Upgrade Guide **PUBLIC**

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Common Upgrade Guide CARAB 2.0 SPS5

Content

1 About this Document

This *Common Upgrade Guide* provides you with information on the upgrade process of the applications delivered with SAP Customer Activity Repository applications bundle 2.0 SPS05.

Overview

The following applications are delivered with SAP Customer Activity Repository applications bundle 2.0 SPS05:

Applications	Common SAP Help Portal with Product Documentation
• SAP Allocation Management 2.0 FP3 • SAP Assortment Planning 2.0 FP3 • SAP Customer Activity Repository 3.0 FP3 • SAP Merchandise Planning 2.0 FP3 • SAP Promotion Management 8.2 FP3	https://help.sap.com/viewer/p/CARAB

For information on these applications and their business scenarios, see the *Administration Guide* for each application under https://help.sap.com/viewer/p/CARAB ▶ *<Version>* ▶ *Administration* ▶.

> ⚠ 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.

Product Versions

Technically, the upgrade to the application versions described in this guide corresponds to the upgrade to the two product versions for SAP Customer Activity Repository applications bundle 2.0 SPS05:

Product Versions	Description
CAR RETAIL APPL BUNDLE 2.0 SPS05	Back-end product version for this release
SAP FIORI FOR SAP CARAB 3.0 SPS05	Front-end product version for this release

New Installation

> **Caution**
>
> If you don't have an existing installation of any of these applications, you must perform a new installation rather than an upgrade.
>
> For more information, see the *Common Installation Guide* under https://help.sap.com/viewer/p/CARAB *<Version>* > *Installation and Upgrade* >.

2 Document History

This section provides details about the changes made in each version of this document.

> **Note**
>
> The latest version of this document is available on SAP Help Portal under https://help.sap.com/viewer/p/CARAB ▶ *<Version>* ▶ *Installation and Upgrade* ▶ *Common Upgrade Guide* ▶.

Document Version	Date	Comment
1.4	2018-04-20	• Updated Prerequisites [page 19] for this release (for example, higher SAP ERP Enhancement Package for Demand Data Foundation and SAP Promotion Management). • Updated required notes in section SAP Notes for the Upgrade [page 29]. • Revised section Activate SAP HANA Content [page 74]. • Updated supported time series in section Configure the Analyze Forecast App (Upgrade Scenarios) [page 100]. • Updated replication instructions in section Create/Replicate Source Master Data System Tables [page 67]. • Revised section Adjust Customizing Settings [page 172] (SAP Assortment Planning). • Updated upgrade scenarios for SAP Promotion Management. SAP Promotion Management [page 224]
1.3	2018-02-02	• Updated various references throughout the guide. • Added authorization information for all scenarios in section Verify SAP HANA Users and Privileges [page 41]. • Updated activation settings for UDF in Activate SAP HANA Content [page 74].
1.2	2018-01-17	• Section Prerequisites [page 19]: Added mandatory SAP Note 2507161 for SAP NetWeaver 7.50 SPS 09 • Section Upgrade Product-Specific SAP Fiori UI Component [page 54]: Updated information on SUM tool • Section Complete UDF Setup [page 96]: Various updates
1.1	2017-12-08	Minor corrections and updates in several chapters.
1.0	2017-12-01	Initial version.

3 Before You Start

> **⚠ Caution**
>
> If you are upgrading to SAP Customer Activity Repository applications bundle 2.0 SPS05 from SAP Customer Activity Repository applications bundle 1.0 (any SPS) or SAP Customer Activity Repository 1.0 (any SP), it is likely that you will need to **simultaneously** upgrade your SAP NetWeaver to the recommended SAP NetWeaver 7.50 SPS 08 or SAP NetWeaver 7.50 SPS 09 version. Please evaluate the instructions listed in Upgrade SAP Customer Activity Repository applications bundle [page 49] carefully, as **manual procedures** are required to be performed by **experienced system administrators**.

Naming Conventions [page 8]
Throughout this guide the following terms, naming differences, and variables apply.

Information Available on SAP Help Portal [page 10]
Find information on prerequisite platforms, applications, other components, as well as general quick links

Integration with Source Master Data Systems [page 13]
Overview of the source master data systems for SAP Customer Activity Repository applications bundle deployment scenarios

Overall System Planning [page 15]
System landscape overview for SAP Customer Activity Repository applications bundle

3.1 Naming Conventions

Throughout this guide the following terms, naming differences, and variables apply.

Terminology

The following terminology is used consistently in the processes and procedures described in this guide:

Term	Definition
Common Installation Guide *Common Upgrade Guide*	Common guides for the applications provided with *SAP Customer Activity Repository applications bundle*: SAP Allocation Management, SAP Assortment Planning, SAP Customer Activity Repository, SAP Merchandise Planning, SAP Promotion Management You can find the guides for your version of *SAP Customer Activity Repository applications bundle* on the common SAP Help Portal: https://help.sap.com/viewer/p/CARAB ▶ *<Version>* ▶ *Installation and Upgrade* ▶.
consuming application	An application designed to consume and utilize data obtained from the SAP Customer Activity Repository platform. **Example** • SAP Allocation Management • SAP Assortment Planning • SAP Merchandise Planning • SAP Promotion Management
back-end system	The SAP NetWeaver-based back-end server on which SAP Customer Activity Repository and its consuming applications are installed. For a visual representation of the back-end system, see *Figure 1* in the *Overall System Planning* section of the *Common Installation Guide*.
front-end server	The SAP NetWeaver-based front-end server on which the SAP Gateway, SAP Fiori launchpad, central SAP Fiori UI component, and the product-specific SAP Fiori component are installed. For a visual representation of the front-end server, see the *Overall System Planning* section of the *Common Installation Guide*.
SAP ERP	Unless otherwise specified, references in this guide to *SAP ERP* are comprehensive; that is, they apply to SAP ERP (SAP Retail) and SAP Fashion Management. For more information, see Integration with Source Master Data Systems [page 13].

Term	Definition
source master data system	SAP Customer Activity Repository applications bundle must be deployed alongside an SAP ERP (SAP Retail) or SAP S/4HANA central component as the single source of truth for all master data. Whenever this guide refers to a *source master data system*, it refers to the SAP ERP (SAP Retail) or SAP S/4HANA central component that you choose for your implementation. For more information, see Integration with Source Master Data Systems [page 13].

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 Assortment Planning / SAP Merchandise Planning	SAP Promotion Management	SAP Allocation Management	SAP Retail or SAP S/4HANA
article	product	product	product	product	article material
article variant	product variant	product variant	product variant	product variant or product/color/size	article variant
store	location (used as an umbrella term for stores, distribution centers, etc.)	location	location	store	store site

Variables

The following variables are used consistently in the processes and procedures described in this guide:

Variables	Description
`<SAPSID>`	SAP system ID in uppercase letters
`<sapsid>`	SAP system ID in lowercase letters
`<DBSID>`	Database ID in uppercase letters

Variables	Description
<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

3.2 Information Available on SAP Help Portal

Find information on prerequisite platforms, applications, other components, as well as general quick links

Information on Prerequisite Platforms, Applications, and Other Components

Description	Path	Title
Information on installing SAP HANA	http://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 installing SAP HANA database clients	http://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*
Information on installing SAP HANA studio	http://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*
Information on installing the SAP LT (Landscape Transformation) Replication Server for SAP HANA	http://help.sap.com/viewer/p/SAP_HANA_REAL_TIME_REPLICATION <Version> > *Installation and Upgrade*	*Installation Guide - Trigger-Based Data Replication Using SAP Landscape Transformation Replication Serve*
Information on managing major operational aspects of the SAP LT Replication Server	http://help.sap.com/viewer/p/SAP_HANA_REAL_TIME_REPLICATION <Version> > *Operations*	*Application Operations Guide - SAP Landscape Transformation Replication Server*

Description	Path	Title
Information on using SAP HANA	http://help.sap.com/viewer/p/SAP_HANA_PLATFORM ▶ *<Version>* ▶ *Administration* ▶ *SAP HANA Administration Guide*	*SAP HANA Administration Guide*
Information for developers on how to use the SAP HANA development tools to create comprehensive analytical models and to build applications with SAP HANA's interfaces and integrated development	http://help.sap.com/viewer/p/SAP_HANA_PLATFORM ▶ *<Version>* ▶ *Development* ▶ *SAP HANA Developer Guide (For SAP HANA Studio)*	*SAP HANA Developer Guide*
Information for modelers (or business analysts) on how to define data models that will be used in SAP HANA	http://help.sap.com/viewer/p/SAP_HANA_PLATFORM ▶ *<Version>* ▶ *Development* ▶ *SAP HANA Modeling Guide (For SAP HANA Studio)*	*SAP HANA Modeling Guide*
Information on installing SAP NetWeaver 7.50	http://help.sap.com/viewer/p/SAP_NETWEAVER_750 ▶ *Installation and Upgrade* ▶ *Installation Guide*	*Installation Guide, SAP Systems Based on the Application Server <Your Server> of SAP NetWeaver on <Your Operating System>: SAP HANA Database*
Information on installing SAP ERP 6.0	http://help.sap.com/viewer/p/SAP_ERP ▶ *<Version>* ▶ *Installation and Upgrade* ▶ *Installation Guide*	*Installation Guide, SAP ERP 6.0 Including <your SAP Enhancement Package> - Technical Usage "Central Applications" <Your Server> on <Your Operating System>*
Information on installing SAP S/4HANA, on-premise edition 1610 or 1709 (depending on your implementation scenarios)	http://help.sap.com/viewer/p/SAP_S4HANA_ON-PREMISE ▶ *<Version>* ▶ *Product Documentation* ▶ *Installation Guide*	*Installation Guide for SAP S/4 HANA, on-premise edition 1610* or *Installation Guide for SAP S/4 HANA, on-premise edition 1709*

Description	Path	Title
Information on installing SAP Enhancement Package 2 for SAP CRM 7.0 or SAP Enhancement Package 2 for SAP CRM 7.0, Version for SAP HANA or higher	http://help.sap.com/viewer/p/SAP_CUSTOMER_RELATIONSHIP_MANAGEMENT *Version 7.0 EHP2* *Installation and Upgrade* *Installation Guide* *Install* *Installation Guides for SAP EHP 2 for SAP CRM 7.0* *Installation Guide - SAP enhancement package 2 for CRM 7.0 - ABAP and Java* http://help.sap.com/crmhana *Installation and Upgrade Information* *Administrator's Guide* *Administrator's Guide SAP CRM 7.0 EHP2, Version for SAP HANA*	*Installation Guide, SAP Customer Relationship Management 7.0 Including Enhancement Package 2 Java and ABAP* *Administrator's Guide, SAP Enhancement Package 2 for SAP CRM 7.0, Version for SAP HANA*

General Quick Links

Description	Path
SAP Help Portal	http://help.sap.com
Knowledge Base Articles and SAP Notes	https://support.sap.com/en/my-support/knowledge-base.html
Product Availability Matrix	http://support.sap.com/pam
Released platforms and operating systems	https://support.sap.com/en/release-upgrade-maintenance.html
SAP Software Download Center	http://support.sap.com/swdc
SAP Solution Manager	http://support.sap.com/solutionmanager
Security	https://support.sap.com/en/offerings-programs/support-services/security-optimization-services-portfolio.html
Data Protection and Privacy	https://www.sap.com/about/cloud-trust-center/data-ownership-privacy.html
Support information (quick access via SAP ONE Support Launchpad)	https://launchpad.support.sap.com/#/productsearch
Support package stacks, latest versions, patch level requirements	http://support.sap.com/patches
System sizing	https://www.sap.com/about/benchmark/sizing.html.

3.3 Integration with Source Master Data Systems

Overview of the source master data systems for SAP Customer Activity Repository applications bundle deployment scenarios

Use

This guide describes upgrade scenarios deployed in parallel with one of the following source master data systems:

Source Master Data System	Flavor	More Information
SAP ERP (including the SAP ERP Central Component, SAP ECC)	SAP Retail (add-on to SAP ERP)	https://help.sap.com/viewer/p/SAP_ERP ▶ *<Version>* ▶ *Application Help* ▶ *SAP Library* ▶ *Industries in SAP ERP* ▶ *SAP Retail*
	SAP Fashion Management (add-on to SAP Retail)	https://help.sap.com/viewer/p/SAP_ERP ▶ *<Version>* ▶ *Application Help* ▶ *SAP Library* ▶ *Industries in SAP ERP* ▶ *Fashion Management*
SAP S/4HANA Retail	SAP S/4HANA Retail for merchandise management	https://help.sap.com/viewer/product/SAP_S4HANA_OVERVIEW/latest/en-US ▶ *<Version>* ▶ *Product Assistance* ▶ *<Language>* ▶ *Industries* ▶ *Retail*

Naming Conventions

Unless otherwise specified, the following naming conventions are used throughout this guide:

- References to *SAP ERP* are comprehensive; that is, they apply to SAP Retail and SAP Fashion Management.
- References to the *source master data system* are comprehensive; that is, they apply to SAP ERP (including SAP ECC) and SAP S/4HANA Retail.

Prerequisites

For information about what version of your chosen source master data system is required for this release, see Prerequisites [page 19].

More Information

For cross-scenario planning information, see the following whitelists:

- SAP Note 1661202 - *Support multiple applications one SAP HANA database / tenant DB*: Support and special considerations for multiple applications on a single SAP HANA database or, in the case of MDC, on a single tenant DB

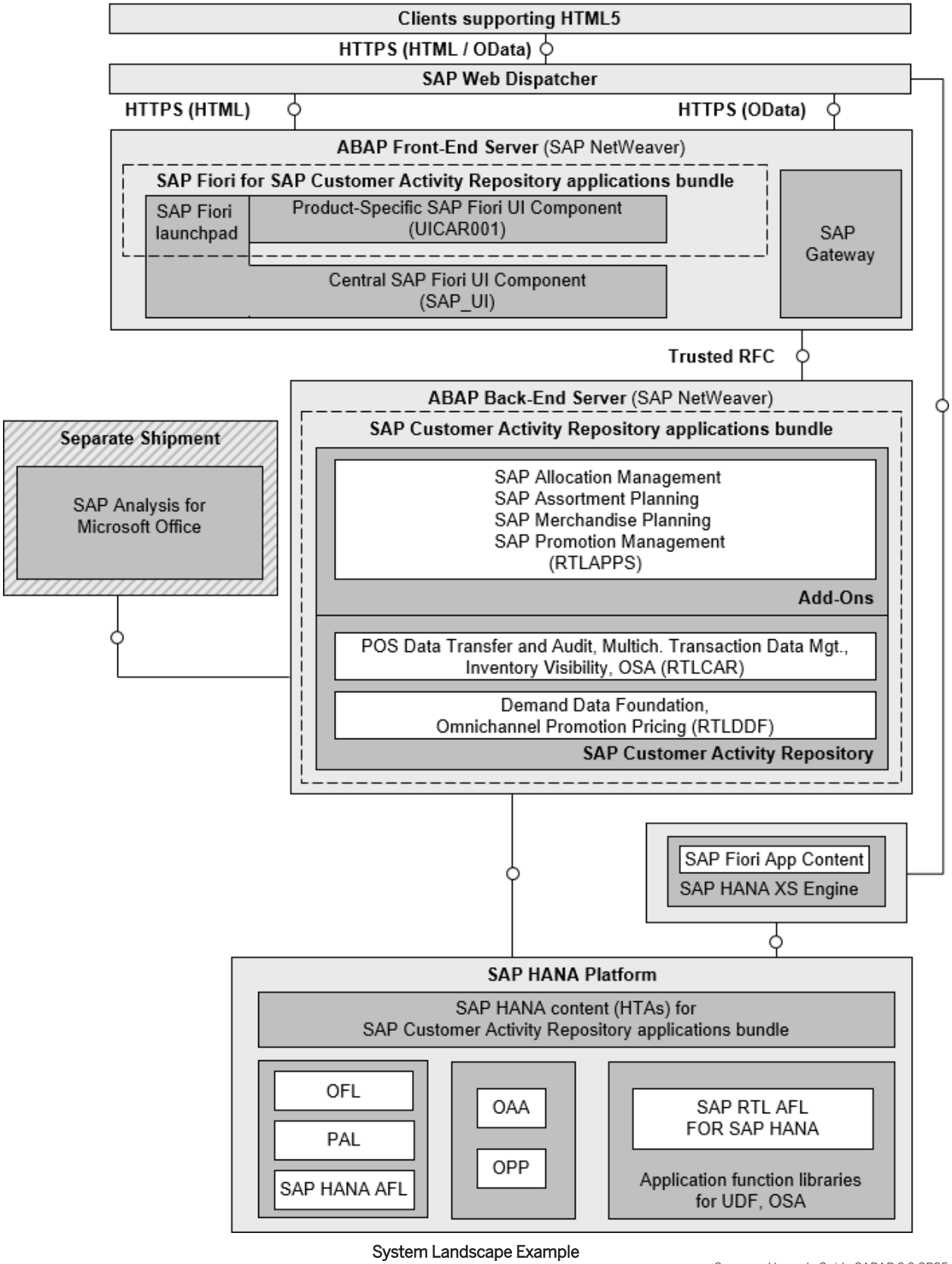
- SAP Note 1826100 - *Multiple applications SAP Business Suite powered by SAP HANA*: Support and special considerations for multiple applications on a single SAP HANA database within SAP Business Suite powered by SAP HANA

3.4 Overall System Planning

System landscape overview for SAP Customer Activity Repository applications bundle

System Landscape

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



System Landscape Example

System Landscape Prerequisites

For information about the technical prerequisites for this release of SAP Customer Activity Repository applications bundle, see the following:

- Prerequisites [page 19]
- SAP Notes for the Upgrade [page 29]

Back-End Product Version and Front-End Product Version of SAP Customer Activity Repository applications bundle

The upgrade of SAP Customer Activity Repository applications bundle is comprised of the upgrade of two distinct product versions, one for the back-end and one for the front-end:

- **Back-end product version for the current release:** SAP Customer Activity Repository applications bundle 2.0 SPS05
  - Support package stack for this release: CAR RETAIL APPL BUNDLE 2.0 SPS05
  - The back-end product version contains several software components that provide the ABAP back-end functionality and the business content (such as SAP HANA views and SQLScript procedures, local BI Content, application function libraries, and workbooks, where applicable).
- **Front-end product version for the current release:** SAP Fiori 3.0 SPS05 for SAP Customer Activity Repository applications bundle 2.0
  - Support package stack for this release: SAP FIORI FOR SAP CARAB 3.0 SPS05
  - The front-end product version is also referred to as the product-specific SAP Fiori UI component. It contains all the SAP Fiori apps included in SAP Customer Activity Repository applications bundle.
  - For more information about the system landscape for SAP Fiori apps, see https://help.sap.com/viewer/p/FIORI_IMPLEMENTATION ▶ *<your SAP NW version>* ▶ *Installation and Upgrade* ▶ *SAP Fiori: Setup and Configuration* ▶ *Setup of SAP Fiori System Landscape* ▶.

> **Tip**
>
> For quick access to support information, log in to the SAP ONE Support Launchpad at https://launchpad.support.sap.com/#/productsearch and search for CAR RETAIL APPL BUNDLE or SAP FIORI FOR SAP CARAB. Find SAP Knowledge Base Articles, Documentation, Guided Answers, Questions & Blogs, and Download information — all on one page.

Central Hub Deployment

> **Tip**
>
> For SAP Customer Activity Repository, SAP Assortment Planning, SAP Allocation Management, and SAP Promotion Management, we highly recommend that you use **central hub deployment**, the deployment option recommended by SAP Fiori for SAP Business Suite.

With central hub deployment, the back-end product version is installed on a back-end server, and the front-end product version is installed on a separate front-end server.

The SAP Fiori apps are deployed in separate systems (UIs in the SAP Fiori front-end server, related OData services in the back-end systems).

Advantages

Central hub deployment decouples the lifecycle of the SAP Fiori apps from the back-end components (separate shipments). This option offers the following advantages:

- Faster iterations for SAP Fiori apps
- Central place for theming and branding SAP Fiori apps
- Single point of maintenance for user interface issues, such as browser support and updated versions of SAPUI5 libraries
- Changes to user interfaces are possible without having development authorizations in the back-end.
- The SAP Fiori front-end server offers a central deployment of the UIs and a central enablement of OData access for multiple SAP application back-end systems.

> **Note**
>
> In general, when an SAP solution includes an SAP Fiori user interface, you could potentially use the embedded deployment option, which allows you to use the same SAP NetWeaver server for back-end and front-end components. Although the advantage of this deployment is that you do not require a separate SAP NetWeaver front-end server, this deployment option is not recommended for the applications described in this guide.
>
> **As we do not recommend the embedded deployment option, the remainder of this document is entirely based on the central hub deployment option.**

More Information

For more information about SAP Fiori deployment options and system landscape recommendations, see:

- https://help.sap.com/viewer/p/FIORI_IMPLEMENTATION ▶ *<Version>* ▶ *Installation and Upgrade* ▶ *SAP Fiori: Setup and Configuration* ▶ *Setup of SAP Fiori System Landscape* ▶ *SAP Fiori Deployment Options* ▶
- Deployment Recommendations for SAP Fiori Front-End Server (Last Update: December 2017)
- https://help.sap.com/viewer/p/SAP_GATEWAY ▶ *Installation and Upgrade* ▶ *Master Guide* ▶ *SAP Gateway Master Guide* ▶ *Deployment Options* ▶ as well as *Embedded Versus Hub Deployment*

4 Prerequisites

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

> **Note**
>
> If you are performing a **new installation of this release**, you must not follow this *Common Upgrade Guide* and rather proceed with the *Common Installation Guide*, available under https://help.sap.com/viewer/p/CARAB *<Version>* *Installation and Upgrade*.

For your convenience, the prerequisites are presented to you in two categories:

- *Common Prerequisites*, which must be installed regardless of the business scenario you are planning to implement
- *Application-Specific Prerequisites*, which are only relevant for specific applications under specific conditions

> **Tip**
>
> The prerequisites should be installed and configured by an experienced SAP Basis administrator. Documentation and support for each prerequisite is available on the SAP Help Portal at http://help.sap.com.

Common Prerequisites

1. **SAP NetWeaver**
   The minimum requirement for this release is one of the following:
   - Either: **SAP NetWeaver 7.50 SPS 08** and **mandatory SAP Note 2451909** (*ABAP CDS: association with multiple alias names in select list*) and **mandatory SAP Note 2507161** (*ABAP CDS: multiple client dependent table functions as base objects*)
   - Or: **SAP NetWeaver 7.50 SPS 09** and **mandatory SAP Note 2507161** (*ABAP CDS: multiple client dependent table functions as base objects*)

   This minimum requirement applies regardless of the business scenario you are planning to implement.

   > **Note**
   >
   > You must upgrade SAP NetWeaver **prior** to upgrading other back-end components.

   > **Caution**
   >
   > If you are upgrading to SAP Customer Activity Repository applications bundle 2.0 SPS05 from SAP Customer Activity Repository applications bundle 1.0 (any SPS) or SAP Customer Activity Repository 1.0 (any SP), it is likely that you will need to **simultaneously** upgrade your SAP NetWeaver to the recommended SAP NetWeaver 7.50 SPS 08 or SAP NetWeaver 7.50 SPS 09 version. Please evaluate the

instructions listed in Upgrade SAP Customer Activity Repository applications bundle [page 49] carefully, as **manual procedures** are required to be performed by **experienced system administrators**.

For installation information, see https://help.sap.com/viewer/p/SAP_NETWEAVER_750 > *<Version>* > *Installation and Upgrade* > *Installation Guide* .

2. Either: **SAP HANA Platform 1.0**
   - **SAP HANA database** component:
     The minimum requirement for this release is the **last available Maintenance Revision of SAP HANA Platform 1.0 SPS 12**, regardless of the business scenario you are planning to implement. For more information, see SAP Note 2021789 and consult the information under *Last Available Maintenance Revision in SPS*.

     > **Caution**
     >
     > At a bare technical minimum, you need SAP HANA database revision 122.15, but SAP strongly recommends that you use the last available Maintenance Revision instead.

   - **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**, regardless of the business scenario you are planning to implement. When you download an AFL revision from the SAP Support Portal, the compatible revision of the SAP HANA database is always indicated for your convenience. If you need more information about the versioning and delivery strategy of application function libraries (AFLs), see SAP Note 1898497.

   Or: **SAP HANA Platform 2.0**

   > **Note**
   >
   > As of SAP Customer Activity Repository applications bundle 2.0 SPS03, all scenarios are released for use on SAP HANA Platform 2.0.

   - **SAP HANA database** component:
     The minimum requirement for this release is the **last available Maintenance Revision of SAP HANA Platform 2.0 SPS 01**, regardless of the business scenario you are planning to implement. For more information, see SAP Note 2378962 and consult the information under *Last Available Maintenance Revision in SPS*.

     > **Caution**
     >
     > At a bare technical minimum, you need the revisions listed below. However, SAP strongly recommends that you use the last available Maintenance Revision instead.
     >
     > - If you wish to use SAP HANA Platform 2.0 SPS 01, you need at least SAP HANA database revision 2.00.012.04.
     > - If you wish to use SAP HANA Platform 2.0 SPS 02, you need at least SAP HANA database revision 2.00.023.00.

   - **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 guidance on selecting the best revision for your scenario, see the *Download and Install the Application Function Library (AFL)* section in Upgrade SAP Customer Activity Repository Applications Bundle [page 49].

For installation information, see the following:

- 2298750: SAP HANA Platform 1.0 SPS12 Release Note
- 2380229: SAP HANA Platform 2.0 Central Note
- 2339267: Important version information for SAP HANA client and SAP HANA server
- *SAP HANA Server Installation and Update Guide* for your SAP HANA Platform version under https://help.sap.com/viewer/p/SAP_HANA_PLATFORM > *<Version>* > *Installation and Upgrade*
- In an upgrade scenario from SAP HANA Platform 1.0 to SAP HANA Platform 2.0, additionally see the following SAP Notes:
  - 2372809: Guideline for upgrading from SAP HANA Platform 1.0 to SAP HANA Platform 2.0
  - 2422421: Guideline for upgrading an SAP HANA system with SAP HANA extended application services, advanced model (XSA)

> **Tip**
>
> To get the latest technical recommendations related to your SAP HANA landscape, you can activate the SAP EarlyWatch Alert (EWA) in your SAP HANA environment. For more information, see SAP Note 1958910.

3. **SAP Landscape Transformation Replication Server**
   The minimum requirement for this release is **SAP Landscape Transformation Replication Server 2.0 for SAP HANA**, regardless of the business scenario you are planning to implement.
   For installation information, see https://help.sap.com/viewer/p/SAP_LANDSCAPE_TRANSFORMATION_REPLICATION_SERVER > *<Version>* > *Installation and Upgrade* > *Installation Guide (Replicating Data to SAP HANA)*. Additionally, see SAP Note 1605140 (*SAP HANA 1.0 and 2.0: Central Note - SAP LT Replication Server*). This is the central note for enabling trigger-based data replication (information on download, installation, upgrade, corrections, implementation).
4. **SAP Fiori**
   The minimum requirement for this release is **SAP FIORI FRONT-END SERVER 2.0 SPS4**, regardless of the business scenario you are planning to implement.
   For installation information, see https://help.sap.com/viewer/p/FIORI_IMPLEMENTATION > *<Version>* > *Installation and Upgrade* > *SAP Fiori: Setup and Configuration* > *Setup of SAP Fiori System Landscape*, including the *Installation* subsection.
   For landscape setups and recommendations, see Deployment Recommendations for SAP Fiori Front-End Server (Last Update: December 2017).
   For implementation information, see https://help.sap.com/viewer/p/FIORI_IMPLEMENTATION > *<Version>* > *Implementation* > *SAP Fiori: App Implementation* as well as the following SAP Notes: 2219596 *SAP Fiori front-end server 2.0 - General Information*, 2327935 *General Information: FIORI UI Infrastructure Components for products on SAP Frontend Server 2.0*, and 2169917 *General Information: FIORI SAP Gateway 2.0 Q3/2015, Q4/2015 and Q1/2016*.
5. **SAP RTL AFL FOR SAP HANA**
   The minimum requirement for this release is the **SAP RTL AFL FOR SAP HANA revision that is compatible with the selected SAP HANA database revision**, regardless of the business scenario you are planning to implement. When you download an AFL revision from the SAP Support Portal, the compatible SAP HANA database revision is always indicated for your convenience.
   For upgrade information, see the *Download and Install the Application Function Library (AFL)* section in Upgrade SAP Customer Activity Repository Applications Bundle [page 49].

Note

Software component `SAP RTL AFL FOR SAP HANA` is available as of SAP Customer Activity Repository applications bundle 2.0. It contains back-end functionality for two modules in SAP Customer Activity Repository, that is, Unified Demand Forecast (UDF) and On-Shelf Availability (OSA).

The **installation** of the component is always mandatory, regardless of the business scenario you are planning to implement.

The **implementation** of UDF or OSA functionality, however, depends on your business scenario:

- UDF
  - Mandatory implementation for: SAP Promotion Management (only for what-if forecasts)
  - Optional implementation for: SAP Allocation Management, SAP Assortment Planning, SAP Merchandise Planning, SAP Promotion Management (without what-if forecasts)
- OSA
  - Optional implementation for: SAP Allocation Management, SAP Assortment Planning, SAP Merchandise Planning, SAP Promotion Management

Application-Specific Prerequisites

SAP Customer Activity Repository

Prerequisites for SAP Customer Activity Repository

Product	Prerequisite Version	Mandatory/ Optional	Installation Information
SAP ERP	The minimum requirement for this release is one of the following: • SAP ERP 6.0 Enhancement Package 5 is the minimum requirement for installing SAP Customer Activity Repository however if you wish to leverage the data blocking capabilities developed for data protection and privacy, you must upgrade to Enhancement Package 7 SP5 or higher. • SAP ERP 6.0 Enhancement Package 7 or higher is mandatory **when implementing** SAP Customer Activity Repository with Demand Data Foundation and Unified Demand Forecast. • SAP ERP 6.0 Enhancement Package 7 or higher is mandatory when implementing the *SAP Customer Activity Repository Co-Deployed with a Source Master Data System* system landscape. The following prerequisites apply if you want to implement the **Omnichannel Article Availability and Sourcing** module within SAP Customer Activity Repository: • SAP ERP 6.0 Enhancement Package 7 SP16 • SAP ERP 6.0 Enhancement Package 8 SP09 The following prerequisites apply if you want to implement the **Omnichannel Promotion Pricing** module within SAP Customer Activity Repository: • SAP ERP 6.0 Enhancement Package 7 SP14 or SAP ERP 6.0 Enhancement Package 8 SP06	You must install a source master data system; either SAP ERP or SAP S/4HANA must be installed.	https://help.sap.com/viewer/p/SAP_ERP ▶ *<Version>* ▶ *Installation and Upgrade* ▶ *Installation Guide* ▶
SAP S/4HANA, on-premise edition	• SAP S/4HANA, on-premise edition 1610 • The following prerequisite applies if you want to implement the **Omnichannel Article Availability and Sourcing** module within SAP Customer Activity Repository: SAP S/4HANA 1709 FPS2 • The following prerequisite applies if you want to implement the **Omnichannel Promotion Pricing** module within SAP Customer Activity Repository: SAP S/4HANA 1709	You must install a source master data system; either SAP ERP or SAP S/4HANA must be installed.	https://help.sap.com/viewer/p/SAP_S4HANA_ON-PREMISE ▶ *<Version>* ▶ *Product Documentation* ▶ *Installation Guide* ▶

Product	Prerequisite Version	Mandatory/ Optional	Installation Information
SAP CRM	The minimum requirement for this release is one of the following: • 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 determination with SAP CRM.	https://help.sap.com/viewer/p/SAP_CUSTOMER_RELATIONSHIP_MANAGEMENT ▶ *<Version>* ▶ *Installation and Upgrade* ▶ *Installation Guide*
SAP Smart Business	SAP Smart Business foundation component 1.0 SPS 03	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
SAP Hybris Marketing	SAP Hybris Marketing 1.10 or higher	Optional, depending on whether or not you choose to implement customer determination with SAP Hybris Marketing.	https://help.sap.com/viewer/product/SAP_HYBRIS_MARKETING/1702%20YMKT/en-US ▶ *<Version>* ▶ *Installation and Upgrade* ▶ *Installation and Configuration Guide*
SAP Hybris Commerce	SAP Hybris Commerce 6.6 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** or **Omnichannel Promotion Pricing** within SAP Customer Activity Repository.	http://help.hybris.com ▶ *<Version>* ▶ *<Main Menu>* ▶ *Installing and Upgrading Hybris*

Product	Prerequisite Version	Mandatory/ Optional	Installation Information
SAP Hybris Commerce, integration package for SAP for Retail	SAP Hybris Commerce, integration package for SAP for Retail 2.6 or higher	Optional, depending on whether or not you choose to implement **Omnichannel Article Availability and Sourcing** or **Omnichannel Promotion Pricing** within SAP Customer Activity Repository.	See the *Administration Guide* delivered with the software package or from https://help.sap.com/viewer/p/IPR.
SAP IQ	SAP IQ 16.0, SP8 or higher	Optional, depending on whether or not you choose to use the *Table Content Aging* report to move data from SAP Customer Activity Repository to SAP IQ.	https://help.sap.com/viewer/p/SAP_IQ ▶ *<Version>* ▶ *Installation and Upgrade* ▶ *<various SAP IQ Installation and Configuration Guides>* ▶
SAP HANA Dynamic Tiering	SAP HANA Dynamic Tiering is delivered with the SAP HANA Platform. See the *Common Prerequisites* above.	Optional, depending on whether or not you choose to use the *Table Content Aging* report to move data from SAP Customer Activity Repository to extended storage using SAP HANA Dynamic Tiering.	https://help.sap.com/viewer/p/SAP_HANA_DYNAMIC_TIERING ▶ *<Version>* ▶ *Installation and Upgrade* ▶ *SAP HANA Dynamic Tiering: Installation and Update Guide* ▶
SAP Jam	SAP Jam, initial release or higher	Optional, depending on whether or not you choose to integrate social media collaboration functionality with SAP Jam.	https://help.sap.com/viewer/p/SAP_JAM_COLLABORATION ▶ *<Version>* ▶ *Administration* ▶ *Administrator Guide* ▶

Product	Prerequisite Version	Mandatory/ Optional	Installation Information
SAP HANA XS Advanced	SAP HANA XSA 1.0.66 or higher	Optional, depending on whether or not you choose to use **Omnichannel Promotion Pricing** within SAP Customer Activity Repository.	https://help.sap.com/viewer/p/SAP_HANA_PLATFORM ▶ *<Version>* ▶ *Installation and Upgrade* ▶ *SAP HANA Server Installation and Upgrade* ▶ *Installing an SAP HANA System* ▶ *Installing XS Advanced Runtime* ▶

SAP Allocation Management

Prerequisites for SAP Allocation Management

Product	Prerequisite Version	Mandatory/Optional	Installation Information
SAP ERP	The minimum requirement for this release is SAP ERP 6.0 Enhancement Package 7.	You must install a source master data system; either SAP ERP or SAP S/4HANA must be installed.	https://help.sap.com/viewer/p/SAP_ERP ▶ *<Version>* ▶ *Installation and Upgrade* ▶ *Installation Guide* ▶
SAP S/4HANA, on-premise edition	SAP S/4HANA, on-premise edition 1709	You must install a source master data system; either SAP ERP or SAP S/4HANA must be installed.	https://help.sap.com/viewer/p/SAP_S4HANA_ON-PREMISE ▶ *<Version>* ▶ *Product Documentation* ▶ *Installation Guide* ▶
SAPUI5	The minimum requirement for this release is version 1.44.XX.	Mandatory	Although support is provided for 1.38.XX versions of SAPUI5, it is recommended that you implement SAPUI5 version 1.44.XX.

SAP Assortment Planning

Prerequisites for SAP Assortment Planning

Product	Prerequisite Version	Mandatory/Optional	Installation Information
SAP ERP	SAP ERP 6.0 Enhancement Package 7	You must install a source master data system; either SAP ERP or SAP S/4HANA must be installed.	https://help.sap.com/viewer/p/SAP_ERP ▶ *<Version>* ▶ *Installation and Upgrade* ▶ *Installation Guide* ▶
SAP S/4HANA, on-premise edition	SAP S/4HANA, on-premise edition 1610	You must install a source master data system; either SAP ERP or SAP S/4HANA must be installed.	https://help.sap.com/viewer/p/SAP_S4HANA_ON-PREMISE ▶ *<Version>* ▶ *Product Documentation* ▶ *Installation Guide* ▶
SAP Jam	SAP Jam, initial release or higher	Optional, depending on whether or not you choose to integrate social media collaboration functionality with SAP Jam.	https://help.sap.com/viewer/p/SAP_JAM_COLLABORATION ▶ *<Version>* ▶ *Administration* ▶ *Administrator Guide* ▶
SAP Analysis	SAP Analysis for Microsoft Office 2.5 SP2	Mandatory	https://help.sap.com/viewer/p/SAP_BUSINESSOBJECTS_ANALYSIS_OFFICE ▶ *<Version>* ▶ *Installation, Configuration, Security, and Administration* ▶ *Administrator Guide* ▶

SAP Merchandise Planning

Prerequisites for SAP Merchandise Planning

Product	Prerequisite Version	Mandatory/Optional	Installation Information
SAP ERP	SAP ERP 6.0 Enhancement Package 7	Mandatory	https://help.sap.com/viewer/p/SAP_ERP ▶ *<Version>* ▶ *Installation and Upgrade* ▶ *Installation Guide* ▶

Product	Prerequisite Version	Mandatory/Optional	Installation Information
SAP S/4HANA, on-premise edition	SAP S/4HANA, on-premise edition 1610	You must install a source master data system; either SAP ERP or SAP S/4HANA must be installed.	https://help.sap.com/viewer/p/SAP_S4HANA_ON-PREMISE ▶ *<Version>* ▶ *Product Documentation* ▶ *Installation Guide* ▶
SAP Jam	SAP Jam, initial release or higher	Optional, depending on whether or not you choose to integrate social media collaboration functionality with SAP Jam.	https://help.sap.com/viewer/p/SAP_JAM_COLLAB-ORATION ▶ *<Version>* ▶ *Administration* ▶ *Administrator Guide* ▶
SAP Analysis	SAP Analysis for Microsoft Office 2.5 SP2	Mandatory	https://help.sap.com/viewer/p/SAP_BUSINESSOB-JECTS_ANALYSIS_OFFICE ▶ *<Version>* ▶ *Installation, Configuration, Security, and Administration* ▶ *Administrator Guide* ▶

SAP Promotion Management

Prerequisites for SAP Promotion Management

Product	Prerequisite Version	Mandatory/Optional	Installation Information
SAP Jam	SAP Jam, initial release or higher	Optional, depending on whether or not you choose to integrate social media collaboration functionality with SAP Jam.	https://help.sap.com/viewer/p/SAP_JAM_COLLAB-ORATION ▶ *<Version>* ▶ *Administration* ▶ *Administrator Guide* ▶

5 Preparation

Before you start with the actual upgrade process of SAP Customer Activity Repository applications bundle 2.0 SPS05, you must first perform several preparatory tasks.

