



INSTALLATION GUIDE | PUBLIC

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# Installation Guide for SAP S/4HANA 1909

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# Document History

Version	Date	Description
1.0	September 20, 2019	First published version.
1.0	September 23, 2019	Additions to section <a href="#">Follow-Up Activities for Analytics and Planning [page 42]</a> .
1.0	October 17, 2019	Changes to section <a href="#">SAP S/4HANA Migration Cockpit [page 16]</a> .
1.0	December 18, 2019	Changes to section <a href="#">Set Up the User Assistance Plugin [page 25]</a> .

# 1 Getting Started

This guide provides you with the following information about SAP S/4HANA:

- A system landscape and product overview
- A list of the tools and documentation you need for the installation
- Important follow-up activities you need to consider after the installation

## i Note

This guide cannot be used on its own, you need to use it together with the installation guides describing the installation of Application Server Systems with the Software Provisioning Manager 2.0 tool.

You find these guides (as well as a link to the SPM tool) on the SAP Support Portal at <https://support.sap.com/sltoolset> >> *System Provisioning* > *System Provisioning Scenarios* > *Install a System using Software Provisioning Manager* > *Installation Option of Software Provisioning Manager 2.0 <latest SP>* > *Installation Guides - Application Server Systems* >.

These installation guides are sorted by database, technical stack (ABAP and Java), and operating system platform. For the installation of SAP S/4HANA, choose the SAP HANA Database guide for your operating system (UNIX, IBM, or Windows), the ABAP Stack and the SAP HANA Database.

## i Note

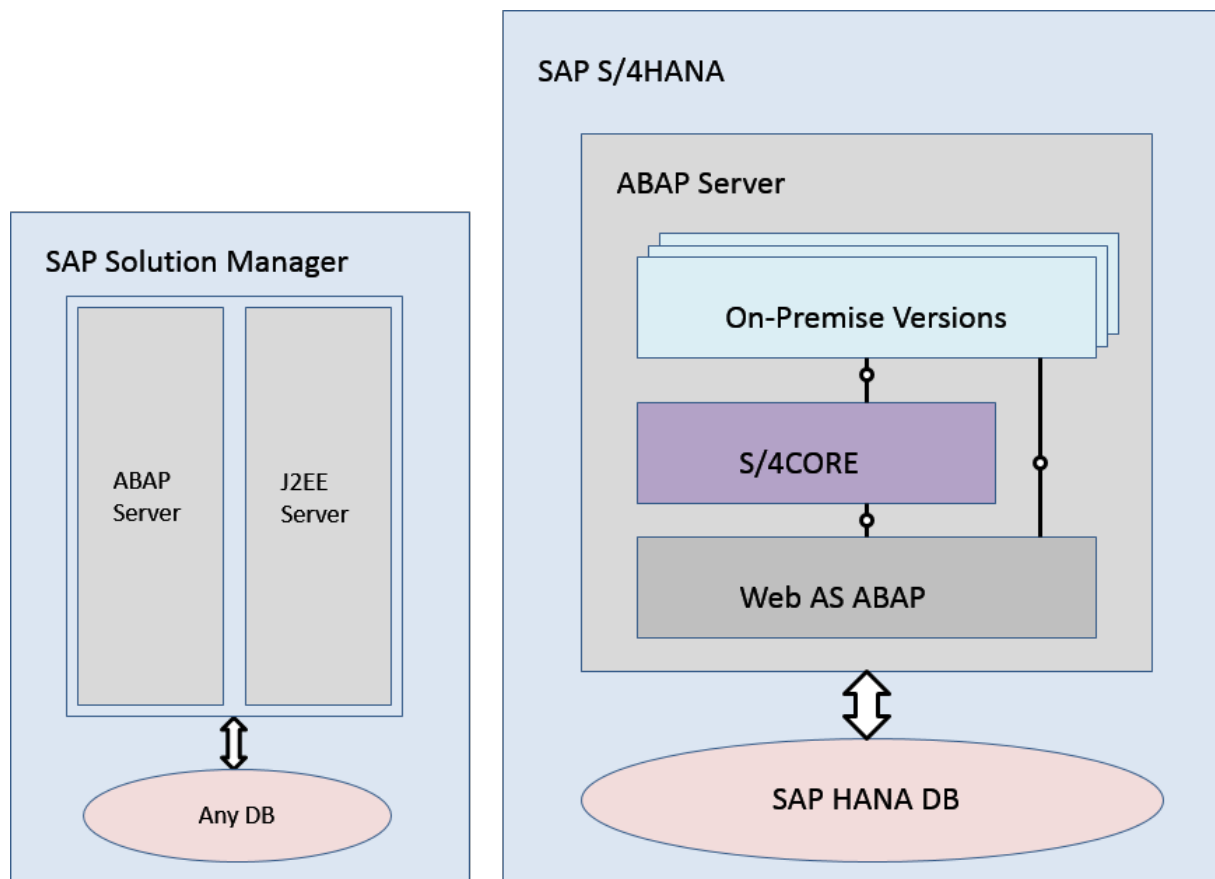
Java components and databases other than SAP HANA are still installed using the 1.0 version of the Software Provisioning Manager. You find the guides for version 1.0 on the same page as those for version 2.0 (see note above), just choose **Installation Option of Software Provisioning Manager 1.0 <latest SP>**.

## 2 SAP S/4HANA System Landscape Information

There are various ways of deploying SAP S/4HANA in your new or already existing system landscape. This section describes some examples.

### Example: SAP S/4HANA New Installation

A new installation of SAP S/4HANA needs to run on the SAP HANA database. It is recommended to use the SAP Solution Manager, which can run on any database. This very simple landscape can be enhanced with the SAP cloud solutions and SAP Business Suite products.



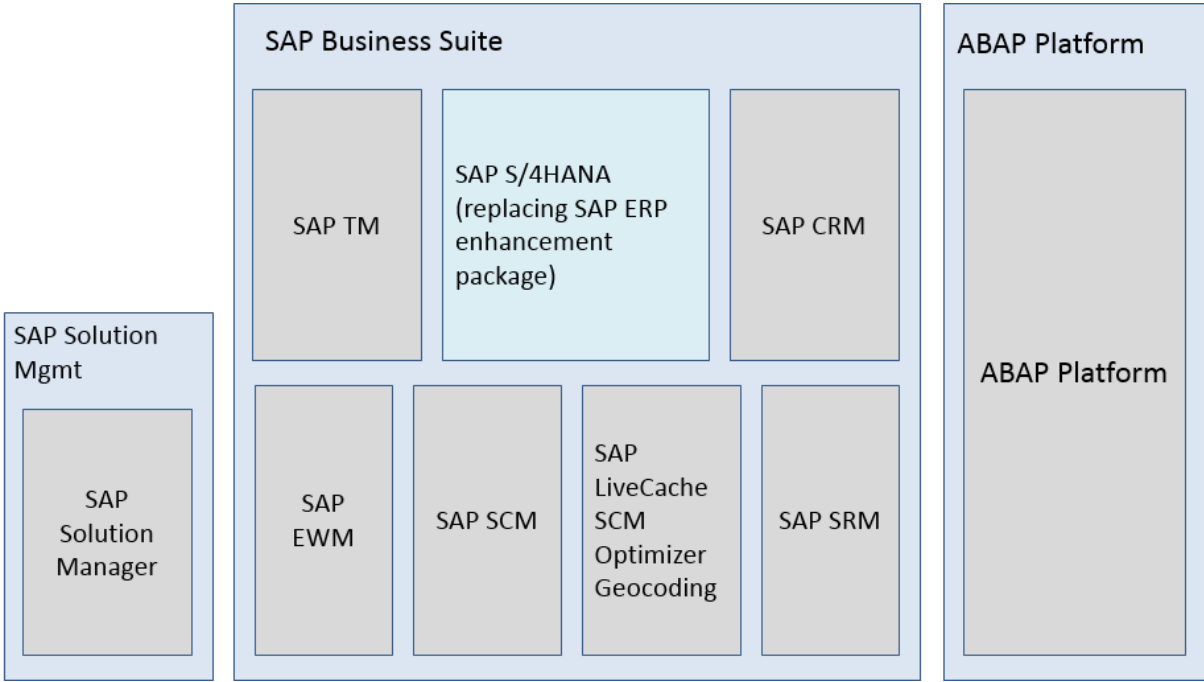
Simple SAP S/4HANA Deployment

### Example: SAP S/4HANA in an SAP Business Suite Landscape

It is possible to integrate SAP S/4HANA into an existing SAP Business Suite landscape by replacing the SAP ERP enhancement package product with SAP S/4HANA. When performing this conversion in your system

