INSTALLATION GUIDE | PUBLIC
Document Version: 1.1 – 2019-04-26

Common Installation Guide for SAP Customer Activity Repository applications bundle 4.0 FPS01

THE BEST RUN SAP

Content

1 How to Use this Common Installation Guide

This guide describes how to install and set up the applications delivered with SAP Customer Activity Repository applications bundle 4.0 FPS01.

> ⚠ Caution
>
> If you already have an existing installation of any of these applications, you must perform a **software upgrade** rather than a new installation. In this case, see the *Common Upgrade Guide* under https://help.sap.com/viewer/p/CARAB ▶ *<Version>* ▶ *Installation and Upgrade* ▶.

Applications in this Release

SAP Customer Activity Repository applications bundle 4.0 FPS01 includes the following applications:

- SAP Customer Activity Repository 4.0 FPS01
- SAP Allocation Management 4.0 FPS01
- SAP Assortment Planning 4.0 FPS01
- SAP Merchandise Planning 4.0 FPS01
- SAP Promotion Management 4.0 FPS01

> ℹ Note
>
> You can find the **product documentation** for all of these applications on SAP Help Portal for SAP Customer Activity Repository applications bundle at https://help.sap.com/viewer/p/CARAB.
>
> If you wish to connect your system to consume documentation directly from the SAP Help Portal, see section Configure Access to Documentation Provided on SAP Help Portal (Optional for All Applications) [page 255] for more information.

What to Install

Technically, SAP Customer Activity Repository applications bundle 4.0 FPS01 is delivered in the form of two installable **product versions**: one for the back-end and one for the front-end.

Product Versions for this Release	Description
SAP CARAB 4.0 FPS01	**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).
SAP FIORI FOR SAP CARAB 4.0 FPS01	**Front-end product version** Contains all the SAP Fiori apps included in SAP Customer Activity Repository applications bundle. It is also referred to as the *product-specific SAP Fiori UI component*.

→ Tip

If you need more information about a product version, log on to the SAP ONE Support Launchpad at https://launchpad.support.sap.com/#/productsearch and search for SAP CARAB or SAP FIORI FOR SAP CARAB. You will find download information, SAP Knowledge Base articles, guided answers, and more.

Installation at a Glance

1. First you **prepare** the installation. For example, you ensure that the technical prerequisites are installed. You also implement mandatory corrections, verify authorizations, and do other preparatory tasks. These steps are described in sections Install the Prerequisites [page 17] and Prepare the Installation [page 25].
2. Then you **install** the back-end product version and the front-end product version. These steps are described in section Install the Software [page 45]. You must do these steps regardless of the application that you want to set up later on.
3. Once you have installed the product versions, you **set up** the desired applications. These steps are described in section Set Up the Applications [page 67]. First you do the general setup steps in section Core (Mandatory for All Applications) [page 67]. You must do the core steps regardless of the application that you want to set up. After the core setup, you only need to do the steps that are required for your application. You do not need to read sections that do not apply to your application.

1.1 Naming Conventions

Important terms and variables used throughout this guide

Terminology

Term	Definition
Common Installation Guide *Common Upgrade Guide*	Common guides for the applications delivered with *SAP Customer Activity Repository applications bundle*. You can find the guides on SAP Help Portal under 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 server / system	The SAP NetWeaver-based ABAP back-end server on which SAP Customer Activity Repository and its consuming applications are installed.
front-end server / system	The SAP NetWeaver-based ABAP front-end server on which the SAP Gateway, SAP Fiori launchpad, central SAP Fiori UI component, and the product-specific SAP Fiori component (front-end product version) are installed.
source master data system	SAP Customer Activity Repository applications bundle must be deployed alongside an SAP ERP 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 or SAP S/4HANA central component that you choose for your implementation. For more information, see Integration with Source Master Data Systems [page 15].
SAP ERP	Unless otherwise specified, references in this guide to *SAP ERP* are comprehensive. That is, they apply to SAP Retail and SAP Fashion Management.

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 variables are used as placeholders in the guides for objects that are user defined. When this variable is used in an instruction, you are expected to substitute your customer defined name for the object. For example, on the back-end application server where you have installed CARAB database objects, you have named your schema *ABC01*. An instruction states to verify the list of packages in your `SAP<SID>`. You would look for packages in the *ABC01* schema.

To find the name of your `SAP<SID>`, sign on to your target system using SAP Logon. Use the file menu *System* > *Status*. In the lower right section titled *Database Data* the name of your *Schema* is shown. This same schema is also listed as an object in your HANA catalog.

Variables Used Across All Guides

Variable	Description
SAP<SID>	Physical schema name **Note** In this guide your physical schema is referred to as SAP<SID> and is your database system ID. This name is customer-defined. To find the name of your SAP<SID>, log on to your target system using SAP Logon. Choose *System* > *Status*. In the lower right-hand section titled *Database data*, the name of your *Schema* is shown. This same schema is also listed as an object in your SAP HANA studio, under *Catalog*. Substitute this schema name whenever the SAP<SID> variable is used in this guide.
<sapsid>	SAP system ID in lowercase letters
<SAPSID>	SAP system ID in uppercase letters
<DBSID>	Database ID in uppercase letters
<dbsid>	Database ID in lowercase letters
<INSTDIR>	Installation directory for the SAP system
<DVD_DIR>	Directory on which a DVD is mounted
<OS>	Operating system name within a path

1.2 Information Available on SAP Help Portal

Information on prerequisite platforms, applications, and other components as well as quick links to SAP sites

Information on Prerequisite Platforms, Applications, Other Components

Information On	Path	Title
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	Path	Title
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*
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*
Installing 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*
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*
Using SAP HANA	http://help.sap.com/viewer/p/SAP_HANA_PLATFORM ▶ *<Version>* ▶ *Administration* ▶ *SAP HANA Administration Guide*	*SAP HANA Administration Guide*
Using the SAP HANA development tools to create comprehensive analytical models and to build applications with SAP HANA interfaces and integrated development (for developers)	http://help.sap.com/viewer/p/SAP_HANA_PLATFORM ▶ *<Version>* ▶ *Development* ▶ *SAP HANA Developer Guide (For SAP HANA Studio)*	*SAP HANA Developer Guide*
Defining data models for use in SAP HANA (for modelers, business analysts)	http://help.sap.com/viewer/p/SAP_HANA_PLATFORM ▶ *<Version>* ▶ *Development* ▶ *SAP HANA Modeling Guide (For SAP HANA Studio)*	*SAP HANA Modeling Guide*
Installing Foundation on SAP NetWeaver AS for ABAP 7.52, version for SAP HANA	https://help.sap.com/viewer/p/SAP_NETWEAVER_AS_ABAP_752 ▶ *<Version>* ▶ *Installation and Upgrade* ▶ *Master Guide*	*SAP NetWeaver Master Guide*

Information On	Path	Title
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>*
Installing SAP S/4HANA, on-premise edition 1610 or higher	http://help.sap.com/viewer/p/SAP_S4HANA_ON-PREMISE ▶ *<Version>* ▶ *Product Documentation* ▶ *Installation Guide* ▶	*Installation Guide for SAP S/4HANA, on-premise edition <version>*
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

SAP Site	Path
SAP Help Portal	http://help.sap.com
Knowledge Base Articles and SAP Notes	https://support.sap.com/en/index.html
Product Availability Matrix (PAM)	http://support.sap.com/pam
Maintenance and release strategy	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
SAP Security Optimization Services Portfolio	https://support.sap.com/en/offerings-programs/support-services/security-optimization-services-portfolio.html

SAP Site	Path
Data Protection and Privacy	https://www.sap.com/about/cloud-trust-center/data-ownership-privacy.html 2590321 *Upgrade recommendations to support GDPR compliance*
Support information (quick access via SAP ONE Support Launchpad; requires login)	https://launchpad.support.sap.com/#/productsearch
Support package stacks, latest versions, patch level requirements	http://support.sap.com/patches
System sizing	https://www.sap.com/about/benchmark/sizing.html.

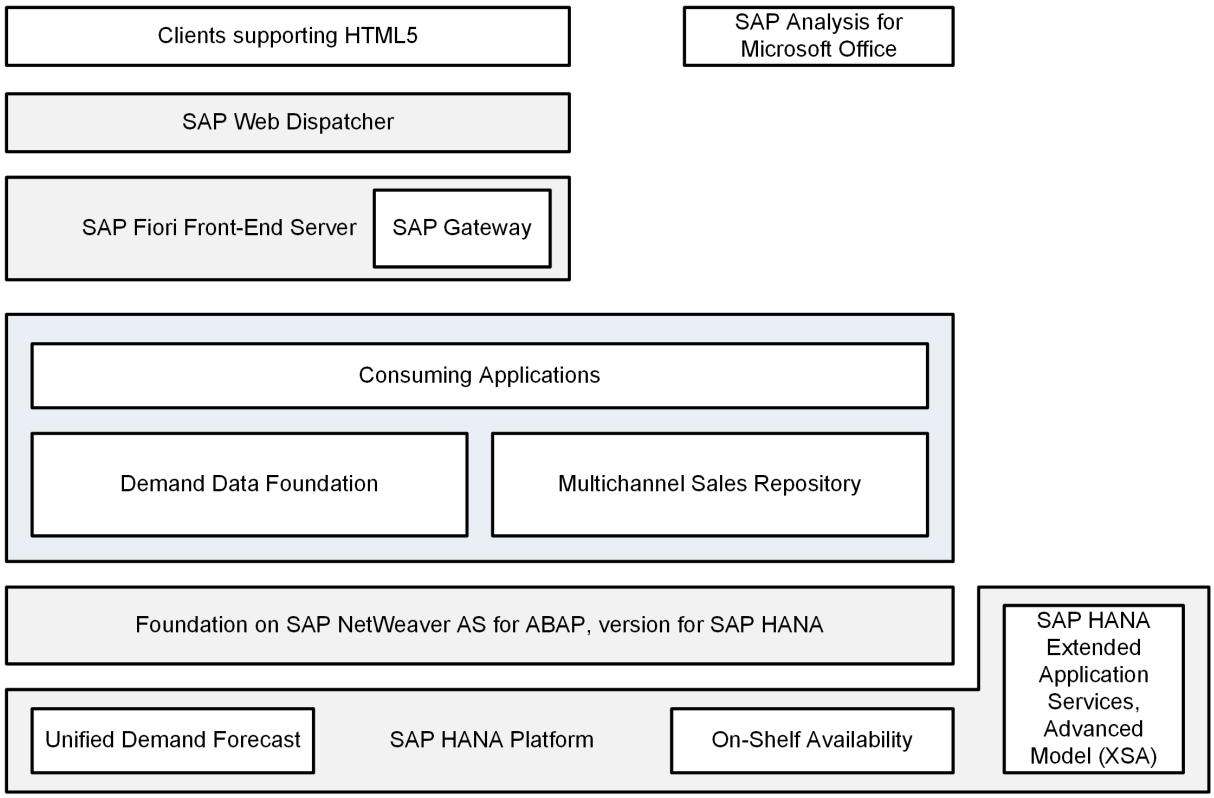
2 Plan your System

2.1 System Landscape

System landscape diagram 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 diagram:



System Landscape Example

For more information about the components not specific to SAP Customer Activity Repository applications bundle, see https://help.sap.com/viewer/p/FIORI_IMPLEMENTATION ▶ *<Version>* ▶ *Installation and Upgrade* ▶ *SAP Fiori: Setup and Configuration* ▶ *Setup of SAP Fiori System Landscape* ▶.

System Landscape Prerequisites

For information on the versions required for this release, see Install the Prerequisites [page 17].

2.2 Central Hub Deployment (Recommended)

Central hub deployment is the recommended deployment option for the applications in SAP Customer Activity Repository applications bundle.

What is Central Hub Deployment

With central hub deployment, the back-end product version is installed in the back-end system, while the front-end product version and the SAP Fiori front-end server are installed in a separate front-end system.

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

Advantages

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

> **i** Note
>
> In general, when an SAP solution includes SAP Fiori apps, you could alternatively choose the “embedded deployment” option, where you use the same SAP NetWeaver server for back-end and front-end components. Although the advantage of this option is that you do not require a separate SAP NetWeaver front-end server, we do not recommend it for the applications described in this guide.
>
> **This guide is therefore based entirely on the “central hub deployment” option.**

More Information

If you need more information about deployment options for SAP Fiori, see the following:

- https://help.sap.com/viewer/p/FIORI_IMPLEMENTATION ▶ *<Version>* ▶ *Installation and Upgrade* ▶ *SAP Fiori: Getting Started* ▶ *SAP Fiori Deployment Options* ▶
- Landscape Deployment Recommendations for SAP Fiori Front-End Server
- 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*

2.3 Integration with Source Master Data Systems

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

Overview

You can deploy your SAP Customer Activity Repository applications bundle solution 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*

> **i Note**
>
> Unless otherwise specified, the following terms are used in this guide:
>
> - References to the *source master data system* are comprehensive; that is, they apply to SAP ERP (including SAP ECC) and SAP S/4HANA Retail.
> - References to *SAP ERP* are comprehensive; that is, they apply to SAP Retail and SAP Fashion Management.

Prerequisites

For information on what versions of the source master data systems are required for this release, see Install the Prerequisites [page 17].

More Information

If a **migration to SAP S/4HANA** is in scope for your business, see the following information for guidance:

- SAP Transformation Navigator at https://go.support.sap.com/transformationnavigator/#/welcome
- SAP Readiness Check at https://help.sap.com/viewer/p/SAP_READINESS_CHECK

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 Install the Prerequisites

This section lists all the prerequisite platforms, applications, and components that must be installed and configured to prepare the system landscape for **a new installation of this release**.

> **i** Note
>
> If you are **upgrading from a previous release**, you must not follow this *Common Installation Guide* and rather proceed with the *Common Upgrade 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.

Common Prerequisites

1. **Foundation on SAP NetWeaver AS for ABAP, version for SAP HANA**
   The minimum requirement for this release is `ABAP FND 1709 ON HANA SPS 02 (05/2018)` **(***foundation 1709 on SAP NetWeaver AS for ABAP 7.52, version for SAP HANA***)**.
   This minimum requirement applies regardless of the business scenario you are planning to implement.

   > **i** Note
   >
   > You must install the foundation **prior** to installing other back-end components.

   For installation information, see SAP Note 2534199 (*ABAP FND 1709 ON HANA: Release Information Note*) as well as the *Master Guide* for your SAP NetWeaver version under https://help.sap.com/viewer/p/SAP_NETWEAVER_AS_ABAP_752 ▶ *<Version>* ▶ *Installation and Upgrade* ▶.
2. **SAP HANA Platform 2.0**
   - **SAP HANA database** component:
     The minimum requirement for this release is **SAP HANA 2.0 SPS 02 revision 24.08**, regardless of the business scenario you are planning to implement.
     If you wish to use SAP HANA Platform 2.0 SPS 03, we recommend that you install **SAP HANA 2.0 SPS 03 revision 36**.

> **i Note**
>
> If you wish to use a higher revision of either SPS, we recommend that you select one of the "maintenance revisions". See SAP Note 2378962 and consult the information under *Last Released Revision or Maintenance Revision*.

> **i Note**
>
> Regardless of the revision that you select, additionally implement mandatory SAP Note 2525644 (*Input Variables are set to an Empty String When not Mapped in Top-Level Calculation Scenario*).

- **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 Download and Install the Application Function Library (SAP RTL AFL FOR SAP HANA) [page 47].
For installation information, see the following:

- 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*
- If you are planning to upgrade 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**
>
> (Optional) 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 RTL AFL FOR SAP HANA**

> **⚠ Caution**
>
> `SAP RTL AFL FOR SAP HANA` is a back-end software component of SAP Customer Activity Repository applications bundle. However, you must always install it together with the SAP HANA Platform. You must do this **before** installing the `SAP CARAB` back-end product version. This guide leads you through the correct procedures.

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 installation information, see Download and Install the Application Function Library (SAP RTL AFL FOR SAP HANA) [page 47].

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

4. **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 Landscape Transformation Replication Server (SLT)*). This is the central note for enabling trigger-based data replication (download, installation, upgrade, corrections, implementation).
5. **SAP Fiori**
   The minimum requirement for this release is **SAP FIORI FRONT-END SERVER 4.0 - SAP FRONTEND SERVER 7.52**, regardless of the business scenario you are planning to implement. The minimum SAPUI5 version is **1.52.4**.
   For installation and implementation information, see the following:
   - Set up the SAP Fiori infrastructure and SAP Fiori apps
   - Overview of SAP Fiori front-end server components and versions
   - 2484979 (*SAP-Fiori-Frontend-Server 4.0 - General Information*)
   - 2524632 (*General Information: FIORI UI Infrastructure Components for products on SAP Frontend Server 4.0 (S4H)*)

   If you are planning an upgrade to SAP Fiori front-end server 5.0, see SAP Note 2618605 (*SAP-Fiori-Frontend-Server 5.0 - General Information*) for information on technical dependencies to other components.
   For additional planning information and a version overview, see SAP Note 2217489 (*Maintenance and Update Strategy for SAP Fiori Front-End Server*).
6. **Source master data system**
   - Either SAP ERP or SAP S/4HANA, on-premise edition must be installed.
   - The minimum release depends on the application that you wish to use. For more information, see the application-specific prerequisites below.

Application-Specific Prerequisites

SAP Customer Activity Repository

Prerequisites for SAP Customer Activity Repository

Product	Minimum Requirement	Mandatory/Optional	Installation Information
SAP ERP	When implementing SAP Customer Activity Repository with all modules, the minimum requirements are: • SAP ERP 6.0 Enhancement Package 7 SP16 or higher • SAP ERP 6.0 Enhancement Package 8 SP09 or higher For module-specific minimum requirements, see SAP Note 2696488.	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	When implementing SAP Customer Activity Repository with all modules, the minimum requirement is: • SAP S/4HANA 1709 FPS2 or higher For module-specific minimum requirements, see SAP Note 2696488.	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 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* ▶

Product	Minimum Requirement	Mandatory/Optional	Installation Information
SAP Smart Business	SAP Smart Business foundation component 1.0, most recent SPS	Optional, depending on whether or not you choose to implement the **SAP Smart Business for Multichannel Sales Analytics** dashboard within SAP Customer Activity Repository.	SAP Note 2018360
SAP Marketing (formerly, SAP Hybris Marketing)	SAP Marketing 1.10 or higher	Optional, depending on whether or not you choose to implement customer determination with SAP Marketing.	https://help.sap.com/viewer/product/SAP_HYBRIS_MARKETING/1702%20YMKT/en-US ▶ *<Version>* ▶ *Installation and Upgrade* ▶ *Installation and Configuration Guide*
SAP Commerce (formerly, SAP Hybris Commerce)	SAP Commerce 1811 or higher (in particular, the Accelerator, the Data Hub, and SAP Asynchronous Order Management)	Optional, depending on whether or not you choose to implement **Omnichannel Article Availability and Sourcing** or **Omnichannel Promotion Pricing** within SAP Customer Activity Repository.	http://help.hybris.com ▶ *SAP Commerce* ▶ *<Version>* ▶ *Installing & Upgrading*
SAP Commerce, integration package for SAP for Retail (formerly, SAP Hybris Commerce, integration package for SAP for Retail)	SAP Commerce, integration package for SAP for Retail 1811 or higher	Optional, depending on whether or not you choose to implement **Omnichannel Article Availability and Sourcing** 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.

Product	Minimum Requirement	Mandatory/Optional	Installation Information
SAP Analytics Cloud	Content Innovation 12	Optional, depending on whether or not you choose to implement **Omnichannel Article Availability and Sourcing** (OAA) within SAP Customer Activity Repository. You only need to run and connect this application if you want to use the set of OAA analyses that has been predefined in SAP Analytics Cloud and that is part of the standard delivery of SAP Analytics Cloud. If you are using a different analytics tool, or if you do not run analytics at all, you do not need this application.	System Requirements and Technical Prerequisites
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* section 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*

Product	Minimum Requirement	Mandatory/Optional	Installation Information
SAP HANA XS Advanced	SAP HANA XSA, version 1.0.88 or higher We recommend that you use the highest version available.	Optional, depending on whether or not you choose to use **Omnichannel Promotion Pricing** 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	Minimum Requirement	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 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*

SAP Assortment Planning

Prerequisites for SAP Assortment Planning

Product	Minimum Requirement	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*

Product	Minimum Requirement	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 Analysis	SAP Analysis for Microsoft Office 2.6 SP03	Mandatory	https://help.sap.com/viewer/p/SAP_BUSINES-SOBJECTS_ANALYSIS_OF-FICE ▶ *<Version>* ▶ *Installation, Configuration, Security, and Administration* ▶ *Administrator Guide*

SAP Promotion Management

SAP Promotion Management requires only the common prerequisites.

SAP Merchandise Planning

Prerequisites for SAP Merchandise Planning

Product	Minimum Requirement	Mandatory/Optional	Installation Information
SAP ERP	SAP ERP 6.0 Enhancement Package 7 SP16 or higher SAP ERP 6.0 Enhancement Package 8 SP09 or higher	Mandatory	https://help.sap.com/viewer/p/SAP_ERP ▶ *<Version>* ▶ *Installation and Upgrade* ▶ *Installation Guide*
SAP S/4HANA, on-premise edition	SAP S/4HANA 1709 FPS2 or higher	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 Analysis	SAP Analysis for Microsoft Office 2.6 SP03	Mandatory	https://help.sap.com/viewer/p/SAP_BUSINES-SOBJECTS_ANALYSIS_OF-FICE ▶ *<Version>* ▶ *Installation, Configuration, Security, and Administration* ▶ *Administrator Guide*

4 Prepare the Installation

Before you start with the actual installation of SAP Customer Activity Repository applications bundle 4.0 FPS01, you must first perform several preparatory tasks.

1. Implement SAP Notes for the Installation [page 25]
   This section lists SAP Notes that you must read and — when appropriate — implement **at different points in the installation process**. For additional SAP Notes created **after the publication of this guide**, always consult the release information notes 2708055 (for the back-end) and 2708040 (for the front-end).
2. Verify SAP HANA Users and Privileges [page 37]
   SAP Customer Activity Repository applications bundle requires a layered system landscape (SAP HANA database, ABAP back-end server, ABAP front-end server with SAP Gateway and SAP Fiori). Each layer requires specific users and privileges. In this procedure, you set up the users and privileges for the SAP HANA database (level 1).
3. Verify Correct Schema Mapping [page 40]
   In SAP HANA studio, verify that all authoring schemas of SAP Customer Activity Repository applications bundle are mapped to the correct physical schema of your customer back-end system. If necessary, create any mappings that are missing. This procedure is mandatory for all the applications.
4. Configure AFL Usage [page 42]
   Perform configuration tasks to enable the usage of application function libraries (such as the PAL and the OFL) for the applications SAP Assortment Planning and SAP Allocation Management.

4.1 Implement SAP Notes for the Installation

This section lists SAP Notes that you must read and — when appropriate — implement **at different points in the installation process**. For additional SAP Notes created **after the publication of this guide**, always consult the release information notes 2708055 (for the back-end) and 2708040 (for the front-end).

> **i 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.

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

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

SAP Notes for SAP Customer Activity Repository

SAP Notes for SAP Customer Activity Repository

Implement	Area	SAP Note	Description
Prior to the installation	Back-end	2548843 *DD: data element changes from DEC to CURR, error for dependent views*	**Mandatory correction for all the applications.**
During the installation	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 installation	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 installation	Back-end	2377525 *External view in view hierarchy*	Troubleshooting information for error messages during the `CREATE VIEW` phase.

Implement	Area	SAP Note	Description
During the installation	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*.
After the installation	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 installation	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 installation	Back-end	2623953 *SADL GW: Exposure for Annotations on Entity Container with namespace*	Mandatory if you are using omnichannel article availability and sourcing (OAA) and using the functionality in sales channel mode. Not required for functions other than OAA. Not required if you are using OAA in OAA profile mode.
After the installation	Back-end	2625428 *SADL GW: Exposure for Annotations on Entity Container with namespace*	Mandatory if you are using omnichannel article availability and sourcing (OAA) and using the functionality in sales channel mode. Not required for functions other than OAA. Not required if you are using OAA in OAA profile mode.

Implement	Area	SAP Note	Description
After the installation	Front-end	2547022 *Service cannot be consumed in SDK IOS due to invalid character '.' in EntityContainer namespace*	Only required if your front-end server is version 7.50 or lower: Mandatory if you are using omnichannel article availability and sourcing (OAA) and using the functionality in sales channel mode. Not required for functions other than OAA. Not required if you are using OAA in OAA profile mode.
After the installation	Front-end	2762819 *Adding new SAP Fiori catalog entry and group for new DDF role (SAP Customer Activity Repository applications bundle 4.0 FPS01)*	Mandatory correction for any scenario using the *Manage Product Attributes* app. The correction is required for the new `SAP_ISR_BR_DDF_ADMIN` role for the app. **i Note** The app is used by several scenarios, such as SAP Customer Activity Repository (similar products search), SAP Assortment Planning, or SAP Allocation Management.
After the installation	Front-end	2763472 *New Role "SAP_ISR_BR_DDF_ADMIN" for SAP Fiori apps (SAP Customer Activity Repository applications bundle 4.0 FPS01)*	Mandatory correction for any scenario using the *Manage Product Attributes* app. The correction is required for the new `SAP_ISR_BR_DDF_ADMIN` role for the app. **i Note** The app is used by several scenarios, such as SAP Customer Activity Repository (similar products search), SAP Assortment Planning, or SAP Allocation Management.
After the installation	Front-end	2760697 *Corrections for the Analyze Forecast and Adjust Forecast apps in SAP Customer Activity Repository 4.0 FPS01*	Mandatory corrections for *Analyze Forecast* and *Adjust Forecast*.

Implement	Area	SAP Note	Description
After the installation	Back-end and front-end	2763337 *Demand Planning CARAB 4.0 FPS01 - Collective Note for Corrections before RTC*	Collective note for mandatory corrections for demand planning functionality. You need to apply these corrections for working with the *Manage Demand Influencing Factors* and the *Adjust Forecast* apps. The collective note references more notes: • **Back-end**: 2766184 • **Additional back-end improvements**: 2780905 • *Manage Demand Influencing Factors* app: 2766567 • *Adjust Forecast* app: 2766169
After the installation	Back-end	2770192 *Corrections for the Similar Products Search in SAP Customer Activity Repository applications bundle 4.0 FPS01*	Mandatory corrections for the similar products search in SAP Customer Activity Repository. The note enables the full configuration of the search via the *Manage Product Attributes* app. **i Note** Implement this note also for SAP Assortment Planning if you are using the search for this scenario.
After the installation	Back-end	2771130 *Back-end corrections for the demand planning apps (Analyze Forecast, Adjust Forecast, Manage Demand Influencing Factors) in SAP Customer Activity Repository 4.0 FPS01*	Mandatory corrections for the SAP Fiori apps *Analyze Forecast*, *Adjust Forecast*, and *Manage Demand Influencing Factors*.
After the installation	Back-end	2576497 *SQL Error Code 274: inserted value too large for column*	Note for errors produced when material number is longer that 18 characters.

Implement	Area	SAP Note	Description
After the installation	Back-end	2777415 *SAP Allocation Management: Activating /AMR/* views ends in Error*	**Mandatory correction for all scenarios of SAP Customer Activity Repository applications bundle. Implement this note regardless of the application that you wish to set up.**

SAP Notes for SAP Merchandise Planning

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

SAP Notes for SAP Merchandise Planning

Implement	Area	SAP Note	Description
After the installation	Back-end	1919631 *Activating the BPC imbedded is necessary*	Embedded BW-IP features explicitly needs the NW BPC10.1 license along with the PAK.
After the installation	Back-end	2600370 *The input help for time characteristics used as navigation attributes does not return any data*	The time-independent navigation attribute table of the characteristic (X table) is fully or partially empty.

SAP Notes for SAP Assortment Planning

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

SAP Notes for SAP Assortment Planning

Implement	Area	SAP Note	Description
Prior to the installation	SAP Retail system	2196351 *Pre-requisite for SAP Note #2196323*	Corrections to SAP Retail data elements.
Prior to the installation	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.
Prior to the installation	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 installation	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
Prior to the installation	Back-end	1656983 *Result Set Size Limit Exceeded Message*	Information on changing the default `ResultSetSizeLimit` setting.

Implement	Area	SAP Note	Description
Prior to the installation	Back-end	2564718 *Authorization replication terminates with the SQL error message* `Predicates are required in a where clause: unknown user_name`	Corrections to the installation of InfoProviders (SAP BW).
After the installation	Back-end	2706022 *When Current Member is activated on 0FISCYEAR, the calculation was not possible*	This note is relevant if you use the Retail SAP BW Structure. This note contains instructions for solving a BW issue in the *Plan Products by Week* worksheet of the *Plan Assortment* workbook.
After the installation	Back-end	2768113 *PHP Number Range Configuration Information*	This note includes instructions to avoid creating corrupt data in database tables and issues with the *Match Placeholders* and *My Assortment Lists* apps.
After the installation	Back-end	2773890 *Assortment List 4.0 - Add access control objects for OData entities and bug fixes*	This optional note for the *My Assortment Lists* app includes the following: • Instructions for adding additional access control objects for OData entities • Bug fix regarding sorting issues for business week and fiscal month • Bug fix for module assignment that is not kept when replacing a product in the similar products table
After the installation	Front-end	2772899 *Assortment List 4.0 - Stable ids for UI elements*	This mandatory note for the *My Assortment Lists* app includes the following: • Stable ids to be able to assign hotspots for Web Assistant • Bug fixes for the *Manage Products* screen

Implement	Area	SAP Note	Description
After the installation	Front-end	2767553 *APR 4.0 FP01 - Manage Option Plans UI OPTION PLANNING - UI Fixes*	This mandatory note for the *Manage Option Plans* app includes several bug fixes.
After the installation	Back-end	2784220 *Assortment List 4.0 - Column with concatenated values too large*	This mandatory note for the *My Assortment Lists* app includes a bug fix.
After the installation	Front-end	2776566 *Assortment List 4.0 - Enhance Update products and Multi-Copy/ Merge extensibility and bug fixes*	This mandatory note for the *My Assortment Lists* app includes enhancements and bug fixes.

SAP Notes for SAP Promotion Management

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

SAP Notes for SAP Promotion Management

Implement	Area	SAP Note	Description
After the installation	Front-End	2606408 *Promotional Offers CARAB 2.0 SPS05 (FP03)*	Mandatory. Fiori - Latest version of Manage Promotional Offers

SAP Notes for SAP Allocation Management

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

SAP Notes for SAP Allocation Management

Implement	Area	SAP Note	Description
After the installation	Back-end and front-end	2778617 *SAP Allocation Management 4.0 - Collection of Corrections Before RTC for FP01*	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 of 4.0 FPS01.
After the installation	Follow-On System	2618509 *Blacklisted RFC for Creation of Allocation Table in S4H System*	Implement the correction to facilitate the creation of allocation tables from SAP Allocation Management in the SAP S/4HANA follow-on system.
After the installation	Back-end	2631613 *SAP Allocation Management - Customizing - Define Business Scenarios*	Follow the instructions to create a valid business scenario ID.
After the installation	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.

Implement	Area	SAP Note	Description
After the installation	Back-end	2502917 *Unable to register the service* `/AMR/OD_WORKLOAD_SRV` *with namespace*	This note is only relevant if the back-end component `SAP_GWFND 752` is below SP 2.
After the installation	Back-end	2474287 *Handling of units of measure inside SAP Allocation Management*	
After the installation	SAP S/4HANA Retail for merchandise management	2522603 *Wrapper RFC for ATP via Controller*	
After the installation	Back-end	2641286 *Internal server error LCX_MISSING_PARAMETER in CL_SADL_ABQ I*	
After the installation	Back-end	2636746 *OData Navigation not working*	

Implement	Area	SAP Note	Description
After the installation	Back-end	2441184 *Static ABAP generation error of classes /AMR/CL... when installing CARAB 1.0 FP03, CARAB 2.0, and CARAB 4.0*	
After the installation	Back-end	2777415 *SAP Allocation Management : Activating /AMR/* views ends in Error*	Mandatory correction
After the installation	Follow-On System	2416853 *RFC function module to create allocation table for SAP Allocation Management*	Enhanced functionality for the transfer of allocation data to an ECC system.
After the installation	Follow-On System	2524857 *RFC function module to create allocation table for SAP Allocation Management in S4H system*	Creation of an allocation table from SAP Allocation Management in **SAP S/4HANA** system for the transfer of allocation plans.

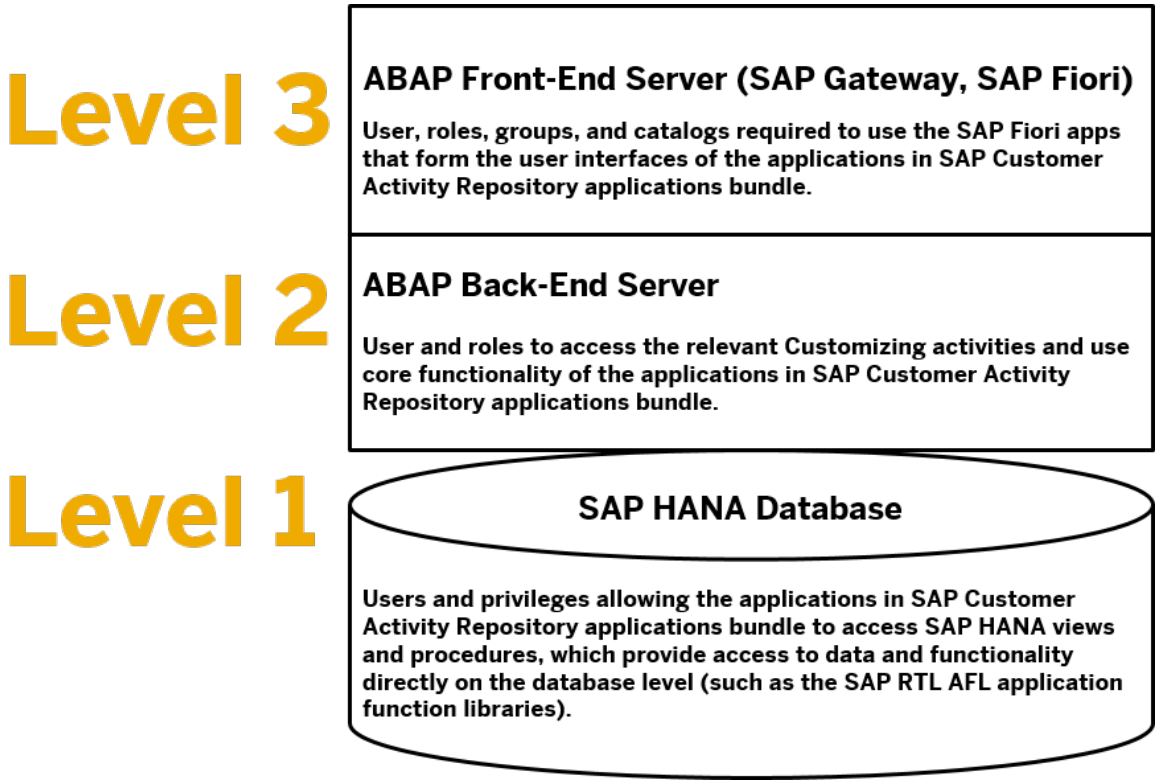
Parent topic: Prepare the Installation [page 25]

Next: Verify SAP HANA Users and Privileges [page 37]

4.2 Verify SAP HANA Users and Privileges

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

Overview



Authorization Levels in SAP Customer Activity Repository applications bundle

> ⚠ Caution
>
> Level 1: You must set up the users and privileges for the SAP HANA database **before** installing SAP Customer Activity Repository applications bundle on the back-end server and the front-end server.

> i Note
>
> Level 2 and level 3: You can only set up these authorizations **after** the installation, and you will get to them later in this guide:
>
> - Level 2 back-end authorizations are described under *Verify Back-End Users and Roles*.
> - Level 3 front-end authorizations are described 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 Set Up Standalone SAP Fiori Apps for SAP Customer Activity Repository [page 108] (optional, app-specific).

Procedure

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

   ⚠ Caution

   Users marked * must be identical on all three levels: that is, on the SAP HANA database level, on the back-end server, and on the front-end server.

Users	Privileges / Roles
`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 (required by SAP Assortment Planning, for example). For more information, see Enable Usage of PAL Functions [page 42] 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`

Users	Privileges / Roles
`_SYS_REPO`	○ Privilege `SELECT`, with option *Grantable to others*, on the following physical database schemas: ○ Physical database schema of your back-end system, this is referred to as `SAP<SID>` in this guide (○ 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 Marketing tables You can use the following example SQL statement to grant the privilege: `GRANT SELECT ON SCHEMA <Your schema name> TO _SYS_REPO WITH GRANT OPTION;` ○ Role `UDF_DEPLOY_SYS_REPO`. For information about the privileges automatically assigned via this role, see Set Up Authorizations for Unified Demand Forecast (UDF) [page 73]. ○ For SAP Allocation Management, you need the following additional privileges: ○ 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 .

Parent topic: Prepare the Installation [page 25]

Previous: Implement SAP Notes for the Installation [page 25]

Next: Verify Correct Schema Mapping [page 40]

4.3 Verify Correct Schema Mapping

In SAP HANA studio, verify that all authoring schemas of SAP Customer Activity Repository applications bundle are mapped to the correct physical schema of your customer back-end system. If necessary, create any mappings that are missing. This procedure is mandatory for all the applications.

Context

What are Authoring Schemas and Physical Schemas

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

You must map multiple *authoring schemas* to the same *physical schema*:

- The *authoring schema* is the logical database schema with which the SAP HANA objects were originally created in the SAP source system. The authoring schema is listed in each object's properties. Different objects can have different authoring schemas.
- The target system is your customer-specific back-end system. Its database schema is the *physical schema*. The tables of the source master data system are replicated to this back-end system and physical schema. This is why all authoring schemas must be mapped to this one physical schema of your customer system (n:1 relationship).

What is Your `SAP<SID>` Name (Schema Name, User Name)

In this guide your physical schema is referred to as `SAP<SID>`. This is your customer-defined database system ID.

There are two ways how you can find the `SAP<SID>` name for your system landscape:

- Log on to your ABAP back-end system using SAP Logon. Choose *System Status*. In the lower right-hand section titled *Database data*, see the name for *Schema*.
- In SAP HANA studio, the schema name is listed as an object under *Catalog*.

Substitute this schema name whenever the `SAP<SID>` variable is used in this guide.

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, or from your test system to your production system.
- Schema mapping is a prerequisite for the successful activation of the SAP HANA content.
- Schema mapping is also a prerequisite for the SLT replication of the source master data system tables. Example: Your source master data system is SAP S/4HANA. During table replication with the SAP Landscape Transformation Replication Server, you replicate the SAP S/4HANA tables from the `SAP_S4H` authoring schema to the physical schema in your SAP Customer Activity Repository applications bundle system.

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 Marketing
`SAP_ECC`	SAP ERP (SAP Retail)
`SAP_S4H`	SAP S/4HANA Retail

Procedure

1. In SAP HANA studio, log on to your back-end system.
2. Choose *Window* > *Perspective* > *Open Perspective* > *SAP HANA Modeler*.
3. Choose *Help* > *Quick View* > *Schema Mapping*.
4. Select the system and choose *Next*.
5. 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.
6. Choose *Finish*.

Parent topic: Prepare the Installation [page 25]

Previous: Verify SAP HANA Users and Privileges [page 37]

Next: Configure AFL Usage [page 42]

4.4 Configure AFL Usage

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

Enable Usage of PAL Functions (SAP Assortment Planning) [page 42]
: To enable the usage of the PAL algorithm for SAP Assortment Planning, perform the required setup steps.

Check the OFL Installation [page 43]
: Confirm that the OFL algorithm was installed successfully as prerequisite for SAP Assortment Planning and SAP Allocation Management.

Parent topic: Prepare the Installation [page 25]

Previous: Verify Correct Schema Mapping [page 40]

4.4.1 Enable Usage of PAL Functions (SAP Assortment Planning)

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

Use

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

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

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

Procedure

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

- `SELECT * FROM SYS.AFL_PACKAGES WHERE AREA_NAME = 'AFLPAL';`
  In the case of a successful installation, the statement should return 1 row.
- `SELECT * FROM SYS.AFL_FUNCTIONS WHERE AREA_NAME = 'AFLPAL';`
  In the case of a successful installation, the statement should return many rows. Verify that the function `KMEANS` is part of the list.

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

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

More Information

- Section Install the Prerequisites [page 17] ▶ *Common Prerequisites* ▶ *SAP HANA Platform* ▶
- http://help.sap.com/hana_platform ▶ *<Version>* ▶ *Reference* ▶ *SAP HANA Predictive Analysis Library (PAL)* ▶

4.4.2 Check the OFL Installation

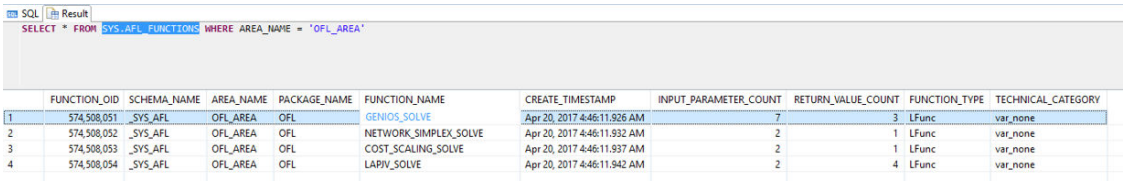
Confirm that the OFL algorithm was installed successfully as prerequisite for SAP Assortment Planning and SAP Allocation Management.

Use

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

Procedure

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



SQL Result

```
SELECT * FROM SYS.AFL_FUNCTIONS WHERE AREA_NAME = 'OFL_AREA'
```

	FUNCTION_OID	SCHEMA_NAME	AREA_NAME	PACKAGE_NAME	FUNCTION_NAME	CREATE_TIMESTAMP	INPUT_PARAMETER_COUNT	RETURN_VALUE_COUNT	FUNCTION_TYPE	TECHNICAL_CATEGORY
1	574,508,051	_SYS_AFL	OFL_AREA	OFL	GENIOS_SOLVE	Apr 20, 2017 4:46:11.926 AM	7	3	LFunc	var_none
2	574,508,052	_SYS_AFL	OFL_AREA	OFL	NETWORK_SIMPLEX_SOLVE	Apr 20, 2017 4:46:11.932 AM	2	1	LFunc	var_none
3	574,508,053	_SYS_AFL	OFL_AREA	OFL	COST_SCALING_SOLVE	Apr 20, 2017 4:46:11.937 AM	2	1	LFunc	var_none
4	574,508,054	_SYS_AFL	OFL_AREA	OFL	LAPJV_SOLVE	Apr 20, 2017 4:46:11.942 AM	2	4	LFunc	var_none

5 Install the Software

For a correct **installation**, you must first install the required prerequisites and pre-installation SAP Notes. Then you install the back-end components and the front-end components. Lastly, you check for SAP Notes that must be implemented after the installation.