1. SAP Notes for the Upgrade [page 29]
   This section lists SAP Notes that you must read and — when appropriate — implement **at different points in the upgrade process**. For additional SAP Notes created **after the publication of this guide**, always consult the release information notes 2592695 (back-end RIN) and 2575842 (front-end RIN).
2. Verify SAP HANA Users and Privileges [page 41]
   SAP Customer Activity Repository applications bundle requires a layered system landscape. In each layer, users, roles, and authorizations required to use SAP Customer Activity Repository and its consuming applications must be created and assigned.
3. Configure AFL Usage (SAP Assortment Planning) [page 44]
   In this procedure, you perform several configuration tasks to enable the usage of application function libraries (such as the PAL and the OFL).

5.1 SAP Notes for the Upgrade

This section lists SAP Notes that you must read and — when appropriate — implement **at different points in the upgrade process**. For additional SAP Notes created **after the publication of this guide**, always consult the release information notes 2592695 (back-end RIN) and 2575842 (front-end RIN).

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

> **Note**
>
> The *Implement* column indicates when to apply the SAP Note.

SAP Notes for SAP Customer Activity Repository

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

SAP Notes for SAP Customer Activity Repository

Implement	Area	SAP Note	Description
After the upgrade	Back-end	2380933 *Dump in DRF when using parallel processes*	The implementation of this note is necessary to avoid short dumps during DRF outbound processing in parallel mode (transaction **DRFOUT**), for example, during the sending of OPP promotions and regular prices in an omnichannel promotion pricing (OPP) scenario.
After the upgrade	Back-end	2507723 *Function module ABL_MOVE_REQUIRED_LENGTH: New data types*	The implementation of this note enables the use of data elements with ABAP type `INT8` in several ALE/EDI layer applications. You must implement this note to ensure the correct outbound processing of IDocs in an omnichannel promotion pricing (OPP) scenario.
Prior to the upgrade	Back-end	2633372 *CARAB 2.0 FP03 Omnichannel Promotion Pricing on XSA*	**Caution** Mandatory note that you must read prior to any installation/upgrade activities. The note describes restrictions applying to the central deployment of Omnichannel Promotion Pricing.
Prior to the upgrade	Back-end	2451909 *ABAP CDS: association with multiple alias names in select list*	Mandatory correction that you must implement if you wish to use SAP NetWeaver 7.50 SPS 08. For more information, see the *Common Prerequisites* in the Prerequisites [page 19] section.
Prior to the upgrade	Back-end	2507161 *ABAP CDS: multiple client dependent table functions as base objects*	Mandatory correction that you must implement if you wish to use SAP NetWeaver 7.50 SPS 08 or SAP NetWeaver 7.50 SPS 09. For more information, see the *Common Prerequisites* in the Prerequisites [page 19] section.

Implement	Area	SAP Note	Description
Prior to the upgrade	Back-end	2438001 *Unable to perform a HANA database upgrade to revision 122.07 or higher to due installed SAP TRD AFL FOR HANA component*	Mandatory correction that you must implement if you wish to **upgrade from a lower SAP HANA database revision** to revision 122.07 or higher. The correction is **not required** for the following: • upgrades to an SAP HANA 2.0 database revision • new installations of an SAP HANA database
During the upgrade	Back-end	2298340 *SAP HANA DB: CDS views with external views as base objects cannot be created in the DB*	Troubleshooting information for error messages during the “move nametabs” phase.
During the upgrade	Back-end	2340418 *SAP HANA DB: RUTDDLSCREATE returns errors for CDS views with external views as base object*	Troubleshooting information for error messages during the `RUTDDLSCREATE` phase.
During the upgrade	Back-end	2377525 *External view in view hierarchy*	Troubleshooting information for error messages during the `CREATE VIEW` phase.
During the upgrade	Back-end	2330184 *Appearance of Non-Existence/Activation Errors of Views/DDL Sources within installation of CARAB 1.0 FP03 and CARAB 2.0*	Troubleshooting information for error messages during various `RSDB02CK`-related phases (SUM only). For example, *2EETG002 View "/AMR/C_P_A_L_C" does not exist in the database* or *2EETG002 View "/AMR/V_APITSLOC" does not exist in the database*.

Implement	Area	SAP Note	Description
After the upgrade	Front-end	2183947 *Smart Business for SoH (Suite on Hana) delivery*	Information on how to install add-on object `UISAFND1 100` when installing the SAP Smart Business Modeler Apps Framework with User Interface Add-On 2.0 for SAP NetWeaver.
After the upgrade	Back-end	1778607 *SAP HANA Live for SAP Business Suite*	Optional (only relevant if you choose to implement SAP HANA Live for SAP Business Suite). Release information and implementation considerations.
After the upgrade	Back-end	2598127 *Error ASSERTION_FAILED in /POSDW/CL_AGGR_PACK_TOOL*	Mandatory note to correct program error that occurs when function module CONFIRM_AGGR_PACKS_RFC is called synchronously multiple times.
After the upgrade	Back-end	2618115	Mandatory note to correct program error that occurs during task 0014 if there is no IDOC data to send.
After the upgrade	Back-end	2613638	Mandatory note to correct user DIF view not saving.
After the upgrade	Back-end	2615727 *Syndicated data import failing for TPO offer creation*	When importing syndicated data, the offer creation is failing with a invalid location hierarchy error. Also offer product location records are not getting generated.

SAP Notes for SAP Merchandise Planning

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

SAP Notes for SAP Merchandise Planning

Implement	Area	SAP Note	Description
Prior to the upgrade	Back-end Only if prior to NW750 SP09	2467710 *Input-ready query: Termination GET_RGC_VALUE-01*	Using a formula with input-ready operands used in inverse formula may cause error.
Prior to the upgrade	Back-end	2549934 *adso: Check of key length*	During the checking or activation of an adso, the following error message is displayed even though the tables could be activated. rs_adso_model 135: "Key is too long: &1 (max = &2)"
Prior to the upgrade	Back-end Only if prior to NW750 SP09	2474337 *Runtime error "DATREF_NOT_ASSIGNED" in class CL_RS2HANA_AUTH_UTIL*	Runtime error "DATREF_NOT_ASSIGNED" in class CL_RS2HANA_AUTH_UTIL
Prior to the upgrade	Back-end Only if prior to NW750 SP09	2468594 *Activation: fail to create scenario with "__numoffacttablerows"-Error*	Issue related to HCPR Mapped source attribute &1 is missing in node EC:2048 [34011] mappings.
Prior to the upgrade	Back-end Only if prior to NW750 SP09	2473463 *BW PAK: Exception raised in Method CL_RSDRC_SFC_SRVS=>SET_RETURNFLS*	Planning function finishes with error.
After the upgrade	Back-end	2562177 *Input help error message: Failed to find source column in input itab.*	When you execute the input help, the system issues the error message 'Error during plan execution; Failed to find source column SID in input itab'

Implement	Area	SAP Note	Description
After the upgrade	Back-end	2585342 *ABAP BICS: currency/unit information for data cells is read too infrequently*	You have opened an input-ready query in RSRT BICS or ABAP Webdynpro. After entering some new values, when you hit submit, an exception occurs in the backend.
After the upgrade	Back-end	2609013 *%XT, %YT and universal display hierarchy*	In an input-ready query, you use the input-ready formula %XT or %YT and the universal display hierarchy is used in the rows or columns the program termination PROCESS_EXEC_PLAN-03- may occur.

SAP Notes for SAP Assortment Planning

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

SAP Notes for SAP Assortment Planning

Implement	Area	SAP Note	Description
Prior to the upgrade	SAP Retail system	2196351 *Pre-requisite for SAP Note #2196323*	Corrections to SAP Retail data elements.
Prior to the upgrade	SAP Retail system	2196323 *DRFOUT: Only valid current node assignments and article assignments are transferred during Article Hierarchy Replication*	Article Hierarchy Transfer replication will transfer all node and article assignments irrespective of the validity.

Implement	Area	SAP Note	Description
Prior to the upgrade	SAP Retail system	2209621 *Assortment Listing API: List by DC fix*	Functionality on the SAP Retail side to enable PIR integration with SAP Assortment Planning.
Prior to the upgrade	SAP Retail system	2286994 *New Listing API for Retail Assortment Planning*	Supports: • Different listing periods for different products within an assortment • Changes in the listing after a product has been listed • In-season listing changes • Multiple validity time periods for the same location
After the upgrade	Back-end	2477932 *After upgrading to APR 2.0 FP02 the initialization of BI structures must be reactivated*	**Note** Implement this note only if you upgrade from SAP Assortment Planning 2.0 FP1. Additional procedure to initialize existing BW structures following an upgrade.
After the upgrade	Back-end	2604460 *Missing texts after SAP Note 2528889 is implemented*	Correction to display of InfoObject values that showed the InfoObject key instead of the text.
After the upgrade	Back-end	2557812 *Imported images is not displayed in Assortment List*	Corrections to image import.
Prior to the upgrade	Back-end	2022080 *Upgrade of PAL AFL and BFL AFL from SAP HANA earlier release to SPS08*	Corrections to add privileges removed during upgrade to SAP HANA Platform SPS 08.

Implement	Area	SAP Note	Description
After the upgrade	Back-end	2559834 *Select Products for Planning Area displays incorrect KPIs for seasonal products*	Corrections to KPIs displayed in My Assortment Lists app.
Prior to the upgrade	Back-end	2474565 *Characteristic relationships and 'With Subsets' setting*	Corrections to characteristic relationships.
Prior to the upgrade	Back-end	2513880 *PAK: FOX, distribution with reference data: System checks too many records*	Corrections to PAK (Planning Application KIT).
Prior to the upgrade	Back-end	2474337 *Runtime error "DATREF_NOT_ASSIGNED" in class CL_RS2HANA_AUTH_UTIL*	Corrections to replication of BW analysis authorizations to SAP HANA.
Prior to the upgrade	Back-end	2478314 *column store error: fail to create scenario: [34011] CalculationScenario invalid after invalidation call*	Corrections to query execution.

Implement	Area	SAP Note	Description
Prior to the upgrade	Back-end	1656983 *Result Set Size Limit Exceeded Message*	Information on changing the default `ResultSetSizeLimit` setting.
Prior to the upgrade	Back-end	2549934 *adso: Check of key length*	Corrections to the installation routine for DataStore Objects (advanced).
After the upgrade	Back-end	2565525 *750SP11: Minor Optimization for accessing ODP in HANA Context*	Correction to a performance issue in query execution.
Prior to the upgrade	Back-end	2562177 *Input help: Error message 'Failed to find source column in input itab'*	Correction of error in F4 help within queries of workbooks.
Prior to the upgrade	Back-end	2627842 *Unexpected Number of HANA Calculation Views for Assortment Planning 2.0 FP03*	Corrections to validation report regarding the stated number of SAP HANA calculation views.
After the upgrade	Back-end	2617292 *AP 2.0 FP3: Adapt search to work with 'contains' operator in assortment list (Back-End)*	Optional note. This correction is necessary if you wish to use the *contains* operator in the *My Assortment Lists* SAP Fiori app.

Implement	Area	SAP Note	Description
After the upgrade	Front-end	2617304 *Assortment Planning 2.0 FP3: Adapt search to work with 'contains' operator in assortment list (Front-End)"*	This correction is necessary if you wish to use the *contains* operator in the *My Assortment Lists* SAP Fiori app.
After the upgrade	Front-end	2630444 *Assortment Planning 2.0 FP3: Fix translation issues*	Corrections to translations for UI texts in the *My Assortment Lists* SAP Fiori app.
After the upgrade	Back-end	2621277 *Assortment Planning 2.0 FP3: Assortment List Backend Corrections*	Corrections to display of option-defining attributes and currency as well as insertion of exit level nodes from planning configuration. These corrections apply to the *My Assortment Lists* SAP Fiori app.

SAP Notes for SAP Promotion Management

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

SAP Notes for SAP Promotion Management

Implement	Area	SAP Note	Description
After the upgrade	Front-End	2539181 *New release CARAB 2.0 FP02 - UI Version 2.4.x*	Steps for creating a service alias for the V2 of the Offer Management Service

SAP Notes for SAP Allocation Management

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

SAP Notes for SAP Allocation Management

Implement	Area	SAP Note	Description
After the upgrade	Back-end and front-end	2630818 *SAP Allocation Management 2.0 Collective Note after ECC SPS05*	This note comprises all corrections for SAP Allocation Management for all architecture layers (SAP Fiori, ABAP (gateway and back end), and SAP HANA DB) up to the RTC date.
After the upgrade	Back-end	2603372 *HANA Content Activation errors*	This note contains corrections regarding SAP S/4HANA content activation errors.
After the upgrade	Back-end	2632881 *SHDB: Low and High Values are clipped during conversion of SelectionTables into WHERE clauses*	This note contains corrections regarding the SAP HANA database.
After the upgrade	Back-end	2502917 *Unable to register the service* `/AMR/OD_WORKLOAD_SRV` *with namespace*	

Implement	Area	SAP Note	Description
After the upgrade	Back-end	2474287 *Handling of unit of measures inside SAP Allocation Management for Retail*	
After the upgrade	SAP S/4HANA Retail for merchandise management	2522603 *Wrapper RFC for ATP via Controller*	
After the upgrade	Follow-On System	2416853 *RFC function module to create allocation table for SAP Allocation Management for Retail 2.0*	Enhanced functionality for the transfer of allocation data to an ECC system.
After the upgrade	Follow-On System	2524857 *RFC for creation of Allocation Table in S4H system*	Creation of an allocation table from SAP Allocation Management Release 2.0 in **S4/HANA** system for the transfer of allocation plans.

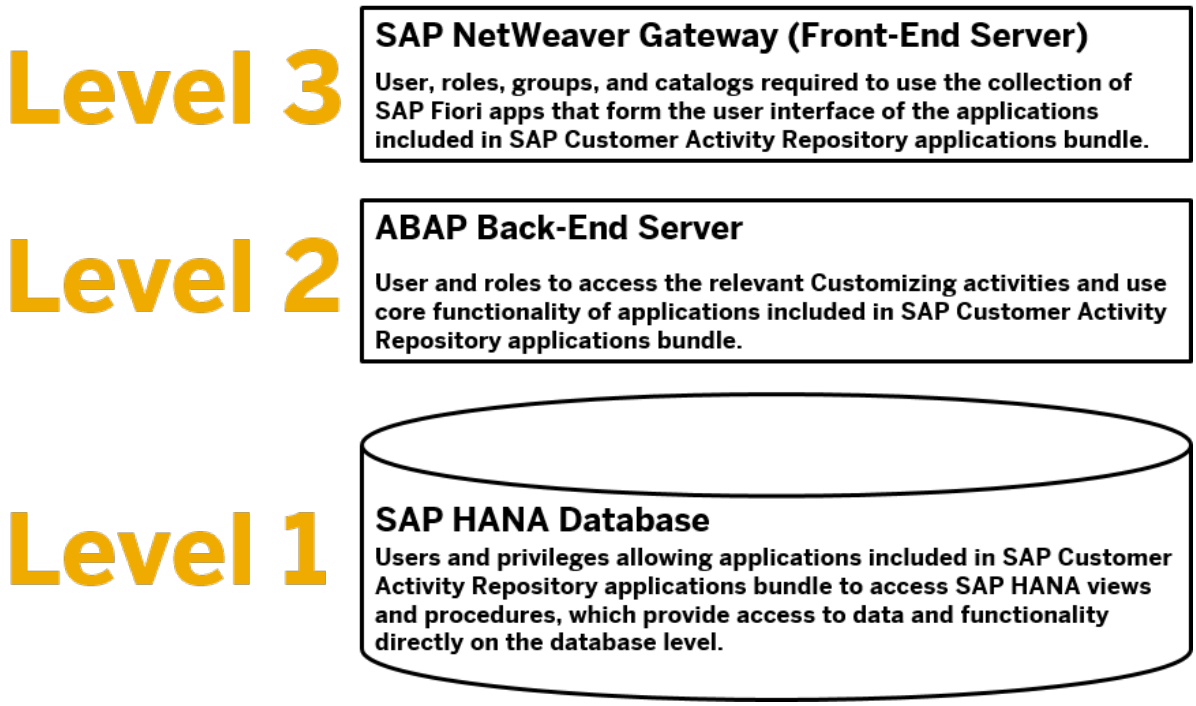
Parent topic: Preparation [page 29]

Next: Verify SAP HANA Users and Privileges [page 41]

5.2 Verify SAP HANA Users and Privileges

SAP Customer Activity Repository applications bundle requires a layered system landscape. In each layer, users, roles, and authorizations required to use SAP Customer Activity Repository and its consuming applications must be created and assigned.

Use



Authorization Levels

This procedure lists the required database users and privileges shown as level 1 in the diagram above. These are roles and privileges that you can set up in the database before upgrading SAP Customer Activity Repository applications bundle on the back-end server and the front-end server.

Back-end, level 2 authorizations, are described in the *Common Installation Guide* under *Verify Back-End Users and Roles*.

Front-end, level 3 authorizations, are described in the *Common Installation Guide* under *Assign Roles, Catalogs, and Groups in SAP Fiori Launchpad* (SAP Assortment Planning), *Assign Roles, Catalogs, and Groups in SAP Fiori Launchpad* (SAP Allocation Management), and (optional, only for this app).

Procedure

1. Ensure that the SAP HANA database users listed below exist and that they have the required roles/privileges.

User	Role/Privilege
`SAP<SID>` This is the generic database user specified for the connection from the SAP NetWeaver 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` ○ Role `CONTENT_ADMIN` ○ Role `AFLPM_CREATOR_ERASER_EXECUTE` This role must be assigned to execute functions of the PAL library. In the case of SAP Assortment Planning, this role is necessary for the assortment planner to use smart clustering in the *Manage Location Clusters* SAP Fiori app. For more information, see Enable Usage of PAL Functions [page 44] and SAP Note 2046767 ○ Role `AFL__SYS_AFL_OFL_AREA_EXECUTE` ○ Grant the following additional privileges, with option *"Grantable to others"*, on these schemas: On schema `_SYS_BIC`: ○ Privilege `CREATE ANY` ○ Privilege `ALTER` On schema `<SAP Retail or SAP S/4HANA schema name>`: ○ Privilege `SELECT`

User	Role/Privilege
_SYS_REPO	○ Privilege SELECT, with option *"Grantable to others"*, on the following physical DB schemas: ○ Physical database schema of your back-end system, typically this is called SAP<SID> ○ Physical database schema that contains the SAP Retail or SAP S/4HANA tables ○ Physical database schema that contains the SAP CRM tables ○ Physical database schema that contains the SAP Hybris Marketing tables You can use the following example SQL statement to grant the required privilege: **GRANT SELECT ON SCHEMA <Your schema name> TO _SYS_REPO WITH GRANT OPTION;** ○ For Unified Demand Forecast, role UDF_DEPLOY_SYS_REPO. For information about the privileges assigned via this role, see the *Common Installation Guide*, section *Authorization Requirements for Unified Demand Forecast*. ○ For SAP Allocation Management, you need the following additional privileges. Please refer to section Create SLT Tables Dynamically (/AMR/CREATE_DYNAMIC_SLT_TABLES) [page 233] for further details: ○ Privilege CREATE ANY ○ Privilege CREATE SCHEMA
<Your User Name> *	○ Privilege SELECT on schema _SYS_BI ○ Privilege SELECT on schema SAP<SID> ○ Privilege EXECUTE on procedure REPOSITORY_REST ○ The *Session Client* of this database user must be set to the appropriate back-end system client. This step is necessary to use the SAP Assortment Planning planning framework, where SAP Analysis for Microsoft Office workbooks obtain data from SAP HANA views. For more information, see the *Assign Default Client* section in the *SAP HANA Modeling Guide*. 1. Log on to SAP HANA studio. 2. Open the *Modeler* perspective and use the *Navigator* to access your back-end system. 3. Under *Security*, select a user. 4. Set the *Session Client* to the client number created in the *Set Up SAP Client* procedure in the *Common Installation Guide*.
* Your user on the SAP HANA database level, the back-end system, and on the front-end server (SAP Gateway) **must be identical** on all three levels.	

Parent topic: Preparation [page 29]

Previous: SAP Notes for the Upgrade [page 29]

Next: Configure AFL Usage (SAP Assortment Planning) [page 44]

5.3 Configure AFL Usage (SAP Assortment Planning)

In this procedure, you perform several configuration tasks to enable the usage of application function libraries (such as the PAL and the OFL).

Parent topic: Preparation [page 29]

Previous: Verify SAP HANA Users and Privileges [page 41]

5.3.1 Enable Usage of PAL Functions

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.

> **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 Prerequisites [page 19] ▶ *Common Prerequisites* ▶ *SAP HANA Platform* ▶
- http://help.sap.com/hana_platform ▶ *<Version>* ▶ *Reference* ▶ *SAP HANA Predictive Analysis Library (PAL)* ▶

Parent topic: Configure AFL Usage (SAP Assortment Planning) [page 44]

Next: Check the OFL Installation [page 45]

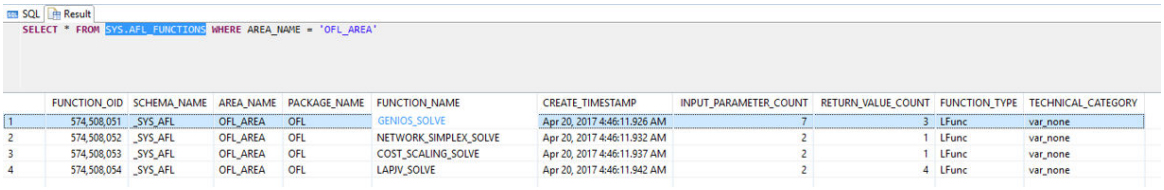
5.3.2 Check the OFL Installation

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	LAPJV_SOLVE	Apr 20, 2017 4:46:11.942 AM	2	4	LFunc	var_none

More Information

Prerequisites section

Parent topic: Configure AFL Usage (SAP Assortment Planning) [page 44]

Previous: Enable Usage of PAL Functions [page 44]

6 Upgrade

For a correct **upgrade**, you must verify the required prerequisites and pre-upgrade notes, then upgrade the back-end and the front-end, and finally check for post-upgrade notes that must be implemented.

> **Note**
>
> Once you have completed the upgrade, you first do the *Follow-up Activities* > *SAP Customer Activity Repository* > *Core* activities, which are relevant for all the scenarios. Then you only need to do the follow-up activities required for your specific scenario(s).

1. Verify Prerequisites and SAP Notes [page 48]
   Before upgrading to SAP Customer Activity Repository applications bundle 2.0 SPS05, you must 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. Upgrade SAP Customer Activity Repository applications bundle [page 49]
   Upgrade from a previous release to the CAR RETAIL APPL BUNDLE 2.0 SPS05 back-end product version and to a compatible revision of the `SAP RTL AFL FOR SAP HANA` software component.
3. Upgrade Product-Specific SAP Fiori UI Component [page 54]
   The product-specific SAP Fiori UI component is front-end product version SAP FIORI FOR SAP CARAB 3.0 SPS05. It contains the SAP Fiori apps included in SAP Customer Activity Repository applications bundle. In this procedure, you first create a stack XML file with the Maintenance Planner tool and then install this file with the Software Update Manager (SUM) tool.
4. Check SAP Notes and RINs [page 55]
   There are notes 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 proceed with the follow-up activities.
5. Install Alternate Storage (Optional) [page 56]
   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 Hadoop, thereby reducing your total cost of hardware ownership.

6.1 Verify Prerequisites and SAP Notes

Before upgrading to SAP Customer Activity Repository applications bundle 2.0 SPS05, you must 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

1. Ensure that you have installed and configured all the prerequisites specific to your implementation scenario, as described under Prerequisites [page 19].

   > ⚠ Caution
   >
   > If you are upgrading to SAP Customer Activity Repository applications bundle 2.0 SPS05 from SAP Customer Activity Repository applications bundle 1.0 (any SPS) or SAP Customer Activity Repository 1.0 (any SP), it is likely that you will need to **simultaneously** upgrade your SAP NetWeaver to the recommended SAP NetWeaver 7.50 SPS 08 or SAP NetWeaver 7.50 SPS 09 version. Please evaluate the instructions listed in Upgrade SAP Customer Activity Repository applications bundle [page 49] carefully, as **manual procedures** are required to be performed by **experienced system administrators**.

2. Ensure that you have implemented **all** of the SAP Notes listed in SAP Notes for the Upgrade [page 29] that are required for your scenario and that can be implemented **before** the upgrade.

   > ➔ Tip
   >
   > Always consult the table for SAP Customer Activity Repository in that section. Notes listed there are often common corrections, applicable to all consuming applications.

Parent topic: Upgrade [page 47]

Next: Upgrade SAP Customer Activity Repository applications bundle [page 49]

6.2 Upgrade SAP Customer Activity Repository applications bundle

Upgrade from a previous release to the CAR RETAIL APPL BUNDLE 2.0 SPS05 back-end product version and to a compatible revision of the `SAP RTL AFL FOR SAP HANA` software component.

Use

You use the Maintenance Planner tool to plan your system landscape and generate a stack XML file based on the required product versions. You then install or upgrade components based on this stack XML file using the Software Update Manager (SUM) tool.

For more information about Maintenance Planner, see SAP Help Portal at https://help.sap.com/viewer/p/MAINTENANCE_PLANNER.

> **Note**
>
> It may be possible to install or upgrade components using the SAP Add-On Installation Tool as an alternative, but this alternative procedure is not described in this guide. For information on whether this is possible for your implementation scenario and on how to proceed, see SAP Note 1803986.

> **Caution**
>
> If you are upgrading to SAP Customer Activity Repository applications bundle 2.0 SPS05 from SAP Customer Activity Repository applications bundle 1.0 (any SPS) or SAP Customer Activity Repository 1.0 (any SP), it is likely that you will need to **simultaneously** upgrade your SAP NetWeaver to the recommended SAP NetWeaver 7.50 SPS 08 or SAP NetWeaver 7.50 SPS 09 version.
>
> Read the following steps carefully before proceeding with the upgrade, as you might require assistance, particularly with the Download and Install the Stack XML Using Software Update Manager (SUM) [page 50] section.

Create the Stack XML Using Maintenance Planner

1. Log in to the Maintenance Planner tool at http://support.sap.com ▶ *Release, Upgrade & Maintenance* > *Maintenance Information* > *Maintenance Planner* > *Access Maintenance Planner* .
2. Choose *Plan a New System*.
3. Choose *Plan*.
4. Choose a system type and enter a three-character system ID.
5. Choose *Install an SAP NetWeaver System*.
6. Select a valid product version (for example, `SAP NETWEAVER 7.5`) and a valid support package stack.

> ### Caution
>
> If you are upgrading to SAP Customer Activity Repository applications bundle 2.0 SPS05 from SAP Customer Activity Repository applications bundle 1.0 (any SPS) or SAP Customer Activity Repository 1.0 (any SP), **simultaneously** upgrade your SAP NetWeaver to the recommended SAP NetWeaver 7.50 SPS 08 or SAP NetWeaver 7.50 SPS 09 version.

7. Select a valid instance (for example, `Application Server ABAP`).
8. Choose *Confirm Selection*.
9. Choose *Install or Maintain an Add-On*.
10. Select the CAR RETAIL APPL BUNDLE 2.0 SPS05 back-end product version and the `Q2/2018` instance.
11. Select the `CAR Retail Appl Bundle NW 750` instance.
12. Choose *Confirm Selection*.
13. Choose *Next*.
14. Select the operating system and database for your implementation scenario.
15. Choose *Confirm Selection*.
16. Review the details of your stack dependent and independent files, then choose *Next*.
17. Choose *Download Stack XML*.

Download and Install the Stack XML Using Software Update Manager (SUM)

The SUM tool installs your add-on product using the stack XML file created during the previous procedure.

For instructions on how to use the SUM tool for your specific operating system/platform and database, see the Software Logistics Toolset at http://support.sap.com/sltoolset *System Maintenance* *Software Update Manager (SUM)* and also *Software Update Manager (SUM) scenario* *Software Update/Upgrade with SUM 2.0 SP xx*.

> ### Caution
>
> If you are upgrading to SAP Customer Activity Repository applications bundle 2.0 SPS05 from SAP Customer Activity Repository applications bundle 1.0 (any SPS) or SAP Customer Activity Repository 1.0 (any SP) and **simultaneously** upgrading your SAP NetWeaver to the recommended SAP NetWeaver 7.50 SPS 08 or SAP NetWeaver 7.50 SPS 09 version, the SUM tool will stop during the `ACT_UPG` phase. The following error message will display:

```
DDIC ACTIVATION ERRORS and RETURN CODE in SAPA750EAS.QE1
```

```
1EEDO519X"DDL Source" "/OAA/C_NET_NETWORK" could not be activated
1EEDO519 "DDL Source" "/OAA/C_NET_SOURCE" could not be activated
1EEDO519 "DDL Source" "/OAA/I_NET_NETWORK" could not be activated
1EEDO519 "DDL Source" "/OAA/I_NET_SOURCE" could not be activated
1EEDO519 "DDL Source" "/OAA/I_SOURCES" could not be activated
1EEDO519 "DDL Source" "/RAP/V_AL_PROD_LANE_CDS" could not be activated
1EEDO519 "DDL Source" "/RAP/V_AL_PROD_VENDORS_CDS" could not be activated
1EEDO519 "DDL Source" "/RAP/V_AL_PROD_VENDOR_PRIO_CDS" could not be activated
1EEDO519 "DDL Source" "/RAP/V_AL_PR_VD_NM" could not be activated
1EEDO519 "DDL Source" "/RAP/V_CATEG_PROD_AGG_CDS" could not be activated
1EEDO519 "DDL Source" "/RAP/V_CATEG_PROD_BASE_CDS" could not be activated
1EEDO519 "DDL Source" "/RAP/V_CATEG_PROD_BASE_MOD_CDS" could not be activated
```

```
1EED0519 "DDL Source" "/RAP/V_CATEG_PROD_CDS" could not be activated
1EED0519 "DDL Source" "/RAP/V_CATEG_PROD_PREP_CDS" could not be activated
1EED0519 "DDL Source" "/RAP/V_CATEG_PR_COUNT_AGG_CDS" could not be activated
1EED0519 "DDL Source" "/RAP/V_CATEG_PR_OPT_CDS" could not be activated
1EED0519 "DDL Source" "/RAP/V_PROD_VENDORS_CDS" could not be activated
1 ETP111 exit code           : "8"
```

To resolve this SAP NetWeaver upgrade issue, an **experienced system administrator** must **manually** implement all of the following SAP Notes:

- 2438380 (*ABAP CDS: Data type RAW in CASE expression*)
- 2507161 (*ABAP CDS: multiple client dependent table functions as base objects*)
- 2374190 (*ABAP CDS: Inconsistency in Reference Table/Field of CDS Views selecting from Table Functions; AMDP Table Function client handling*)

At this point in the upgrade, it is not possible to implement notes using transaction **SNOTE**. These notes must be implemented on the shadow instance. Alternatively, for assistance from SAP, raise a customer incident to component `BC-DWB-DIC-AC`.

> **Note**
>
> Additionally, check if SAP Note 2513585 (*Potential DDIC objects and data loss during upgrades to NetWeaver 7.50 or higher*) is relevant for your scenario. The issue described is not frequent but might lead to data loss. If the note does not apply to your scenario, there is no action for you to take.

You have now completed the stack XML installation. To finalize the upgrade of the back-end product version, you must additionally do some manual steps. Continue with the next section.

Download and Install the Application Function Library (AFL)

There is one software component that you cannot install or upgrade as described above: `SAP RTL AFL FOR SAP HANA`.

> **Note**
>
> This AFL component is available as of SAP Customer Activity Repository applications bundle 2.0. It contains back-end functionality for two modules in SAP Customer Activity Repository:
>
> - Unified Demand Forecast (UDF, provides the demand modeling and forecasting services, the application functions run directly in the SAP HANA database)
> - On-Shelf Availability (OSA, provides the on-shelf availability services, the application functions run directly in the SAP HANA database)

You need to download a revision of `SAP RTL AFL FOR SAP HANA` and install it in your SAP HANA database.

For a successful upgrade, you need to be aware of the following dependencies:

Dependencies Between AFLs and the SAP HANA Database

The AFL is released independently of the releases of SAP Customer Activity Repository applications bundle. This is because the AFL follows the release cycle of the SAP HANA database. The releases are called “revisions”.

Whenever a new revision of the SAP HANA database is released, a new revision of the AFL is released. As a result, multiple revisions of the AFL are available on the SAP Support Portal at any one time.

> ⚠ Caution
>
> For each revision of an AFL, there is **only one compatible revision** of the SAP HANA database. Whenever you upgrade the AFL, you must also upgrade the database and any other AFLs to the compatible revisions. Reversely, whenever you upgrade the database, you must upgrade the AFLs.
>
> This dependency applies not only to `SAP RTL AFL FOR SAP HANA` but also to the generic SAP HANA AFL. The SAP HANA AFL and the SAP HANA database are components of the SAP HANA Platform (see Prerequisites [page 19] ▸ *Common Prerequisites* ▸ *SAP HANA Platform* ▸).
>
> When you download an AFL revision from the SAP Support Portal, the compatible revision of the SAP HANA database is always indicated for your convenience.

Download and Install `SAP RTL AFL FOR SAP HANA`

1. Select a revision for the SAP HANA database and the AFL components.
   Multiple revisions are available on the SAP Support Portal. To select the best revision for your scenario, see the following:
   - - Prerequisites [page 19] ▸ *Common Prerequisites* ▸ *SAP HANA Platform* ▸: This section indicates the minimum revisions of the SAP HANA database and the AFL components. You need at least these revisions for the current release.
     - If you want to use a higher revision for your scenario, select one of the "Datacenter Service Point (DSP)" revisions. These are specially verified revisions, which you can find listed in SAP Note 2021789 (for SAP HANA Platform 1.0) and SAP Note 2378962 (for SAP HANA Platform 2.0).
       For a helpful overview of the different types of SAP HANA revisions, see the *SAP HANA Revision Strategy* slide deck linked from either note.
     - SAP Note 1948334: This note lists the supported database update paths for SAP HANA Maintenance Revisions. Consult this note for valid revision combinations for your scenario.
     - For more information on the release and maintenance strategy of the SAP HANA Platform, see http://support.sap.com and choose *Download Software* ▸ *By Alphabetical Index (A-Z)* ▸ *H* ▸ *SAP HANA PLATFORM EDITION* ▸ *<your edition>* ▸ *INFO* ▸.

   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 *Download Software* ▸:

   > ➔ 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`:
     This component is provided as part of the CAR RETAIL APPL BUNDLE back-end product version. You can find the AFL under *By Alphabetical Index (A-Z)* ▸ *C* ▸ *CAR RETAIL APPLICATIONS BUNDLE* ▸ *CAR RETAIL APPL BUNDLE 2.0* ▸ *Support Packages and Patches* ▸ *DOWNLOADS* ▸ *COMPRISED SOFTWARE COMPONENT VERSIONS* ▸.

- `SAP HANA AFL` and `SAP HANA DATABASE`:
  These components are provided as part of the SAP HANA Platform. You can find them under *By Alphabetical Index (A-Z)* > *H* > *SAP HANA PLATFORM EDITION* > *<your edition>* > *Support Packages and Patches* > *DOWNLOADS*.
- If applicable, other AFLs provided with the SAP HANA Platform that might be relevant for your scenario. For an overview, see the *Managing SAP HANA System Components* section of the *SAP HANA Server Installation and Update Guide* under https://help.sap.com/viewer/p/SAP_HANA_PLATFORM > *<Version>* > *Installation and Upgrade*.

3. Upgrade your system to the selected revision of `SAP RTL AFL FOR SAP HANA`:

   Upgrade Scenarios for SAP RTL AFL FOR SAP HANA

You want to upgrade from a release of...	What you do is...
SAP Customer Activity Repository applications bundle 1.0	You replace the AFL revisions `UDFAFL_INST 100` and `POSAFL_INST 100` of the lower release with the selected `SAP RTL AFL FOR SAP HANA` revision of the current release.
SAP Customer Activity Repository applications bundle 2.0	You update the existing revision of `SAP RTL AFL FOR SAP HANA` with the selected new revision of the current release.

   For either scenario, proceed as described in SAP Note 2377894. Carefully follow the instructions for the upgrade scenario in this note.

> **Note**
>
> - If you want to use the UDF functionality in your scenario, you must additionally do some follow-up activities. For more information, see Complete UDF Setup [page 96].
> - If you want to use the OSA functionality in your scenario, you must additionally do some follow-up activities. For more information, see Configure On-Shelf Availability [page 90].

Result

You have successfully upgraded to the back-end product version of this release. Continue with the next section.