landscape, you need to do some adaptations, for example you need to convert some of your existing business processes to the simplified SAP S/4HANA processes. Some of the SAP Business Suite processes are no longer supported, some have been changed, and there are also new processes. How to convert your existing processes to the SAP S/4HANA processes is described in the *Simplification Item Catalog*.

For more information about the *Simplification Item Catalog*, see the *Conversion Guide for SAP S/4HANA* at [https://help.sap.com/s4hana\\_op\\_1909](https://help.sap.com/s4hana_op_1909) ► *Product Documentation* 📄.



Example SAP Business Suite landscape with an embedded SAP S/4HANA system

**More Information**

For more information about SAP Fiori for SAP S/4HANA see SAP Note [2590653](#) 📄.

# 3 Installation Documentation

Required Installation Documentation

Documents	Comments and Links
<i>Installation Guide for SAP S/4HANA 1909</i> (this guide)	<p>This document contains information relevant for the installation of SAP S/4HANA, but it does not describe the process or the installation tool. They are described in the Software Provisioning Manager guides listed below.</p> <p>Always find the latest version of the <i>Installation Guide for SAP S/4HANA 1909</i> at <a href="https://help.sap.com/s4hana_op_1909">https://help.sap.com/s4hana_op_1909</a></p> <p>▶ <a href="#">Product Documentation</a> ▶</p>
<p>Installation guides describing the installation of Application Server Systems with the Software Provisioning Manager 2.0 which is part of SL Toolset 1.0. Make sure that you always use the latest SP version of the tool and guides available on the SAP Support Portal at <a href="http://help.sap.com/sltoolset">http://help.sap.com/sltoolset</a>.</p>	<p>You find these guides (as well as a link to the SPM tool) at <a href="https://support.sap.com/sltoolset">https://support.sap.com/sltoolset</a> ▶ <a href="#">System Provisioning</a> ▶ <a href="#">System Provisioning Scenarios</a> ▶ <a href="#">Install a System using Software Provisioning Manager</a> ▶ <a href="#">Installation Option of Software Provisioning Manager 2.0 &lt;latest SP&gt;</a> ▶ <a href="#">Installation Guides - Application Server Systems</a> ▶</p> <p>These installation guides are sorted by database, technical stack (ABAP and Java), and operating system platform. For the installation of SAP S/4HANA, choose the SAP HANA Database guide for your operating system (UNIX, IBM, or Windows), the ABAP Stack.</p>

### i Note

Java components and databases other than SAP HANA are still installed using the 1.0 version of the Software Provisioning Manager. You find the guides for version 1.0 on the same page as those for version 2.0, just choose **Installation Option of Software Provisioning Manager 1.0 SP <latest SP>**.



## Documents

## Comments and Links

*SAP HANA Server Installation and Update Guide*

You need the *SAP HANA Server Installation and Update Guide* for the installation of the following components:

- SAP liveCache on SAP HANA  
If you plan to use the SAP S/4HANA **Production Planning & Detailed Scheduling (PP/DS)** application and / or the **Schedule Production** app (Fiori ID: F3770) which is part of SAP S/4HANA Manufacturing, it is important that you install HANA integrated liveCache, which is the HANA component SAP LCA (also called LCAPPS- or liveCache Applications plugin).
- VCH AFL (SAP VCH AFL 1909.00)  
See also SAP Note [1898497](#).

### i Note

For each SAP HANA revision, there exists one corresponding version of these SAP HANA system components.

You find this guide at [http://help.sap.com/hana\\_platform](http://help.sap.com/hana_platform)

▶ [Installation and Upgrade](#) ▶ [SAP HANA Server Installation and Update Guide](#) ▶ For information about how to install or update these components, see the section *Managing SAP HANA System Components* in the guide.

*UI Technology Guide for SAP S/4HANA*

You find this guide at [https://help.sap.com/s4hana\\_op\\_1909](https://help.sap.com/s4hana_op_1909)

▶ [Product Documentation](#) ▶

The guide provides important information about the UI implementation.

*SAP S/4HANA 1909: Release Information Note*

SAP Note [2769531](#)

*SAP S/4HANA 1909: Restriction Note*

SAP Note [2799003](#)

*SAP Fiori for SAP S/4HANA 1909: Release Information Note*

SAP Note [2805572](#)

*SAP S/4HANA Foundation 1909: Release Information Note*

SAP Note [2750164](#)

*SAP S/4HANA Add-on Note*

SAP Note [2214409](#)

Additional Documentation

## Documents

## Comments

*Getting Started with SAP S/4HANA*

You find this guide at [https://help.sap.com/s4hana\\_op\\_1909](https://help.sap.com/s4hana_op_1909)

▶ [Product Documentation](#) ▶

## Documents

System copy guides using the Software Provisioning Manager 1.0 or 2.0.

## Comments

You find these guides at <https://support.sap.com/sitoolset>  
▶▶ *System Provisioning* ▶ *System Provisioning Scenarios*  
▶ *Copy a System using Software Provisioning Manager* ▶  
*System Copy of Software Provisioning Manager 1.0 or 2.0*  
*<latest SPs>* ▶ *System Copy Guides - Software Provisioning*  
*Manager 1.0 or 2.0* ▶.

## 4 Product and Database Information

This section gives an overview of the components of SAP S/4HANA 1909.

### SAP S/4HANA Components

Component Name	Comment
SAP S/4HANA Server	Note that client 000 is not a productive client.
SAP Predictive Integrator	<ul style="list-style-type: none"> <li>• APL 4 FOR HANA 2 SPO3+</li> <li>• UMML4HANA1</li> </ul>
SAP HANA Rules Framework	HANA RULES FRAMEWORK 1.0
SAP S/4HANA AFL	SAP VCH AFL 1909.00
SAP LiveCache on SAP HANA	<p>SAP HANA LCAPPS 1.00</p> <p>When configuring your SAP S/4HANA installation package through Software Provisioning Manager (SWPM), you get a screen named <i>Configuration of SAP liveCache with SAP HANA</i>. Here, choose to install liveCache for SAP System.</p> <ul style="list-style-type: none"> <li>• For SAP S/4HANA you can only choose the SAP HANA integrated liveCache.</li> <li>• You need the liveCache installation only when at least one of your applications uses it.</li> </ul>
SAP Optimizer	SAP SCM Optimizer 14.0
Integration for Elster	<ul style="list-style-type: none"> <li>• ABAP Platform 1909 - Advanced Adapter Engine Extnd</li> <li>• Elster 2.1</li> <li>• UTELSTER 730</li> </ul>
Integration for Swift	<ul style="list-style-type: none"> <li>• ABAP Platform 1909 - Advanced Adapter Engine Extnd</li> <li>• SWIFT 622</li> <li>• UTSWIFT 730</li> </ul>
ESR Content	ESR Content (XI CONTENT)
SAP EHS Expert Server	EH&S EXPERT 3.2
SAP EHS WWI Server	EH&S WWI 3.2
MSG.PMQ Designer	MSG.PMQ DESIGNER 1.1
MSG.PMQ XSA Content	XSAC_TOMATOSJ 1
MSG.PMQ Sample Content	MSG.PMQ SAMPLE CONTENT 804
Basis Apps	-

Component Name	Comment
Business Intelligence	-
BI Content Extension	-
TMC Content	-
SAP S/4HANA Java	-
Adobe Document Services	-
Advanced Adapter Engine Extnd	-
Enterprise Services Repository	-
Content Server	-
ABAP in Eclipse	-
SAPUI5 Dev Toolkit: IDE Plugins	-

### i Note

For information about PI Adapters, see also SAP Note [2251604](#).