1. Verify Prerequisites and SAP Notes [page 45]
   Ensure that the required prerequisites and SAP Notes have been implemented in your system landscape.
2. Install ABAP Back-End Server [page 46]
   Install the `SAP RTL AFL FOR SAP HANA` component in the SAP HANA database. In your back-end system, then install the back-end product version of SAP Customer Activity Repository applications bundle and set up an SAP client.
3. Install ABAP Front-End Server [page 53]
   Install the complete UI layer in the front-end system. This UI layer consists of SAP Gateway, the central SAP Fiori UI component (SAP Fiori front-end server), and the product-specific SAP Fiori UI component (front-end product version of SAP Customer Activity Repository applications bundle).
4. Install Alternate Storage (Optional) [page 57]
   You only need to implement this procedure if you plan on using the *Table Content Aging* report delivered with SAP Customer Activity Repository. This report allows you to copy your transaction log (TLOG) data and its extensions from your SAP HANA database to an alternate storage technology (such as SAP IQ or Apache Hadoop), thereby reducing your total cost of hardware ownership.

5.1 Verify Prerequisites and SAP Notes

Ensure that the required prerequisites and SAP Notes have been implemented in your system landscape.

1. Verify that you have installed and configured the required prerequisites for your scenario. See Install the Prerequisites [page 17] under *Common Prerequisites* and *Application-Specific Prerequisites*.
2. Verify that **all SAP Notes** that must be applied **before the installation** and that are **required for your scenario** have been implemented.
   See Implement SAP Notes for the Installation [page 25].

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

Parent topic: Install the Software [page 45]

Next: Install ABAP Back-End Server [page 46]

5.2 Install ABAP Back-End Server

Install the `SAP RTL AFL FOR SAP HANA` component in the SAP HANA database. In your back-end system, then install the back-end product version of SAP Customer Activity Repository applications bundle and set up an SAP client.

Context

The ABAP back-end server is based on SAP NetWeaver. It contains the products that provide the business logic and the back-end data, including users, roles, and authorizations.

> **i** Note
>
> For a general system landscape overview, see https://help.sap.com/viewer/p/FIORI_IMPLEMENTATION ▶ *<Version>* ▶ *Installation and Upgrade* ▶ *SAP Fiori: Setup and Configuration* ▶ *Setup of SAP Fiori System Landscape* ▶.

1. Download and Install the Application Function Library (SAP RTL AFL FOR SAP HANA) [page 47]
   Install compatible revisions of the SAP RTL AFL FOR SAP HANA component, the SAP HANA AFL component, and the SAP HANA database. You must do this **before** you install the back-end product version of SAP Customer Activity Repository applications bundle.
2. Install SAP Customer Activity Repository applications bundle (Back-End Product Version) [page 49]
   Install the `SAP CARAB 4.0 FPS01` back-end product version of SAP Customer Activity Repository applications bundle 4.0 FPS01.
3. Set Up SAP Client [page 51]
   Set up an SAP client on your back-end system. The steps to follow depend on whether your scenario uses the Demand Data Foundation (DDF) module in SAP Customer Activity Repository or not.

Parent topic: Install the Software [page 45]

Previous: Verify Prerequisites and SAP Notes [page 45]

Next: Install ABAP Front-End Server [page 53]

5.2.1 Download and Install the Application Function Library (SAP RTL AFL FOR SAP HANA)

Install compatible revisions of the SAP RTL AFL FOR SAP HANA component, the SAP HANA AFL component, and the SAP HANA database. You must do this **before** you install the back-end product version of SAP Customer Activity Repository applications bundle.

Overview

There is one software component in SAP Customer Activity Repository applications bundle that you must always install first: `SAP RTL AFL FOR SAP HANA`.

You must download **compatible revisions** of `SAP RTL AFL FOR SAP HANA`, `SAP HANA AFL`, and `SAP HANA DATABASE`, and install them together. For this, you need to be aware of the following dependencies.

Dependencies Between AFLs and the SAP HANA Database

Even though `SAP RTL AFL FOR SAP HANA` is part of SAP Customer Activity Repository applications bundle, it is released independently.

That is because AFL components (such as `SAP RTL AFL FOR SAP HANA` and `SAP HANA AFL`) follow 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 each AFL is released. As a result, there are always multiple revisions of each component available for download.

> ⚠ Caution
>
> For each revision of an AFL component, there is **only one compatible revision** of the SAP HANA database. Whenever you upgrade the AFLs, you must also upgrade the database to the compatible revision. Whenever you upgrade the database, you must also upgrade the AFLs.

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

Download and Install `SAP RTL AFL FOR SAP HANA`

1. Determine which revision of the SAP HANA database and the AFL components you need.

To select the best revision for your scenario, see the following:

- In section Install the Prerequisites [page 17], see *Common Prerequisites* > *SAP HANA Platform*. Here you can find 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 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 this 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.
- If you need more information on the release and maintenance strategy of the SAP HANA Platform, see http://support.sap.com *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 included in the `SAP CARAB` back-end product version. You can find the available revisions under *By Alphabetical Index (A-Z)* > *C* > *CAR RETAIL APPLICATIONS BUNDLE* > *SAP CARAB 4.0* > *Support Packages and Patches* > *DOWNLOADS* > *COMPRISED SOFTWARE COMPONENT VERSIONS* > *SAP RTL AFL FOR SAP HANA 200*.
   - `SAP HANA AFL` and `SAP HANA DATABASE`:
     These components are included in the SAP HANA Platform. You can find the available revisions under *By Alphabetical Index (A-Z)* > *H* > *SAP HANA PLATFORM EDITION* > *SAP HANA PLATFORM EDITION 2.0* > *Support Packages and Patches* > *DOWNLOADS* > *SAP HANA AFL 2.0* and *SAP HANA DATABASE 2.0*.
   - 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. Install the selected revisions of `SAP RTL AFL FOR SAP HANA`, `SAP HANA AFL`, and `SAP HANA DATABASE`.
   See SAP Note 2377894 and carefully follow the steps for the new installation scenario.

   > → Tip
   >
   > If you encounter issues during the installation, see the Troubleshooting [page 154] section for possible solutions.

Parent topic: Install ABAP Back-End Server [page 46]

Next: Install SAP Customer Activity Repository applications bundle (Back-End Product Version) [page 49]

5.2.2 Install SAP Customer Activity Repository applications bundle (Back-End Product Version)

Install the `SAP CARAB 4.0 FPS01` back-end product version of SAP Customer Activity Repository applications bundle 4.0 FPS01.

Prerequisites

- You have completed all of the procedures listed in the previous sections of this guide, in particular, in section Prepare the Installation [page 25].
- You have installed compatible revisions of the SAP HANA database, the SAP HANA AFL component, and the `SAP RTL AFL FOR SAP HANA` component. If you need information on the required minimum revision, see Install the Prerequisites [page 17].

Overview

In the procedures below you do the following:

Use this tool...	To do this...
Maintenance Planner More information: https://help.sap.com/viewer/p/MAINTENANCE_PLANNER	Plan your system landscape and create a stack XML file based on the required product versions.
Software Update Manager (SUM) More information: https://support.sap.com/en/tools/software-logistics-tools/software-update-manager.html	Install or upgrade components using the stack XML file.

> **i Note**
>
> It may be possible to install or upgrade components using the SAP Add-On Installation Tool 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.

Create the Stack XML File Using Maintenance Planner

> **i Note**
>
> If you encounter issues in Maintenance Planner, see the following SAP Notes for possible solutions:
>
> - 2596901: *NetWeaver 7.51 and 7.52 targets are not available when selecting the option "Update SAP NetWeaver" in Maintenance Planner*
> - 2535751: *Can not select the higher release for Netweaver in Maintenance Planner*
> - 2314463: *Required file K-XXXxxxxxxxx.SAR is not visible for your user Sxxxxxxx*

1. Log on to Maintenance Planner at http://support.sap.com *Maintenance* *Maintenance Information* *Maintenance Planner* *Access Maintenance Planner*.
2. Choose *Plan a New System*.
3. Choose *Plan*.
4. Enter a three-character system ID.
5. Select *Install an SAP NETWEAVER System*.
6. Select one of the following product versions and support package stacks:
   - `ABAP FND 1709 ON HANA` and `SPS02 (05/2018)` (or a higher support package stack)
   - `ABAP FND 1809 ON HANA` and `Initial Shipment Stack` (or a higher support package stack)
7. Select a valid instance (for example, `SAP Foundation`).
8. Choose *Confirm Selection*.
9. Choose *Install or Maintain an Add-On*.
10. Select the back-end product version `SAP CARAB 4.0` and the support package stack `FPS01 (04/2019)`.
11. Select the instance `CAR Retail Application Bundle`.
12. Choose *Confirm Selection*.
13. Choose *Next*.
14. Select the operating system and database for your scenario.
15. Choose *Confirm Selection*.
16. Review the details of your stack dependent and independent files, then choose *Next*.
17. Choose *Download Stack XML*.
    You have now created the stack XML file.

Install the Stack XML File Using Software Update Manager (SUM)

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

Result

You have successfully installed the back-end product version.

> **i** Note
>
> With this installation, the SAP HANA content for Unified Demand Forecast (UDF) has already been activated automatically. This saves you a manual activation step later on.

Continue with the next section.

Parent topic: Install ABAP Back-End Server [page 46]

Previous: Download and Install the Application Function Library (SAP RTL AFL FOR SAP HANA) [page 47]

Next: Set Up SAP Client [page 51]

5.2.3 Set Up SAP Client

Set up an SAP client on your back-end system. The steps to follow depend on whether your scenario uses the Demand Data Foundation (DDF) module in SAP Customer Activity Repository or not.

Procedure for All Scenarios Using DDF

Do this procedure in the following cases:

- You want to model and forecast demand using the UDF module in SAP Customer Activity Repository.
- You want to use the Omnichannel Promotion Pricing (OPP) module in SAP Customer Activity Repository.
- You want to use SAP Allocation Management.
- You want to use SAP Assortment Planning.
- You want to use SAP Merchandise Planning.
- You want to use SAP Promotion Management.

1. Create the necessary client on your back-end system using the client maintenance transaction (**SCC4**).

   > ⚠ Caution
   >
   > If you are performing a client copy, only do this after a successful import of all related software components. Also, only import or transfer Customizing tables after this client copy is complete, as described in SAP Note 337623.

2. Make the required settings in the *Define Logical Systems* Customizing activity under *Cross-Application Components* > *Demand Data Foundation* > *Basic Settings*.
   Read the activity documentation to verify your settings. If you are using multiple source master data systems and/or clients, you must define a logical system for each system/client.

Furthermore, you use this activity to define the master data system type (SAP Retail (SAP ERP) or SAP S/4HANA).

Procedure for Scenarios Not Using DDF

Do this procedure if you are implementing a non-DDF scenario:

- POS Data Transfer and Audit
- Multichannel Transaction Data Management
- Inventory Visibility
- On-Shelf Availability

1. Verify the client numbers in the source SAP Retail or SAP S/4HANA system and in the source systems of optional products that you wish to implement with SAP Customer Activity Repository (such as SAP CRM and SAP Marketing).
   This installation includes SAP HANA content that provides views on a combination of client-dependent data authored in these source SAP systems. For instance, sales documents are created in a source SAP Retail system and are replicated to the repository. Likewise, customer information can be optionally replicated from a source SAP CRM or SAP Marketing system.
2. Create the necessary client on your back-end system using the client maintenance transaction (**SCC4**).

   > ⚠ Caution
   >
   > If you are performing a client copy, only do this after a successful import of all related software components. Also, only import or transfer Customizing tables after this client copy is complete, as described in SAP Note 337623.

   Using the same client number might not be possible due to the specifics of your implementation and client setup rules. In this case, **you must use SLT transformation rules before replicating data** to transform the source SAP Retail or SAP S/4HANA, and optionally, the source SAP CRM or SAP Marketing, client(s) to match the client on your back-end system.

   > Example
   >
   > If SAP Retail and SAP CRM (or SAP Marketing) are set up on client 100 in your implementation, you should also set up your installation on client 100. If, for any reason, you are unable to do so, you can transform the source client to 100 using SLT transformation rules.

   Cross-system information is client-dependent. As a result, the *SAP Client* (`MANDT`) attribute must be used as one of the join attributes in the SAP HANA views to combine cross-system sales and master data. All data (whether created or replicated) must be affiliated with the same client number.
3. If required, enable multiple master data system support and define client mapping for each of the master data systems. Do this in the *Client Mapping For Multiple ERP Systems* Customizing activity under *SAP Customer Activity Repository* > *General Settings*.

More Information

If you require more information about the client concept, see https://help.sap.com/viewer/product/SAP_NETWEAVER_AS_ABAP_752 ▶ *Application Help* ▶ *SAP NetWeaver Library: Function-Oriented View* ▶ *Application Server ABAP* ▶ *Other Services* ▶ *Services for Administrators* ▶ *Client Concept* ▶.

Parent topic: Install ABAP Back-End Server [page 46]

Previous: Install SAP Customer Activity Repository applications bundle (Back-End Product Version) [page 49]

5.3 Install ABAP Front-End Server

Install the complete UI layer in the front-end system. This UI layer consists of SAP Gateway, the central SAP Fiori UI component (SAP Fiori front-end server), and the product-specific SAP Fiori UI component (front-end product version of SAP Customer Activity Repository applications bundle).

Context

The **ABAP front-end server** contains all the infrastructure components to generate an SAP Fiori app-specific UI for the client and to communicate with the back-end systems. The UI components and SAP Gateway are based on SAP NetWeaver.

The central SAP Fiori UI component is a framework that provides the common infrastructure for all SAP Fiori apps: The SAP Fiori launchpad is the basis of all SAP Fiori UIs, and provides fundamental functions for SAP Fiori apps (such as logon, surface sizing, navigation between apps, and role- based app catalogs). End-users access the SAP Fiori apps from the SAP Fiori launchpad.

> **i** Note
>
> For a general system landscape overview, see https://help.sap.com/viewer/p/FIORI_IMPLEMENTATION ▶ *<Version>* ▶ *Installation and Upgrade* ▶ *SAP Fiori: Setup and Configuration* ▶ *Setup of SAP Fiori System Landscape* ▶.

1. Install SAP Gateway on the ABAP Front-End Server [page 54]
   SAP Gateway (`SAP_GWFND`) is a component in SAP NetWeaver. In this procedure, you ensure that the required SAP NetWeaver version is installed on your ABAP front-end server.
2. Verify Installation of Central SAP Fiori UI Component [page 55]
   The central SAP Fiori UI component includes the SAPUI5 control library and the SAP Fiori launchpad. It is delivered as part of the SAP Fiori front-end server. Verify that the required version of the SAP Fiori front-end server is installed.
3. Install Product-Specific SAP Fiori UI Component (Front-End Product Version) [page 55]

Install the SAP FIORI FOR SAP CARAB 4.0 FPS01 front-end product version for this release. The product version contains the SAP Fiori apps for SAP Customer Activity Repository applications bundle. First create a stack XML file with Maintenance Planner and then install the stack XML file with Software Update Manager (SUM).

Parent topic: Install the Software [page 45]

Previous: Install ABAP Back-End Server [page 46]

Next: Install Alternate Storage (Optional) [page 57]

5.3.1 Install SAP Gateway on the ABAP Front-End Server

SAP Gateway (`SAP_GWFND`) is a component in SAP NetWeaver. In this procedure, you ensure that the required SAP NetWeaver version is installed on your ABAP front-end server.

Context

SAP Gateway (sometimes called SAP Gateway Foundation) handles the communication between the ABAP back-end server and the client on the front-end. It establishes a connection between SAP Business Suite or application data and target clients, platforms, and programming framework.

> **i** Note
>
> With the **central hub deployment** option, you use separate servers for the back-end and the front-end components. For a landscape diagram and more information about deployment options, see System Landscape [page 13].

Procedure

1. Ensure that the required SAP NetWeaver version is installed on your front-end server. For more information, see the following:
   - Verify the required version. See Install the Prerequisites [page 17] and consult the information under *Common Prerequisites* > *Foundation on SAP NetWeaver AS for ABAP, version for SAP HANA* and *SAP Fiori*.
   - For installation and upgrade information for SAP Fiori, 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.

Parent topic: Install ABAP Front-End Server [page 53]

Next: Verify Installation of Central SAP Fiori UI Component [page 55]

5.3.2 Verify Installation of Central SAP Fiori UI Component

The central SAP Fiori UI component includes the SAPUI5 control library and the SAP Fiori launchpad. It is delivered as part of the SAP Fiori front-end server. Verify that the required version of the SAP Fiori front-end server is installed.

Procedure

1. Verify what version is required. In Install the Prerequisites [page 17], see under *Common Prerequisites* > *SAP Fiori* .
2. Ensure that the required version is installed on your front-end server.

Parent topic: Install ABAP Front-End Server [page 53]

Previous: Install SAP Gateway on the ABAP Front-End Server [page 54]

Next: Install Product-Specific SAP Fiori UI Component (Front-End Product Version) [page 55]

5.3.3 Install Product-Specific SAP Fiori UI Component (Front-End Product Version)

Install the SAP FIORI FOR SAP CARAB 4.0 FPS01 front-end product version for this release. The product version contains the SAP Fiori apps for SAP Customer Activity Repository applications bundle. First create a stack XML file with Maintenance Planner and then install the stack XML file with Software Update Manager (SUM).

Overview

In the procedures below you do the following:

Use this tool...	To do this...
Maintenance Planner More information: https://help.sap.com/viewer/p/MAINTENANCE_PLANNER	Plan your system landscape and create a stack XML file based on the required product versions.
Software Update Manager (SUM) More information: https://support.sap.com/en/tools/software-logistics-tools/software-update-manager.html	Install or upgrade components using the stack XML file.

> **i Note**
>
> It may be possible to install or upgrade components using the SAP Add-On Installation Tool 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.

Create the Stack XML File Using Maintenance Planner

> **i Note**
>
> If you encounter issues in Maintenance Planner, see the following SAP Notes for possible solutions:
>
> - 2596901: *NetWeaver 7.51 and 7.52 targets are not available when selecting the option "Update SAP NetWeaver" in Maintenance Planner*
> - 2535751: *Can not select the higher release for Netweaver in Maintenance Planner*
> - 2314463: *Required file K-XXXxxxxxxxx.SAR is not visible for your user Sxxxxxxx*

1. Log in to Maintenance Planner 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 4.0 FPS01` 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*.

Install the Stack XML File Using Software Update Manager (SUM)

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

Result

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

Continue with the next section.

Parent topic: Install ABAP Front-End Server [page 53]

Previous: Verify Installation of Central SAP Fiori UI Component [page 55]

5.4 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 Apache Hadoop), thereby reducing your total cost of hardware ownership.

Use

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

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

Process Flow

In order to successfully install alternate storage, you must execute the following procedures:

1. Do one of the following:
   - Install and set up integration with SAP IQ, **or**
   - Install and set up integration with Apache Hadoop, **or**
   - Install and set up integration with SAP HANA Dynamic Tiering
2. Create the remote source in SAP HANA studio (not applicable for integration with SAP HANA Dynamic Tiering).
3. Create the virtual table.
4. Set the deploy mode in SAP HANA Transport for ABAP.

Parent topic: Install the Software [page 45]

Previous: Install ABAP Front-End Server [page 53]

5.4.1 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.

   > **i Note**
   >
   > The default DBSpaces provided during installation are intended to be used for SAP IQ system management. You should create your own DBSpace under the *Main* store with a DB File that is large enough to satisfy your sizing requirements.
   >
   > For more information, see SAP Help Portal at https://help.sap.com/viewer/p/SAP_IQ *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*.

   > **i Note**
   >
   > Click *View All* if topic does not appear in initial list.

3. Create a database under the content created at the beginning of this procedure.

   > **i Note**
   >
   > Ensure the following:
   >
   > - The SAP IQ stores are configured with a large enough cache configuration, main memory, and temporary memory.
   > - The page size should be set to 128KB.
   > - The concurrency aligns with the amount of processes that will be triggered during the data copy.

   For more information, see SAP Help Portal at https://help.sap.com/viewer/p/SAP_IQ *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`

   > **i 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*.

5.4.2 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

> **i 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

> **i** 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. Confirm the right combination of versions required between SAP HANA, Apache Spark, and the SAP HANA Spark controller. Use the *SAP HANA Spark Controller Compatibility Matrix* to do this. This document is available under https://help.sap.com/viewer/p/SAP_HANA_SPARK_CONTROLLER. Navigate to *Additional Information* > *SAP HANA Spark Controller Compatibility Matrix*.
2. Install and set up the SAP HANA Spark controller as described in SAP Note 2273047.

For more information on installing and setting up the SAP HANA Spark controller, see SAP Help Portal at http://help.sap.com/viewer/p/SAP_HANA_PLATFORM *Administration* > *SAP HANA Administration Guide* > *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).

> **i** Note
>
> The following steps are only **guidelines** which provide an example of how to mount Network File System (NFS) on an SAP NetWeaver Linux-based client.

1. Make sure the NFS client is installed based on the examples provided:

Operating System	Command
Red Hat, CentOS	`sudo yum install nfs-utils`
Ubuntu	`sudo apt-get install nfs-common`

Operating System	Command
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>`

> **i 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`

5.4.3 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*

5.4.4 Create the Remote Source in SAP HANA Studio

> **i Note**
>
> This step is not applicable if you are integrating the alternate storage feature with SAP HANA Dynamic Tiering.

Create a remote source by selecting the appropriate adapter and configuring the connection properties and user credentials.

A detailed procedure is described in the *SAP HANA Administration Guide*.

For 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* ▶.

5.4.5 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* ▶.

5.4.6 Activate Alternate Storage

1. In your back-end system, execute report `/CAR/ACTIVATE_HTA`.
2. Confirm or set the following:
   - In the *ECC Mode* section, choose the relevant ECC mode for your system.
   - In the *External Systems* section, choose *Nearline Storage*.
3. Press *Execute*.

This deploys package `sap.is.retail.car.nls` for ECC mode SAP ERP, or `sap.is.retail.car_s4h.nls` for ECC mode S/4HANA. Each package contains views that combine TLOG data from SAP HANA with TLOG data from the alternate storage system.

6 Set Up the Applications

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

For **SAP Allocation Management**, first consult the information in section SAP Allocation Management. Then do the setup steps under *SAP Customer Activity Repository* > *Core (Mandatory for All Applications)*.

6.1 SAP Customer Activity Repository

First do the setup steps under *SAP Customer Activity Repository* > *Core (Mandatory for All Applications)*. Then you can continue with the setup steps under *SAP Customer Activity Repository* > *Advanced (Optional)* or do the setup steps for your application.

6.1.1 Core (Mandatory for All Applications)

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

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

1. Check SAP Notes and RINs [page 69]

There are notes that can only be implemented **after** you have installed 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 do the next steps.

2. Verify Back-End Users and Roles [page 70]
   Ensure that the required users on the **SAP HANA database** level and on the **back-end application** level have the privileges, roles, and authorizations required for your scenario.
3. Set Up Authorizations for On-Shelf Availability (OSA) [page 72]
   In SAP HANA studio, grant the `AFL__SYS_AFL_POSDM_AREA_EXECUTE` role to the `SAP<SID>` user. This short procedure is mandatory for **all the scenarios**, because it is required for the successful activation of the SAP HANA content later on.
4. Set Up Authorizations for Unified Demand Forecast (UDF) [page 73]
   In SAP HANA studio, create three roles for UDF, grant the required privileges, and assign two roles to the `SAP<SID>` user and one role to the `_SYS_REPO` user. This procedure is mandatory for **all the scenarios** because it is required for the successful activation of the SAP HANA content later on.
5. Create/Replicate Source Master Data System Tables [page 76]
   Create the tables in SAP Customer Activity Repository that are required for data replication with the SAP Landscape Transformation Replication Server (SLT). Then do the actual replication from the source master data system. For reference, use a spreadsheet listing the tables for each system (SAP Retail, SAP S/4HANA).
6. Activate SAP HANA Content [page 78]
   Activate the SAP HANA content for your scenario by executing an activation report in the back-end system. You can run this report as many times as your scenario requires.
7. Activate SAP HANA Content for Distribution Curves [page 81]
   If you plan to calculate distribution curves for your scenario, activate the required SAP HANA content in this additional procedure.
8. Activate SAP HANA Script Server [page 83]
   Activate the script server for the SAP HANA database. This step is mandatory for all the applications.
9. Configure Demand Data Foundation [page 84]
   Configure the DDF module in SAP Customer Activity Repository as required for your scenario.
10. Configure SAP Gateway [page 88]
    Perform several configuration steps for SAP Gateway and the OData services. The steps to follow depend on the SAP NetWeaver version on your front-end server.
11. Configure SAP Fiori Launchpad [page 96]
    Perform the general configuration of the SAP Fiori launchpad. This is a prerequisite to being able to set up SAP Fiori apps for any of the applications.
12. Configure Calculation of SAPUI5 Application Index [page 97]
    Configure and run the report to calculate the SAPUI5 application index. You can run the report manually, but we recommend that you schedule it as a regular background job on your front-end server. The report is `/UI5/APP_INDEX_CALCULATE` (*Calculation of SAPUI5 Application Index for SAPUI5 Repositories*).

6.1.1.1 Check SAP Notes and RINs

There are notes that can only be implemented **after** you have installed 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 do the next steps.

Prerequisites

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 Implement SAP Notes for the Installation [page 25] section and verify that all *After the installation* notes that are required for your scenario have been implemented.

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

2. Consult the back-end RIN 2708055 and implement any required corrections. The note contains back-end corrections for the current release of SAP Customer Activity Repository applications bundle.
3. Consult the front-end RIN 2708040 and implement any required corrections. The note contains front-end corrections for the current release of SAP Customer Activity Repository applications bundle.

Task overview: Core (Mandatory for All Applications) [page 67]

Next: Verify Back-End Users and Roles [page 70]

6.1.1.2 Verify Back-End Users and Roles

Ensure that the required users on the **SAP HANA database** level and on the **back-end application** level have the privileges, roles, and authorizations required for your scenario.

Prerequisites

- You are aware that the names of the **front-end application** users must be the same as those in the SAP HANA database and the back-end application.
- You have read and performed the steps in section Verify SAP HANA User and Privileges [page 37].

Procedure

Ensure that your **back-end application user** has the following roles/authorizations.

User	Role / Authorization
<Your User Name>*	• SAP_ISR_DDF_MASTER • SAP_ISR_AP_MASTER • /RAP/BW_AP_WORKBOOKS • /RAP/BW_MPR_WORKBOOKS • In transaction **RS2HANA_VIEW**, set SAP HANA User Mapping to **C** (*DBMS user, else SAP HANA user with same name as BW user*). • In transaction **RS2HANA_CHECK**, verify that authorizations for generating SAP HANA views out of local BI Content objects are set up. Correct any resulting issues. For more information, see http://help.sap.com/viewer/p/SAP_NETWEAVER_750 (or choose a higher version). Navigate to *Application Help* > *SAP NetWeaver Library: Function-Oriented View* > *SAP Business Warehouse* > *Using the SAP HANA Database* > *Data Modeling When Using a SAP HANA* > *Mixed Modeling (SAP BW and SAP HANA)* > *Generating SAP HANA Views from the BW System* > *Authorizations for Generating SAP HANA Views*. • If you need detailed information about PAK execution, the user profile must have the following parameters maintained. Be aware that as a result of the additional logging, these settings might slow down the performance. In transaction SU3, select the *Parameters* tab. Enter the parameter and the desired value as shown below and choose *Save*. **Parameter** / **Value** RSPLS_HDB_PE_TRACE / **Y**

More Information

For information on setting up front-end application users, see the following:

- For SAP Assortment Planning: Assign Roles, Catalogs, and Groups in SAP Fiori Launchpad [page 237]
- For SAP Allocation Management: Assign Roles, Catalogs, and Groups in SAP Fiori Launchpad [page 254]

Parent topic: Core (Mandatory for All Applications) [page 67]

Previous task: Check SAP Notes and RINs [page 69]

Next: Set Up Authorizations for On-Shelf Availability (OSA) [page 72]

6.1.1.3 Set Up Authorizations for On-Shelf Availability (OSA)

In SAP HANA studio, grant the `AFL__SYS_AFL_POSDM_AREA_EXECUTE` role to the `SAP<SID>` user. This short procedure is mandatory for **all the scenarios**, because it is required for the successful activation of the SAP HANA content later on.

Context

The `AFL__SYS_AFL_POSDM_AREA_EXECUTE` role enables the `SAP<SID>` user to call the OSA application function library (part of the `SAP RTL AFL FOR SAP HANA` component) in the SAP HANA database.

Prerequisites

- You have installed the `SAP RTL AFL FOR SAP HANA` component as described in Download and Install the Application Function Library (SAP RTL AFL FOR SAP HANA) [page 47].
- You have an `SAP<SID>` user and an `SAP<SID>` physical schema in your SAP HANA database. **The names must be identical.** If you need more information on database users and schema mapping, see Verify Back-End Users and Roles [page 70] and Verify Correct Schema Mapping [page 40].
- You have database administrator rights so that you can grant roles to users.

Procedure

→ Tip

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

1. In SAP HANA studio, access your back-end system and open the *SAP HANA Administration Console*.
2. Choose ▶ *Security* ▶ *Users* ▶.
3. Select your `SAP<SID>` user and open the user details (or double-click the user).
4. On the *Granted Roles* tab, choose the plus icon and select **`AFL__SYS_AFL_POSDM_AREA_EXECUTE`** as the role name.
   SQL example: `grant AFL__SYS_AFL_POSDM_AREA_EXECUTE to SAP<SID>;`
5. Save your changes by choosing the *Deploy (F8)* icon at the top right.

Result

You have successfully set up the authorizations for OSA.

Parent topic: Core (Mandatory for All Applications) [page 67]

Previous: Verify Back-End Users and Roles [page 70]

Next: Set Up Authorizations for Unified Demand Forecast (UDF) [page 73]

6.1.1.4 Set Up Authorizations for Unified Demand Forecast (UDF)

In SAP HANA studio, create three roles for UDF, grant the required privileges, and assign two roles to the `SAP<SID>` user and one role to the `_SYS_REPO` user. This procedure is mandatory for **all the scenarios** because it is required for the successful activation of the SAP HANA content later on.

Context

The three roles for UDF have the following purpose:

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

Prerequisites

- You have installed the `SAP RTL AFL FOR SAP HANA` component as described in Download and Install the Application Function Library (SAP RTL AFL FOR SAP HANA) [page 47]. This component contains the application function library for UDF.
- You have an `SAP<SID>` user and an `SAP<SID>` physical schema in your SAP HANA database. **The names must be identical.** For more information, see Verify Back-End Users and Roles [page 70].

- You know what the name of the `SAP<SID>` user is in your system landscape. For information on how to find this name, see Verify Correct Schema Mapping [page 40].
- You have database administrator rights so that you can create roles, grant privileges, and assign roles to users.

Procedure

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

1. In SAP HANA studio, log on to your back-end system and open the *SAP HANA Administration Console*.
2. Navigate to ▶ *Security* ▶ *Roles* ▶ and select *New Role* from the context menu.
3. In the *Role Name* field, specify **`UDF_EXECUTE`**.
   SQL example: `create role UDF_EXECUTE;`
4. Make the following settings for this role:
   - On the *Granted Roles* tab: Choose the plus icon and select the `AFL__SYS_AFL_UDFCORE_AREA_EXECUTE` role from the list.
     SQL example: `grant AFL__SYS_AFL_UDFCORE_AREA_EXECUTE to UDF_EXECUTE;`
   - On the *Object Privileges* tab: Add the following catalog objects and grant them the following privileges:
     - Catalog object (schema name) `SAP<SID>`: privileges *SELECT*, *INSERT*, *UPDATE*, *DELETE*
       SQL example: `grant SELECT, INSERT, UPDATE, DELETE on schema SAP<SID> to UDF_EXECUTE;`
     - Catalog object (schema name) `_SYS_BIC`: privileges *SELECT*, *EXECUTE*
       SQL example: `grant SELECT, EXECUTE on schema _SYS_BIC to UDF_EXECUTE;`
   - On the *Analytic Privileges* tab: Add the `_SYS_BI_CP_ALL` privilege.
     SQL example: `call GRANT_ACTIVATED_ANALYTICAL_PRIVILEGE('_SYS_BI_CP_ALL','UDF_EXECUTE');`
5. Save your changes by choosing the *Deploy (F8)* icon at the top right.
6. Navigate to ▶ *Security* ▶ *Users* ▶.
7. Select the `SAP<SID>` user from the list and open the details screen (or double-click the user).
8. On the *Granted Roles* tab, add the `UDF_EXECUTE` role.
   SQL example: `grant UDF_EXECUTE to SAP<SID>`
9. Save your changes by choosing the *Deploy (F8)* icon at the top right.

   > **i Note**
   >
   > You have created the first role with the required privileges and granted the role to the `SAP<SID>` user.

10. Now create the second role. Navigate again to ▶ *Security* ▶ *Roles* ▶ and select *New Role* from the context menu.

11. In the *Role Name* field, specify **UDF_DEPLOY**.
    SQL example: `create role UDF_DEPLOY;`
12. Make the following settings for this role:
    - On the *Granted Roles* tab: Choose the plus icon and select the `CONTENT_ADMIN` role from the list.
      SQL example: `grant CONTENT_ADMIN to UDF_DEPLOY;`
    - On the *System Privileges* tab: Add the `CATALOG READ` privilege.
      SQL example: `grant CATALOG READ to UDF DEPLOY;`
13. Save your changes by choosing the *Deploy (F8)* icon at the top right.
14. Navigate again to *Security* > *Users*.
15. Select the `SAP<SID>` user from the list and open the details screen (or double-click the user).
16. On the *Granted Roles* tab, add the `UDF_DEPLOY` role.
    SQL example: `grant UDF_DEPLOY to SAP<SID>;`
17. Save your changes by choosing the *Deploy (F8)* icon at the top right.

> **i Note**
>
> You have created the second role and granted the role to the `SAP<SID>` user.

18. Now create the third role. Navigate again to *Security* > *Roles* and select *New Role* from the context menu.
19. In the *Role Name* field, specify **UDF_DEPLOY_SYS_REPO**.
    SQL example: `create role UDF_DEPLOY_SYS_REPO;`
20. On the *Object Privileges* tab, make these settings:
    Add catalog object (schema name) `SAP<SID>` and grant the privileges *SELECT*, *INSERT*, *UPDATE*, and *DELETE*.
    SQL example: `grant SELECT, INSERT, UPDATE, DELETE on schema SAP<SID> to UDF_DEPLOY_SYS_REPO;`
21. Save your changes by choosing the *Deploy (F8)* icon at the top right.
22. Navigate again to *Security* > *Users*.
23. Select the `_SYS_REPO` user from the list and open the details screen (or double-click the user).
24. On the *Granted Roles* tab, add the `UDF_DEPLOY_SYS_REPO` role.
    SQL example: `grant UDF_DEPLOY_SYS_REPO to _SYS_REPO;`
25. Save your changes by choosing the *Deploy (F8)* icon at the top right.

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

Result

You have successfully set up the authorizations for UDF.

Parent topic: Core (Mandatory for All Applications) [page 67]

Previous: Set Up Authorizations for On-Shelf Availability (OSA) [page 72]

Next task: Create/Replicate Source Master Data System Tables [page 76]

6.1.1.5 Create/Replicate Source Master Data System Tables

Create the tables in SAP Customer Activity Repository that are required for data replication with the SAP Landscape Transformation Replication Server (SLT). Then do the actual replication from the source master data system. For reference, use a spreadsheet listing the tables for each system (SAP Retail, SAP S/4HANA).

Prerequisites

- You have installed the SAP Landscape Transformation Replication Server. For the minimum version required, see in Install the Prerequisites [page 17] under *Common Prerequisites*.
- You have downloaded the spreadsheet with the tables 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 *SLT Tables for SAP Customer Activity Repository applications bundle* archive from under *Installation and Upgrade* and extract the spreadsheet.

Context

SAP Customer Activity Repository applications bundle uses data that originates from a single or multiple source master data systems. For information on using multiple source master data systems and/or clients, see Set Up SAP Client [page 51].

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

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

> **i** Note
>
> To be able to activate the SAP HANA content for SAP Allocation Management, you must replicate both the SAP ERP tables and the SAP Fashion Management tables. Note that the replication of the SAP Fashion Management tables is mandatory, even if you do not use SAP Fashion Management.

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

> **⚠** Caution
>
> You must always create and replicate **all the tables** listed for your source master data system in the spreadsheet. This is mandatory for the successful activation of the SAP HANA content.

> **i Note**
>
> You can combine the steps *create* and *replicate*.

Procedure

1. **Create all the tables listed for your source master data system.**
   a. Configure access from the SAP Landscape Transformation Replication Server to the source SAP Retail or SAP S/4HANA Retail system (RFC connection) and from the SAP Landscape Transformation Replication Server to the target SAP HANA database.

      For more information, see sections *Technical Prerequisites and Authorization Aspects* and *Accessing the Configuration and Monitoring Dashboard* under https://help.sap.com/viewer/p/SAP_LANDSCAPE_TRANSFORMATION_REPLICATION_SERVER ▶ *<Version>* ▶ *Operations* ▶ *Application Operations Guide (Replicating Data to SAP HANA)*.
   b. Ensure that your back-end system is connected to SAP HANA studio.

      If necessary, set the connection as follows:

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

      > **i Note**
      >
      > For more information, see section Create a Schema of the *SAP HANA Developer Guide*.
   d. Create **all the tables** for your source master data system.
      1. Log on to the SAP Landscape Transformation Replication Server.
      2. Start transaction **LTRC** (*SAP LT Replication Server Cockpit*).
      3. Define and select your replication configuration.
         See section *Creating a Configuration* under https://help.sap.com/viewer/p/SAP_LANDSCAPE_TRANSFORMATION_REPLICATION_SERVER ▶ *<Version>* ▶ *Operations* ▶ *Application Operations Guide (Replicating Data to SAP HANA)*.
      4. Choose `Execute (F8)`. A screen opens that shows the details of this replication configuration.
      5. Select the *table overview* tab. On top, the *data provisioning* function will get visible.
      6. Execute the *table overview* function. On the subsequent pop-up, select the function for table creation.
      7. Choose the multiple selection push-button next to the table name field.
      8. In the next screen, you can either enter table names manually or upload a text file with the table names (recommended):
         Create this text file based on the spreadsheet and ensure that it only contains the table names and no other data. Then upload the text file.

9. Choose `Copy (F8)` to return to the previous screen.
10. Choose `Execute (F8)` to trigger the creation of the tables.

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

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

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

      If the *Quick View* panel is not displayed, choose *Help* > *Quick View*.
   d. In the *Data Provisioning Editor*, make any necessary adjustments: remove or add tables, select the appropriate source system, and select the target schema for replication.
   e. Choose *Replicate* to open the *Replicate Request* screen.
   f. Choose *Load from file* and browse to the location where you saved the CSV file.
   g. The tables in the file will be added to the *Selected* column on the right-hand side. Select *Finish*.

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

   You have successfully created and replicated the tables for your source master data system.

Task overview: Core (Mandatory for All Applications) [page 67]

Previous: Set Up Authorizations for Unified Demand Forecast (UDF) [page 73]

Next task: Activate SAP HANA Content [page 78]

6.1.1.6 Activate SAP HANA Content

Activate the SAP HANA content for your scenario by executing an activation report in the back-end system. You can run this report as many times as your scenario requires.

Prerequisites

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

Context

The `/CAR/ACTIVATE_HTA` report activates the SAP HANA Transport for ABAP (HTA) objects for your scenario. One HTA object is activated for each SAP HANA content package.

Procedure

1. **i Note**

   You must only do this first step if your source master data system is **SAP S/4HANA 1809 or higher**. If it is not, continue directly with step 2.

   Run a special SLT report to create the tables required for data replication with the SAP Landscape Transformation Replication Server:

   a. In your back-end system, start transaction `SE38`.
   b. Enter **`/DMF/CREATE_SLT_TABLES`** as the program and choose *Execute* (`F8`).
   c. Select system *S/4HANA* and version *1809* (or a higher version).
   d. Make the other settings as required for your system landscape:
      - *Physical Source Schema*: Enter the name of your physical schema that you have previously mapped to the `SAP_S4H` authoring schema.
      - *Physical Dummy Schema*: Enter the name of your physical schema that you have previously mapped to the `SAP_ECC` authoring schema.

        i Note

        If you need information on the mapped schemas, see Verify Correct Schema Mapping [page 40].

      - *Mode*: Select *Simulation*.
   e. Choose *Execute* to run the report in simulation mode.
   f. Resolve any messages that might be raised.
   g. Deselect the simulation mode and run the report for real.

   The SLT tables for SAP S/4HANA 1809 (or higher) are created. Now you can activate the SAP HANA content for your scenario.

2. Start transaction `SE38`.
3. Enter **`/CAR/ACTIVATE_HTA`** as the program and choose *Execute* (`F8`).
4. Select all the options for which you wish to activate the SAP HANA content. Use the following table for reference:

You want to activate the SAP HANA content for...	Select at least these options...
SAP Allocation Management	**Do not** select *Allocation Management* and run the report. Follow the instructions in section Activate SAP Allocation Management SAP HANA Content [page 245] instead.
Distribution Curves (without SAP Allocation Management)	Follow the instructions in Activate SAP HANA Content for Distribution Curves [page 81].
SAP Assortment Planning	○ *ECC Mode*: Select your source master data system. If you use *Fashion Management*, select it. ○ *Business Scenarios Activation*: Select *Assortment Planning*.
Unified Demand Forecast (UDF) and demand planning SAP Fiori apps (*Analyze Forecast*, *Adjust Forecast*, *Manage Demand Influencing Factors*)	You do not need to run the report for these scenarios. The SAP HANA content should already be active at this point. It was activated automatically during the installation of the back-end product version.
On-Shelf Availability	○ *ECC Mode*: Select your source master data system. ○ *Business Scenarios Activation*: Select *On-Shelf Availability* and *Customer Activity Repository*.
Omnichannel Article Availability and Sourcing (OAA)	○ *ECC Mode*: Select your source master data system. ○ *Business Scenarios Activation*: Select *Omnichannel Article Availability*.
SAP Merchandise Planning	Follow the instructions in Activate SAP HANA Content for SAP Merchandise Planning [page 174].
SAP Promotion Management	No action required.

5. Perform the prerequisite check to validate the selections:
   a. Select *Perform Prerequisite Check* and choose *Execute* (F8).
   b. Read the system log before applying any database changes.
   c. Resolve any issues found during the check.