Parent topic: Upgrade [page 47]

Previous: Verify Prerequisites and SAP Notes [page 48]

Next: Upgrade Product-Specific SAP Fiori UI Component [page 54]

6.3 Upgrade Product-Specific SAP Fiori UI Component

The product-specific SAP Fiori UI component is front-end product version SAP FIORI FOR SAP CARAB 3.0 SPS05. It contains the SAP Fiori apps included in SAP Customer Activity Repository applications bundle. In this procedure, you first create a stack XML file with the Maintenance Planner tool and then install this file with the Software Update Manager (SUM) tool.

Use

You use the Maintenance Planner tool to plan your system landscape and generate a stack XML file based on the required product versions. You upgrade components based on this stack XML file using the Software Update Manager (SUM) tool.

For more information about Maintenance Planner, see https://help.sap.com/viewer/p/MAINTENANCE_PLANNER.

> **Caution**
>
> It may be possible to upgrade components using the SAP Add-On Installation Tool as an alternative, but this alternative procedure is not described in this guide. For information on whether this is possible for your implementation scenario and on how to proceed, see SAP Note 1803986 (*Rules to use SUM or SPAM/SAINT to apply SPs for ABAP stacks*).

Create the Stack XML Using Maintenance Planner

1. Log in to the Maintenance Planner tool at https://help.sap.com/viewer/p/MAINTENANCE_PLANNER *Additional Information* > *Launch Maintenance Planner*.
2. Choose *Plan a New System*.
3. Choose *Plan*.
4. Choose a system type (*ABAP or JAVA system*) and enter a three-character system ID.
5. Choose *Install an SAP NetWeaver System*.
6. Select a valid product version (for example, `SAP NETWEAVER 7.5`) and a valid support package stack.
7. Select a valid instance (for example, `Application Server ABAP`).
8. Choose *Confirm Selection*.
9. Choose *Install or Maintain an Add-On*.
10. Select the SAP FIORI FOR SAP CARAB 3.0 SPS05 front-end product version.
11. Select a valid front-end server instance.
12. Choose *Confirm Selection*.
13. Choose *Next*.
14. Select the operating system and database for your implementation scenario.
15. Choose *Confirm Selection*.
16. Review the details of your stack-dependent and stack-independent files, then choose *Next*.

17. Choose *Download Stack XML*.

Download and Install the Stack XML Using Software Update Manager (SUM)

The SUM tool installs your add-on product using the stack XML file created during the previous procedure.

For instructions on how to use the SUM tool for your specific operating system/platform and database, see the Software Logistics Toolset at http://support.sap.com/sltoolset ▸ *System Maintenance* ▸ *Software Update Manager (SUM)* and also ▸ *Software Update Manager (SUM) scenario* ▸ *Software Update/Upgrade with SUM 2.0 SP xx* ▸.

Result

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

Continue with the next section.

Parent topic: Upgrade [page 47]

Previous: Upgrade SAP Customer Activity Repository applications bundle [page 49]

Next task: Check SAP Notes and RINs [page 55]

6.4 Check SAP Notes and RINs

There are notes 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 proceed with the follow-up activities.

Context

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

The release information notes (RINs) in particular are continuously updated, as corrections for the current release of SAP Customer Activity Repository applications bundle become available.

Procedure

1. Consult the SAP Notes for the Upgrade [page 29] section again and verify that all the notes that are required for your scenario have been implemented.

   > **Note**
   >
   > Always consult the table for SAP Customer Activity Repository in that section. Notes listed there are often common corrections, applicable to all consuming applications.

2. Consult the back-end RIN 2592695 and implement any required corrections. This note contains only back-end corrections for the current release of SAP Customer Activity Repository applications bundle.
3. Consult the front-end RIN 2575842 and implement any required corrections. This note contains only front-end corrections for the current release of SAP Customer Activity Repository applications bundle.

Task overview: Upgrade [page 47]

Previous: Upgrade Product-Specific SAP Fiori UI Component [page 54]

Next: Install Alternate Storage (Optional) [page 56]

6.5 Install Alternate Storage (Optional)

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 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>* ▶ *Application Help* ▶ *SAP Customer Activity Repository* ▶ *POS Data Transfer and Audit* ▶ *Implementing a POS Transaction Data Storage Strategy* ▶ *Using the Table Content Aging Report*.

> **Note**
>
> When modeling and forecasting demand using 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.

Parent topic: Upgrade [page 47]

Previous task: Check SAP Notes and RINs [page 55]

6.5.1 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>* ▶ *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 ▶ *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.

> **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 ▶ *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 ▶ *Administration* ▶ *Administration: In-Memory Row-Level Versioning* ▶ *About In-Memory Row-Level Versioning*.

   > **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.

   > **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 ▶ *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* ▶ *Data Provisioning* ▶ *SAP HANA Smart Data Access* ▶ *Setting Up ODBC Drivers* ▶ *SAP IQ ODBC Driver*.

6.5.2 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>* ▶ *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*, 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* > *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*, 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* > *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* at http://help.sap.com/viewer/p/SAP_HANA_PLATFORM *Administration* > *SAP HANA Administration Guide* > *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** a 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. Read SAP Note 2290350 to confirm the right combination of versions required between SAP HANA, Apache Spark, and the SAP HANA Spark controller.
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* > *Data Access* > *SAP HANA Hadoop Integration* > *SAP HANA Spark Controller*.

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).

> **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	`sudo yum install nfs-utils`
Ubuntu	`sudo apt-get install nfs-common`
SUSE	`sudo zypper install nfs-client`

