to External Systems* section in the application help for SAP Customer Activity Repository.
 - Purging order plan items for aggregation with the *Purge Order Plan Items for Aggregation* (/DMF/ORDERPLAN_4_AGG_PURGE) report.

For detailed information about the respective authorization objects, see section *Set Up Back-End Roles and Authorizations* of the *Common Installation Guide* at <https://help.sap.com/viewer/p/CARAB>.

If you want to use *Replenishment-Related Analytics* that has been predefined in SAP Analytics Cloud, configure SAP Analytics Cloud as described in the section *Configure SAP Analytics Cloud for Forecast-Related Analytics* of the *Common Installation Guide* at <https://help.sap.com/viewer/p/CARAB>.

Specific steps for the upgrade to 5.0 FPS04:

With release 5.0 FPS04, the consideration of replenishment blocks has been introduced as a new feature in the determination process of scheduling information. This feature includes a flag that indicates a replenishment block in the internal data structure that represent schedule items, which have been determined in scheduling. This data structure is used in the AMDP *BAdI: Adaptation of Replenishment Schedule* (/XRP/SCHEDULING_RESULT), which allows custom adjustments of scheduling results.

With the introduction of the replenishment block this information is also visible in the BAdI and can be adjusted via a BAdI implementation if required. The enhancement of the data structure used in the AMDP BAdI invalidates existing implementations, so that the execution is no longer possible. In case there is an active BAdI implementation, you must ensure that the existing implementation is compatible with the enhanced structure after the upgrade:

- The structures /XRP/SCHEDULING_RESULT_STY (Scheduling Result) and /XRP/ADTNL_SCHDLS_WTH_RANK_STY (Additionally determined schedule items) have been enhanced by the field `ISBLOCKEDATORDERDATETIME` of type /DMF/FLAG to display that a schedule item is blocked for the specified order date and time. These structures are used as changing parameter in the methods `ADAPT_SCHEDULING_RESULT` and `ADAPT_ADDITIONAL_SCHEDULES` of BAdI /XRP/SCHEDULING_RESULT. Every field of a changing parameter must be set explicitly for an AMDP BAdI.
- In case you have already implemented the BAdI, you must ensure that the new field is set by any value, even if you do not want to use the new information. You can do so either in a generic way, for example, by adding a `SELECT*` on a table which contains the new field, or explicitly by setting the field value to blank.
- Then you must activate your BAdI implementation again.

Specific steps for the upgrade to 5.0 SPS05:

There are no steps for the upgrade to 5.0 SPS05.

Specific steps for the upgrade to 5.0 SPS06:

There are no steps for the upgrade to 5.0 SPS06.

6.6.2 Create Exception Profiles

To enable the reporting of specific exceptions and to configure when they are raised, create at least one exception profile and assign it to all product locations.

Context

In SAP Replenishment Planning 5.0 FPS01, parameter profiles have been introduced for specifying the parameters that are used in the replenishment calculation process to influence the creation of exceptions. These parameter profiles are called exception profiles. Specific exceptions, such as the high-level exceptions *High Order Plan Quantity* and *High Spoilage*, are only reported if an exception profile exists and is assigned to the product locations subject to replenishment calculation. For more information about these exceptions, see section *Replenishment Calculation under Exceptions Relevant for SAP Replenishment Planning* in the application help for SAP Replenishment Planning. For more information about the exception profile parameters, see section *Exception Profile Parameters* in the same application help.

With the following procedure, you create a downward compatible exception profile and assign it to all product locations. This is the minimum requirement.

Depending on your business needs, you can generate further different exception profiles and assign them in any way to your product locations, as long as every product location has an exception profile assigned.

Procedure

1. In the *Manage Exception Profiles* app, create a new exception profile. You do not need to change the preset values for the exception parameters as they already reflect a downward compatible setting.
2. In the *Manage Configuration Assignments* app, assign the newly created exception profile to the product locations. As a very simple approach, you can create (or modify, if already existing), a global assignment:
 1. Search for the assignment level *Global*. If there is no assignment, create one.
 2. In the *Generic Assignments* section, search for the *Standard Assignment*, and if necessary, create one.
 3. In the standard assignment, select your newly created exception profile and save it.