      If you encounter issues, see the Troubleshooting [page 154] section for possible solutions.
6. Activate the SAP HANA content for real:
   a. Deselect *Perform Prerequisite Check*.
   b. Choose *Execute* (F8) again.
7. Check that the activation was successful. You have several options:
   a. Simply rerun the report. The system lists the scenarios that are now active.
   b. Or: Execute transaction `SCTS_HTA`. Specify a SAP HANA content package (for example, `sap.is.retail`), select *Include subpackages*, and choose *Execute* (F8). The system lists the contents of the package and indicates the status of each object.
   c. Or: Navigate to the same package in SAP HANA studio and check whether all its views are active.

Results

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

Task overview: Core (Mandatory for All Applications) [page 67]

Previous task: Create/Replicate Source Master Data System Tables [page 76]

Next: Activate SAP HANA Content for Distribution Curves [page 81]

6.1.1.7 Activate SAP HANA Content for Distribution Curves

If you plan to calculate distribution curves for your scenario, activate the required SAP HANA content in this additional procedure.

Prerequisite

You have installed SAP Note 2692291 *SAP Allocation Management 4.0 - Distribution Curve Configuration - SLT report /DMF/CREATE_SLT_TABLES fails for S4H 1709 Source system*.

Run the Dummy Schema and Dummy Table Creation Report

The report checks for a missing physical schema and creates this physical schema and the corresponding dummy tables in the schema if necessary. The successful completion of this step is a prerequisite for the SAP HANA content activation for distribution curves.

> **i Note**
>
> The running of the report requires a database user in the ABAP system with the authorization to crate the dummy schema. Check the application log for the report if there were errors.

1. In your back-end system, start transaction `SE38`. Enter **`/DMF/CREATE_SLT_TABLES`** (*Create SLT Tables*) as the program and choose *Execute*.
2. Select your source system. For *S/4HANA*, enter the version.
3. Enter the physical source and dummy schema names. For the *Physical Source Schema*, enter the physical schema name into which your SLT tables should be replicated. For the *Physical Dummy Schema*, enter the name for the schema to be created. If the physical source schema already exists in the SAP HANA database, then only the dummy tables in this schema are created when you execute the report.
4. Select the simulation mode for a test run. After the simulation run, you can check for errors in the application log.

Maintain Schema Mapping

Check the names you use for your physical schema. If you are using the default names below, no further action is required:

- `SAP_S4H`, for your SAP S/4HANA schema
- `SAP_ECC`, for your SAP Retail (ECC or FMS) schema

If you have chosen names for your physical schema that are **different from the names above**, you must do the following:

Maintain a schema mapping in your SAP HANA database where your customer-specific names are used as authoring schemas for the physical schema.

Set *Prework Done* for DDF Packages

A precondition for the activation of SAP HANA Transport for ABAP (HTA) objects is that the `PREWORK_DONE` indicator is set for all packages with activation mode `P – prework needed`. You can check this setting in the table `CTS_HOT_PACKAGE` in field `HOT_ACTIVATION_MODE`.

Set the `PREWORK_DONE` indicator for all Demand Data Foundation (DDF) packages relevant for the distribution curve functionality:

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

1. Call transaction `SE16` (*Data Browser*) and display the contents of table `CTS_HOT_PREWORK` (*HANA Transport for ABAP: Prework for SAP HANA Deployment*).
2. Enter `ABAP_HANA_PACKAGE_ID` for all DDF packages listed above. You can obtain the `ABAP_HANA_PACKAGE_ID` for the `HANA_PACKAGE_ID` from table `CTS_HOT_PACKAGE`.
3. Check if the indicator `PREWORK_DONE` is set to **X** for **all** these packages. If not, set the indicator to **X**.

Check and Activate DDF SAP HANA Content

Based on your scenario, there can be inactive packages in DDF, even though you have activated the content earlier via the report `/CAR/ACTIVATE_HTA` (*Activate SAP HANA Content for SAP CARAB*), as described in section Activate SAP HANA Content [page 78].

1. Call transaction `SCTS_HTA_DEPLOY` (*SAP HANA Transport for ABAP - Deployment*) to check and to deploy (if not already deployed) the following packages, in **strictly the sequence** in which they are listed. Do **not** select the option to *Include subpackages*:

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

> **i** Note
>
> The package names are case-sensitive.

Parent topic: Core (Mandatory for All Applications) [page 67]

Previous task: Activate SAP HANA Content [page 78]

Next task: Activate SAP HANA Script Server [page 83]

6.1.1.8 Activate SAP HANA Script Server

Activate the script server for the SAP HANA database. This step is mandatory for all the applications.

Context

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

> **i** Note
>
> The operating system process is `hdbscriptserver`.
>
> The service name is `scriptserver`.
>
> The operating system 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.

2. If the script server is not active, restart it manually as described in SAP Note 1650957 *SAP HANA Database: Starting the Script Server*.

Task overview: Core (Mandatory for All Applications) [page 67]

Previous: Activate SAP HANA Content for Distribution Curves [page 81]

Next: Configure Demand Data Foundation [page 84]

6.1.1.9 Configure Demand Data Foundation

Configure the DDF module in SAP Customer Activity Repository as required for your scenario.

Required Configuration

The configuration of DDF is mandatory for the following scenarios:

- You want to model and forecast demand using the UDF module in SAP Customer Activity Repository.
- You want to use the Omnichannel Promotion Pricing (OPP) module in SAP Customer Activity Repository.
- You want to use SAP Allocation Management.
- You want to use SAP Assortment Planning.
- You want to use SAP Merchandise Planning.
- You want to use SAP Promotion Management.

> **i Note**
>
> The configuration of DDF is optional for the following SAP Customer Activity Repository scenarios:
>
> - POS Data Transfer and Audit
> - Multichannel Transaction Data Management
> - Inventory Visibility
> - On-Shelf Availability

For additional configurations and integration information, see the following documentation on SAP Help Portal at http://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*
- *Administration* > *SAP Customer Activity Repository Administration Guide*: sections *Configuring Demand Data Foundation (DDF)*, *Configuring Data Replication from SAP ERP to DDF*

> **i Note**
>
> If you encounter issues during the configuration, see the Troubleshooting [page 154] section for possible solutions.

Overview of DDF Configuration Tasks

1. Perform General Demand Data Foundation Configuration [page 85]
   Perform various configuration steps in Customizing for DDF. DDF must be fully configured and operational for all the scenarios for which it is mandatory.
2. Configure Automatic Flattening of Hierarchies [page 86]
   Configure the system so it automatically creates and updates flat structures for the product and location hierarchies in DDF. The flat structures are required so that the consuming applications can correctly recognize the hierarchies.
3. Import SAP NetWeaver Portal Roles for DDF [page 87]
   Set up user authorizations for DDF using the `PFCG` roles from the SAP NetWeaver Business Client (NWBC) and from the SAP NetWeaver Portal (optional). Both sets of roles operate in the same manner.
4. Check Performance-Related Configuration Options (Optional) [page 88]
   Use additional configuration options for Demand Data Foundation (DDF) to optimize performance for different use cases.

Parent topic: Core (Mandatory for All Applications) [page 67]

Previous task: Activate SAP HANA Script Server [page 83]

Next: Configure SAP Gateway [page 88]

6.1.1.9.1 Perform General Demand Data Foundation Configuration

Perform various configuration steps in Customizing for DDF. DDF must be fully configured and operational for all the scenarios for which it is mandatory.

Procedure

1. Perform all of the Customizing activities that are required for DDF.
   For more information, see the *Configuring Demand Data Foundation (DDF)* section of the *SAP Customer Activity Repository Administration Guide*.

Parent topic: Configure Demand Data Foundation [page 84]

Next task: Configure Automatic Flattening of Hierarchies [page 86]

6.1.1.9.2 Configure Automatic Flattening of Hierarchies

Configure the system so it automatically creates and updates flat structures for the product and location hierarchies in DDF. The flat structures are required so that the consuming applications can correctly recognize the hierarchies.

Context

Flat structures describe the parent-child relationships of hierarchies in a flattened format. A hierarchy can be vertically or horizontally flattened. Each row of the resulting flat structure contains one parent-child relationship.

When you create (or update) a product hierarchy, product group, location hierarchy, or location group in Demand Data Foundation (DDF), the system should create (or update) the corresponding flat structure. Without this, you get hierarchy errors in the consuming applications.

To configure the automatic flattening of hierarchies, follow these steps:

Procedure

1. Carefully read SAP Note 1425876 and follow the instructions.
2. Execute transaction **SWETYPV** and ensure that you have activated all required event type linkages and have enabled the specified event queues. In particular, check that the *Linkage Activated* and *Enable Event Queue* options are for each of the following events: `LOCATION_CREATED`, `LOCATION_UPDATED`, `CREATE_LOC_HIER`, `CREATE_PROD_HIER`. If you need to change a setting, you can do so in the *Details* screen of each event.

   For more information about event handling, see SAP Note 1098805, in particular sections *Events* and *Transactions for troubleshooting*.

Results

You have set up the automatic flattening of the hierarchies. When you now create (or update) a hierarchy, the system will automatically run the `/DMF/TREE_FLATTENER_PROD_INS` report (for product hierarchies) or the `/DMF/TREE_FLATTENER_LOC_INS` report (for location hierarchies) and create (or update) the corresponding flat structure.

Task overview: Configure Demand Data Foundation [page 84]

Previous: Perform General Demand Data Foundation Configuration [page 85]

Next: Import SAP NetWeaver Portal Roles for DDF [page 87]

6.1.1.9.3 Import SAP NetWeaver Portal Roles for DDF

Set up user authorizations for DDF using the `PFCG` roles from the SAP NetWeaver Business Client (NWBC) and from the SAP NetWeaver Portal (optional). Both sets of roles operate in the same manner.

Use

The roles have been designed for use in SAP NetWeaver Business Client. To use the functions of these roles in SAP NetWeaver Portal, you must upload the roles from the SAP back-end system to the portal. The uploaded objects are converted into portal objects.

Procedure

1. Use the *Role Upload* tool to generate the SAP NetWeaver Portal roles automatically. For information about this tool, see SAP Note 1685257.
   You can also enhance the SAP NetWeaver Portal roles; for example, you can create your own iViews.
   You can upload the following roles for DDF:
   - `SAP_ISR_DDF_MASTER`
   - `SAP_ISR_DDF_READONLY_MASTER`

For descriptions of these roles and information about maintaining roles in SAP Customer Activity Repository, see section *Authorizations* in the *SAP Customer Activity Repository Administration Guide*.

Parent topic: Configure Demand Data Foundation [page 84]

Previous task: Configure Automatic Flattening of Hierarchies [page 86]

Next: Check Performance-Related Configuration Options (Optional) [page 88]

6.1.1.9.4 Check Performance-Related Configuration Options (Optional)

Use additional configuration options for Demand Data Foundation (DDF) to optimize performance for different use cases.

Procedure

See the following options and implement those that are relevant for you:

Use Case	Configuration Option
You have a great number of products and locations, so that the resulting tables are very large.	Consider table partitioning. For information, see the *Partition Tables for UDF and DDF* section of the *SAP Customer Activity Repository Administration Guide*.
You want to optimize workload distribution.	Consider setting up load balancing. For information, see https://help.sap.com/viewer/p/CARAB ▶ *<Version>* ▶ *Application Help* ▶ *SAP Customer Activity Repository* ▶ *Demand Data Foundation* ▶ *General Services* ▶ *Configure Load Balancing* ▶.
You are using DDF together with UDF to model and forecast consumer demand.	Optimize performance for modeling and forecasting processes. For information, see the Optimize UDF Performance*Optimize UDF Performance* section of the *SAP Customer Activity Repository Administration Guide*.

Parent topic: Configure Demand Data Foundation [page 84]

Previous: Import SAP NetWeaver Portal Roles for DDF [page 87]

6.1.1.10 Configure SAP Gateway

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

Perform General SAP Gateway Configuration [page 89]

Make several general configuration settings (for example, set profile parameters, activate ICF services, or make language settings). The settings may vary depending on the SAP NetWeaver version installed on your front-end server, or on other specifics related to your system landscape.

Connect SAP Gateway to Your Back-End System [page 90]
Set up the connection between SAP Gateway on your front-end server and your back-end system. In other words, set up the OData Channel (ODC).

Activate SAP Gateway [page 91]
Before you can use SAP Gateway, you must activate it globally on your front-end server.

Activate OData Services [page 91]
First activate all the common OData services for SAP Fiori (mandatory). Then select the OData services for the application and SAP Fiori apps that you wish to use and activate these services as well.

Parent topic: Core (Mandatory for All Applications) [page 67]

Previous: Configure Demand Data Foundation [page 84]

Next: Configure SAP Fiori Launchpad [page 96]

6.1.1.10.1 Perform General SAP Gateway Configuration

Make several general configuration settings (for example, set profile parameters, activate ICF services, or make language settings). The settings may vary depending on the SAP NetWeaver version installed on your front-end server, or on other specifics related to your system landscape.

Use

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

Procedure

1. Determine the SAP NetWeaver version on your front-end server.
2. Consult the product documentation for your SAP NetWeaver version to determine what settings to make. For SAP Gateway for SAP NetWeaver 7.52, see https://help.sap.com/viewer/p/SAP_NETWEAVER_AS_ABAP_752 ▶ *<Version>* ▶ *Application Help* ▶ *SAP Gateway Foundation (SAP_GWFND)* ▶ *SAP Gateway Foundation Configuration Guide* ▶ *General Configuration Settings* ▶.
3. Perform the general SAP Gateway configuration specific to your SAP NetWeaver version.

6.1.1.10.2 Connect SAP Gateway to Your Back-End System

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

Use

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

Procedure

1. Determine the SAP NetWeaver version on your front-end server.
2. Set up the OData Channel as described in the product documentation for your SAP NetWeaver version. For SAP Gateway for SAP NetWeaver 7.52, see https://help.sap.com/viewer/p/SAP_NETWEAVER_AS_ABAP_752 ▶ *<Version>* ▶ *Application Help* ▶ *SAP Gateway Foundation (SAP_GWFND)* ▶ *SAP Gateway Foundation Configuration Guide* ▶ *SAP Gateway Configuration* ▶ *User, Developer, and Administrator Roles* ▶ and *Connection Settings for the SAP Gateway Hub System*.
3. Set up the required roles on the front-end server and assign your user to these roles.
4. Specify the connection settings on the SAP Gateway hub system. They include:
   - Connection from SAP Gateway to consumer systems
     These settings allow you to connect the SAP Gateway host to the consumer systems (clients from which you access the SAP Fiori apps).
   - Connection from SAP Gateway to SAP back-end system
     These settings allow you to connect SAP Gateway to your back-end system. They include the following steps:
     - Creating a type 3 connection from the SAP Gateway host to your back-end system
     - Defining a trust relationship between your back-end system and the SAP Gateway host
     - Configuring your back-end system to accept SAP assertion tickets from the SAP Gateway host
     - Configuring your SAP Gateway host to accept SAP assertion tickets from your back-end system
     - Configuring the necessary system aliases

6.1.1.10.3 Activate SAP Gateway

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

Use

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

Procedure

1. Determine the SAP NetWeaver version on your front-end server.
2. Carry out the instructions specific to your SAP NetWeaver version:
   For SAP Gateway for SAP NetWeaver 7.52, see https://help.sap.com/viewer/p/SAP_NETWEAVER_AS_ABAP_752 ▶ *<Version>* ▶ *Application Help* ▶ *SAP Gateway Foundation (SAP_GWFND)* ▶ *SAP Gateway Foundation Configuration Guide* ▶ *SAP Gateway Configuration* ▶ *Activating SAP Gateway* ▶.

6.1.1.10.4 Activate OData Services

First activate all the common OData services for SAP Fiori (mandatory). Then select the OData services for the application and SAP Fiori apps that you wish to use and activate these services as well.

Context

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

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

Procedures

Mandatory: Activate Common OData Services for SAP Fiori

1. Log on to your front-end server (your SAP Gateway system).

2. In transaction **SPRO**, navigate to *SAP Reference IMG* > *SAP NetWeaver* > *SAP Gateway* > *OData Channel* > *Administration* > *General Settings* > *Activate and Maintain Services* and execute the Customizing activity.

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

   The *Service Catalog* shows you all the services that are currently active in your SAP Gateway system.
3. To add and activate more services, choose *Add Service*.
   The *Add Selected Services* screen is displayed.
4. In *System Alias*, select the alias of your local back-end system.
   This is the alias that you have created in Connect SAP Gateway to your Back-End System [page 90]. For example, `LOCAL`.
5. In *Technical Service Name*, specify **`/UI2*`**.
6. Choose *Get Services* (or press `ENTER`).
7. Select all the common OData services for SAP Fiori:

Common OData Services for SAP Fiori
`/UI2/PAGE_BUILDER_CONF`
`/UI2/PAGE_BUILDER_CUST`
`/UI2/PAGE_BUILDER_PERS`
`/UI2/TRANSPORT`
`/UI2/INTEROP`

8. Choose *Add Selected Services* and follow the instructions.
   Result
   The common OData services are now active in your SAP Gateway system.

Activate Application-Specific OData Services for SAP Customer Activity Repository applications bundle

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

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

   The *Service Catalog* shows you all the services that are currently active in your SAP Gateway system.
3. Activate the services that are required for your application:
   1. Choose *Add Service*.
      The *Add Selected Services* screen is displayed.

2. In *System Alias*, select the alias of your back-end system.
3. Choose *Get Services* (or press ENTER).
   The available services are displayed.

4. Use the following table for reference and select the services for your application:

For this Application...	Activate These OData services...

SAP Customer Activity Repository	○ For POS Data Transfer and Audit: none
	○ For Multichannel Transaction Data Management: none
	○ For Unified Demand Forecast and the demand planning apps (*Analyze Forecast*, *Adjust Forecast*, *Manage Demand Influencing Factors*):
	○ `/DMF/DEMAND_PLAN_UTILITIES_SRV`
	○ `/DMF/OD_DEMAND_PLAN_SRV`
	○ `/DMF/OD_FC_TIME_SERIES_VIZ_SRV`
	○ `/DPL/OD_ADJUST_FORECAST_SRV`
	○ For Demand Data Foundation (optional, alternative to the DRF data replication framework for importing master data):
	○ `/DMF/API_DOCUMENT`
	○ `/DMF/API_GENERIC_TIME_SERIES`
	○ `/DMF/API_INVENTORY`
	○ `/DMF/API_LOCATION`
	○ `/DMF/API_LOCATION_HIERARCHY`
	○ `/DMF/API_PRODUCT`
	○ `/DMF/API_PRODUCT_HIERARCHY`
	○ `/DMF/API_PRODUCT_LOCATION`
	○ `/DMF/API_SALES_HISTORY`
	○ `/DMF/API_TRANSPORTATION_LANE`
	○ `/DMF/API_ATTRIBUTES`
	○ `/DMF/API_IMAGES`
	○ `/DMF/API_MERCHANDISE_PLAN_KPI`
	○ `/DMF/API_PHPS`
	○ For the *Manage Product Attributes* app:
	`/DMF/API_ATTRIBUTES_SRV` (optional, to import external attributes for integration scenarios with a non-SAP source master data system)
	○ For Omnichannel Promotion Pricing: none
	○ For Omnichannel Article Availability and Sourcing (part of Inventory Visibility):
	○ With SAP S/4HANA back-end:
	`/OAA/F3391_MSN_SRV` (new with SAP Customer Activity Repository)
	`/OAA/F2586_MSS_SRV`
	`/OAA/F2659_MSC_SRV`
	`/OAA/F3392_MS_SRV` (new with SAP Customer Activity Repository)
	○ With SAP Retail back-end:
	`/OAA/F2530_MSN_SRV`
	`/OAA/F2586_MSS_SRV`
	`/OAA/F2659_MSC_SRV`
	`/OAA/F3003_MS_SRV`
	○ For On-Shelf Availability:
	`/OSA/ON_SHELF_AVAILABILITY`

For this Application...	Activate These OData services...
	○ For SAP Smart Business for Multichannel Sales Analytics: none
Distribution Curves	`/DMF/DIST_CURVE`
SAP Allocation Management	○ `/AMR/OD_ALLOCATIONPLAN_SRV` ○ `/AMR/OD_COMMON_SRV` ○ `/AMR/OD_MARKETUNIT_SRV` ○ `/AMR/OD_PARAM_SRV` ○ `/AMR/OD_WORKLOAD_SRV` ○ `/AMR/OD_PRODUCT_FLOW_SRV` ○ `/AMR/OD_KPI_CONFIG_SRV` ○ `/AMR/OD_ALLOCATIONRESULT_SRV` ○ `/AMR/OD_BASKET_SRV` ○ `/AMR/OD_ALLOCATIONPLAN_SEARCH_SRV`
SAP Assortment Planning	○ `/DMF/CURRENCY_LIST_SRV` ○ `/DMF/LOCATION_CLUSTERSET_SRV` ○ `/DMF/MASTER_DATA_SRV` ○ `/DMF/MODULE_MANAGEMENT_SRV` ○ `/DMF/OBJ_ATTRIBUTE_SRV` ○ `/DMF/PLAN_CONFIG_SRV` ○ `/DMF/SEARCH_LOCATIONS_SRV` ○ `/DMF/SEARCH_PRODUCTS_SRV` ○ `/DMF/SEASONS_SRV` ○ `/RAP/ASSORTMENT_LIST_SRV` ○ `/RAP/OPTION_PLAN_SRV` ○ `/RAP/PHP_MATCH_SRV` ○ `/RAP/VALIDITY_PERIOD_SRV` ○ `/RAP/V_OP_KPI_Q_CDS_CDS` ○ `/RAP/OPT_PLN_KPI_SRV` ○ `/RAP/V_OP_OCLST_PRSL_Q_CDS_CDS`
SAP Merchandise Planning	Not applicable (this application does not have SAP Fiori apps)
SAP Promotion Management	○ `/DMF/PROD_MD_SRV` (Master Data Retrieval) ○ `/DMF/OFFER_MANAGEMENT_V2_SRV` (*Manage Promotional Offers*) ○ `/DMF/PRODUCT_GROUP_SRV` (*Manage Product Groups*) ○ `/DMF/LOCATION_SUBGROUP_SRV` (*Manage Location Subgroups*) ○ `/PRM/OFFER_CONTENT_SRV` (Offer Content Assignment)

4. Choose *Add Selected Services* and follow the instructions.

> **i Note**
>
> User roles are only needed if you want to have connections to multiple back-end systems or multiple clients on the same back-end. The user roles are system-specific and are not delivered by default. If

required, you must create them manually. If you define multiple user roles for different connections, make sure you have only one role assigned to your user at any time. If you need to change roles, first remove the old role from your user, then assign the new role.

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

6.1.1.11 Configure SAP Fiori Launchpad

Perform the general configuration of the SAP Fiori launchpad. This is a prerequisite to being able to set up SAP Fiori apps for any of the applications.

Prerequisite

The central SAP Fiori UI component is installed on the front-end server. The component contains the SAP Fiori launchpad.

Use

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

Procedure

1. Determine the SAP NetWeaver version on your front-end server.
2. Configure the SAP Fiori launchpad as described in the corresponding product documentation.
   For SAP NetWeaver 7.52, see https://help.sap.com/viewer/p/SAP_NETWEAVER_AS_ABAP_752 ▶ *<Version>* ▶ *UI Technologies in SAP NetWeaver* ▶ *SAP Fiori Launchpad* ▶ *Administration Guide* ▶.
   If required, select a different version at the top right.

Parent topic: Core (Mandatory for All Applications) [page 67]

Previous: Configure SAP Gateway [page 88]

Next: Configure Calculation of SAPUI5 Application Index [page 97]

6.1.1.12 Configure Calculation of SAPUI5 Application Index

Configure and run the report to calculate the SAPUI5 application index. You can run the report manually, but we recommend that you schedule it as a regular background job on your front-end server. The report is `/UI5/APP_INDEX_CALCULATE` (*Calculation of SAPUI5 Application Index for SAPUI5 Repositories*).

Context

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

This index is calculated and updated each time you run the report. The index makes it possible to find the data significantly faster.

Use

Run the report and update the index in all front-end systems of your system landscape:

- after any changes to the content of the SAPUI5 ABAP repository
- after installing a new version of the SAPUI5 distribution layer
- after implementing an SAP Note containing changes to an SAP Fiori app

Procedure

1. Read SAP Note 2227577 (*Recalculation of the SAPUI5 Application Index After Implementing an SAP Note*).
2. Determine the SAP NetWeaver version on your front-end server.
3. Follow the instructions specific to your SAP NetWeaver version:
   - For SAP Gateway for SAP NetWeaver 7.52: https://help.sap.com/viewer/p/SAP_NETWEAVER_AS_ABAP_752 ▶ *<Version>* ▶ *Application Help* ▶ *UI Technologies in SAP NetWeaver (SAP_UI 750)* ▶ *SAPUI5: UI Development Toolkit for HTML5* ▶ *Developing Apps* ▶ *The SAPUI5 ABAP Repository and the ABAP Back-End Infrastructure* ▶ *SAPUI5 Application Index* ▶

Parent topic: Core (Mandatory for All Applications) [page 67]

Previous: Configure SAP Fiori Launchpad [page 96]

6.1.2 Advanced (Optional)

Perform optional steps to set up specific functionality in SAP Customer Activity Repository.

6.1.2.1 Configure SAP Smart Business for Multichannel Sales Analytics

6.1.2.1.1 Install the SAP Smart Business Modeler Apps Framework

The SAP Smart Business for Multichannel Sales Analytics apps included in this installation are based on the SAP Smart Business Modeler Apps Framework. Installation and setup of this framework includes the following:

- Installation of SAP Smart Business Modeler apps on the front-end server
- Installation of SAP Smart Business products on the SAP HANA Server
- Installation of SAP Web Dispatcher
- Communication channels
- App implementation

For more information on these topics, see https://help.sap.com/viewer/p/UI_ADD-ON_FOR_SAP_NETWEAVER_10 ▶ *Application Help* ▶ *SAP Library* ▶ *SAPUI5: UI Development Toolkit for HTML5* ▶ *SAPUI5 Application Frameworks* ▶ *SAP Smart Business* ▶ *Setting up the SAP Smart Business Modeler Apps Framework* ▶.

> **i Note**
>
> If you are installing User Interface Add-On 2.0 for SAP NetWeaver, you must download and install add-on object UISAFND1 100 as described in SAP Note 2183947.

6.1.2.1.2 Configure SAP Web Dispatcher for the SAP Smart Business Modeler Apps

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

Where to Find Configuration Information

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

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

How to Configure SAP Web Dispatcher for the SAP Smart Business Modeler Apps

The following parameters values are required:

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

Other Solutions

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

6.1.2.2 Configure On-Shelf Availability

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

> **i Note**
>
> The configuration of OSA is **mandatory** if you want to generate intraday forecasts. For 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* ▶.

> **i Note**
>
> If you encounter any issues when upgrading OSA, see Troubleshooting [page 154] for a possible solution.

6.1.2.2.1 Generate Run IDs for OSA Processing Steps

Use

Each scheduled run of a processing step of On-Shelf Availability (OSA) 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 ID generator transactions, you must define the range of run IDs.

Procedure

Do the following steps for each transaction:

1. Log on to your back-end system.
2. Execute the transaction by specifying either `/n<transaction>` or `/o<transaction>`.
   Example for the first transaction: `/n/OSA/NR_IWP`
3. Choose *Intervals* in change mode.

4. In the first row of the table, enter the following values for the following fields:
    - Field *No*: `01`
    - Field *From No.*: `0000000000000001`
    - Field *To Number*: `9999999999999999`
5. Save your changes.

6.1.2.2.2 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 must check if the fields in these views contain the mappings or formulas you need.

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

Procedure

To change the mapping or the formula of a field, do these steps:

1. Define the data foundation that is the source for the view, that is, the table `/POSDW/TLOGF`.
2. Define filters for the view.
3. Map the fields from source to target.
4. Create measures and calculation fields.

For more information, see the documentation under https://help.sap.com/viewer/p/SAP_HANA_PLATFORM ▶ *<Version>* ▶ *Development* ▶.

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

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

- The source of the view is the table `/POSDW/TLOGF`.
- Examples of filters for the views:
    - `RECORDQUALIFIER = '5'`: Only sales records are used.
    - `DATASTATUS in ('2' , '3')`: Only those records are used that passed the SAP Customer Activity Repository validation.
    - `RETAILQUANTITY > 0.0`: Negative quantities are not used by On-Shelf Availability.

- `VOIDEDLINE = ''`: Canceled transactions are not used by On-Shelf Availability.

- Examples of fields mappings:
  - `MANDT`: Client ID. This field is mapped to the `MANDT` column of the `/POSDW/TLOGF` table.
  - `STORE_ID`: Store ID. This field is mapped to the `RETAILSTOREID` column of the `/POSDW/TLOGF` table.
  - `BUSINESSDAYDATE`: Business day. This field is mapped to the `BUSINESSDAYDATE` column of the `/POSDW/TLOGF` table.
- Examples of measures:
  - `RETAILQUANTITY`: Amount of units sold. Refers to the `SALESUOM` (Sales Unit of Measure) field that is also defined in the `/POSDW/TLOGF` table. Contains the value of the `RETAILQUANTITY` field.
  - `PRICE`: Price specified in the store currency. Contains the value of the `ACTUALUNITPRICE` field.
- Examples of calculated fields:
  - `TRANS_TIME_DBL`: Value of the `TRANS_TIME` output field of type `DOUBLE`. The format of the transaction time that is stored in `BEGINTIMESTAMP` and `ENDTIMESTAMP` is `<YYYYMMDDhhmmss>`.
  - `DISCOUNT`: Total relative discount applied on the item.
    Calculated as `(ITEMDISC + DISTDISC) / (RETAILQUANTITY * ACTUALUNITPRICE)`. If the price is not a positive number, 0 is returned.
    Definitions:
    - `DISTDISC`: global discount on the whole purchase; currently not used.
    - `ITEMDISC`: item-specific discount; currently used.

6.1.2.3 Ensure that Third Party CRM Sales Orders are Transferred to SAP ERP

Use

Sales documents are accessed by SAP Customer Activity Repository (either through replication or direct data access) from a source SAP ERP system. One way that sales documents of type *Sales Order* can be generated in a SAP ERP system is through the transfer of sales orders created using an SAP CRM source system or a third party CRM system.

When customers create sales orders using SAP CRM systems, these sales orders are inherently compatible to the sales document structure in SAP ERP. They are transferred to SAP ERP via *Data Exchange for Sales Orders: CRM Enterprise - ERP System* process. For more information, see SAP Library for SAP CRM on SAP Help Portal at http://help.sap.com/crm. Select the applicable version of SAP CRM and under *Application Help*, open SAP Library and choose *Basic Functions* > *Business Transaction* > *Data Exchange for Business Transactions*.

Customers who use third party CRM systems to create sales orders, and who want to access these sales orders from SAP Customer Activity Repository, must ensure that their sales order data:

- Includes the information required by SAP Customer Activity Repository
- Has been transferred to SAP ERP prior to being able to access this data from SAP Customer Activity Repository

Procedure

1. Ensure that the fields required by SAP Customer Activity Repository are filled during the transfer of sales order data from your third party CRM system to SAP ERP.
2. Ensure that sales order data has been transferred from your third party CRM system to SAP ERP.

6.1.2.4 Partition /POSDW/TLOGF and Aggregation Tables

Use

SAP Customer Activity Repository application contains the Point of Sale Data Management software component, which is used to receive a large volume of data from your connected stores. Point of Sale Data Management, or more specifically, its POS Inbound Processing Engine (PIPE), processes the incoming transactions and stores them in the `/POSDW/TLOGF` table.

Since every transaction line item is stored as a separate row in the `/POSDW/TLOGF` table, the table can quickly grow to become very large. To improve standard database operations, such as inserting, updating, deleting and reading and mass operations, such as archiving or index merging, SAP recommends that you partition the `/POSDW/TLOGF` table.

Also, you can select to store extension segments in a dedicated `/POSDW/TLOGF_EXT` table using the *Store Extensions in Separate Table* option of the *Define General Settings* Customizing activity. Table `/POSDW/TLOGF_EXT` should be partitioned in the same way as the `/POSDW/TLOGF` table.

For more information on extension segments, see the *Appendix* of the *Operations Guide, SAP Customer Activity Repository*.

> **i** Note
>
> Partitioning is typically used in distributed system, but it may also be beneficial for single-host systems.

Procedure

1. Read the *Table Partitioning in the SAP HANA Database* section of the *SAP HANA Administration Guide*.
2. Plan your **partition specifications** in accordance to the following guidelines:
   - A single partition should not contain more than 1 billion rows.
   - The total amount of partitions of a single table should not exceed 1000.
   - Because the actual act of partitioning a table does use system resources, do not start partitioning the `/POSDW/TLOGF` table until its volume has surpassed 250 million rows.
3. Partition the `/POSDW/TLOGF` table as required according to SAP Note 1719282. Depending on your requirements, you may also optionally partition the following tables. The same SAP Note is relevant for these as well.
   - `/POSDW/TLOGF_EXT`

- /POSDW/AGGR01
- /POSDW/ACCRTB

6.1.2.5 Customize Copies of SAP HANA Views

Use

In this optional procedure, you create copies of views included in SAP HANA Live for SAP ERP or in the SAP HANA content for SAP Customer Activity Repository. You then customize these copies to reflect your specific data model extensions.

> ⚠ Caution
>
> Do not modify standard SAP HANA content.

For example, you would need to execute this procedure if you have extended your POS transaction data model. The views delivered with the SAP HANA content for SAP Customer Activity Repository are built on the standard /POSDW/TLOGF table. If you have added custom fields to the /POSDW/TLOGF table, you will have to create views that expose these fields.

In general, if you have extended any standard SAP data models, you must copy and adapt the standard SAP HANA content.

> ⚠ Caution
>
> If you have created a copy of a view shipped as part of the standard SAP HANA content and have made modifications to this copy, a subsequent upgrade of SAP HANA Live for SAP ERP or SAP HANA content for SAP Customer Activity Repository will not update your copied and modified version of the view. SAP Notes or enhancements shipped by SAP will also have to be manually implemented on the copied, and subsequently modified, SAP HANA content.

Procedure

1. Log on to SAP HANA studio.
2. Open the *Modeler* and use the *Navigator* to access the folder that contains the view that you want to copy.
   For example, *<Your System Name>* > *Content* > *sap* > *is* > *retail* > *car* > *Calculation Views*.
3. Identify the view you want to copy. For example, sap.is.retail.car/POSSalesQuery.
4. Use the *Auto Documentation* feature of SAP HANA studio to identify all reuse and private views that are consumed by your selected view, as well as any query views that might consume your view. To do so:
   1. Right-click on the selected view, and choose *Auto Documentation* from the context menu.
   2. Browse to the location where you want to save the file and choose *Finish*.
   3. Open the generated *.pdf file, and locate the *Cross-References* section of the document.
      The *Cross-References* section displays the hierarchy of calculation (query, reuse, and private) views that are accessed by the selected view. Affected underlying, as well as all consuming views, in this hierarchy must also be copied and modified as a result of your extension.

For example, calculation views `sap.is.retail.car/POSSales`, `sap.is.retail.car/POSLogItem`, and `sap.is.retail.car/TLOGF_ITEM_COM` are all consuming the `/POSDW/ TLOGF` table and are consumed by the `sap.is.retail.car/POSSalesQuery` view. Therefore, if you have extended the `/POSDW/TLOGF` table, all these views must be copied and modified.

5. For each view identified in the previous step, do the following:
   1. In the *Navigator* panel, select an object and in the context menu, choose *Copy*.
   2. Navigate to the package where you want to paste the view and choose *Paste*.

      > **i Note**
      >
      > You must have write permissions on the target package to which you are pasting the view. Also, you should copy the view to your own package. Do not modify the original `sap` package.

   3. Modify the copied view as required.
      For more information, see the *Creating Views* section of the *SAP HANA Developer Guide*.
   4. Right-click on the copied and modified view and select *Activate*.

6.1.2.6 Complete UDF Setup

Set up the Unified Demand Forecast (UDF) module in SAP Customer Activity Repository to enable demand modeling and forecasting. The steps in this section are optional and depend on the scenario that you wish to implement.

Use

UDF supports the following scenarios:

Scenario	Set Up and Configure UDF
Demand planning apps in SAP Customer Activity Repository (*Analyze Forecast*, *Adjust Forecast*, *Manage Demand Influencing Factors*)	Mandatory
SAP Promotion Management	Mandatory (for what-if forecasts) Optional (without what-if forecasts)
SAP Allocation Management SAP Assortment Planning SAP Merchandise Planning	Mandatory (if associated with your scenario)

Prerequisites

- You have configured the DDF module as described in Configure Demand Data Foundation [page 84].
- You have set up the users, roles, and privileges for UDF as described in Set Up Authorizations for Unified Demand Forecast (UDF) [page 73].

Procedure

> **i Note**
>
> If you encounter issues during the setup, see the Troubleshooting [page 154] section for possible solutions.

Perform Mandatory Setup Steps

1. Log on to your ABAP back-end system.
2. In transaction SPRO, do the Customizing for UDF that you need for your scenario:

   > **i Note**
   >
   > For more information about the following Customizing activities, see the accompanying system documentation.

What to do...	Your scenario is...	Customizing
Define the time series source with historical demand data that you wish 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*

3. 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. Execute the Customizing activity and choose *New Entries*.
3. Configure the `MOD_COV_REDUCED` parameter to generate either the "full" or the "reduced" covariance matrix:

Your scenario is...	What to do...
○ You want to calculate hierarchical priors (HPRs). ○ You want to use SAP Promotion Management, but without generating the forecast confidence index (FCI). ○ You do not want to use SAP Promotion Management.	The **reduced covariance matrix** is sufficient for those scenarios and also saves runtime. Enable the `MOD_COV_REDUCED` parameter: Enter the parameter name under *Configuration Type Code* and set the *Value* to **X** to override the default. Make the other settings as required and save your changes.
You want to generate the FCI in SAP Promotion Management.	The **full covariance matrix** is mandatory for the FCI. No additional configuration is required (the `MOD_COV_REDUCED` parameter is disabled by default, which is correct for this scenario). Be aware that the generation of the full covariance matrix is performance-intensive.

> **i Note**
>
> To calculate either the full or the reduced covariance matrix, the `MOD_OUTPUT_COV` parameter must be enabled. As it is enabled by default, no additional configuration is required unless you have previously disabled the parameter for a different scenario.

4. Configure the modeling and forecasting features that you wish to use in your scenario.
   See the *Configuring Unified Demand Forecast (UDF)* section of the *SAP Customer Activity Repository Administration Guide*.

Perform Optional Setup Steps

You have the following additional options:

1. Implement the following SAP Note(s) 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
2. Set up table partitioning for your scenario.
   See the *Partition Tables for UDF and DDF* section of the *SAP Customer Activity Repository Administration Guide*.
3. Set up the demand planning apps (*Analyze Forecast*, *Adjust Forecast*, *Manage Demand Influencing Factors*).
   See Set Up Standalone SAP Fiori Apps for SAP Customer Activity Repository [page 108].

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*.

6.1.2.7 Set Up Standalone SAP Fiori Apps for SAP Customer Activity Repository

Check that the prerequisites are fulfilled and prepare the system landscape for the standalone apps included in SAP Customer Activity Repository.

> **i** Note
>
> Depending on your scenario, some prerequisites might already be available in your system landscape.

General Prerequisites

- **Front-end server:** You have installed the required version of `SAP FIORI FRONT-END SERVER`. For version information, see Install the Prerequisites [page 17] under *Common Prerequisites* > *SAP Fiori*.
- **SAP Fiori launchpad:** You have set up the launchpad as described in the *Common Installation Guide*, section .
- **SAP Fiori launchpad designer:** You have set up the designer as described for the SAP NetWeaver version on your front-end server. See https://help.sap.com/viewer/p/SAP_NETWEAVER *SAP NetWeaver Platform* > *<Version>* > *Application Help* > *UI Technologies in SAP NetWeaver* > *SAP Fiori Launchpad* > *Setting up the Launchpad* and *Using the Launchpad Designer*.
  For some apps, app-specific settings will be required in the designer.
- **SAP Gateway:** You have done the general SAP Gateway configuration and you have activated the central OData services and Internet Communication Framework (ICF) services. See the following:
  - , including all subsections
  - SAP Note 1560585 (*SAP Gateway 2.0 Release Note*)

Prerequisites Specific to SAP Customer Activity Repository applications bundle

1. You have installed the `SAP RTL AFL FOR SAP HANA` component for the current release. See Download and Install the Application Function Library (SAP RTL AFL FOR SAP HANA) [page 47].
2. You have installed the back-end system. See Install ABAP Back-End Server [page 46].
3. You have installed the front-end system. See .

4. You have implemented all the mandatory SAP Notes for the apps that you wish to set up. See Implement SAP Notes for the Installation [page 25] and consult the release information notes (RINs) mentioned there as well as the table for SAP Customer Activity Repository.
5. You have performed all mandatory setup steps for SAP Customer Activity Repository. For example, this includes activating the OData services for the apps or calculating the SAPUI5 application index. For a complete list of the steps, see Core (Mandatory for All Applications) [page 67].
6. You have set up the system connections:
   - You have set up dedicated RFC connections between your front-end system and your back-end system, and between your front-end system and your source master data system.
   - You have defined a system alias for your back-end system.

   > ⚠ Caution
   >
   > You must set the back-end system client to the same value for the SAP Gateway OData services (via the system alias and the RFC connection) and the SAP HANA services (via the `bk-client` parameter in the SAP Fiori launchpad designer). Otherwise, the apps will not work correctly.
7. For the demand planning apps (*Analyze Forecast*, *Adjust Forecast*, *Manage Demand Influencing Factors*): You have set up the Unified Demand Forecast (UDF) module as the forecasting engine in the back-end. You must at least complete the mandatory setup steps. See Complete UDF Setup [page 105].
8. Only for *Analyze Forecast*:
   - **SAP Web Dispatcher:** You have configured the dispatcher and set up the routing rules for browser requests as described in section Configuring SAP Web Dispatcher.

     > i Note
     >
     > If you encounter issues during the setup, see the following sections for possible solutions:
     >
     > - Central SAP Note for SAP Web Dispatcher: 908097 (*SAP Web Dispatcher: Release, Installation, Patches, Documentation*)
     > - SAP Help Portal for SAP NetWeaver: Choose your SAP NetWeaver Platform and select your support package stack at the top right. Search for *"Architecture and Functions of the SAP Web Dispatcher"* and *"Administration of the SAP Web Dispatcher"*.
     > - If you use any other reverse proxy, see the manufacturer's documentation for more information.
   - **SAP Fiori system landscape with SAP HANA Extended Application Services, classic model:** You have set up the system landscape as described in https://help.sap.com/viewer/p/FIORI_IMPLEMENTATION ▶ *Version: SAP NW 7.40 4.0* ▶ *Installation and Upgrade* ▶ *Setup of SAP Fiori System Landscape* ▶ *Setup of SAP Fiori System Landscape with SAP HANA XS*.
     For system landscape diagrams, see https://help.sap.com/viewer/p/SAP_FIORI ▶ *Implementation Information for SAP Fiori for SAP Business Suite* ▶ *Setup of SAP Fiori System Landscape for SAP Business Suite* ▶ *SAP Fiori for SAP Business Suite: Implementation Information* ▶ *Setup of SAP Fiori System Landscape for SAP Business Suite with SAP HANA XS*.