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>
   ```

> **Note**
>
> You must ensure that the folder paths share the same naming conventions, as follows:

Temporary data folder	`/tmp/tct_csv_out/temp`
Data folder	`/tmp/tct_csv_out/data`

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`

6.5.3 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> > *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 *Installation and Update* > *Installation and Update*.

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 *System Administration* > *SAP HANA Dynamic Tiering: Administration Guide* and consult the following subsections:

- *System Administration* > *Managing Extended Storage* > *Create Extended Storage*
- *System Administration* > *Managing Tables* > *Extended Store Tables* > *Convert HANA Tables to Extended Store Tables Using the SAP HANA Cockpit*

6.5.4 Create the Remote Source in SAP HANA Studio

> **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 more information, see SAP Help Portal at http://help.sap.com/viewer/p/SAP_HANA_PLATFORM *Administration* > *SAP HANA Administration Guide* > *Data Access* > *SAP HANA Smart Data Access* > *Creating a Remote Source*.

6.5.5 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 more information, see SAP Help Portal at http://help.sap.com/viewer/p/SAP_HANA_PLATFORM ▶ *Administration* ▶ *SAP HANA Administration Guide* ▶ *Data Provisioning* ▶ *SAP HANA Smart Data Access* ▶ *Managing Virtual Tables*.

6.5.6 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.

7 Follow-Up Activities

You have completed the upgrade to the current release of SAP Customer Activity Repository applications bundle on the back-end server and the front-end server. Proceed with the follow-up activities under *SAP Customer Activity Repository* > *Core*, which are mandatory for all scenarios. Then continue with the follow-up activities for your scenario(s).

7.1 SAP Customer Activity Repository

Follow-up activities for implementing SAP Customer Activity Repository in an upgrade scenario

7.1.1 Core

Core follow-up steps for implementing SAP Customer Activity Repository. The core steps are mandatory for **all the implementation scenarios** of SAP Customer Activity Repository and its consuming applications.

> ⚠ Caution
>
> You must first complete the core steps before executing the *Advanced (Optional)* steps for SAP Customer Activity Repository or the follow-up steps for your consuming application.

1. Create/Replicate Source Master Data System Tables [page 67]
   Ensure that **all the tables** required for your source master data system have been created and replicated using the SAP Landscape Transformation Replication Server. Be aware that upgrade scenarios might require additional tables. For reference, use a spreadsheet that lists the required tables by source master data system (database schema).
2. Verify Correct Schema Mapping [page 72]

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). Verify that the authoring schemas are mapped to the correct physical schema of your customer system. If necessary, create new mappings.

3. Activate SAP HANA Content [page 74]
   In this procedure, you activate the SAP HANA content for your scenario(s) using a dedicated report.
4. Verify that SAP HANA Script Server Is Active [page 77]
   In this procedure, you verify that the script server for the SAP HANA database is active. This step is required, regardless of the scenario you are planning to implement.
5. Verify Time Data [page 78]
   Time data to verify following an upgrade to SAP Customer Activity Repository applications bundle 2.0 SPS05.

7.1.1.1 Create/Replicate Source Master Data System Tables

Ensure that **all the tables** required for your source master data system have been created and replicated using the SAP Landscape Transformation Replication Server. Be aware that upgrade scenarios might require additional tables. For reference, use a spreadsheet that lists the required tables by source master data system (database schema).

> ⚠ Caution
>
> Following an upgrade, it is important that you create and replicate any additional tables required by the new release. This is necessary or the activation of the SAP HANA content will fail.

Procedure

1. Download the spreadsheet for your version of SAP Customer Activity Repository applications bundle:
   1. Navigate to SAP Help Portal at https://help.sap.com/viewer/p/CARAB and select the desired version at the top right.
   2. Download the *CARAB 2.0 - SLT Tables* archive from under *Installation and Upgrade* and extract the spreadsheet.
2. Ensure that all the tables required for your source master data system (database schema) are created and replicated.

> ℹ Note
>
> After the SLT replication, you have created one physical schema (either **SAP_S4H** or **SAP_ECC**). If you want to calculate **distribution curves** or in case you plan to use **SAP Allocation Management**, schemas for **both** source master data systems need to be active in the SAP Customer Activity Repository system. Make sure that you create the additional schema and the corresponding tables. For more information, see
>
> - Create SLT Tables Dynamically (/DMF/CREATE_SLT_TABLES) [page 69]
> - Create Physical Dummy Schemas and Tables [page 231]

Parent topic: Core [page 66]

Next: Verify Correct Schema Mapping [page 72]

7.1.1.1.1 SAP HANA Content Activation for Distribution Curves

Background information about the activation of distribution curve SAP HANA content. Only relevant, if you plan to calculate distribution curves.

From the CARAB 2.0 FP2 release, SAP HANA content activation for distribution curve functionality supports customers who run an ERP Central Component (ECC), or an SAP S4/HANA, as their source system. For more information, see 2.0 SAP HANA Content Activation [page 228]

To use distribution curve functionality, follow these steps:

1. After the creation and replication of your source master data system tables via the SAP Landscape Transformation Replication Server, verify the correct schema mapping.

   For more information, see Identify Physical Schema and Maintain Schema Mapping [page 68]
2. Create a physical dummy schema and dummy tables for distribution curves.

   For more information, see Create SLT Tables Dynamically (/DMF/CREATE_SLT_TABLES) [page 69]
3. Activate the SAP HANA content for specific Demand Data Foundation packages.

   For more information, see Deploy DDF Packages for SAP HANA Content Activation [page 72]

7.1.1.1.1.1 Identify Physical Schema and Maintain Schema Mapping

Check names for physical schemas and map customer-specific names to authoring schemas `SAP_S4H` and `SAP_ECC`

The SLT-replicated tables reside in a physical schema. You have named the physical schema already when you initiated the SLT replication.

If you have chosen names for your physical schema, which are **different from the following names**, make sure you maintain schema mapping in your SAP CAR SAP HANA database, where these names are used as authoring schemas for the physical schema:

- `SAP_S4H`, for your S/4HANA schema
- `SAP_ECC`, for your ECC or FMS schema

> **Note**
>
> In addition, ensure that the authoring schema `SAP_RTLRAP_AMR` is mapped to your ABAP schema.

The following two examples explain what you need to do, when you used names that differ from SAP_S4H or SAP_ECC for your schema. Note that only one of these examples is relevant for your situation.

Example

Source System is SAP S/4HANA

Your source system is an SAP S/4HANA system, and you have replicated your tables into a schema called S4HDATA. Since SAP Allocation Management does not recognize this name, maintain a schema mapping where the authoring schema is named SAP_S4H for the physical schema S4HDATA.

Example

Source System is ECC

Your source system is an ECC system, and you have replicated your tables into a schema called ECCDATA. Since SAP Allocation Management does not recognize this name, maintain a schema mapping where authoring schema is named SAP_ECC for the physical schema ECCDATA.

Parent topic: SAP HANA Content Activation Procedure [page 229]

Next: Create Physical Dummy Schemas and Tables [page 231]

Related Information

Verify Correct Schema Mapping [page 72]

7.1.1.1.1.2 Create SLT Tables Dynamically (/DMF/CREATE_SLT_TABLES)

You only need to perform this procedure if you plan to calculate distribution curves.

Context

For distribution curves, both schemas for the source master data systems, ECC **and** S4H, need to be active in the SAP Customer Activity Repository system. You need to execute this program, no matter which source master data system you are using. The program creates dummy tables in the schema you are not using (either ECC or S4H). Tables for both schemas need to be available **before** you can activate the SAP HANA content.

For detailed information, refer to section 2.0 SAP HANA Content Activation [page 228].

If you plan to use SAP Allocation Management, refer to section SAP HANA Content Activation Procedure [page 229].

> **Note**
>
> The default database user for all database calls from ABAP must have the following privileges:
>
> - Privilege `SELECT` on schema `SAP<SID>`
> - Privilege `CREATE ANY` in both schemas, `SAP_ECC` and `SAP_S4H`
> - Privilege `CREATE SCHEMA` if no schema exists

Procedure

1. In your back-end system, start transaction `SE38`.
2. Enter **`/DMF/CREATE_SLT_TABLES`** (*Create SLT Tables*) as the program and choose *Execute*.
3. Use the default schema names `SAP_ECC` and `SAP_S4H` or enter new schema names.

   If you change the default schema names, create a schema mapping between `SAP_ECC` and `SAP_S4H` as the authoring schema and the schema names that you defined. For detailed information, refer to Identify Physical Schema and Maintain Schema Mapping [page 68]
4. Select *S/4 HANA Fresh Install* and choose *Execute*.
5. Verify that the new schema is created.

   Since you have created a new dummy schema, it is now necessary that the following statement is executed by the database administrator, so that the `_SYS_REPO` user (system user) gets **access and authorization** for this new schema: `GRANT SELECT ON SCHEMA new_dummy_schema_created TO _SYS_REPO WITH GRANT OPTION`

   To enable the current user to **display** the schema in the catalog of systems, use SQL statements `CALL _SYS_REPO.GRANT_SCHEMA_PRIVILEGE_ON_ACTIVATED_CONTENT( 'SELECT', '"YourSchema"', 'YourUserName' )`
6. If you plan to use distribution curves **without using SAP Allocation Management**, then you need to **manually activate specific SAP HANA packages** in transaction *SAP HANA Deployment for ABAP Transport* `SCTS_HTA_DEPLOY` as described in section Deploy DDF Packages for SAP HANA Content Activation [page 72]

Results

The output of the report is a message log providing information about success or failure of creating the tables and schemas. When the report runs successfully, all required tables are created and you can activate the SAP HANA content for distribution curve configuration.

The following tables contain information on the required tables and settings:

- `/DMF/DB_SLT` *List of SLT Tables that are needed in ECC and S4H* lists all tables, that should be included in the schema.
- `/DMF/DB_S4_SLT` *List of SLT Tables needed for fresh S4 install* lists all tables, that are needed for an SAP S/4 HANA installation.

- `/DMF/DB_SLT_DELT` *Delta Changes in SLT Tables* contains delta classifications.
- `/DMF/DB_SLT_TECH` *Technical Settings of SLT Tables* contains Data Definition Language (DDL) statements.
- `/DMF/DB_S4_SLT_T` *Technical Settings of SLT Tables for S4* contains Data Definition Language (DDL) statements.

Example

Sample Input for Program `/DMF/CREATE_SLT_TABLES` for SAP S/4HANA and for ECC Source Systems

Your source system is an **SAP S/4HANA system**, and you have replicated your tables into a schema called `S4HDATA`. You have also maintained authoring schema `SAP_S4H` for the physical schema `S4HDATA`.

Run the report `/DMF/CREATE_SLT_TABLES` with the example input:

Sample Input for Program /DMF/CREATE_SLT_TABLES for S/4HANA Source System

Field	User Input
Schema with ECC SLT Tables	SAP_ECC
Schema with S4 HANA SLT Tables	S4HDATA
S/4 HANA Fresh Install check box	Selected

Your source system is an **ECC system**, and you have replicated your tables into a schema called `ECCDATA`. You have also maintained authoring schema `SAP_ECC` for the physical schema `ECCDATA`.

Run the report `/DMF/CREATE_SLT_TABLES` with the following example input:

Sample Screen Input /DMF/CREATE_SLT_TABLES for ECC Source System

Field	User Input
Schema with ECC SLT Tables	ECCDATA
Schema with S4 HANA SLT Tables	SAP_S4H
S/4 HANA Fresh Install check box	Selected

Related Information

Deploy DDF Packages for SAP HANA Content Activation [page 72]

7.1.1.1.1.3 Deploy DDF Packages for SAP HANA Content Activation

Check and deploy Demand Data Foundation (DDF) packages and their subpackages

Context

Deploy the **following packages** and the corresponding **subpackages** of Demand Data Foundation (DDF), as they are relevant for distribution curve SAP HANA Content activation:

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

> **Note**
>
> You need to deploy the packages, no matter if your source system is an ECC or an SAP S/4HANA system.

Procedure

1. Call the transaction `SE16` (*Data Browser*) and display the contents of table `CTS_HOT_PREWORK` (*HANA Transport for ABAP: Prework for SAP HANA Deployment*) for the all of the packages.
2. Check if the indicator `PREWORK_DONE` is set to **X** for all these packages. If not, set the indicator to **X**.
3. Call transaction `SCTS_HTA_DEPLOY` (*SAP HANA Transport for ABAP - Deployment*)
4. Enter the first package name `Sap.is.ddf.ecc()`.
5. Select the *Include Subpackages* option.
6. *Execute* the program.
7. Check if the content of this package is already fully deployed. Then no further action is needed, proceed with step 4 for the next package.
8. If not all the content is deployed, then select the content that is not deployed and execute the program `SCTS_HTA_DEPLOY`.
9. Call up the content for **all other packages** (`sap.is.ddf.fms`, `sap.is.ddf.fms_s4h`, `sap.is.ddf.cross`) and check if their content is fully deployed. Run the program `SCTS_HTA_DEPLOY` to deploy all packages and subpackages.

7.1.1.2 Verify Correct Schema Mapping

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). Verify that the authoring

schemas are mapped to the correct physical schema of your customer system. If necessary, create new mappings.

Context

Why Schema Mapping

- Schema mapping allows transporting SAP HANA objects from a source system to a target system. For example, from the SAP delivery system to your test system, and from your test system to your production system.
- It also allows the SAP HANA objects to work correctly.

Schema Types

You can map several *authoring schemas* to the same *physical schema*:

- The *authoring schema* is the logical database schema with which the SAP HANA object delivered by SAP was created in the source system. The authoring schema is referred to in the object's properties. Different objects can have different authoring schemas.
- In the target system, all these authoring schemas are mapped to a single *physical schema* where the tables are replicated. Typically, this is called `SAP<SID>`.

Authoring Schemas

You have two sets of authoring schemas:

Authoring Schemas in SAP Customer Activity Repository applications bundle

`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
`SAP_RTLRAP_AMR`	SAP HANA objects for SAP Allocation Management

Authoring Schemas for source master data systems

`SAP_CRM`	SAP Customer Relationship Management
`SAP_CUAN`	SAP Hybris Marketing
`SAP_ECC`	SAP ERP (SAP Retail)
`SAP_S4H`	SAP S/4HANA Retail

> **Note**
>
> If you plan to use **distribution curves** or **SAP Allocation Management**, refer to section Identify Physical Schema and Maintain Schema Mapping [page 68] for additional information and examples.

Procedure

> **Caution**
>
> You must perform this procedure regardless of the business scenario you are planning to implement.

To verify the schema mappings or create new ones, follow these steps in SAP HANA studio:

1. Open the *Modeler* perspective and display the *Quick View* tab.
2. Choose *Schema Mapping*.
3. Select the system and choose *Next*.
4. Do the following for the two sets of schemas:
   - Map **all authoring schemas of the first table above** to **the same physical schema (**`SAP<SID>`**)** in your customer system. If necessary, add new mappings.
   - Map **each authoring schema of the second table above** to **the physical schema for the respective source master data system** in your customer system. If necessary, add new mappings.
5. Choose *Finish*.

Parent topic: Core [page 66]

Previous: Create/Replicate Source Master Data System Tables [page 67]

Next task: Activate SAP HANA Content [page 74]

7.1.1.3 Activate SAP HANA Content

In this procedure, you activate the SAP HANA content for your scenario(s) using a dedicated report.

Prerequisites

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

Context

The report activates the SAP HANA Transport for ABAP (HTA) objects that are required for your selected scenario(s). One HTA object will be activated for each SAP HANA content package.

Procedure

1. In your back-end system, start transaction **SE38**.
2. Enter **/CAR/ACTIVATE_HTA** as the program and choose *Execute*.
3. Select all applicable source master data systems, business scenarios, and scenario options for which you wish to activate SAP HANA content.

> ⚠ Caution
>
> Make sure that you read the application-specific information in the following table before you select the scenario options.

Application-Specific Selections and Interdependencies

Application or Functionality	What to Select
SAP Assortment Planning	Ensure that selecting the *Assortment Planning* scenario also selected the *Merchandise Planning*, *Customer Activity Repository*, and *Demand Data Foundation* scenarios. If not, select these scenarios manually.
Distribution Curves	If you are planning to use distribution curves but **not SAP Allocation Management**, you need to complete all steps described in procedure Create SLT Tables Dynamically (/DMF/CREATE_SLT_TABLES) [page 69] including some manual package activation steps **before** you start the SAP HANA content activation.
SAP Allocation Management	**Before** you start the SAP HANA content activation for SAP Allocation Management, make sure to read the background information and procedure description in section 2.0 SAP HANA Content Activation [page 228]. Especially make sure to complete all steps described in sectionSAP HANA Content Activation Procedure [page 229]. This is a mandatory prerequisite for SAP Allocation Management SAP HANA content activation. When selecting the *Allocation Management* scenario, make sure the following options are also selected: ○ Under *ECC Mode*: *SAP ERP* and *Fashion Management* ○ Under *Business Scenarios Activation*: *Customer Activity Repository* and *Demand Data Foundation*

Application or Functionality	What to Select
Unified Demand Forecast (UDF) and *Analyze Forecast* SAP Fiori app	If your scenario includes Unified Demand Forecast (UDF) and the *Analyze Forecast* SAP Fiori app, select at least the following options: ○ Under *ECC Mode*: Select the source master data system for your scenario. ○ Under *Business Scenarios Activation*: Select *Forecasting* and *Customer Activity Repository*.
On-Shelf Availability	For On-Shelf Availability, select at least the following options: ○ Under *ECC Mode*: Select the source master data system for your scenario. ○ Under *Business Scenarios Activation*: Select *On-Shelf Availability*, and *Customer Activity Repository*.
Omnichannel Article Availability and Sourcing (OAA)	Activate the SAP HANA content for OAA by selecting at least the following options: ○ Under *ECC Mode*: Select the source master data system for your scenario. ○ Under *Business Scenarios Activation*: Select *Omnichannel Article Availability*.

4. Perform the prerequisite check to validate the processing:
   a. Select *Perform Prerequisite Check* and choose *Execute*.
   b. Read the system log before applying any database changes.
   c. Resolve any issues found during the prerequisite check.
5. Activate the SAP HANA content for real:
   a. Deselect *Perform Prerequisite Check*.
   b. Choose *Execute* again.

   If you encounter issues during the activation, see the Troubleshooting [page 131] section for possible solutions.

Results

You have successfully activated the SAP HANA content for your scenario(s). Proceed with the next step.

Task overview: Core [page 66]

Previous: Verify Correct Schema Mapping [page 72]

Next task: Verify that SAP HANA Script Server Is Active [page 77]

Related Information

Create SLT Tables Dynamically (/DMF/CREATE_SLT_TABLES) [page 69]
Create SLT Tables Dynamically (/AMR/CREATE_DYNAMIC_SLT_TABLES) [page 233]

7.1.1.4 Verify that SAP HANA Script Server Is Active

In this procedure, you verify that the script server for the SAP HANA database is active. This step is required, regardless of the scenario you are planning to implement.

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).

> **Note**
>
> The OS process is `hdbscriptserver`.
>
> The service name is `scriptserver`.
>
> The OS process can be started while the SAP HANA database is already running.

Procedure

1. In SAP HANA studio, verify if the script server is active. If it is not, you must start it manually.
2. To do this, read and implement SAP Note 1650957.

Task overview: Core [page 66]

Previous task: Activate SAP HANA Content [page 74]

Next task: Verify Time Data [page 78]

7.1.1.5 Verify Time Data

Time data to verify following an upgrade to SAP Customer Activity Repository applications bundle 2.0 SPS05.

Context

Following the upgrade, ensure that the previous generated time data is sufficient for the SAP Customer Activity Repository applications bundle 2.0 SPS05 release.

Procedure

Ensure that the time data for the Gregorian Calendar, and, if required, the Fiscal Calendar, has been generated far enough into the past and future.

For more information, see:

- *Generate Time Data - Gregorian Calendar* and *Generate Time Data - Fiscal Calendar* sections of the *Common Installation Guide*.
- *Management* section of the *SAP Assortment Planning Administration Guide*.

Task overview: Core [page 66]

Previous task: Verify that SAP HANA Script Server Is Active [page 77]

7.1.2 Advanced (Optional)

Optional follow-up steps for implementing different SAP Customer Activity Repository scenarios.

7.1.2.1 Replicate Optional Tables

7.1.2.1.1 Replicate SAP CRM Tables (Optional)

Use

In this optional procedure, you 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*.

> **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.

7.1.2.1.2 Replicate SAP Hybris Marketing Tables (Optional)

Use

In this optional procedure, you set up the replication of tables from your SAP Hybris Marketing source system. You only need to perform this procedure if you have a SAP Hybris Marketing 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 Hybris Marketing co-deployed with SAP Customer Activity Repository, the SAP Hybris Marketing tables will not be replicated because they already exist in the same SAP HANA database and the same database schema.

   > **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 Hybris Marketing side-by-side with SAP Customer Activity Repository, do the following:
   1. Define client transformation rules for all the SAP Hybris Marketing tables that you plan to replicate. In most cases, you need to apply transformation rules to map the client of the source SAP Hybris Marketing 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 Hybris Marketing 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
SAP_CUAN	<Name of Your Schema for Storing SAP Hybris Marketing 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 Hybris Marketing tables that you plan to replicate.
   In most cases, you need to apply transformation rules to map the client of the source SAP Hybris Marketing 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*.

7.1.2.2 Configure SAP Smart Business for Multichannel Sales Analytics

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

7.1.2.3 Activate SAP HANA Content for SAP Smart Business for Multichannel Sales Analytics

Use

In this procedure, you activate all SAP HANA content required by the SAP Smart Business for Multichannel Sales Analytics dashboards.

Prerequisites

You have completed activating all SAP HANA content (SAP HANA views and SQLScript procedures) required by SAP Customer Activity Repository.

For more information, see Activate SAP HANA Content [page 74].

Procedure

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 *Smart Business for CAR*.
3. Choose *Execute*.

7.1.2.4 Configure SAP NetWeaver Gateway

7.1.2.4.1 Perform General SAP Gateway Configuration

Use

Prior to connecting the SAP Gateway on your front-end server to your back-end system, you need to perform a series of general SAP Gateway configuration steps. These configuration steps include the setting of profile parameters, ICF (Internet Communication Framework) services, language settings, and so on.

These steps are not specific to this guide and are described in the SAP NetWeaver product documentation referenced below.

> **Tip**
>
> We recommend that you consult the SAP NetWeaver product documentation corresponding to your installed version prior to commencing this configuration to determine the value of any required settings, as these may vary depending on your installed NetWeaver version or other specifics related to your technical landscape.

Procedure

1. Determine the SAP NetWeaver version on your front-end server.
2. Carry out the instructions specific to your SAP NetWeaver version:
   - SAP Gateway for SAP NetWeaver 7.31
     See http://help.sap.com/viewer/p/UI_ADD-ON_FOR_SAP_NETWEAVER_20 ▶ *Application Help* ▶ *SAP Library* ▶ *Configuration and Operations* ▶.
   - SAP Gateway for SAP NetWeaver 7.40
     See http://help.sap.com/viewer/p/SAP_NETWEAVER_740 ▶ *Application Help* ▶ *SAP NetWeaver Library: Function-Oriented View* ▶ *SAP Gateway Foundation (SAP_GWFND)* ▶ *SAP Gateway Foundation Configuration Guide* ▶ *General Configuration Settings* ▶.
   - SAP Gateway for SAP NetWeaver 7.50
     See http://help.sap.com/viewer/p/SAP_NETWEAVER_750 ▶ *Application Help* ▶ *SAP Gateway Foundation (SAP_GWFND)* ▶ *SAP Gateway Foundation Configuration Guide* ▶ *General Configuration Settings* ▶.

7.1.2.4.2 Connect SAP Gateway to Your Back-End System

Use

In this procedure, you configure the OData Channel, that is, set up a connection between SAP Gateway on your front-end server and your back-end system.

These steps are not specific to this guide and are described in the SAP NetWeaver product documentation referenced below.

Procedure

1. Set up the required roles on the front-end server and assign your user to these roles.
   For more information, see https://help.sap.com/viewer/p/SAP_NETWEAVER_750 ▶ *Application Help* ▶ *SAP NetWeaver Library: Function-Oriented View* ▶ *SAP Gateway Foundation (SAP_GWFND)* ▶ *SAP Gateway Foundation Configuration Guide* ▶ *SAP Gateway Configuration* ▶ *User, Developer, and Administrator Roles* ▶.
2. Specify the connection settings on the SAP Gateway hub system, which include:
   - Connection from the SAP Gateway to consumer systems
     These settings allow the connection between the SAP Gateway host and the consumer systems (clients from which you access the SAP Fiori user interfaces).
   - Connection from the SAP Gateway to SAP back-end system
     These settings allow the connection between SAP Gateway to your back-end system and include:
     - 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.

More Information

For SAP NetWeaver 7.31, see SAP Library for SAP Gateway on SAP Help Portal at http://help.sap.com/viewer/p/UI_ADD-ON_FOR_SAP_NETWEAVER_20 ▶ *Application Help* ▶ *SAP Library* ▶ *Configuration and Operations* ▶.

For SAP NetWeaver 7.4, see SAP Library for SAP NetWeaver on SAP Help Portal at http://help.sap.com/viewer/p/SAP_NETWEAVER_740 ▶ *Application Help* ▶ *SAP NetWeaver Library: Function-Oriented View* ▶ *SAP NetWeaver Gateway Foundation (SAP_GWFND)* ▶ *SAP NetWeaver Gateway Foundation Configuration Guide* ▶ *SAP Gateway Configuration* ▶ *Connection Settings for the SAP Gateway Hub System* ▶.

For SAP NetWeaver 7.5, see SAP Library for SAP NetWeaver on SAP Help Portal at http://help.sap.com/viewer/p/SAP_NETWEAVER_750 ▶ *Application Help* ▶ *SAP NetWeaver Library: Function-Oriented View* ▶ *SAP Gateway Foundation (SAP_GWFND)* ▶ *SAP Gateway Foundation Configuration Guide* ▶ *SAP Gateway Configuration* ▶ *Connection Settings for the SAP Gateway Hub System* ▶.

7.1.2.4.3 Activate SAP Gateway

Use

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

These steps are not specific to this guide and are described in the SAP NetWeaver product documentation referenced below.

Procedure

1. Determine the SAP NetWeaver version of your front-end server.
2. Carry out the instructions specific to your SAP NetWeaver version:
   - SAP Gateway for SAP NetWeaver 7.31
     See http://help.sap.com/viewer/p/SAP_GATEWAY ▶ *Configuration* ▶ *Configuration Guide* ▶ *SAP Gateway Configuration Guide* ▶ *SAP Gateway Configuration* ▶ *Activating SAP Gateway* ▶.
   - SAP Gateway for SAP NetWeaver 7.4
     See http://help.sap.com/viewer/p/SAP_NETWEAVER_740 ▶ *Application Help* ▶ *SAP NetWeaver Library: Function-Oriented View* ▶ *SAP Gateway Foundation (SAP_GWFND)* ▶ *SAP Gateway Foundation Configuration Guide* ▶ *SAP Gateway Configuration* ▶ *Activating SAP Gateway* ▶.
   - SAP Gateway for SAP NetWeaver 7.5

See http://help.sap.com/viewer/p/SAP_NETWEAVER_750 ▸ *Application Help* ▸ *SAP NetWeaver Library: Function-Oriented View* ▸ *SAP Gateway Foundation (SAP_GWFND)* ▸ *SAP Gateway Foundation Configuration Guide* ▸ *SAP Gateway Configuration* ▸ *Activating SAP Gateway*.

7.1.2.4.4 Activate Common OData Services

Use

A number of OData services are required to run the SAP Fiori launchpad. These OData services are delivered as part of the SAP Fiori front-end server. For more information, see the *Prerequisites* section in this guide.

For security reasons, all OData services are delivered in an inactive state. To use the SAP Fiori launchpad, you must activate the common SAP Fiori OData services.

Procedure

1. Log on to your front-end system (your SAP Gateway system).
2. Go to Customizing (transaction **SPRO**).
3. Navigate to ▸ *SAP NetWeaver* ▸ *Gateway* ▸ *OData Channel* ▸ *Administration* ▸ *General Settings* ▸ *Activate and Maintain Services*.
   You are presented with the service catalog. This is a list of all the services that are currently active on your SAP Gateway.
4. Get common SAP Fiori OData services:
   1. Choose *Add Service*.
      The *Add Service* screen is displayed.
   2. Enter the system alias of your local front-end system.
      This is the alias created in the Connect SAP Gateway to your Back-End System [page 84] procedure. For example, `LOCAL`.
   3. Enter **/UI2*** in the *Technical Service Name* field.
   4. Choose *Get Services*.
      The *Add Selected Services* screen is displayed.
   5. Select the common SAP Fiori OData services that you would like to activate, and choose *Add Selected Services*.

Service Name
/UI2/PAGE_BUILDER_CONF
/UI2/PAGE_BUILDER_CUST
/UI2/PAGE_BUILDER_PERS

Service Name
/UI2/TRANSPORT
/UI2/INTEROP

The selected OData services are now active in your SAP Gateway.

More Information

- For SAP NetWeaver 7.31, see SAP Library for User Interface Add-On 1.0 on SAP Help Portal at http://help.sap.com/viewer/p/UI_ADD-ON_FOR_SAP_NETWEAVER_20 *Application Help* > *SAP Library* > *SAP Fiori Launchpad* > *Setting Up the Launchpad* > *Activating SAP Gateway OData Services*.
- For SAP NetWeaver 7.4, see the documentation on SAP Help Portal at http://help.sap.com/viewer/p/SAP_NETWEAVER_740 *Application Help* > *UI Technologies in SAP NetWeaver (with SAP_UI 740)* > *SAP Fiori Launchpad* > *Setting Up the Launchpad* > *Activating SAP Gateway OData Services*.
- For SAP NetWeaver 7.5, see the documentation on SAP Help Portal at http://help.sap.com/viewer/p/SAP_NETWEAVER_750 *Application Help* > *UI Technologies in SAP NetWeaver (with SAP_UI 750)* > *SAP Fiori Launchpad* > *Setting Up the Launchpad* > *Activating SAP Gateway OData Services*.

7.1.2.5 Configure the SAP Web Dispatcher

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.

Configuration

> **Note**
>
> To find the SAP Web Dispatcher documentation for your SAP NetWeaver release, see https://help.sap.com/viewer/p/SAP_NETWEAVER. Choose your SAP NetWeaver Platform and select the support package stack at the top right. This is your starting point for all references in this section.

For information on how to configure the SAP Web Dispatcher, search for *“Administration of the SAP Web Dispatcher”*.

SAP Fiori for SAP Customer Activity Repository Apps

When configuring the web dispatcher for the SAP Fiori for SAP Customer Activity Repository apps, the following parameters values are required:

- 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`
- 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`

Example

For a configuration example, search for *"SAP Web Dispatcher Configuration Reference"*.

Other Solutions

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

More Information

For information on the architecture of the SAP Web Dispatcher, search for *"Architecture and Functions of the SAP Web Dispatcher"*.

7.1.2.6 Configure Central SAP Fiori UI Component

Use

The central SAP Fiori UI component (delivered as part of the SAP Fiori front-end server) contains the SAPUI5 control library and the SAP Fiori launchpad. Prior to being able to use the SAP Fiori apps that constitute the user interface of the retail applications described in this guide, you may need to configure the SAP Fiori launchpad.

These steps are not specific to this guide and are described in the SAP NetWeaver product documentation referenced below.

For more information, see the *Prerequisites* section in this guide.

Procedure

1. Determine the SAP NetWeaver version on your front-end server.
2. Carry out the instructions specific to your SAP NetWeaver version:
   - SAP Gateway for SAP NetWeaver 7.31
     - http://help.sap.com/viewer/p/UI_ADD-ON_FOR_SAP_NETWEAVER_20 *Application Help* > *SAP Library* > *SAP Fiori Launchpad* , and
     - http://help.sap.com/viewer/p/UI_ADD-ON_FOR_SAP_NETWEAVER_20 *Configuration* > *Administrator's Guide* > *System Administration and Maintenance Information* > *Administrator's Guide* > *Configuration and Operations* > *Content Administration* > *SAP Fiori Launch Page* > *Setting Up the SAP Fiori Launch Page*
   - SAP Gateway for SAP NetWeaver 7.40
     - http://help.sap.com/viewer/p/SAP_NETWEAVER_740 *Application Help* > *UI Technologies in SAP NetWeaver* > *SAP Fiori Launchpad* , and
     - http://help.sap.com/viewer/p/SAP_NETWEAVER_740 *Application Help* > *UI Technologies in SAP NetWeaver* > *Configuration and Operations* > *Setting Up the Launchpad*
   - SAP Gateway for SAP NetWeaver 7.50
     - http://help.sap.com/viewer/p/SAP_NETWEAVER_750 *Application Help* > *UI Technologies in SAP NetWeaver* > *SAP Fiori Launchpad* , and
     - http://help.sap.com/viewer/p/SAP_NETWEAVER_750 *Application Help* > *UI Technologies in SAP NetWeaver with SAP_UI 750* > *Configuration and Operations* > *Setting Up the Launchpad*

7.1.2.7 Configure SAP Jam

Use

Your retail application uses collaboration SAP UI5 components to define key ABAP-based SAP business object data that can be consumed by the SAP Jam social collaboration platform.

If you are using SAP Jam, you can configure the integration between your retail application and SAP Jam. The integration, enabled by Social Media Integration, allows you to share, or expose, the pre-defined ABAP-based SAP business object data directly from your retail application with members of your organization, through SAP Jam.

The steps to enable the integration between your retail application and SAP Jam are not specific to this guide and are described in the User Interface Add-On 2.0 for SAP NetWeaver product documentation referenced below.

Prerequisites

To enable the integration of your retail application with SAP Jam, you must have a license for *SAP Jam Collaboration, enterprise edition*, and your SAP Jam instance must be configured for productive use.

Procedure

1. Read the documentation for the user interface add-on available on SAP Help Portal at http://help.sap.com/viewer/p/UI_ADD-ON_FOR_SAP_NETWEAVER_20 ▶ *Application Help* > *SAP Library* > *Social Media Integration*.
   This documentation provides important information on configuring the integration of your retail application with SAP Jam, including the following sections: *About SAP Jam Integration* and *Information for Administrators*.

More Information

- For the latest updates on SAP Jam, see SAP Help Portal at http://help.sap.com/viewer/p/SAP_JAM_COLLABORATION.
- For configuration and maintenance information for SAP Jam, see http://help.sap.com/viewer/p/SAP_JAM_COLLABORATION ▶ *Administration* > *Administrator Guide*.

7.1.2.8 Adjust Totals When Excluding Post-Voided Transactions

If you have existing transactional data prior to this upgrade, you must run transaction `/POSDW/REFI` against all relevant stores and posting dates in order to adjust displayed totals when post-voided transactions are filtered out of search results

7.1.2.9 Configure On-Shelf Availability

In this procedure you configure the On-Shelf Availability (OSA) module in SAP Customer Activity Repository. All steps are **optional** and depend on your specific implementation scenario.

> **Note**
>
> The configuration of OSA is **mandatory** if you want to generate intraday forecasts. For more information about this feature, see https://help.sap.com/viewer/p/CARAB ▶ *<Version>* > *Application Help* > *SAP Customer Activity Repository* > *Unified Demand Forecast* > *General Services* > *Generate Intraday Forecasts*.

To configure OSA, perform the following follow-up activities.

7.1.2.9.1 Generate Run IDs for OSA Processing Steps

Use

Each scheduled run of an OSA processing step has a generated run ID. This is the unique identification for 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 transactions, you must define the range of run IDs.

Procedure

Do the following steps for each transaction:

1. Execute the transaction by specifying either `/n<transaction>` or `/o<transaction>`.
   Example for the first transaction: `/n/OSA/NR_IWP`
2. Choose *Intervals* in change mode.
3. In the first row of the table, enter the following values for the fields *No*, *From No.*, and *To Number*:
   - *No*: `01`
   - *From No.*: `0000000000000001`
   - *To Number*: `9999999999999999`
4. Save your changes.

7.1.2.9.2 Check Field Contents in SAP HANA Content for On-Shelf Availability

Use

There are two OSA-specific SAP HANA views that can be customized:

- `AN_TRANSACTION`
- `PROMOTION_TRANS`

You have to check if the fields in these views contain the mappings or formulas you need.

> ⚠ Caution
>
> If you need to modify any of the views, be aware that a new installation will rewrite the modifications. It is therefore recommended to back up the modified views.

Procedure

If you want to change the mapping or a formula of a field, perform the following 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 detailed information, see the documentation under https://help.sap.com/viewer/p/SAP_HANA_PLATFORM ▶ *<Version>* ▶ *Development* ▶.

Definitions for a View (Using the AN_TRANSACTION View as an Example)

The following definitions are set by default for the `AN_TRANSACTION` view:

- 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 the 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.
    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.

7.1.2.9.3 Activate SAP HANA Content for On-Shelf Availability

In this procedure, you activate the SAP HANA content required for the On-Shelf Availability (OSA) module in SAP Customer Activity Repository.

Prerequisites

You have completed the *Core* follow-up activities, which are mandatory for all the scenarios. For more information, see Core [page 66].

Procedure

1. To activate the SAP HANA content for On-Shelf Availability, follow the steps in Activate SAP HANA Content [page 74].

7.1.2.9.4 Verify Activation of SAP HANA Content for On-Shelf Availability

1. Log on to SAP HANA studio.
2. Open the *Modeler* perspective.
3. In the *Navigator* window, expand the database system for which you have activated the views.
4. Expand the *Content* folder.
5. Expand the package hierarchy by choosing *sap* > *is* > *retail* > *posdmext* > *osa*.
6. Verify that the following views have been activated:
   - `sap.is.retail.posdmext.osa.reporting.MON_ANA_VIEW`
   - `sap.is.retail.posdmext.osa.reporting.STATUS_LOG_VIEW`
   - `sap.is.retail.posdmext.osa.status_log_view`
   - `sap.is.retail.posdmext.osa.tlog.an_transaction`
   - `sap.is.retail.posdmext.osa.tlog.promotion_trans`
7. Verify that the following procedures have been activated:
   1. Procedures in the package `sap.is.retail.posdmext.osa.common`:
      - `CREATE_LOG_ENTRY`

- PARSE_HOLIDAY_STRING

2. Procedures in the package `sap.is.retail.posdmext.osa.tlog.dao`:
   - GET_TRX_FOR_IWP_SUBDEP
   - GET_TRX_FOR_PRODUCT
   - GET_TRX_FOR_STORE
   - GET_TRX_FOR_SUBDEP
   - GET_TRX_FOR_SUBDEP_CURRENCY
   - GET_TRX_FOR_SUBDEP_WITH_MIN
   - GET_TRX_INFO_FOR_PRODUCT
3. Procedures in the package `sap.is.retail.posdmext.osa.pattern.dao`:
   - GET_INTRA_WEEK_PATTERN
   - GET_INTRA_WEEK_PATTERN_FOR_PRODUCT
   - GET_INTRA_WEEK_PATTERN_LATEST
   - GET_INTRA_WEEK_PATTERN_RUNS
   - PERSIST
4. Procedures in the package `sap.is.retail.posdmext.osa.pattern.runner.internal`:
   - CALL_ALGO_FOR_STORE
   - CALL_ALGO_FOR_SUBDEP
   - CALL_ALGO_PRODUCT_IN_SUBDEP
   - CALL_FUNCTION
5. Procedures in the package `sap.is.retail.posdmext.osa.pattern.runner.public`:
   - RUN_FOR_PRODUCT_IN_SUBDEP
   - RUN_FOR_STORE
   - RUN_FOR_SUBDEP
6. Procedure in the package `sap.is.retail.posdmext.osa.estimation.config`:
   - GET_CONFIG
7. Procedures in the package `sap.is.retail.posdmext.osa.estimation.dao`:
   - GET_PARAMETER
   - GET_PARAMETERS
   - PERSIST
8. Procedures in the package `sap.is.retail.posdmext.osa.estimation.runner.internal`:
   - CALL_ALGO_PRODUCT_IN_SUBDEP
   - CALL_FUNCTION
9. Procedure in the package `sap.is.retail.posdmext.osa.estimation.runner.public`:
   - RUN_FOR_PRODUCT_IN_SUBDEP
10.
11. Procedures in the package `sap.is.retail.posdmext.osa.monitor.dao`:
    - CREATE_STATUS_LOG_ENTRIES
    - CREATE_STATUS_LOG_ENTRIES_FOR_EXCL_PRODUCTS
    - PERSIST
    - UPDATE_STATUS_TABLE
    - UPDATE_STATUS_TABLE_FOR_EXCL_PRODUCTS

12. Procedures in the package `sap.is.retail.posdmext.osa.monitor.runner.internal`:
    - `CALL_ALGO_PRODUCT_IN_SUBDEP`
    - `CALL_FUNCTION`
    - `RUN_FOR_PRODUCT_IN_SUBDEP`
13. Procedures in the following packages, depending on your source master data system:
    - If the system is connected to SAP ERP, procedures in the package `sap.is.retail.posdmext.osa.monitor.runner.public`:
        - `GET_QUALIFIED_PRODUCT_FOR_RUNNER`
        - `GET_QUALIFIED_PRODUCT_FOR_RUNNER_S4H`
        - `RUN_MONITOR`
    - If the system is connected to SAP S/4HANA, procedures in the package `sap.is.retail.posdmext.osa.monitor.runner.public_s4h`:
        - `GET_QUALIFIED_PRODUCT_FOR_RUNNER_S4H`
        - `RUN_MONITOR`
14.
15. Procedure in the package `sap.is.retail.posdmext.osa.analysis.calc`:
    - `COMPUTE_LOST_SALES`
16. Procedure in the package `sap.is.retail.posdmext.osa.analysis.dao`:
    - `PERSIST`
17. Procedures in the package `sap.is.retail.posdmext.osa.analysis.runner.internal`:
    - `CALL_FUNCTION`
    - `CALL_ALGO_PRODUCT_IN_SUBDEP`
18. Procedure in the package `sap.is.retail.posdmext.osa.analysis.runner.public`:
    - `RUN_FOR_PRODUCT_IN_SUBDEP`

7.1.2.9.5 Configure SAP Gateway and Activate OData Service

Use

This configuration step is only required if you use separate products or developments on top of SAP Customer Activity Repository that communicate via OData service. After you have installed SAP Gateway, configure the Gateway system and configure the settings for OData service.

> **Note**
>
> Prior to connecting the SAP Gateway, you need to perform a series of general SAP Gateway configuration steps. These steps are not provided in this guide but described in the product documentation referenced below.
>
> We recommend that you consult the product documentation corresponding to your installed version prior to commencing this configuration to determine the value of any required settings, as these may vary depending on your installed version or other specifics related to your technical landscape.

Procedure

The main steps to do this are as follows:

1. Activate SAP Gateway.
2. Define RFC connections from SAP Gateway to your back-end system.
3. Define settings for OData service for SAP Gateway.
4. (Optional) Define settings for the Push Functionality.
5. Set up users and authorizations for SAP Gateway.
6. Activate the OData service in the SAP Gateway system (transaction **`/IWFND/maint_service`**) for the requested URI (for example, `/sap/opu/odata/OSA/ON_SHELF_AVAILABILITY/`).

More Information

For information on the OData Channel (ODC) for SAP Gateway, see https://help.sap.com/viewer/p/SAP_GATEWAY ▶ *Application Help* ▶ *SAP Gateway 2.0 <your SPS>* ▶ *SAP Gateway Developer Guide* ▶ *OData Channel* ▶, including the subsections.

7.1.2.10 Complete UDF Setup

In this procedure, you do the post-upgrade tasks for Unified Demand Forecast (UDF) to enable modeling and forecasting in SAP Customer Activity Repository.

Use

> **Note**
>
> UDF supports different scenarios. The steps in this section are **optional** and depend on the scenario that you wish to implement:

Scenario	Implement and Configure UDF
SAP Promotion Management	Mandatory (for what-if forecasts)
SAP Allocation Management SAP Assortment Planning SAP Merchandise Planning	Mandatory (if associated with your scenario)

Procedure

> **Note**
>
> If you encounter issues during the setup, see the Troubleshooting [page 131] section for possible solutions.

Perform Mandatory Setup Steps

The following steps are mandatory if you want to model and forecast demand with UDF:

1. Activate the SAP HANA content required for UDF as described in Activate SAP HANA Content [page 74].
2. Only relevant if you have upgraded **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 you need for your scenario:

   > **Note**
   >
   > For more information about each Customizing activity, see the accompanying system documentation.

What to do...	Your scenario is...	Customizing
Define the time series source with historical demand data that you want to import to DDF.	All scenarios	*Cross-Application Components* > *Demand Data Foundation* > *Imported Data* > *Time Series* > *Define Time Series for Key Figure Configuration*
	You want to generate what-if forecasts in SAP Promotion Management.	Additionally, configure the following activity for this scenario: *Cross-Application Components* > *Demand Data Foundation* > *Data Maintenance* > *Define Time Series Source*
Define general settings for modeling and forecasting.	All scenarios	Activities under *Cross-Application Components* > *Demand Data Foundation* > *Modeling and Forecasting*

4. Check and, if necessary, change the default 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*.
   2. Read the Customizing activity documentation.

3. Depending on your scenario, choose between the “full” covariance matrix (default) and the “reduced” covariance matrix (faster):

Your scenario is...	What to do...
You want to generate the **forecast confidence index (FCI)** in SAP Promotion Management.	Keep the default configuration value of the `MOD_COV_REDUCED` configuration type code for all the time series sources. The full covariance matrix is mandatory for the FCI. For information on how to configure the FCI, see the *Configuring Unified Demand Forecast* section of the *SAP Customer Activity Repository Administration Guide*.
○ You want to use SAP Promotion Management, but without the FCI. ○ You do not want to use SAP Promotion Management. ○ You want to calculate hierarchical priors (HPRs).	The reduced covariance matrix is sufficient for those scenarios. For sizing and performance reasons, activate the `MOD_COV_REDUCED` configuration type code for all the time series sources. To do this, change the configuration value to **X**.

5. Configure the UDF forecasting features that you want to use in your scenario.
   See the *Configuring Unified Demand Forecast* section of the *SAP Customer Activity Repository Administration Guide*.

Perform Optional Setup Steps

You have the following additional options:

1. Implement the following SAP Notes if relevant for your scenario:
   - 2161484: Information about an ABAP report that you can use to validate the input data for modeling and forecasting and identify potential issues
   - 2560853: This note is relevant if you are upgrading from a release prior to SAP Customer Activity Repository applications bundle 2.0 SPS03 (“2.0 FP2”) and have existing data in the modeling and forecast tables. The note explains how you can update the time granularity entries in UDF output tables to prevent modeling and forecasting issues.
2. Set up table partitioning for your scenario.
   See Partition Tables for UDF and DDF [page 99].
3. Set up forecast visualization with the *Analyze Forecast* SAP Fiori app.
   See Configure the Analyze Forecast App (Upgrade Scenarios) [page 100].

More Information

For integration information for UDF and DDF, see the *Introduction to SAP Customer Activity Repository* section of the *SAP Customer Activity Repository Administration Guide*.

7.1.2.11 Partition Tables for UDF and DDF

This section is only relevant for solutions on a multiple-host SAP HANA system. If your solution is implemented on a single-host SAP HANA system, you can skip this section.

> **Note**
>
> For more information about multiple-host and single-host systems, see SAP Help Portal for your SAP HANA Platform version at https://help.sap.com/viewer/p/SAP_HANA_PLATFORM ▶ *<Version>* ▶ *Installation and Upgrade* ▶ *SAP HANA Server Installation and Update Guide* ▶ *Installing an SAP HANA System* ▶.

Context

If your forecasting scenario involves large numbers of products and locations, the relevant Unified Demand Forecast (UDF) and Demand Data Foundation (DDF) tables can become very large. To improve standard database operations (such as inserting, updating, deleting, and reading) and mass operations (such as archiving or index merging), we recommend to partition those tables.

Prerequisites

You have upgraded and configured UDF and DDF as described in this guide.

Procedure

1. Open SAP Note 2190377. This is your main reference for partitioning the UDF and DDF tables.
2. Prepare the partitioning:
   Read the *Reason and Prerequisites* section of the note and ensure that all prerequisites are fulfilled for your scenario.
3. Determine the partitioning scope:
   Read the *Solution* section of the note and determine which of the UDF and DDF tables are relevant for your scenario.

   > **Tip**
   >
   > To help you with the partitioning decisions, consult the sizing information for your solution. For example, check the number of records estimated for the large tables to decide which tables to partition and how many partitions you need.
   >
   > You can find a sizing guideline and a sizing questionnaire for your version of SAP Customer Activity Repository applications bundle at https://help.sap.com/viewer/p/CARAB ▶ *<Version>* ▶ *Additional Information* ▶ *Sizing (All Scenarios)* ▶.

4. Partition the relevant tables as described in the note.

More Information

For general sizing information for SAP solutions, see https://www.sap.com/about/benchmark/sizing.html.

7.1.2.12 Configure Standalone SAP Fiori Apps for SAP Customer Activity Repository

Configure the Analyze Forecast App (Upgrade Scenarios) [page 100]
Different upgrade scenarios are available for the *Analyze Forecast* SAP Fiori app in SAP Customer Activity Repository. In this procedure, you select the scenario that is relevant for you and perform the implementation tasks for the app.

7.1.2.12.1 Configure the Analyze Forecast App (Upgrade Scenarios)

Different upgrade scenarios are available for the *Analyze Forecast* SAP Fiori app in SAP Customer Activity Repository. In this procedure, you select the scenario that is relevant for you and perform the implementation tasks for the app.

Restrictions

Time Series

The app can only display sales, modeling, and forecasting data that has been generated based on one of the following time series sources:

Time Series Source	Time Granularity	Description	Input Table
`POS_TS`	daily	Sales time series (daily level point-of sale data)	`/DMF/TS_PS`
`POS_TS`	weekly	Sales time series (weekly level point-of sale data)	`/DMF/TS_PS`

Time Series Source	Time Granularity	Description	Input Table
SO_VDM	daily	Virtual data model for sales orders (daily level only)	Multiple tables (depending on whether your source master data system is SAP Retail or SAP S/4HANA Retail)

Other time series are currently not supported.

Upgrade Scenarios

> **Note**
>
> Different upgrade scenarios are available, depending on the SAP FIORI FOR SAP CARAB **front-end product version that you wish to upgrade from**. Select the scenario that is relevant for you and follow the instructions.

> **Tip**
>
> If you encounter issues during the configuration, see the Troubleshooting [page 131] section for possible solutions.

Scenario 1: Upgrade from SAP FIORI FOR SAP CARAB 1.0 SP04 (12/2015)

> **Note**
>
> In this scenario, your existing version of the *Analyze Forecast* app was delivered via the following:
>
> - Front-end product version: SAP FIORI FOR SAP CARAB 1.0 SP04 (12/2015)
> - Software component: UISCAR01
> - Technical name: UDF_ANALYZFCST

Upgrade Procedure

1. This upgrade scenario requires a complete new setup and configuration of the app. For instructions, see the *Configure the Analyze Forecast App* section of the *Common Installation Guide* for the current release. You can find this guide under https://help.sap.com/viewer/p/CARAB *<Version>* *Installation and Upgrade*.

Scenario 2: Upgrade from SAP FIORI FOR SAP CARAB 2.0 SPxx

> **Note**
>
> In this scenario, your existing version of the *Analyze Forecast* app was delivered via the following:
>
> - Front-end product version: SAP FIORI FOR SAP CARAB 2.0 SPxx
> - Software component: UICAR001 100
> - Technical name: ANALYZFCST_V2

Upgrade Procedure

> **Note**
>
> Depending on your implementation scenario, it is possible that you have already performed some of the following steps. In this case, simply continue with the next step.

1. Check that you have at least `SAP FIORI FRONT-END SERVER 2.0 SPS04 (07/2016)` installed on the front-end server. If not, see the installation information under Prerequisites [page 19] ▶ *Common Prerequisites* ▶ *SAP Fiori* ▶.
2. Check that all relevant SAP Notes that should be implemented **before the upgrade** are available in your system landscape. See SAP Notes for the Upgrade [page 29] and consult the table for SAP Customer Activity Repository.
3. Deploy the back-end product version of the current release. This step ensures that all the app features of the current release are supported by the back-end. See Upgrade SAP Customer Activity Repository applications bundle [page 49].
4. Deploy the front-end product version of the current release. This step ensures that you get the newest app UI on the front-end. See Upgrade Product-Specific SAP Fiori UI Component [page 54].
5. Implement SAP Note 2601249 *("Analyze Forecast" SAP Fiori app - corrections for the app in CARAB 2.0 SPS05 (CAR 3.0 FP03)*. The note contains mandatory corrections for the app for the current release.
6. Check that other relevant SAP Notes that should be implemented **after the upgrade** are available in your system landscape. See Check SAP Notes and RINs [page 55].
7. Perform all the mandatory follow-up activities for SAP Customer Activity Repository. See Core [page 66].
8. Check that you have performed all the mandatory setup steps for the Unified Demand Forecast (UDF) module. See Complete UDF Setup [page 96].
9. (Optional) Assign area of responsibility.
   This step is only required if you wish to use the *Product Hierarchy* filter in the app. In this case, each user of the app must have an area of responsibility (AOR) assigned to their ABAP back-end user. This enables the display of product hierarchies in the app. You assign AORs using the *Maintain Area of Responsibility* Web Dynpro service in DDF.
   Follow the instructions in the *Maintain Area of Responsibility* section under https://help.sap.com/viewer/p/CARAB ▶ *<Version>* ▶ *Application Help* ▶ *SAP Customer Activity Repository* ▶ *Demand Data Foundation* ▶ *General Services* ▶ *Maintenance Services* ▶.
10. (Optional) If you haven't already done so, set up Single Sign-On (SSO) between the front-end server and the back-end server.
    See the *Configure the Analyze Forecast App* section of the *Common Installation Guide* and consult the references provided for this step.

Result

You have successfully configured the *Analyze Forecast* app for your upgrade scenario.

Scenario 3: Upgrade from a lower release of `SAP FIORI FOR SAP CARAB 3.0 SPxx`

> **Note**
>
> In this scenario, your existing version of the *Analyze Forecast* app was delivered via the following:
>
> - Front-end product version: `SAP FIORI FOR SAP CARAB 3.0 SPxx`
> - Software component: `UICAR001 200`

- Technical name: `ANALYZFCST_V2`

Upgrade Procedure

> **Note**
>
> Depending on your implementation scenario, it is possible that you have already performed some of the following steps. In this case, simply continue with the next step.

1. Check that all relevant SAP Notes that should be implemented **before the upgrade** are available in your system landscape. See SAP Notes for the Upgrade [page 29] and consult the table for SAP Customer Activity Repository.
2. Deploy the back-end product version of the current release. This step ensures that all app features of the current release are supported by the back-end. See Upgrade SAP Customer Activity Repository applications bundle [page 49].
3. Deploy the front-end product version of the current release. This step ensures that you get the newest app UI on the front-end. See Upgrade Product-Specific SAP Fiori UI Component [page 54].
4. Implement SAP Note 2601249 *("Analyze Forecast" SAP Fiori app - corrections for the app in CARAB 2.0 SPS05 (CAR 3.0 FP03)*. The note contains mandatory corrections for the app for the current release.
5. Check that relevant SAP Notes that should be implemented **after the upgrade** are available in your system landscape. See Check SAP Notes and RINs [page 55].
6. Perform all the mandatory follow-up activities for SAP Customer Activity Repository. See Core [page 66].
7. Check that you have performed all the mandatory setup steps for the Unified Demand Forecast (UDF) module. See Complete UDF Setup [page 96].
8. (Optional) Assign area of responsibility.
   This step is only required if you wish to use the *Product Hierarchy* filter in the app. In this case, each user of the app must have an area of responsibility (AOR) assigned to their ABAP back-end user. This enables the display of product hierarchies in the app. You assign AORs using the *Maintain Area of Responsibility* Web Dynpro service in DDF.
   Follow the instructions in the *Maintain Area of Responsibility* section under https://help.sap.com/viewer/p/CARAB ▸ *<Version>* ▸ *Application Help* ▸ *SAP Customer Activity Repository* ▸ *Demand Data Foundation* ▸ *General Services* ▸ *Maintenance Services*.
9. (Optional) If you haven't already done so, set up Single Sign-On (SSO) between the front-end server and the back-end server.
   See the *Configure the Analyze Forecast App* section of the *Common Installation Guide* and consult the references provided for this step.

Result

You have successfully configured the *Analyze Forecast* app for your upgrade scenario.

More Information

You can extend the app with custom content. For extensibility information, see https://help.sap.com/viewer/p/CARAB ▸ *<Version>* ▸ *Application Help* ▸ *SAP Customer Activity Repository* ▸ *SAP Fiori for SAP Customer Activity Repository* ▸ *Standalone SAP Fiori Apps for SAP Customer Activity Repository* ▸ *Analyze Forecast (Version 2)* ▸ *App Extensibility: Analyze Forecast (Version 2)*.

7.1.2.13 Configure Omnichannel Article Availability and Sourcing for Use with SAP Customer Activity Repository

You need to integrate SAP S/4HANA or SAP Retail, SAP Customer Activity Repository, SAP Hybris Commerce, and SAP Hybris Commerce, integration package for SAP for Retail, as well as set up asynchronous order management and the data replication between SAP S/4HANA or SAP Retail, SAP Hybris Commerce, and SAP Customer Activity Repository.

7.1.2.13.1 Set up Data Replication Between SAP S/4HANA or SAP Retail, and SAP Hybris Commerce

In SAP S/4HANA or SAP Retail, and SAP Hybris 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 Hybris Commerce.
   For more information, see the documentation for SAP Hybris Commerce at https://help.hybris.com/6.5.0/hcd/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 Hybris Commerce to SAP S/4HANA or SAP Retail (see link above).
3. Configure asynchronous order management.
   For more information, see the documentation for SAP Hybris Commerce at https://help.hybris.com/6.5.0/hcd/8b8ac51b866910148e68c3be8963eb96.html *Configuring Asynchronous Order Management*.

7.1.2.13.2 Set Up Data Replication Between SAP Hybris Commerce and SAP Customer Activity Repository

1. In SAP Hybris 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 Hybris Commerce, in the Backoffice application under *SAP Integration* > *SAP Global Configuration* > *Backend Connectivity*, enter the HTTP destination of SAP Customer Activity Repository created before.

> **Note**
>
> In the standard Solr configuration for products in SAP Hybris Commerce, `ProductStoreStockValueProvider` is used to replicate the store availability situation from the Hybris 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.

7.1.2.13.3 Check Version of SAP Customer Activity Repository in SAP Hybris Commerce

SAP Hybris 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 Hybris Commerce controls the mapping to the different API versions.

Context

Check the `spring.profiles.active` property in the `local.properties` file of your SAP Hybris 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	`sapoaa_carApiVersionLatest`
CAR 2.0 FP3 (CARAB 1.0 FP3)	`sapoaa_carApiVersion1`

As of SAP Hybris Commerce, integration package for SAP for Retail 2.4 / SAP Hybris Commerce 6.4, the property is set automatically to `sapoaa_carApiVersionLatest`.

7.1.2.13.4 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.

7.1.2.13.5 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.

7.1.2.13.6 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.

Context

Following an upgrade, you must ensure that all OData services required by the SAP Fiori user interface of omnichannel article availability and sourcing are activated.

Procedure

1. Log on to your front-end system (your SAP NetWeaver system).
2. Go to Customizing (transaction `SPRO`).
3. Navigate to *SAP NetWeaver* > *Gateway* > *OData Channel* > *Administration* > *General Settings* > *Activate and Maintain Services*.

   You are presented with the service catalog. This is a list of all the services that are currently active on your SAP Gateway.
4. Get the OAA OData services:
   a. Choose *Add Service*.

      The *Add Service* screen is displayed.
   b. Enter the system alias of your back-end system.
   c. In the *Technical Service Name* field, enter **`/OAA*`**.
   d. Choose *Get Services*.

      The *Add Selected Services* screen is displayed.
   e. Select the OAA OData services you would like to activate, and choose *Add Selected Services*.

OData Service
Services for SAP Fiori Apps:
`/OAA/F2530_MSN_SRV`
`/OAA/F2586_MSS_SRV`
`/OAA/F2659_MSC_SRV`
`/OAA/F3003_MS_SRV`
ATP Snapshot Replication Service:
`/OAA/ATP_SNAPSHOT_SRV`

Results

The selected OData services are now active in your SAP Gateway.

For SAP NetWeaver 7.5, see the documentation on SAP Help Portal at http://help.sap.com/viewer/p/SAP_NETWEAVER_750 *Application Help* > *UI Technologies in SAP NetWeaver (with SAP_UI 750)* > *SAP Fiori Launchpad* > *Setting Up the Launchpad* > *Activating SAP Gateway OData Services*.

7.1.2.14 Configure Omnichannel Promotion Pricing for Use with SAP Customer Activity Repository

1. In Customizing for SAP Customer Activity Repository under *Omnichannel Promotion Pricing* > *Configure Omnichannel Promotion Pricing*, activate and configure omnichannel promotion pricing.
   Optional: If you want to use *Product Groups* instead of *Simple Product Groups* (default), you have to do the following:
   In Customizing for SAP Customer Activity Repository under *Omnichannel Promotion Pricing (OPP)* > *Configure Omnichannel Promotion Pricing* set the indicator *Activate Enhanced Product Groups*.
   Additionally, you have to activate 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/viewer/p/CARAB *<Version>* > *Development* > *Development and Extension Guide for Omnichannel Promotion Pricing* under > *Promotion Pricing Service* > *PPS Module calcengine-gk* > *Default Settings and Properties*.
2. In transaction **SFW5**, activate business function `DRF_FOUNDATION`.
   This activates the Data Replication Framework (DRF) functionality. You need DRF to send regular prices and OPP promotions to an external system via IDocs.
3. In Customizing for SAP Customer Activity Repository under *Omnichannel Promotion Pricing (OPP)* > *Define Number Ranges*, you can maintain a number range interval for OPP promotions outbound processing.
4. To use the central promotion pricing service, you have to install the XS Advanced (XSA) as Java runtime.
   For information about the installation of the XS Advanced runtime, see the *SAP HANA Server Installation and Update Guide* on SAP Help Portal at https://help.sap.com/viewer/p/SAP_HANA_PLATFORM *<Version>* > *Installation and Upgrade* > *SAP HANA Server Installation and Upgrade* > *Installing an SAP HANA System* > *Installing XS Advanced Runtime*.

> **Tip**
>
> For more information about the configuration of the promotion pricing service in SAP Hybris Commerce, see the *Administrator Guide* of SAP Hybris Commerce, integration package for SAP for Retail on SAP Help Portal under https://help.sap.com/viewer/p/IPR *<Version>* > *Administration* > *Omnichannel Promotion Pricing* > *Configuration*.

Related Information

Outbound Processing for Regular Prices and OPP Promotions [page 109]
Central Deployment of the Promotion Pricing Service [page 122]
Update the PPS XSA Application [page 130]

7.1.2.14.1 Outbound Processing for Regular Prices and OPP Promotions

Related Information

Local Deployment of the Promotion Pricing Service [page 109]
Location-Specific Outbound Processing of OPP Promotions [page 117]

7.1.2.14.1.1 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. For that, you have to configure application link enabling (ALE) for the distribution of IDocs, 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 performed the configuration steps during post-installation. For more information, see Configure Omnichannel Promotion Pricing for Use with SAP Customer Activity Repository [page 108].
- You have defined receiving systems and clients in the system landscape directory (SLD).

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 Hybris 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
Log. System	**<receiving system>**
Name	**<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
RFC Destination	**<name of the RFC destination>**
Connection Type	Enter connection type *G HTTP Connection to External Server*.
Description	Enter at least *Description 1* in the description section.

2. In *Technical Settings*, enter the following values for *Target System Settings*:

Field Name	Value
Target Host	**<name of the target host>**
Path Prefix	**/sapppspricing/idocinbound**
Service No.	**<service number for https or http connection>** **Note** With OPP, an https connection is recommended.

3. In *Logon and Security*, select *Basic Authentication* for *Logon with User*, and enter the following values:

Field Name	Value
User	**<user name that you have created in SAP Hybris Backoffice>**
Password	**<password that you have created in SAP Hybris 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

1. Create this ALE port in the *XML HTTP* folder and enter the following values:

Field Name	Value
Port	**<name of port>**
Description	**<description of port>**
RFC destination	**<name of the RFC destination created in the previous step>**

2. 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
Partner No.	**<partner number>**, which must be the same as the receiving system that you defined in section *Defining a Logical System*
Partner Type	**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
Ty.	**US** (for User)

Field Name	Value
Agent	**<users to be notified>** should be an agent who can process IDocs with errors
Lang.	**<notification language>**

Outbound Parameters

Field Name	Value
Message Type	• `/ROP/BASE_PRICE` for regular prices • `/ROP/PROMOTION` for OPP promotions
Outbound Options tab	
Receiver port	**<receiver port>** as defined in section *Defining a Port*

Output Mode	• *Pass IDoc Immediately*
	  ○ 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*
	  ○ Select this option to collect IDocs and transfer them sequentially with transaction **WE14**.

IDoc Type	• `/ROP/BASE_PRICE01` for regular prices • Depending on the receiving system `/ROP/PROMOTION01` or `/ROP/PROMOTION02` for OPP promotions
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 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 **Note** For this outbound implementation, the filter application time needs to be set to *Filter Before Change Analysis*.
ROP_PROMO	Outbound implementation for OPP promotions sent via promotion-centric outbound processing	Initialization, Change, and Manual	ROP_PROMO

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	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. **Note** 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.	20,000-100,000
PACK_SIZE_BULK	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. **Note** 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.	200-1,000
TASK_SIZE_PROCMSG	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. **Note** 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.	400-2,000
/ROP/SEQ_READ_SIZE	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. **Note** If this parameter is set to 0, all products of the corresponding package are read within one call.	100-200

Outbound Parameter for Regular Prices	Description	Typical Value*
/ROP/DAY_OFFSET_PAST	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. 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. 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. In this way you ensure that also regular prices with a validity end date in the specified past time range are transferred. **Note** 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.	30

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_PROCMSG parameter and is relevant for both, the sequential and the parallel execution of DRF outbound. **Note** 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.	100-1,000

Outbound Parameter for OPP Promotions	Description	Typical Value*
TASK_SIZE_PROCMSG	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. **Note** 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.	100-5,000
/ROP/Generic_ENH_MAP	This parameter activates the automatic mapping of customer-specific fields that are stored in the CI-Inlcudes of promotional entities to the corresponding extension segments in the OPP promotion IDocs. **Note** Internal tables, structures, and so on, are not supported.	x

*This value gives you an idea of usable values for the replication of regular prices and OPP promotions, it is not a recommendation.

3. 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.

7.1.2.14.1.2 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.

Prerequisites

- You have performed the configuration steps during post-installation. For more information, see Configure Omnichannel Promotion Pricing for Use with SAP Customer Activity Repository [page 108].
- You have defined receiving systems and clients in the system landscape directory (SLD).

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 Hybris 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 Hybris 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
Target Host	`<name of the target host>`
Path Prefix	`/sapppspricing/idocinbound`

Field Name	Value
Service No.	**<service number for https or http connection>** **Note** With OPP, an https connection is recommended.

2. In *Logon and Security*, select *Basic Authentication* for *Logon with User*, and enter the following values:

Field Name	Value
User	**<user name that you have created in SAP Hybris Backoffice>**
Password	**<password that you have created in SAP Hybris 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

1. Create this ALE port in the *XML HTTP* folder and enter the following values:

Field Name	Value
Port	**<name of port>**
Description	**<description of port>**
RFC destination	**<name of the RFC destination created in the previous step>**

2. Select a content type supported with the receiving system. If you configure a local promotion pricing service choose *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.

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
Partner No.	External ID of the receiving DDF location
Partner Type	**LO** for OPP promotions replicated via location-specific outbound processing

> **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.
>
> If 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*.

2. In the *Post processing: permitted agent* tab, enter the following values:

Field Name	Value
Ty.	**US** (for User)
Agent	**<users to be notified>**, which should be an agent who can process IDocs with errors.
Lang.	**<notification language>**

Outbound Parameters

Field Name	Value
Message Type	`/ROP/PROMOTION` for OPP promotions
Outbound Options tab	
Receiver port	**<receiver port>** as defined in section *Defining a Port*

Field Name	Value

Output Mode	• *Pass IDoc Immediately*
	  ○ 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*
	  ○ Select this option to collect IDocs and transfer them sequentially with transaction **WE14**.

IDoc Type	Depending on the receiving system `/ROP/PROMOTION01` or `/ROP/PROMOTION02` for OPP promotions
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_PROCMSG parameter and is relevant for both, the sequential and the parallel execution of DRF outbound. **Note** 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.	100-1,000
TASK_SIZE_PROCMSG	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. **Note** 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.	100-5,000
/ROP/Generic_ENH_MAP	This parameter activates the automatic mapping of customer-specific fields that are stored in the CI-Inlcudes of promotional entities to the corresponding extension segments in the OPP promotion IDocs. **Note** Internal tables, structures, and so on, are not supported.	x

*This value gives you an idea of usable values for the replication of regular prices and OPP promotions, it is not a recommendation.

3. 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.

7.1.2.14.2 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.

Prerequisites

- You have installed SAP HANA XSA version 1.0.66 or higher.
- You have access to the XSA *command-line* tool.
- Your SAP HANA user has the user parameter `XS_RC_XS_CONTROLLER_ADMIN` with value `XS_CONTROLLER_ADMIN` assigned.
- You have downloaded and installed the XSA component`xsac_monitoring`. This component contains the app `xsa-admin` that is used for the security configuration.
- You have downloaded the SCV file `XSACOPPPPS02_<patch level>.ZIP` (for example patch level `0` for the initial delivery) for the PPS from SAP Service Marketplace.

For more 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/viewer/product/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/viewer/product/SAP_HANA_PLATFORM/ > *<Version>* > *Installation and Upgrade* > *SAP HANA Server Installation and Upgrade Guide* > *Installing an SAP HANA System* > *Installing XS Advanced Runtime* >.

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 acess the database.
ppServiceUaa	xsuaa	space	com.sap.xs.uaa-space	Service for 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.

Creating the Database Service

To make the promotion pricing service run, you have to create the database service *ppeHana*. To do so, you have to execute the following xs command:

Source Code

```
xs create-user-provided-service ppeHana -p "{\"user\":\"<DB_USER>\",\"password\":
\"<DB_USER_PASSWORD>\",\"url\":\"jdbc:sap://<HOSTNAME>:<PORT>\",\"driver\":
\"com.sap.db.jdbc.Driver\",\"port\":\"<PORT>\",\"host\":\"<HOSTNAME>:<PORT>\"}"
```

Adjust the 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.
<DB_USER_PASSWORD>	Replace this entry with the password of your database user (in clear text) in your SAP Customer Activity Repository system.
<HOSTNAME>	Replace this entry with the database host name of your SAP Customer Activity Repository system.
<PORT>	Replace this entry with the database port of your SAP Customer Activity Repository system.

When you have created the database service, clear the command history to prevent unauthorized disclosure of the password.

For more information about security, see the Administration Guide on SAP Help Portal at https://help.sap.com/viewer/product/CARAB/ under *<Version>* > *SAP Customer Activity Repository <Version> Administration Guide* > *Security Information* > *Security for Omnichannel Promotion Pricing Using SAP HANA XS Advanced*.

Creating the 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:

> **Note**
>
> This content includes the minimum settings that are necessary to create the extension descriptior file. Specific 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.ppservice.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:
      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: -Dsap.dataaccess-
common.db.client="<DB_CLIENT>" -Dsap.dataaccess-common.logSys=<LOGSYS>'
    provides:
      - name: java
```

Note

This configuration is written in YAML format. Make sure that you copy the format of the code block correctly.