Result

You have now created an exception profile and assigned it to all product locations.

Further Information

If you have several master data systems providing product locations, repeat the assignment for each master data system.

For more information, see the section *Define the Parameterization Profiles and the Assignment of the Common Installation Guide* at <https://help.sap.com/viewer/p/CARAB>.

6.7 Configure Access to Documentation on SAP Help Portal (Optional for All Applications)

In transaction SR13, configure your ABAP back-end system to access documentation on SAP Help Portal.

Context

You can configure your ABAP back-end system to access documentation provided on SAP Help Portal for SAP Customer Activity Repository applications bundle at <https://help.sap.com/viewer/p/CARAB>.

Example

If you are using SAP Customer Activity Repository or SAP Replenishment Planning, you may want to configure access to the respective application help.

Prerequisites

- The documentation that you want to access is available on SAP Help Portal.
- The users who access the documentation have access to the Internet.
- You are aware that you can configure access to **only one combination of product and version**. This is the *Path* that you will enter in the procedure below.

Example

The product/version combination `CARAB/5.0.6` is valid for all the applications in **SAP Customer Activity Repository applications bundle 5.0 SPS06**.

Note

If these prerequisites cannot all be fulfilled, you must install the documentation in your local system landscape using the download packages or DVDs/CDs provided. For more information, see the [Installation Guide for SAP Library](#).

Procedure

1. Open transaction SR13.
2. Select the tab *PlainHtmlHttp*.
3. Choose *New Entries*.

i Note

In the next two steps, you will create *Area* entries for *Documentation* and *XML Documentation*. Be aware that you must repeat these entries for each platform that you are using and for each language in which you want to provide access to the documentation.

4. To create entries for the *Documentation* area, enter the following values:

Name	Value
Variant	Enter a name for the variant.
Platform	Select the platform relevant for your implementation from the list of available platforms (for example, <code>WN32</code>).
Area	Select <i>Documentation</i> from the list; this will display as <code>IWBHELP</code> in the table.
Server Names	Enter https://help.sap.com/http.svc/ahp2 .
Path (<Product/Version>)	Enter CARAB/5.0.6.
Language	Select the language you need from the list.

i Note

The value is case-sensitive. Enter it exactly as shown here.

5. To create entries for the *XML Documentation* area, enter the following values:

Name	Value
Variant	Enter a name for the variant.
Platform	Select the platform relevant for your implementation from the list of available platforms (for example, <code>WN32</code>).
Area	Select <i>XML Documentation</i> from the list; this will display as <code>XML_DOCU</code> in the table.
Server Names	Enter https://help.sap.com/http.svc/ahp2 .
Path (<Product/Version>)	Enter CARAB/5.0.6.
Language	Select the language you need from the list.

i Note

The value is case-sensitive. Enter it exactly as shown here.

6. Repeat steps 4 and 5 for each relevant platform and language.

7. Select one entry as the default language for each platform and area.
8. Save your entries.

Results

You have configured your back-end system to point to the desired documentation on SAP Help Portal.

Related Information

[SAP Note 2652009 Connecting the help to the SAP Help Portal](#)

[SAP Note 2572047 SAP provides user assistance \(documentation\) as HTML, PDF, or directly via SAP Help Portal](#)

[SAP Note 2149786 Customizing help settings in transaction SR13](#)

6.8 Enable In-App Help

In-app help is available for several SAP Fiori apps of SAP Customer Activity Repository applications bundle. To enable the in-app help, you need to make it available in the SAP Fiori launchpad by setting up the underlying framework.