Result

After you have prepared the system landscape in this way, you can now set up the apps that you wish to use.

Set Up the Analyze Forecast App [page 110]
Perform several tasks on the front-end server and the back-end server to set up the *Analyze Forecast* app.

Set Up the Adjust Forecast App [page 117]
Perform several tasks on the front-end server and the back-end server to set up the *Adjust Forecast* app.

Set Up the Manage Demand Influencing Factors App [page 122]
Perform several tasks on the front-end server and the back-end server to set up the *Manage Demand Influencing Factors* app.

Set Up the Manage Product Attributes App [page 127]
Perform several tasks on the front-end server and the back-end server to set up the *Manage Product Attributes* app. This transactional app is delivered with SAP Customer Activity Repository and supports different scenarios and consuming applications (such as SAP Allocation Management and SAP Assortment Planning). The app enables planning administrators to create, configure, assign, and maintain product attributes for a selected product hierarchy.

Set Up Additional Standalone Apps Included in SAP Customer Activity Repository [page 130]
In addition to the apps described in this guide, SAP Customer Activity Repository includes additional apps that support different scenarios and consuming applications.

6.1.2.7.1 Set Up the Analyze Forecast App

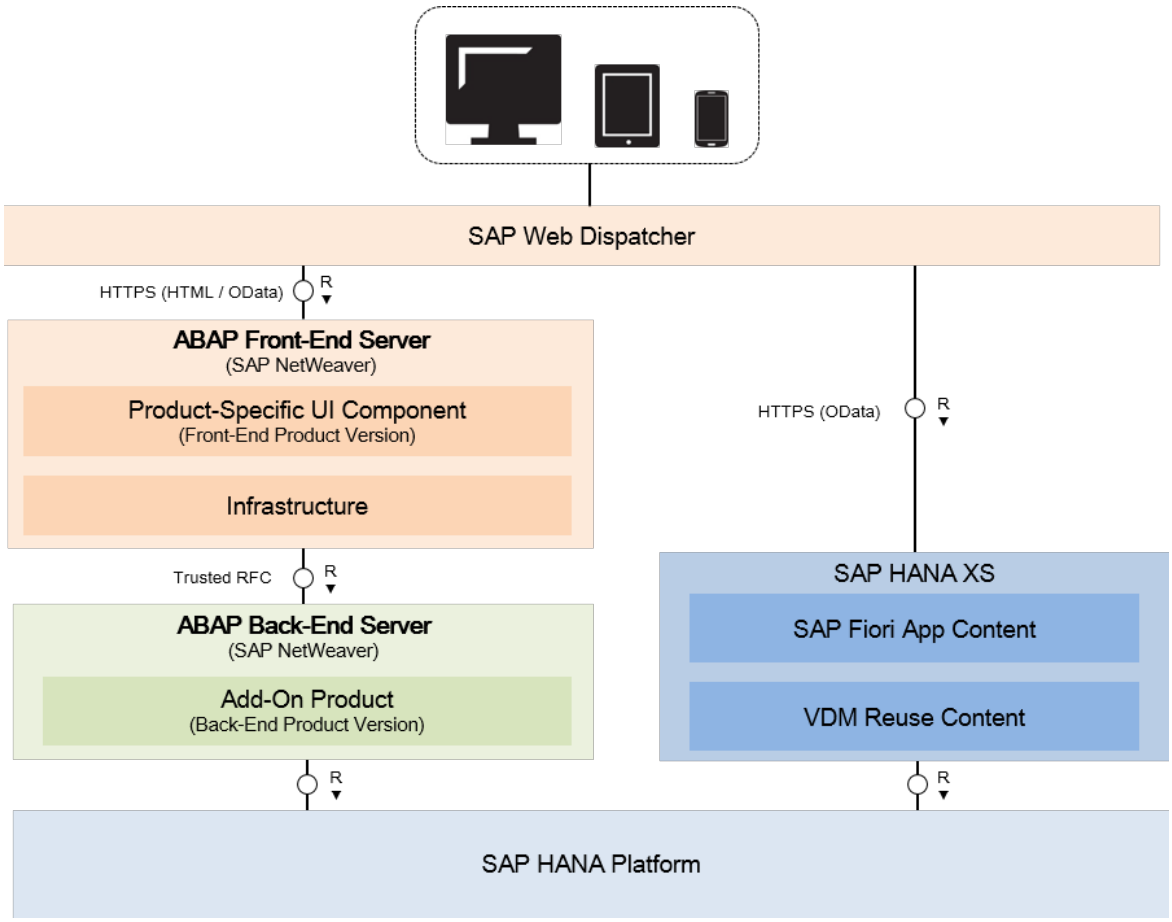
Perform several tasks on the front-end server and the back-end server to set up the *Analyze Forecast* app.

> **i Note**
>
> If you are already using the app and only wish to upgrade it to the current release, see the *Set Up the Analyze Forecast App (Upgrade Scenarios)* section of the *Common Upgrade Guide* for this release.

Prerequisites

- You are aware that the technical setup for *Analyze Forecast* (app ID: F1773A) differs from that of the other apps:
  - The app requires SAP Web Dispatcher.
  - The app does not use SAP HANA XSA (SAP HANA Extended Application Services, advanced model). Instead, it requires SAP HANA XS Classic (SAP HANA Extended Application Services, classic model).

    > **i Note**
    >
    > The SAP HANA Extended Application Services are a layer on top of the SAP HANA database. This layer provides the platform for running SAP HANA-based Web applications.



System Landscape Example with SAP Web Dispatcher and SAP HANA XS

- You are aware of the implementation information for the app in the SAP Fiori apps reference library. For the latest delivery (latest wave), see: https://fioriappslibrary.hana.ondemand.com/sap/fix/externalViewer/index.html?appId=F1773A
- You have verified the prerequisites and prepared the system landscape as described in Set Up Standalone SAP Fiori Apps for SAP Customer Activity Repository [page 108].
- (Optional) If you need information on the key features of the app and the supported time series, 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)* ▶.

Procedure

To set up *Analyze Forecast*, follow these steps:

> → Tip
>
> If you encounter issues during the setup, see the Troubleshooting [page 154] section for possible solutions.

1. **Configure user access to the SAP HANA data for the app.**

> **i Note**
>
> You can find the general SAP Fiori Help section for this step at https://help.sap.com/viewer/p/FIORI_IMPLEMENTATION ▶ *Version: SAP NW 7.40* ▶ *Implementation* ▶ *App Implementation* ▶ *App Implementation for Analytical Apps* ▶ *Configuring Access to SAP HANA Data* ▶.
>
> Use this section as your starting point. However, to configure *Analyze Forecast*, you only need to do some of the steps described there.

1. Synchronize the SAP HANA database users. Each user of the app requires both a user in the ABAP front-end server (to enable navigation in the SAP Fiori launchpad) and a user in the SAP HANA database (to enable access to the relevant SAP HANA views).

   Follow the steps in ▶ *Configuring Access to SAP HANA Data* ▶ *Synchronizing SAP HANA Database Users* ▶.
2. Assign the app-specific SAP HANA role `sap.hba.t.rtl.udf.afc.roles::AnalyzeForecast.hdbrole` to the users of the app. The role gives them access to the app-specific SAP HANA data so they can analyze this data in the app (for example, sales, modeling results, forecasts).

   Follow the steps in ▶ *Configuring Access to SAP HANA Data* ▶ *Assigning Roles for Accessing SAP HANA Data* ▶.
3. Create the analytic privileges to give the users read-only access to the SAP HANA views for the app (SAP HANA content package `sap.hba.t.rtl.udf.afc.v`).

   Follow the steps in ▶ *Configuring Access to SAP HANA Data* ▶ *Creating Analytic Privileges* ▶.
   If you need more information about analytic privileges, see the following:
   - https://help.sap.com/viewer/p/SAP_HANA_PLATFORM ▶ *<Version>* ▶ *Development* ▶ *SAP HANA Modeling Guide (for SAP HANA Studio)* ▶ *Defining Data Access Privileges* ▶ *Create Classical XML-based Analytic Privileges* ▶
   - https://help.sap.com/viewer/product/SAP_HANA_LIVE/2.0/en-US ▶ *<Version>* ▶ *Additional Information* ▶ *SAP HANA Live Authorization Assistant* ▶, in particular sections *Generating Analytic Privileges* and *Updating Analytic Privileges*

2. **Customize the navigation target for the app in the SAP Fiori launchpad on the front-end server.**

   In *Launchpad Customizing* (transaction **`LPD_CUST`**), choose ▶ *UICAR001 TRANSACTIONAL* ▶ *AnalyzeForecast* ▶ and make the following settings:
   - *Link Text*: **`AnalyzeForecast`**
   - *Application Type*: **`URL`**
   - *URL*: **`/sap/bc/ui5_ui5/sap/analyzfcst_v2`**
   - *Application Alias*: **`AnalyzeForecast`**
   - *Additional Information*: **`SAPUI5.Component=retail.udf.analyzeforecastv2`**
   - *Portal Parameters*: Leave the default settings.
   - *Switch Support*: Leave the default settings.

   If you need more information on navigation targets, see https://help.sap.com/viewer/p/SAP_NETWEAVER and choose your SAP NetWeaver Platform. Select your support package stack at the top right and search for *"Customizing Navigation Targets in LPD_CUST"*.
3. **Configure the SAP Fiori launchpad designer for** *Analyze Forecast*.

1. Launch the designer in one of the following modes:
   - For the `CUST` mode, use this URL:
     `https://<server>:<port>/sap/bc/ui5_ui5/sap/arsrvc_upb_admn/main.html?sap-client=<client>#/Catalog/X-SAP-UI2-CATALOGPAGE:SAP_ISR_CAR_TC_A`
     Use this mode for client-specific configurations, specifying the respective client.
   - For the `CONF` mode, use this URL:
     `https://<server>:<port>/sap/bc/ui5_ui5/sap/arsrvc_upb_admn/main.html?sap-client=<client>&scope=<CONF>#/Catalog/X-SAP-UI2-CATALOGPAGE:SAP_ISR_CAR_TC_A`
     Use this mode for global configurations across all clients. Note that in this URL, you additionally specify the **`scope`** parameter.
2. Configure the app tile in the SAP Fiori launchpad designer.

   > **i Note**
   >
   > By default, the tile for *Analyze Forecast* is in the *SAP: CAR – Analytical Apps* catalog (which is shipped with the launchpad configuration).

   If the app tile has not yet been created, create it as a static tile using the following settings:
   - *Title*: **`Analyze Forecast`**
   - *Icon*: **`sap-icon://Fiori5/F0812`**
   - *Use semantic object navigation*: Select this option.
   - *Semantic Object*: **`ForecastDemand`**
   - *Action*: **`showUDFAnalyzeForecast`**
   - *Parameters*: **`bk-client=<backend client>`**
   - Leave the other options empty.

   If you need more information about configuring tiles, see https://help.sap.com/viewer/p/SAP_NETWEAVER and choose your SAP NetWeaver Platform. Select your support package stack at the top right and search for *"Static App Launcher Tiles"*.
3. Configure the target mapping in the SAP Fiori launchpad designer.
   If the target mapping has not yet been created, choose *Target Mappings* and create a new entry with the following settings:
   - *Semantic Object*: **`ForecastDemand`**
   - *Action*: **`showUDFAnalyzeForecast`**
   - *Application Type*: **`SAP Fiori App using LPD_CUST`**
   - *Launchpad Role*: **`UICAR001`**
   - *Launchpad Instance*: **`TRANSACTIONAL`**
   - *Application Alias*: **`AnalyzeForecast`**
   - *Device Types*: Select *Desktop* and *Tablet*.
   - *Allow additional parameters*: Select this option.

   If you need more information about configuring target mappings, see https://help.sap.com/viewer/p/SAP_NETWEAVER and choose your SAP NetWeaver Platform. Select your support package stack at the top right and search for *"Configuring Target Mappings"*.
4. **Complete the setup on the front-end server.**

> **Note**
>
> You can find the general SAP Fiori Help section for this step at https://help.sap.com/viewer/p/FIORI_IMPLEMENTATION ▶ *Version: SAP NW 7.40* ▶ *Implementation* ▶ *App Implementation* ▶ *App Implementation for Analytical Apps* ▶ *Implementation Tasks on Front-End Server* ▶.
>
> Use this section as your starting point. However, to configure *Analyze Forecast*, you only need to do some of the steps described there.

1. Activate the SAP Gateway OData services for the app:
   Follow the steps in Activate OData Services [page 91].

   > **Caution**
   >
   > In the SAP Fiori launchpad designer, you specify the back-end system client using the `bk-client` parameter. You must specify the **same** back-end system client for the SAP Gateway OData services (system alias and RFC connection) **and** for the SAP HANA services. Otherwise, the app will not work correctly.

2. In *Launchpad Customizing* (transaction **`LPD_CUST`**), choose ▶ *UICAR001 TRANSACTIONAL* ▶ *AnalyzeForecast* ▶ and verify that the app-specific Internet Communication Framework (ICF) services are active:
   - `/sap/bc/bsp/sap/analyzfcst_v2`
   - `/sap/bc/lrep`
   - `/sap/bc/ui5_ui5/sap/analyzfcst_v2`
   - `/sap/bc/bsp/sap/udfreuse`
   - `/sap/bc/ui5_ui5/sap/udfreuse`

   If a service is not active, activate it as follows:
   1. Execute transaction **`SICF`**.
   2. As *Service Path*, specify the **`<service path/service name>`** and execute the search.
   3. As *Virtual Hosts / Services*, select the `analyzfcst_v2` entry and choose ▶ *Service/Host* ▶ *Activate* ▶.

   If you need more information on how to activate ICF services and OData services, see ▶ *Implementation Tasks on Front-End Server* ▶ *Front-End Server: Activate ICF Services of SAPUI5 Application* ▶.
3. Add the start authorizations for the app-specific XS OData service (`sap.hba.t.rtl.udf.afc.odata::AnalyzeForecast.xsodata`) to the role on the front-end server. The users need the start authorizations for the activated service to be able to launch the app.
   Follow the steps in ▶ *Implementation Tasks on Front-End Server* ▶ *Add Start Authorizations for OData Services to Role on Front-End* ▶.
4. Create your custom copy of the `SAP_CAR_TCR_A` PFCG role on the front-end server.

   > **Note**
   >
   > `SAP_CAR_TCR_A` is the front-end server authorization role delivered for analytical apps in SAP Customer Activity Repository. The role contains the catalogs, groups, and start authorizations for the OData service required for access to the app.

1. Copy the provided standard role `SAP_CAR_TCR_A` on the front-end server and enter a name from the customer namespace.
2. Adjust the role as needed for your scenario. If you need more information on adjusting standard roles, see section Changing Standard Roles in the *User and Role Administration of Application Server ABAP*.
3. Assign the required launchpad catalogs and groups. Follow the steps in *Implementation Tasks on Front-End Server* > *Create PFCG Role on Front-End and Assign Launchpad Catalogs and Groups*.
4. Save your changes.

5. Create your custom copy of the `SAP_DPL_TCR_T` PFCG role on the front-end server. This step is similar to the previous one, and you can consult the same references.

> **i Note**
>
> `SAP_DPL_TCR_T` is the front-end server authorization role delivered for the demand planning apps in SAP Customer Activity Repository.

1. Copy the provided standard role `SAP_DPL_TCR_T` on the front-end server and enter a name from the customer namespace.
2. Adjust the role as needed for your scenario.
3. Assign the required launchpad catalogs and groups.
4. Save your changes.

> **→ Tip**
>
> If you already have an SAP Fiori launchpad open, clear your browser cache to apply all the changes.

5. **Set up the catalogs, groups, and roles in the SAP Fiori launchpad.**
   Follow the steps in *Implementation Tasks on Front-End Server* > *Setup of Catalogs, Groups, and Roles in the SAP Fiori Launchpad*.
6. **Take your custom copies of the two front-end PFCG roles and assign them to the users of the app.**
   Follow the steps in *Implementation Tasks on Front-End Server* > *Front-End Server: Assign Roles to Users*.
7. **Complete the setup on the back-end server.**
   1. Log on to the back-end server and execute transaction `PFCG` to open the *Role Maintenance* screen.
   2. Choose *Role* > *Create* > *Role*.
   3. Copy the provided standard role `/DMF/DPL` and enter a name from the customer namespace.

> **i Note**
>
> `/DMF/DPL` is the back-end server authorization role. It is also required to access the *Adjust Forecast* app via cross-navigation from the *Analyze Forecast* app.

   4. Adjust the copied role as needed for your scenario. If you need more information on adjusting standard roles, see section Changing Standard Roles in the *User and Role Administration of Application Server ABAP*.
   5. Save your changes.

Optional Setup Steps

If relevant for your scenario, implement any of the following options:

- **Single Sign-On (SSO):** If you haven't already done so, set up SSO between the front-end server and the back-end server.
  For available SSO mechanisms depending on the system landscape, see:
  - https://help.sap.com/viewer/p/FIORI_IMPLEMENTATION ▶ *<Version>* ▶ *SAP Fiori: Security* ▶ *User Authentication and Single Sign-On (SSO)* ▶
  - https://help.sap.com/viewer/p/SAP_HANA_PLATFORM ▶ *<Version>* ▶ *Security* ▶ *SAP HANA Security Guide* ▶ *SAP HANA Authentication and Single Sign-On* ▶ *Single Sign-On Integration* ▶

  For information on how to set up SSO for SAP HANA XS in particular, see https://help.sap.com/viewer/p/SAP_HANA_PLATFORM ▶ *<Version>* ▶ *Administration* ▶ *SAP HANA Administration Guide* ▶ *Application Run-Time Services* ▶ *Maintaining the SAP HANA XS Classic Model Run Time* ▶ *Maintaining Single Sign-On for SAP HANA XS Applications* ▶.
- **Area of Responsibility (AOR):** Assign an AOR (recommended).
  This step is required if you wish to use the *Product Hierarchy* filter option in the app. If so, each front-end user of the app must also have a user in the back-end system. You assign an area of responsibility to this back-end user so that the front-end user can see the assigned product hierarchies in the app.
  To assign an AOR, use the *Maintain Area of Responsibility* service in transaction `NWBC`. For instructions, see https://help.sap.com/viewer/p/CARAB ▶ *<Version>* ▶ *Application Help* ▶ *SAP Customer Activity Repository* ▶ *Demand Data Foundation* ▶ *General Services* ▶ *Maintenance Services* ▶ *Maintain Area of Responsibility* ▶.
- **App Extensibility**: Extend the app with custom content.
  For information on the available extension points and controller hooks, see the SAP Fiori apps reference library at https://fioriappslibrary.hana.ondemand.com/sap/fix/externalViewer/index.html?appId=F1773A. Choose *IMPLEMENTATION INFORMATION*, select the delivery, and consult the information under *Extensibility*.

Result

You have successfully set up the *Analyze Forecast* app.

6.1.2.7.2 Set Up the Adjust Forecast App

Perform several tasks on the front-end server and the back-end server to set up the *Adjust Forecast* app.

Prerequisites

You have checked that the prerequisites described in Set Up Standalone SAP Fiori Apps for SAP Customer Activity Repository [page 108] are fulfilled.

You are aware of the implementation information for the app in the SAP Fiori apps reference library: For the latest delivery (wave), see: https://fioriappslibrary.hana.ondemand.com/sap/fix/externalViewer/index.html?appId=F3479

You have set up the SAP Fiori app *Analyze Forecast*, as described in Set Up the Analyze Forecast App [page 110].

Procedure

To set up *Adjust Forecast*, follow these steps:

1. To prepare the setup, read the app-specific information on SAP Help Portal at 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* ▶ *Adjust Forecast* ▶.
2. Customize the navigation target for the app in the SAP Fiori launchpad on the front-end server.
   In *Launchpad Customizing* (transaction **LPD_CUST**), choose `UIDPL001 TRANSACTIONAL` *Demand Planning Apps* and make the app-specific settings for all of the apps:
   Application Settings for *Adjust Forecast*
   - *Link Text*: `AdjustForecast`
   - *Application Type*: `URL`
   - *URL*: `/sap/bc/ui5_ui5/sap/adjustforecast`
   - *Application Alias*: `AdjustForecast`
   - *Additional Information*: `SAPUI5.Component=retail.dpl.adjustforecast`
   - *Portal Parameters*: Leave the default settings.
   - *Switch Support*: Leave the default settings.

   Application Settings for *Forecast Correction Overlapping Rules*
   - *Link Text*: `Forecast Correction Overlapping Rules`
   - *Application Type*: `TRA Transaction`
   - *Transaction Code*: `/DMF/FCC_MAINT_RULES`
   - *System Alias*: Enter the HTTP connection to the back-end client in the format `SYSID_CLNT_HTTPS`
   - *Application Alias*: `ForecastCorrOverlapRules`
   - *GUI Type*: `WEB_GUI_SAP GUI for HTML`
   - *Entries Once Started*: `S Initial Screen`

- *Portal Parameters*: Leave the default settings.
- *Switch Support*: Leave the default settings.

Application Settings for *Forecast Correction Classification*

- *Link Text*: `Forecast Correction Classification`
- *Application Type*: `TRA Transaction`
- *Transaction Code*: `/DMF/FCC_MAINT_CLSCF`
- *System Alias*: Enter the HTTP connection to the back-end client in the format `SYSID_CLNT_HTTPS`
- *Application Alias*: `ForecastCorrClassification`
- *GUI Type*: `WEB_GUI_SAP GUI for HTML`
- *Entries Once Started*: `S` *Initial Screen*
- *Portal Parameters*: Leave the default settings.
- *Switch Support*: Leave the default settings.

If you need more information about navigation targets, see SAP Help Portal at https://help.sap.com/viewer/p/SAP_NETWEAVER and choose your SAP NetWeaver Platform. Select your support package stack at the top right and search for *"Customizing Navigation Targets in LPD_CUST"*.

3. Configure the SAP Fiori launchpad designer for *CAR Demand Planning Apps*.
   1. Launch the SAP Fiori launchpad designer either in the `CUST` or in the `CONF` mode:
      - `CUST` mode:
        Use this mode for client-specific configurations, specifying the respective client. For the `CUST` mode, use this URL:
        `https://<server>:<port>/sap/bc/ui5_ui5/sap/arsrvc_upb_admn/main.html?sap-client=<client>#/Catalog/X-SAP-UI2-CATALOGPAGE:SAP_DPL_TC_T`
      - `CONF` mode:
        Use this mode for global configurations across all clients. Note that in this URL, you additionally specify the **`scope`** parameter.
        For the `CONF` mode, use this URL:
        `https://<server>:<port>/sap/bc/ui5_ui5/sap/arsrvc_upb_admn/main.html?sap-client=<client>&scope=CONF#/Catalog/X-SAP-UI2-CATALOGPAGE:SAP_DPL_TC_T`
        Use this mode for global configurations across all clients. Note that in this URL, you additionally specify the **`scope`** parameter.
   2. Configure the app tile in the SAP Fiori launchpad designer.

      > **i Note**
      >
      > By default, the tiles for *Adjust Forecast*, *Analyze Forecast*, *Forecast Correction Classification*, and *Forecast Correction Overlapping Rules* are in the *SAP: CAR – Deman Planning Apps* catalog (which is shipped with launchpad configuration).

      If the app tiles have not yet been created, create them as static tiles using the following settings:

      Adjust Forecast

      - *Title*: **`Adjust Forecast`**
      - *Icon*: **`sap-icon://Fiori5/F0819`**
      - *Use semantic object navigation*: Select this option.
      - *Semantic Object*: **`ForecastDemand`**
      - *Action*: **`editUDFAdjustForecast`**
      - Leave the other options empty.

      Forecast Correction Classification

- *Title*: **Forecast Correction Classification**
- *Icon*: **sap-icon://group-2**
- *Information*: **/DMF/FCC_MAINT_CLSCF**
- *Use semantic object navigation*: Select this option.
- *Semantic Object*: **DemandPlanConfiguration**
- *Action*: **create**
- Leave the other options empty.

Forecast Correction Overlapping Rules

- *Title*: **Forecast Correction Overlapping Rules**
- *Icon*: **sap-icon://Fiori2/F0306**
- *Information*: **/DMF/FCC_MAINT_RULES**
- *Use semantic object navigation*: Select this option.
- *Semantic Object*: **DemandPlanConfiguration**
- *Action*: **manage**
- Leave the other options empty.

If you need more information about configuring tiles, see SAP Help Portal at https://help.sap.com/viewer/p/SAP_NETWEAVER and choose your SAP NetWeaver Platform. Select your support package stack at the top right and search for *"Static App Launcher Tiles"*.

3. Configure the target mapping in the SAP Fiori launchpad designer.
   If the target mapping has not yet been created, choose *Target Mappings* and create entries with the following settings:

   Adjust Forecast

   - *Semantic Object*: **ForecastDemand**
   - *Action*: **editUDFAdjustForecast**
   - *Application Type*: **SAP Fiori App using LPD_CUST**
   - *Launchpad Role*: **UIDPL001**
   - *Launchpad Instance*: **TRANSACTIONAL**
   - *Application Alias*: **AdjustForecast**
   - *Device Types*: Select *Desktop* and *Tablet*.
   - *Allow additional parameters*: Select this option.

   Forecast Correction Classification

   - *Semantic Object*: **DemandPlanConfiguration**
   - *Action*: **create**
   - *Application Type*: **SAP Fiori App using LPD_CUST**
   - *Launchpad Role*: **UIDPL001**
   - *Launchpad Instance*: **TRANSACTIONAL**
   - *Application Alias*: **ForecastCorrClassification**
   - *Information*: **/DMF/FCC_MAINT_CLSCF**
   - *Device Types*: Select *Desktop* and *Tablet*.
   - *Allow additional parameters*: Select this option.

   Forecast Correction Overlapping Rules

   - *Semantic Object*: **DemandPlanConfiguration**
   - *Action*: **manage**
   - *Application Type*: **SAP Fiori App using LPD_CUST**

- *Launchpad Role*: **UIDPL001**
- *Launchpad Instance*: **TRANSACTIONAL**
- *Application Alias*: **ForecastCorrOverlapRules**
- *Information*: **/DMF/FCC_MAINT_RULES**
- *Device Types*: Select *Desktop* and *Tablet*.
- *Allow additional parameters*: Select this option.

If you need more information about configuring target mappings, see SAP Help Portal at https://help.sap.com/viewer/p/SAP_NETWEAVER and choose your SAP NetWeaver Platform. Select your support package stack at the top right and search for *"Configuring Target Mappings"*.

4. Complete the implementation on the front-end server.

> **i Note**
>
> You can find the general SAP Fiori Help section for this step at https://help.sap.com/viewer/p/FIORI_IMPLEMENTATION ▶ *Version: SAP NW 7.40* ▶ *Implementation* ▶ *App Implementation* ▶ *App Implementation for Analytical Apps* ▶ *Implementation Tasks on Front-End Server* ◀.
>
> Use this section as your starting point. However, to configure *Adjust Forecast*, you only need to perform a subset of the steps described there. Proceed as follows:

1. Check that the app-specific Internet Communication Framework (ICF) service *AdjustForecast* `/sap/bc/ui5_ui5/sap/adjustforecast` is active. If the service is not active, activate it as follows:
   1. Execute transaction **SICF**.
   2. As *Service Path*, specify the **<service path/service name>** and execute the search.
   3. As *Virtual Hosts / Services*, select the `ADJUSTFORECAST` entry and choose ▶ *Service/Host* ▶ *Activate* ◀.

   For more information on how to activate ICF services and OData services, see ▶ *Implementation Tasks on Front-End Server* ▶ *Front-End Server: Activate ICF Services of SAPUI5 Application* ◀.
2. **Activate and Maintain OData Services**
   Call up transaction *Activate and Maintain Services* (`/IWFND/MAINT_SERVICE`) and check if the following services are already existing in your service catalog:
   - Adjust Forecast OData Service
     - *Type*: `BEP`
     - *Technical Service Name*: `ZOD_ADJUST_FORECAST_SRV`
     - *Service Description*: DPL Fiori Adjust Forecast App OData Service
     - *External Service Name*: `OD_ADJUST_FORECAST_SRV`
     - *Namespace*: /DPL/

     If the service is not available, choose *Add Service*, enter back-end system alias, and choose *Get Services*. Search for `/DPL/OD_ADJUST_FORECAST_SRV`, select the entry and choose *Add Selected Services*. Take over the provided data and enter the local package assignment.
   - Time Series OData Service
     - *Type*: `BEP`
     - *Technical Service Name*: `ZOD_FC_TIME_SERIES_VIZ_SRV`
     - *Service Description*: OData Srv. for Forecast-Related Time Series Visualization
     - *External Service Name*: `OD_FC_TIME_SERIES_VIZ_SRV`

- *Namespace*: /DMF/

  If the service is not available, choose *Add Service*, enter back-end system alias, and choose *Get Services*. Search for `/DMF/OD_FC_TIME_SERIES_VIZ_SRV`, select the entry and choose *Add Selected Services*. Take over the provided data and enter the local package assignment.
- Demand Plan OData Service for Reuse
  - *Type*: `BEP`
  - *Technical Service Name*: `ZDEMAND_PLAN_UTILITIES_SRV`
  - *Service Description*: Demand Plan OData Service for Reuse
  - *External Service Name*: `DEMAND_PLAN_UTILITIES_SRV`
  - *Namespace*: /DMF/

  If the service is not available, choose *Add Service*, enter back-end system alias, and choose *Get Services*. Search for `/DMF/DEMAND_PLAN_UTILITIES_SRV`, select the entry and choose *Add Selected Services*. Take over the provided data and enter the local package assignment.

3. Copy the `SAP_DPL_TCR_T` PFCG role on the front-end server and enter a name from the customer namespace. Assign the required launchpad catalogs and groups. `SAP_DPL_TCR_T` is the front-end server authorization role delivered for all demand planning apps in SAP Customer Activity Repository.

   > → Tip
   >
   > If you already have an SAP Fiori launchpad open, clear your browser cache to apply the modifications to your user roles. Otherwise, you cannot see the changes on the user interface.

   Follow the steps in *Implementation Tasks on Front-End Server* > *Create PFCG Role on Front-End and Assign Launchpad Catalogs and Groups*.
4. Set up the catalogs, groups, and roles in the SAP Fiori launchpad.

   Follow the steps in *Implementation Tasks on Front-End Server* > *Setup of Catalogs, Groups, and Roles in the SAP Fiori Launchpad*.
5. Take the front-end PFCG role that you created before and assign it to the users of the app. The role contains the catalogs, groups, and start authorizations for the OData service that the users need.

   Follow the steps in *Implementation Tasks on Front-End Server* > *Front-End Server: Assign Roles to Users*.

5. **Complete the implementation on the back-end server.**
   Copy the role `/DMF/DPL` in the *Role Maintenance* (`PFCG`) of the back-end server and enter a name from the customer namespace. `/DMF/DPL` is the back-end server authorization role. It is also required for accessing the *Adjust Forecast* app via forward navigation from the *Analyze Forecast* app in SAP Customer Activity Repository.
6. **(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 assignment 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 steps 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*.
7. **(Optional) Set up Single Sign-On (SSO) between the front-end server and the back-end server.**

For information on available SSO mechanisms depending on your system landscape, see the following:

- https://help.sap.com/viewer/p/FIORI_IMPLEMENTATION ▶ *<Version>* ▶ *SAP Fiori: Security* ▶ *User Authentication and Single Sign-On (SSO)* ▶
- https://help.sap.com/viewer/p/SAP_HANA_PLATFORM ▶ *<Version>* ▶ *Security* ▶ *SAP HANA Security Guide* ▶ *SAP HANA Authentication and Single Sign-On* ▶ *Single Sign-On Integration* ▶

> → Tip
>
> If you encounter issues during the setup, see the Troubleshooting [page 154] section for possible solutions.

Result

You have successfully set up the *Adjust Forecast* app.

Related Information

Activate OData Services [page 91]

6.1.2.7.3 Set Up the Manage Demand Influencing Factors App

Perform several tasks on the front-end server and the back-end server to set up the *Manage Demand Influencing Factors* app.

Prerequisites

You have checked that the prerequisites described in Set Up Standalone SAP Fiori Apps for SAP Customer Activity Repository [page 108] are fulfilled.

You are aware of the implementation information for the app in the SAP Fiori apps reference library: For the latest delivery (wave), see: https://fioriappslibrary.hana.ondemand.com/sap/fix/externalViewer/index.html?appId=F3885

Procedure

To set up *Manage Demand Influencing Factors*, follow these steps:

1. To prepare the setup, read the app-specific information on SAP Help Portal at 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* ▶ *Manage Demand Influencing Factors* ▶.
2. Customize the navigation target for the app in the SAP Fiori launchpad on the front-end server.
   In *Launchpad Customizing* (transaction **LPD_CUST**), choose `UIDPL001 TRANSACTIONAL` *Demand Planning Apps* and make the app-specific settings for all of the apps:
   Application Settings for *Manage Demand Influencing Factors*
   - *Link Text*: `ManageDemandInfluencingFactors`
   - *Application Type*: `URL`
   - *URL*: `/sap/bc/ui5_ui5/sap/managedifs`
   - *Application Alias*: `DIFManagement`
   - *Additional Information*: `SAPUI5.Component=retail.dpl.managedif`
   - *Portal Parameters*: Leave the default settings.
   - *Switch Support*: Leave the default settings.

   Application Settings for *Demand Influencing Factors Library*
   - *Link Text*: `Demand Influencing Factors Library`
   - *Application Type*: `TRA` Transaction
   - *Transaction Code*: `/DMF/DIF_LIBRARY`
   - *System Alias*: Enter the HTTP connection to the back-end client in the format `SYSID_CLNT_HTTPS`
   - *Application Alias*: `DIFLibrary`
   - *GUI Type*: `WEB_GUI_SAP GUI for HTML`
   - *Entries Once Started*: `S Initial Screen`
   - *Portal Parameters*: Leave the default settings.
   - *Switch Support*: Leave the default settings.

   If you need more information about navigation targets, see SAP Help Portal at https://help.sap.com/viewer/p/SAP_NETWEAVER and choose your SAP NetWeaver Platform. Select your support package stack at the top right and search for *"Customizing Navigation Targets in LPD_CUST"*.
3. Configure the SAP Fiori launchpad designer for *CAR Demand Planning Apps*.
   1. Launch the SAP Fiori launchpad designer either in the `CUST` or in the `CONF` mode:
      - `CUST` mode:
        Use this mode for **client-specific configurations**, specifying the respective client. For the `CUST` mode, use this URL:
        `https://<server>:<port>/sap/bc/ui5_ui5/sap/arsrvc_upb_admn/main.html?sap-client=<client>#/Catalog/X-SAP-UI2-CATALOGPAGE:SAP_DPL_TC_T`
      - `CONF` mode:
        Use this mode for global configurations across all clients. Note that in this URL, you additionally specify the **`scope`** parameter.
        For the `CONF` mode, use this URL:
        `https://<server>:<port>/sap/bc/ui5_ui5/sap/arsrvc_upb_admn/main.html?sap-client=<client>&scope=CONF#/Catalog/X-SAP-UI2-CATALOGPAGE:SAP_DPL_TC_T`

Use this mode for global configurations **across all clients**. Note that in this URL, you additionally specify the `scope` parameter.

2. Configure the app tiles in the SAP Fiori launchpad designer.

> → Tip
>
> By default, the tiles for *Manage Demand Influencing Factors* and *Demand Influencing Factors Library* are in the *SAP: CAR – Demand Planning Apps* catalog (which is shipped with launchpad configuration).

If the app tile for *Manage Demand Influencing Factors* has not yet been created, create it as static tile using the following settings:

Manage Demand Influencing Factors

- *Title*: `Manage Demand Influencing Factors`
- *Icon*: `sap-icon://create-entry-time`
- *Use semantic object navigation*: Select this option.
- *Semantic Object*: `ForecastDemand`
- *Action*: `manage`
- Leave the other options empty.

Demand Influencing Factors Library

- *Title*: `Demand Influencing Factors Library`
- *Icon*: `sap-icon://FioriInAppIcons/Hierarchical Tree`
- *Information*: `/DMF/DIF_LIBRARY`
- *Use semantic object navigation*: Select this option.
- *Semantic Object*: `ForecastDemand`
- *Action*: `change`
- Leave the other options empty.

If you need more information about configuring tiles, see SAP Help Portal at https://help.sap.com/viewer/p/SAP_NETWEAVER and choose your SAP NetWeaver Platform. Select your support package stack at the top right and search for *"Static App Launcher Tiles"*.

3. Configure the target mapping in the SAP Fiori launchpad designer.
If the target mapping has not yet been created, choose *Target Mappings* and create entries with the following settings:

Manage Demand Influencing Factors

- *Semantic Object*: `ForecastDemand`
- *Action*: `manage`
- *Application Type*: `SAP Fiori App using LPD_CUST`
- *Launchpad Role*: `UIDPL001`
- *Launchpad Instance*: `TRANSACTIONAL`
- *Application Alias*: `DIFManagement`
- *Device Types*: Select *Desktop* and *Tablet*.
- *Allow additional parameters*: Select this option.

Demand Influencing Factors Library

- *Semantic Object*: `ForecastDemand`
- *Action*: `change`
- *Application Type*: `SAP Fiori App using LPD_CUST`

- *Launchpad Role*: **UIDPL001**
- *Launchpad Instance*: **TRANSACTIONAL**
- *Application Alias*: **DIFLibrary**
- *Device Types*: Select *Desktop*
- *Allow additional parameters*: Select this option.

If you need more information about configuring target mappings, see SAP Help Portal at https://help.sap.com/viewer/p/SAP_NETWEAVER and choose your SAP NetWeaver Platform. Select your support package stack at the top right and search for *"Configuring Target Mappings"*.

4. Complete the implementation on the front-end server.

> **i Note**
>
> You can find the general SAP Fiori Help section for this step at https://help.sap.com/viewer/p/FIORI_IMPLEMENTATION ▶ *Version: SAP NW 7.40* ▶ *Implementation* ▶ *App Implementation* ▶ *App Implementation for Analytical Apps* ▶ *Implementation Tasks on Front-End Server* ▶.
>
> Use this section as your starting point. However, to configure *Manage Demand Influencing Factors*, you only need to perform a subset of the steps described there. Proceed as follows:

1. Check that the app-specific Internet Communication Framework (ICF) service *ManageDemandInfluencingFactors* `/sap/bc/ui5_ui5/sap/managedifs` is active. If the service is not active, execute these steps:
   1. Execute transaction **SICF**.
   2. As *Service Path*, specify the **<service path/service name>** and execute the search.
   3. As *Virtual Hosts / Services*, select the `MANAGEDIFS` entry and choose ▶ *Service/Host* ▶ *Activate* ▶.

   For more information on how to activate ICF services and OData services, see ▶ *Implementation Tasks on Front-End Server* ▶ *Front-End Server: Activate ICF Services of SAPUI5 Application* ▶.
2. **Activate and Maintain OData Services**
   Call up transaction *Activate and Maintain Services* (`/IWFND/MAINT_SERVICE`) and check if the following services are already existing in your service catalog:
   - Demand Plan OData Service
     - *Type*: `BEP`
     - *Technical Service Name*: `ZOD_DEMAND_PLAN_SRV`
     - *Service Description*: Demand Plan OData Service
     - *External Service Name*: `OD_DEMAND_PLAN_SRV`
     - *Namespace*: /DMF/

     If the service is not available, choose *Add Service*, enter back-end system alias, and choose *Get Services*. Search for `/DMF/OD_DEMAND_PLAN_SRV` , select the entry and choose *Add Selected Services*. Take over the provided data and enter the local package assignment.
   - Demand Plan OData Service for Reuse
     - *Type*: `BEP`
     - *Technical Service Name*: `ZDEMAND_PLAN_UTILITIES_SRV`
     - *Service Description*: Demand Plan OData Service for Reuse
     - *External Service Name*: `DEMAND_PLAN_UTILITIES_SRV`
     - *Namespace*: /DMF/

If the service is not available, choose *Add Service*, enter back-end system alias, and choose *Get Services*. Search for `/DMF/DEMAND_PLAN_UTILITIES_SRV`, select the entry and choose *Add Selected Services*. Take over the provided data and enter the local package assignment.

3. Copy the `SAP_DPL_TCR_T` PFCG role on the front-end server and enter a name from the customer namespace. Assign the required launchpad catalogs and groups. `SAP_DPL_TCR_T` is the front-end server authorization role delivered for all demand planning apps in SAP Customer Activity Repository.

   > → Tip
   >
   > If you already have an SAP Fiori launchpad open, clear your browser cache to apply the modifications to your user roles. Otherwise, you cannot see the changes on the user interface.

   Follow the steps in *Implementation Tasks on Front-End Server* > *Create PFCG Role on Front-End and Assign Launchpad Catalogs and Groups*.
4. Set up the catalogs, groups, and roles in the SAP Fiori launchpad.
   Follow the steps in *Implementation Tasks on Front-End Server* > *Setup of Catalogs, Groups, and Roles in the SAP Fiori Launchpad*.
5. Take the front-end PFCG role that you created before and assign it to the users of the app. The role contains the catalogs, groups, and start authorizations for the OData service that the users need.
   Follow the steps in *Implementation Tasks on Front-End Server* > *Front-End Server: Assign Roles to Users*.

5. **Complete the implementation on the back-end server.**
   Copy the *Demand Planner (Retail)* role (`/DMF/DPL`) in the *Role Maintenance* (`PFCG`) of the back-end server and enter a name from the customer namespace. Assign the users. This role `/DMF/DPL` is the back-end server authorization role delivered for accessing the *Manage Demand Influencing Factors* app.
6. **(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 assignment 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 steps 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*.
7. **(Optional) Set up Single Sign-On (SSO) between the front-end server and the back-end server.**
   For information on available SSO mechanisms depending on your system landscape, see the following:
   - https://help.sap.com/viewer/p/FIORI_IMPLEMENTATION > *<Version>* > *SAP Fiori: Security* > *User Authentication and Single Sign-On (SSO)*
   - https://help.sap.com/viewer/p/SAP_HANA_PLATFORM > *<Version>* > *Security* > *SAP HANA Security Guide* > *SAP HANA Authentication and Single Sign-On* > *Single Sign-On Integration*

> → Tip
>
> If you encounter issues during the setup, see the Troubleshooting [page 154] section for possible solutions.

Result

You have successfully set up the *Manage Demand Influencing Factors* app.

Related Information

Activate OData Services [page 91]

6.1.2.7.4 Set Up the Manage Product Attributes App

Perform several tasks on the front-end server and the back-end server to set up the *Manage Product Attributes* app. This transactional app is delivered with SAP Customer Activity Repository and supports different scenarios and consuming applications (such as SAP Allocation Management and SAP Assortment Planning). The app enables planning administrators to create, configure, assign, and maintain product attributes for a selected product hierarchy.