SAP Fiori for SAP S/4HANA 1909

Component Name	Comment
UI for SAP S/4HANA	<ul style="list-style-type: none"> <li>UIAPFI70 700</li> <li>UIS4HOP1 500</li> </ul>
UI for HCM (Fiori 2.0)	UIHR002 100
UI for MDG	UIMDG001 200
UI for TVR	UITRV001 300


SAP Multichannel Foundation for Utilities and Public Sector, UI add-on for SAP S/4HANA 1709 and higher releases

Component Name	Comment
MCF UI FOR SAP S/4HANA 1709+	UIS4MCF 100

Database for SAP S/4HANA Backend

Database for SAP S/4HANA Backend	Comments
SAP HANA (SAP HANA DATABASE 2.0)	Used as database for SAP S/4HANA backend; can also be used by SAP Fiori for SAP S/4HANA in an embedded and in a hub deployment (see table below).

## Databases for SAP Fiori for SAP S/4HANA (Frontend)

Databases for SAP Fiori for SAP S/4HANA Frontend	Comments
SAP HANA (SAP HANA DATABASE 1.0 and SAP HANA DATABASE 2.0)	The SAP Fiori frontend for SAP S/4HANA can run on SAP HANA, SAP MaxDB, and SAP ASE in a hub deployment, but the database for the SAP S/4HANA backend must be SAP HANA (see table above).
SAP MaxDB (MAXDB 7.9 64-BIT)	
SAP Adaptive Server Enterprise (SAP ASE) (SAP ASE 16.0 FOR BUS. SUITE)	For more information about SAP Fiori for SAP S/4HANA deployment, see <a href="#">Installation of SAP Fiori [page 19]</a> and SAP Note <a href="#">2590653</a> 

### **i** Note

Databases other than the ones mentioned in the tables above are **not supported** for SAP S/4HANA.

# 5 Maintenance Planner

We recommend that you use the Maintenance Planner to plan your installation. The Maintenance Planner creates a stack XML file with the support package stack information that you then hand over to the Software Provisioning Manager (the installer).

## i Note

The Maintenance Optimizer (MOPZ) cannot be used with SAP S/4HANA. It has been replaced by the Maintenance Planner.

You access the Maintenance Planner tool and its *User Guide* on the SAP Support Portal at <http://help.sap.com/maintenanceplanner>.

## 6 Installation Process

The installation process for SAP S/4HANA and its components is described in the Software Provisioning tool guides referenced in the section [Installation Documentation \[page 8\]](#).

# 7 Installation Follow-Up Activities

## i Note

For information about how to configure the ABAP Platform, see [https://help.sap.com/s4hana\\_op\\_1909](https://help.sap.com/s4hana_op_1909)

► [Product Assistance](#) ► [English](#) ► [Enterprise Technology](#) ► [ABAP Platform](#) ► [Configuring the ABAP Platform](#) ►

## 7.1 Importing Data to SAP S/4HANA

The following sections explain possible ways of migrating data to SAP S/4HANA:

- [SAP S/4HANA Migration Cockpit \[page 16\]](#)
- [SAP Data Services \[page 19\]](#)

### 7.1.1 SAP S/4HANA Migration Cockpit

For the migration of legacy data to SAP S/4HANA, SAP provides the SAP S/4HANA migration cockpit. It helps you to transfer your master data and business data from SAP systems and non-SAP systems to SAP S/4HANA 1610, 1709, 1809, and 1909. The cockpit is available as part of SAP S/4HANA and is included in the SAP S/4HANA license.

#### Preconfigured SAP S/4HANA-Specific Content

For the data migration, the SAP S/4HANA migration cockpit uses predefined migration content, that is, standard migration objects such as customer, supplier or purchase order objects to identify and transfer the relevant data. These migration objects contain pre-defined mappings to support the migration.

There are three options for transferring data to SAP S/4HANA:

#### 1. Template file upload

For each migration object, the migration cockpit provides Microsoft Excel XML files that contain the necessary fields for the SAP S/4HANA target structure. You download the file for the migration object, fill it with the source data, upload it to the cockpit, and then migrate the data to the SAP S/4HANA target system.

#### 2. Staging tables

As of SAP S/4HANA 1709 FPS01, the data transfer option using staging tables is available in the migration cockpit. This option allows you to handle large data volumes more easily. You can fill in the staging tables



either manually or by using your preferred tools (SAP or third-party tools). The migration cockpit reads the data from the staging tables and migrates them into the SAP S/4HANA target system.

If you are using the SAP S/4HANA technical job repository in your SAP S/4HANA system, the migration cockpit will use it as well. This requires that the technical job repository and the migration cockpit's technical job definition `/LTB/JOB_DISPATCHER` are active in the respective client.

If you are not using the technical job repository in your SAP S/4HANA system and you do not want the migration cockpit to use it either, implement SAP Note [2705355](#) (this note is relevant for SAP S/4HANA 1809 FPS01 and FPS02 as well as for 1909).

### 3. Direct data transfer from SAP source systems

This new migration approach that is delivered with SAP S/4HANA 1909 allows you to directly transfer data from SAP source systems to SAP S/4HANA. The migration cockpit selects the migration objects in the source system with the help of predefined selection criteria and directly transfers them to the SAP S/4HANA target system via an RFC connection. This new approach is available for the following migration scenarios:

- SAP ERP to SAP S/4HANA
- SAP Apparel and Footwear (SAP AFS) to SAP S/4HANA for fashion and vertical business
- SAP Extended Warehouse Management (SAP EWM) to decentralized EWM based on SAP S/4HANA

Some prerequisites for the direct data transfer must be met including some SAP Notes that have to be implemented before the migration. It is necessary to differentiate between the SAP source system and the SAP S/4HANA target system.