3. Adjust the entries in angle brackets (<...>) in the file:

Entry	Comment
<DB_SCHEMA>	Replace this entry with the database schema of your SAP Customer Activity Repository system.
<DB_CLIENT>	Replace this entry with the client of your SAP Customer Activity Repository system.
<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 different promotion pricing services for each system.

Note

If you need higher values for memory settings, especially for `ppservice-webapp-central`, you can choose larger cache sizes.

4. 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
```

5. Save the extension descriptor file for later update or patch activities.

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.

Configuring Authentication and Authorization Settings

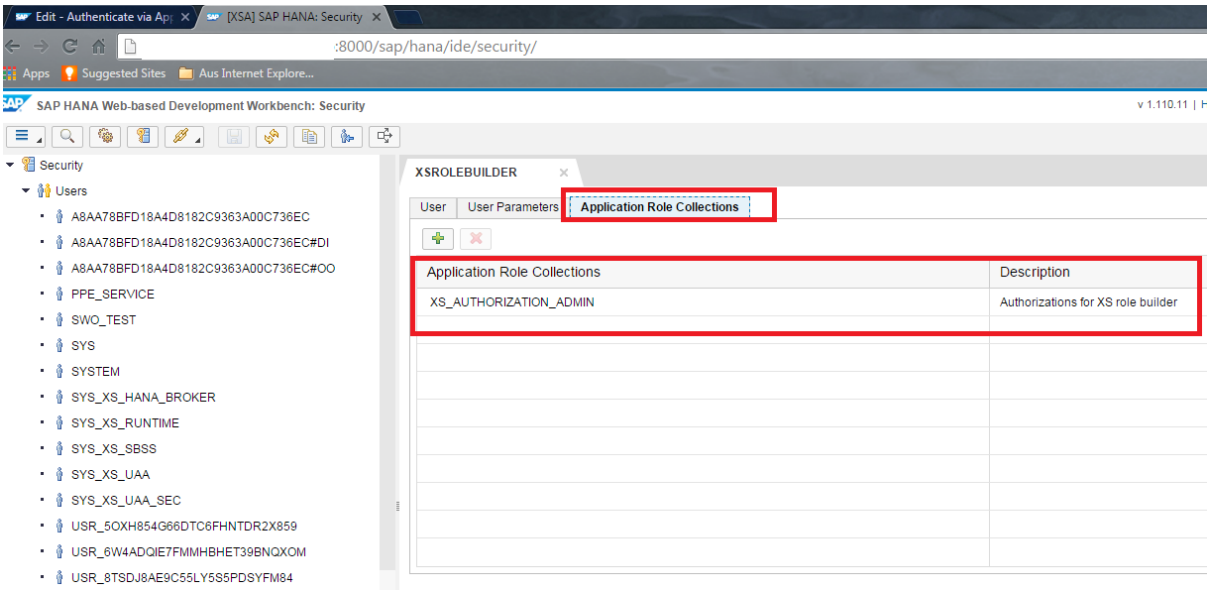
To secure access to the promotion pricing service, you have to configure users and roles in SAP HANA user and role management.

For more information about the XSA security concept, see the *SAP HANA Administration Guide* on SAP Help Portal at https://help.sap.com/viewer/product/SAP_HANA_PLATFORM/ > *<Version>* > *Administration* > *SAP HANA Administration Guide* > *Application Run-Time Services* > *Maintaining the SAP HANA XS Advanced Run Time Model* > *Setting Up Security Artifacts* >.

Creating SAP HANA Users

This section describes how to create the SAP HANA users that you need for the authentication configuration of the XSA server:

- A system/admin user
  Contact your system administrator to create this user.
- A user for the XSA user management
  Use the system/admin user created in step 1 to create the corresponding SAP HANA user. This user needs the *System Privileges* `USER ADMIN` and `ROLE ADMIN` and the *Granted Role* `sap.hana.ide.roles:SecurityAdmin`. You can create this user, for example, via the SAP HANA Studio.
- A user for the role builder
  Use the XSA user management user created in step 2 to create the corresponding role builder user. The role builder user needs the *Application Role Collection* `XS_AUTHORIZATION_ADMIN`. For this, assign the user parameter `XS_RC_XS_AUTHORIZATION_ADMIN` with value `XS_AUTHORIZATION_ADMIN` in the SAP HANA Studio, or use the SAP HANA web-based Development Security Workbench. You can call this workbench with `http://<HOST>:80<HANA_INSTANCE_NUMBER>/sap/hana/ide/security/`.



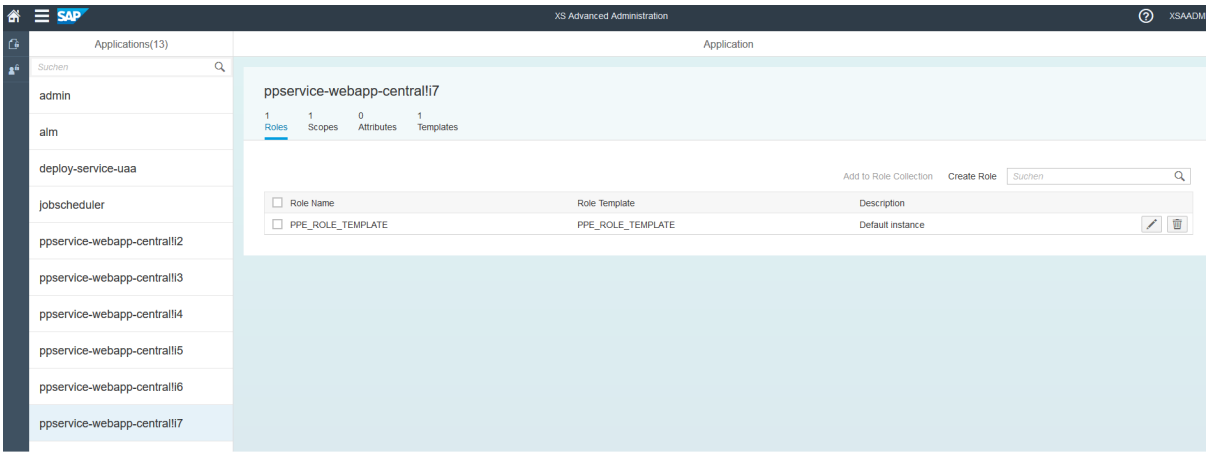
Assigning a Role Collection

This section describes how to define a role for the central promotion pricing service (`ppservice-webapp-central` application) using the role builder.

For more information about building roles, see the *SAP HANA Administration Guide*, at https://help.sap.com/viewer/product/SAP_HANA_PLATFORM/ > *<Version>* > *Administration* > *SAP HANA Administrator Guide* >

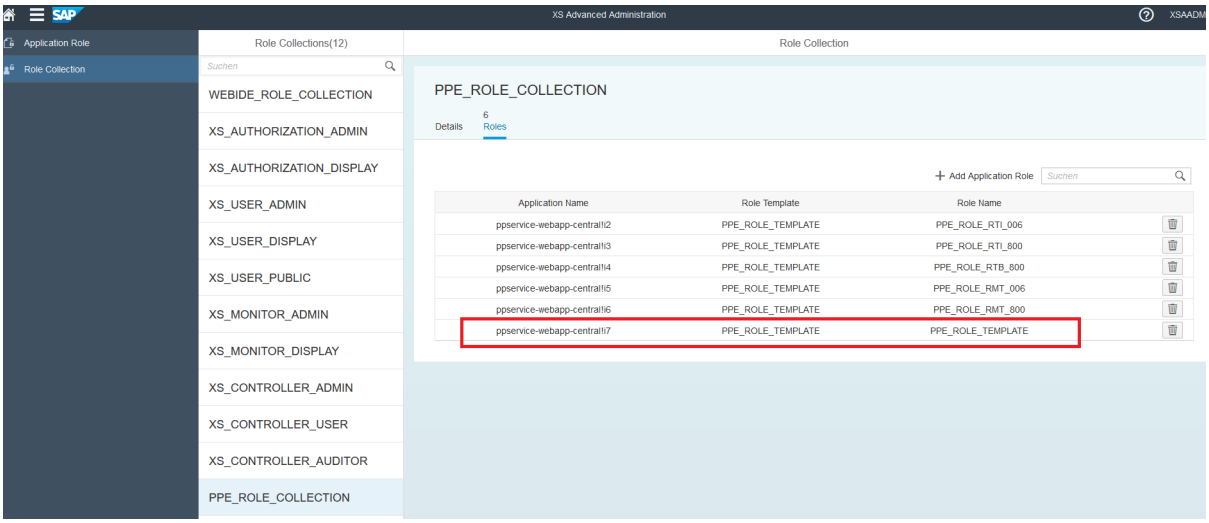
Application Run-Time Services > *Maintaining the SAP HANA XS Advanced Model Run Time* > *Building Roles for SAP HANA XS Advanced Model Applications* >.

1. If you are logged into space *SAP*, call the command `xs apps`. If you are logged into a different space, call `xs version`.
2. Check the URL of the application `xsa-admin` that has to be pre-installed in space *SAP*. If this application is not installed, contact your system administrator.
3. Access the URL of application `xsa-admin` and log in with the user for the role builder as described in section *Creating SAP HANA Users*.
4. Choose *Application Role Builder* and select the corresponding `ppservice-webapp-central` application.
5. You can use the default role from the role template `PPE_ROLE_TEMPLATE` of the PPS application, or you can create a new role.



For more information about building roles, see the *SAP HANA Administration Guide*, at https://help.sap.com/viewer/product/SAP_HANA_PLATFORM/ > *<Version>* > *Administration* > *SAP HANA Administrator Guide* > *Application Run-Time Services* > *Maintaining the SAP HANA XS Advanced Model Run Time* > *Building Roles for SAP HANA XS Advanced Model Applications* >.

6. Define a new role collection, or enrich an existing collection in the role builder with this role:



7. Assign this role collection to a user of your choice as described in section *Creating SAP HANA Users*. This user is then allowed to use the promotion pricing service to send price calculation requests. The name of the parameter should look as follows:
   XS_RC_<YOUR_ROLE_COLLECTION_NAME> with the value *<YOUR_ROLE_COLLECTION_NAME>*.
   For example, `XS_RC_PPE_ROLE_COLLECTION` with value `PPE_ROLE_COLLECTION`.
8. With a REST Client, verify that the promotion pricing service user that you have created in the prior step is working. For this, you have to set the following parameters in your REST Client (like Postman for Chrome):
   - Request method = POST
   - **Authorization**
     - Type = Basic Authentication
     - User name = <name of the user created in prior step>
     - Password = <password of the user created in prior step>

     > **Note**
     >
     > 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.
   - **Headers**
     - Accept = application/xml
     - Content-Type = application/xml
   - **URL**
     - Call the command *xs apps* and check for the URL of the `ppservice-approuter app`.
     - You can use this URL in a browser to import or download the corresponding certificate to your REST Client.
     - Append */restapi/* to the URL and enter this information in your REST Client.
   - Body = <PriceCalculate xmlns="http://www.sap.com/IXRetail/namespace/"/>

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.

Additional Configuration Settings (Optional)

There are a lot of settings that are not mandatory in a default case. However, they provide facilities to adapt the promotion pricing service to your specific needs.

Configuration of Caches

By default, all database accesses to OPP promotion and regular price entities are cached. For this, you can use the following two types of caches:

- Object cache based on JPA
  In this case, OPP promotions and their child entities (price rules, texts, and so on) are stored in the L2 object cache of the JPA provider, for example Eclipselink.
- 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). Guava is the default cache provider and allows the configuration of the cache via a cache specification string per cache region.

Example

How to Set the Query Result Caches Related to Promotional Information and Regular Prices

Source Code

```
# Use Spring caching for promotional information and base prices - true is
the default setting!
sap.dataaccess-common.cachenamedqueries=true
# Spring cache for promotional information
sap.dataaccess-
common.promocachespec=maximumSize=10000,expireAfterAccess=10m,expireAfterWrit
e=20m
# Spring cache for base prices
sap.dataaccess-
common.basepricecachespec=maximumSize=10000,expireAfterAccess=10m,expireAfter
Write=20m
```

To apply these settings, they have to be part of the extension descriptor within the `JBP_CONFIG_JAVA_OPTS` property.

Source Code

```
...
 JBP_CONFIG_JAVA_OPTS: 'java_opts: -Dsap.dataaccess-
common.db.client="<DB_CLIENT>" -Dsap.dataaccess-common.logSys=<LOGSYS>' -
Dsap.dataaccess-common.cachenamedqueries=true -Dsap.dataaccess-
common.promocachespec=maximumSize=10000,expireAfterAccess=10m,expireAfterWrit
e=20m -Dsap.dataaccess-
common.basepricecachespec=maximumSize=10000,expireAfterAccess=10m,expireAfter
Write=20m
...
```

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/viewer/p/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/viewer/p/CARAB ▶ *<Version>* ▶ *Development* ▶ under ▶ *Promotion Pricing Service* ▶ *PPS Module dataaccess-common* ▶.

Related Information

https://github.com/google/guava/wiki/CachesExplained
http://www.eclipse.org/eclipselink/documentation/2.6/concepts/cache.htm#CDEFHHEH

https://docs.spring.io/spring/docs/current/spring-framework-reference/html/cache.html

7.1.2.14.3 Update the PPS 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. The minimum required XSA version is 1.0.66.

Procedure

The following steps describe how to update the XSA component from version 1.1.0 to 1.2.0:

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)   1.1.0
   ```

2. Download the new SCV file `XSACOPPPPS<software_component_version>.ZIP` from SAP Service Marketplace.
3. Assuming your extension descriptor file is `config-op.mtaext`, execute the following command to install the new or patched application.
   In this case, the command is called from the directory of your extension descriptor file.

   Source Code

   ```
   xs install <pathToScvFile>/XSACOPPPPS<software_component_version>.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)   1.2.0
```

7.1.3 Troubleshooting

Diagnose and resolve issues that may arise when you install, upgrade, and implement your SAP Customer Activity Repository 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 and search for CAR RETAIL APPL BUNDLE (back-end) or SAP FIORI FOR SAP CARAB (front-end). Find 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 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 the Application Function Library (AFL)* in Upgrade SAP Customer Activity Repository applications bundle [page 49].
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: • `SAP RTL AFL FOR SAP HANA` • SAP HANA database • `SAP HANA AFL`	See section *Download and Install the Application Function Library (AFL)* in Upgrade SAP Customer Activity Repository applications bundle [page 49].
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

Area	Symptom	Cause	Possible Solutions
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.	• SAP Note 2078425 • SAP Note 2082466 • See the *SAP HANA Server Installation and Update Guide* for your SAP HANA Platform version. You can find this guide under https://help.sap.com/viewer/p/SAP_HANA_PLATFORM > *<Version>* > *Installation and Upgrade*.
Installation / Upgrade	You get an import error when installing the `RTLAPPS` software component of the CAR RETAIL APPL BUNDLE backend product version.	A program error must be fixed.	SAP Note 2377525
Installation / Upgrade	You get the error *CAR RETAIL APPLSAP DBTech JDBC: [258]: insufficient privilege: Not authorized*.	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

Area	Symptom	Cause	Possible Solutions
Installation / Upgrade	In an upgrade, you get the following error when running program `RUTDDLSCREATE`: *3 ETW678Xstart export of R3TRDDLS<CDS view name> ...* *3WETW000 DDLS <CDS view name> is not activated.* *2EETW190 "DDLS" <CDS view name> has no active version.* *4 ETW679 end export of R3TRDDLS<CDS view name>.*	An issue with CDS views must be fixed.	SAP Note 2340418
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	Relevant for upgrades to SAP NetWeaver 7.50 or higher: You have Data Dictionary (DDIC) objects that are deleted during the upgrade. In some cases, this deletion might lead to data loss in the upgraded system. The same can occur with data appended to tables.	Different solutions are possible, depending on your SAP NetWeaver version.	SAP Note 2513585

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 want to know which objects have not been activated correctly and what errors have occurred.	• 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.
SAP HANA content	You have run the `/CAR/ACTIVATE_HTA` activation report but get the error *Insufficient privilege: Not authorized*.	The SAP HANA user needs additional authorizations (privileges).	SAP Note 2586850

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 an authorization issue.	• Check if SAP HANA database user `_SYS_REPO` has been assigned privilege `SELECT` with option *Grantable to others*. If not, you can grant the missing privilege using the following example SQL statement: **`GRANT SELECT ON SCHEMA <your schema name> TO _SYS_REPO WITH GRANT OPTION;`** • Check that other required authorizations have been set up correctly. For more information, see section *Verify Users, Privileges, and Roles* of the *Common Installation Guide*.
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	After running the `/CAR/ACTIVATE_HTA` activation report, you get two conflicting messages: • *The following scenario was deployed successfully...* • *But returned error/warning/information message(s)...*	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 74].

Area	Symptom	Cause	Possible Solutions
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.	• 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*.
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`. This component contains backend 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 the Application Function Library (AFL)* in Upgrade SAP Customer Activity Repository applications bundle [page 49].
SAP HANA content	You get the error *Table ABAP:/DMF_ORG_ASSIGN not found*.	A program error must be fixed.	• SAP Note 2218875 • SAP Note 2224582
SAP HANA content	You get the error *Object DDF_ORG_ASSIGN (Calculation View), package sap.is.ddf.udf.data_validation, was processed with errors*.	A program error must be fixed.	SAP Note 2224582
SAP HANA content	You get the error *SQLScript: Could not derive table type for variable "UDF_FC_HORIZON"*.	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.	• 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	You get any of the following errors: • *View "/AMR/..." does not exist in data base* • *"DDL Source" "/AMR/...." could not be activated* • *"DDL Source" "/DMF/DIST_..." could not be activated*	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 *SQL Script message: invalid table name: Could not find table/view /AMR/V*.	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 *View with par. <CDS view name>: data element <data element> par. & does not exist or not active*.	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: • Priority 1 error: *View <view_name> is not consistent* • Priority 1 error: *<view_name-field> is not consistent* • 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 get an error when **upgrading from a lower** SAP HANA database revision to revision 122.07 or higher.	A program error must be fixed.	SAP Note 2438001
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
Customizing	You cannot see the Customizing activities for Unified Demand Forecast (UDF) in the *SAP Customizing Implementation Guide* (transaction **SPRO**). Either the activities are not displayed at all or you see different activities. When you try to display the correct activities by activating business functions in the Switch Framework (transaction **SFW5**), you get an error.	You might not have activated all required business functions for UDF.	See section *Activate Business Functions for DDF and UDF* of the *Common Installation Guide*.

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.	• See section *Configure Automatic Flattening of Hierarchies* of the *Common Installation Guide*.
			• See the following sections of the *SAP Customer Activity Repository Administration Guide* under https://help.sap.com/viewer/p/CARAB ▶ *<Version>* ▶ *Administration* ▶:
			  ○ *Configuring Demand Data Foundation (DDF)*
			  ○ *Configuring Data Replication from SAP ERP to DDF*

Hierarchies	You get errors when importing article hierarchies (product hierarchies) from your master data system.	A program error must be fixed.	• 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 `/DMF/OFR_LG_LOC`.	SAP Note 2208619
Hierarchies	An error occurs for a DDL SQL view when you execute the `CREATE VIEW` statement.	A program error must be fixed.	SAP Note 2377525

Area	Symptom	Cause	Possible Solutions
DRF data replication framework (transaction **DRFOUT**)	You have deleted a vendor from the `/DMF/D_VENDOR` table but this deletion is not replicated to the master data system.	A program error must be fixed.	SAP Note 1872136
DRF data replication framework (transaction **DRFOUT**)	You get an error when using the DRF with the `PMPL` SAP ERP outbound implementation.	A program error must be fixed.	• SAP Note 1904782 • SAP Note 2167629 • See the application help for SAP Customer Activity Repository at https://help.sap.com/viewer/p/CARAB ▶ *<Version>* ▶ *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 *Product &1, location &2: The Valid From time for &3 must be 00:00:00* (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

Area	Symptom	Cause	Possible Solutions
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 *SAP HANA Troubleshooting and Performance Analysis Guide* under https://help.sap.com/viewer/p/SAP_HANA_PLATFORM ▶ *<Version>* ▶ *Administration* ▶.
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 *Update Sales Projection* function in SAP Assortment Planning (workbooks *Product Planning* and *Size Planning*). 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 `CL_SADL_SQL_STATEMENT`, method `EXECUTE_PREPARED_STATEMENT`. The OData request uses the system query option `$count`.	The Core Data Services (CDS) view uses a table function that is not active in the database. The trigger that is supposed to activate it fails because of missing parameters if only `$count` 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.	• 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 *SYSTEM_ABAP_ACCESS_DENIED*.	The error is caused by the Blacklist Monitor in SAP S/4HANA on premise.	SAP Note 2249880

Troubleshoot Operation Issues

You also may encounter issues during the day-to-day running of your application. For troubleshooting information, see the application-specific *Administration Guides* under https://help.sap.com/viewer/p/CARAB ▶ *<Version>* ▶ *Administration* ▶:

- *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 encounter an issue with your system, we recommend that you first search the SAP Knowledge Base and SAP Notes for existing solutions. For more information, see http://support.sap.com/ ▶ *My Support* ▶ *Knowledge Base* ▶.
- To view or report an incident, see http://support.sap.com/ ▶ *My Support* ▶ *Incidents* ▶.
- 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*.

7.2 SAP Merchandise Planning

This upgrade guide describes upgrading to *SAP Merchandise Planning 2.0 FP3* from *SAP Merchandise Planning 2.0 FP2*. It is assumed you have completed the upgrade activities in this guide under ▶ *SAP Customer Activity Repository applications bundle* ▶ and ▶ *SAP Customer Activity Repository* ▶ *Core* ▶. (Available at https://help.sap.com/viewer/p/CARAB).

7.2.1 Activate SAP HANA Content for SAP Merchandise Planning

Activate 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. In particular, you must have created all the necessary tables, as described in Create/Replicate Source Master Data System Tables [page 67].

You must also have mapped all the necessary schemas, as described in Verify Correct Schema Mapping [page 72].

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 have to be activated before activating the BI Content objects as described in Activate Application BI Content Upgrade [page 144] .

For more information, see http://help.sap.com/hana ▶ *HANA Platform* ▶ Section *Activating Objects of the SAP HANA Developer Guide SAP*.

Procedure

1. In your back-end system, start transaction **SE38**.
2. Enter `/CAR/ACTIVATE_HTA` and choose *Execute*.
3. Select all applicable *ECC modes* and the business scenarios *Demand Data Foundation* and *Merchandise Planning* to activate the SAP HANA content.
4. Optionally, select the *Perform Prerequisite Check* option to validate the processing and read the system log prior to applying any database changes.
5. Choose *Execute*.
6. Ensure that the `_SYS_REPO` user has the authorizations required to successfully activate SAP HANA content.

   Provide user `_SYS_REPO` with object privilege `SELECT`, with option *"Grantable to others"*, on the following physical DB schemas:

   - Physical database schema of your back-end system, typically this is called SAP<SID>.
   - Physical database schema that contains the SAP ERP tables

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

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

7. Log on to SAP HANA Studio.
8. Open the *Modeler* and use the *Navigator* to access your back-end system.
9. Expand the *Content* folder located under your system name in the *Navigator*.
10. Expand the listed packages to verify the underlying folders listed below are active:
    - `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`

7.2.2 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
- Composite Providers
- Aggregation Levels
- Queries
- Workbooks

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 `RSA1` to launch the BW workbench.

1. Verify transport connections.
    1. Select *Transport Connection* in the left-hand frame.
    2. Select *Object Types*.
    3. Expand *Source System*.
    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*.

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 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 160].

    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.

DataStore Objects (advanced)

aDSO Description	aDSO
Market Hierarchy CR based on Planning Configuration Set	/RAP/MHDS1
MP - Regional Month Sales Target for Omni Channel	/RAP/MPDS1
Market Hierarchy CR aDSO for LY and LLY	/RAP/MHDS2
MP - Local Month Sales Inventory Targets for Retail and E-Co	/RAP/MPDS2
MP - Local Month Sales and Inventroy Targets for Wholsale	/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
aDSO for actuals of LY and LLY KPIs	/RAP/MPDS0

Composite Providers

Composite Provider Description	Composite Provider
Merchandise Financial Plan Omni Channe	`/RAP/CP15`

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
AL for Actuals of LY and LLY KPIs	/RAP/MPDSA0

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/C15A03_IRQ00
MP - Regional Targets - Season Sales Mix - PHN7	/RAP/CP15A03_IRQ01

Query Name	Technical Name
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

Note

If you cannot locate workbooks navigate to *BI Content* > *Object Types* > *More Types* > *Analysis Office Excel Workbook*.

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

Merchandise Planning Retail Workbooks

Workbook Description	Workbook Technical Name
01 - Channel Mix	/RAP/MPCHANNELMIXV2
03 - Merchandise Plan - Class	/RAP/MPCLASSV2
02 - Merchandise Plan - Department	/RAP/MPDEPARTMENTV2
01 - Merchandise Plan - Division	/RAP/MPDIVISIONV2
05 - Merchandise Plan - OTB Reconsiliation Report	/RAP/MPOTBRECONSILIATIONV2
05 - Channel Plan - Store Area Plan	/RAP/MPSTOREAREAV2
02 - Channel Plan - Store Comparability	/RAP/MPSTORECOMPV2
03 - Channel Plan - Multi Store	/RAP/MPSTOREMULTIV2
04 - Channel Plan - Single Store	/RAP/MPSTORESINGLEV2
04 - Merchandise Plan - Subclass	/RAP/MPSUBCLASSV2

7.3 SAP Assortment Planning

7.3.1 2.0 FP1 to 2.0 FP3

Upgrade information.

This section is intended for existing SAP Assortment Planning for Retail customers who have installed and configured SAP Assortment Planning for Retail 2.0 FP1 and would like to upgrade to SAP Assortment Planning 2.0 FP3.

> ⚠ 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.

7.3.1.1 Quick Guide

Upgrade to SAP Assortment Planning 2.0 FP3.

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 core follow-up activities listed under SAP Customer Activity Repository. See Core [page 66].
- ☐ 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 2.0 FP2 update report.
- ☐ Run the SAP Assortment Planning 2.0 FP3 update report.
- ☐ Verify that all SAP Assortment Planning OData services are active following the upgrade.
- ☐ 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.

7.3.1.2 Perform Core SAP Customer Activity Repository Follow-Up Steps

Perform core SAP Customer Activity Repository follow-up steps.

Context

The follow-up steps for SAP Customer Activity Repository consists of *Core* and *Advanced (Optional)* steps. The core steps are required by most implementation scenarios, and therefore, you must complete them before executing the follow-up steps for your consuming application.

Procedure

Perform all steps listed under Core [page 66].

7.3.1.3 Adjust Customizing Settings

Customizing to maintain following an upgrade to SAP Assortment Planning 2.0 FP3.

Context

Following the upgrade, you need to make settings in Customizing to be able to use SAP Assortment Planning 2.0 FP3.

Procedure

1. Log on to your back-end system.
2. 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 successfully reactivate the Retail SAP BW Structure, available from previous releases. For more information, see Reactivate SAP Assortment Planning Planning Framework Content [page 152].
3. 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 successfully reactivate the Retail SAP BW Structure, available from previous releases. For more information, see Reactivate SAP Assortment Planning Planning Framework Content [page 152].
4. Maintain number ranges for planning configurations under *Cross-Application Components* > *Assortment Planning* > *Number Ranges* > *Maintain Number Range for Planning Configuration*.
5. Maintain number ranges for parameter configurations under *Cross-Application Components* > *Assortment Planning* > *Number Ranges* > *Maintain Number Range for Parameter Configuration*.
6. If present, verify your custom implementation of *BAdI: Extraction of KPIs for Location Clustering*.

   As of SAP Assortment Planning 2.0 FP2, the definition and default implementation of this BAdI has been modified.

Furthermore, BAdIs found under *Cross-Application Components* > *Assortment Planning* > *Imported Demand Data Foundation Settings* > *Data Maintenance* > *Location Clustering* > *Enhancements Using Business Add-Ins* > *Extraction of KPIs for Location Clustering* have also been modified as follows:

- *BAdI: Extraction of Referenced Sales*
  Definition and default implementation of this BAdI have been modified.
- *BAdI: Extraction of Capacity KPIs*
  Definition of this BAdI has been modified, and its default implementation is inactive.
  As of SAP Assortment Planning 2.0 FP2, *BAdI: Extraction of Planned KPIs*, used by location clustering to extract planned KPIs, is not executed if the usage of planning configurations is enabled. If necessary, provide a custom implementation to replace *BAdI: Extraction of Planned KPIs*.
  For more information, see *Load Merchandise Planning Data* section in the *Common Installation Guide*.
- *BAdI: Extraction of Planned KPIs*
  Definition of this BAdI has been modified, and its default implementation is inactive.

7.3.1.4 Verify Time Data

Time data to verify following an upgrade to SAP Assortment Planning 2.0 FP3.

Context

If not already done, ensure that the previous generated time data is sufficient for SAP Assortment Planning 2.0 FP3.

Procedure

Ensure that the time data for the Gregorian Calendar, and, if required, the Fiscal Calendar, has been generated far enough into the past and future.

For more information, see:

- *Generate Time Data - Gregorian Calendar* and *Generate Time Data - Fiscal Calendar* sections of the *Common Installation Guide*.
- *Management* section of the *SAP Assortment Planning Administration Guide*.

7.3.1.5 Reactivate SAP Assortment Planning Planning Framework Content

As of SAP Assortment Planning 2.0 FP2, 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.

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*.

For more information, see SAP Note 2477932.

7.3.1.5.1 Activate Application BI Content

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.

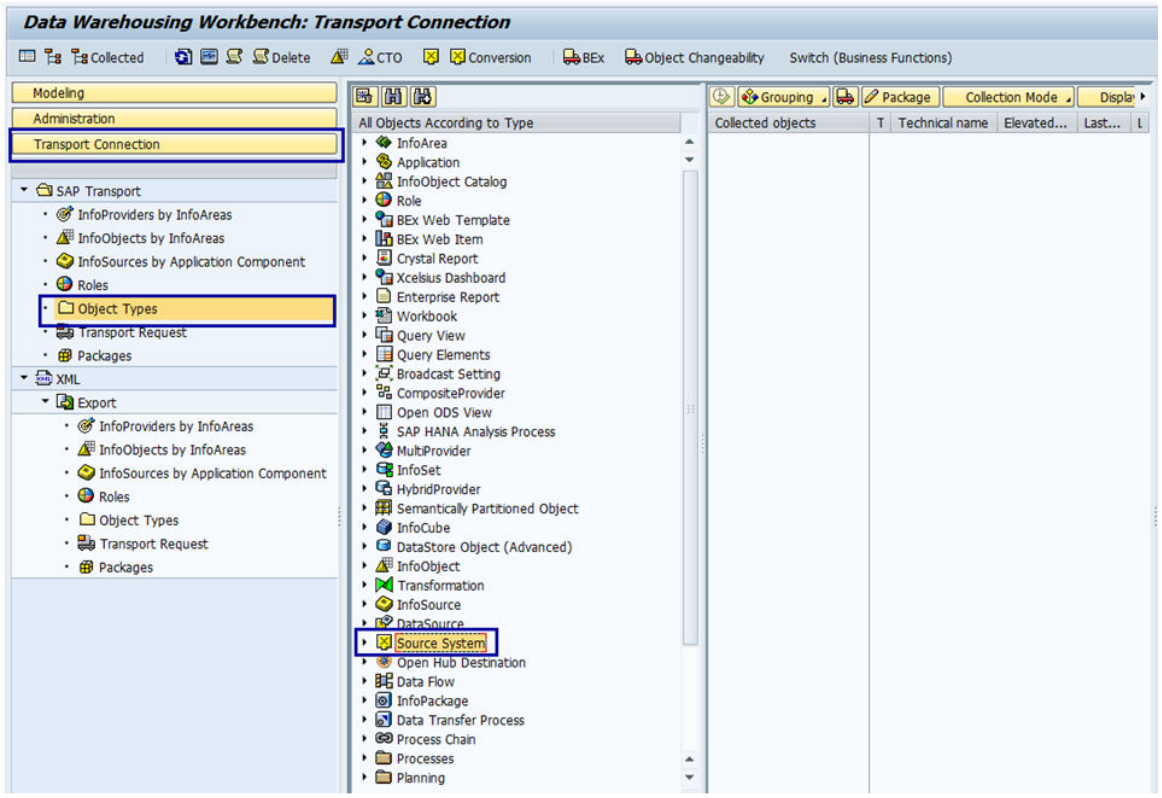
> **Note**
>
> To ensure correct activation of the local BI Content objects, carry out the activation sequentially, as specified in the following procedures. Resolve any activation warnings, except for the ones listed under Activation Warnings [page 160], which can be ignored.
>
> Also, the default BI 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

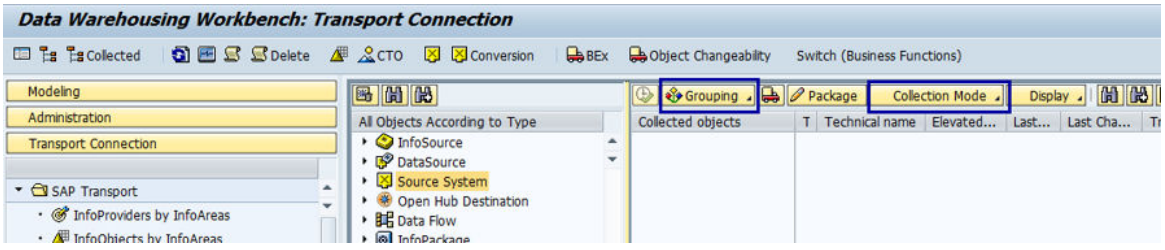
1. On your back-end SAP Assortment Planning system, open the Data Warehousing Workbench (transaction `RSA1`).
2. Verify transport connections.

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*.



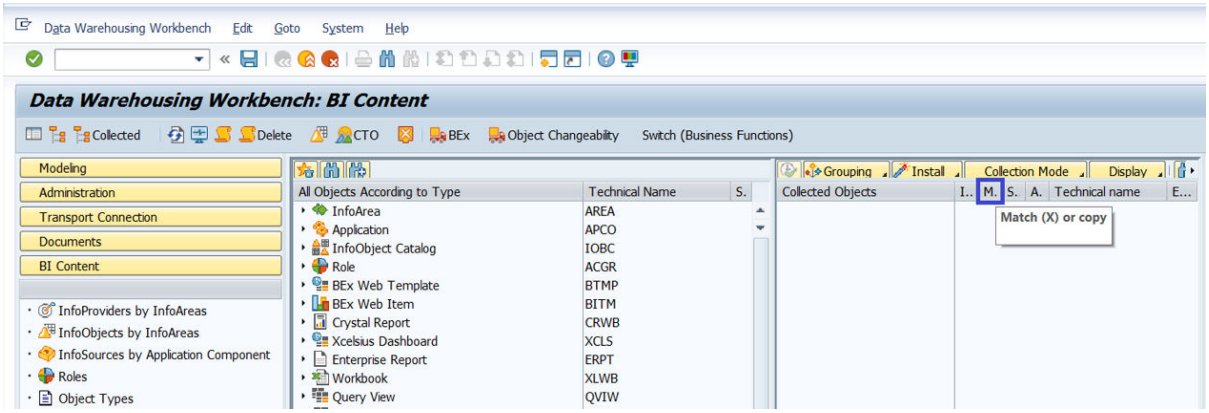
Grouping and Collection Settings

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 *Match (X) or copy* 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 environment**[1]	**Standard `/RAP/*` BI Content objects have been modified in your local environment**[1]
	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.

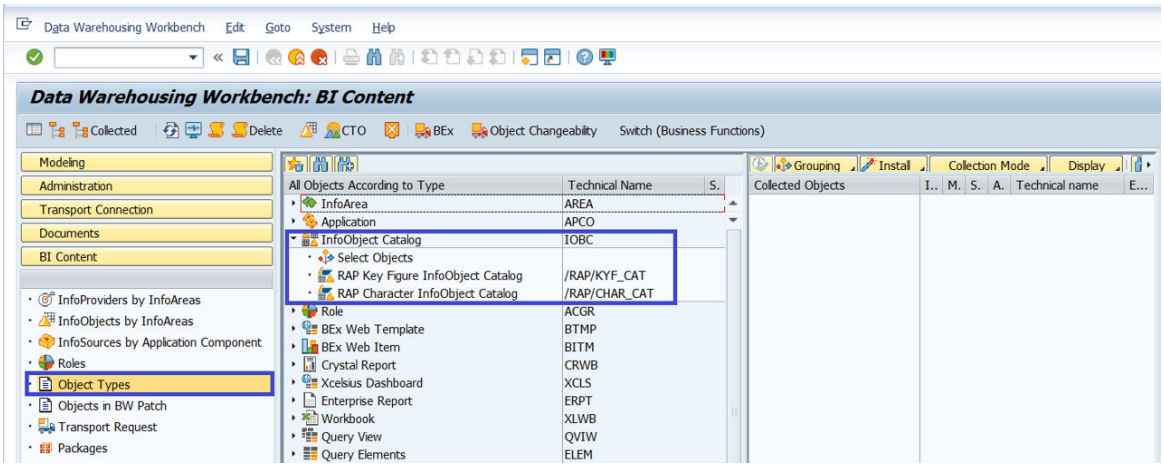


4. Activate InfoObject catalogs.
   If at any point during the installation of BI Content objects you are presented with a dialog asking you to add objects to a personal list, we recommend that you select **No**.