Prerequisites

- You are aware of the technical implementation information for the app in the SAP Fiori apps reference library:
  For the latest delivery (latest wave), see: https://fioriappslibrary.hana.ondemand.com/sap/fix/externalViewer/index.html?appId=F0829A
- You have implemented any mandatory corrections for the app in the current release:
  - For the app in SAP Customer Activity Repository 4.0 FPS01, implement SAP Notes 2762819 and 2763472. The notes are required for the new `SAP_ISR_BR_DDF_ADMIN` role, which is mandatory for the app and which you will need in the steps below.

To set up the app, do the steps in the following sections.

> **i Note**
>
> If your scenario includes SAP Allocation Management or SAP Assortment Planning, some of the steps might already have been performed in your system landscape. If so, skip the step and continue with the next one.

Activate ICF Services

Context

For security reasons, the Internet Communication Framework (ICF) services are delivered in an inactive state. In this procedure, you activate the services that are required for the app.

Procedure

1. Log on to your front-end server.
2. Execute transaction `SICF`.
3. In the *Define Services* screen, make the following selections:
   - *Hierarchy Type*: **`SERVICE`**
   - *Virtual Host*: **`DEFAULT_HOST`**
   - *Service Path*: **`/sap/bc/ui5_ui5/sap/attribmgmt_v2/`**
4. Choose *Execute* (F8).
5. Under *Virtual Hosts / Services*, double-click the `attribmgmt_v2/` service to open the *Create/Change a Service* screen.
6. To activate the service, choose *Service/Host* > *Activate*.

   > **i Note**
   >
   > You can check the activation status by selecting the service and opening the context menu. If the *Activate Service* option is grayed out, this means the service is already active.

7. Repeat steps 3 to 6 for the **`/sap/bc/ui5_ui5/sap/ddfreuse_v2/`** service.

Enable the App for SAP Fiori Launchpad

Context

To be able to access the app from the SAP Fiori launchpad, your front-end system user must have the necessary role(s) assigned. Based on the role(s) assigned to your user, you can access the business catalogs and business catalog groups required for the app.

SAP Customer Activity Repository is delivered with the following predefined objects for the app:

Front-End Business Content			Front-End Technical Content	
Business Role	**Business Catalog**	**Business Catalog Group**	**Technical PFCG Role**	**Technical Catalog**
`SAP_RAP_BCR_PLANNING_ADMIN`	`SAP_RAP_BC_PLANNING_ADMIN_T`	`SAP_RAP_BCG_PLANNING_ADMIN_T`	`SAP_RAP_TCR_T`	`SAP_RAP_TC_T`

Procedure

1. Log on to your front-end system.
2. Execute transaction `SU01` to open the *User Maintenance* screen.
3. Enter your front-end user name in the *User* field and choose *Change*.
4. On the *Roles* tab, assign the following roles to your user:
   - `SAP_RAP_BCR_PLANNING_ADMIN` (*Planning Administrator*)
   - `SAP_ISR_BR_DDF_ADMIN` (*Demand Data Foundation Administrator*)
5. Save your changes.

> ⚠ Caution
>
> If you already have an SAP Fiori launchpad open, clear your browser cache or you won't be able to see the changes.

6. Verify the app and role settings for the SAP Fiori launchpad.
   1. Execute transaction `LPD_CUST` to open the *Overview of Launchpads*.
   2. Double-click the role `UIRAP001` to view the role details.
   3. Expand the role *Planning Administrator* and select the *Manage Product Attributes* app.
   4. Display the advanced parameters and check that the app has all the mandatory settings listed below. You do not need to make any additional settings.
      - *Link Text*: *Manage Product Attributes*
      - *Application Type*: `URL`
      - *URL*: `/sap/bc/ui5_ui5/sap/attribmgmt_v2`
      - *Application Alias*: `AssignProductAttribute`
      - *Additional Information*: `SAPUI5.Component=retail.ddf.attributemgmtv2`
      - *Navigation Mode*: `EXT_HEAD Leaderless Portal Window`
      - *History Mode*: *1 Navigation Entry can Occur Once in History*
      - *Parameter Forwarding*: *G Get Parameters*

Activate OData Services

There are common OData services for SAP Fiori that must be activated for any scenario. (mandatory). Then select the OData services for your specific application and activate those as well. `/DMF/API_ATTRIBUTES_SRV` (optional, to import external attributes for integration scenarios with a third-party source master data system)

1. Follow the instructions in Activate OData Services [page 91].

Assign Area of Responsibility (AOR) to ABAP Back-End User

You can only display and select product hierarchies in the app that have been assigned as AOR to your ABAP back-end user.

1. Log on to your ABAP back-end system.
2. Execute transaction `NWBC` to open the SAP NetWeaver Business Client.
3. Choose *Services* > *Maintain Area of Responsibility* > *Product Hierarchy*.
4. Select your ABAP back-end user, choose *Continue*, and define the AOR.
   For instructions, see the *Maintain Area of Responsibility* section in the application help for SAP Customer Activity Repository at https://help.sap.com/viewer/p/CARAB.

6.1.2.7.5 Set Up Additional Standalone Apps Included in SAP Customer Activity Repository

In addition to the apps described in this guide, SAP Customer Activity Repository includes additional apps that support different scenarios and consuming applications.

For information on the additional apps, see SAP Note 2774098.

6.1.2.8 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 Commerce, and SAP 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 Commerce, and SAP Customer Activity Repository.

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

In SAP S/4HANA or SAP Retail, and SAP Commerce, set up the **asynchronous order management scenario** as follows:

1. Set up **asynchronous replication of articles** via the Data Hub from SAP S/4HANA or SAP Retail to SAP Commerce.
   For more information, see the documentation for SAP Commerce at https://help.hybris.com/latest/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 Commerce to SAP S/4HANA or SAP Retail (see link above).
3. Configure asynchronous order management.
   For more information, see the documentation for SAP Commerce at https://help.hybris.com/latest/hcd/e2be57a501da41cc9ebdf7cf7d3aa229.html *Configuring Order Management for SAP Commerce with One or More SAP Back Ends*.

6.1.2.8.2 Set Up Data Replication Between SAP Commerce and SAP Customer Activity Repository

1. In SAP Commerce, in the Backoffice application under *SAP Integration* > *HTTP Destination*, create the HTTP destination of SAP Customer Activity Repository that is used for availability calculation and sourcing.

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

> **i** Note
>
> In the standard Solr configuration for products in SAP Commerce, `ProductStoreStockValueProvider` is used to replicate the store availability situation from the SAP Commerce database into the Solr index.
>
> If you use OAA, availability information is provided through synchronous calls into SAP Customer Activity Repository for every article/store combination instead. If your product catalog is rather large, this is why indexing the complete product catalog can take very long. In this case, we recommend to either deactivate the value provider or to create a custom one. If you deactivate the value provider, faceted search according to store availability is not possible in the product catalog. OAA functionality is not affected.

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

This step is optional. You only need to execute it if you want to use the set of OAA analyses that has been predefined in SAP Analytics Cloud and that is part of the standard delivery of SAP Analytics Cloud. If you are using a different analytics tool, or if you do not run analytics at all, you may skip this step.

Context

Procedure

1. Configure SAP Customer Activity Repository to support cross-origin resource sharing (CORS), for cross-domain communication from the browser.

   For more information, see Live Data Connection to SAP BW Using a Direct Connection and Password Authentication, steps 1 and 2 of the procedure.

2. In SAP Analytics Cloud, navigate to *Home* > *Connection* and select live connection `SAPRTOAA` (*SAP Retail Omnichannel Article Availability and Sourcing*). This connection is part of the standard delivery.
3. Click *Edit Connection* and enter your custom details for *Host*, *HTTPS Port*, and *Client*.

6.1.2.8.4 Activate OData Services for Omnichannel Article Availability and Sourcing

A number of OData services are required to run the SAP Fiori apps for omnichannel article availability and sourcing (OAA).

Context

Make sure that you have activated the OData services required for OAA, as described and listed in Activate OData Services [page 91]. Depending on your back end, different services are required.

6.1.2.9 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 Commerce, see the *Administrator Guide* of SAP 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 133]
Central Deployment of the Promotion Pricing Service [page 146]
Update the PPS XSA Application

6.1.2.9.1 Outbound Processing for Regular Prices and OPP Promotions

Related Information

Local Deployment of the Promotion Pricing Service [page 133]
Location-Specific Outbound Processing of OPP Promotions [page 141]

6.1.2.9.1.1 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 132].
- 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 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**

Field Name	Value
Port	**<service number for https or http connection>** **i 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 Commerce **Backoffice>**
Password	**<password that you have created in** SAP Commerce **Backoffice>**

In *Security Options* select *SSLActive* to send your data via https connection and enter an appropriate certificate.

i Note

We strongly recommend to use Secure protocols (SSL, SCN) whenever possible.

For more information, see *Transport Layer Security and Web Services Security* in the *SAP NetWeaver Security Guide*.

Transaction WE21: Defining a Port

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)
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

Field Name	Value
Cancel Processing After Syntax Error	Ensure that this field is selected to avoid sending erroneous IDocs.

Data Replication Framework

In Customizing for *Cross-Application Components* under *Processes and Tools for Enterprise Applications* > *Master Data Governance, Central Governance* > *General Settings* > *Data Replication* > *Overall Information*, see the system documentation to check how data is 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*.

Outbound Implementation	Description	Supported Replication Model	Filter Object
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. **i 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. **i 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. **i 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

Outbound Parameter for Regular Prices	Description	Typical Value*
/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. **i Note** If this parameter is set to 0, all products of the corresponding package are read within one call.	100-200
/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. **i 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. **i 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. **i 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. **i 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

Business Object Type	Message Type
ROP_PROMO	/ROP/PROMOTION

For more information, see Customizing for *Cross Application Components* under *Processes and Tools for Enterprise Applications* > *Master Data Governance, Central Governance* > *General Settings* > *Data Replication* > *Overall Information*.

Transaction DRFF: Defining Filter Criteria

In *Define Filter Criteria*, specify your data selection for each replication model and business object. The filter criteria are valid for *Initial* replication and *Change* replication.

6.1.2.9.1.2 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 132].
- 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 Commerce system. You need to perform the following steps:

Transaction SM59: Defining an RFC Destination

For each receiving system that initially receives the created IDocs, you have to create an RFC destination. If you use a middleware, this RFC destination refers to the host in which the middleware is running, If you use a 1:1 connection, all receiving systems require a separate RFC destination. The attributes of the RFC destination are

determined by the receiving system. In the following we assume that we want to setup a location-specific outbound processing to a local promotion pricing service in a SAP Commerce system that is directly connected to the SAP Customer Activity Repository.

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

Field Name	Value
Target Host	**<name of the target host>**
Path Prefix	**/sapppspricing/idocinbound**
Port	**<service number for https or http connection>** **i 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 Commerce **Backoffice>**
Password	**<password that you have created in** SAP Commerce **Backoffice>**

In *Security Options* select *SSLActive* to send your data via https connection and enter an appropriate certificate.

i Note

We strongly recommend to use Secure protocols (SSL, SCN) whenever possible.

For more information, see *Transport Layer Security and Web Services Security* in the *SAP NetWeaver Security Guide*.

Transaction WE21: Defining a Port

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>**

Field Name	Value
RFC destination	**<name of the RFC destination created in the previous step>**

2. *Text/XML*.

Transaction WE20: Defining a Partner ProfileSelect a content type supported with the receiving system. If you configure a local promotion pricing service choose

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

> **i** Note
>
> For this partner type, only the first 10 characters of the DDF location ID are taken into account, the location type and logical system are ignored. If you want to use a different logic, use transaction **WE44** to define a different partner type or to change the validation logic.
>
> Select a content type supported with the receiving system. If you configure a localIf 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*

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. **i 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. **i 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

Outbound Parameter for OPP Promotions	Description	Typical Value*
/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. **i 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.

6.1.2.9.2 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 1.0.88 or higher.
- You have access to the XSA *command-line* tool version 1.0.82 or higher.
- Your SAP HANA XSA user has the user parameter `XS_CONTROLLER_ADMIN` assigned.
- Your SAP HANA XSA user has the user parameter `XS_USER_ADMIN` assigned.
- You have downloaded the SCV file `XSACOPPPPS02_<patch level>.ZIP` (for example patch level `0` for the initial delivery) for the PPS from the SAP Support Portal at https://support.sap.com.

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.

Note

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:
      DISABLE_SUCCESSFUL_LOGIN_AUDIT_LOG: "<AUDIT_LOG_FLAG>"
      JBP_CONFIG_RESOURCE_CONFIGURATION: "['tomcat/webapps/ROOT/WEB-INF/
classes/ppe-schema-orm.xml': {'sap.dataaccess-
common.schema':'<DB_SCHEMA>'},'tomcat/webapps/ROOT/META-INF/context.xml':
{'ppeHana-service-name':'ppeHana'}]"
      JBP_CONFIG_JAVA_OPTS: 'java_opts: -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
<AUDIT_LOG_FLAG>	If you set this flag to true, the system only creates audit log messages for failed login attempts. If set to false, every login is recorded. This is of limited use for an A2A communication. To achieve optimal performance, SAP recommends to set this flag to true.
<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:

1. **A system/admin user**
   Contact your system administrator to create this user.
2. **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.
3. **A user for the application role management**
   Use the XSA user management user created in step 2 to create the corresponding role builder user. The application role management user needs the *Application Role Collections* `XS_AUTHORIZATION_ADMIN` and `XS_USER_ADMIN`. You can assign these parameters with the user for XSA user management created in

step 2 via xs commands (as descibed below in step 6 of the section *Creating and Assigning a Role Collection*) or via the XSA Cockpit.
For more information, see the documentation of the following xs command (this command lists all available xs commands):

```
xs help-a
```

or the *SAP HANA Administration Guide* at https://help.sap.com/viewer/product/SAP_HANA_PLATFORM/ ▶ *<Version>* ▶ *Administration* ▶ *SAP HANA Administration* ▶ *Application Run-Time Services* ▶ *Maintaining the SAP HANA XS Advanced Model Run Time* ▶ *Maintaining the XS Advanced Run Time Environment with Graphical User Interface* ▶.

Creating and 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. Create a role collection for the promotion pricing service with the following xs command:

```
xs create-role-collection <NAME> [<DESCRIPTION>]
e.g., xs create-role-collection PPE_ROLE_COLLECTION "PPE ROLE COLLECTION"
```

2. Navigate to the space where the PPS has been installed with the following xs command:

```
xs target-s <SPACE_NAME>
```

3. Check if the role template `ppservice-webapp-central` is listed in the space with the following xs command:

```
xs role-templates
```

   If the installation has been successful, this role template must be listed in this space.

4. Create a role with the PPS role template:

```
xs create-role <APP> <ROLE_TEMPLATE> <ROLE_NAME> <DESCRIPTION>
e.g., xs create-role ppservice-webapp-central PPE_ROLE_TEMPLATE
PPE_ROLE_XYZ "PPE role for xyz"
```

5. Add the new role to the new role collection:

   Source Code

   ```
   xs update-role-collection <ROLE_COLLECTION> --add-role <ROLE>
   e.g., xs update-role-collection PPE_ROLE_COLLECTION --add-role PPE_ROLE_XYZ
   ```

6. Assign the new role collection to a SAP HANA (XSA) user of your choice:

   Source Code

   ```
   xs assign-role-collection <ROLE_COLLECTION> <USER>
   e.g., xs assign-role-collection PPE_ROLE_COLLECTION PPSUSER
   ```

   → Tip

   You can call xs help -a to get an overview of other xs commands regarding role management.

7. 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>

       i 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,expireAfte
  rWrite=20m
  # Spring cache for base prices
  sap.dataaccess-
  common.basepricecachespec=maximumSize=10000,expireAfterAccess=10m,expire
  AfterWrite=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,expireAfte
  rWrite=20m -Dsap.dataaccess-
  common.basepricecachespec=maximumSize=10000,expireAfterAccess=10m,expire
  AfterWrite=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 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

6.1.3 Troubleshooting

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

> → Tip
>
> For quick access to support information, log in to the SAP ONE Support Launchpad at https://launchpad.support.sap.com/#/productsearch and search for SAP CARAB (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 (SAP RTL AFL FOR SAP HANA) [page 47].
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 (SAP RTL AFL FOR SAP HANA) [page 47].

Area	Symptom	Cause	Possible Solutions
Installation / Upgrade	You want to know what AFLs (application function libraries) are installed and active in your SAP HANA database.	For example, you want to check if an AFL was installed or upgraded correctly.	SAP Note 2188129
Installation / Upgrade	You want to verify if your revision of SAP HANA Platform is compatible with your version of SAP HANA studio.	For example, you might be experiencing compatibility issues following an upgrade.	SAP Note 2375176
Installation / Upgrade	You have installed 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 installation.	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 • *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* ▶
Installation / Upgrade	You get an import error when installing the `RTLAPPS` software component of the SAP CARAB back-end 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
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.

Area	Symptom	Cause	Possible Solutions
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
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 Back-End Users and Roles [page 70].
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

Area	Symptom	Cause	Possible Solutions
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 78].
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*.

Area	Symptom	Cause	Possible Solutions
SAP HANA content	You get an error indicating that you are attempting to access inactive or invalid SAP HANA content.	You have not installed software component `SAP RTL AFL FOR SAP HANA`. The component contains 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 (SAP RTL AFL FOR SAP HANA) [page 47].
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 cannot install the SAP HANA XS advanced (XSA) runtime. For example, you need XSA to use the Omnichannel Promotion Pricing (OPP) module in SAP Customer Activity Repository.	You cannot install XSA as long as SAP HANA dynamic tiering is active on the same host.	SAP Note 2388443

Area	Symptom	Cause	Possible Solutions
SAP HANA Platform	You are encountering performance issues in the SAP HANA Platform.	Several causes are possible.	• SAP Note 2600030 (*Parameter Recommendations in SAP HANA Environments*) • SAP Note 2100040 (*FAQ: SAP HANA CPU*) • *SAP HANA Troubleshooting and Performance Analysis Guide* for your SAP HANA Platform version under https://help.sap.com/viewer/p/SAP_HANA_PLATFORM ▶ *<Version>* ▶ *Administration*
SAP HANA Platform	You are not sure if the installed SAP HANA revision is compatible with the installed SAP HANA studio version.	Consult the list of compatible revisions and versions.	SAP Note 2375176

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.	• Follow the steps in Configure Automatic Flattening of Hierarchies [page 86].
			• 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

Area	Symptom	Cause	Possible Solutions
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
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

Area	Symptom	Cause	Possible Solutions
DRF data replication framework (transaction **DRFOUT**)	You have changed the listing information in your source master data system and replicated the changes to your SAP Customer Activity Repository system. However, the listing information there is not updated correctly.	A program error must be fixed.	SAP Note 1932525
Performance	You are experiencing performance issues in your SAP HANA database.	You need information on how to troubleshoot and resolve those issues and how to enhance performance in general.	See the *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

Area	Symptom	Cause	Possible Solutions
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
SAP Fiori	• You want to start an SAP Fiori app for a key user and get the error *Application is not configured. Find details in SAP Note 2283716*. • You want to activate extensibility for key users.	You must set up the adaptation transport organizer (ATO) to be able to transport key user extensions.	SAP Note 2283716
SAP Fiori	You want to check the SAPUI5 version installed in your system.	There are several methods how you can check the version.	SAP Note 2282103

Area	Symptom	Cause	Possible Solutions
SAP Fiori	You cannot open the *Analyze Forecast* app.	Several reasons are possible. See the checklist at the right and verify that the app is set up correctly.	Use section Set Up the Analyze Forecast App [page 110] for reference and check the following: 1. In transaction `SE80`, navigate to package `UICAR001`, subpackage `UISCAR01`. Check that the BSP Applications for the app (`ANALYZFCST_V2`) and the reuse library (`UDFREUSE`) are deployed. 2. In *Launchpad Customizing* (transaction `LPD_CUST`), check that the Internet Communication Framework (ICF) services for `ANALYZFCST_V2` and for `UDFREUSE` are active. 3. Clear the cache on the server side by running the following reports in transaction `SE38`: ○ `/UI5/APP_INDEX_CALCULATE`: Select *Single SAPUI5 Repository Only* and run the report once for `ANALYZFCST_V2` and once for `UDFREUSE`. ○ `/UI2/INVALIDATE_GLOBAL_CACHES`: Run this report in execution mode. ○ `/UI2/INVALIDATE_CLIENT_CACHES`: Run

Area	Symptom	Cause	Possible Solutions
			this report for all users. 4. Clear the browser cache. 5. Check if you can now access the app.
Upgrade On-Shelf Availability Dispatcher (transaction **/OSA/DISPATCH**)	The following error occurs when executing the On-Shelf Availability (OSA) Dispatcher: "SQL Error Code 274 : inserted value too large for column'	Local temporary tables (`LOCAL_EXCL_PRODUCT`, `LOCAL_LISTED_PRODUCT`, and `LOCAL_PS_CONF`) created and used by OSA for internal dispatcher processing are not dropped automatically during runtime therefore new tables, such as any containing CHAR40 fields, cannot get created. This causes an SQL error when a CHAR40 material is supplied. Subsequent structural change to the definition of these tables requires manual intervention in cases where the tables may already exist.	SAP Note 2576497

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*.

6.2 SAP Merchandise Planning

Post-installation of SAP Merchandise Planning .

> **i** Note
>
> Some of the activities in this section may have already been performed in the corresponding section under SAP Customer Activity Repository. Such activities do not need to be repeated during the setup and installation of consuming applications.

6.2.1 Perform Core Steps for SAP Customer Activity Repository

To set up this application, you must first perform the **Core (Mandatory)** steps for SAP Customer Activity Repository. The core steps are mandatory for all the consuming applications.

Procedure

Perform all steps listed under Core (Mandatory for All Applications) [page 67].

6.2.2 Configure SAP Merchandise Planning

Use

SAP Merchandise Planning is a consuming application of SAP Customer Activity Repository, which contains data that is imported from SAP ERP or SAP S/4HANA into the following:

- SAP HANA for SAP ERP using SAP LT Replication Server (SLT), which is saved in the `SAP_ECC` authoring schema.

Or
SAP S/4HANA using SLT, which is saved in the `SAP_S4H` authoring schema.

- Demand Data Foundation (DDF)

Customizing Activities

There are key Customizing activities required to use the SAP Merchandise Planning application. These steps are performed using transaction `SPRO` and navigating to the required Customizing activity.

Demand Data Foundation Customizing Node

This node is accessible under *Cross-Application Components*.

1. Perform the necessary configuration steps in DDF.
   The mandatory activities are marked in the configuration document *Configuring Demand Data Foundation (DDF)*.
2. Configure data replication from SAP ERP to DDF.
   SAP Merchandise Planning uses master data (such as product, location, and product hierarchy) as well as organizational data (such as sales organization and distribution channel) that is replicated from SAP ERP to DDF using `DRFOUT`.
   This step was performed during installation as described in section *SAP Customer Activity Repository* > *Core (Mandatory for All Applications)*. See http://help.sap.com/viewer/p/CARAB > *<Version>* > *Common Installation Guide for SAP Customer Activity Repository applications bundle* > *Set Up the Applications*.
   For more information on setting up this data replication, see the following document *Configuring Data Replication from SAP ERP to DDF*.
3. Verify you have entered the *Merchandise Planning* and *Planning Configuration* relevant sections in Customizing activity *Cross-Application Components* > *Demand Data Foundation* > *Basic Settings* > *Define Default Values*. For more information see the documentation attached to each activity or the field level help (F1).

> **i Note**
>
> Geo Hierarchy ID is only for Merchandise Planning for Retail version 1.1 or prior.

Merchandise Planning Customizing Node

As of SAP Merchandise Planning 2.0 FP2, there is a *Cross Application Components* > *Merchandise Planning* node containing **mandatory** steps for your implementation. Review the table below for applicable activities for your environment. Each Customizing activity has attached documentation to further explain the activity.

Technical Name	Customizing Path	Description
/RAP/MPR_CALC_ECC	*Cross-Application Components* > *Merchandise*	Use this option if your source data system is SAP ECC.

Technical Name	Customizing Path	Description
	Planning > *Enhancements Using Business Add-Ins* > *BAdI: ECC Calculate Open Qty, Goods Receipt and Returns KPI*	
/RAP/MPR_CALC_FMS	*Cross-Application Components* > *Merchandise Planning* > *Enhancements Using Business Add-Ins* > *BAdI: FMS Calculate Open Qty, Goods Receipt and Returns KPI*	Use this option if your source data system is SAP FMS.
/RAP/MPR_CALC_S4H	*Cross-Application Components* > *Merchandise Planning* > *Enhancements Using Business Add-Ins* > *BAdI: S4H Calculate Open Qty, Goods Receipt and Returns KPI*	Use this option if your source data system is SAP S4H.
/RAP/MPR_COST_PRC_DETERM	*Cross-Application Components* > *Merchandise Planning* > *Enhancements Using Business Add-Ins* > *BAdI: Cost Determination for Receipt, Open Qty and Returns*	You use this BAdI to determine the purchase price for goods receipts, open purchase order and returns to vendor KPIs. The default implementation assumes moving average price is always available in the unit of measure.
/RAP/MPOC_CALC_PO_RECEIPTS_KPI	*Cross-Application Components* > *Merchandise Planning* > *Enhancements Using Business Add-Ins* > *BAdI: Calculate Goods Receipt KPIs by Segmentation & Channel*	You use this BAdI to determine the calculation for goods receipt, open purchase order quantity and returns to vendor KPIs are based on segmentation and channel.
/RAP/MPOC_CALC_INVENTORY_KPI	*Cross-Application Components* > *Merchandise Planning* > *Enhancements Using Business Add-Ins* > *BAdI: Calculate Inventory KPIs Based on Segmentation & Channel*	You use this BAdI to Calculate Inventory KPIs like Beginning of Period Cost and Unit Values for Distribution Centre, Store and Excess Inventory Stock based on segmentation and channel.

Technical Name	Customizing Path	Description
/RAP/MPOC_PLANNING_YSCT	*Cross-Application Components* > *Merchandise Planning* > *Enhancements Using Business Add-Ins* > *BAdI: Select Season Year, Season, Collection and Theme*	You use this BAdI: to select the season year, season, collection and theme relevant data for Merchandise Planning.

Implementation Tasks

Use of Workbook Versions

The version concept allows you to plan and view different working versions, and to create special versions for released and finalized plans. Each workbook can display up to two different versions in parallel, with the capability to copy or provide a working plan version from any other available version to begin the planning process

The version and planning levels are decided during installation. These concepts will affect your planning configuration set and integration with SAP Assortment Planning. The recommended standard is planning at the 5th node level of the product hierarchy (1-7 levels available). The installation will prompt you to create levels 5 and 7. The workbook versions are named by concatenating the level with the version. For example the merchandise financial plan for level 5 versions are:

- Working Version - M51
- Simulated Version - M52
- Released Version - M5R
- Final Version - M5F
- In Season Version - M5P

Planning Configuration Sets

A Planning Configuration Set (PCS) is a prerequisite to creating a merchandise plan. A planning configuration defines entry and exit levels for merchandise and option plans based on a market hierarchy (representing an organizational view on top of retail stores and wholesale customers) and a product hierarchy. The PCS must be specifically defined in order for the data to render properly in the workbook.

> **i Note**
>
> You must have an area of responsibility assigned for the product hierarchy and market hierarchy you will be using. From your *SAP Easy Access* menu, use transaction code `NWBC` and navigate to menu *Services* > *Maintain Area of Responsibility*.

For more information about *Planning Configurations* see https://help.sap.com/viewer/p/CARAB and navigate to *<your version>* > *SAP Assortment Planning* > *Assortment Planning* > *Manage Planning Configuration Sets*.

Integration with SAP Assortment Planning.

SAP Assortment Planning is not aware of the finalized version maintained in SAP Merchandise Planning. This means if you want to send your merchandise plans to an assortment plan, there are setup tasks. The standard integration is implemented in an `AMDP` BAdI named `/DMF/MPR_READ_KPI_DATA` which resides in fallback class `/DMF/CL_MPR_READ_DATA_DEFAULT`. The BAdI works as follows:

- While calling the API to fetch finalized version, the assortment plan interface selects product hierarchy node(s) of the same level as the plan. For example, based on the product hierarchy node of level 3 (or 4, 5, 6, 7), the system will automatically look for version M3F (or M4F, M5F, etc.).
- If standard integration is used, it is recommended that final released versions should be named as *M<level of product hierarchy node>F*.
- A specific custom extension is possible by implementing `AMDP BAdI /DMF/MPR_READ_KPI_DATA` if your planning version used for the merchanise plan does not follow the recommended naming convention.
    - The BAdI is available using transaction code `SPRO` and navigating to Customizing node *SAP Customizing Implementation Guide* > *SAP Customer Activity Repository* > *Demand Data Foundations* > *Data Maintenance* > *Planning Configuration* > *Enhancements Using Business Add-Ins* > *BAdI: Read Merchandise Planning KPI Data*.

6.2.3 Generate Time Data - Gregorian Calendar

Generate time data (Gregorian calendar) required by time-dependent views included in the SAP HANA content for SAP Customer Activity Repository applications bundle.

Use

Execute this procedure to generate time data (**Gregorian calendar**).

Procedure

1. Log on to SAP HANA studio.
2. In the *Modeler* perspective, on the *Quick Launch* tab, select your SAP Customer Activity Repository applications bundle system and choose *Generate Time Data*.
3. Select *Gregorian* as the *Calendar Type*.
   For example, SAP HANA views included in SAP HANA content for SAP Customer Activity Repository require the presence of time data in `_SYS_BI.TIME_DIMENSION*` SAP HANA database tables.
4. Enter a range of years that includes all the years of data that you plan to store in SAP Customer Activity Repository.

> ### Example
>
> If you plan to start using SAP Customer Activity Repository on January 1, 2014, enter 2014 as your starting year. But if you plan to access sales documents created in SAP ERP that date from January 2013, you should specify 2013 as your starting year.

5. Define the granularity as *Day*, which is the minimum granularity required by SAP Customer Activity Repository. You can choose a finer level of granularity, for example *Hour*, if necessary.
6. Choose the day that is the first day of the week in your company.
7. Choose *Finish*.

For more information, see:

- https://help.sap.com/viewer/p/SAP_HANA_LIVE *Installation and Upgrade* *Administrator's Guide* *Configuration Steps* *Generate Time Data*
- https://help.sap.com/viewer/p/SAP_HANA_PLATFORM *<Version>* *Development* *SAP HANA Modeling Guide (for SAP HANA studio)* *Creating Information Views and Previewing its Output* *Generate Time Data*

6.2.4 Activate SAP Merchandise Planning BI Planning Framework Content

The planning framework used by SAP Merchandise Planning consists of the following elements:

- **Business Intelligence Content (BI Content) Objects:** A collection of local BI Content objects is used as the basis for the SAP Analysis for Microsoft Office workbooks.
  SAP Analysis for Microsoft Office workbooks are designed to consume data from BI Content objects. The local BI Content objects that are provided with the SAP Merchandise Planning application use the integrated planning engine in SAP Business Warehouse (SAP BW). These local BI Content objects are used as an interface between the SAP HANA views and the SAP Analysis for Microsoft Office workbooks.

  > ### Note
  >
  > The local BI Content provided with the SAP Merchandise Planning application is entirely independent of the SAP Business Warehouse BI Content and BI Content Extensions add-on.

- **SAP Analysis for Microsoft Office Workbooks:** Microsoft Excel-based spreadsheets that you use to plan assortments for the different locations in your retail business.

This section of the guide provides information on the SAP HANA content activation, BI Content activation and configuration, and data upload activities required to set up the SAP Merchandise Planning planning framework.

6.2.4.1 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* > *Core (Mandatory for All Applications)*. In particular, you must have created all the necessary tables, as described in Create/Replicate Source Master Data System Tables [page 76].

You must also have mapped all the necessary schemas, as described in Verify Correct Schema Mapping [page 40].

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 [page 176] .

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. If all applicable scenarios show *(Active)* you can skip to step 6.
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*. Exit the screen when completed.
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.

    Based on the selected *ECC Mode* in the above report the following packages should exist:

    - *SAP ERP*:
      - `sap.is.ddf.ecc`
      - `sap.is.retail.ecc`
    - *Fashion Management*:
      - `sap.is.ddf.ecc`
      - `sap.is.retail.ecc`
      - `sap.is.ddf.fms`
    - *S/4HANA*:
      - `sap.is.ddf.fms`
      - `sap.is.retail.fms_s4h`
11. The following packages should exist resulting from the standard installation:
    - `sap.is.ddf.ddf`
    - `sap.is.retail.rap.ap`
    - `sap.is.retail.rap.common_bw`
    - `sap.is.retail.rap.mpr`
    - `sap.is.retail.rap.mpr_oc`

    If any of these packages are missing, you must activate those relative to the order above due to dependencies. Use transaction `SCTS_HTA_DEPLOY` to activate each missing packages.

6.2.4.2 Activate SAP Merchandise Planning Local BI Content

.

Procedure

1. On your back-end system, open the Data Warehousing Workbench (transaction `RSA1`).

2. In the *Replicate Metadata* dialog box, choose *Only Activate*.
3. If a message appears that you are only authorized to work in client. (Brain 009), then refer to SAP Note 316923 (do not import the support package, but use the description under section *Workaround*).
4. Select *Do not show this question Again* in the dialog that appears.
5. Choose *Yes*.
   Make sure that the current job has finished before you proceed with the next step. Check the status of the background job using transaction `SM37`or `SLG1`. If there are problems, you must first solve them.
   You can use transaction `RSTCO_ADMIN` to restart the activation of the technical content and to verify the status of the activation.

   > **i Note**
   >
   > In the case that you get the short-dump "RAISE_EXCEPTION" when installing InfoObjects from the BI content, see SAP Note 1637935 for a possible solution.
   >
   > Also, see SAP Note 2090845 for important information on technical content activation.

   Following activation, you can locate the technical content in the Data Warehousing Workbench as follows:
   1. Selecting *Modeling* in the left-hand frame.
   2. Expand *InfoObjects*.
   3. In the right-hand frame, locate *Technical Content*.

6.2.4.3 Activate Application BI Content

Use

> **⚠ Caution**
>
> Proper authorization is required to complete these steps.

These instructions are to activate content for the InfoArea *Merchandise Planning Omni Channel* (`/RAP/MPOC`). This will activate the following object types:

- InfoObjects
- Advanced DataStore Objects (aDSO)
- Composite Providers
- Aggregation Levels
- Planning Sequences
- Queries
- Workbooks

After completing the activate sections, see the last section of this topic, *Verify Installed Objects* to insure all objects have been installed and activated.

Activate Advanced DataStore Objects

> **i Note**
>
> A window being referenced, may be hidden. Use the *Data Warehousing Workbench* menu in the main window title bar to hide/unhide the following windows: *Navigation*, *All Objects*, and *Collected Objects*.

- Use transaction `RSOR` to launch the BW workbench Transport Connection.
- In the navigation window, locate and select *Object Types*. In the window *All Objects According to Types*, expand node *DataStore Objects (advanced)* and double click *Select Objects*. In the popup window, select the following objects and select button *Transfer Selections*.

  DataStore Object (advanced)

aDSO Description	aDSO
Market Hierarchy CR based on Planning Configuration Set	/RAP/MHDS1
Market Hierarchy CR aDSO for LY and LLY	/RAP/MHDS2
aDSO for actuals of LY and LLY KPIs	/RAP/MPDS0
MP - Regional Month Sales Target for Omni Channel	/RAP/MPDS1
MP - Local Month Sales Inventory Targets for Retail and E-Co	/RAP/MPDS2
MP - Local Month Sales and Inventroy Targets for Whol-sale	/RAP/MPDS3
Product Hierarchy CR based on Planning Configuration Set	/RAP/PHDS1
Product Hierarchy CR aDSO for LY and LLY	/RAP/PHDS2
Merchandise Plan YSCT Characteristic Relationship	/RAP/SCTDS

- Select *Yes* to the system prompt *Do you want to add the objects to the personal list*.
- When prompted for *Source System*, do not choose any and select *OK*.
- For each `aDSO`, right click on the object and select option *Install All Below*.
- *Install* and *Activate* each aDSO.

Activate Analysis Office Excel Workbooks 2.0

In this section you will continue from the above step and activate the workbooks. :

- From the left navigation panel for *BI Content* locate and expand folder *More Types*. Expand *Analysis Office Excel Workbook* and double click *Select Objects*. Use the filter in the popup window to define a filter on column *Object Name* having values of `/RAP/MP_*`.

In the pop up window, select the following objects and select button *Transfer Selections*.

Workbooks

Object Name
/RAP/MP_ECOM_PHN5_WB_01
/RAP/MP_OTB_OTS_PHN5_WB_01
/RAP/MP_OTB_OTS_PHN5_WB_02
/RAP/MP_RTL_PHN5_WB_01
/RAP/MP_RT_PHN5_M_WB_01
/RAP/MP_RT_PHN7_WB_01
/RAP/MP_RT_SSN_PHN5
/RAP/MP_WHS_PHN5_M_WB_01

- Select *Yes* to the system prompt *Do you want to add the objects to the personal list*.
- For each workbook, right click and select option *Install All Below*.
- *Install* and *Activate* each workbook.

Activate Planning Sequence

In this section you will activate the Planning Sequence, Planning Function used for loading last year actual data, From the left navigation panel for *BI Content* locate and select *Object Types*. In the *All Objects According to Type* window, perform the following:

- Locate and expand *Planning, Planning Sequence*.
  - Double click *Select Objects* and use the filter in the popup window to define a filter on column *Object Name* having values of `/RAP/MPDS*`. In the results, use the *Transfer Selections* button to transfer `/RAP/MPDS0_A0_PS01`, `/RAP/MPDS0_A2_PS01`, and `/RAP/MPDS1_A1_PS01` to *Collected Objects*, then Install.

Verify Installed Objects

Verify the installed objects exist using the associated tables below.