#### SAP source systems

The lowest supported SAP source system is SAP ERP Central Component 6.0 EHP00. The supported SAP AFS release is SAP AFS 6.0 and the lowest SAP EWM release is SAP EWM 5.1. You must install the SAP Landscape Transformation Add-On DMIS 2011\_1 SP17 or higher (which is included in the license for SAP S/4HANA 1909). To do so, follow the instructions in the following SAP Notes and apply all support packages up to the latest level:

- SAP Note [1577441](#) *Installation and delta upgrade of DMIS 2011\_1*
- SAP Note [1577503](#) *Upgrade to DMIS 2011\_1 in the system switch upgrade*
- SAP Note [1648747](#) *DMIS 2011 / DMIS\_CNT 2011 Generation errors during installation*
- SAP Note [1697641](#) *Support packages for DMIS 2011*

#### SAP target systems

For the SAP S/4HANA target systems, consider the following collective SAP Notes:

- SAP Note [2819445](#) *SAP S/4HANA Migration Cockpit: Transfer Data Directly from SAP System – Corrections in migration technology for SAP S/4HANA 1909*
- SAP Note [2836748](#) *SAP S/4HANA Migration Cockpit: Central Note for Transfer Data Directly from SAP System – SAP ERP to SAP S/4HANA*
- SAP Note [2836840](#) *SAP S/4HANA Migration Cockpit: Central Note for Transfer Data Directly from SAP System – SAP AFS to SAP S/4HANA for fashion and vertical business*
- SAP Note [2815704](#) *Migrate Your Data Fiori App for SAP S/4HANA 1909*

## Integration of Custom Data

In addition, the SAP S/4HANA migration cockpit allows you to integrate your custom data into the migration using the migration object modeler. For example, you can adjust the predefined standard migration objects by adding fields to them. As of SAP S/4HANA 1610 FPS02 (for the file and staging options), you can also create

your own custom-specific migration objects or SAP standard objects that have not yet been included in the scope of the migration cockpit.

## Migration Objects

For a list of the migration objects available with SAP S/4HANA 1909, see [https://help.sap.com/S4\\_OP\\_MO](https://help.sap.com/S4_OP_MO).

## Required Roles

- For the file and staging options:  
For direct access to the SAP S/4HANA migration cockpit, use transaction `LTMCM`. To work with the migration cockpit, you need the role `SAP_CA_DMC_MC_USER`.  
To access the migration object modeler, use transaction `LTMOM`. As prerequisite for using the modeler, you first need to create a migration project in the migration cockpit and assign the role `SAP_CA_DMC_MC_DEVELOPER` to the respective user.
- For the direct data transfer option:  
The required composite role in the SAP source system is `SAP_DMIS_OBT_REMOTE`.  
For the SAP S/4HANA target system, a user with the role `SAP_DMIS_OBT_MASTER` is required. This user must also have the role `SAP_BR_CONFIG_EXPERT_DATA_MIG` for the front-end server.  
To use the migration object modeler (transaction `LTMOM`), role `SAP_CA_DMC_MC_DEVELOPER` is required in the SAP S/4HANA system.


## Migration Cockpit ICF Services

For the file and staging approach, make sure to activate the migration cockpit ICF services. Use transaction `SICF` in the backend system and activate the following services:

- `/sap/bc/webdynpro/sap/DMC_WDA`
- `/sap/bc/webdynpro/sap/DMC_WDA_GAF`

## Additional Information

For more information about the SAP S/4HANA migration cockpit, see:

- [https://help.sap.com/S4\\_OP\\_DM](https://help.sap.com/S4_OP_DM)
- SAP Note [2481235](#)  *SAP S/4HANA Migration Cockpit (on premise) - restrictions and extensibility of pre-delivered migration objects*

## 7.1.2 SAP Data Services

SAP provides SAP Data Services with Rapid Data Migration content to assist you with importing your data into your SAP S/4HANA system after installation.

For additional information, see:

- SAP Notes [2239701](#) and [2287723](#)
- SAP Data Services at the SAP Help Portal <http://help.sap.com/bods>
- SAP Best Practice content for data migration: [http://rapid.sap.com/bp/RDM\\_S4H\\_OP](http://rapid.sap.com/bp/RDM_S4H_OP)

## 7.2 System Configuration for SAP S/4HANA

After you have installed SAP S/4HANA, you have a number of options how to proceed with the system configuration:

1. You follow SAP Activate and SAP Best Practices to guide you through your system configuration.

### i Note

We strongly recommend that you use SAP Activate and SAP Best Practices as this will simplify both the initial implementation process and future updates of your software.

SAP Activate is the innovation adoption framework that helps you to implement your SAP S/4HANA system. It provides ready-to-run business and technology processes and guided configurations. For ordering information see SAP Note [2041140](#) (for partners and customers).

For additional information about SAP Activate and SAP Best Practices, see:

- <https://www.sap.com/services/rapid-deployment.html>
  - <https://go.support.sap.com/roadmapviewer/>
  - [http://rapid.sap.com/bp/BP\\_OP\\_ENTPR](http://rapid.sap.com/bp/BP_OP_ENTPR)
2. You use SAP Activate and SAP Best Practices as templates for your system configuration and make changes using the Implementation Guide (IMG). This allows you to adapt the SAP-delivered configuration settings to your specific requirements.
  3. You use only the Implementation Guide (IMG) to configure your system.

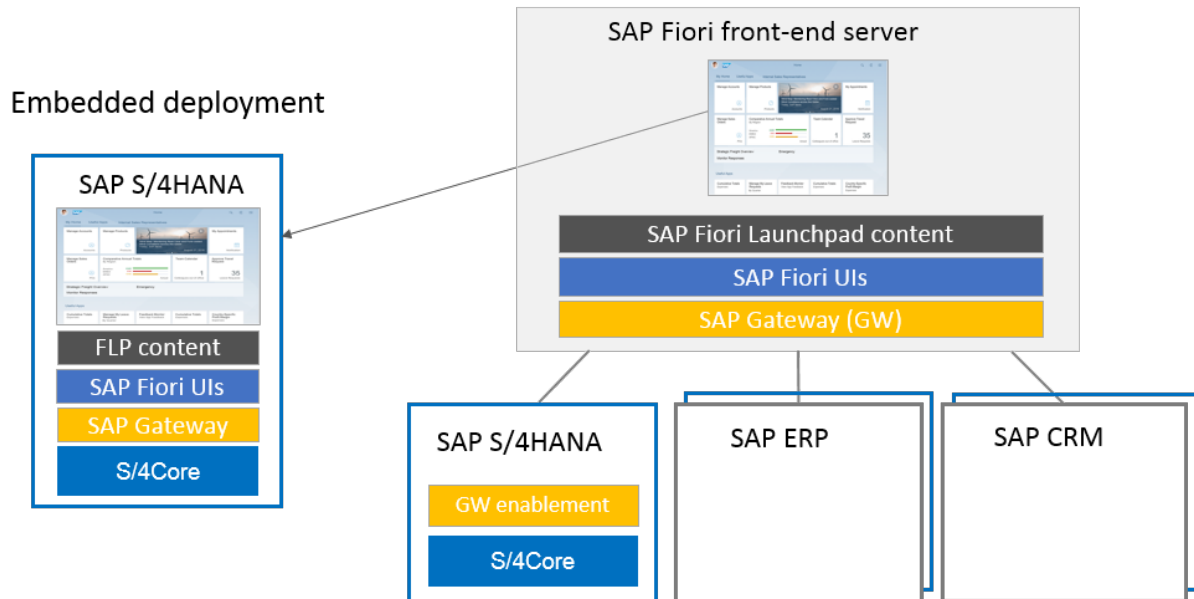
### i Note

In case of a conversion of an existing SAP Business Suite system, you proceed as described in the *Conversion Guide for SAP S/4HANA* at the SAP Help Portal under [https://help.sap.com/s4hana\\_op\\_1909](https://help.sap.com/s4hana_op_1909).

## 7.3 Installation of SAP Fiori

There are two possible deployment options for SAP Fiori for SAP S/4HANA, the embedded or the hub deployment option.