Remember

You can ignore activation warnings listed under Activation Warnings [page 160].

1. Select *BI Content* in the left-hand frame.
2. Select *Object Types* and expand *InfoObject Catalog*.

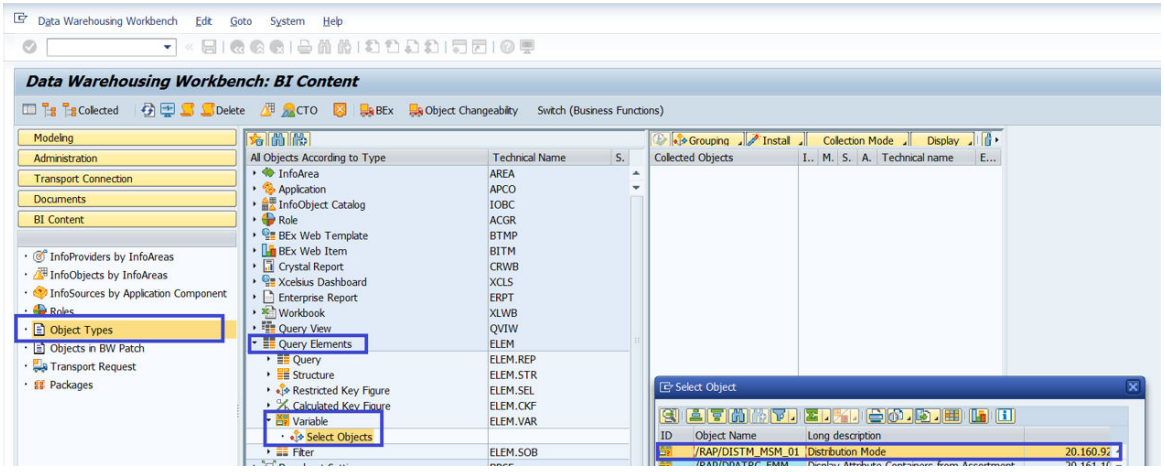


3. Use *Select Objects* to select the `/RAP/CHAR_CAT` and the `/RAP/KYF_CAT` catalogs.
4. Choose *Transfer Selections*.
5. In the right-hand frame, in the list of *Collected objects,* verify that both InfoObject catalogs are listed.
6. Right-click on each of the InfoObject catalogs, and choose *Install 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 160].

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.

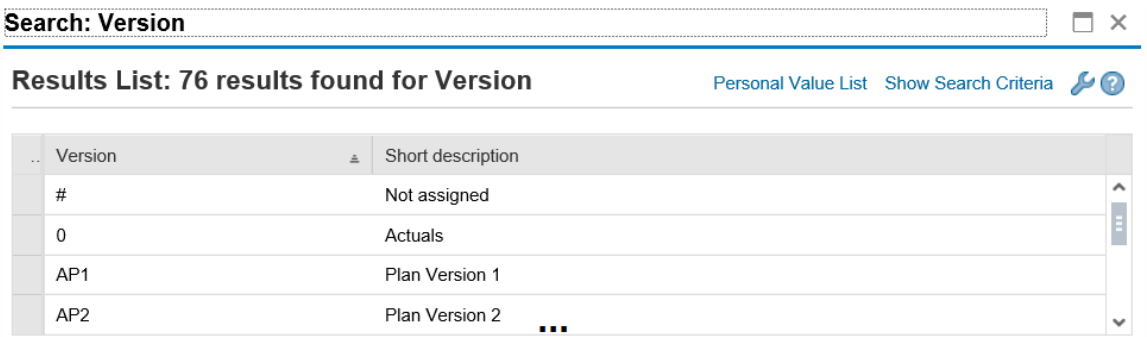


4. Choose *Transfer Selections*.
5. In the right-hand frame, in the list of *Collected objects,* verify that the `/RAP/DISTM_MSM_01` Variable is listed and that the option in the *Install* column is enabled.

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
PRJ
REF



The supported planning versions are described in detail in the *Maintain Customizing Table /RAP/RS_VARCUST* section of the *Common Installation Guide*.

> **Note**
>
> If you encounter problems opening the master data maintenance WebDynpro application, ensure that you have implemented SAP Note 2034623.

7. Activate DataStore Objects.

   > **Remember**
   >
   > You can ignore activation warnings listed under Activation Warnings [page 160].

   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 160].

   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 160].

   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 160].

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 160].

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 160].

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>

7.3.1.5.2 Activate SAP HANA Content for SAP Assortment Planning - Final Activation

Use

In this procedure, you perform the final activation of SAP HANA content (views and stored procedures) required by the SAP Assortment Planning application. This final activation results in a **full** activation of the SAP HANA content for SAP Assortment Planning. Several SAP HANA views depend on local BI Content objects, and as such, have to be activated following the activation of these BI Content objects, as described in this procedure.

Prerequisites

As a mandatory prerequisite for a successful activation of SAP HANA content for SAP Assortment Planning, you must have successfully completed all of the procedures listed in the previous sections of this guide. In particular, Activate SAP HANA Content [page 74].

Procedure

1. In your back-end system, start transaction `SE38`.
2. Enter `/CAR/ACTIVATE_HTA` and choose *Execute*.
3. Select all applicable source master data systems, the *Assortment Planning (Final)* business scenarios, and external systems for which you wish to activate HTA content.

> ⚠ Caution
>
> Ensure that selecting the *Assortment Planning (Final)* scenario also selected the *Forecasting* scenario. If not, select this scenario manually.

4. Optionally, choose the *Perform Prerequisite Check* option to validate the processing and read the system log prior to applying any database changes.
5. Choose *Execute*.

More Information

- If you encounter issues during the activation, see the Troubleshooting [page 131] section for possible solutions.
- For more information about activating SAP HANA content in SAP HANA studio, see http://help.sap.com/viewer/p/SAP_HANA_PLATFORM *Development* > *SAP HANA Developer Guide (SAP HANA studio)* > *Setting Up the Analytic Model* > *Creating Views* > *Activating Objects*.
- For more information about HTAs, see the Application Help for SAP NetWeaver 7.5 at https://help.sap.com/saphelp_nw75/helpdata/en/ff/7652bd542849b18b218efe8d2f2373/content.htm?frameset=/en/34/dfb3083df34453beb5eb8ade7bd4ed/frameset.htm&current_toc=/en/4e/bfa9a86e391014adc9fffe4e204223/plain.htm&node_id=7&show_children=false.

7.3.1.6 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

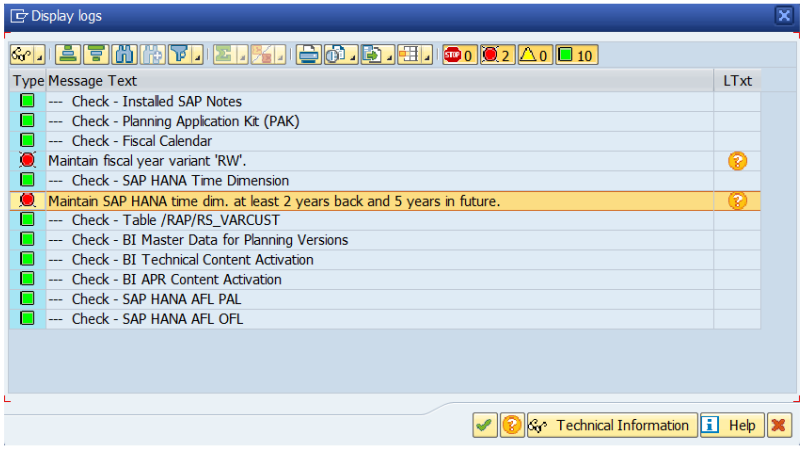
- DRFOUT Outbound Implementation: `PAHY`
- DDF Inbound Interface: `/DMF/MDIF_PROD_HIER_INBOUND`

- All the tables listed in the spreadsheet of the *CARAB 2.0 - 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 periodic tasks to load product attributes into SAP Assortment Planning are still running following the upgrade. (reports `/DMF/ATR_IMPORT` and `/DMF/PROD_ATR_IMPORT`)
- Ensure that season classification data is being loaded from the appropriate source. For more information, see the *Load Season Classification Data* section in the *Common Installation Guide*.
  You also need to set up the *Execute inbound SLT replication for season data* report (`/DMF/EXECUTE_SEASON_INBOUND` in transaction `SE38`) to run as a background job to regularly import any updates from SAP Fashion Management to DDF.
- 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 *Common Installation Guide*.

7.3.1.7 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 to validate the Retail SAP BW structure, the structure recommended to reactivate during the upgrade. For more infrormation, see Reactivate SAP Assortment Planning Planning Framework Content [page 152].

Running this report allows you 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 need to troubleshoot.

7.3.1.8 Run the SAP Assortment Planning for Retail 2.0 FP2 and 2.0 FP3 Update Reports

Context

Run this report to carry out back-end server changes required by the SAP Assortment Planning 2.0 FP3 release.

Procedure

1. Run transaction `SE38`.
2. Execute the `/RAP/20_FP2_UPGRADE_APR` report.

   Read the documentation associated with the report for important information on updates performed by the report.

3. Execute the `/RAP/20_FP3_UPGRADE_APR` report.

   Read the documentation associated with the report for important information on updates performed by the report.

7.3.1.9 Activate SAP Assortment Planning OData Services

Use

A number of OData services are required to run the SAP Assortment Planning application.

Following an upgrade, you must ensure that all OData services required by the SAP Fiori user interface of the SAP Assortment Planning application are activated.

Procedure

1. Log on to your front-end system (your SAP NetWeaver system).
2. Go to Customizing (transaction `SPRO`).
3. Navigate to *SAP NetWeaver* > *Gateway* > *OData Channel* > *Administration* > *General Settings* > *Activate and Maintain Services*.
   You are presented with the service catalog. This is a list of all the services that are currently active on your SAP Gateway.
4. Get SAP Assortment Planning OData services:
   1. Choose *Add Service*.
      The *Add Service* screen is displayed.
   2. Enter the system alias of your back-end system.
      This is the alias created for your back-end system in the Connect SAP NetWeaver Gateway to your Back-End System [page 84] procedure. For example `RAPCLNT100`.
   3. Enter **`/DMF*`** in the *Technical Service Name* field.
   4. Choose *Get Services*.
      The *Add Selected Services* screen is displayed.
   5. Select the SAP Assortment Planning OData services you would like to activate, and choose *Add Selected Services*.

OData Service
`/DMF/CURRENCY_LIST_SRV`
`/DMF/LOCATION_CLUSTERSET_SRV`
`/DMF/MASTER_DATA_SRV`

OData Service
/DMF/MODULE_MANAGEMENT_SRV
/DMF/OBJ_ATTRIBUTE_SRV
/DMF/PLAN_CONFIG_SRV
/DMF/SEARCH_LOCATIONS_SRV
/DMF/SEARCH_PRODUCTS_SRV
/DMF/SEASONS_SRV

The selected OData services are now active in your SAP Gateway.

6. Enter **`/RAP*`** in the *Technical Service Name* field.
7. Choose *Get Services*.
   The *Add Selected Services* screen is displayed.
8. Select the SAP Assortment Planning OData services you would like to activate, and choose *Add Selected Services*.

OData Service
/RAP/ASSORTMENT_LIST_SRV
/RAP/OPTION_PLAN_SRV
/RAP/PHP_MATCH_SRV
/RAP/VALIDITY_PERIOD_SRV

The selected OData services are now active in your SAP Gateway.

More Information

For SAP NetWeaver 7.31, see SAP Library for User Interface Add-On 1.0 on SAP Help Portal at http://help.sap.com/viewer/p/UI_ADD-ON_FOR_SAP_NETWEAVER_20 *Application Help* > *SAP Library* > *SAP Fiori Launchpad* > *Setting Up the Launchpad* > *Activating SAP Gateway OData Services*.

For SAP NetWeaver 7.4, see the documentation on SAP Help Portal at http://help.sap.com/viewer/p/SAP_NETWEAVER_740 *Application Help* > *UI Technologies in SAP NetWeaver (with SAP_UI 740)* > *SAP Fiori Launchpad* > *Setting Up the Launchpad* > *Activating SAP Gateway OData Services*.

For SAP NetWeaver 7.5, see the documentation on SAP Help Portal at http://help.sap.com/viewer/p/SAP_NETWEAVER_750 *Application Help* > *UI Technologies in SAP NetWeaver (with SAP_UI 750)* > *SAP Fiori Launchpad* > *Setting Up the Launchpad* > *Activating SAP Gateway OData Services*.

7.3.1.10 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 *Maintain Service* 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/modulemgmt_v2/`
   - `/sap/bc/ui5_ui5/sap/optionplan_v2/`
   - `/sap/bc/ui5_ui5/sap/phpmatch_v2/`
   - `/sap/bc/ui5_ui5/sap/plnconfig/`

7.3.1.11 Define System Alias for Back-End Transactions

Use

A number of SAP Assortment Planning 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 RFC connections and system alias definitions required by SAP Assortment Planning application 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 the SAP Assortment Planning application.
2. Launch *Configuration of RFC Connections* (transaction `SM59`).
3. Create an RFC connection with the *RFC Destination* set to `SAP_ISR_CARAB` and *Connection Type* set to `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. Create another RFC connection with the RFC Destination set to `SAP_ERP_ISR_CARAB` and *Connection Type* set to `H` (HTTP connection).
   Ensure to maintain all of the settings required to connect to your front-end system to the SAP Retail or SAP S/4HANA system, in particular, the *Target Host* entry on the *Technical Settings* tab.
5. Save your changes.
6. Open *Launchpad Customizing* (transaction `LPD_CUST`).
7. Select the SAP Assortment Planning role (`UIRAP001`), and choose *Display*.
   The two catalogs, *Assortment Planner* and *Planning Administrator*, are displayed.
8. In each of the catalogs, selecting one app at a time, make the following settings:

Catalog	App	System Alias	Description
Assortment Planner	*View Log*	`SAP_ISR_CARAB`	This setting allows the *My Assortment Lists* app to launch transaction `SLG1` on the back-end system. **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.
	View ExtAssort Listing Conditions	`SAP_ERP_ISR_CARAB`	This setting allows the *My Assortment Lists* app to launch transaction `WSL10` on the connected SAP Retail or SAP S/4HANA system. **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.

Catalog	App	System Alias	Description
	View External Assortments	SAP_ERP_ISR_CARAB	This setting allows the *My Assortment Lists* app to launch transaction WRF_WSOA3 on the connected SAP Retail or SAP S/4HANA system. **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.
Planning Administrator	*Manage Category responsibilities*	SAP_ISR_CARAB	This setting allows the *Manage Category Responsibilities* app to launch the corresponding DDF WebDynpro application.
	Manage Market responsibilities	SAP_ISR_CARAB	This setting allows the *Manage Market Responsibilities* app to launch the corresponding DDF WebDynpro application.
	Manage Products	SAP_ISR_CARAB	This setting allows the *Manage Products* app to launch the corresponding DDF WebDynpro application.
	Manage Locations	SAP_ISR_CARAB	This setting allows the *Manage Locations* app to launch the corresponding DDF WebDynpro application.

7.3.1.12 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.

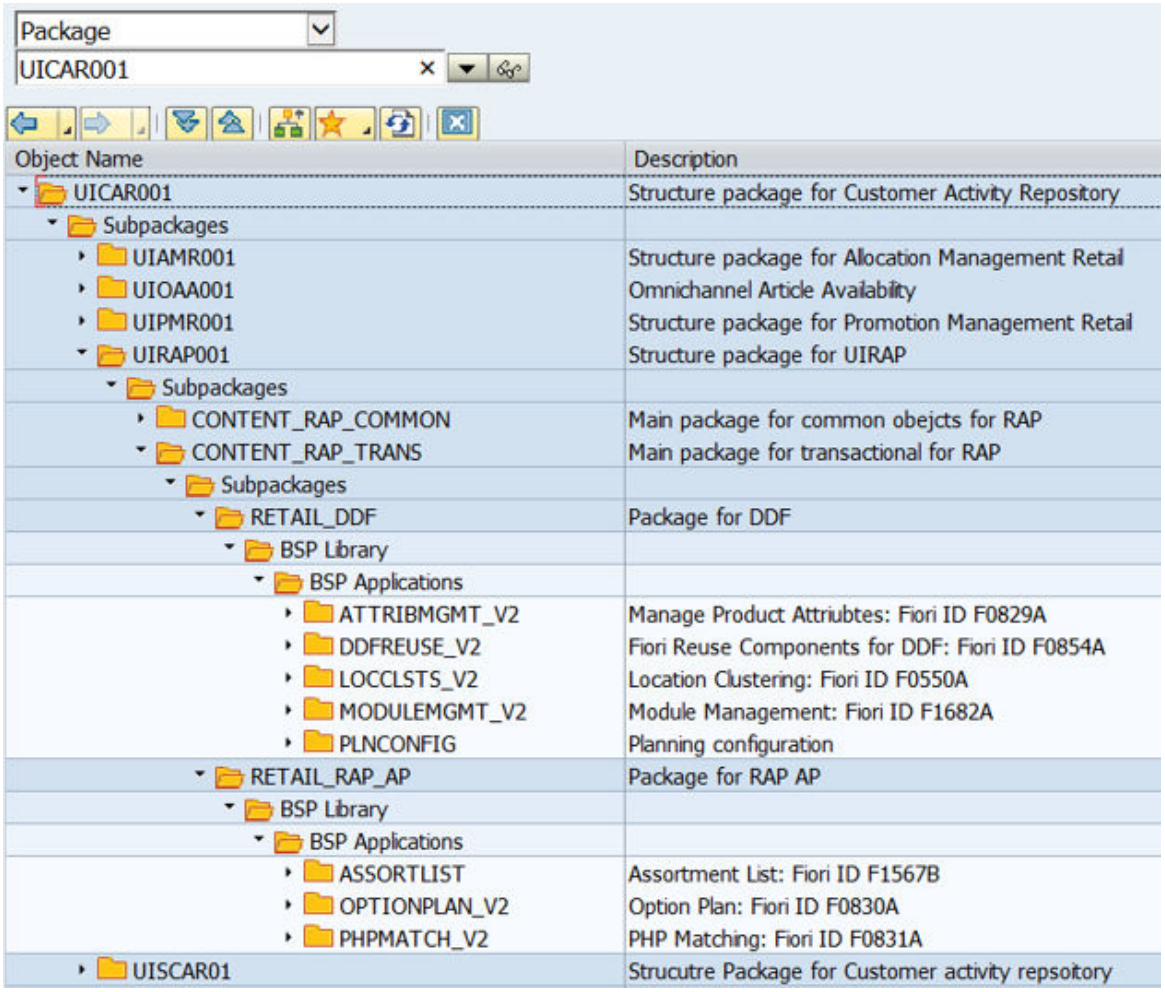
These steps are also listed in the *Troubleshooting* section of the *SAP Assortment Planning Administrator's Guide* available on the SAP Help Portal at http://help.sap.com/viewer/p/CARAB *<Your Version>* *Administration* *SAP Assortment Planning Administration Guide*.

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:



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.

7.3.2 2.0 FP2 to 2.0 FP3

Upgrade information.

This section is intended for existing SAP Assortment Planning for Retail customers who have installed and configured SAP Assortment Planning for Retail 2.0 FP2 and would like to upgrade to SAP Assortment Planning 2.0 FP3.

> ⚠ 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.

7.3.2.1 Quick Guide

Upgrade to SAP Assortment Planning 2.0 FP3.

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 core follow-up activities listed under SAP Customer Activity Repository. See Core [page 66].
- ☐ 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 2.0 FP3 update report.
- ☐ Verify that all SAP Assortment Planning OData services are active following the upgrade.
- ☐ 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.

7.3.2.2 Perform Core SAP Customer Activity Repository Follow-Up Steps

Perform core SAP Customer Activity Repository follow-up steps.

Context

The follow-up steps for SAP Customer Activity Repository consists of *Core* and *Advanced (Optional)* steps. The core steps are required by most implementation scenarios, and therefore, you must complete them before executing the follow-up steps for your consuming application.

Procedure

Perform all steps listed under Core [page 66].

7.3.2.3 Adjust Customizing Settings

Customizing to maintain following an upgrade to SAP Assortment Planning 2.0 FP3.

Context

Following the upgrade, you need to make settings in Customizing to be able to use SAP Assortment Planning 2.0 FP3.

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 successfully reactivate the Retail SAP BW Structure, available from previous releases. For more information, see Reactivate SAP Assortment Planning Planning Framework Content [page 175].

   a. 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 successfully reactivate the Retail SAP BW Structure, available from previous releases. For more information, see Reactivate SAP Assortment Planning Planning Framework Content [page 175].

   If you use the Omnichannel SAP BW structure, make sure that *Use Planning Configuration* is enabled.
3. Maintain number ranges for planning configurations under *Cross-Application Components* > *Assortment Planning* > *Number Ranges* > *Maintain Number Range for Planning Configuration*.
4. Maintain number ranges for parameter configurations under *Cross-Application Components* > *Assortment Planning* > *Number Ranges* > *Maintain Number Range for Parameter Configuration*.
5. Make sure that the settings in Customizing activity *Assortment List Settings* fit to your planning process.

   As of SAP Assortment Planning for Retail 2.0 FP1, a new Customizing activity, *Assortment List Settings*, has been added, allowing you to specify settings for assortment lists. The *Assortment List Settings* activity is available in Customizing under *Cross-Application Components* > *Assortment Planning* > *Assortment Lists*.
6. 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*.
7. If present, verify your custom implementation of *BAdI: Extraction of KPIs for Location Clustering*.

   As of SAP Assortment Planning 2.0 FP2, the definition and default implementation of this BAdI has been modified.

   Furthermore, BAdIs found under *Cross-Application Components* > *Assortment Planning* > *Imported Demand Data Foundation Settings* > *Data Maintenance* > *Location Clustering* > *Enhancements Using Business Add-Ins* > *Extraction of KPIs for Location Clustering* have also been modified as follows:
   - *BAdI: Extraction of Referenced Sales*
     Definition and default implementation of this BAdI have been modified.
   - *BAdI: Extraction of Capacity KPIs*
     Definition of this BAdI has been modified, and its default implementation is inactive.

As of SAP Assortment Planning 2.0 FP2, *BAdI: Extraction of Planned KPIs*, used by location clustering to extract planned KPIs, is not executed if the usage of planning configurations is enabled. If necessary, provide a custom implementation to replace *BAdI: Extraction of Planned KPIs*.
For more information, see *Load Merchandise Planning Data* section in the *Common Installation Guide*.

- *BAdI: Extraction of Planned KPIs*
  Definition of this BAdI has been modified, and its default implementation is inactive.

8. Verify default implementation of *BAdI: Determine Product Season Classification* and, if necessary, provide a custom implementation.

   As of SAP Assortment Planning for Retail 2.0 FP1, a new BAdI, *BAdI: Determine Product Season Classification*, has been provided to determine the season classifications (and their corresponding date ranges) of products in an assortment list. This new BAdI is found under *Cross-Application Components* > *Assortment Planning* > *Enhancements Using Business Add-Ins*.

7.3.2.4 Verify Time Data

Time data to verify following an upgrade to SAP Assortment Planning 2.0 FP3.

Context

If not already done, ensure that the previous generated time data is sufficient for SAP Assortment Planning 2.0 FP3.

Procedure

Ensure that the time data for the Gregorian Calendar, and, if required, the Fiscal Calendar, has been generated far enough into the past and future.

For more information, see:

- *Generate Time Data - Gregorian Calendar* and *Generate Time Data - Fiscal Calendar* sections of the *Common Installation Guide*.
- *Management* section of the *SAP Assortment Planning Administration Guide*.

7.3.2.5 Reactivate SAP Assortment Planning Planning Framework Content

As of SAP Assortment Planning 2.0 FP2, 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.

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*.

For more information, see SAP Note 2477932.

7.3.2.5.1 Upgrade from Omnichannel SAP BW Structure

If you already use the Omnichannel SAP BW structure, activate the local BI Content objects as described in Activate Application BI Content [page 176].

7.3.2.5.1.1 Activate Application BI Content

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

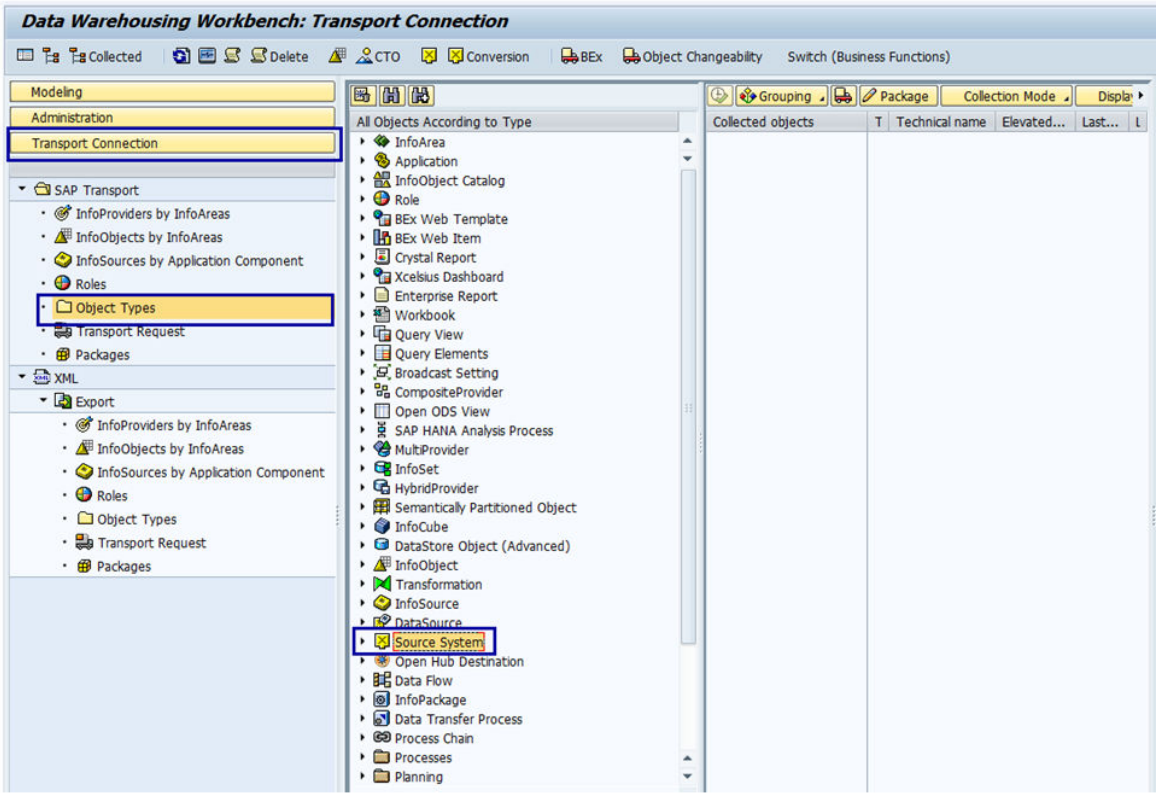
> **Note**
>
> To ensure correct activation of the BI Content objects, carry out the activation sequentially, as specified in the following procedures. Resolve any activation warnings, except for the ones listed under Result [page 183], which can be ignored.
>
> Also, do not disable the default BI setting to collect and activate all dependencies. The instructions below activate a minimum subset of objects, and it 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:

- *Common Installation Guide* under *Initial Load of Data to DDF Using DRFOUT*
- 173241
- Customizing activity *Maintain permitted extra characters* under *SAP NetWeaver* > *Business Warehouse* > *General Settings*.

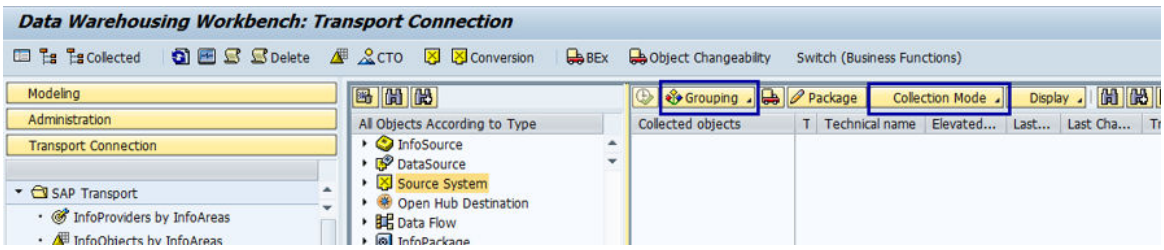
Procedure

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

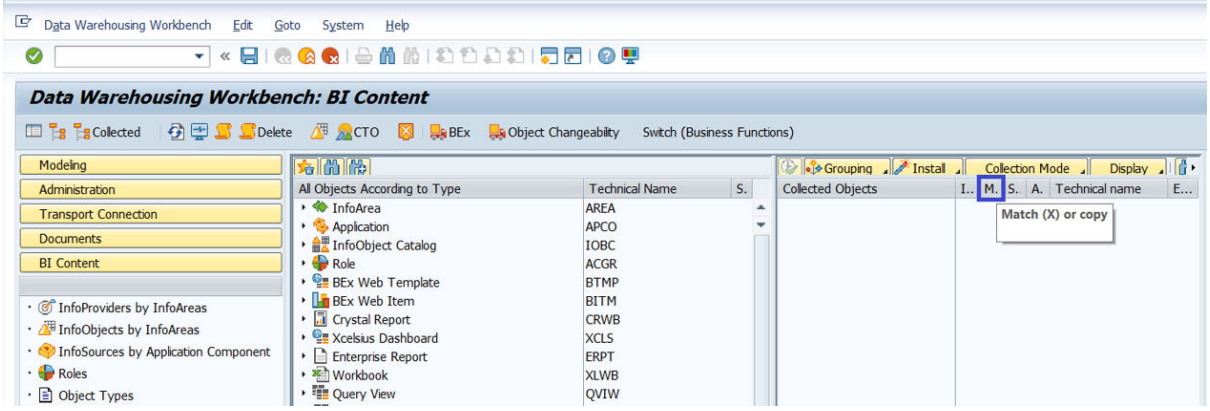
3. Determine if you need to enable to *Match (X) or copy* option for the BI Content, which you will activate in the subsequent steps.

   Match(X) or copy Selection

<table>
<tr><th>Installation Type</th><th colspan="2">Selection</th></tr>
<tr><td>New Installation</td><td colspan="2">Do not enable the Match (X) or copy option for any of the BI Content objects.</td></tr>
<tr><td rowspan="2">Upgrade
(Previously installed/ activated any of the <code>/RAP/*</code> BI Content)</td><td>Standard <code>/RAP/*</code> BI Content objects have not been modified in your local environment[1]</td><td>Standard <code>/RAP/*</code> BI Content objects have been modified in your local environment[1]</td></tr>
<tr><td>Do not enable the Match (X) or copy option for any of the BI Content objects.</td><td>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.</td></tr>
<tr><td colspan="3">[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.</td></tr>
</table>



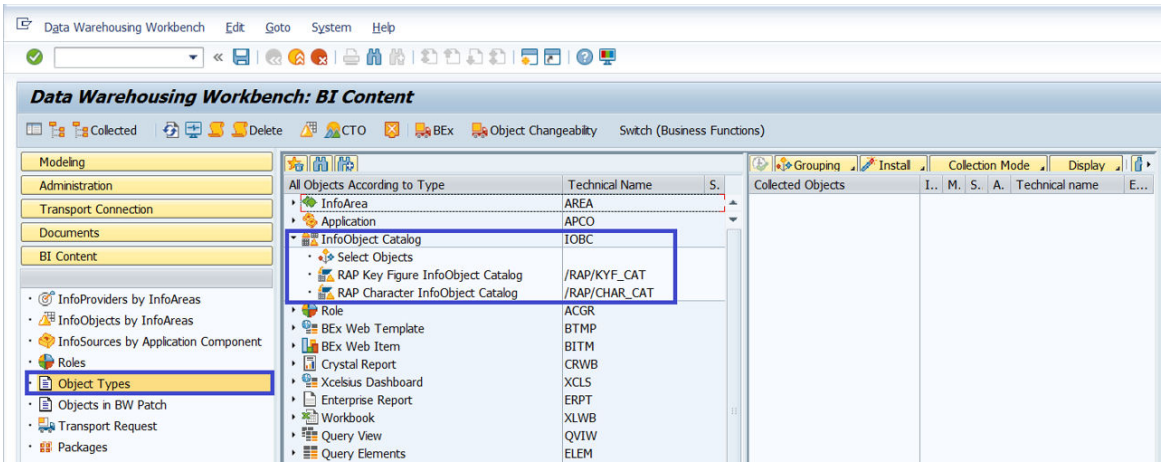
4. Activate InfoObject catalogs.

   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 Result [page 183].

1. Select *BI Content* in the left-hand frame.
2. Select *Object Types* and expand *InfoObject Catalog*.



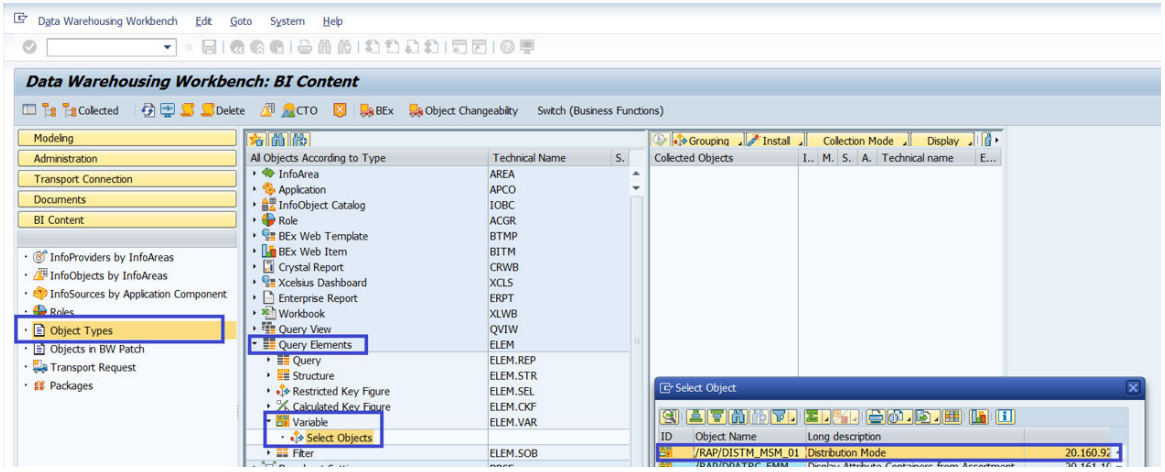
3. Use *Select Objects* to select the `/RAP/CHAR_CAT` and the `/RAP/KYF_CAT` catalogs.
4. Choose *Transfer Selections*.
5. In the right-hand frame, in the list of *Collected objects,* verify that both InfoObject catalogs are listed.
6. Right-click on each of the InfoObject catalogs, and choose *Install all Bellow*.
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 183].

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. Select *Modeling* in the left-hand frame.
   2. Search for the InfoObject `/RAP/VERSN` that is located under *Assortment Planning* > *RAP Character InfoObject Catalog* .
   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

> **Note**
>
> If you encounter problems opening the master data maintenance WebDynpro application, ensure that you have implemented SAP Note 2034623.

> **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 183].

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`.

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 183].

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 183].

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 183].

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:

   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

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. Activate Planning Function Type Objects.

> **Remember**
>
> You can ignore activation warnings listed under Result [page 183].

1. Select *BI Content* in the left-hand frame.
2. Select *Object Types* and expand *Planning* > *Function Type for Planning* >.
3. Use *Select Objects* to select the following Planning Function:

   Planning Functions

Planning Functions
/RAP/OP_BUFFER_DATA

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. 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>

7.3.2.5.2 Upgrade from Retail SAP BW Structure

If you were using the previously existing Retail SAP BW structure, activate the local BI Content objects as described in Activate Application BI Content [page 153] and activate the SAP HANA content as described in Activate SAP HANA Content for SAP Assortment Planning - Final Activation [page 161].

7.3.2.5.2.1 Activate SAP HANA Content for SAP Assortment Planning - Final Activation

Use

In this procedure, you perform the final activation of SAP HANA content (views and stored procedures) required by the SAP Assortment Planning application. This final activation results in a **full** activation of the SAP HANA content for SAP Assortment Planning. Several SAP HANA views depend on local BI Content objects, and as such, have to be activated following the activation of these BI Content objects, as described in this procedure.

Prerequisites

As a mandatory prerequisite for a successful activation of SAP HANA content for SAP Assortment Planning, you must have successfully completed all of the procedures listed in the previous sections of this guide. In particular, Activate SAP HANA Content [page 74].

Procedure

1. In your back-end system, start transaction `SE38`.
2. Enter `/CAR/ACTIVATE_HTA` and choose *Execute*.
3. Select all applicable source master data systems, the *Assortment Planning (Final)* business scenarios, and external systems for which you wish to activate HTA content.

   > **Caution**
   >
   > Ensure that selecting the *Assortment Planning (Final)* scenario also selected the *Forecasting* scenario. If not, select this scenario manually.

4. Optionally, choose the *Perform Prerequisite Check* option to validate the processing and read the system log prior to applying any database changes.
5. Choose *Execute*.