DataStore Object (advanced)

aDSO Description	aDSO
Market Hierarchy CR based on Planning Configuration Set	/RAP/MHDS1

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

InfoObject Catalog (RAP)

Catalog Description	Catalog Name
RAP Character InfoObject Catalog	/RAP/CHAR_CAT
RAP Key Figure InfoObject Catalog	/RAP/KYF_CAT

InfoObjects Characteristics

InfoObject Description	InfoObject Name
Logical System ID	/RAP/LOGSYS
Planning Configuration Node	/RAP/PLCND
Planning Configuration Set	/RAP/PLCSET
Market Hierarchy Node on Level 1	/RAP/PLNHN1
Market Hierarchy Node on Level 2	/RAP/PLNHN2
Market Hierarchy Node on Level 3	/RAP/PLNHN3
Market Hierarchy Node on Level 4	/RAP/PLNHN4
Market Hierarchy Node on Level 5	/RAP/PLNHN5
Market Hierarchy Node on Level 6	/RAP/PLNHN6
Market Hierarchy Node on Level 7	/RAP/PLNHN7
Market Hierarchy Node on Level 8	/RAP/PLNHN8
Market Hierarchy Node on Level 9	/RAP/PLNHN9
Market Hierarchy	/RAP/PLNHR
Planning Process Level	/RAP/PLPLVL
Markdown Sales Revenue	/RAP/MRKDRV

InfoObject Description	InfoObject Name
Markdown Sales Units	/RAP/MRKDSU
Product Hierarchy Node on Level 1	/RAP/PRDHN1
Product Hierarchy Node on Level 2	/RAP/PRDHN2
Product Hierarchy Node on Level 3	/RAP/PRDHN3
Product Hierarchy Node on Level 4	/RAP/PRDHN4
Product Hierarchy Node on Level 5	/RAP/PRDHN5
Product Hierarchy Node on Level 6	/RAP/PRDHN6
Product Hierarchy Node on Level 7	/RAP/PRDHN7
Product Hierarchy Node on Level 8	/RAP/PRDHN8
Product Hierarchy Node on Level 9	/RAP/PRDHN9
Product Hierarchy	/RAP/PRDHR
Promotion Sales Revenue	/RAP/PROMRV
Promotion Sales Units	/RAP/PROMSU
Returns Revenue Loss	/RAP/RETRRV
Regular Sales Revenue	/RAP/RSLSRV
Regular Sales Units	/RAP/RSLSUN
Collection	/RAP/SCOLL
Sales Cost	/RAP/SLSCV
Sales Revenue	/RAP/SLSRV
Sales Units	/RAP/SLSUN
Season	/RAP/SSEAS
Season Year	/RAP/SSYR
Theme	/RAP/STHEME
Version	/RAP/VERSN

InfoObjects Key Figures

InfoObject Description	InfoObject Name
BOP DC Excess Stock at Cost	/RAP/BDEXCV
BOP DC Stock at Cost	/RAP/BDCCV
BOP Store Stock at Cost	/RAP/BSTCV
Channel Count	/RAP/CHCNT
End of Period Stock DC Cost Value	/RAP/EDCCV
EOP DC Excess Stock at Cost	/RAP/EDEXCV

InfoObject Description	InfoObject Name
EOP Store Stock at Cost	/RAP/ESTCV
Inventory Adjustment at Cost	/RAP/IADCV
Markdown Budget	/RAP/MRKBUD
Markdown Sales Revenue	/RAP/MRKDRV
Markdown Sales Units	/RAP/MRKDSU
Month Of Supply Store	/RAP/MOSUP
Month Of Supply at DC	/RAP/MOSUPD
On Order Cost DC	/RAP/DCOCV
On Order Units DC	/RAP/DCOUN
On Order Units Store	/RAP/ONOUN
On Order Cost Store	/RAP/ONOCV
Open Sales Order Cost	/RAP/SOOCV
Open Sales Order Units	/RAP/SOOUN
Open to Sale at Cost	/RAP/OTSC
OTB at Cost	/RAP/OTBC
Promotion Budget	/RAP/PROBUD
Promotion Sales Revenue	/RAP/PROMRV
Promotion Sales Units	/RAP/PROMSU
Receipt DC at Cost	/RAP/RDCCV
Receipt Store at Cost	/RAP/RDTCV
Receipt Units DC	/RAP/RCPUND
Receipt Units Store	/RAP/RCPUNS
Regular Sales Revenue	/RAP/RSLSRV
Regular Sales Units	/RAP/RSLSUN
Return Units DC	/RAP/DCREUN
Return Units Store	/RAP/RETRUN

InfoObject Description	InfoObject Name
Returns at Cost DC	/RAP/DCRECV
Returns at Cost Store	/RAP/RETRCV
Returns Revenue Loss	/RAP/RETRRV
Sales at Cost	/RAP/SLSCV
Sales Order Intake Revenue	/RAP/SOIRV
Sales Order Rejection Cost	/RAP./SORCV
Sales Order Rejection Units	/RAP/SORUN
Sales Revenue	/RAP/SLSRV
Sales Store Fulfilled at Cost	/RAP/STSCV
Sales Units	/RAP/SLSUN
Shipment Fulfilled at Cost	/RAP/SHPCV
Write Off Adjustment at Cos	/RAP/WOFFAD

Composite Providers

Composite Provider Description	Composite Provider
Merchandise Financial Plan Omni Channel	/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

Aggregation Description	Aggregation Name
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

Planning Sequence

Workbook	Function	Planning Sequence
1.1 Regional Monthly Plan	Planning sequence for Ribbon in AO	/RAP/C15A01_PS00
1.1 Regional Monthly Plan	Delete	/RAP/C15A01_PS01
1.1 Regional Monthly Plan	Release	/RAP/C15A01_PS02
1.1 Regional Monthly Plan	Copy	/RAP/C15A01_PS03
1.1 Regional Monthly Plan	Bottom Up	/RAP/C15A01_PS04
1.2 Regional Seasonal Plan	Planning sequence for Ribbon in AO	/RAP/C15A02_PS00
1.2 Regional Seasonal Plan	Delete	/RAP/C15A02_PS01
1.2 Regional Seasonal Plan	Release	/RAP/C15A02_PS02
1.2 Regional Seasonal Plan	Top Down	/RAP/C15A02_PS03
1.2 Regional Seasonal Plan	Copy	/RAP/C15A02_PS04
1.2 Regional Seasonal Plan	Bottom Up	/RAP/C15A02_PS05
1.3 Regional Seasonal Plan	Planning sequence for Ribbon in AO	/RAP/C15A03_PS00
1.3 Regional Seasonal Plan	Delete	/RAP/C15A03_PS01
1.3 Regional Seasonal Plan	Release	/RAP/C15A03_PS02
1.3 Regional Seasonal Plan	Top Down	/RAP/C15A03_PS03
1.3 Regional Seasonal Plan	Copy	/RAP/C15A03_PS04
4.1 Ecommerce Monthly Plan	Planning sequence for Ribbon in AO	/RAP/C15A12_PS00

Workbook	Function	Planning Sequence
4.1 Ecommerce Monthly Plan	Delete	/RAP/C15A12_PS01
4.1 Ecommerce Monthly Plan	Release	/RAP/C15A12_PS02
4.1 Ecommerce Monthly Plan	Copy	/RAP/C15A12_PS03
4.1 Ecommerce Monthly Plan	Top Down	/RAP/C15A12_PS04
4.1 Ecommerce Monthly Plan	Initialize BOP - M	/RAP/C15A12_PS05
4.1 Ecommerce Monthly Plan	Re-calculate BOP	/RAP/C15A12_PS06
4.1 Ecommerce Monthly Plan	Initialize BOP - T	/RAP/C15A12_PS07
4.1 Ecommerce Monthly Plan	Initialize BOP - P	/RAP/C15A12_PS08
2.1 Retail Monthly Plan	Planning sequence for Ribbon in AO	/RAP/C15A22_PS00
2.1 Retail Monthly Plan	Delete	/RAP/C15A22_PS01
2.1 Retail Monthly Plan	Release	/RAP/C15A22_PS02
2.1 Retail Monthly Plan	Copy	/RAP/C15A22_PS03
2.1 Retail Monthly Plan	Initialize BOP - M	/RAP/C15A22_PS04
2.1 Retail Monthly Plan	Top Down	/RAP/C15A22_PS05
2.1 Retail Monthly Plan	Initialize BOP - T	/RAP/C15A22_PS06
2.1 Retail Monthly Plan	Initialize BOP - P	/RAP/C15A22_PS07
2.1 Retail Monthly Plan	Re-calculate BOP	/RAP/C15A08_PS08
3.1 Wholesale Monthly Plan	Planning sequence for Ribbon in AO	/RAP/C15A32_PS00
3.1 Wholesale Monthly Plan	Delete	/RAP/C15A32_PS01
3.1 Wholesale Monthly Plan	Release	/RAP/C15A32_PS02
3.1 Wholesale Monthly Plan	Copy	/RAP/C15A32_PS03
3.1 Wholesale Monthly Plan	Top Down	/RAP/C15A32_PS04
3.1 Wholesale Monthly Plan	Initialize BOP - M	/RAP/C15A32_PS05
3.1 Wholesale Monthly Plan	Initialize BOP - T	/RAP/C15A32_PS06
3.1 Wholesale Monthly Plan	Initialize BOP - P	/RAP/C15A32_PS07
3.1 Wholesale Monthly Plan	Re-calculate BOP	/RAP/C15A32_PS08

Workbook	Function	Planning Sequence
5.1 OTB & OTS Reconciliation	Planning sequence for Ribbon in AO	/RAP/C15A41_PS00
5.1 OTB & OTS Reconciliation	MP - OTB - Reconciliation	/RAP/C15A41_PS01
5.1 OTB & OTS Reconciliation	MP - OTB - Reconciliation - Finalize	/RAP/C15A41_PS02
5.2 OTB & OTS Reconciliation - Season	Planning sequence for Ribbon in AO	/RAP/C15A42_PS00
5.2 OTB & OTS Reconciliation - Season	MP - OTB - Reconciliation	/RAP/C15A42_PS01
5.2 OTB & OTS Reconciliation - Season Final	MP - OTB - Reconciliation - Finalize	/RAP/C15A42_PS02

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
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

Query Name	Technical Name
MP - Local Targets - WHS - Inventory Mix - PHN5	/RAP/CP15A31_IRQ02
MP - Local Targets - WHS - Prompt Query - PHN5	/RAP/CP15A31_Q01
MP - OTB Reconciliation Report - Prompt Query	/RAP/CP15_Q001
MP - OTB Reconciliation Report	/RAP/CP15_Q01
MP - OTB Reconciliation Season Prompt Query	/RAP/CP15_Q002
MP - OTB Reconciliation Report - Season	/RAP/CP15_Q02

Workbooks 2.0

Workbook Description	Workbook Technical Name
1.1 Regional Monthly Plan	/RAP/MP_RT_PHN5_M_WB_01
1.2 Regional Seasonal Plan	/RAP/MP_RT_SSN_PHN5
1.3 Regional Seasonal Plan	/RAP/MP_RT_PHN7_WB_01
2.1 Retail Monthly Plan	/RAP/MP_RTL_PHN5_WB_01
3.1 Wholesale Monthly Plan	/RAP/MP_WHL_PHN5_M_WB_01
4.1 Ecommerce Monthly Plan	/RAP/MP_ECOM_PHN5_WB_01
5.1 OTB & OTS Reconciliation	/RAP/MP_OTB_OTS_PHN5_WB_01
5.2 OTB & OTS Seasonal Reconciliation	/RAP/MP_OTB_OTS_PHN5_WB_02

Change aDSO Behavior

You must change the loading behavior for each aDSO. To do this, locate each object in the DataStore (advanced) table above and right click to select *Planning-Specific Properties* > *Change Real-Time Load Behavior...* > . Select radio button *Real-Time Target Can Be Planned; Data Loading Not Allowed*.

6.2.4.4 Configure SAP Merchandise Planning Local BI Content

6.2.4.4.1 Enable the Planning Application Kit (PAK)

Use

To be able to use the SAP Analysis for Microsoft Office workbooks provided as part of the SAP Assortment Planning planning framework content, you must enable the Planning Application Kit.

Procedure

1. Read SAP Note 1637199.
2. In your back-end system, launch table/view maintenance (transaction `SM30`).
3. Enter `RSPLS_HDB_ACT` in the *Table/View* field and choose *Maintain*.
4. Choose *New Entries*.
5. In the *HANA Integratn. Active* column select **`Deep HANA Integration Active`** and in the *Functn. Active* column, enable the checkbox.

6.2.4.4.2 Maintain RSADMIN Parameter for Input Cells

In this procedure, you maintain the `RSADMIN` parameter for Input Cells in the SAP BW application to suppress zero values for actual data versions.

1. Log on to your back-end system.
2. Open the *ABAP Editor* (transaction `SE38`).
3. Run program **`SAP_RSADMIN_MAINTAIN`**
4. In `RSAD` Table Maintenance, insert `ZERO_SUPPRESSION_ON_INPUTCELLS` in `OBJECT` and Execute.

> **i** Posting Instructions
>
> Refer to 1126478
>
> for further information.

6.2.4.4.3 Maintain Fiscal Year Variants

Use

In this section you maintain the required fiscal year variant values for month, `RM`. These instructions are for SAP Merchandise Planning 2.0 FP2 or later. In addition, the years used in the examples are to depict the relationship between the years. You will need to create the range of years applicable for your implementation.

> ⚠ Caution
>
> SAP Merchandise Planning uses activated time objects `0FISCPER` (fiscal year period) and `0FISCVARNT` (fiscal year variant), provided as part of the technical `BI Content`.

> i Note
>
> SAP Merchandise Planning for Retail 1.0 Workbooks supports time hierarchy YR/MON. For more information please see Maintain Time Hierarchy [page 194].

Procedure

Fiscal Variant RM

You must maintain `0FISCVARNT 'RM'` using the standard 12 month calendar entries. If you are using alternative fiscal periods in your business, you can provide your own entries instead of the ones suggested in this guide.

1. Log on to your back-end system.
2. Launch the fiscal year variant maintenance (transaction `GVAR`). Choose *New Entries*.
3. In the *Fiscal Year Variants* view, choose *New Entries*.
4. On the *New Entries: Overview of Added Entries* screen make the following sets of entries:

Field Name	User Entry
`FV`	**RM**
`Description`	Planning month
`Calendar yr`	Do not select
`Year-dependent`	Select
`Number of period postings`	12

Field Name	User Entry
No.of special periods	

5. Choose *Enter*.
6. Choose *Back*.
   You can see the newly created entry.
7. Mark the entry *RM* and select *Periods* from the *Dialog Structure* and double click to open the *Calendar year* dialog.
8. Enter the year, for example **2014**, in the *Calendar yr* field and choose *Continue*.
9. Choose *New Entries*. For the year selected to enter the information that will define each period.
10. Enter the last valid calendar date of the period being added in the *Month and Day* fields.
11. Enter the relevant *Period* number.
12. In the *Year Shift* field, enter +1 if the fiscal year is later than the calendar year enter. Enter -1 if the fiscal year is before the calendar year.
13. Press *Enter* to accept the first row.
14. Continue adding each period to complete the fiscal year. Choose *Save* after you have finished the entries for a year.
15. Continue adding the fiscal year variants for each year required by your scenario by repeating steps 2-13.
16. For more information about setting up the calendar for additional years, see SAP Note 2112634. Note that this SAP Note is applicable for both SAP Merchandise Planning and SAP Assortment Planning.
17. Choose *Save* after you have finished the maintenance for the last year.

2015 Monthly Calendar (sample)

Month	Day	Period	Year Shift
1	31	12	-1
2	28	1	0
3	28	2	0
5	2	3	0
5	30	4	0
6	27	5	0
8	1	6	0
8	29	7	0
9	26	8	0
10	31	9	0
11	28	10	0

Month	Day	Period	Year Shift
12	26	11	0
12	31	12	0

6.2.4.4.4 Generate Time Dimension

Use

In this procedure you generate the time dimension. There is a weekly and monthly time dimension required. The steps provided in this procedure allow you to maintain the `M_FISCAL_CALENDAR` table in the `_SYS_BI` schema. Perform the steps for the weekly (RW), then the monthly (RM) dimensions.

Procedure

1. Log on to your SAP HANA studio.
2. From the *Quick Launch* tab page, choose *Generate Time Data*.
3. In the *Generate Time Data* dialog, input the following values:

> **i Note**
>
> The sample dates are to match generated sample data. It is recommended the dates are 3 years prior and 5 forward.

Field	Value	Comment
Calendar Type	**`Fiscal`**	
From Year	**`2010`**	Ensure that you choose the first year that you have entered in transaction `GVAR`.
To Year	**`2020`**	Ensure that you choose the last year that you have entered in transaction `GVAR`.
Variant	**`RW:(Client)`** (1st iteration) **`RM:(Client)`** (2nd iteration)	Ensure that you choose the fiscal year variant that you have defined in transaction `GVAR` for the appropriate client..

4. Choose button *Generate*.
5. Check table `M_FISCAL_CALENDAR` in the `_SYS_BI` schema to confirm the time generation.

Return to Step 2 in the procedure and repeat the steps for the monthly dimension.

6.2.4.4.5 Maintain Versions

In this step, you maintain the master data for the InfoObject `/RAP/VERSN` to support versions in workbooks.

1. Launch HANA Studio, and open perspective BW Modeler. Open your BW Project and expand *BW Repository*. Navigate to *⏵ /RAP/MPOC ⏵ Aggregation Level ⏹*. Expand any object built on `/RAP/C15A*` and navigate to a query. Open the query and navigate to the *InfoProvider* tab.
2. Expand *⏵ InfoProvider Fields ⏵ General ⏹*. Open field `/RAP/VERSN`. In the *Properties* tab select the *Master Data* link.
3. You are on the *Change Master Data of InfoObject* `/RAP/VERSN` maintenance screen.
4. Select the section below matching the scenario of workbooks you will be using to enter the correct information.
   Be sure to save your entries and close the window.

Merchandise Planning 2.0 and Above

The default workbooks are planned at product hierarchy node levels 5 and 7. Entries for those are listed in the table below. For more information about versions see https://help.sap.com/viewer/p/CARAB *⏵ <Version> ⏵ Administration ⏵ SAP Merchandise Planning Administration Guide ⏵ Configuration Information ⏵ Configure SAP Merchandise Planning ⏵ Implementation Tasks ⏹*.

Merchandise Planning Versions 2.0

Version	Text
M51	Working Version
M52	Simulation Version
M5F	Finalized Version
M5R	Reporting Version
M71	Working Version
M72	Simulation Version
M7F	Finalized Version
M7R	Reporting Version

Merchandise Planning for Retail 1x

Merchandise Planning for Retail

Version	Text
MO1	MO Working Version
MO2	MO Simulation Version
MOR	MO Reporting Version
MOP	MO In Season Version
MD1	MD Working Version
MD2	MD Simulation Version
MDR	MD Reporting Version
MDP	MD In Season Version
MP1	MP Working Version
MP2	MP Simulation Version
MPR	MP Reporting Version
MPP	MP In Season Version
MM1	MM Working Version
MM2	MM Simulation Version
MMR	MM Reporting Version
MMP	MM In Season Version
MMF	MM Final Version
FO1	FO Working Version
FO2	FO Simulation Version
FOR	FO Reporting Version
FOP	FO In Season Version
FD1	FD Working Version
FD2	FD Simulation Version
FDR	FD Reporting Version

Version	Text
FDP	FD In Season Version
FM1	FM Working Version
FM2	FM Simulation Versio
FMR	FM Reporting Version
FMP	FM In Season Version
FL1	FL Working Version
FL2	FL Simulation Versio
FLR	FL Reporting Version
FLP	FL In Season Version
SAP	Store Area Plan

6.2.4.4.6 Activate Internet Communication Framework (ICF) Services

For security reasons, all Internet Communication Framework (ICF) services relevant to your SAP Merchandise Planning application are made available in an inactive state.

In this procedure, you activate the ICF service.

1. Log on to your back-end system.
2. Open the *HTTP Service Hierarchy Maintenance* screen (transaction `SICF`).
3. Enter the following data:

Field name	User action and values
Hierarchy Type	**`SERVICE`**

4. Choose *Execute*.
5. On the *Maintain Service* screen, expand the hierarchy of `Default_host`.
6. Expand SAP.
7. Select the **`BW`** entry.
8. From the context menu choose *Activate* service.
9. In the confirmation dialog box, choose *Yes* to activate all sub-nodes below the **`BW`** node in the hierarchy.
10. Choose Back.

6.2.4.4.7 Connect File System in SAP BW (Optional)

In this procedure, you perform the settings that are necessary for the connectivity for an external system - PC files on the Workstation (for example Excel files) or files on the application server in SAP BW.

1. Log on to your back-end system.
2. Open the *Data Warehouse Workbench: Modeling* screen (transaction `RSA1`).
3. Choose *Modeling*.
4. Choose *Source Systems*.
5. In the right-hand frame, mark the entry *File*.
6. Right-click the folder of *File*.
7. Choose *Create*.
8. Enter the following data:

Field name	User action and values
Logical system name	**FILE**
Source system name	**FILE**

9. Choose Continue.
10. Right-click the **FILE** Source System.
11. Follow the context menu path *Activate*.

6.2.4.4.8 SAP Merchandise Planning for Retail 1.0 Workbooks

These steps are for users who have upgraded to or installed SAP Fiori 3.0 SPS03 for SAP Customer Activity Repository applications bundle 2.0 and are choosing to continue using the SAP Merchandise Planning for Retail 1.0 workbooks.

6.2.4.4.8.1 Maintain Time Hierarchy

The time hierarchy is used to summarize the fiscal periods for planning. In this step, you create 2 time hierarchies: `YR/MON`. Use transaction `RSH1` to create the hierarchies for the InfoObject `0FISCPER`. The instructions are an example of the required steps that will be repeated for each year and time period

InfoObject	Time hierarchy example
0FISCPER	• Create the **0RP_FISCHIER03** hierarchy name with the entry **YR/MON** in the *Short Description* field. • Create the **Year** hierarchy node with **Month** in the *Short Description*. • Choose the **Year** hierarchy node, and create the **Year** hierarchy node with the **Month** in the *Short Description* field under the **Month** hierarchy node. Click continue • Choose the **Period** hierarchy node, use the *Characteristic Nodes Button* to insert the **Fiscal year/Period** value for each period for that year. • Continue the process for each year, month and period. Save and activate the hierarchy when completed. • Create the **0RP_FISCHIER01** hierarchy name with the entry **YR/MON** in the *Short Description* field. • Create the **Year** hierarchy node with **Month** value in the *Short Description* field. • Choose the **Year** hierarchy node, and create the **Month** hierarchy node with **Month** in the *Short Description* field under the **period** hierarchy node. • Choose the **Year** hierarchy node, and create the **Month** hierarchy node with **Month** in the *Short Description* field under the **Period** hierarchy node. • Choose the **Year** hierarchy node, use the *Characteristic Nodes Button* to insert the **Fiscal year/Period** value for each period for that month. • Continue the process for each year, month and period as desired. Save and activate the hierarchy when completed.

6.2.4.4.8.1.1 Maintain Fiscal Year Variants

Use

In this section you maintain the required fiscal year variant values for week and month; `0FISCVARNT 'RW'` and `'RM'`.

> ⚠ Caution
>
> SAP Merchandise Planning for Retail uses activated time objects `0FISCPER` (fiscal year period) and `0FISCVARNT` (fiscal year variant), provided as part of the technical `BI Content`.
>
> If you are also using the SAP Assortment Planning application, you use the same fiscal year variant that was created for this application.

Procedure

Fiscal Variant RW

The steps provided in this procedure allow you to maintain `0FISCVARNT 'RW'` using the standard 4-5-4 calendar entries. If you are using alternative fiscal periods in your retail business, for example, each week starting on a Sunday instead of Saturday, you can provide your own entries instead of the ones suggested in this guide.

1. Log on to your back-end system.
2. Launch fiscal year variant maintenance (transaction `GVAR`).
3. Choose *New Entries*.
4. On the *New Entries: Overview of Added Entries* screen make the following sets of entries:

Field Name	User Entry
`FV`	**RW**
`Description`	Planning week
`Year-dependent`	Select
`Calendar yr`	Do not select
`Number of period postings`	53
`No.of special periods`	

5. Choose *Enter*.
   An information message is displayed about creating more than 16 periods, choose *Continue*.
6. Choose *Back*.
   You can see the newly created entry.
7. Mark the entry *RW* and select *Periods* from the *Dialog Structure*.
8. Enter **2012** in the *Calendar yr* field and choose *Continue*.
   Data for the previous year must be maintained.
9. Choose *New Entries*.
10. Open SAP Note 2112634, locate the entries for year 2012, and enter the data by copy-and-paste. Note that this SAP Note is applicable for both SAP Merchandise Planning for Retail and SAP Assortment Planning for Retail.
11. Choose *Enter* to finish your input.
    While making the fiscal year entries, an information message might be displayed stating that there are *Gaps in financial year variant periods RW*. This is an information message only, and the entered fiscal year data is saved.
12. Maintain the weekly fiscal year variant in the same way for the year 2017. The entries for year 2017 are also available in SAP Note 2112634.
13. Select *Shortened Fiscal Years* from the *Dialog Structure*.
14. Enter **2013** in the *Fiscal year* field and choose *Continue*.
15. Choose *New Entries*.

16. Enter **52** in the *No. of posting periods* field.
17. Choose *Back* twice.
18. Maintain the weekly fiscal year variant in the same way for the shortened fiscal years, that is, years 2013, 2014, 2015, 2016, and 2017. The corresponding tables are available in SAP Note 2112634.
19. Choose *Save* after you have finished the maintenance for year 2018.

Fiscal Variant RM

The next steps allow you to maintain `0FISCVARNT 'RM'` using the standard 12 month calendar entries. If you are using alternative fiscal periods in your retail business, you can provide your own entries instead of the ones suggested in this guide. These month entries must align with the week values used in the prior step.

1. In the *Fiscal Year Variants* view, choose *New Entries*.
2. On the *New Entries: Overview of Added Entries* screen make the following sets of entries:

Field Name	User Entry
`FV`	**RM**
`Description`	Planning month
`Year-dependent`	Select
`Calendar yr`	Do not select
`Number of period postings`	12
`No.of special periods`	

3. Choose *Enter*.
4. Choose *Back*.
   You can see the newly created entry.
   To get the information to enter in the next step, open SAP Note 2112634. Note that this SAP Note is applicable for both SAP Merchandise Planning and SAP Assortment Planning. If you have used these dates for your weekly calendar, then align the month end dates to match. An example is contained in the table below using the 2015 calendar entries from the SAP Note.
5. Mark the entry *RM* and select *Periods* from the *Dialog Structure* and double click to open the *Calendar year* dialog.
6. Enter **2012** in the *Calendar yr* field and choose *Continue*.
7. Choose *New Entries*. For the year selected to enter the information that will define each period.
8. Enter the last valid calendar date of the period being added in the *Month and Day* fields.
9. Enter the relevant *Period* number.
10. In the *Year Shift* field, enter +1 if the fiscal year is later than the calendar year enter. Enter -1 if the fiscal year is before the calendar year.
11. Press *Enter* to accept the first row.

12. Continue adding each period to complete the fiscal year.
    Maintain the monthly fiscal year variant in the same way for the remaining years.
13. Choose *Save* after you have finished the maintenance for year 2018.

Choose *Save* after you have finished the maintenance for the last year.

2015 Monthly Calendar (sample)

Month	Day	Period	Year Shift
1	31	12	-1
2	28	1	0
3	28	2	0
5	2	3	0
5	30	4	0
6	27	5	0
8	1	6	0
8	29	7	0
9	26	8	0
10	31	9	0
11	28	10	0
12	26	11	0
12	31	12	0

6.2.4.5 Generate Missing Data Reports

Use

There are two reports required to populated supporting tables.

Procedure

The first report will generate entries for table `/RAP/RS_VARCUSTS`.

- Use transaction code. `SE38` and enter `/RAP/SEED_BW_CUSTOMIZING_DATA` in the *Program* field. Use the Execute button to run the report.

The second report is only for *SAP Merchandise Planning for Retail 1.0* or (1.1) and is used to set the session client on the HANA system.

- Use transaction code. `SE38` and enter `/RAP/MPR_REPORTING_CLIENT` in the *Program* field. Use the Execute button to run the report.

6.2.4.6 Verify the Connection Between the SAP Merchandise Planning System and SAP Analysis for Microsoft Office

The SAP Merchandise Planning application includes several SAP Analysis for Microsoft Office workbooks. These workbooks, which are installed on your back-end system as part of the local BI Content, can only be opened using SAP Analysis for Microsoft Office.

In this step, you verify that you can open the SAP Merchandise Planning workbooks from SAP Analysis for Microsoft Office.

1. Open SAP Analysis for Microsoft Office from *Start* > *All Programs* > *SAP Business Intelligence* > *SAP BusinessObjects Analysis* > *Analysis for Microsoft Excel*.
2. From the *File* menu, select *Analysis* > *Open Workbook (Open Workbook from SAP NetWeaver)*.
3. Select your back-end system.
   Tip: The list of systems corresponds to the systems available in your SAP Logon.
4. If single sign-on is not configured provide your user information.
5. Search for `/RAP/MP*` on the *Search* tab.
6. Open any of the workbooks from the list of SAP Merchandise Planning workbooks.
   The opening of the workbook indicates that there are no issues with the connection between your back-end system and SAP Analysis for Microsoft Office.

6.2.4.7 Retail Version 1.0 Workbooks

You may choose to use the original retail workbooks contained in this configuration.

The following topics are not used in SAP Merchandise Planning 2.0 FP2. If you are configuring for the 1.0 workbooks you must complete these next topics.

Create Geographical Location Hierarchies [page 200]

Maintain Article and Geographical Hierarchy [page 201]

Reporting Currency for Geo Hierarchy Level 2 [page 201]

6.2.4.7.1 Maintain BEX Variables

In this step, you maintain the variables `/RAP/HIEID_MSM_01`and `/RAP/UNIT_MSM_01`. To do this launch the *Query Designer* and follow the steps below.

1. Log in to the system desired and select the *Open query* icon. In the prompt, search the *InfoAreas* for *Merchandise, Financial Planning for Retail* and select.
2. Open query *Channel Mix - query/PF* (`/RAP/CP11A02_IRQ01`).
3. In the *Filter* panel, *Characteristic Restrictions* and select *Hierarchy ID* and expand. Choose the variable *Hierarchy ID* beneath to focus the value in the *Properties* panel.
4. Select the *Default Values* tab and enter the same hierarchy id used in the Customizing activity.
5. Return to the *Filter* panel, *Characteristic Restrictions* and select *Unit of Measure* and expand. Choose the variable *Unit of Measure* beneath to focus the value in the *Properties* panel.
6. Select the *Default Values* tab and enter the value 'PC' to represent the default unit of measure value for pieces.
7. Save the Query and exit.

to support versions in workbooks.

6.2.4.7.2 Create Geographical Location Hierarchies

> **i Note**
>
> This step is relevant to *SAP Merchandise Planning for Retail* versions prior to SAP Merchandise Planning 2.0 FP2.
>
> *SAP Merchandise Planning for Retail* supports up to 2 levels of geographical location hierarchies. For example, you create the first level for the world regions, the second level for countries, and then the location hierarchy. The location hierarchy node assigned to a geographical location hierarchy must be a distribution chain hierarchy (DC), which is a type 04 or a promotion location hiearchy which is a type 05.

Do the following steps to create a geographical location hierarchy:

1. Log in to the application server using `SAP GUI` and execute transaction code `NWBC`.
2. Select the *Services* menu.
3. In the left navigation menu select *Location Services* > *Location Hierarchy*.
   In the POWL menu on the right, select the *Create* button, then *Market Hierarchy* in the dropdown.
4. Enter the location hierarchy name, description and the master data system for your new geographical location hierarchy.
5. Select the *Editor* tab.

   > **i Note**
   >
   > - The *Location* and *Import* tabs are disabled.

   Enter or search for the distribution chain location hierarchy or promotion location hierarchy that you want to add to your geographical location hierarchy.
6. Add the desired DC location hierarchy or promotion location hierarchy to your geographical location hierarchy. You may have either or both types of hierarchies added to the same geographical location hierarchy node.
7. Save your entries.

In the example below you have two level 2 hierarchies. The level 3 hierarchies are the actual distribution chain location hierarchies and/or promotion location hierarchies that were selected (created in a previous activity).

- GLOBAL (GEOLEVEL1)
  - NORTH_AMERICA (GEOLEVEL2)
    - DC Hierarchy for Sales Org/Dist. Channel XYZ (GEOLEVEL3)
      This will assign all locations for the sales org / distribution channel XYZ to North America's node.
    - Promotion location hierarchy PL123 (GEOLEVEL3)
      This will assign all locations for the promotion location hierarchy PL123 to North America's node.
  - SOUTH_AMERICA (GEOLEVEL2)
    - DC Hierarchy for Sales Org/Dist. Channel ABC (GEOLEVEL3)
      This will assign all locations for the sales org / distribution channel ABC to South America's node.

6.2.4.7.3 Maintain Article and Geographical Hierarchy

Use

This information is relevant to versions prior to SAP Merchandise Planning 2.0 FP2. There are two types of hierarchies used in **SAP Merchandise Planning for Retail**, the geographical and the article hierarchy.

Procedure

There is a Customizing activity to define the required hierarchies. Use transaction code `SPRO` and in the Dialog Structure navigate to *Cross-Application Components* > *Demand Data Foundation* > *Basic Settings* and choose *Define Default Values*.

- In the *Hierarchy ID* field use the prompt to select the applicable article hierarchy id.
- In the *Geo Hierarchy ID* field, use the prompt to select the applicable geo hierarchy ID.

6.2.4.7.4 Reporting Currency for Geo Hierarchy Level 2

This information is relevant to versions prior to SAP Merchandise Planning 2.0 FP2. The geographical hierarchy level 2 requires a reporting currency. Do the following steps to create a geographical location hierarchy currency:

1. In your back-end system, launch table/view maintenance transaction code `SM30`.
2. In the *Maintain Table Views: Initial Screen* enter `/RAP/GEOLVL_CUST` in the *Table/view field* and select the *Maintain* button
3. Choose *New Entries* .
4. Use the *F4* help to select the *Geographical Level 02* desired.
5. Use the *F4* help to select the *Reporting Currency* associated with the *Geographical Level 02* selected.
6. Repeat for each *Geographical Level 02* required.
7. Save your entries.

6.2.4.7.4.1 Maintain Process Chain Related

Maintain BW process chain variants relevant for SAP Merchandise Planning for Retail.

Context

In this optional procedure, you activate the following infoobjects and maintain the BW process chain variants .

Planning: Characteristic Relationships

InfoObject Description	InfoObject Name
Characteristic Rels. for Financial Merchandise Planning	Plan `/RAP/MPRC01`
Characteristic Rels. for Channel Planning	Plan `/RAP/MPRC02`

Planning: Data Slices

InfoObject Description	InfoObject Name
Data Slices for Financial Merchandise Planning, Plan	`/RAP/MPRC01`
Data Slices for Channel Planning, Plan	`/RAP/MPRC02`

Process Chain Doc Process Chain

InfoObject Name
`/RAP/MPPC01_01`

Process Chain Starter

InfoObject Name
`/RAP/MPPC01_01`

Procedure

In this process you will create variants and activate the BW process chains.

1. Planning Sequence Data Slice Activation
    1. Go to transaction `RSPLAN`
    2. Select the *Planning Sequence* button.
    3. In the planning sequence field, enter `/RAP/C11A02_PS08` and choose *Edit* button.
    4. Select the *Variables* button.
    5. Select the *Geographical Level 1 Input* help and select a value.
    6. Select the *Save As* Button.
    7. In the Variables prompt, choose *F9* to turn Cross User-variant on.
    8. Enter a variant name. For description enter **`Data Slice Activation`** and select the Cross-User Variant check box.

9. Select the *Continue* button.
10. Select the *Continue* button in the variables screen.
11. Go to transaction `RSA1`.
12. In the navigation panel, select the *Modeling* button, then *Process Chain*.
13. In the process chain panel, right click on **Merchandise Planning - Actualization** and choose *Edit*.
14. In the right tree, right click on **Execute Planning Sequence Data Slice Activation (/RAP/MPPC01_10)** and choose *Maintain Variant*.
15. Load the variant created in step h (if not already loaded).
16. Select the *Transfer* button and save.

2. Planning Sequence Deactivation of Data Slice
    1. Go to transaction `RSPLAN`
    2. Select the *Planning Sequence* button.
    3. In the planning sequence field, enter `/RAP/C11A02_PS09` and choose *Edit* button.
    4. Select the *Variables* button.
    5. Select the *Geographical Level 1 Input* help and select a value.
    6. Select the *Save As* Button.
    7. In the Variables prompt, choose *F9* to turn Cross User-variant on.
    8. Enter a variant name. For description enter **`Data Slice Deactivation`** and select the Cross-User Variant check box.
    9. Select the *Continue* button.
    10. Select the *Continue* button in the variables screen.
    11. Go to transaction `RSA1`.
    12. In the navigation panel, select the *Modeling* button, then Process Chain.
    13. In the process chain panel, right click on **Merchandise Planning - Actualization** and choose *Edit*.
    14. In the right tree, right click on **Execute Planning Sequence Data Slice Deactivation (/RAP/MPPC01_11)** and choose *Maintain Variant*.
    15. Load the variant created in step h (if not already loaded).
    16. Select the *Transfer* button and save.
3. Planning Sequence Channel Mix - Actualization
    1. Go to transaction `RSPLAN`
    2. Select the *Planning Sequence* button.
    3. In the planning sequence field, enter `/RAP/C11A02_PS07` and choose *Edit* button.
    4. Select the *Variables* button.
    5. Select the *Geographical Level 1 Input* help and select a value.
    6. Select the *Save As* Button.
    7. In the Variables prompt, choose *F9* to turn Cross User-variant on.
    8. Enter a variant name. For description enter **`Channel Mix - Actualization`** and select the Cross-User Variant check box.
    9. Select the *Continue* button.
    10. Select the *Continue* button in the variables screen.
    11. Go to transaction `RSA1`.
    12. In the navigation panel, select the *Modeling* button, then Process Chain.
    13. In the process chain panel, right click on Merchandise Planning - Actualization and choose edit.
    14. In the right tree, right click on **Execute Planning Sequence Channel Mix - Actualization (/RAP/MPPC01_02)** and choose *Maintain Variant*.

15. Load the variant created in step h (if not already loaded).
16. Select the *Transfer* button and save.

4. Planning Sequence Financial Merchandise Plan - Division - Actualization
    1. Go to transaction `RSPLAN`
    2. Select the *Planning Sequence* button.
    3. In the planning sequence field, enter `/RAP/C11A07_PS11` and choose *Edit* button.
    4. Select the *Variables* button.
    5. Select the *Geographical Level 1 Input* help and select a value.
    6. Select the *Save As* Button.
    7. In the Variables prompt, choose *F9* to turn Cross User-variant on.
    8. Enter a variant name. For description enter **`MP - Division - Actualization`** and select the Cross-User Variant check box.
    9. Select the *Continue* button.
    10. Select the *Continue* button in the variables screen.
    11. Go to transaction `RSA1`.
    12. In the navigation panel, select the *Modeling* button, then Process Chain.
    13. In the process chain panel, right click on Merchandise Planning - Actualization and choose edit.
    14. In the right tree, right click on **Execute Planning Sequence Financial Merchandise Plan - Division - Actualization(/RAP/MPPC01_03)** and choose *Maintain Variant*.
    15. Load the variant created in step h (if not already loaded).
    16. Select the *Transfer* button and save.
5. Planning Sequence Financial Merchandise Plan - Department - Actualization
    1. Go to transaction `RSPLAN`
    2. Select the *Planning Sequence* button.
    3. In the planning sequence field, enter `/RAP/C11A03_PS10` and choose *Edit* button.
    4. Select the *Variables* button.
    5. Select the *Geographical Level 1 Input* help and select a value.
    6. Select the *Save As* Button.
    7. In the Variables prompt, choose *F9* to turn Cross User-variant on.
    8. Enter a variant name. For description enter **`MP - Department - Actualization`** and select the Cross-User Variant check box.
    9. Select the *Continue* button.
    10. Select the *Continue* button in the variables screen.
    11. Go to transaction `RSA1`.
    12. In the navigation panel, select the *Modeling* button, then Process Chain.
    13. In the process chain panel, right click on Merchandise Planning - Actualization and choose edit.
    14. In the right tree, right click on **Execute Planning Sequence Financial Merchandise Plan - Department - Actualization(/RAP/MPPC01_04)** and choose *Maintain Variant*.
    15. Load the variant created in step h (if not already loaded).
    16. Select the *Transfer* button and save.
6. Planning Sequence Financial Merchandise Plan - Class - Actualization
    1. Go to transaction `RSPLAN`
    2. Select the *Planning Sequence* button.
    3. In the planning sequence field, enter `/RAP/C11A08_PS10` and choose *Edit* button.
    4. Select the *Variables* button.

5. Select the *Geographical Level 1 Input* help and select a value.
6. Select the *Save As* Button.
7. In the Variables prompt, choose *F9* to turn Cross User-variant on.
8. Enter a variant name. For description enter **`MP - Class - Actualization`** and select the Cross-User Variant check box.
9. Select the *Continue* button.
10. Select the *Continue* button in the variables screen.
11. Go to transaction `RSA1`.
12. In the navigation panel, select the *Modeling* button, then Process Chain.
13. In the process chain panel, right click on Merchandise Planning - Actualization and choose edit.
14. In the right tree, right click on **Execute Planning Sequence Financial Merchandise Plan - Class - Actualization(/RAP/MPPC01_05)** and choose *Maintain Variant*.
15. Load the variant created in step h (if not already loaded).
16. Select the *Transfer* button and save.

7. Planning Sequence Financial Merchandise Plan - Subclass - Actualization
    1. Go to transaction `RSPLAN`
    2. Select the *Planning Sequence* button.
    3. In the planning sequence field, enter `/RAP/C11A09_PS13` and choose *Edit* button.
    4. Select the *Variables* button.
    5. Select the *Geographical Level 1 Input* help and select a value.
    6. Select the *Save As* Button.
    7. In the Variables prompt, choose *F9* to turn Cross User-variant on.
    8. Enter a variant name. For description enter **`MP - Subclass - Actualization`** and select the Cross-User Variant check box.
    9. Select the *Continue* button.
    10. Select the *Continue* button in the variables screen.
    11. Go to transaction `RSA1`.
    12. In the navigation panel, select the *Modeling* button, then Process Chain.
    13. In the process chain panel, right click on Merchandise Planning - Actualization and choose edit.
    14. In the right tree, right click on **Execute Planning Sequence Financial Merchandise Plan - Subclass - Actualization(/RAP/MPPC01_06)** and choose *Maintain Variant*.
    15. Load the variant created in step h (if not already loaded).
    16. Select the *Transfer* button and save.
8. Planning Sequence Channel Plan - Store Comp - Actualization
    1. Go to transaction `RSPLAN`
    2. Select the *Planning Sequence* button.
    3. In the planning sequence field, enter `/RAP/C11A19_PS04` and choose *Edit* button.
    4. Select the *Variables* button.
    5. Select the *Geographical Level 1 Input* help and select a value.
    6. Select the *Save As* Button.
    7. In the Variables prompt, choose *F9* to turn Cross User-variant on.
    8. Enter a variant name. For description enter **`CP - Store Comp - Actualization`** and select the Cross-User Variant check box.
    9. Select the *Continue* button.
    10. Select the *Continue* button in the variables screen.

11. Go to transaction `RSA1`.
12. In the navigation panel, select the *Modeling* button, then Process Chain.
13. In the process chain panel, right click on Merchandise Planning - Actualization and choose edit.
14. In the right tree, right click on **Execute Planning Sequence Channel Plan - Store Comp - Actualization(/RAP/MPPC01_07)** and choose *Maintain Variant*.
15. Load the variant created in step h (if not already loaded).
16. Select the *Transfer* button and save.

9. Planning Sequence Channel Plan - Multi Store - Actualization
    1. Go to transaction `RSPLAN`
    2. Select the *Planning Sequence* button.
    3. In the planning sequence field, enter `/RAP/C11A18_PS05` and choose *Edit* button.
    4. Select the *Variables* button.
    5. Select the *Geographical Level 1 Input* help and select a value.
    6. Select the *Save As* Button.
    7. In the Variables prompt, choose *F9* to turn Cross User-variant on.
    8. Enter a variant name. For description enter **`CP - Multi Store - Actualization`** and select the Cross-User Variant check box.
    9. Select the *Continue* button.
    10. Select the *Continue* button in the variables screen.
    11. Go to transaction `RSA1`.
    12. In the navigation panel, select the *Modeling* button, then Process Chain.
    13. In the process chain panel, right click on Merchandise Planning - Actualization and choose edit.
    14. In the right tree, right click on **Execute Planning Sequence Channel Plan - Multi Store - Actualization(/RAP/MPPC01_08)** and choose *Maintain Variant*.
    15. Load the variant created in step h (if not already loaded).
    16. Select the *Transfer* button and save.
10. Planning Sequence Channel Plan - Single Store - Actualization
    1. Go to transaction `RSPLAN`
    2. Select the *Planning Sequence* button.
    3. In the planning sequence field, enter `/RAP/C11A16_PS08` and choose *Edit* button.
    4. Select the *Variables* button.
    5. Select the *Geographical Level 1 Input* help and select a value.
    6. Select the *Save As* Button.
    7. In the Variables prompt, choose *F9* to turn Cross User-variant on.
    8. Enter a variant name. For description enter **`CP - Single Store - Actualization`** and select the Cross-User Variant check box.
    9. Select the *Continue* button.
    10. Select the *Continue* button in the variables screen.
    11. Go to transaction `RSA1`.
    12. In the navigation panel, select the *Modeling* button, then Process Chain.
    13. In the process chain panel, right click on Merchandise Planning - Actualization and choose edit.
    14. In the right tree, right click on **Execute Planning Sequence Channel Plan - Single Store - Actualization(/RAP/MPPC01_09)** and choose *Maintain Variant*.
    15. Load the variant created in step h (if not already loaded).
    16. Select the *Transfer* button and save.

6.2.5 Configure Data Replication Steps

6.2.5.1 Initial Load of Data to DDF Using DRFOUT

Use

SAP Merchandise Planning uses master data, such as product, location, and product hierarchy, that is replicated from SAP ERP to the DDF module in SAP Customer Activity Repository using the `DRFOUT` data replication framework.

> **i Note**
>
> Not all of the master data is replicated into DDF using `DRFOUT`. Some data must be replicated separately using SLT replication.