## Hub deployment of SAP Fiori front-end server



## Embedded Deployment

Components for embedded deployment for SAP S/4HANA 1909:

- Optional UI components
- SAP Fiori for SAP S/4HANA 1909
- SAP Fiori front-end server 6.0 (SAP FES) (including My Inbox – in earlier releases My Inbox was one of the optional UI components)
- SAPUI5 1.65
- SAP S/4HANA 1909
- SAP Gateway 7.54
- ABAP Platform 1909 (part of SAP S/4HANA 1909)

After the installation of SAP S/4HANA 1909, the other components of the embedded deployment option may need to be upgraded to the required version.

## Hub Deployment

You can co-deploy an existing SAP Business Suite hub with the SAP Fiori for SAP S/4HANA 1909 deployment. Existing apps continue to run against the SAP Business Suite back-end systems while the newly installed applications of SAP Fiori for SAP S/4HANA 1909 need to be configured to run against the SAP S/4HANA 1909 system. As a prerequisite, you have to migrate the database of the existing SAP Business Suite hub (supported databases are SAP HANA, SAP MaxDB, or SAP ASE) and upgrade the system to the minimum required versions.

Components for hub deployment for SAP S/4HANA 1909:

- **Frontend:**
  - Optional UI components
  - SAP Fiori for SAP S/4HANA 1909
  - SAP Fiori FES 6.0 (with My Inbox)
  - SAPUI5 1.65
  - SAP Gateway 7.51 (minimum version)
  - SAP NetWeaver 7.51 SP06 (minimum version - the maximum version is SAP NetWeaver 7.52)
- **Backend:**
  - SAP S/4HANA 1909
  - SAP Gateway 7.54
  - ABAP Platform 1909 (part of SAP S/4HANA 1909)

For more information, see: .

- The *UI Technology Guide for SAP S/4HANA* at [https://help.sap.com/s4hana\\_op\\_1909](https://help.sap.com/s4hana_op_1909) ► *Product Documentation* ► about the installation and deployment of SAP Fiori for SAP S/4HANA
- SAP Notes [2590653](#) and [2790996](#)

## 7.4 User Assistance Settings

The following sections describe how to enable context-sensitive user assistance for SAP S/4HANA.

### 7.4.1 Enable User Assistance for the Back-End System

#### Enable Context-Sensitive User Assistance

You need to do these settings in the back-end system which you use to create your system configuration setting. After you have done the settings, you save them, create a transport for them and transport them to your productive system(s).

Proceed as follows:

1. Open transaction SR13.
2. Select the tab *PlainHtmlHttp*.
3. Choose *New Entries*.

You have to create new entries for both documentation and XML documentation areas. To create entries for the **documentation** area, enter the following values:

Name	Value to be entered
<i>Variant</i>	Enter a name for the variant (any name).
<i>Platform</i>	Select the platform relevant for your implementation, for example, WN32.
<i>Area</i>	Select Documentation. This will display as IWBHELP in the table.
<i>Server Names</i>	<a href="https://help.sap.com/http.svc/ahp2">https://help.sap.com/http.svc/ahp2</a>
<i>Path</i>	<b>SAP_S4HANA_ON-PREMISE/1909.000</b>
<i>Language</i>	Enter the required languages. The product assistance is available in English (EN) and German (DE).

To create entries for the **XML documentation** area, enter the following values:

Name	Value to be entered
<i>Variant</i>	Enter a name for the variant (any name).
<i>Platform</i>	Select the platform relevant for your implementation, for example, WN32.
<i>Area</i>	Select XML Documentation. This will display as XML_DOCU in the table.
<i>Server Names</i>	<a href="https://help.sap.com/http.svc/ahp2">https://help.sap.com/http.svc/ahp2</a>
<i>Path</i>	<b>SAP_S4HANA_ON-PREMISE/1909.000</b>
<i>Language</i>	Enter the required languages. The product assistance is available in English (EN) and German (DE).

4. Repeat step 3 for each relevant platform and language.
5. Select **one** entry as default per platform.
6. Save your changes and create a transport.

## Enable Product-Specific User Assistance

After you have done the settings in transaction SR13 described above, you need to enable the product-specific User Assistance with the program **RSIWBH04** in transaction SE38:

1. Open transaction SE38.
2. Enter the program name **RSIWBH04** in the *Program* field and open the program.

3. Under *Product-Specific SAP Library* enter the ID `2c0e7c571fbeb576e1000000a4450e5` in the *Structure/DITA Map ID* field.
  - Class must be `XDP_STRUCT`.
  - The radio button *Change* must be selected.
4. Run the program.

## 7.4.2 Enable Context-Sensitive User Assistance for SAP Fiori Launchpad

To make context-sensitive user assistance available in the SAP Fiori launchpad, you need to do the settings described in the following sections:

- [Configure the SAP Web Dispatcher \[page 23\]](#)
- [Set Up the User Assistance Plugin \[page 25\]](#)

### 7.4.2.1 Configure the SAP Web Dispatcher

#### Use

If you want to make context-sensitive user assistance available in the SAP Fiori launchpad, you must configure SAP Web Dispatcher.

#### Prerequisites

You have installed SAP Web Dispatcher 7.5 as the reverse proxy. For more information, go to [https://help.sap.com/s4hana\\_op\\_1909](https://help.sap.com/s4hana_op_1909), enter *Operating SAP Web Dispatcher* into the search bar, press , open the search result with that title and navigate to the section *Installing SAP Web Dispatcher*.

#### Activities

1. Adjust the SAP Web Dispatcher profile file.  
In the `sapwebdisp_pf.txt` file, add the following parameters:
  - For the User Assistance Content Platform  
`wdisp/system_<number> = SID=<SID1>, EXTSRV=https://cp.hana.ondemand.com:443, SRCURL=/sap/dfa/help/, SRCSRV=*.*, PROXY=<your proxy>:<your proxy port>, STANDARD_COOKIE_FILTER=OFF`
  - For the script server in your production system

```
wdisp/system_<number> = SID=<SID2>, EXTSRV=https://xray.hana.ondemand.com:443, SRCURL=/resources/sap/dfa/help/, SRCSRV=*, PROXY=<your proxy>:<your proxy port>, STANDARD_COOKIE_FILTER=OFF
```

### i Note

- Make sure that the numbers following `wdisp/system_` are smaller than the numbers that you use for all your application server. The rules for the context-sensitive user assistance need to come before the rules for the application servers.
- Make sure that the SIDs are not the same as your system IDs.

2. Activate the usage of the modification handler:

```
icm/HTTP/mod_0 = PREFIX=/, FILE=$(DIR_PROFILE)/redirect.txt
```

For more information, go to [https://help.sap.com/s4hana\\_op\\_1909](https://help.sap.com/s4hana_op_1909), enter *SAP Web Dispatcher Parameter References* into the search bar, press , open the search result with that title and navigate to the section `icm/HTTP/mod_<xx>`.

3. Adjust the SAP Web Dispatcher redirect file.

In the `redirect.txt` file, add the following parameters:

```
# User Assistance Content Platform - rewrite rule
if %{SID} = <SID1>
begin
SetHeader HOST cp.hana.ondemand.com:443
RegRewriteRawUrl ^/sap/dfa/help/(.*) /dps/$1
end
# Script Server - rewrite rule
if %{SID} = <SID2>
begin
SetHeader HOST xray.hana.ondemand.com:443
RegRewriteRawUrl ^/resources/sap/dfa/help/(.*) /xRayControls/
resources/sap/dfa/help/$1
end
```

### i Note

Make sure that the SIDs in the `redirect.txt` file are the same as in the `sapwebdisp_cf.txt` file.