More Information

- If you encounter issues during the activation, see the Troubleshooting [page 131] section for possible solutions.
- For more information about activating SAP HANA content in SAP HANA studio, see http://help.sap.com/viewer/p/SAP_HANA_PLATFORM *Development* > *SAP HANA Developer Guide (SAP HANA studio)* > *Setting Up the Analytic Model* > *Creating Views* > *Activating Objects*.
- For more information about HTAs, see the Application Help for SAP NetWeaver 7.5 at https://help.sap.com/saphelp_nw75/helpdata/en/ff/7652bd542849b18b218efe8d2f2373/content.htm?frameset=/en/34/dfb3083df34453beb5eb8ade7bd4ed/frameset.htm&current_toc=/en/4e/bfa9a86e391014adc9fffe4e204223/plain.htm&node_id=7&show_children=false.

7.3.2.6 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.

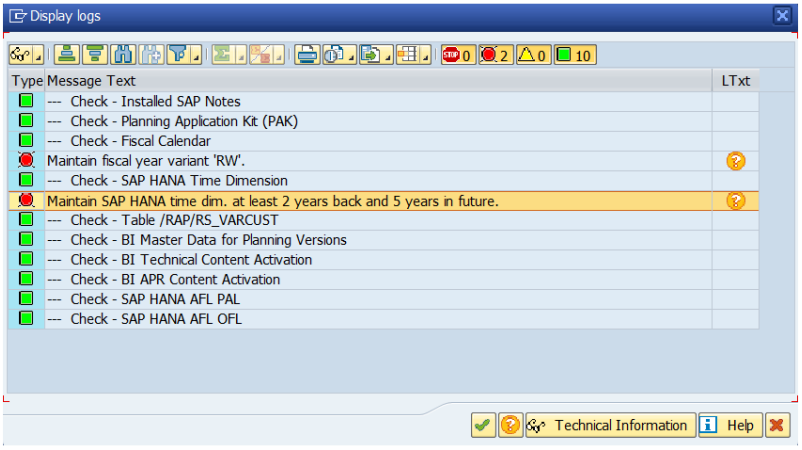
In particular, following the upgrade, you need to pay attention to the following:

- 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 2.0 - 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 periodic tasks to load product attributes into SAP Assortment Planning are still running following the upgrade. (reports `/DMF/ATR_IMPORT` and `/DMF/PROD_ATR_IMPORT`)
- Ensure that season classification data is being loaded from the appropriate source. For more information, see the *Load Season Classification Data* section in the *Common Installation Guide*.
  You also need to set up the *Execute inbound SLT replication for season data* report (`/DMF/EXECUTE_SEASON_INBOUND` in transaction `SE38`) to run as a background job to regularly import any updates from SAP Fashion Management to DDF.
- 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 *Common Installation Guide*.

7.3.2.7 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 to validate the Retail SAP BW structure, the structure recommended to reactivate during the upgrade. For more infrormation, see Reactivate SAP Assortment Planning Planning Framework Content [page 152].

Running this report allows you 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 need to troubleshoot.

7.3.2.8 Run the SAP Assortment Planning for Retail 2.0 FP3 Update Report

Context

Run this report to carry out back-end server changes required by the SAP Assortment Planning 2.0 FP3 release.

Procedure

1. Run transaction `SE38`.
2. Execute the `/RAP/20_FP3_UPGRADE_APR` report.

   Read the documentation associated with the report for important information on updates performed by the report.

7.3.2.9 Activate SAP Assortment Planning OData Services

Use

A number of OData services are required to run the SAP Assortment Planning application.

Following an upgrade, you must ensure that all OData services required by the SAP Fiori user interface of the SAP Assortment Planning application are activated.

Procedure

1. Log on to your front-end system (your SAP NetWeaver system).
2. Go to Customizing (transaction `SPRO`).
3. Navigate to *SAP NetWeaver* > *Gateway* > *OData Channel* > *Administration* > *General Settings* > *Activate and Maintain Services*.
   You are presented with the service catalog. This is a list of all the services that are currently active on your SAP Gateway.
4. Get SAP Assortment Planning OData services:
   1. Choose *Add Service*.
      The *Add Service* screen is displayed.
   2. Enter the system alias of your back-end system.
      This is the alias created for your back-end system in the Connect SAP NetWeaver Gateway to your Back-End System [page 84] procedure. For example `RAPCLNT100`.
   3. Enter **`/DMF*`** in the *Technical Service Name* field.
   4. Choose *Get Services*.
      The *Add Selected Services* screen is displayed.
   5. Select the SAP Assortment Planning OData services you would like to activate, and choose *Add Selected Services*.

OData Service
/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

OData Service
/DMF/SEARCH_PRODUCTS_SRV
/DMF/SEASONS_SRV

The selected OData services are now active in your SAP Gateway.

6. Enter **/RAP*** in the *Technical Service Name* field.
7. Choose *Get Services*.
   The *Add Selected Services* screen is displayed.
8. Select the SAP Assortment Planning OData services you would like to activate, and choose *Add Selected Services*.

OData Service
/RAP/ASSORTMENT_LIST_SRV
/RAP/OPTION_PLAN_SRV
/RAP/PHP_MATCH_SRV
/RAP/VALIDITY_PERIOD_SRV

The selected OData services are now active in your SAP Gateway.

More Information

For SAP NetWeaver 7.31, see SAP Library for User Interface Add-On 1.0 on SAP Help Portal at http://help.sap.com/viewer/p/UI_ADD-ON_FOR_SAP_NETWEAVER_20 *Application Help* > *SAP Library* > *SAP Fiori Launchpad* > *Setting Up the Launchpad* > *Activating SAP Gateway OData Services*.

For SAP NetWeaver 7.4, see the documentation on SAP Help Portal at http://help.sap.com/viewer/p/SAP_NETWEAVER_740 *Application Help* > *UI Technologies in SAP NetWeaver (with SAP_UI 740)* > *SAP Fiori Launchpad* > *Setting Up the Launchpad* > *Activating SAP Gateway OData Services*.

For SAP NetWeaver 7.5, see the documentation on SAP Help Portal at http://help.sap.com/viewer/p/SAP_NETWEAVER_750 *Application Help* > *UI Technologies in SAP NetWeaver (with SAP_UI 750)* > *SAP Fiori Launchpad* > *Setting Up the Launchpad* > *Activating SAP Gateway OData Services*.

7.3.2.10 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 *Maintain Service* 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/modulemgmt_v2/`
   - `/sap/bc/ui5_ui5/sap/optionplan_v2/`
   - `/sap/bc/ui5_ui5/sap/phpmatch_v2/`
   - `/sap/bc/ui5_ui5/sap/plnconfig/`

7.3.2.11 Define System Alias for Back-End Transactions

Use

A number of SAP Assortment Planning 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 RFC connections and system alias definitions required by SAP Assortment Planning application 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 the SAP Assortment Planning application.
2. Launch *Configuration of RFC Connections* (transaction `SM59`).
3. Create an RFC connection with the *RFC Destination* set to `SAP_ISR_CARAB` and *Connection Type* set to `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. Create another RFC connection with the RFC Destination set to `SAP_ERP_ISR_CARAB` and *Connection Type* set to `H` (HTTP connection).
   Ensure to maintain all of the settings required to connect to your front-end system to the SAP Retail or SAP S/4HANA system, in particular, the *Target Host* entry on the *Technical Settings* tab.
5. Save your changes.
6. Open *Launchpad Customizing* (transaction `LPD_CUST`).
7. Select the SAP Assortment Planning role (`UIRAP001`), and choose *Display*.
   The two catalogs, *Assortment Planner* and *Planning Administrator*, are displayed.
8. In each of the catalogs, selecting one app at a time, make the following settings:

Catalog	App	System Alias	Description
Assortment Planner	*View Log*	`SAP_ISR_CARAB`	This setting allows the *My Assortment Lists* app to launch transaction `SLG1` on the back-end system. **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.
	View ExtAssort Listing Conditions	`SAP_ERP_ISR_CARAB`	This setting allows the *My Assortment Lists* app to launch transaction `WSL10` on the connected SAP Retail or SAP S/4HANA system. **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.

Catalog	App	System Alias	Description
	View External Assortments	SAP_ERP_ISR_CARAB	This setting allows the *My Assortment Lists* app to launch transaction WRF_WSOA3 on the connected SAP Retail or SAP S/4HANA system. **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.
Planning Administrator	*Manage Category responsibilities*	SAP_ISR_CARAB	This setting allows the *Manage Category Responsibilities* app to launch the corresponding DDF WebDynpro application.
	Manage Market responsibilities	SAP_ISR_CARAB	This setting allows the *Manage Market Responsibilities* app to launch the corresponding DDF WebDynpro application.
	Manage Products	SAP_ISR_CARAB	This setting allows the *Manage Products* app to launch the corresponding DDF WebDynpro application.
	Manage Locations	SAP_ISR_CARAB	This setting allows the *Manage Locations* app to launch the corresponding DDF WebDynpro application.

7.3.2.12 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.

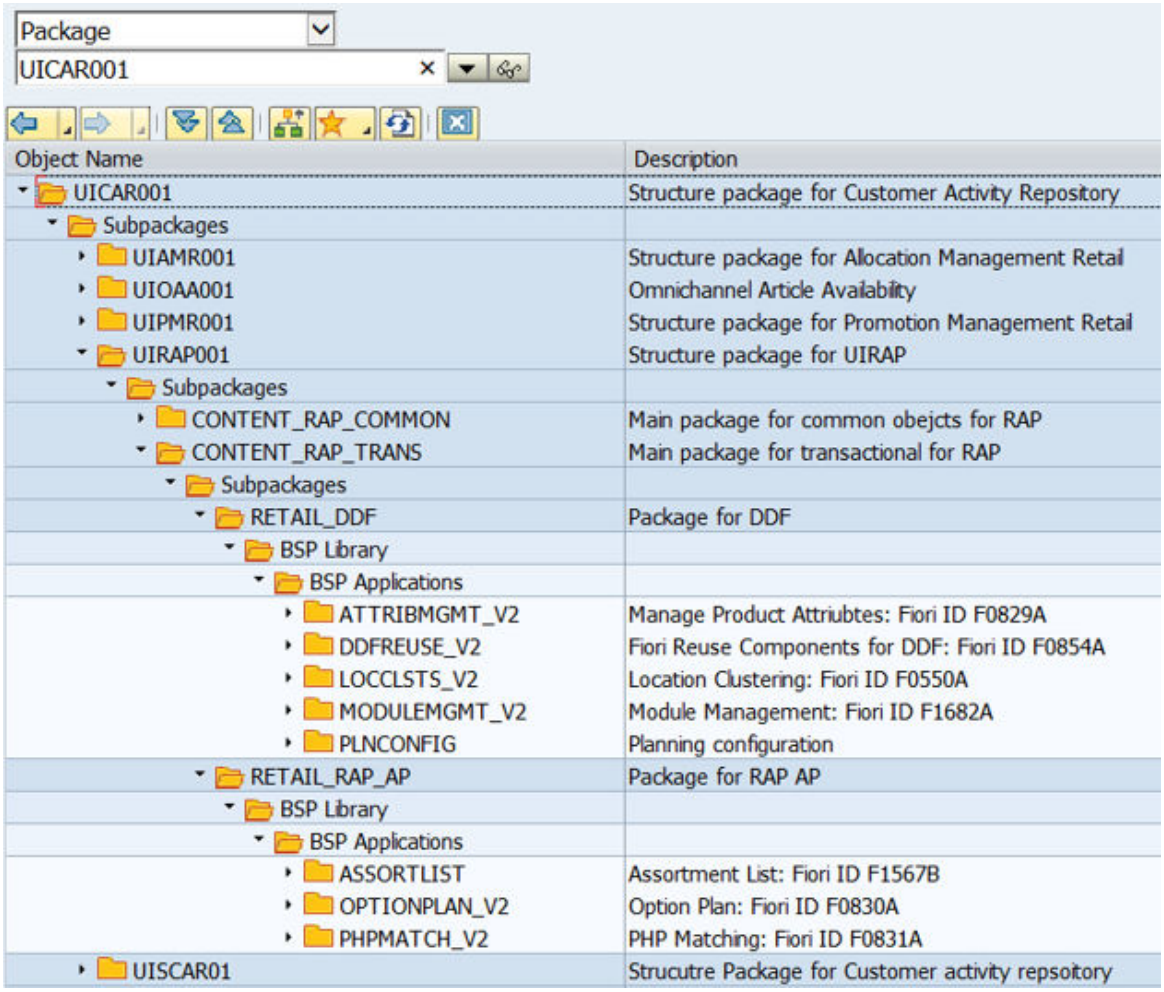
These steps are also listed in the *Troubleshooting* section of the *SAP Assortment Planning Administrator's Guide* available on the SAP Help Portal at http://help.sap.com/viewer/p/CARAB *<Your Version>* > *Administration* > *SAP Assortment Planning Administration Guide* >.

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:



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.

7.3.3 2.0 SP4 to 2.0 FP3

This section is intended for existing SAP Assortment Planning for Retail customers who have installed and configured SAP Assortment Planning for Retail 2.0 SP4 and would like to upgrade to SAP Assortment Planning 2.0 FP3.

> ⚠ 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.

7.3.3.1 Quick Guide

Upgrade to SAP Assortment Planning 2.0 FP3.

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 core follow-up activities listed under SAP Customer Activity Repository. See Core [page 66].
- ☐ 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 2.0 FP3 update report.
- ☐ Verify that all SAP Assortment Planning OData services are active following the upgrade.
- ☐ 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.

7.3.3.2 Perform Core SAP Customer Activity Repository Follow-Up Steps

Perform core SAP Customer Activity Repository follow-up steps.

Context

The follow-up steps for SAP Customer Activity Repository consists of *Core* and *Advanced (Optional)* steps. The core steps are required by most implementation scenarios, and therefore, you must complete them before executing the follow-up steps for your consuming application.

Procedure

Perform all steps listed under Core [page 66].

7.3.3.3 Adjust Customizing Settings

Customizing to maintain following an upgrade to SAP Assortment Planning 2.0 FP3.

Context

Following the upgrade, you need to make settings in Customizing to be able to use SAP Assortment Planning 2.0 FP3.

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 successfully reactivate the Retail SAP BW Structure, available from previous releases. For more information, see Reactivate SAP Assortment Planning Planning Framework Content [page 175].

   a. 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 successfully reactivate the Retail SAP BW Structure, available from previous releases. For more information, see Reactivate SAP Assortment Planning Planning Framework Content [page 175].

   If you use the Omnichannel SAP BW structure, make sure that *Use Planning Configuration* is enabled.
3. Maintain number ranges for planning configurations under *Cross-Application Components* > *Assortment Planning* > *Number Ranges* > *Maintain Number Range for Planning Configuration*.
4. Maintain number ranges for parameter configurations under *Cross-Application Components* > *Assortment Planning* > *Number Ranges* > *Maintain Number Range for Parameter Configuration*.
5. Make sure that the settings in Customizing activity *Assortment List Settings* fit to your planning process.

   As of SAP Assortment Planning for Retail 2.0 FP1, a new Customizing activity, *Assortment List Settings*, has been added, allowing you to specify settings for assortment lists. The *Assortment List Settings* activity is available in Customizing under *Cross-Application Components* > *Assortment Planning* > *Assortment Lists*.
6. 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*.
7. If present, verify your custom implementation of *BAdI: Extraction of KPIs for Location Clustering*.

   As of SAP Assortment Planning 2.0 FP2, the definition and default implementation of this BAdI has been modified.

   Furthermore, BAdIs found under *Cross-Application Components* > *Assortment Planning* > *Imported Demand Data Foundation Settings* > *Data Maintenance* > *Location Clustering* > *Enhancements Using Business Add-Ins* > *Extraction of KPIs for Location Clustering* have also been modified as follows:
   - *BAdI: Extraction of Referenced Sales*
     Definition and default implementation of this BAdI have been modified.
   - *BAdI: Extraction of Capacity KPIs*
     Definition of this BAdI has been modified, and its default implementation is inactive.

As of SAP Assortment Planning 2.0 FP2, *BAdI: Extraction of Planned KPIs*, used by location clustering to extract planned KPIs, is not executed if the usage of planning configurations is enabled. If necessary, provide a custom implementation to replace *BAdI: Extraction of Planned KPIs*.
For more information, see *Load Merchandise Planning Data* section in the *Common Installation Guide*.

- *BAdI: Extraction of Planned KPIs*
  Definition of this BAdI has been modified, and its default implementation is inactive.

8. Verify default implementation of *BAdI: Determine Product Season Classification* and, if necessary, provide a custom implementation.

   As of SAP Assortment Planning for Retail 2.0 FP1, a new BAdI, *BAdI: Determine Product Season Classification*, has been provided to determine the season classifications (and their corresponding date ranges) of products in an assortment list. This new BAdI is found under *Cross-Application Components* > *Assortment Planning* > *Enhancements Using Business Add-Ins*.

7.3.3.4 Verify Time Data

Time data to verify following an upgrade to SAP Assortment Planning 2.0 FP3.

Context

If not already done, ensure that the previous generated time data is sufficient for SAP Assortment Planning 2.0 FP3.

Procedure

Ensure that the time data for the Gregorian Calendar, and, if required, the Fiscal Calendar, has been generated far enough into the past and future.

For more information, see:

- *Generate Time Data - Gregorian Calendar* and *Generate Time Data - Fiscal Calendar* sections of the *Common Installation Guide*.
- *Management* section of the *SAP Assortment Planning Administration Guide*.

7.3.3.5 Reactivate SAP Assortment Planning Planning Framework Content

As of SAP Assortment Planning 2.0 FP2, 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.

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*.

For more information, see SAP Note 2477932.

7.3.3.6 Upgrade from Omnichannel SAP BW Structure

If you already use the Omnichannel SAP BW structure, activate the local BI Content objects as described in Activate Application BI Content [page 176].

7.3.3.6.1 Activate Application BI Content

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

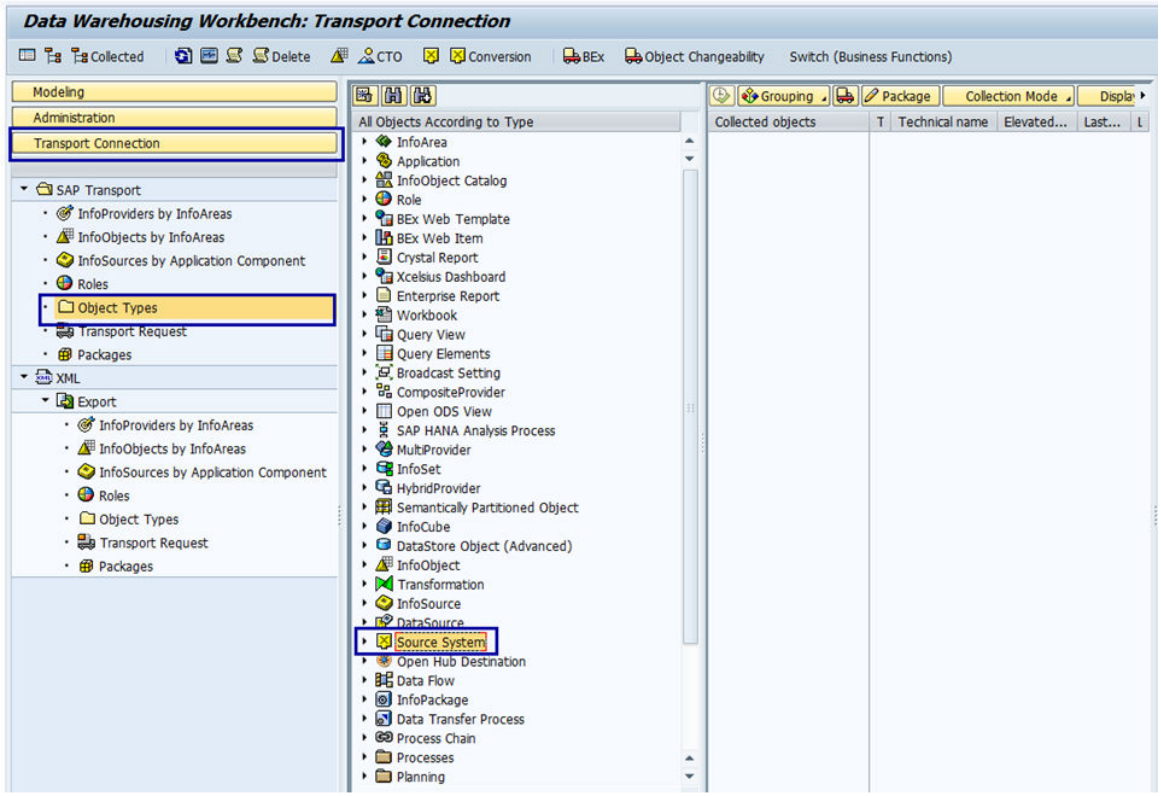
> **Note**
>
> To ensure correct activation of the BI Content objects, carry out the activation sequentially, as specified in the following procedures. Resolve any activation warnings, except for the ones listed under Result [page 206], which can be ignored.
>
> Also, do not disable the default BI setting to collect and activate all dependencies. The instructions below activate a minimum subset of objects, and it 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:

- *Common Installation Guide* under *Initial Load of Data to DDF Using DRFOUT*
- 173241
- Customizing activity *Maintain permitted extra characters* under *SAP NetWeaver* > *Business Warehouse* > *General Settings*.

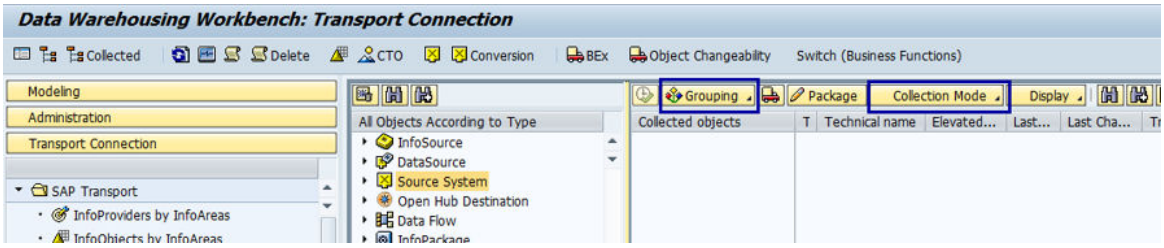
Procedure

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

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

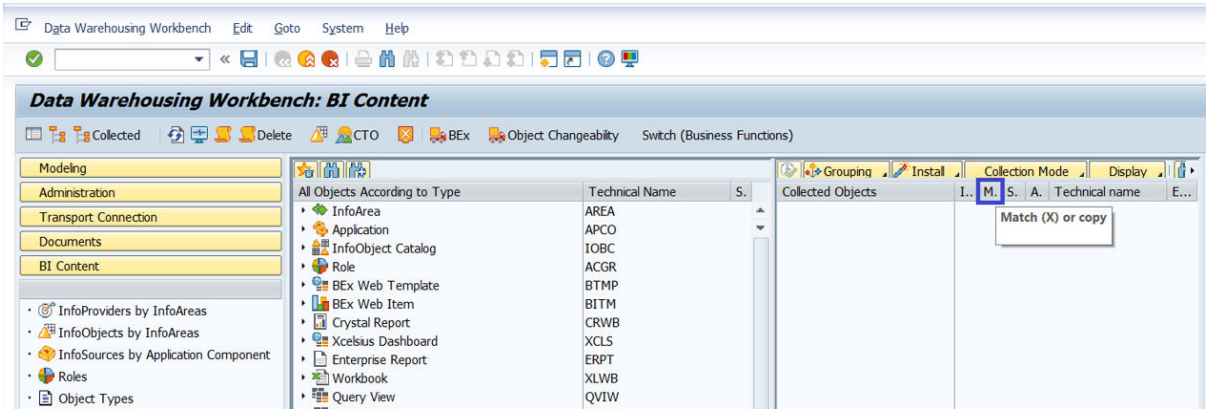
<table>
<tr><th>Installation Type</th><th colspan="2">Selection</th></tr>
<tr><td>New Installation</td><td colspan="2">Do not enable the Match (X) or copy option for any of the BI Content objects.</td></tr>
<tr><td rowspan="2">Upgrade

(Previously installed/ activated any of the <code>/RAP/*</code> BI Content)</td><td>Standard <code>/RAP/*</code> BI Content objects have not been modified in your local environment[1]</td><td>Standard <code>/RAP/*</code> BI Content objects have been modified in your local environment[1]</td></tr>
<tr><td>Do not enable the Match (X) or copy option for any of the BI Content objects.</td><td>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.</td></tr>
<tr><td colspan="3">[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.</td></tr>
</table>



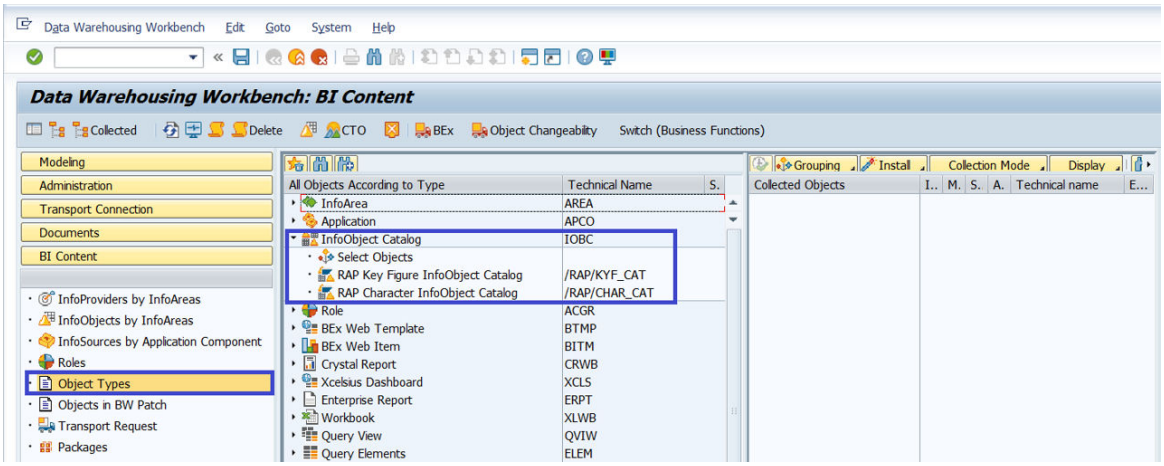
4. Activate InfoObject catalogs.

   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 Result [page 206].

1. Select *BI Content* in the left-hand frame.
2. Select *Object Types* and expand *InfoObject Catalog*.



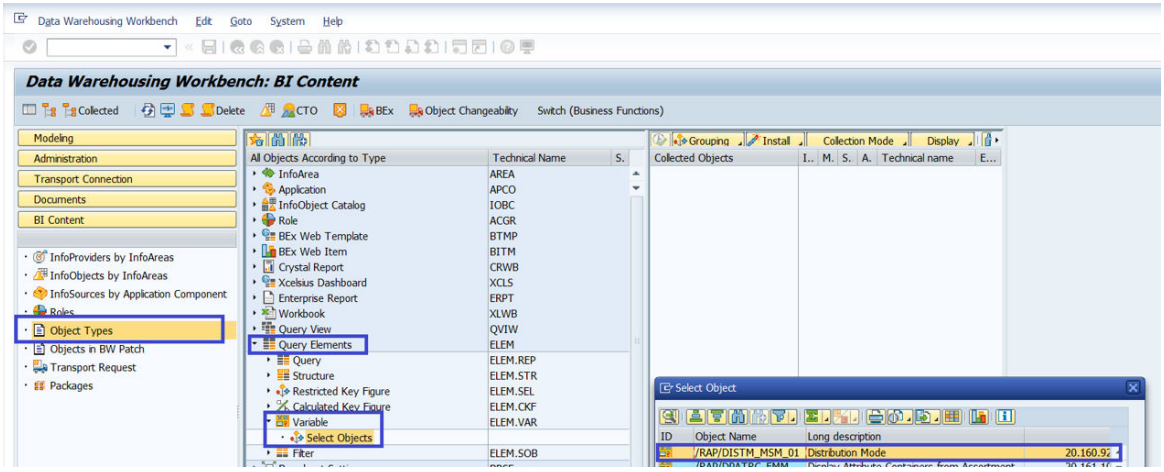
3. Use *Select Objects* to select the `/RAP/CHAR_CAT` and the `/RAP/KYF_CAT` catalogs.
4. Choose *Transfer Selections*.
5. In the right-hand frame, in the list of *Collected objects,* verify that both InfoObject catalogs are listed.
6. Right-click on each of the InfoObject catalogs, and choose *Install all Bellow*.
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 206].

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. Select *Modeling* in the left-hand frame.
   2. Search for the InfoObject `/RAP/VERSN` that is located under *Assortment Planning* > *RAP Character InfoObject Catalog*.
   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

> **Note**
>
> If you encounter problems opening the master data maintenance WebDynpro application, ensure that you have implemented SAP Note 2034623.

> **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 206].

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`.

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 206].

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 206].

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 206].

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:

   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

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. Activate Planning Function Type Objects.

> **Remember**
>
> You can ignore activation warnings listed under Result [page 206].

1. Select *BI Content* in the left-hand frame.
2. Select *Object Types* and expand *Planning* > *Function Type for Planning* .
3. Use *Select Objects* to select the following Planning Function:

   Planning Functions

Planning Functions
/RAP/OP_BUFFER_DATA

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. 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>

7.3.3.7 Upgrade from Retail SAP BW Structure

If you were using the previously existing Retail SAP BW structure, activate the local BI Content objects as described in Activate Application BI Content [page 153] and activate the SAP HANA content as described in Activate SAP HANA Content for SAP Assortment Planning - Final Activation [page 161].

7.3.3.7.1 Activate Application BI Content

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.

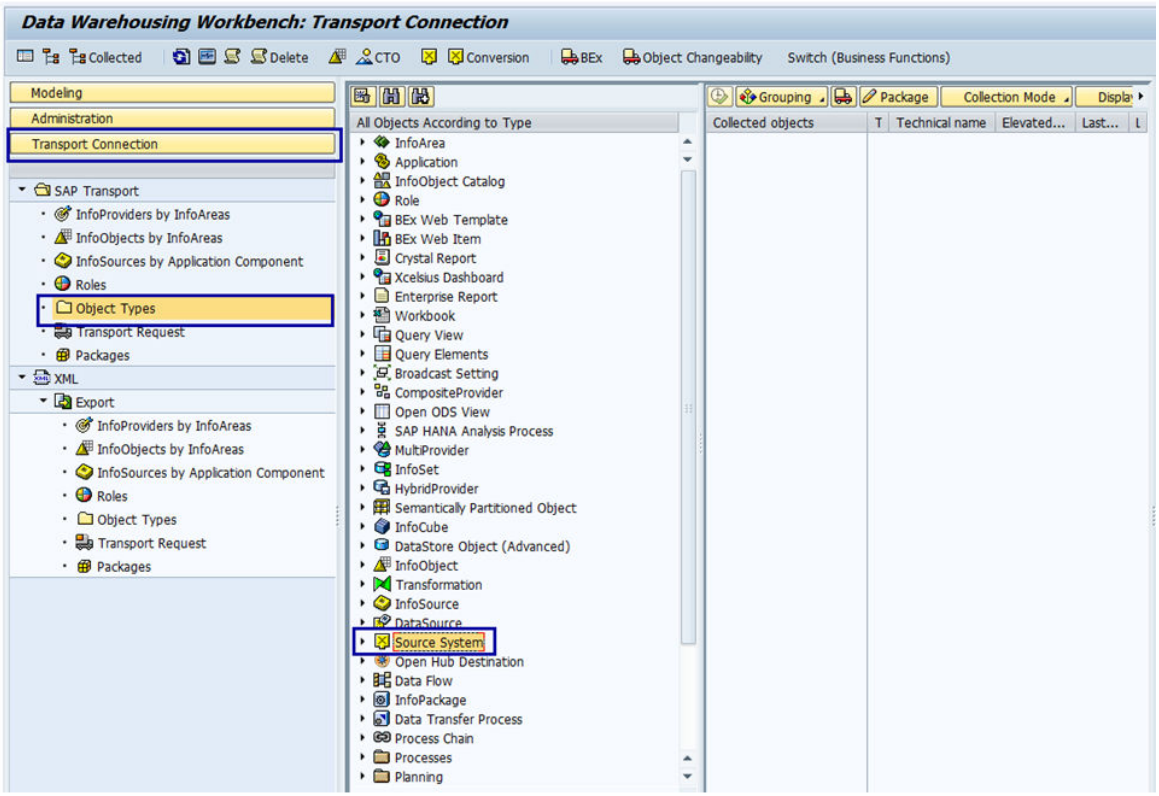
> ℹ Note
>
> To ensure correct activation of the local BI Content objects, carry out the activation sequentially, as specified in the following procedures. Resolve any activation warnings, except for the ones listed under Activation Warnings [page 215], which can be ignored.
>
> Also, the default BI 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*.

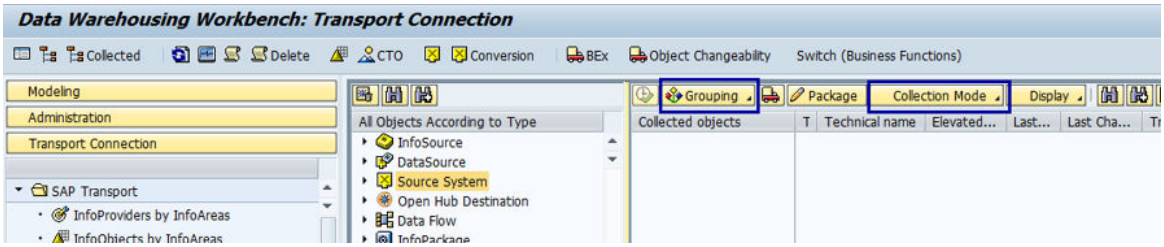
Procedure

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*.



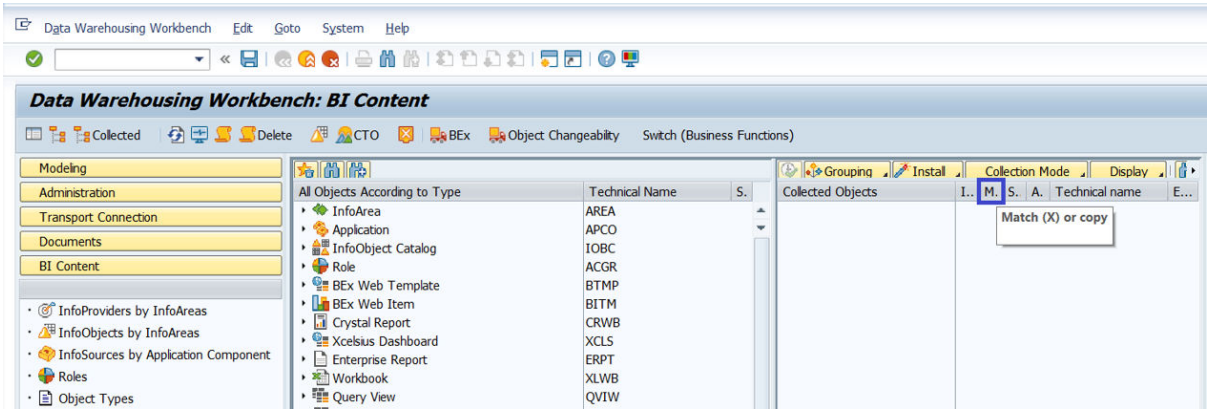
Grouping and Collection Settings

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 *Match (X) or copy* 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 environment**[1]	**Standard `/RAP/*` BI Content objects have been modified in your local environment**[1]
	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.

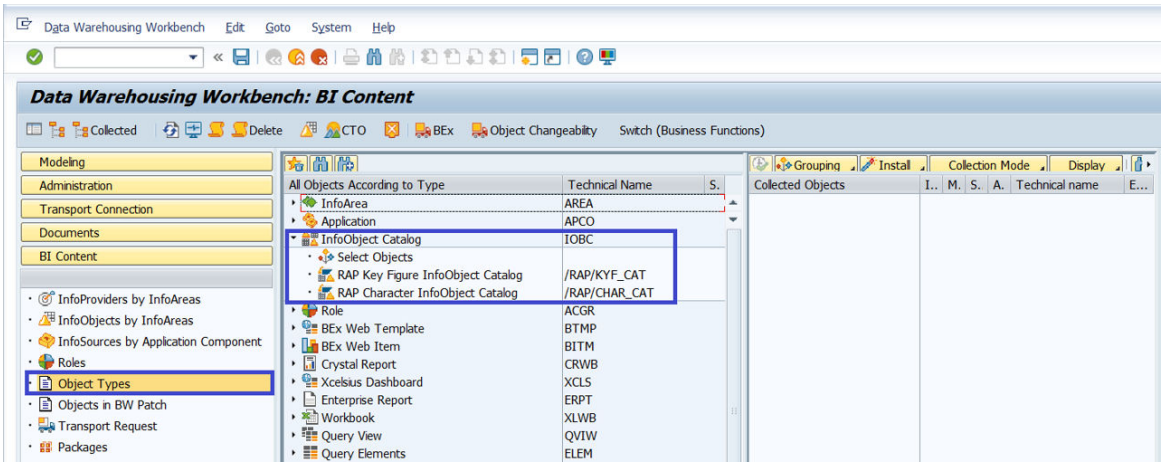
[1] As a system administrator, you may need to contact the SAP Assortment Planning project implementation team to learn if standard, SAP-delivered, BI Content objects have been modified in your local environment.



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 215].