SAP Merchandise Planning requires that the following master data is replicated from a connected SAP ERP system using `DRFOUT`:

Sequence	Master Data	Technical Details	For more information, see:
1	Product Hierarchy	• **SAP ERP Description:** Material Group Hierarchy • **DRFOUT Outbound Implementation:** `PMCH` • **DDF Inbound Interface:** `/DMF/MDIF_PROD_HIER_INBOUND`	http://help.sap.com/car ▸ *<your release>* ▸ *Application Help* ▸ *<>* ▸ *Demand Data Foundation* ▸ *Integration Information* ▸ *Inbound Interfaces For Remote Function Call (RFC) Communication* ▸ *Product Hierarchy Master Data* ▸
2	Product	• **SAP ERP Description:** Material • **DRFOUT Outbound Implementation:** `PMAT` • **DDF Inbound Interface:** `/DMF/MDIF_PRODUCT_INBOUND`	http://help.sap.com/car ▸ *<your release>* ▸ *Application Help* ▸ *Demand Data Foundation* ▸ *Integration Information* ▸ *Inbound Interfaces For Remote Function Call (RFC) Communication* ▸ *Product Master Data* ▸

Sequence	Master Data	Technical Details	For more information, see:
3	Location	• **SAP ERP Description:** Plant • **DRFOUT Outbound Implementation:** `PPLT` • **DDF Inbound Interface:** `/DMF/MDIF_LOCATION_INBOUND`	http://help.sap.com/car ▸ *<your release>* ▸ *Application Help* ▸ *Demand Data Foundation* ▸ *Integration Information* ▸ *Inbound Interfaces For Remote Function Call (RFC) Communication* ▸ *Product Location Master Data*
4	Product Location	• **SAP ERP Description:** Material/Plant • **DRFOUT Outbound Implementation:** `PMPL` • **DDF Inbound Interface:** `/DMF/MDIF_PROD_LOC_INBOUND`	http://help.sap.com/car ▸ *<your release>* ▸ *Application Help* ▸ *Demand Data Foundation* ▸ *Integration Information* ▸ *Inbound Interfaces For Remote Function Call (RFC) Communication* ▸ *Product Location Master Data*
5	Product Location	• **SAP ERP Description:** Sales Price • **DRFOUT Outbound Implementation:** `PSPR` • **DDF Inbound Interface:** `/DMF/MDIF_PROD_LOC_INBOUND`	http://help.sap.com/car ▸ *<your release>* ▸ *Application Help* ▸ *Demand Data Foundation* ▸ *Integration Information* ▸ *Inbound Interfaces For Remote Function Call (RFC) Communication* ▸ *Product Location Master Data*
6	Inventory	• **SAP ERP Description:** Inventory • **DRFOUT Outbound Implementation:** `PINV` • **DDF Inbound Interface:** `/DMF/OPIF_INVENTORY_INBOUND`	http://help.sap.com/car ▸ *<your release>* ▸ *Application Help* ▸ *Demand Data Foundation* ▸ *Integration Information* ▸ *Inbound Interfaces For Remote Function Call (RFC) Communication* ▸ *Inventory Master Data*
7	Product Location	• **SAP ERP Description:** Moving Average Price • **DRFOUT Outbound Implementation:** `PMAP` • **DDF Inbound Interface:** `/DMF/MDIF_PROD_LOC_INBOUND`	http://help.sap.com/car ▸ *<your release>* ▸ *Application Help* ▸ *Demand Data Foundation* ▸ *Integration Information* ▸ *Inbound Interfaces For Remote Function Call (RFC) Communication* ▸ *Product Location Master Data*

Sequence	Master Data	Technical Details	For more information, see:
9	Location	• **SAP ERP Description:** Vendor • **DRFOUT Outbound Implementation:** `PVEN` • **DDF Inbound Interface:** `/DMF/MDIF_LOCATION_INBOUND`	http://help.sap.com/car <your release> > *Application Help* > *Demand Data Foundation* > *Integration Information* > *Inbound Interfaces For Remote Function Call (RFC) Communication* > *Location Master Data*
10	Product Hierarchy	• **SAP ERP Description:** Article Hierarchy • **DRFOUT Outbound Implementation:** `PAHY` • **DDF Inbound Interface:** `/DMF/MDIF_PROD_HIER_INBOUND`	http://help.sap.com/car <your release> > *Application Help* > *Demand Data Foundation* > *Integration Information* > *Inbound Interfaces For Remote Function Call (RFC) Communication* > *Product Hierarchy Master Data*

Prerequisites

Before replicating data from SAP ERP to DDF using `DRFOUT`, the following prerequisites must be fulfilled:

- The following business functions are activated in SAP ERP:
  - `ISR_APPL_OUTBOUND_DMF`
  - `ISR_RETAIL_OUTBOUND_DMF`
- You have noted the different terms for the following objects:

SAP ERP	SAP Retail	DDF / SAP Merchandise Planning for Retail
Material	Article	Product
Plant	Site	Location

6.2.5.2 Initial Load of Sales Data from BW

Use

If you have accumulated large amounts of historical sales data using SAP POS Data Management or SAP Customer Activity Repository, it is possible that you are storing these large data sets in a connected SAP BW system. In such a case, you can perform the initial load of the sales time series (historical POS data) data into DDF using the *BI Interface for Time Series* report.

> **i Note**
>
> These instructions extract historical sales data from an Infocube in BW. If you are using BW/4HANA, additional project work will be required to re-implement the BAdI `/DMF/BI_IF_READ_BI`. For technical details, see 2764634.

Procedure

1. Log on to your back-end system.
2. Execute transaction `SE38`.
3. Specify **`/DMF/BI_IF_TS`** in the *Program* field and choose *Execute*.
4. Read the documentation associated with the report, carry out the described customizing, and run the report accordingly.

More Information

http://help.sap.com/car ▶ *Application Help* ▶ *Demand Data Foundation* ▶ *Integration Information* ▶ *Inbound Interfaces For Remote Function Call (RFC) Communication* ▶ *Sales Time Series* ▶.

6.2.5.3 Initial Load of Goods Movement KPIs

Load goods movement Key Performance Indicators (KPI) for returns, receipts, and open quantity.

Context

The goods movement data is stored in the SLT replicated tables `EKPO`, `EKET`, `EKBE`, `MARA`, and `MARM` in the Customer Activity Repository. You perform the initial load of this data into Demand Data Foundation (DDF) using the report */RAP/MPR_ECC_KPI_CALC*. When run in initial mode, this report will load 2 years of data from the current date. Further information is available in the documentation attached to the report.

In addition there are some prequisite steps to follow.

- You have maintained fiscal year variants using `SPRO`. Navigate to ▶ *SAP Customizing Implementation Guide* ▶ *Cross-Application Components* ▶ *Demand Data Foundation* ▶ *Basic Settings* ▶ *Define Default Values* ▶.
-

Procedure

1. Log on to your back-end system.
2. Verify your user has the role `/RAP/BW_MPR_WORKBOOKS` assigned.
3. You have maintained fiscal year variants using `SPRO`. Navigate to *SAP Customizing Implementation Guide* > *Cross-Application Components* > *Demand Data Foundation* > *Basic Settings* > *Define Default Values* .
4. Execute transaction `SE38`.
5. Specify **`/RAP/MPR_REPORTING_CLIENT`** in the *Program* field and select *Execute*.
6. Specify **`/RAP/MPR_ECC_KPI_CALC`** in the *Program* field, select radio button *Initial* and select *Execute*.

Next Steps

It is recommended you run this report weekly to update the aggregated KPIs with the ongoing ERP activity

.

6.2.5.4 Initial Load of Sales Orders and Shipments

Load replicated data for sales orders and shipments to Demand Data Foundation (DDF) table `/DMF_TS_WS`.

The sales order and shipment data is stored in the SLT replicated tables LIKP, LIPS, VBAK, VBAP, VBEP, VBPA, VBKD, KONV, VBFA and MSEG. in the Customer Activity Repository. You perform the initial load of this data into DDF using the */DMF/WHOLESALE_SO_SHP_TO_TS_WS* report. Use transaction `SE38` to execute or display documentation for the report.

When you execute the report you select the following:

- The *Master Data Logical System* (mandatory).
- *Force Initial Run*. Check box, not required for the true initial execution. (Used to reinitialize data. This will force delete all entries previously processed and re-populate TS_WS).
- *Past Days for Initial Load*. When the report is run the first time it will default to initial mode and will load any sales orders and shipments created or modified with a date greater than or equal to the date resulting from the calculation of current date minus the value in this field. This value is also required if you have checked Force Initial Run.
- *Past Days to Check Deletions* specifies how far back in days to look for deleted sales orders or shipments. This allows the customer to go back as far as needed for potentially deleted documents without processing data that may have been archived already in ECC.

> **i Note**
>
> This report should be run on a recurring cycle based on your activity.

6.2.5.5 Delta Load of Data to DDF Using DRFOUT

We recommend that you schedule a weekly periodic task to replicate inventory data (outbound implementation PINV) from the SAP ERP system to the system for SAP Merchandise Planning. This replication builds up the inventory history data that is needed by SAP Merchandise Planning.

6.2.5.6 Delta Load of Sales Data in SAP Customer Activity Repository

Use

Once the initial load of historical sales data is completed or, if you are working on a brand new system implementation and do not have to perform an initial sales data load, you need to configure the periodic delta load of sales data in SAP Customer Activity Repository.

Procedure

1. Ensure that you have properly configured the POS Sales Transfer and Audit functionality in SAP Customer Activity Repository to receive transaction data from your connected POS systems.
   For more information, see https://help.sap.com/viewer/p/CARAB ▸ *<Version>* ▸ *Application Help* ▸ *SAP Customer Activity Repository* ▸ *POS Data Transfer and Audit*.
2. Ensure that you have configured the *Supply - DMF-Based Applications* outbound tasks to load sales data from POS Sales Transfer and Audit to DDF.
   For more information, see https://help.sap.com/viewer/p/CARAB ▸ *<Version>* ▸ *Application Help* ▸ *SAP Customer Activity Repository* ▸ *POS Data Transfer and Audit* ▸ *Task Processing* ▸ *Tasks for Sending Data to Follow-On Applications*.

   > → Recommendation
   >
   > If you are not storing aggregated sales data in an SAP BW system, and have historical sales data that you would like to load into DDF from POS Sales Transfer and Audit, you can configure the *Supply - DMF-Based Applications* outbound tasks to perform this initial load.
3. Monitor the transfer of sales time series data as described in https://help.sap.com/viewer/p/CARAB ▸ *<Version>* ▸ *Application Help* ▸ *SAP Customer Activity Repository* ▸ *Demand Data Foundation* ▸ *Integration Information* ▸ *Inbound Processing*.

More Information

https://help.sap.com/viewer/p/CARAB <Version> > *Application Help* > *SAP Customer Activity Repository* > *Demand Data Foundation* > *Integration Information* > *Inbound Interfaces For Remote Function Call (RFC) Communication* > *Sales Time Series* .

6.2.5.7 Delta Load of Goods Movement KPIs

Once the initial load of historical goods movement KPIs data is completed you should continue to update your data on a recurring basis. As data is replicated from SAP ERP activity, the values for goods movement KPIs can only be added to the Demand Data Foundation when you execute the report **/RAP/MPR_ECC_KPI_CALC** . The delta load sets the timeframe to start one month (30 days) prior to the current date and one year in the future from the current date.

To execute the report, log on to your back-end system and execute transaction `SE38`. Specify **/RAP/MPR_ECC_KPI_CALC** in the *Program* field and use the *Execute* button. Select radio button *Delta* and select *Execute*. For further information see the documentation attached to the report by selecting *Documentation*, *Display* on the *ABAP Editor: Initial Screen*.

6.2.5.8 Delta Load of Sales Orders and Shipments

Load replicated data for ongoing sales orders and shipments to Demand Data Foundation (DDF) table `/DMF_TS_WS`

The sales order and shipment data is stored in the SLT replicated tables LIKP, LIPS, VBAK, VBAP, VBEP, VBPA, VBKD, KONV, VBFA and MSEG. in the Customer Activity Repository. You perform the delta load of this data into DDF using the */DMF/WHOLESALE_SO_SHP_TO_TS_WS* report. Use transaction `SE38` to execute or display documentation for the report.

When you execute the report you select the following:

- The *Master Data Logical System* (mandatory).
- *Force Initial Run*. Check box unchecked for delta mode.
- *Past Days for Initial Load*. When the report is run the first time it will default to initial mode and will load any sales orders and shipments created or modified with a date greater than or equal to the date resulting from the calculation of current date minus the value in this field. This value is also required if you have checked Force Initial Run.
- *Past Days to Check Deletions* specifies how far back in days to look for deleted sales orders or shipments. This allows the customer to go back as far as needed for potentially deleted documents without processing data that may have been archived already in ECC.

> **i Note**
>
> This report should be run on a recurring cycle based on your activity.

6.2.5.9 Replicate SAP ERP Tables for SAP Merchandise Planning

Use

Verify that all SAP ERP or SAP S/4HANA tables that are relevant for SAP Merchandise Planning KPIs have not only been created but have also been filled with data.

> **i Note**
>
> You have already replicated all of the relevant tables in a prior step, Create/Replicate Source Master Data System Tables [page 76].

In particular, SAP Merchandise Planning requires that the following master data table are replicated in order to calculate KPIs:

Master Data	SAP ERP Table
General Material Data	MARA
Units of Measure for Material	MARM
Purchasing Document Item	EKPO
History per Purchasing Document	EKBE
Scheduling Agreement Schedule Lines	EKET

6.2.6 Create Market Hierarchy

SAP Merchandise Planning supports market hierarchies, a logical structuring of selling locations (stores, wholesale customers, digital customers) that align with your goals for planning.

The market hierarchy allows you to group locations by markets or across multiple sales organizations. In addition, your Area of Responsibility (AOR) must be aligned with your market hierarchy before using the planning applications. Do the following steps to create a market hierarchy:

1. Log in to the application server using `SAP GUI` and execute transaction code `NWBC`.
2. Select the *Services* menu.
3. In the left navigation menu select *Location Services* > *Location Hierarchy*.
   In the POWL menu on the right, select the *Create* button, then *Market Hierarchy* in the dropdown.
4. Enter the location hierarchy name, description and the master data system for your new hierarchy.
5. Select the *Editor* tab. Enter or search for the locations that you want to add to your market hierarchy.
6. Add the locations to your market hierarchy by selecting the row or rows and selecting the move arrow.

> **Note**
>
> The same location ID cannot be used more than once in a market hierarchy. For example location ID ABC can exist as multiple location types. It can exist as a distribution chain (DC) type, a store type, and a customer type. You may not have the type of DC and store in the same hierarchy

7. Save your entries.

More Information

For more information regarding location and market hierarchies, see *Maintain Location Hierarchies* located at https://help.sap.com/viewer/p/CARAB ▶ *<version>* ▶ *Application Help* ▶ *SAP Customer Activity Repository applications bundle* ▶ *Demand Data Foundation* ▶ *General Services* ▶ *Maintenance Services* ▶

For more information about AOR see *Maintain Area of Responsibility* located at https://help.sap.com/viewer/p/CARAB ▶ *<version>* ▶ *Application Help* ▶ *SAP Customer Activity Repository applications bundle* ▶ *Demand Data Foundation* ▶ *General Services* ▶.

.

6.2.7 Specify Analysis Workbook Settings

6.2.7.1 Enable Macros

Use

In this procedure, you enable your SAP Analysis for Microsoft Office workbooks to use macros.

Procedure

1. Open the SAP Analysis for Microsoft Office from ▶ *Start* ▶ *All Programs* ▶ *SAP Business Intelligence* ▶ *Analysis for Microsoft Excel* ▶.
2. Choose ▶ *File* ▶ *Options* ▶ *Customize Ribbon* ▶.
3. Under *Customize the Ribbon*, select *Main Tabs*.
4. Enable the entry *Developer* and confirm by choosing *OK*.
5. Now you will see the new *Developer* tab in your SAP Analysis for Microsoft Office.
6. Select the *Developer Tab* and choose *Macro Security*.

7. Choose *Enable all macros*.

6.2.7.2 General Workbook Settings

Use

You use SAP Analysis for Microsoft Office to launch the planning workbooks.

Procedure

If you are unable to see the *Analysis* , *MP Selection*, and *MP Info* options on the menu of *Analysis for Microsoft Excel*, perform the following steps in the *Options, Add-Ins* of the Excel options:

1. Enter **`COM`** in the *Manage* field and choose *Go*.
2. In the **`COM Add-Ins`** box, select the *Analysis* and *Planning* options and choose *Go*. If you do not find them in the list, Enter **`Disabled`** in the *Manage* field and choose *Go*.

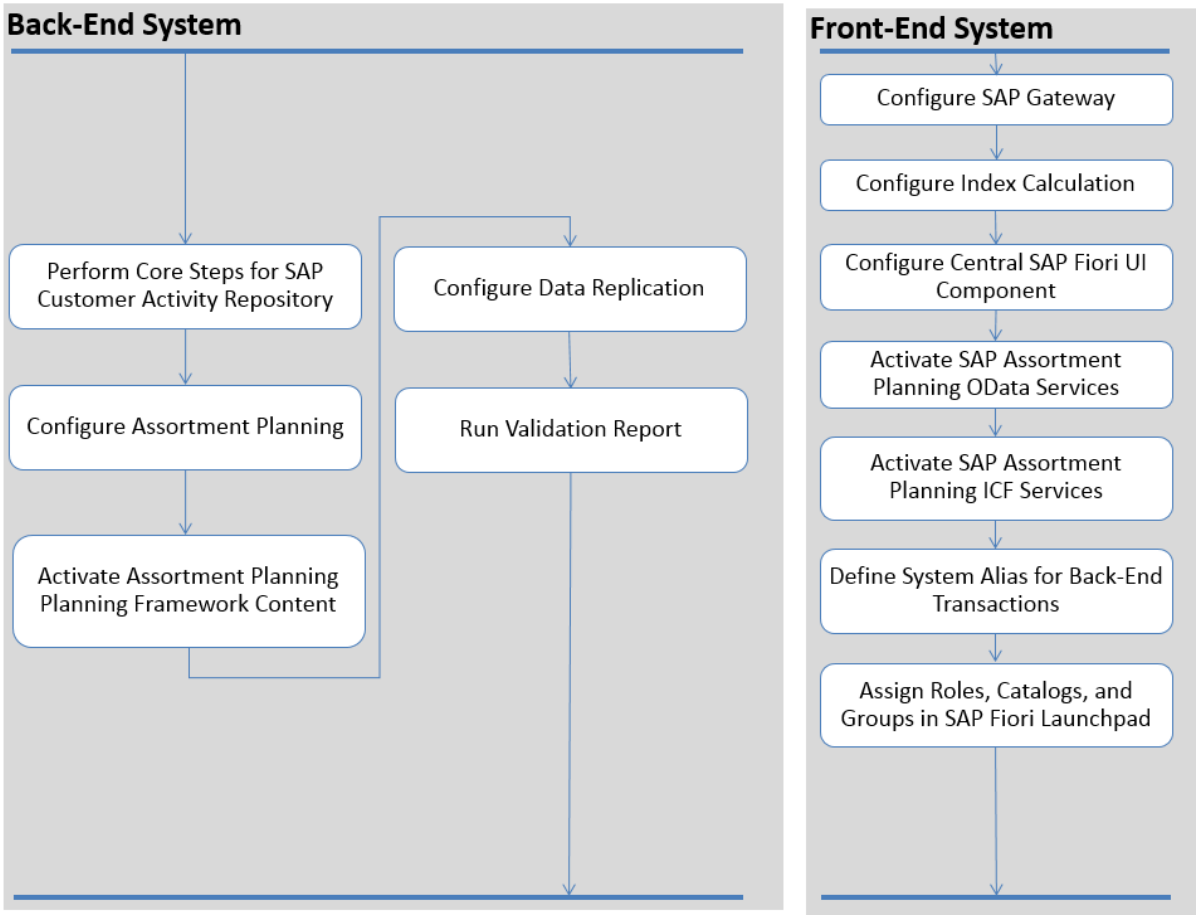
Now you are able to view the *Analysis* , *MP Selection* and *MP Info* options.

6.3 SAP Assortment Planning

> **i** Note
>
> Some of the activities in this section may have already been performed in the corresponding section under SAP Customer Activity Repository. Such activities do not need to be repeated during the setup and installation of consuming applications.

The following diagram depicts the main steps of the post-installation process for SAP Assortment Planning and contains links to the descriptions of these steps. There are two further steps in the back-end system following Configure Assortment Planning [page 218]:

- Maintain Fiscal Year Variant for Retail Week [page 219]
- Generate Time Data - Fiscal Calendar [page 223]



- Perform Core Steps for SAP Customer Activity Repository [page 168]
- Configure Assortment Planning [page 218]
- Activate Planning Framework Content (SAP Assortment Planning) [page 224]
- Configure Data Replication [page 233]
- Run the Validation Report [page 233]
- Perform General SAP Gateway Configuration [page 89]
- Configure SAP Fiori Launchpad [page 96]
- Activate OData Services [page 91]
- Activate SAP Assortment Planning ICF Services [page 235]
- Define System Alias for Back-End Transactions [page 236]
- Assign Roles, Catalogs, and Groups in SAP Fiori Launchpad [page 237]
- Configure Index Calculation [page 235]

6.3.1 Perform Core Steps for SAP Customer Activity Repository

To set up this application, you must first perform the **Core (Mandatory)** steps for SAP Customer Activity Repository. The core steps are mandatory for all the consuming applications.

Procedure

Perform all steps listed under Core (Mandatory for All Applications) [page 67].

6.3.2 Configure Assortment Planning

Use

To use SAP Assortment Planning, you must define several application-specific settings in Customizing.

Procedure

1. Specify assortment list settings.
   In the *Assortment List Settings* Customizing activity, found under *Cross-Application Components* > *Assortment Planning* > *Assortment Lists*, you can specify general settings for assortment lists. For example, you can define whether you can assign an assortment list product to more than one module.
2. Verify settings under *Cross-Application Components* > *Assortment Planning* > *Imported Demand Data Foundation Settings*.
   Although you might have specified most of these settings when configuring DDF, the activities under *Imported Demand Data Foundation Settings* are particularly important for the SAP Assortment Planning application.
3. Define the required number ranges.
   You must set all of the number ranges under *SAP Customizing Implementation Guide* > *Cross-Application Components* > *Assortment Planning* > *Number Range*.
4. Define the business week (using transaction `SPRO`) under *Cross-Application Components* > *Demand Data Foundation* > *Basic Settings* > *Define Business Week*.
5. Verify the default implementations of BAdIs under *SAP Customizing Implementation Guide* > *Cross-Application Components* > *Assortment Planning* > *Enhancements Using Business Add-Ins*, and if necessary, provide custom implementations.

> **i Note**
>
> We recommend that you activate BAdI implementations that enable the use of the Omnichannel SAP BW Structure. For more information, see Activate Planning Framework Content (SAP Assortment Planning) [page 224].

6. To use forecasted values in the *Sales & Inventory Analysis* view within the *My Assortment Lists* app, configure Unified Demand Forecast (UDF). For more information, see the *SAP Customer Activity Repository Administration Guide*, section *Configuring Unified Demand Forecast (UDF)*.

Related Information

Configuration Information

6.3.3 Maintain Fiscal Year Variant for Retail Week

Use

In this procedure you maintain the required fiscal year variant (`0FISCVARNT 'RW'`). SAP Assortment Planning uses time objects `0FISCPER` (fiscal year period) and `0FISCVARNT` (fiscal year variant), provided as part of the technical BI Content, and activated in the Activate Technical Content [page 224] procedure.

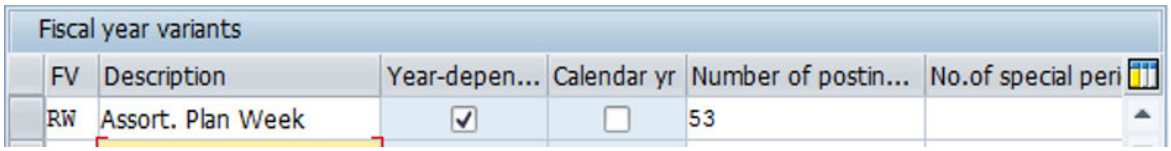
> **⚠ Caution**
>
> You must maintain fiscal year variants for a period far enough into the past and into the future to cover the full range required for your planning activities. For example, two years into the past and five years into the future.

The steps provided in this procedure allow you to maintain `0FISCVARNT 'RW'` using the standard 4-5-4 calendar entries. If you are using alternative fiscal periods in your retail business, for example, each week starting on a Sunday instead of Saturday, you can provide your own entries instead of the ones suggested in this guide.

Procedure

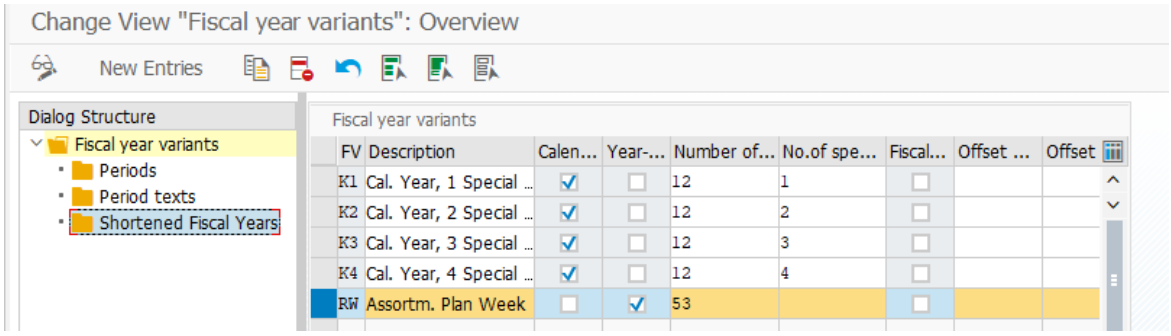
1. Log on to your back-end system.
2. Launch fiscal year variant maintenance (transaction `GVAR`).
3. Choose *New Entries*.

4. On the *New Entries: Overview of Added Entries* screen make the following sets of entries:



Create New Fiscal Year Variant

5. Choose *Enter*.
   An information message is displayed about creating more than 16 periods, choose *Continue*.
6. Choose *Back*.
   You can see the newly created entry.
7. Mark the entry *RW* and select *Shortened Fiscal Years* from the *Dialog Structure*.



Shortened Fiscal Years in Dialog Structure

8. In the *Fiscal year* dialog, enter the year (for example, **2015**) in the *Fiscal year* field and choose *Continue*.
9. On the *Change View "Shortened Fiscal Years": Overview* screen, choose *New Entries*.
10. In the *Shortened Fiscal Years* table, enter **52** in the *No. of posting periods* field.
11. Choose *Back* twice.
12. On the *Change View "Fiscal Year variants": Overview* screen, mark the entry *RW* and select *Periods* from the *Dialog Structure*.
13. In the *Calendar yr* dialog, enter the year (for example, **2015**) in the *Calendar yr* field and choose *Continue*.
    Data for the previous year must be maintained.
14. On the *Change View "Periods": Overview* screen, choose *New Entries*.
15. In the *Periods* table, enter the data (month, day, period, year shift) for each period according to your fiscal calendar. For an example, see the following table. For more examples, see SAP Note 2112634. If you want to copy data from this note, locate the required year and enter the data by copy-and-paste.

2015 Weekly Calendar

Month	Day	Period	Year Shift
1	3	48	-1
1	10	49	-1
1	17	50	-1
1	24	51	-1
1	31	52	-1

Month	Day	Period	Year Shift
2	7	1	0
2	14	2	0
...	..	...	...

16. Repeat steps 7-15 to maintain the weekly fiscal year variant for all of the required years, entering each year as shortened fiscal year. The corresponding tables are available in SAP Note 2112634.
17. Choose *Save*.
18. Launch transaction `RSRHIERARCHYVIRT` and ensure that the dates specified in the *From* and *To* fields under *Time Interval* cover the years maintained for the fiscal year variant in the previous steps.

6.3.4 Maintain Fiscal Year Variant for Month

Context

In this section, you maintain the required fiscal year variant values for the fiscal month, `'RM'`. This is especially required for using the *Sales & Inventory Analysis* view in the *My Assortment Lists* app.

> ⚠ Caution
>
> You must maintain fiscal year variants for a period far enough into the past and into the future to cover the full range required for your planning activities. For example, two years into the past and five years into the future.

If you are using alternative fiscal periods in your retail business, you can provide your own entries instead of the ones suggested in this guide.

Procedure

1. Log on to your back-end system.
2. Launch fiscal year variant maintenance (transaction `GVAR`).
3. Choose *New Entries*.
4. On the *New Entries: Overview of Added Entries* screen make the following sets of entries:

Field Name	User Entry
FV	RM

Field Name	User Entry
Description	Planning month
Calendar year	Do not select
Year-dependent	Select
Number of posting periods	12
No. of special periods	

5. Choose *Enter*.
6. Choose *Back*.

   You can see the newly created entry.

   To get the information to enter in the next step, open SAP Note 2112634.
7. Mark the entry *RM* and select *Periods* from the *Dialog Structure* and double click to open the *Calendar year* dialog.
8. Enter the year (for example, **2015**) in the *Calendar yr* field and choose *Continue*.
9. On the *Change View "Periods": Overview* screen, choose *New Entries*.
10. In the *Periods* table, enter the data (month, day, period, year shift) for each period according to your fiscal calendar. For an example, see the following table.

    2015 Monthly Calendar (sample)

Month	Day	Period	Year Shift
1	31	12	-1
2	28	1	0
3	28	2	0
5	2	3	0
5	30	4	0
6	27	5	0
8	1	6	0
8	29	7	0
9	26	8	0
10	31	9	0
11	28	10	0
12	26	11	0

Month	Day	Period	Year Shift
12	31	12	0

11. Enter the last valid calendar date of the period being added in the *Month and Day* fields.
12. Enter the relevant *Period* number.
13. In the *Year Shift* field, enter +1 if the fiscal year is later than the calendar year enter. Enter -1 if the fiscal year is before the calendar year.
14. Press *Enter* to accept the first row.
15. Continue adding each period to complete the fiscal year. Choose *Save* after you have finished the entries for a year.
16. Continue adding the fiscal year variants for each year required by your scenario by repeating steps 3 to 15.
17. Choose *Save* after you have finished the maintenance for the last year.

6.3.5 Generate Time Data - Fiscal Calendar

In this procedure, you generate time data (Fiscal calendar) required for SAP Assortment Planning.

Use

Execute this procedure to generate time data (**Fiscal calendar**). This is especially required for using the *Sales & Inventory Analysis* view in the *My Assortment Lists* app.

Procedure

1. Log on to SAP HANA studio.
2. In the *Modeler* perspective, on the *Quick Launch* tab, select your SAP Customer Activity Repository applications bundle system and choose *Generate Time Data*.
3. Select *Fiscal* as the *Calendar Type*.
4. Enter the same range of years as defined in the previous procedure, Maintain Fiscal Year Variant for Retail Week [page 219].
5. In the *Variant Schema* field, enter the name of the database schema that contains the tables holding the fiscal year variant data.
   For SAP Assortment Planning, these are tables `T009` and `T009B`, which you filled with data in the previous procedure, Maintain Fiscal Year Variant for Retail Week [page 219].
6. Select the **RW** fiscal year variant, defined in the previous procedure, Maintain Fiscal Year Variant for Retail Week [page 219].
7. Choose *Generate*.

For more information, see:

- https://help.sap.com/viewer/p/SAP_HANA_LIVE ▶ *Installation and Upgrade* ▶ *Administrator's Guide* ▶ *Configuration Steps* ▶ *Generate Time Data* ▶
- https://help.sap.com/viewer/p/SAP_HANA_PLATFORM ▶ *Development* ▶ *SAP HANA Modeling Guide (for SAP HANA studio)* ▶ *Creating Information Views and Previewing its Output* ▶ *Generate Time Data* ▶

6.3.6 Activate Planning Framework Content (SAP Assortment Planning)

In a new installation, only the **Omnichannel SAP BW structure** is supported in SAP Assortment Planning. The **Retail SAP BW Structure** is supported in an existing installation with maintenance, however no new functionality will be developed for this structure.

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.
- If you are integrating with SAP Merchandise Planning, 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.

The following subsections describe the activation steps.

6.3.6.1 Activate Technical BI Content

Use

The first time you enter the Data Warehousing Workbench, the system runs a background job to activate **technical content**. Technical content consists of technical information that is generated by the system, for example, data required for the general operation of BI Content, or time data.

Procedure

1. On your back-end system, open the Data Warehousing Workbench (transaction `RSA1`).
2. If prompted, in the *Replicate Metadata* dialog box, choose *Only Activate*.

3. If a message appears that you are only authorized to work in client ... (Brain 009), then refer to SAP Note 316923 (do not import the support package, but use the description under section *Workaround*).
4. Select *Do not show this question Again* in the dialog that appears.
5. Choose *Yes*.
   Make sure that the current job has finished before you proceed with the next step. Check the status of the background job using transaction `SM37`or `SLG1`. If there are problems, you must first solve them.

   > **i Note**
   >
   > If you get the short dump "RAISE_EXCEPTION" when installing InfoObjects from the BI content, see SAP Note 1637935 for a possible solution.
   >
   > Also, see SAP Notes 2090845 and 2056106 for important information on technical content activation.

   Following activation, you can locate the technical content in the Data Warehousing Workbench as follows:
   1. Selecting *Modeling* in the left-hand frame.
   2. Expand *InfoObjects*.
   3. In the right-hand frame, locate *Technical Content*.
6. You can use transaction `RSTCO_ADMIN` to restart the activation of the technical content and to verify the status of the activation.

6.3.6.2 Enable Optimized In-Memory Planning Capabilities of SAP BW Integrated Planning

Use

To be able to use the SAP Analysis for Microsoft Office workbooks built on top of the SAP Assortment Planning planning framework content, you must enable the optimized in-memory planning capabilities of the integrated planning engine in SAP Business Warehouse (SAP BW Integrated Planning). This includes the enabling of the Planning Application Kit (PAK).

Procedure

1. Read SAP Note 1919631.
2. In your back-end system, launch table/view maintenance (transaction `SM30`).
3. Enter `RSPLS_HDB_ACT` in the *Table/View* field and choose *Maintain*.
4. Choose *New Entries*.
5. In the *HANA Integratn. Active* column select **`Deep HANA Integration Active`** and in the *Functn. Active* column, enable the checkbox.
6. In the *HANA Integratn. Active* column select **`BPC Embedded Model Active`** and in the *Functn. Active* column, enable the checkbox.

6.3.6.3 Activate Application BI Content (Omnichannel SAP BW Structure)

Context

In this procedure, you perform a sequential, step-by-step activation of the local BI Content objects delivered in the **Omnichannel SAP BW structure** of the SAP Assortment Planning application. SAP Assortment Planning uses this application BI Content to consume data stored in the back-end system

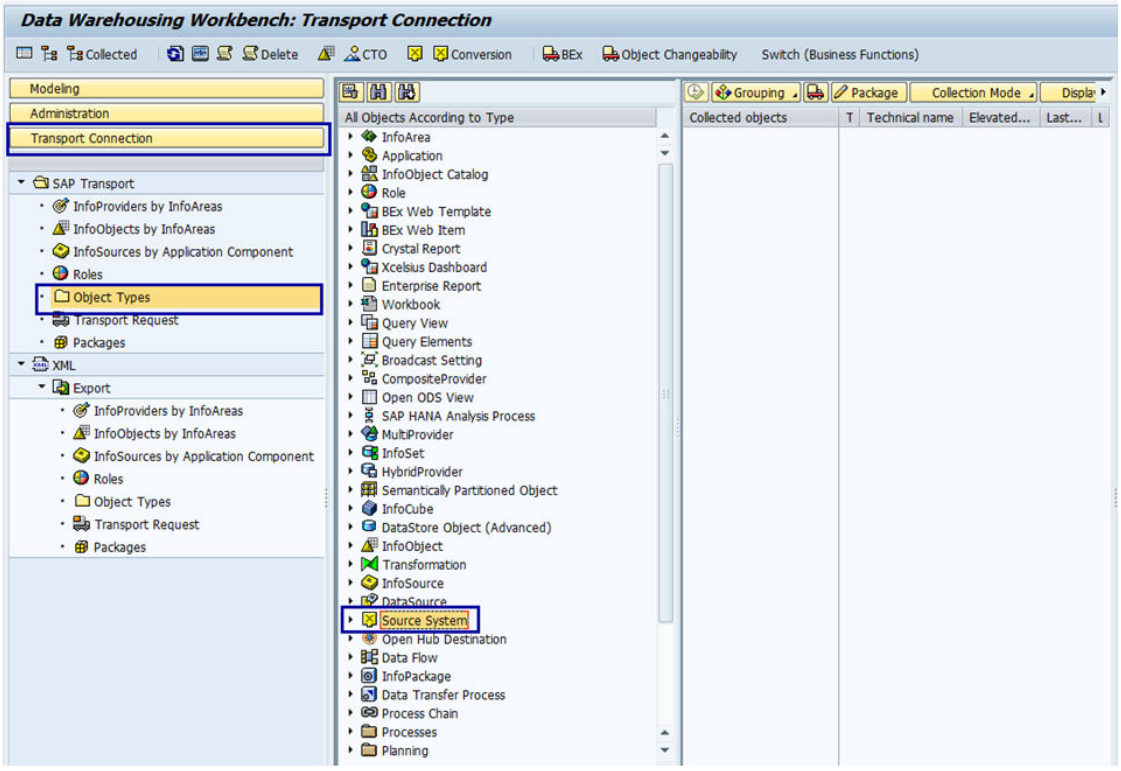
> **i** Note
>
> To ensure correct activation of the BI Content objects, carry out the activation sequentially, as specified in the following procedures. Resolve any activation warnings, except for the ones listed under Result [page 233], which can be ignored.
>
> Also, do not disable the default BI 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:

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

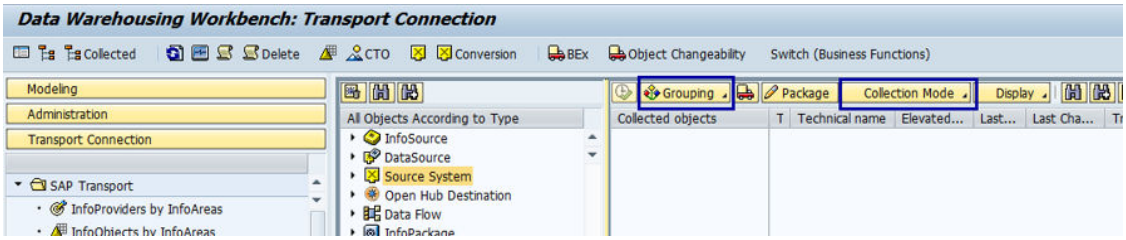
Procedure

1. On your back-end SAP Assortment Planning system, open the Data Warehousing Workbench (transaction `RSA1`).
2. Verify transport connections.
   1. Select *Transport Connection* in the left-hand frame.
   2. Select *Object Types*.
   3. Expand *Source System*.



Selecting Source Systems

4. Use *Select Objects* to ensure that the back-end system is selected as the source system.
5. Choose *Transfer Selections*.
6. At the top of the right-hand frame, above the list of *Collected objects*, choose *Grouping* and select *Only Necessary Objects*.
7. At the top of the right-hand frame, choose *Collection Mode* and select *Collect Automatically*.



Grouping and Collection Settings

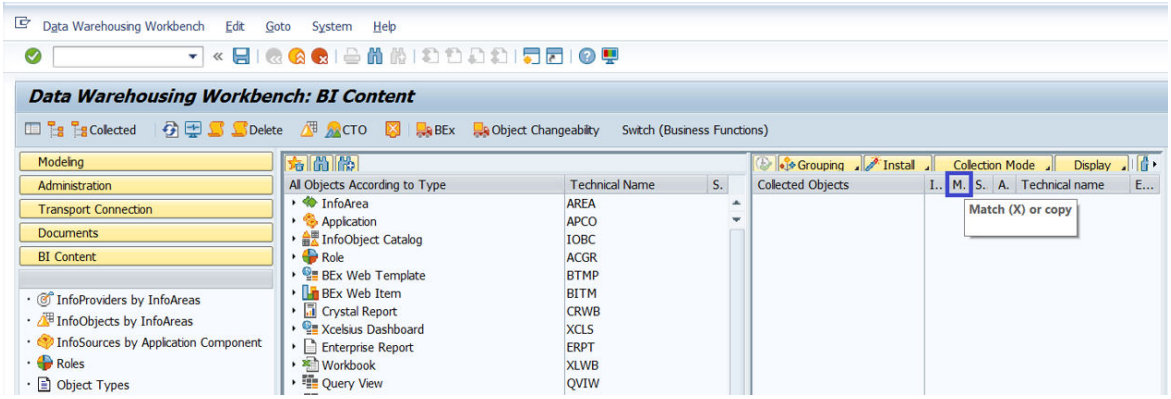
3. Determine if you need to enable to *Match (X) or copy* option for the BI Content, which you will activate in the subsequent steps.

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.

Installation Type	Selection	
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.



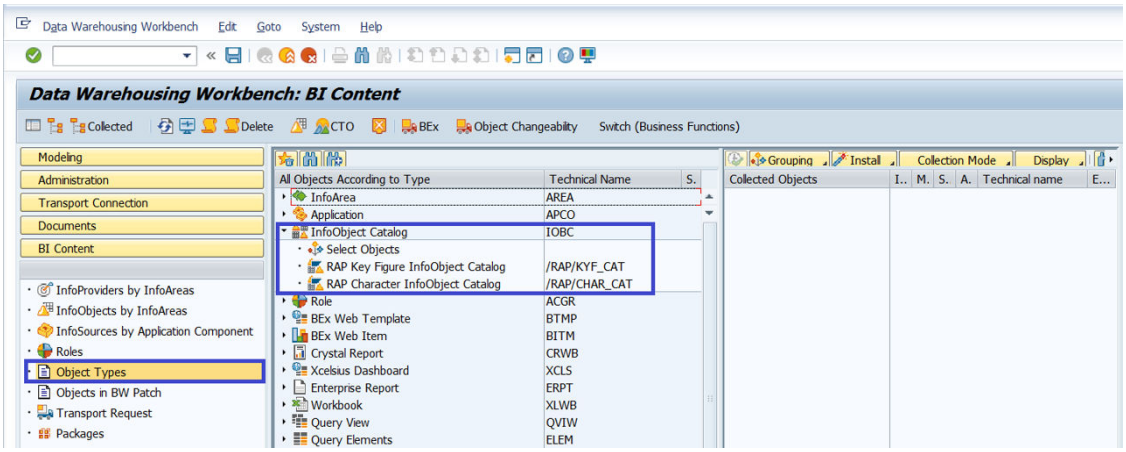
4. Activate InfoObject catalogs.

   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 Result [page 233].

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

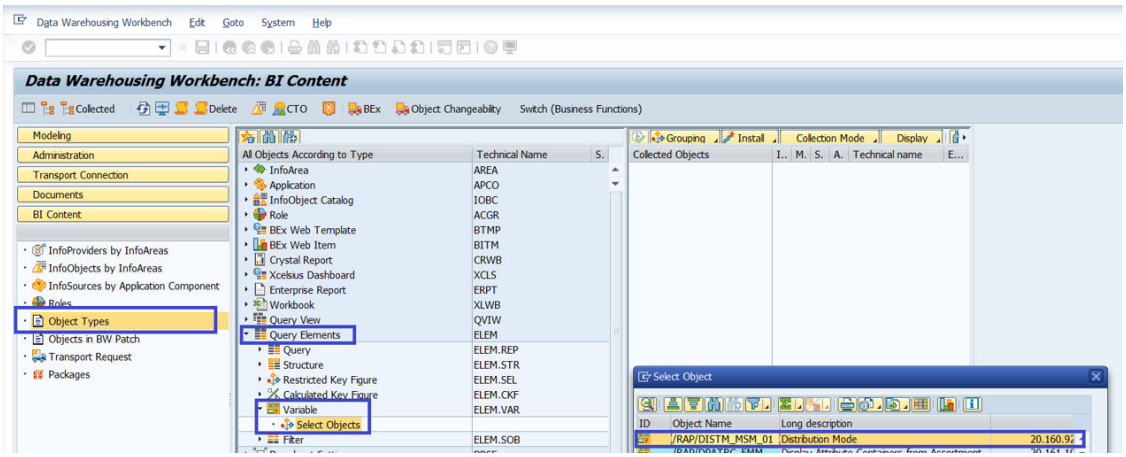


3. Use *Select Objects* to select the `/RAP/CHAR_CAT` and the `/RAP/KYF_CAT` catalogs.
4. Choose *Transfer Selections*.
5. In the right-hand frame, in the list of *Collected objects,* verify that both InfoObject catalogs are listed.
6. Right-click on each of the InfoObject catalogs, and choose *Install 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 233].