4. You can check if the content platform is working properly through the proxy connection by accessing:  
`https://<your server>:<your port>/sap/dfa/help/odata.svc/?$format=json`

### ❁ Example

If the content platform is connected correctly, you can see on your screen the following output, for example:

```
{"d":{"EntitySets":
[["Transport","DeliverableForReplication","Tile","Project","Deliverable","TransportHistory","TourIssue","ReplicationTourIssue","Hotspot","Product","Context"]]}}
```

5. You can check if the help script server is working properly through the proxy connection by accessing:  
`https://<yourserver>:<yourport>/resources/sap/dfa/help/sap/cfg/XrayBootstrapHelpConfig.json`



### ❖ Example

If the help script server is connected correctly, you can see on your screen the following output, for example:

```
{
  "description": "This configuration registers the Xray bootstrap plug-in",
  "modulePaths": {
    "sap.dfa.help": "/resources/sap/dfa/help/~201509221536~"
  },
  "bootstrapPlugins": {
    "BootstrapXrayPlugin": {
      "module": "sap.dfa.help.utils.adapters.fiori.BootstrapXrayHelpPlugin"
    }
  }
}
```

## Result

You can access SAP Fiori launchpad with context-sensitive user assistance.

### 7.4.2.2 Set Up the User Assistance Plugin

To make context-sensitive user assistance available in the SAP Fiori Launchpad, you set up the user assistance plugin in the following way:

1. Execute transaction `/UI2/FLP_CUS_CONF`.
2. Under *FLP Configuration*, click on *Change → Display* and then on *New Entries*.
3. In the field *FLP Property ID*, select or enter `ENABLE_HELP`.
4. Enter the property value `true`.
5. Click on *Save*.
6. Double-click on *FLP Plugins*.
7. Click on *Change → Display* and then on *New Entries*.
8. In the field *FLP Plugin ID*, select or enter `WEB_ASSISTANT_HELP_PLUGIN` and in the field *Activity State*, choose *Active*.
9. Highlight the entry `WEB_ASSISTANT_HELP_PLUGIN` and double-click on *Configuration*.
10. Click on *New Entries*.
11. Enter the following values:

FLP Property ID	Property Value
DATA_URL_UACP	https://help.sap.com/webassistant
EDITOR	false

FLP Property ID	Property Value
LA_COMMUNITY_URL	<a href="https://community.sap.com/">https://community.sap.com/</a>
LEARNING_APP_BACKEND_URL	<a href="https://education.hana.ondemand.com/education/">https://education.hana.ondemand.com/education/</a>
LEARNING_APP_WORKSPACE	s4
NO_HELP_MODE	carousel
PRODUCT	SAP_S4HANA_ON-PREMISE
SHOW_WHATS_NEW	no
USE_GLOBAL_HELP	true
VERSION	1909.000

12. Click on [Save](#).

After you have made these settings, the user assistance icon is available for the SAP Fiori launchpad.

For more information, go to [https://help.sap.com/s4hana\\_op\\_1909](https://help.sap.com/s4hana_op_1909), enter *Setting Parameters in SAP Fiori Customizing* into the search bar, press , and open the search result with that title.

## 7.5 Installation of SAP CoPilot

SAP CoPilot enables a humanized user experience for your SAP applications and is an optional addition to your SAP S/4HANA system. It is a digital assistant that allows you to accomplish tasks without having to navigate away from the context of your screen. You can add and create objects and notes on-the-go through conversation in the app. You can use SAP CoPilot on your phone, desktop, or through an external channel.

To use SAP CoPilot skills and the digital assistant capabilities for SAP S/4HANA, a separate purchase may be required.

For more information about SAP CoPilot, see [https://help.sap.com/viewer/p/SAP\\_COPILOT](https://help.sap.com/viewer/p/SAP_COPILOT).

## 7.6 Integration of SAP S/4HANA with SAP Cloud Platform Using SAP Cloud Connector

The SAP Cloud Connector serves as a link between SAP Cloud Platform applications and on-premise systems. If you are entitled to use SAP Cloud Platform services and applications, you can install the SAP Cloud Connector and use it to connect SAP S/4HANA to the SAP Cloud Platform Neo environment. You find information about how to do this in SAP Note [2610956](#).

## 7.7 Installation of the PI Adapters for Elster and Swift

The Advanced Adapter Engine Extended (AEX) is required for the installation of the Process Integration Adapters for Elster and Swift. AEX is part of SAP S/4HANA as described in the section [Product Information \[page 11\]](#). For more information about Elster and Swift, see also SAP Notes [1802839](#) and [1064419](#).

You have the following two options how to install the Elster/Swift adapters:

### 1 Installation from DVD

With this option, you copy the archives from the DVD location `\S4HANA10JAVA\DATA_UNITS\S4_JAVA` to the directory `/usr/sap/trans/EPS/` and use the Software Update Manager (SUM) to deploy the files using the option *Manually prepared directory*.

For more information how to use the SUM tool, see SUM guides at <https://support.sap.com/sltoolset>  
► *Software Logistics Toolset 1.0* ► *System Maintenance* . Select the guide according to your operating systems and database.

### 2 Installation with Maintenance Planner

With this option, you use Maintenance Planner to generate a stack XML file with the Elster and Swift support package stack information that you then hand over to the Software Update Manager (SUM) tool.

You access the Maintenance Planner tool and its *User Guide* at <http://help.sap.com/maintenanceplanner>.

## 7.8 Creating RFC Destinations for liveCache Applications

You use this procedure to use liveCache across clients, for example, to initialize liveCache correctly.

1. Create a user with the following authorizations in all production clients:

- Cross-application AAAB authorization objects  
Authorization object: S\_TCODE Value: SE38  
Authorization object: S\_RFC Activity: 16  
Name of RFC object to be protected : /SAPAPO/DM\_LC\_SYNC, SYST  
Type of RFC object to be protected : FUGR
- Basis development environment BC\_C  
Authorization object: S\_DEVELOP Value: 03, 16  
Authorization object: S\_PROGRAM  
User action ABAP/4 program : \*  
Authorization gr.ABAP/4 program : (no input necessary)
- Basis administration BC\_A

Authorization object: 'S\_BTCH\_JOB'

User action: 'RELE'

### i Note

Ensure that the user no longer has the initial password in any of the clients.

2. In each client, create a RFC destination by performing the following substeps:
  1. Start transaction SM59.
  2. Choose *Create*.
3. Add a **CLNT** string and the client number (for example, "678") to your system ID (for example, "XYZ") to determine the connection name.

### i Note

This constitutes the connection name (for example, "XYZCLNT678"). You must adhere to this naming convention as ABAP does not recognize other names, for example, "XYZMAND678", and causes errors. If there is already a connection with the same destination but a different name, you must still create the connection as described. "

4. Enter the connection name in RFC destination.
5. As a connection type, choose "3" (= SAP S/4HANA backend system destination or connection to the ABAP system).
6. Enter a description for the destination.
7. In the *Logon* section, enter the user credentials of the user created in this client in step 1.

### i Note

Ensure that the password is no longer initial, and do not select **Current User**.

8. Save the changes.

## Verifying the Above Steps

To check that you have carried out all the steps correctly, choose *Remote Login*.

The system should display an SAP S/4HANA backend system window, but not an SAP S/4HANA backend system logon screen. If the system displays an SAP S/4HANA backend system logon screen, check if all steps above were performed correctly, you should check whether or not the user is actually available in this client (in particular). This test is not possible with an RFC destination with a CPIC user.

### i Note

You create the same user in each client only once. You must, however, ensure that the clients of the destination and user match. The user may also be a CPIC user. The authorization "Authorization object: S\_TCODE Value: SE38" and similar should be assigned here also. You should also check if you can implement SAP Note [536291](#).