Context

After a successful setup, you can see the Help icon (question mark) in the SAP Fiori launchpad and at the top of each app that supports in-app help. Simply choose this icon to display the in-app help and easily call up a detailed app description.

i Note

For example, the in-app help is available for the following apps:

- Apps for demand forecasting (*Analyze Forecast*, *Adjust Forecast*, *Manage Demand Influencing Factors*)
- Apps for Demand Data Foundation (*Manage Alerts*, *Manage Alert Profiles*, *Manage Configuration Assignments*, and *Manage Workloads*)
- Apps for configuring the replenishment calculation (*Manage Cost Profiles* app and *Manage Exception Profiles* app)
- Apps for SAP Replenishment Planning (for example, *Review Order Plan Items*)

The in-app help is not available for the SAP Smart Business for Multichannel Sales Analytics apps in SAP Customer Activity Repository.

Procedure

1. [Install and Configure SAP Web Dispatcher \[page 309\]](#)
Install and configure SAP Web Dispatcher as the reverse proxy in your SAP Fiori system landscape.
2. [Set Up the In-App Help Plugin \[page 311\]](#)
To make in-app help available in the SAP Fiori Launchpad, set up the in-app help plugin in the relevant front-end systems.

6.8.1 Install and Configure SAP Web Dispatcher

Install and configure SAP Web Dispatcher as the reverse proxy in your SAP Fiori system landscape.

Installation

Install the latest SAP Web Dispatcher version as the reverse proxy. For more information, see [SAP Fiori Implementation Information](#) and search for section *Installing SAP Web Dispatcher*.

Configuration

i Note

Instead of configuring the SAP Web Dispatcher, you can maintain the URLs required for the context-sensitive user assistance in transaction `/UI2/FLP_CUS_CONF` as described in SAP Note [3022494](#). This is possible if you are using a product with at least the front-end component `SAP_UI 7.55 SP02` installed.

If this does not work, please configure the SAP Web Dispatcher as described in the following procedure.

1. Adjust the SAP Web Dispatcher profile file.
In the `sapwebdisp_pf.txt` file, add the following parameters:
 - For the User Assistance Content Platform:
`wdisp/system_<number> = SID=<SID1>, EXTSRV=https://cp.hana.ondemand.com:443, SRCURL=/sap/dfa/help/, SRCSRV=**:, PROXY=<your proxy>:<your proxy port>, STANDARD_COOKIE_FILTER=OFF`
 - For the script server in your production system:
`wdisp/system_<number> = SID=<SID2>, EXTSRV=https://xray.hana.ondemand.com:443, SRCURL=/resources/sap/dfa/help/, SRCSRV=**:, PROXY=<your proxy>:<your proxy port>, STANDARD_COOKIE_FILTER=OFF`

i Note

- Make sure that the numbers following `wdisp/system_` are smaller than the numbers that you use for all your application server. The rules for the context-sensitive user assistance need to come before the rules for the application servers.
- Make sure that the SIDs are not the same as your system IDs.

2. Activate the usage of the modification handler:

```
icm/HTTP/mod_0 = PREFIX=/, FILE=$(DIR_PROFILE)/redirect.txt
```

For more information about the profile parameter, see SAP Help Portal at [ABAP Platform](#) under

► [Application Server ABAP - Infrastructure](#) ► [Components of Application Server ABAP](#) ► [SAP Web Dispatcher](#) ► [Administration of the SAP Web Dispatcher](#) ► [SAP Web Dispatcher Parameter Reference](#) ► [icm/HTTP/mod_<xx>](#): 

3. Adjust the SAP Web Dispatcher redirect file.

In the `redirect.txt` file, add the following parameters:

```
# User Assistance Content Platform - rewrite rule
if %{{SID}} = <SID1>
begin
SetHeader HOST cp.hana.ondemand.com:443
RegRewriteRawUrl ^/sap/dfa/help/(.*) /dps/$1
end
# Script Server - rewrite rule
if %{{SID}} = <SID2>
begin
SetHeader HOST xray.hana.ondemand.com:443
RegRewriteRawUrl ^/resources/sap/dfa/help/(.*) /xRayControls/
resources/sap/dfa/help/$1
end
```

i Note

Make sure that the SIDs in the `redirect.txt` file are the same as in the `sapwebdisp_cf.txt` file.