1. Select *BI Content* in the left-hand frame.
2. Select *Object Types* and expand *InfoObject Catalog*.

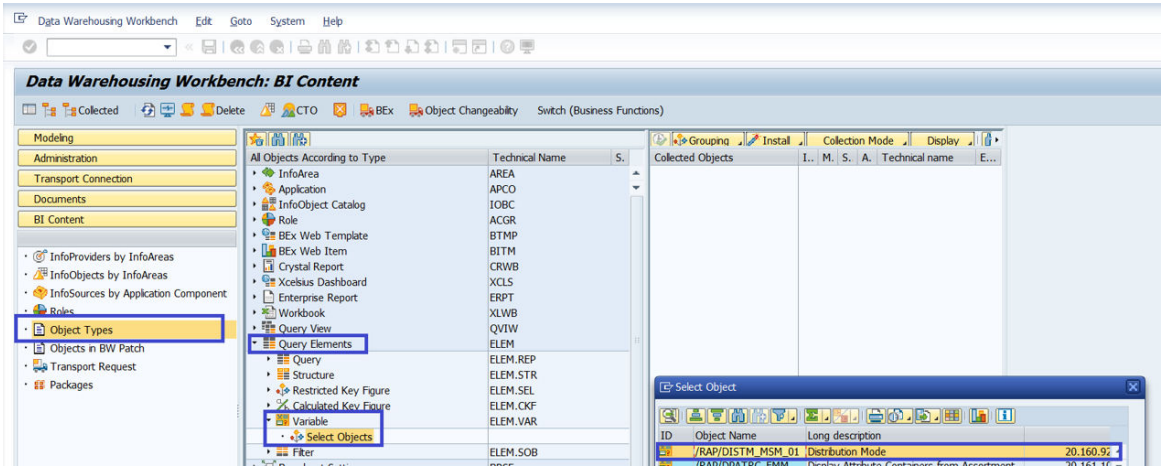


3. Use *Select Objects* to select the `/RAP/CHAR_CAT` and the `/RAP/KYF_CAT` catalogs.
4. Choose *Transfer Selections*.
5. In the right-hand frame, in the list of *Collected objects,* verify that both InfoObject catalogs are listed.
6. Right-click on each of the InfoObject catalogs, and choose *Install 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 215].

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.

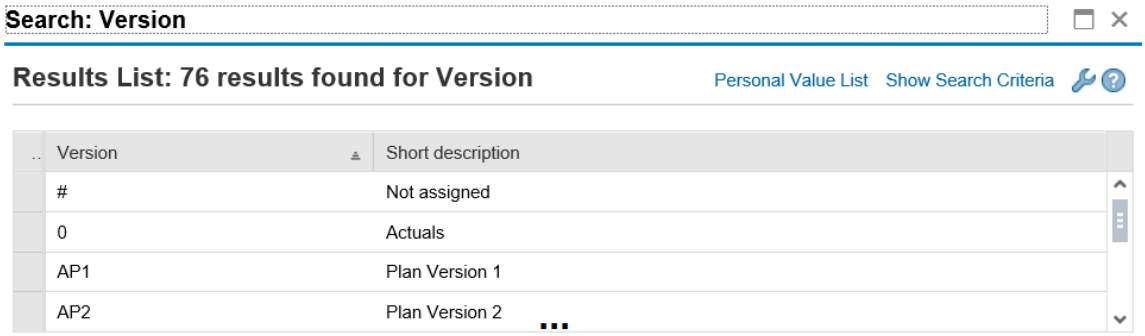


4. Choose *Transfer Selections*.
5. In the right-hand frame, in the list of *Collected objects,* verify that the `/RAP/DISTM_MSM_01` Variable is listed and that the option in the *Install* column is enabled.
6. Choose *Install*.
   If an information dialog box appears, choose *Continue*. Choose *Local 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

Version
OP2
PRJ
REF



The supported planning versions are described in detail in the *Maintain Customizing Table /RAP/RS_VARCUST* section of the *Common Installation Guide*.

> **Note**
>
> If you encounter problems opening the master data maintenance WebDynpro application, ensure that you have implemented SAP Note 2034623.

7. Activate DataStore Objects.

   > **Remember**
   >
   > You can ignore activation warnings listed under Activation Warnings [page 215].

   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 215].

   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 215].

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 215].

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

Aggregation Level
/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 215].

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 215].

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>

7.3.3.8 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.

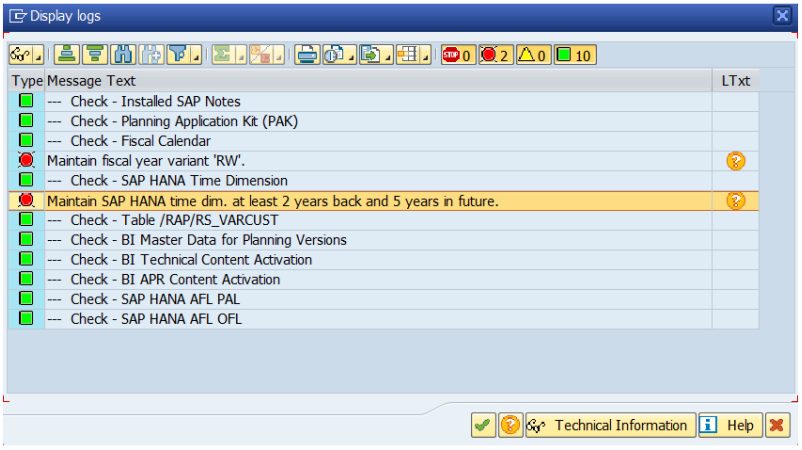
In particular, following the upgrade, you need to pay attention to the following:

- 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 2.0 - 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 periodic tasks to load product attributes into SAP Assortment Planning are still running following the upgrade. (reports `/DMF/ATR_IMPORT` and `/DMF/PROD_ATR_IMPORT`)
- Ensure that season classification data is being loaded from the appropriate source. For more information, see the *Load Season Classification Data* section in the *Common Installation Guide*.
  You also need to set up the *Execute inbound SLT replication for season data* report (`/DMF/EXECUTE_SEASON_INBOUND` in transaction `SE38`) to run as a background job to regularly import any updates from SAP Fashion Management to DDF.
- 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 *Common Installation Guide*.

7.3.3.9 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 to validate the Retail SAP BW structure, the structure recommended to reactivate during the upgrade. For more infrormation, see Reactivate SAP Assortment Planning Planning Framework Content [page 152].

Running this report allows you 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 need to troubleshoot.

7.3.3.10 Run the SAP Assortment Planning for Retail 2.0 FP3 Update Report

Context

Run this report to carry out back-end server changes required by the SAP Assortment Planning 2.0 FP3 release.

Procedure

1. Run transaction `SE38`.
2. Execute the `/RAP/20_FP3_UPGRADE_APR` report.

   Read the documentation associated with the report for important information on updates performed by the report.

7.3.3.11 Activate SAP Assortment Planning OData Services

Use

A number of OData services are required to run the SAP Assortment Planning application.

Following an upgrade, you must ensure that all OData services required by the SAP Fiori user interface of the SAP Assortment Planning application are activated.

Procedure

1. Log on to your front-end system (your SAP NetWeaver system).
2. Go to Customizing (transaction `SPRO`).
3. Navigate to *SAP NetWeaver* > *Gateway* > *OData Channel* > *Administration* > *General Settings* > *Activate and Maintain Services*.
   You are presented with the service catalog. This is a list of all the services that are currently active on your SAP Gateway.
4. Get SAP Assortment Planning OData services:
   1. Choose *Add Service*.
      The *Add Service* screen is displayed.
   2. Enter the system alias of your back-end system.
      This is the alias created for your back-end system in the Connect SAP NetWeaver Gateway to your Back-End System [page 84] procedure. For example `RAPCLNT100`.
   3. Enter **`/DMF*`** in the *Technical Service Name* field.
   4. Choose *Get Services*.
      The *Add Selected Services* screen is displayed.
   5. Select the SAP Assortment Planning OData services you would like to activate, and choose *Add Selected Services*.

OData Service
/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

OData Service
/DMF/SEARCH_PRODUCTS_SRV
/DMF/SEASONS_SRV

The selected OData services are now active in your SAP Gateway.

6. Enter **/RAP*** in the *Technical Service Name* field.
7. Choose *Get Services*.
   The *Add Selected Services* screen is displayed.
8. Select the SAP Assortment Planning OData services you would like to activate, and choose *Add Selected Services*.

OData Service
/RAP/ASSORTMENT_LIST_SRV
/RAP/OPTION_PLAN_SRV
/RAP/PHP_MATCH_SRV
/RAP/VALIDITY_PERIOD_SRV

The selected OData services are now active in your SAP Gateway.

More Information

For SAP NetWeaver 7.31, see SAP Library for User Interface Add-On 1.0 on SAP Help Portal at http://help.sap.com/viewer/p/UI_ADD-ON_FOR_SAP_NETWEAVER_20 *Application Help* > *SAP Library* > *SAP Fiori Launchpad* > *Setting Up the Launchpad* > *Activating SAP Gateway OData Services*.

For SAP NetWeaver 7.4, see the documentation on SAP Help Portal at http://help.sap.com/viewer/p/SAP_NETWEAVER_740 *Application Help* > *UI Technologies in SAP NetWeaver (with SAP_UI 740)* > *SAP Fiori Launchpad* > *Setting Up the Launchpad* > *Activating SAP Gateway OData Services*.

For SAP NetWeaver 7.5, see the documentation on SAP Help Portal at http://help.sap.com/viewer/p/SAP_NETWEAVER_750 *Application Help* > *UI Technologies in SAP NetWeaver (with SAP_UI 750)* > *SAP Fiori Launchpad* > *Setting Up the Launchpad* > *Activating SAP Gateway OData Services*.

7.3.3.12 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 *Maintain Service* 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/modulemgmt_v2/`
   - `/sap/bc/ui5_ui5/sap/optionplan_v2/`
   - `/sap/bc/ui5_ui5/sap/phpmatch_v2/`
   - `/sap/bc/ui5_ui5/sap/plnconfig/`

7.3.3.13 Define System Alias for Back-End Transactions

Use

A number of SAP Assortment Planning 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 RFC connections and system alias definitions required by SAP Assortment Planning application 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 the SAP Assortment Planning application.
2. Launch *Configuration of RFC Connections* (transaction `SM59`).
3. Create an RFC connection with the *RFC Destination* set to `SAP_ISR_CARAB` and *Connection Type* set to `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. Create another RFC connection with the RFC Destination set to `SAP_ERP_ISR_CARAB` and *Connection Type* set to `H` (HTTP connection).
   Ensure to maintain all of the settings required to connect to your front-end system to the SAP Retail or SAP S/4HANA system, in particular, the *Target Host* entry on the *Technical Settings* tab.
5. Save your changes.
6. Open *Launchpad Customizing* (transaction `LPD_CUST`).
7. Select the SAP Assortment Planning role (`UIRAP001`), and choose *Display*.
   The two catalogs, *Assortment Planner* and *Planning Administrator*, are displayed.
8. In each of the catalogs, selecting one app at a time, make the following settings:

Catalog	App	System Alias	Description
Assortment Planner	*View Log*	`SAP_ISR_CARAB`	This setting allows the *My Assortment Lists* app to launch transaction `SLG1` on the back-end system. **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.
	View ExtAssort Listing Conditions	`SAP_ERP_ISR_CARAB`	This setting allows the *My Assortment Lists* app to launch transaction `WSL10` on the connected SAP Retail or SAP S/4HANA system. **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.

Catalog	App	System Alias	Description
	View External Assortments	`SAP_ERP_ISR_CARAB`	This setting allows the *My Assortment Lists* app to launch transaction `WRF_WSOA3` on the connected SAP Retail or SAP S/4HANA system. **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.
Planning Administrator	*Manage Category responsibilities*	`SAP_ISR_CARAB`	This setting allows the *Manage Category Responsibilities* app to launch the corresponding DDF WebDynpro application.
	Manage Market responsibilities	`SAP_ISR_CARAB`	This setting allows the *Manage Market Responsibilities* app to launch the corresponding DDF WebDynpro application.
	Manage Products	`SAP_ISR_CARAB`	This setting allows the *Manage Products* app to launch the corresponding DDF WebDynpro application.
	Manage Locations	`SAP_ISR_CARAB`	This setting allows the *Manage Locations* app to launch the corresponding DDF WebDynpro application.

7.3.3.14 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.

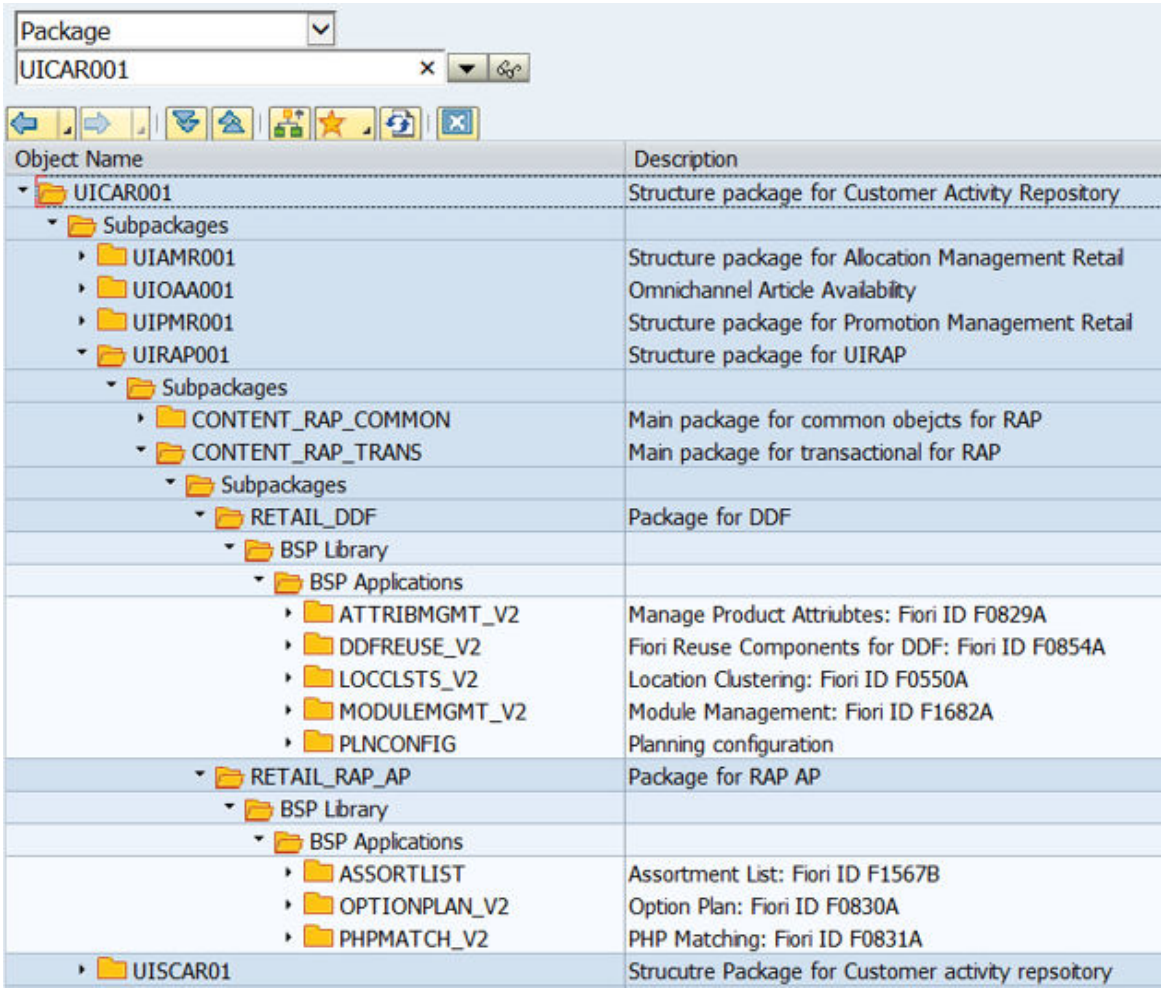
These steps are also listed in the *Troubleshooting* section of the *SAP Assortment Planning Administrator's Guide* available on the SAP Help Portal at http://help.sap.com/viewer/p/CARAB *<Your Version>* > *Administration* > *SAP Assortment Planning Administration Guide* >.

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:



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.

7.4 SAP Promotion Management

2.0 FP1 to 2.0 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 Note 2592695

Follow-Up Activities

1. Perform core follow-up activities listed under *SAP Customer Activity Repository* > *Core*. For more information see: Core [page 66]
2. Activate the following OData servicces:
   - `/DMFOFFER_MANAGMENT_V2_SRV`
   - `/DMF/LOCATION_SUBGROUP_SRV`
3. Update to the latest version of the UI by installing 2606408

2.0 FP2 to 2.0 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 following259265

Follow-Up Activities

1. Perform core follow-up activities listed under *SAP Customer Activity Repository* > *Core*. For more information see: Core [page 66]
2. Activate the following OData servicces:
   - `/DMFOFFER_MANAGMENT_V2_SRV`

- `/DMF/LOCATION_SUBGROUP_SRV`

3. Update to the latest versions of the UI by installing 2606408

2.0 SP4 to 2.0 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 core follow-up activities listed under *SAP Customer Activity Repository* > *Core*. For more information see: Core [page 66]
2. Activate the following OData servicces:
   - `/DMFOFFER_MANAGMENT_V2_SRV`
   - `/DMF/LOCATION_SUBGROUP_SRV`
3. Update to the latest version of the UI by installing 2606408

Activate OData Services

1. Logon to your front-end system.
2. Go to *Customizing* (transaction `SPRO`)
3. Navigate to *SAP NetWeaver* > *Gateway* > *OData Channel* > *Administration* > *General Settings* > *Activate and Maintain Services*
   You are presented with the service catalog. This is a list of all the services that are currently active on your SAP Gateway.
4. Get *SAP Promotion Management OData Services*
   1. Choose *Add Service*.
   2. Enter the systems alias of your back-end system. This is the alias created for your back end system in the *Connect SAP NetWeaver Gateway* to your Back-End System procedure.

      Example

      `PMRCLNT100`

   3. Enter */DMF** in the *Technical Service Name Field*.
   4. Choose *Get Services*. The *Add Selection Services* screen is displayed.
   5. Select the `SAP Promotion Management OData` services you would like to activate, (see table below) and choose *Add Selected Services*.

OData Services
/DMF/LOCATION_SUBGROUP_SRV
/DMF/OFFER_MANAGEMENT_V2_SRV

The selected OData Services are now active in your `SAP Gateway`.

7.5 SAP Allocation Management

7.5.1 1.5 to 2.0 FP2

Summary of follow-up activities to upgrade your SAP Allocation Management installation from release 1.5 to release 2.0 FP2.

The following steps are required to upgrade your SAP Allocation Management system:

- Perform all core and required advanced SAP Customer Activity Repository upgrade follow-up steps
- Run SAP Allocation Management reports
- Prepare follow-on system

Perform Core SAP Customer Activity Repository Follow-Up Steps

To upgrade your SAP Allocation Management system, you must complete the follow-up steps for SAP Customer Activity Repository. The follow-up steps for SAP Customer Activity Repository consist of *Core* and *Advanced (Optional)* activities. All **core** steps are required by SAP Allocation Management.

> **Note**
>
> For upgrade of SAP Allocation Management from version 1.5 to 2.0, please consider the following **major changes**:
>
> - No matter which source master data system you are using (ECC or S4H), you have to 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. Hence report `/CAR/ACTIVATE_HTA` *Activate SAP HANA Content for SAP CARAB* needs to be used.

Perform all steps listed under Core [page 66].

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

Run Migration and Update Reports

- Run report `/AMR/MIGRATE_MARKET_UNITS_V20` to default the source type for given market units.

  > ⚠ Caution
  >
  > This report must be run **before any new market unit** is created in SAP Allocation Management 2.0 and has to be executed exactly once in the system.
  >
  > No market unit should be accessed in parallel while running this report.

- 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 for Retail 2.0*.

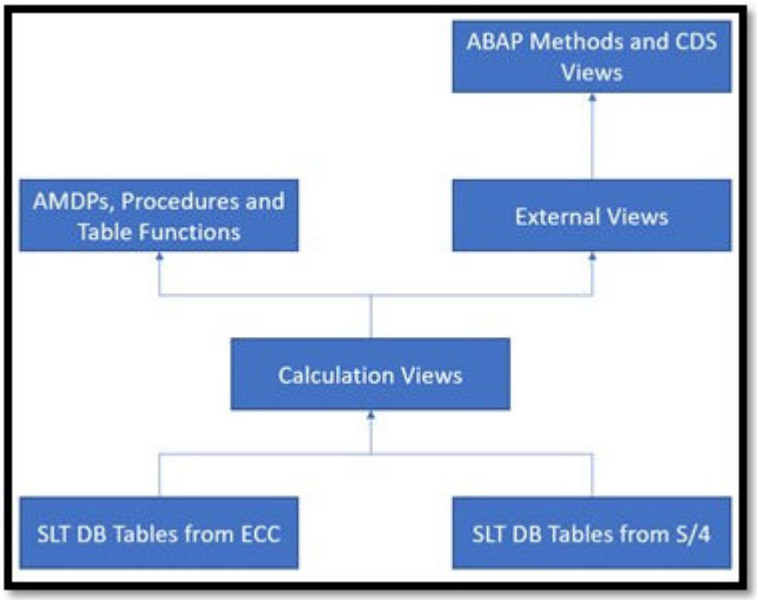
You can also transfer data to an **SAP S/4HANA** follow-on system. Follow the instructions in SAP Note 2524857 *RFC for creation of Allocation Table in S4H system*.

Related Information

Core [page 66]
Advanced (Optional) [page 78]

7.5.2 2.0 SAP HANA Content Activation

From the CARAB 2.0 FP2 release, SAP Allocation Management supports customers who run an ERP Central Component (ECC), or an SAP S4/HANA, as their source system. Source system tables are replicated into their corresponding physical schemas in SAP Customer Activity Repository (SAP CAR).



Sample SAP Allocation Management Procedure Stack

This architecture, results in the following scenario:

- If you have a source system that is ECC or FMS, then no tables are replicated from an SAP S/4HANA perspective
- If you have a source system that is SAP S/4HANA, then no tables are replicated from an ECC or FMS perspective
- Therefore, **one physical schema** exists after the replication, with tables and data coming from the relevant source system
- Note that you can choose any name for the physical schema. However, internally within SAP Allocation Management, the naming convention is:
  - Schema name `SAP_S4H`, for schema containing tables coming from SAP S/4HANA source system
  - Schema name `SAP_ECC`, for schema containing tables coming from ECC or FMS source system

> ⚠ Caution
>
> Do **not create any dummy schemas with identical schema names (**`SAP_S4H` **or** `SAP_ECC`**)**, as this leads to complications later in the activation process.

SAP Allocation Management requires both schemas for the source master data systems, `ECC` and `S4H`. Therefore, SAP Allocation Management delivers two programs, which enable you to:

- Create the additional schema (for the system that is not your source system)
- Include the tables that are relevant for that newly created schema

The relevance of these tables is limited to SAP HANA content activation. They have no impact on data retrieval, since they are created as dummy tables.

These programs are:

- `/DMF/CREATE_SLT_TABLES` (*Create SLT Tables*)
- `/AMR/CREATE_DYNAMIC_SLT_TABLES` (*Create SLT Tables Dynamically*)

Related Information

Create/Replicate Source Master Data System Tables [page 67]
Identify Physical Schema and Maintain Schema Mapping [page 68]

7.5.2.1 SAP HANA Content Activation Prerequisites

Before you start the SAP HANA content activation for SAP Allocation Management, make sure you have processed the SLT replication of tables and their content from the source system into your SAP CAR SAP HANA database.

You can find a list of the required tables to be replicated for your version of SAP Customer Activity Repository applications bundle on the SAP Help Portal at https://help.sap.com/viewer/p/CARAB. Select the desired version at the top right. Download the *CARAB 2.0 - SLT Tables* archive from under *Installation and Upgrade* and extract the spreadsheet.

To activate SAP Allocation Management SAP HANA content, SAP HANA content for SAP Customer Activity Repository (SAP CAR) and for Demand Data Foundation needs to be deployed, since SAP Allocation Management uses this content as a basis. This can be done in two different ways:

- You can deploy SAP HANA content for SAP CAR and Demand Data Foundation in a separate step, **before** you activate SAP Allocation Management content. This is the recommend approach.
- You can deploy SAP Allocation Management SAP HANA content and the SAP CAR and Demand Data Foundation (DDF) SAP HANA content **concurrently**.

  When you execute the report `/CAR/ACTIVATE_HTA` and select *Allocation Management*, then the *Customer Activity Repository* and the *Demand Data Foundation* options are automatically selected.

Related Information

Activate SAP HANA Content [page 74]

7.5.2.2 SAP HANA Content Activation Procedure

1. Identify Physical Schema and Maintain Schema Mapping [page 68]
   Check names for physical schemas and map customer-specific names to authoring schemas `SAP_S4H` and `SAP_ECC`
2. Create Physical Dummy Schemas and Tables [page 231]
   Create physical dummy schemas and dummy tables for the additional source system by executing programs `/DMF/CREATE_SLT_TABLES` and `/AMR/CREATE_DYNAMIC_SLT_TABLES`
3. Create SLT Tables Dynamically (/AMR/CREATE_DYNAMIC_SLT_TABLES) [page 233]
   You only need to perform this procedure if you plan to use SAP Allocation Management
4. Activate SAP Allocation Management SAP HANA Content [page 235]
   Once all previous steps are successfully completed, you can activate SAP Allocation Management SAP HANA content.
5. Troubleshooting: Missing Views in Database [page 235]
   After the SAP HANA content activation, you can check for missing views in transaction DB02 and then run a mass activation, if required.

7.5.2.2.1 Identify Physical Schema and Maintain Schema Mapping

Check names for physical schemas and map customer-specific names to authoring schemas `SAP_S4H` and `SAP_ECC`

The SLT-replicated tables reside in a physical schema. You have named the physical schema already when you initiated the SLT replication.

If you have chosen names for your physical schema, which are **different from the following names**, make sure you maintain schema mapping in your SAP CAR SAP HANA database, where these names are used as authoring schemas for the physical schema:

- `SAP_S4H`, for your S/4HANA schema
- `SAP_ECC`, for your ECC or FMS schema

> **Note**
>
> In addition, ensure that the authoring schema `SAP_RTLRAP_AMR` is mapped to your ABAP schema.

The following two examples explain what you need to do, when you used names that differ from `SAP_S4H` or `SAP_ECC` for your schema. Note that only one of these examples is relevant for your situation.

> **Example**
>
> **Source System is SAP S/4HANA**
>
> Your source system is an SAP S/4HANA system, and you have replicated your tables into a schema called `S4HDATA`. Since SAP Allocation Management does not recognize this name, maintain a schema mapping where the authoring schema is named `SAP_S4H` for the physical schema `S4HDATA`.

Example

Source System is ECC

Your source system is an ECC system, and you have replicated your tables into a schema called `ECCDATA`. Since SAP Allocation Management does not recognize this name, maintain a schema mapping where authoring schema is named `SAP_ECC` for the physical schema `ECCDATA`.

Parent topic: SAP HANA Content Activation Procedure [page 229]

Next: Create Physical Dummy Schemas and Tables [page 231]

Related Information

Verify Correct Schema Mapping [page 72]

7.5.2.2.2 Create Physical Dummy Schemas and Tables

Create physical dummy schemas and dummy tables for the additional source system by executing programs `/DMF/CREATE_SLT_TABLES` and `/AMR/CREATE_DYNAMIC_SLT_TABLES`

After the SLT replication, you have created one physical schema (either **SAP_S4H** or **SAP_ECC**). For SAP Allocation Management, both schemas for the source master data systems, **ECC and S4H**, need to be active in the SAP Customer Activity Repository system. Tables for both schemas need to be available **before** you can activate the SAP HANA content. Therefore, you need to create the additional schema and the corresponding tables.

Execute following programs to create the dummy schema and the dummy tables within the schema. Make sure to execute the reports in this **sequence**

Note

If you have already created the dummy schema and tables for **distribution curves** in a previous step, you can now skip step one.

1. *Create SLT Tables* `/DMF/CREATE_SLT_TABLES`

   Run this report with the name of the **physical schema that you have already created** and the relevant name for SAP Allocation Management (`SAP_ECC` or `SAP_S4H`) for the physical schema that is to be created as **dummy schema**.Ensure that you select the option *S/4HANA Fresh Install* below the input fields.

   See section Create SLT Tables Dynamically (/DMF/CREATE_SLT_TABLES) [page 69] for detailed information.
2. *Create SLT Tables Dynamically* `/AMR/CREATE_DYNAMIC_SLT_TABLES`

   Run this report with the name of the physical schema that you have already created and the relevant name for SAP Allocation Management (`SAP_ECC` or `SAP_S4H`) for the physical schema that is to be created as dummy schema..

See section Create SLT Tables Dynamically (/AMR/CREATE_DYNAMIC_SLT_TABLES) [page 233] for detailed information.

The following two examples explain what you need to do. Note that only one of these examples is relevant for your situation:

Example

Source System is SAP S/4HANA

1. Your source system is an SAP S/4HANA system, and you have replicated your tables into a schema called S4HDATA. You have also maintained authoring schema SAP_S4H for the physical schema S4HDATA.
2. Run the report `/DMF/CREATE_SLT_TABLES` with the example input:

   Sample Input for Program /DMF/CREATE_SLT_TABLES for S/4HANA Source System

Field	User Input
Schema with ECC SLT Tables	SAP_ECC
Schema with S4 HANA SLT Tables	S4HDATA
S/4 HANA Fresh Install check box	Selected

3. Run report `/AMR/CREATE_DYNAMIC_SLT_TABLES` with the following example input:

   Sample Input for Program /AMR/CREATE_DYNAMIC_SLT_TABLES for S/4HANA Source System

Field	User Input
Schema with ECC SLT Tables	SAP_ECC
Schema with S4 HANA SLT Tables	S4HDATA

4. Check in the application log messages if the reports ran successfully.

Example

Source System is ECC

1. Your source system is an ECC system, and you have replicated your tables into a schema called ECCDATA. You have also maintained authoring schema SAP_ECC for the physical schema ECCDATA.

   Run the report `/DMF/CREATE_SLT_TABLES` with the following example input:

   Sample Screen Input /DMF/CREATE_SLT_TABLES for ECC Source System

Field	User Input
Schema with ECC SLT Tables	ECCDATA
Schema with S4 HANA SLT Tables	SAP_S4H
S/4 HANA Fresh Install check box	Selected

2. Run the report `/AMR/CREATE_DYNAMIC_SLT_TABLES` with the following example input:

   Sample Screen Input /AMR/CREATE_DYNAMIC_SLT_TABLES for ECC Source System

Field	User Input
Schema with ECC SLT Tables	SAP_ECC
Schema with S4 HANA SLT Tables	S4HDATA

Parent topic: SAP HANA Content Activation Procedure [page 229]

Previous: Identify Physical Schema and Maintain Schema Mapping [page 68]

Next task: Create SLT Tables Dynamically (/AMR/CREATE_DYNAMIC_SLT_TABLES) [page 233]

Related Information

Create SLT Tables Dynamically (/DMF/CREATE_SLT_TABLES) [page 69]
Create SLT Tables Dynamically (/AMR/CREATE_DYNAMIC_SLT_TABLES) [page 233]

7.5.2.2.3 Create SLT Tables Dynamically (/AMR/CREATE_DYNAMIC_SLT_TABLES)

You only need to perform this procedure if you plan to use SAP Allocation Management

Prerequisites

Context

For SAP Allocation Management, both schemas for the source master data systems, **ECC and S4H**, need to be active in the SAP Customer Activity Repository system. Tables for both schemas need to be available **before** you can activate the SAP HANA content.

When you run report **`/AMR/CREATE_DYNAMIC_SLT_TABLES`**, the required associated tables are created dynamically in the schema you are not actively using.

The default database user for all database calls from ABAP must have the following privileges:

> **Note**
>
> The default database user for all database calls from ABAP must have the following privileges:
>
> - Privilege `SELECT` on schema `SAP<SID>`
> - Privilege `CREATE ANY` in both the schemas, `SAP_ECC` and `SAP_S4H`
> - Privilege `CREATE SCHEMA` if no schema exists

Procedure

1. In your back-end system, start transaction `SE38`.
2. Enter **`/AMR/CREATE_DYNAMIC_SLT_TABLES`** (*Create SLT Tables Dynamically*) as the program and choose *Execute*.
3. Use the default schema names `SAP_ECC` and `SAP_S4H` or enter new schema names.

   If you **change the default schema names**, create a schema mapping between `SAP_ECC` and `SAP_S4H` as the authoring schema and the schema names that you defined. For more information, see Identify Physical Schema and Maintain Schema Mapping [page 68]
4. Choose *Execute*.
5. Verify that the new schema is created.

   Since you have created a new dummy schema, it is now necessary that the following statement is executed by the database administrator, so that the `_SYS_REPO` user (system user) gets **access and authorization for this new schema**: `GRANT SELECT ON SCHEMA new_dummy_schema_created TO _SYS_REPO WITH GRANT OPTION`

   To enable the current user to **display** the schema in the catalog of systems, use SQL statements `CALL _SYS_REPO.GRANT_SCHEMA_PRIVILEGE_ON_ACTIVATED_CONTENT( 'SELECT', '"YourSchema"', 'YourUserName' )`

Results

The output of the report is a message log providing information about success or failure of creating the tables and schemas. When the report runs successfully, all required tables are created and you can activate the SAP HANA content for SAP Allocation Management.

The following tables contain information on the required tables and settings:

- `/AMR/DB_SLT` *List of SLT Tables that are similar in ECC and S4H* lists all tables, that should be included in the schema.
- `/AMR/DB_SLT_DELT` *Delta Fields between ECC and S4H* contains delta classifications.
- `/AMR/DB_SLT_TECH` *Technical Settings of SLT Tables* contains Data Definition Language (DDL) statements.

Task overview: SAP HANA Content Activation Procedure [page 229]

Previous: Create Physical Dummy Schemas and Tables [page 231]

Next: Activate SAP Allocation Management SAP HANA Content [page 235]

7.5.2.2.4 Activate SAP Allocation Management SAP HANA Content

Once all previous steps are successfully completed, you can activate SAP Allocation Management SAP HANA content.

You can activate the SAP Allocation Management SAP HANA Content, since all the prerequisites are met.

Run the program *Activate SAP HANA Content for SAP CARAB* (`/CAR/ACTIVATE_HTA`) with the selection options that are relevant to your installation.

In case of content activation errors, check for missing views in the database. For more information, see Troubleshooting: Missing Views in Database [page 235].

Parent topic: SAP HANA Content Activation Procedure [page 229]

Previous task: Create SLT Tables Dynamically (/AMR/CREATE_DYNAMIC_SLT_TABLES) [page 233]

Next: Troubleshooting: Missing Views in Database [page 235]

Related Information

SAP HANA Content Activation Prerequisites [page 229]
Activate SAP HANA Content [page 74]

7.5.2.2.5 Troubleshooting: Missing Views in Database

After the SAP HANA content activation, you can check for missing views in transaction DB02 and then run a mass activation, if required.

Check if some 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. To resolve this issue, you can activate the views on the database.

1. Call up transaction *Diagnostics: Missing Tables and Indexes* (`DB02`)
2. Check if any SAP Allocation Management views are displayed as missing in the database.
3. If there are missing views, call up transaction `SE38` and run the *Mass Activation* program (`RADMASG0`) for the collective activation of Core Data Services (CDS) views and external views.

4. Select *Direct Objects* and enter **`/AMR/V*`** in the *View Name* selection field.
5. Then execute the program.

Parent topic: SAP HANA Content Activation Procedure [page 229]

Previous: Activate SAP Allocation Management SAP HANA Content [page 235]

7.5.3 2.0 FP1 to 2.0 FP2

Summary of follow-up activities to upgrade your SAP Allocation Management installation from release 2.0 FP1 to release 2.0 FP2.

The following steps are required to upgrade your SAP Allocation Management system:

- Perform all core and required advanced SAP Customer Activity Repository upgrade follow-up steps
- Prepare follow-on system

Perform Core SAP Customer Activity Repository Follow-Up Steps

To upgrade your SAP Allocation Management system, you must complete the follow-up steps for SAP Customer Activity Repository. The follow-up steps for SAP Customer Activity Repository consist of *Core* and *Advanced (Optional)* activities. All **core** steps are required by SAP Allocation Management.

> **Note**
>
> For upgrade of SAP Allocation Management from version 2.0 FP1 to 2.0 FP2, please consider the following **major change**: No matter which source master data system you are using (ECC or S4H), you have to 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 [page 66].

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

Run Update Report for Integration to SAP Assortment Planning

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`.

Follow-On System

In the follow-on system, use the 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 2.0*.

You can also transfer data to an **SAP S/4HANA** follow-on system. Follow the instructions in SAP Note 2524857 *RFC for creation of Allocation Table in S4H system*.

Related Information

Core [page 66]
Advanced (Optional) [page 78]

7.5.4 2.0 FP2 to 2.0 FP3

Summary of follow-up activities to upgrade your SAP Allocation Management installation from release 2.0 FP2 to release 2.0 FP3.

The following steps are required to upgrade your SAP Allocation Management system:

- Refer to the background information and procedure description for SAP HANA content activation for SAP Allocation Management in section 2.0 SAP HANA Content Activation [page 228].

  > **Note**
  >
  > No matter which source master data system you are using (ECC or S4H), you have to 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 core and required advanced SAP Customer Activity Repository upgrade follow-up steps
- Prepare follow-on system

Perform Core SAP Customer Activity Repository Follow-Up Steps

To upgrade your SAP Allocation Management system, you must complete the follow-up steps for SAP Customer Activity Repository. The follow-up steps for SAP Customer Activity Repository consist of *Core* and *Advanced (Optional)* activities. All **core** steps are required by SAP Allocation Management.

Perform all steps listed under Core [page 66].

Verify that all SAP Allocation Management OData services and Core Data Services (CDS) 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 235]

Prepare Follow-On System

In the follow-on system, use the 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 2.0*.

You can also transfer data to an **SAP S/4HANA** follow-on system. Follow the instructions in SAP Note 2524857 *RFC for creation of Allocation Table in S4H system*.

Related Information

SAP HANA Content Activation Prerequisites [page 229]
SAP HANA Content Activation Procedure [page 229]
Core [page 66]
Advanced (Optional) [page 78]

7.5.5 Troubleshooting

During 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) may not be active. In this case, you can run program `RADMASG0` in transaction **SE38** for the collective activation of Core Data Services (CDS) views and external views. Select *Direct Objects* and enter **/AMR/V*** in the *View Name* selection field. Then execute the report.

Related Information

SAP Notes for the Upgrade [page 29]

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