## 7.9 Follow-Up Activities for Advanced Variant Configuration

### Integration of the Fiori UI into SAP GUI

You enable the integration of the Advanced Variant Configuration SAP Fiori UI in SAP GUI as described in the product assistance on the SAP Help Portal:


- Go to [https://help.sap.com/s4hana\\_op\\_1909](https://help.sap.com/s4hana_op_1909), enter *Configuration of SAP Fiori Infrastructure* into the search bar, press , open the search result with that title, and navigate to ► [Communication Channels](#) ► [ABAP Servers: Setup of Communication](#) ► [Creating System Alias for Applications](#) ►. Steps 1 to 3 in the documentation describe how to enable OData calls for the Fiori UI. Step 4 describes the settings required for enabling SAP GUI transactions in the SAP Fiori Launchpad and also contains important information about whitelisting.
- Go to [https://help.sap.com/s4hana\\_op\\_1909](https://help.sap.com/s4hana_op_1909), enter *Establish a Connection from Back-End System to Front-End Server* into the search bar, press , and open the search result with that title. This documentation describes how to set up a connection between the back-end system with a front-end server. This is necessary for activating the integrated SAP Fiori UI.
- In addition, you have to activate the following OData services on the front-end server:
  - LO\_VCHCLF
  - LO\_VCHCLF\_INTEGRATION\_LEGACY\_SRV

For information about how to activate services, go to [https://help.sap.com/s4hana\\_op\\_1909](https://help.sap.com/s4hana_op_1909), enter *SAP Fiori: App Implementation* into the search bar, press , open the search result with that title, and navigate to ► [Implementation Tasks on Front-End Server](#) ► [Activating OData Services](#) ►.

### Execute the Report VCH\_MASS\_MAINTENANCE

You use this report for the initial preparation of your variant configuration data for SAP S/4HANA Advanced Variant Configuration. For information about how to use the report, see the system documentation in transaction SE38 or SE80, click on the [Goto](#) menu, and select [Documentation](#).

### Post-Installation Steps for VCH AFL

An Application Function Library (AFL) extends the SAP HANA Database with functions required for business applications - specifically, the VCH AFL (Variant Configuration on SAP HANA) extends the SAP HANA Database with functions to run SAP S/4HANA Advanced Variant Configuration. After you have installed VCH AFL (SAP VCH AFL 1909.00), you need to do some post-installation steps for the VCH AFL described in SAP Note [2598627](#) .

#### i Note

For information about the installation of this component, see [Installation Documentation \[page 8\]](#): *SAP HANA Server Installation and Update Guide*.

## 7.10 Follow-Up Activities for Predictive Analytics integrator

To enable the use of Predictive Analytics integrator with SAP S/4HANA, perform the following steps:

Product	Supporting Documentation	Further Information
SAP HANA Automated Predictive Library.	For more information, go to the SAP Help Portal at <a href="https://help.sap.com">https://help.sap.com</a> , and search for ► <a href="#">SAP HANA Automated Predictive Library Reference Guide</a> ► <a href="#">Getting Started with SAP HANA APL</a> ► <a href="#">Installing SAP HANA APL</a> ►.	<p><b>i Note</b></p> <p>For more detailed information about the exact APL version required for Predictive Analytics integrator, please refer to SAP Note <a href="#">2631182</a> ►.</p>
Application Function Library (AFL), which includes SAP HANA Predictive Analysis Library.	For more information, go to the chapter called <i>Prerequisites</i> in the <i>SAP HANA Predictive Analysis Library (PAL) guide</i> on the SAP Help Portal at <a href="https://help.sap.com">https://help.sap.com</a>	<p>Choose the option to install PAL. The revision number of the AFL must match the revision number of SAP HANA. Ensure that the correct AFL role is assigned. Assign one of the following roles to the SAP HANA database user or ABAP technical user:</p> <ul style="list-style-type: none"> <li>• AFL__SYS_AFL_AFLPAL_EXECUTE</li> <li>• AFL__SYS_AFL_AFLPAL_EXECUTE_WITH_GRANT_OPTION</li> </ul>
Predictive Analytics integrator (UMML4HANA 1) Delivery Unit.	For more information, go to <a href="https://help.sap.com/viewer/p/SAP_HANA_PLATFORM">https://help.sap.com/viewer/p/SAP_HANA_PLATFORM</a> ► <a href="#">Development</a> ► <a href="#">SAP HANA Developer Guide (How to develop applications for SAP HANA Extended Application Services classic model using the SAP HANA studio, including modeling data and analytic views, and building application logic)</a> ► <a href="#">SAP HANA Application Lifecycle Management</a> ► <a href="#">Maintaining Delivery Units</a> ► <a href="#">Import a Delivery Unit</a> ►.	<p><b>i Note</b></p> <ol style="list-style-type: none"> <li>1. We suggest this path when searching for the correct Delivery Unit: ► <a href="#">Support Packages and Patches</a> ► <a href="#">By Alphabetical Index</a> ► <a href="#">SAP S/4HANA</a> ► <a href="#">UMML4HANA 1</a> ►.</li> <li>2. For more detailed information about the exact Predictive Analytics integrator (UMML4HANA 1) Delivery Unit version required, please refer to SAP Note <a href="#">2631182</a> ►.</li> </ol>
SAP HANA database user or ABAP technical user roles.	Assign the <code>sap.hana.pai::ExecutePAI</code> role to the SAP HANA database user or ABAP technical user, in order for them to access functionality such as training and executing models.	N/A

Product	Supporting Documentation	Further Information
Configuration.	For information on setting up the OData service and bgRFC Queue, you can refer to the chapters called <i>Setting up the OData Service</i> and <i>Setting up the bgRFC Queue</i> . For information on setting up the required authorization, go to the the chapters called <i>Configuring Business Roles for the Backend</i> and <i>Configuring Business Roles for the Frontend</i> .	<ul style="list-style-type: none"> <li>• <a href="#">Setting up the OData Service [page 31]</a></li> <li>• <a href="#">Setting up the bgRFC Queue [page 35]</a></li> <li>• <a href="#">Configuring Business Roles for the Backend [page 36]</a></li> <li>• <a href="#">Configuring Business Roles for the Frontend [page 39]</a></li> </ul>

## 7.10.1 Setting up the OData Service

Setting up the OData service for *Predictive Models* and *Predictive Scenarios* apps.

The Open Data Protocol (OData) is a standardized protocol for exposing and accessing information from various sources. OData is based on core protocols, including HTTP, AtomPub (Atom Publishing Protocol), XML, and JSON (Java Script Object Notation).

OData provides a standard API on service data and metadata presentation and data operations. Use OData version 2.0.

For access to *Predictive Models* and *Predictive Scenarios* apps, you need to register the OData Service as the backend server. The steps for doing this will be different depending on how the servers are configured. The main configuration tasks are as follows:

- Configure the OData service backend server.
- Configure the OData service frontend server. (Only required where the frontend and backend servers are on different machines)

## 7.10.1.1 Setting up OData - Configuring the Backend Server for Predictive Models App

How to set up the backend server for the OData service for the *Predictive Models* app.

### Context

For the *Predictive Models* app you need to register the OData service as the backend server. To do so, perform the following steps:

### Procedure

1. Open SAP-Logon.
2. Enter the transaction */IWFND/MAINT\_SERVICE* in the top left side of the user interface.
3. Select *Add Service*.
4. Select the *System Alias* field.
5. Select the icon to open the *SAP System Alias* window.
6. In the *SAP System Alias* window, select *Local*.
7. Select the *OK* button to confirm the selection.
8. In the *External Service Name* field, search for *ANA\_PAI\_REPOSITORY\_SRV*
9. Select *Enter* to search.