4. You can check if the content platform is working properly through the proxy connection by accessing:
`https://<your server>:<your port>/sap/dfa/help/odata.svc/?$format=json`

❁ Example

If the content platform is connected correctly, you can see the following output on your screen, for example:

```
{ "d": { "EntitySets":
[ "Transport", "DeliverableForReplication", "Tile", "Project", "Deliverable", "TransportHistory", "TourIssue", "ReplicationTourIssue", "Hotspot", "Product", "Context" ] } }
```

5. You can check if the help script server is working properly through the proxy connection by accessing: `https://<yourserver>:<yourport>/resources/sap/dfa/help/sap/cfg/XrayBootstrapHelpConfig.json`

❖ Example

If the help script server is connected correctly, you can see the following output on your screen, for example:

```
{
  "description": "This configuration registers the Xray bootstrap plug-in",
  "modulePaths": {
    "sap.dfa.help": "/resources/sap/dfa/help/~201509221536~"
  },
  "bootstrapPlugins": {
    "BootstrapXrayPlugin": {
      "module": "sap.dfa.help.utils.adapters.fiori.BootstrapXrayHelpPlugin"
    }
  }
}
```

Result

The in-app help is available in the SAP Fiori launchpad.

Parent topic: [Enable In-App Help \[page 308\]](#)

Next: [Set Up the In-App Help Plugin \[page 311\]](#)

6.8.2 Set Up the In-App Help Plugin

To make in-app help available in the SAP Fiori Launchpad, set up the in-app help plugin in the relevant front-end systems.

Procedure

1. Log on to your front-end system.
2. Execute transaction `/UI2/FLP_CUS_CONF`.
3. Under *FLP Configuration*, click on *Change → Display* and then on *New Entries*.
4. In the field *FLP Property ID*, select or enter `ENABLE_HELP`.
5. Enter the property value `true`.
6. Click on *Save*.
7. Double-click on *FLP Plugins*.
8. Click on *Change → Display* and then on *New Entries*.
9. In the field *FLP Plugin ID*, select or enter `WEB_ASSISTANT_HELP_PLUGIN`, and in the field *Activity State*, choose *Active*.

10. Highlight the entry `WEB_ASSISTANT_HELP_PLUGIN` and double-click on [Configuration](#).
11. Click on [New Entries](#).
12. Enter the following values:

FLP Property ID	Property Value
BUTTON_LOCATION	head
CAROUSEL_ORIENTATION	vertical
DATA_URL_UACP	https://help.sap.com/webassistant
EDITOR	false
LA_COMMUNITY_URL	https://community.sap.com/
LEARNING_APP_BACKEND_URL	https://education.hana.ondemand.com/education/
LEARNING_APP_WORKSPACE	CARAB
NO_HELP_MODE	Carousel
PRODUCT	CARAB
RO_MODEL	UACP
RW_MODEL	WPB
SERVICE_LAYER_VERSION	UACP
USE_GLOBAL_HELP	true
VERSION	5.0.6

i Note

The table above describes how to set up context-sensitive user assistance to link to the **latest** published user assistance of the release. We recommend that you link to the latest version as this ensures that you receive the most up-to-date documentation.

13. Optionally, you can configure that the In-App Help opens immediately when the SAP Fiori launchpad or an app is opened. To configure this behavior, add the following property:

FLP Property ID	Property Value
PARAMETERS	openImmediately=full

To open the In-App Help in minimized mode, specify the property value `openImmediately=minimized`. Note that this property causes the In-App Help to open for all apps irrespective if the In-App Help content is available or not.

14. Click on [Save](#).

After you have made these settings, the question mark icon for the in-app help is available for the SAP Fiori launchpad.

Parent topic: [Enable In-App Help \[page 308\]](#)



Previous: [Install and Configure SAP Web Dispatcher \[page 309\]](#)

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