1. Select *BI Content* in the left-hand frame.
2. Select *Object Types* and expand *Query Elements* followed by *Variable*.
3. Use *Select Objects* to select the following variables:
   - `/RAP/PLCND_ESM_02`
   - `/RAP/PLCSET_ESM_02`
   - `/RAP/PCYCLE_EMM_01`
   - `/RAP/PLNHR_MSO_01`
   - `/RAP/PLNHN1_MSO_01` to `/RAP/PLNHN9_MSO_01` (inclusive)
   - `/RAP/PRDHN1_MMO_01` to `/RAP/PRDHN9_MMO_01` (inclusive)



4. Choose *Transfer Selections*.
5. In the right-hand frame, in the list of *Collected objects,* verify that all of the selected variables are listed and that the option in the *Install* column is enabled .
6. Choose *Install*.
   If an information dialog box appears, choose *Continue*. Choose *Local Object* or enter a package if you need to transport the objects.

6. Maintain version master data.
   1. In the left-hand frame, select *Modeling* > *InfoObjects*.
   2. In the right-hand frame under *Assortment Planning for Retail* > *RAP Character InfoObject Catalog*, search in the object list for the InfoObject `/RAP/VERSN`.
   3. Right-click the InfoObject `/RAP/VERSN`, choose *Maintain Master Data* from the context menu, and maintain the following entries on the *Time Independent* tab:

Version	Short description
#	An empty version value that you must maintain
ALV	Assortment List Vsn
APF	Vsn of final plan

> **i Note**
>
> Save your changes and activate them.

7. Activate Advanced DataStore Objects.

   If during the installation, you are presented with a message stating that your source system is not active, navigate to the *Modeling* tab, locate your source system under *Source Systems*, and activate it by right-clicking and selecting *Activate*. If prompted, choose *Only Activate* .

> **→ Remember**
>
> You can ignore activation warnings listed under Result [page 233].

   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.

8. Activate CompositeProviders.

> **→ Remember**
>
> You can ignore activation warnings listed under Result [page 233].

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 233].

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 233].

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
/RAP/C46A04_PS02

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 233].

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>

6.3.7 Configure Data Replication

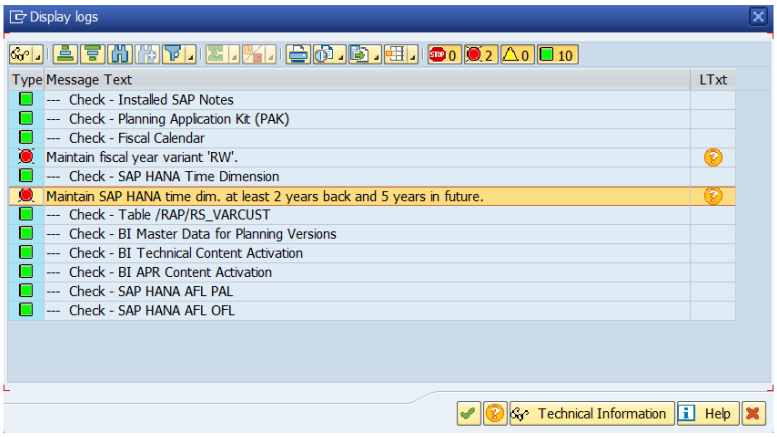
SAP Assortment Planning uses master data, sales history data, inventory data, and merchandise planning data originating from connected systems, such as SAP Retail (SAP ERP) or SAP BW.

For more information, see *SAP Assortment Planning Administration Guide* under *Configure Data Replication*.

6.3.8 Run the Validation Report

1. Run transaction `/DMF/VAL_CAR_INSTALL`.
   Alternatively, run transaction `SE38` and execute the `/DMF/VALIDATE_CAR_INSTALLATION` report.
2. Select the *Assortment Planning* scenario and select *Execute*.
   In the dialog that appears, select whether to validate the Retail SAP BW structure, the Omnichannel SAP BW structure, or both. The SAP BW structure to validate depends on the structure that you have selected to activate during the previous step Activate Planning Framework Content (SAP Assortment Planning) [page 224] .

Running this report allows you to verify the success of the installation, providing a log of potential issues. For example, you may be presented with the following results:



Validation Report Results

View the long text associated with each message to see the link to the documentation describing the procedure you have to troubleshoot.

Related Information

Activate Planning Framework Content (SAP Assortment Planning) [page 224]

6.3.9 Configure Front-End

6.3.9.1 Configure SAP Gateway

For information about the configuration and activation of SAP Gateway as well as the activation of all the common OData services for SAP Fiori, see Configure SAP Gateway [page 88].

6.3.9.2 Configure Index Calculation

We recommend that you schedule the *Calculation of SAPUI5 Application Index for SAPUI5 Repositories* report (`/UI5/APP_INDEX_CALCULATE`) to run as a background job on your front-end server.

This is one of the mandatory tasks under *SAP Customer Activity Repository* > *Core (Mandatory for All Applications)* that you have most likely performed already. If not, see Configure Calculation of SAPUI5 Application Index [page 97].

6.3.9.3 Activate SAP Assortment Planning ICF Services

Use

For security reasons, all Internet Communication Framework (ICF) services relevant to your SAP Assortment Planning application are made available in an inactive state.

You have activated the central ICF services as described in Perform General SAP NetWeaver Gateway Configuration [page 89] and Configure SAP Fiori Launchpad [page 96]. This procedure provides the instructions to activate ICF services required for the SAP Assortment Planning SAP Fiori apps.

Procedure

1. Log on to your front-end server.
2. Open service maintenance (transaction `SICF`).
3. In the *Define Services* screen, select the Location Clustering service by specifying the following:
   - Hierarchy Type: **`SERVICE`**
   - Virtual Host: **`DEFAULT_HOST`**
   - Service Path: **`/sap/bc/ui5_ui5/sap/locclsts_v2/`**
4. Choose *Execute*.
5. To activate the service, choose *Service/host Activate*.
6. Repeat steps 3 to 5 to ensure that **all** of the following services are activated:
   - `/sap/bc/ui5_ui5/sap/attribmgmt_v2/`
   - `/sap/bc/ui5_ui5/sap/assortlist/`
   - `/sap/bc/ui5_ui5/sap/ddfreuse_v2/`
   - `/sap/bc/ui5_ui5/sap/locclsts_v2/`
   - `/sap/bc/ui5_ui5/sap/modulemgmt_v2/`
   - `/sap/bc/ui5_ui5/sap/optionplan_v2/`
   - `/sap/bc/ui5_ui5/sap/phpmatch_v2/`
   - `/sap/bc/ui5_ui5/sap/plnconfig/`

6.3.9.4 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.

To enable this behavior, you need to create a dedicated RFC connection between the front-end and the back-end systems.

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. Save your changes.
5. 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 your front-end system to the SAP Retail or SAP S/4HANA system, in particular, the *Target Host* entry on the *Technical Settings* tab.
6. Save your changes.
7. Open *Launchpad Customizing* (transaction `LPD_CUST`).
8. Select the SAP Assortment Planning role (`UIRAP001`), and choose *Display*.
   The two catalogs, *Assortment Planner* and *Planning Administrator*, are displayed.
9. 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. **i Note** This application is only used to configure a link to the back-end system, you do not need to add this app to your SAP Fiori launchpad.

Catalog	App	System Alias	Description
	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. **i Note** This application is only used to configure a link to the SAP Retail or SAP S/4HANA system, you do not need to add this app to your SAP Fiori launchpad.
	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. **i Note** This application is only used to configure a link to the SAP Retail or SAP S/4HANA system, you do not need to add this app to your SAP Fiori launchpad.
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.

6.3.9.5 Assign Roles, Catalogs, and Groups in SAP Fiori Launchpad

Use

To be able to access SAP Fiori apps that constitute the SAP Assortment Planning user interface from the SAP Fiori launchpad, your front-end system user must have the necessary roles assigned. Based on the role(s) assigned to your user, you can access certain business catalogs and business catalog groups.

Your SAP Assortment Planning application is delivered with two predefined roles, catalogs, and groups. These include technical content as well as business content:

Front-End Server Business Content			Front-End Technical Content	
Business Role	**Business Catalog**	**Business Catalog Group**	**Technical Role**	**Technical Catalog**
SAP_RAP_BCR_AP_PLANNER	SAP_RAP_BC_AP_PLANNER	SAP_RAP_BCG_AP_PLANNER	SAP_RAP_TCR_T	SAP_RAP_TC_T
SAP_RAP_BCR_PLANNING_ADMIN	SAP_RAP_BC_PLANNING_ADMIN	SAP_RAP_BCG_PLANNING_ADMIN		

To test the installation of SAP Assortment Planning from the SAP Fiori launchpad, you need to assign the roles above to your user on the front-end system.

Procedure

1. Log on to your front-end system.
2. Launch *User Maintenance* (transaction SU01).
3. Enter your user name in the *User* field and choose *Change*.
4. On the *Roles* tab, assign the roles SAP_RAP_BCR_AP_PLANNER and SAP_RAP_BCR_PLANNING_ADMIN to your user.

> ⚠ Caution
>
> If you already have an SAP Fiori launchpad open, you must clear your browser cache to apply any modifications made to your user roles. Otherwise, your changes will not be reflected in the SAP Fiori user interface.

More Information

Security Information section of the *SAP Assortment Planning Administrator's Guide*.

6.3.10 Additional Information for Retail SAP BW Structure

6.3.10.1 Specify Analysis Workbooks Settings

The Retail SAP BW Structure of SAP Assortment Planning is delivered with some SAP Analysis for Microsoft Office workbooks. These are template workbooks that you can adapt to use in your retail business. However, you should not use the Retail SAP BW Structure in a new installation but the Omnichannel SAP BW Structure.

For an example of how to create customized versions of the workbooks, see Workbook Design Example [page 242].

6.3.10.1.1 Enable Macros

Use

In this procedure, you enable your SAP Analysis for Microsoft Office workbooks to use macros.

Procedure

1. Open SAP Analysis for Microsoft Office from *Start* > *All Programs* > *SAP Business Intelligence* > *SAP BusinessObjects Analysis* > *Analysis for Microsoft Excel*.
2. Choose *File* > *Options* > *Customize Ribbon*.
3. Under *Customize the Ribbon*, select *Main Tabs*.
4. Enable the entry *Developer* and confirm by choosing *OK*.
5. Now you will see the new *Developer* tab in your SAP Analysis for Microsoft Office.
6. Select the *Developer Tab* and choose *Macro Security*.
7. Choose *Enable all macros*.

6.3.10.1.2 Set Language for Ribbons and Buttons in Workbooks

Use

In this procedure, you can set the desired language of the following user interface objects that are specific to the workbooks of SAP Assortment Planning:

- Ribbons *Planning Functions*, *Refinement Functions*, and *Extended Features*
- Tooltips for planning functions
- Message texts
- Buttons.

The content of the workbooks consists of multiple parts:

- The language of the standard menus and standard ribbons depends on the language set for Microsoft Excel.
- The language of the contents in the cells (mainly KPIs) depends on the user-selected system language of the back-end system.

- The language of the user interface objects that are specific to the workbooks of SAP Assortment Planning, is not set by the selected system language of the back-end system, but you can change it for each workbook according to the following procedure. The default language is English.

Procedure

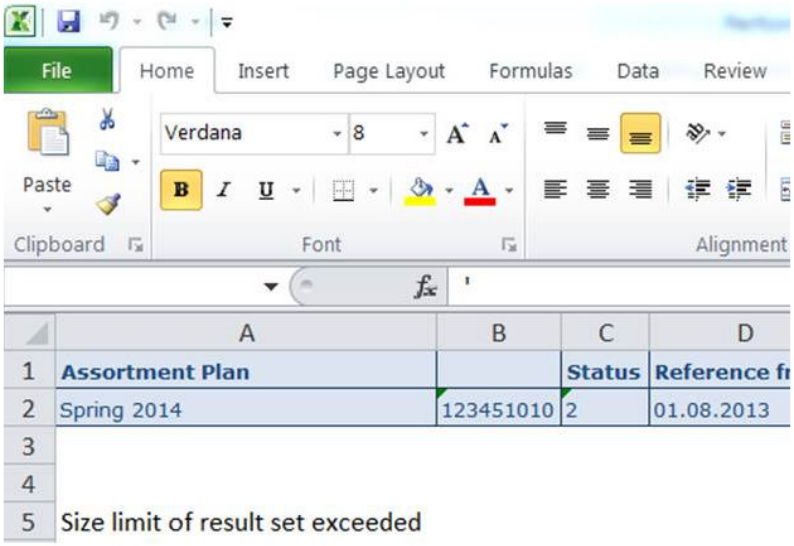
1. Unhide the worksheet *SAP_TEXT_CUSTOMIZING* using standard functionality of Microsoft Excel.
2. On the worksheet *SAP_TEXT_CUSTOMIZING*, copy the column of the desired language to column *B - Custom Text*.
3. Hide the worksheet *SAP_TEXT_CUSTOMIZING*.
4. Save your changes in the worksheet on the SAP NetWeaver Server by choosing *File* > *Analysis* > *Save Workbook to SAP NetWeaver*.

> **i Note**
>
> To allow for correct interpretation of the texts by screen readers, make sure that the language for all parts of the workbooks is set to the same desired one. Set the language as described in this section.

6.3.10.1.3 Set ResultSetSizeLimit Registry Setting

Use

By default, SAP Analysis for Microsoft Office workbooks are set to display 500,000 cells. This setting might not be sufficient for the productive use of SAP Assortment Planning. For example, if you have more than 300 products in your assortment plan, you might encounter the following error message:



Size Limit Error

To resolve this issue, you need to increase the default setting of the `ResultSetSizeLimit` registry setting.

Procedure

Read and implement SAP Note 1662968.

> **i Note**
>
> As the administrator overseeing the installation of SAP Assortment Planning, you need to carry out the steps listed in this procedure on the workstation of each SAP Assortment Planning user.

6.3.10.2 Workbook Design Example

Use

In this procedure, you walk through an example of creating an SAP Analysis for Microsoft Office workbook. You can use steps of this procedure to create customized versions of the SAP-delivered assortment planning workbooks.

Prerequisites

The necessary BI queries must exist in the back-end system.

Procedure

1. Open SAP Analysis for Microsoft Office from *Start* > *All Programs* > *SAP Business Intelligence* > *SAP BusinessObjects Analysis* > *Analysis for Microsoft Excel*.
2. Select the cell in the worksheet where the crosstab with the data from the selected data source should be inserted.
3. From the menu, choose *Analysis* > *Insert* > *Select Data Source*.
4. Choose *Skip* on the popup window *Logon to SAP BusinessObjects BI Platform*.
5. In the *Select Data Source* dialog box, select the source system, then choose *Next*.
6. In the *Logon to system <Your System Name>* dialog box, enter your logon data, then choose *OK*.
7. In the *Select Data Source* dialog box, choose tab *Search*.
8. In the *Search* tab, you can search for the description or technical name of a data source, that is, the name of the BI query that will provide the data for your workbook.
   For example, search for `/RAP/M01A01_IRQ02` or `/RAP/M01A01_IRQ01`. In general, you can search for `/RAP*` to find any SAP Assortment Planning query.
9. Select the required data source, and then choose *OK*.
10. On the *Prompts* screen, make the relevant entries base on the selected query in the *Specify Value for Prompts* area.
11. Choose *OK*, and then you will see the table is inserted in the sheet. You can now analyze the data and change the displayed data set according to your needs. You can also add other components to your analysis, for example charts.
12. Choose menu *Analysis* > *Display* to open the design panel.
13. Choose the *Components* tab in the bottom right corner, and right-click *Book1* and choose *Use Planning Sequence*.
14. In the *Search For* field of the *Open Planning Sequence* dialog box enter your planning sequence and choose *Search*.
15. Select the required planning sequence, and then choose *OK*. The planning sequence will be displayed under *Book1* > *Planning Objects* in the design panel.

16. Select the cell in the worksheet where a button should be inserted.
17. From the menu, choose *Developer* > *Insert* > *Button (Form Control)*, and insert the button using drag and drop.
18. In the *Assign Macro* dialog box, choose *New*.
19. In the VB edit, maintain the relevant code in the *Sub ButtonX_Click* area.
20. Choose *Close*.
21. Right-click the button, and choose *Edit Text*. Replace the button name with a meaningful name.
22. Position your cursor where the condition will be defined, and make the relevant entries.
23. Select the sheet and position the cursor where the variable list will be inserted, for example cell H1 in sheet1.
24. Choose menu *Analysis* > *Info* > *Field* > *Variables*, and the variables will be inserted into the relevant sheet.
25. Maintain the relevant entries in the sheet.
26. Choose your *Planning Sequence* in the design panel.
27. In the section of *Variables of Planning Sequence*, make the relevant entries.
28. Choose *Save Button*.
29. Provide a file name and save the workbook as type *Excel Macro-Enabled Workbook* (*.xlsm).
30. Choose *Save*.

Result

The customized workbook is created.

6.4 SAP Promotion Management

6.4.1 Perform Core Steps for SAP Customer Activity Repository

To set up this application, you must first perform the **Core (Mandatory)** steps for SAP Customer Activity Repository. The core steps are mandatory for all the consuming applications.

Procedure

Perform all steps listed under Core (Mandatory for All Applications) [page 67].

6.4.2 Activate Internet Communication Framework (ICF) Services

For security reasons, all Internet Communication Framework (ICF) services relevant to your SAP Promotion Management application are made available in an inactive state. In this procedure, you activate an ICF service required for the SAP Manage Promotional Offers Fiori app.

1. Log on to your front-end system.
2. Open service maintenance (transaction `SICF`).
3. In the *Maintain Service* screen, select the service by specifying the following:
   - Hierarchy Type: `SERVICE`
   - Virtual Host: `DEFAULT_HOST`
   - Service Path: `/sap/bc/bsp/sap/`
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:
   - `pmroffers`
   - `pmrcontent`
   - `prodgrps`
   - `locsubgrp`

6.5 SAP Allocation Management

Post-installation setup for SAP Allocation Management

1. Perform Core Steps for SAP Customer Activity Repository [page 168]
2. Activate SAP Allocation Management SAP HANA Content [page 245]
3. Check Procedure Associated with Function GENIOS_SOLVE is Active [page 249]
4. Configure SAP Allocation Management [page 249]
5. Configure Data Replication [page 250]
6. Configure Front End [page 253]

6.5.1 Perform Core Steps for SAP Customer Activity Repository

To set up this application, you must first perform the **Core (Mandatory)** steps for SAP Customer Activity Repository. The core steps are mandatory for all the consuming applications.

Procedure

Perform all steps listed under Core (Mandatory for All Applications) [page 67].

6.5.2 Activate SAP Allocation Management SAP HANA Content

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

Prerequisites

Before you can start to activate the SAP Allocation Management SAP HANA content, perform these activities:

- Ensure that you have at least one of the `SAP_ECC` or `SAP_S4H` schemas in the SAP HANA database. Based on your source system for all SAP ERP data, you have either a `SAP_ECC` schema or a `SAP_S4H` schema (either physical schemas with these names, or at least authoring schemas). If you have both these systems, you must have two schemas.
- Ensure that all tables listed for SLT replication are available in the relevant schemas. The spreadsheet with tables that are relevant for replication and for SAP HANA content activation is available on the SAP Help Portal at https://help.sap.com/viewer/p/CARAB. Select the desired version at the top right and download the *SLT Tables for SAP Customer Activity Repository applications bundle* archive from under *Installation and Upgrade* and extract the spreadsheet.
  Ensure that you have successfully set up the SLT tables in the schemas.

SAP HANA Content Activation Steps

1. Deploy SAP Allocation Management delivered procedures, functions, and views.
   SAP Allocation Management delivers several native HANA objects as a part of the application. These objects are delivered via HANA transport for ABAP (HTA) and must be explicitly deployed into the SAP HANA database. Without this deployment, you do not see these objects in the SAP HANA database. Once deployed, you can find the content via the path `sap.is.retail.rap.amr.db`.

2. Activate SAP Customer Activity Repository and Demand Data Foundation (DDF) SAP HANA content.

   > **i Note**
   >
   > If the SAP Customer Activity Repository and DDF SAP HANA content is already active, you can skip this step.

   SAP Allocation Management depends on active SAP HANA content for SAP Customer Activity Repository and DDF. Therefore, it is recommended that you first activate the SAP Customer Activity Repository and DDF SAP HANA content.
   Run the program *Activate SAP HANA Content for SAP CARAB* (`/CAR/ACTIVATE_HTA`) and select the *ECC Mode* relevant to your installation. Under *Business Scenario Activation*, select the *Customer Activity Repository* and *Demand Data Foundation* options.
   Execute the activation report. As a result, you have successfully activated and deployed the SAP HANA content for SAP Customer Activity Repository and DDF.

   > **⚠ Caution**
   >
   > **Do not** select *Allocation Management* within this activation run for a simultaneous activation of SAP Allocation Management SAP HANA content as simultaneous activation leads to activation problems.

3. Set *Prework Done* for SAP Allocation Management packages.
   A precondition for SAP HANA Transport for ABAP (HTA) activation is that the `PREWORK_DONE` indicator is set for all packages with activation mode `P – prework needed`. You can check this setting in the table `CTS_HOT_PACKAGE` in field `HOT_ACTIVATION_MODE`. Set the `PREWORK_DONE` indicator for all packages relevant for SAP Allocation Management:
   1. Call transaction `SE16` (*Data Browser*) and display the content of table `CTS_HOT_PACKAGE`.
      Search for package names `sap.is.retail.rap.amr*` in the field `HANA_PACKAGE_ID`. Please note, that the package names are case-sensitive.
      You should find 163 entries that match the search criterion. Copy the package names from the result list of your search.
   2. Display the selection screen of table `CTS_HOT_PREWORK`. Enter the `HANA_PACKAGE_ID` for all packages from the result list of your search in table `CTS_HOT_PACKAGE`.
   3. Set the `PREWORK_DONE` indicator to **X** for all packages in the CTS_HOT_PREWORK table. The indicator shows that the SAP HANA content in all packages relevant for SAP Allocation Management is ready for deployment.
4. Run the dummy schema and dummy table creation reports.
   The reports check for a missing physical schema and create this physical schema and the corresponding dummy tables in the schema if necessary. The successful completion of this step is a prerequisite for a successful SAP HANA content activation for SAP Allocation Management.

   > **i Note**
   >
   > The running of the report requires a database user in the ABAP system with the authorization to create the dummy schema. Check the application log for the report if there were errors.

   In your back-end system, start transaction `SE38` and execute the following two reports, in the **sequence** they are listed:
   - `/DMF/CREATE_SLT_TABLES` (*Create SLT Tables*)
   1. Select your source system. For *S/4HANA*, enter the release.

2. Enter the physical source and dummy schema names. For the *Physical Source Schema*, enter the physical schema name into which your SLT tables are replicating. For the *Physical Dummy Schema*, enter the name for the schema to be created. If the physical source schema already exists in the SAP HANA database, then only the dummy tables in this schema are created when you execute the report.
3. Select the simulation mode for a test run. After the simulation run, you can check for errors in the application log.

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

1. Select your source system. For *S/4HANA*, enter the release.
2. Enter the physical source and dummy schema names. For the *Physical Source Schema*, enter the physical schema name into which your SLT tables are replicating. For the *Physical Dummy Schema*, enter the name for the schema to be created. If the physical source schema already exists in the SAP HANA database, then only the dummy tables in this schema are created when you execute the report.
3. Select the simulation mode for a test run. After the simulation run, you can check for errors in the application log.

5. Grant Authorization
   The two SLT table creation reports use the database user maintained in the ABAP system to create the dummy schemas. The `_SYS_REPO` user needs the exact same authorizations on the newly created dummy schema that this user already has on the physical source schema. In addition, to display the schema in the navigator, a `SELECT` authorization on the schema (with `GRANT` option) must be provided to the database user for the content activation.

   > **i Note**
   >
   > This step must be performed by the SAP HANA database administrator, who has the authorization for these activities.

6. Check and maintain schema mapping.
   Check the names you use for your physical schema. If you are using the default names below, no further action is required:
   - `SAP_S4H`, for your S/4HANA schema
   - `SAP_ECC`, for your ECC or FMS schema

   If you have chosen names for your physical schema, which are **different from the names above**, you must do the following:

   Maintain a schema mapping in your SAP HANA database, where your customer-specific names are used as authoring schemas for the physical schema.
7. Activate relevant inactive SAP HANA content for DDF.
   Based on your scenario, there can be inactive packages in DDF, even though you have activated the content earlier via the report `/CAR/ACTIVATE_HTA` (*Activate SAP HANA Content for SAP CARAB*).
   For the following packages in DDF, perform these actions:
   - In the table `CTS_HOT_PREWORK`, set the `PREWORK_DONE` indicator to **X** for these packages.
   - Call up transaction `SCTS_HTA_DEPLOY` (*SAP HANA Transport for ABAP - Deployment*) to check and to deploy (if not already deployed) these packages, in **strictly the sequence** they are listed. Do **not** select the option to *Include subpackages*:
   - `sap.is.ddf.ecc`
   - `sap.is.ddf.fms`
   - `sap.is.ddf.fms_s4h`
   - `sap.is.ddf.cross.ecc`
   - `sap.is.ddf.cross.fms`

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

> **i Note**
>
> The package names are case-sensitive.

8. Once you have successfully deployed all content as described in the previous steps, call up transaction *SAP HANA Transport for ABAP - Deployment* (`SCTS_HTA_DEPLOY`). To deploy the SAP Allocation Management packages, enter package name **`sap.is.retail.rap.amr*`** and choose *Execute*.

> **i Note**
>
> With this step, the SAP Allocation Management SAP HANA content is finally deployed. It is the last and most critical activation step.

Checking for Missing Views

If content activation errors occur, check for missing views in the database. For more information, see Troubleshooting: Missing Views in Database [page 248].

Related Information

Create/Replicate Source Master Data System Tables [page 76]
Activate SAP HANA Content [page 78]
Create/Replicate Source Master Data System Tables

6.5.2.1 Troubleshooting: Missing Views in Database

After the SAP HANA content activation, you can check for missing views in transaction `DB02`.

Check if SAP Allocation Management views are highlighted as objects missing in the database. There could be some missing objects, despite having received success messages from the previous step of activating SAP Allocation Management SAP HANA content.

1. Call up transaction *Diagnostics: Missing Tables and Indexes* (`DB02`)
2. Select *Diagnostics* > *Tables/Views* and enter the technical name.
3. Check if any SAP Allocation Management views are displayed as missing in the database.
4. If there are views missing in the database, raise a support ticket.

6.5.3 Check Procedure Associated with Function GENIOS_SOLVE is Active

For SAP Allocation Management, confirm that the procedure associated with function `GENIOS_SOLVE` is active in the `_SYS_AFL` catalog.

Prerequisites

You have configured the AFL usage and confirmed that the OFL algorithm was installed successfully as described in section Check the OFL Installation [page 43].

Context

Procedure

1. Go to `SAP HANA Systems` view in the `SAP HANA Development Perspective`.
2. In your system, filter for catalog `_SYS_AFL`.
3. In the `_SYS_AFL` catalog, filter on procedures to search for `OFL_AREA_GENIOS_DOLVE_PROC`
4. Confirm this procedure `OFL_AREA_GENIOS_SOLVE_PROC` is available.

6.5.4 Configure SAP Allocation Management

Configuration of SAP Allocation Management

To use SAP Allocation Management, you must define several application-specific settings in Customizing. Define the settings under *SAP Implementation Guide* > *Cross-Application Components* > *Allocation Management*.

SAP Allocation Management provides optional integration scenarios with:

- UDF (Unified Demand Forecast)
- SAP Assortment Planning

Both scenarios require additional installation steps, which are described in sections SAP Assortment Planning [page 216] and Complete UDF Setup [page 105] of this guide.

Allocation information from allocation plans can be transferred to follow-on systems to create the corresponding **allocation tables**. You set up the transfer of allocation plans with the implementation of SAP Notes in the follow-on systems. For more information, see Implement SAP Notes for the Installation [page 25].

6.5.5 Configure Data Replication

SAP Allocation Management uses master data such as product, store, and product hierarchy that is imported to the Demand Data Foundation (DDF) and Unified Demand Forecast (UDF) modules using the data replication framework (DRF, transaction `DRFOUT`).

> **i Note**
>
> Not all of the master data is replicated using the data replication framework. Some data must be replicated separately using SAP Landscape Transformation Replication Server (SLT).
>
> For a detailed information on the SLT replication procedure, see Create/Replicate Source Master Data System Tables [page 76].

6.5.5.1 Initial Load of Data to DDF Using DRFOUT

SAP Allocation Management uses master data, such as product, location, and product hierarchy, that is replicated from SAP Retail or SAP S/4HANA to DDF using DRFOUT.

Procedure

SAP Allocation Management specifically requires that the following data is replicated sequentially from a connected SAP ERP system using `DRFOUT`:

Sequence	Master Data	Technical Details	For more information, see:
1	Product Hierarchy	• **SAP ERP Description:** Material Group Hierarchy • **DRFOUT Outbound Implementation:** `PMCH` • **DDF Inbound Interface:** `/DMF/MDIF_PROD_HIER_INBOUND`	http://help.sap.com/car ▸ *<your release>* ▸ *Application Help* ▸ *Demand Data Foundation* ▸ *Integration Information* ▸ *Inbound Interfaces For Remote Function Call (RFC) Communication* ▸ *Product Hierarchy Master Data*
2	Product	• **SAP ERP Description:** Material • **DRFOUT Outbound Implementation:** `PMAT` • **DDF Inbound Interface:** `/DMF/MDIF_PRODUCT_INBOUND`	http://help.sap.com/car ▸ *<your release>* ▸ *Application Help* ▸ *Demand Data Foundation* ▸ *Integration Information* ▸ *Inbound Interfaces For Remote Function Call (RFC) Communication* ▸ *Product Master Data*

Sequence	Master Data	Technical Details	For more information, see:
3	Location	• **SAP ERP Description:** Plant • **DRFOUT Outbound Implementation:** `PPLT` • **DDF Inbound Interface:** `/DMF/MDIF_LOCATION_INBOUND`	http://help.sap.com/car <your release> > *Application Help* > *Demand Data Foundation* > *Integration Information* > *Inbound Interfaces For Remote Function Call (RFC) Communication* > *Product Location Master Data*
4	Product Location	• **SAP ERP Description:** Material/Plant • **DRFOUT Outbound Implementation:** `PMPL` • **DDF Inbound Interface:** `/DMF/MDIF_PROD_LOC_INBOUND`	http://help.sap.com/car <your release> > *Application Help* > *Demand Data Foundation* > *Integration Information* > *Inbound Interfaces For Remote Function Call (RFC) Communication* > *Product Location Master Data*
5	Product Location	• **SAP ERP Description:** Sales Price • **DRFOUT Outbound Implementation:** `PSPR` • **DDF Inbound Interface:** `/DMF/MDIF_PROD_LOC_INBOUND`	http://help.sap.com/car > *Application Help* > *Demand Data Foundation* > *Integration Information* > *Inbound Interfaces For Remote Function Call (RFC) Communication* > *Product Location Master Data*
6	Inventory	• **SAP ERP Description:** Inventory • **DRFOUT Outbound Implementation:** `PINV` • **DDF Inbound Interface:** `/DMF/OPIF_INVENTORY_INBOUND`	http://help.sap.com/car <your release> > *Application Help* > *Demand Data Foundation* > *Integration Information* > *Inbound Interfaces For Remote Function Call (RFC) Communication* > *Inventory Master Data*

Sequence	Master Data	Technical Details	For more information, see:
7	Transportation Lane	• **SAP ERP Description:** Source of Supply • **DRFOUT Outbound Implementation:** `PSOS` • **DDF Inbound Interface:** `/DMF/MDIF_LANE_INBOUND` **Note** Before transferring the planned delivery time to DDF, implement a BAdI to update the planned delivery time values as described in SAP Note 2357255).	http://help.sap.com/car <your release> Application Help Demand Data Foundation Integration Information Inbound Interfaces For Remote Function Call (RFC) Communication Transportation Lane Master Data
8	Location	• **SAP ERP Description:** Vendor • **DRFOUT Outbound Implementation:** `PVEN` • **DDF Inbound Interface:** `/DMF/MDIF_LOCATION_INBOUND`	http://help.sap.com/car <your release> Application Help Demand Data Foundation Integration Information Inbound Interfaces For Remote Function Call (RFC) Communication Location Master Data
9	Product Hierarchy	• **SAP ERP Description:** Article Hierarchy • **DRFOUT Outbound Implementation:** `PAHY` • **DDF Inbound Interface:** `/DMF/MDIF_PROD_HIER_INBOUND`	http://help.sap.com/car Application Help Demand Data Foundation Integration Information Inbound Interfaces For Remote Function Call (RFC) Communication Product Hierarchy Master Data

You can import the data into staging tables, and then transfer this data to production tables using report `/DMF/PROCESS_STAGING_TABLES`. Alternatively, you can skip the staging tables and import the data directly into the production tables. For more information, see:

- http://help.sap.com/car <your release> Application Help Demand Data Foundation Integration Information Inbound Processing
- http://help.sap.com/car <your release> Application Help Demand Data Foundation General Services Monitor Imports Process Inbound Staging Tables

More Information

For more information on monitoring the replication, see:

- http://help.sap.com/car ▶ *<your release>* ▶ *Application Help* ▶ *Demand Data Foundation* ▶ *General Services* ▶ *Monitor Imports* ▶
- The *Periodic Tasks* section of the *Administration Guide* for SAP Allocation Management.

Related Information

Periodic Tasks

6.5.5.2 Delta Load of Data to DDF Using DRFOUT

When performing a delta load of data from the source master data system using the *DRFOUT* framework, you must ensure that the product location data required to enhance the sales records with historical sales cost is loaded prior to the sales data.

Furthermore, we recommend that you schedule a daily periodic task to replicate data from the source system to the SAP Allocation Management system.

6.5.6 Configure Front End

Check if you have performed the SAP Gateway configuration and that you have activated the OData Services for distribution curve and SAP Allocation Management.

Activate SAP Allocation Management ICF Services [page 254]
: Perform these steps to activate Internet Communication Framework (ICF) services for SAP Allocation Management.

Assign Roles, Catalogs, and Groups in SAP Fiori Launchpad [page 254]
: To be able to access SAP Fiori apps that constitute the SAP Allocation Management user interface from the SAP Fiori launchpad, your front-end system user must have the necessary roles assigned. Based on the roles assigned to your user, you can access certain business catalogs and business catalog groups.

Related Information

Configure SAP Gateway [page 88]
Activate OData Services [page 91]

6.5.6.1 Configure SAP Gateway

6.5.6.2 Activate SAP Allocation Management ICF Services

Perform these steps to activate Internet Communication Framework (ICF) services for SAP Allocation Management.

For security reasons, all Internet Communication Framework (ICF) services relevant to your SAP Allocation Management application are made available in an inactive state.

You have activated the central ICF services while configuring the SAP Gateway. This procedure provides the instructions to activate ICF services required for the SAP Allocation Management SAP Fiori apps.

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/amr_alloplan/`**
4. Choose *Execute*.
5. To activate the service, choose *Service/host Activate*.
6. Repeat steps 3–5 to ensure that **all** of the following services are activated:
   - `/sap/bc/ui5_ui5/sap/amr_allo_params`
   - `/sap/bc/ui5_ui5/sap/amr_dist_config`
   - `/sap/bc/ui5_ui5/sap/amr_lib_reuse`
   - `/sap/bc/ui5_ui5/sap/amr_marketunit`
   - `/sap/bc/ui5_ui5/sap/amr_workload`
   - `/sap/bc/ui5_ui5/sap/amr_kpiconfig`
   - `/sap/bc/ui5_ui5/sap/amr_result`

6.5.6.3 Assign Roles, Catalogs, and Groups in SAP Fiori Launchpad

To be able to access SAP Fiori apps that constitute the SAP Allocation Management user interface from the SAP Fiori launchpad, your front-end system user must have the necessary roles assigned. Based on the roles assigned to your user, you can access certain business catalogs and business catalog groups.

Your SAP Allocation Management application is delivered with a predefined role, catalog, and group. These include technical content as well as business content:

Front-End Server Business Content			Front-End Technical Content	
Business Role	**Business Catalog**	**Business Catalog Group**	**Technical Role**	**Technical Catalog**
SAP_AMR_BCR_ ALLOCATOR_T	SAP_AMR_BC_ALLOCA TOR_T	SAP_AMR_BCG_ALLOCATOR _T	SAP_AMR_TCR_ T	SAP_AMR_ TC _T

To test the installation of SAP Allocation Management from the SAP Fiori launchpad, you need to assign the roles to your user on the front-end system.

Procedure

1. Log on to your front-end system.
2. Launch *User Maintenance* (transaction SU01).
3. Enter your user name in the *User* field and choose *Change*.
4. On the *Roles* tab, assign the roles SAP_AMR_BCR_ALLOCATOR_T and SAP_AMR_TCR_ T to your user.

> ⚠ Caution
>
> If you already have an SAP Fiori launchpad open, you must clear your browser cache to apply any modifications made to your user roles. Otherwise, your changes are not reflected in the SAP Fiori user interface.

More Information

Security Information section of the *Administration Guide* for SAP Allocation Management.

6.6 Configure Access to Documentation Provided on SAP Help Portal (Optional for All Applications)

In transaction SR13, you can configure your back-end system to point to documentation for your application that is provided on SAP Help Portal for SAP Customer Activity Repository applications bundle.

Context

You can configure your back-end system to access documentation provided on SAP Help Portal for SAP Customer Activity Repository applications bundle at https://help.sap.com/viewer/p/CARAB. For example, if

your application is SAP Customer Activity Repository, you can configure access to the application help for SAP Customer Activity Repository.

Prerequisites

- The documentation you want to access must be available on SAP Help Portal.
- The users who access the documentation must have access to the Internet.
- You can configure an ABAP system to connect to only one combination of product and version. These are the values that you will specify as *Path* in the procedure below.

> **i Note**
>
> The product `CARAB` is valid for all the applications delivered with SAP Customer Activity Repository applications bundle.
>
> The version depends on the release. For example, version `4.0.1` is valid for all the application versions delivered with SAP Customer Activity Repository applications bundle 4.0 FPS01.

If you cannot fulfill one or more of these prerequisites, you must install the documentation in your local system landscape using the download packages or DVDs/CDs provided.

> **i Note**
>
> For more information about installing the documentation in your local system landscape, see the SAP Library Installation and Update Guide for SAP NetWeaver-Based Systems.

Procedure

1. Open transaction `SR13`.
2. Select the tab *PlainHtmlHttp*.
3. Choose *New Entries*.

> **⚠ Caution**
>
> You have to create entries for both documentation and XML documentation areas for each platform you are using and each language in which you want to provide documentation.
>
> You must use the exact combination of uppercase and lowercase characters specified in the product and version.

4. To create entries for the documentation area, enter the following values:

Name	Value to be entered
Variant	Enter a name for the variant.
Platform	Select the platform relevant for your implementation from the list of available platforms, for example, WN32.
Area	Select *Documentation* from the list; this will display as IWBHELP in the table.

Name	Value to be entered
Server Names	https://help.sap.com/http.svc/ahp2
Path (`<Product/Version>`**)**	CARAB/4.0.1
Language	Select the language you need from the list.

5. To create entries for the XML documentation area, enter the following values:

Name	Value to be entered
Variant	Enter a name for the variant (any name).
Platform	Select the platform relevant for your implementation from the list of available platforms, for example, WN32.
Area	Select *XML Documentation* from the list; this will display as XML_DOCU in the table.
Server Names	https://help.sap.com/http.svc/ahp2
Path (`<Product/Version>`**)**	CARAB/4.0.1
Language	Select the language you need from the list.

6. Repeat steps 4 and 5 for each relevant platform and language.
7. Select one entry as the default language for each platform and area.
8. Save your entries.

Results

You have configured your back-end system to point to documentation that is provided on SAP Help Portal.

Related Information

SAP Note 2149786 Customizing help settings in transaction SR13

SAP Note 2652009 Connecting the help to the SAP Help Portal

SAP Note 2572047 SAP provides user assistance (documentation) as HTML, PDF, or directly via SAP Help Portal

Important Disclaimers and Legal Information

Hyperlinks

Some links are classified by an icon and/or a mouseover text. These links provide additional information.
About the icons:

- Links with the icon : You are entering a Web site that is not hosted by SAP. By using such links, you agree (unless expressly stated otherwise in your agreements with SAP) to this:
  - The content of the linked-to site is not SAP documentation. You may not infer any product claims against SAP based on this information.
  - SAP does not agree or disagree with the content on the linked-to site, nor does SAP warrant the availability and correctness. SAP shall not be liable for any damages caused by the use of such content unless damages have been caused by SAP's gross negligence or willful misconduct.
- Links with the icon : You are leaving the documentation for that particular SAP product or service and are entering a SAP-hosted Web site. By using such links, you agree that (unless expressly stated otherwise in your agreements with SAP) you may not infer any product claims against SAP based on this information.

Beta and Other Experimental Features

Experimental features are not part of the officially delivered scope that SAP guarantees for future releases. This means that experimental features may be changed by SAP at any time for any reason without notice. Experimental features are not for productive use. You may not demonstrate, test, examine, evaluate or otherwise use the experimental features in a live operating environment or with data that has not been sufficiently backed up.
The purpose of experimental features is to get feedback early on, allowing customers and partners to influence the future product accordingly. By providing your feedback (e.g. in the SAP Community), you accept that intellectual property rights of the contributions or derivative works shall remain the exclusive property of SAP.

Example Code

Any software coding and/or code snippets are examples. They are not for productive use. The example code is only intended to better explain and visualize the syntax and phrasing rules. SAP does not warrant the correctness and completeness of the example code. SAP shall not be liable for errors or damages caused by the use of example code unless damages have been caused by SAP's gross negligence or willful misconduct.

Gender-Related Language

We try not to use gender-specific word forms and formulations. As appropriate for context and readability, SAP may use masculine word forms to refer to all genders.

www.sap.com/contactsap

THE BEST RUN SAP