The result is shown in the *Select Backend Services* panel in the column *Technical Service Name*.

10. Select the service name in the listing.

The *Add Service* window opens.

11. In *Add Service* window, for *Package Assignment*, select *Local Object*, or assign a suitable package as required.
12. Select the icon to accept.
13. The *Information* window opens, confirming that the service was created.

### Next Steps

If the OData backend and frontend servers are installed on different machines, then you will need to perform additional configuration on the OData frontend server.



## 7.10.1.2 Setting up OData - Configuring the Backend Server for Predictive Scenarios App

How to set up the backend server for the OData service for the *Predictive Scenarios* app.

### Context

For the *Predictive Scenarios* app, you need to register the OData Service as the backend server. The *ANA\_PAI\_PF\_SRV* service is used in conjunction with SAP Predictive Factory or SAP Analytics Cloud Smart Predict to create the draft predictive scenarios. The *ANA\_PAI\_PS\_SRV* service is used by the Fiori app to display or update draft predictive scenarios, and display published ones. Perform the following steps for both:

### Procedure

1. Open SAP-Logon.
2. Enter the transaction */IWFND/MAINT\_SERVICE* in the top left side of the user interface.
3. Select *Add Service*.
4. Select the *System Alias* field.
5. Select the icon to open the *SAP System Alias* window.
6. In the *SAP System Alias* window, select *Local*.
7. Select the *OK* button to confirm the selection.
8. In the *External Service Name* field, search for *ANA\_PAI\_PS\_SRV* and *ANA\_PAI\_PF\_SRV*.
9. Select *Enter* to search.

The results are shown in the *Select Backend Services* panel in the column *Technical Service Name*.

10. Select the service names in the listing.

The *Add Service* window opens.

11. In *Add Service* window, for *Package Assignment*, select *Local Object*, or assign a suitable package as required.
12. Select the icon to accept.
13. The *Information* window opens, confirming that the service was created.

### Next Steps

If the OData backend and frontend servers are installed on different machines then you will need to perform additional configuration on the OData frontend server.

## 7.10.1.3 Setting up OData - Configuring the Frontend Server

How to set up the frontend service for the OData service for *Predictive Models* and *Predictive Scenarios* apps.

### Context

SAP S/4HANA provides an interface through which you can also integrate predictive use cases from another system, currently SAP Predictive Factory or SAP Analytics Cloud Smart Predict. In scenarios, where the backend and frontend servers are on different machines, you need to perform the following steps on the frontend server:

### Procedure

1. Open SAP-Logon.
2. On the upper left enter transaction `/IWFND/MAINT_SERVICE`.
3. Select *Add Service*.
4. Click the field *SAP System Alias*. Click the search button. The *SAP System Alias* window opens.
5. Select the appropriate server name where your service is running. Confirm this selection by double-clicking. **Note:** The frontend server communicates with the backend server using RFC (Remote Function Call).
6. Search for a backend service (the PAi backend service that you previously created) to add by entering part of the service name, enclosed in \* characters. Press enter, and the search result is listed in the *Select Backend Services* panel in the column *Technical Service Name*. Click on the service name in the listing. The *Add Service* window opens.
7. In the *Add Service* window, in the *Package Assignment* field, select *Local Object for Package Assignment* or specify suitable package as required. Click accept.
8. An *Information* popup window should appear, confirming that the service was created. Click the accept button to confirm that the process has been completed.

## 7.10.2 Setting up the bgRFC Queue

How to configure background processing with the bgRFC Queue.

### Context

You need to configure the settings for background processing with the bgRFC Queue. Do the following:

### Procedure

1. Log on to the SAP backend system using the SAP GUI.
2. Access the activity using the transaction code: *SBGRFCCONF*.
3. On the *bgRFC Configuration* screen, choose the *Define Supervisor Dest* tab page.
4. On the *Define Supervisor Dest.* tab page, choose *Create*.
5. In the *Create RFC Destination for Supervisor* dialog box, maintain the following data:

Field Name	Value
Destination Name	BGRFC_SUPERVISOR
Create User	This should be checked.
User Name	BGRFC_SUPER
Password	Enter a password.

6. Choose *Save*.
7. On the *bgRFC Configuration* screen, choose *Save*.
8. On the *bgRFC Configuration* screen, choose the *Define Inbound Dest.* tab page.
9. On the *Define Inbound Dest* tab page, choose *Create*.
10. On the *Configure Inbound Destination* screen, maintain the following settings:

Field Name	Value
Inb. Dest. Name	QD_EQ_LOCAL
Add Queue Prefix	EQQD_

11. In the *Add Queue Prefix* screen area, choose *Add*.
12. Choose *Save*.
13. On the *Scheduler: Destination* tab page, choose *Create*.
14. In the *bgRFC Configuration* dialog box, choose *Inbound*.

15. On the *Create Scheduler Settings for Inbound Destination* screen, choose the *QD\_EQ\_LOCAL* destination.
16. Choose *Save*.
17. Choose *Save* again.
18. Choose *Back*.

## 7.10.3 Configuring Business Roles for the Backend

Configuring business roles for the backend.

Backend roles should be assigned based on the *Predictive Models* app and *Predictive Scenarios* app user's needs. Backend roles should include the necessary PAi authorizations as described in the following chapters: *Backend Authorization for Predictive Scenarios* and *Backend Authorization for Predictive Models*.

### Related Information

[Backend Authorization for Predictive Scenarios \[page 36\]](#)

[Backend Authorization for Predictive Models \[page 38\]](#)

### 7.10.3.1 Backend Authorization for Predictive Scenarios

How to perform backend ABAP role configuration for predictive scenarios.

#### Context

Additional configuration is required for PAi-specific authorizations, which grant roles access to predictive scenarios and predictive models.

You will need to authorize a role to call the PAi OData service (ANA\_PAi\_PS\_SRV) using the OData service authorization object (S\_SERVICE).

You also need to add authorizations for the authorization objects RSANAUMMPS and S\_DEVELOP, which are required for predictive analytics.

#### Procedure

To add authorizations, follow these steps:

1. In the SAP backend system, access the activity using the transaction code PFCG or on the IMG menu, navigate to *Tools > Administration > User Maintenance > Role Administration > Roles*.

2. On the *Role Maintenance* screen, create a new role. Enter the name of your role.
3. Select *Single Role*.
4. Enter a description and save your created role.
5. Select the *Menu* tab.
6. Select the *SAP Fiori Tile Catalog* from the *Insert Node* dropdown menu.
7. Select the *Remote Front-End Server* radio button and provide the RFC variable or the RFC destination to establish a connection to the front-end server.
8. Enter the catalog *SAP\_CA\_BC\_ANA\_UMM\_PSC*.
9. Select *Enter* to continue.
10. Select *Save*.
11. Select the *Authorizations* tab.
12. Select *Expert Mode for Profile Generation*.
13. Select *Read old status and merge with new data* and choose *OK*.

This step is not always required. If you don't see *Read old status and merge with new data*, you can ignore this step.

14. Modify the authorization objects and populate the fields with these values:

Authorization Data

Authorization Object	Field	Value in Business Catalog Role
RSANAUMMPS	ACTVT	Add or Create, Change, Display, Delete (01, 02, 03, 06)
	PRED_SCEN	<PS_NAME>
	PAI_OTYPE	PSCENARIO, MCONTEXT, ENHMO-DEL, MVERSION
S_DEVELOP	DEVCLASS	<Package>
	OBJTYPE	PAI1
	OBJNAME	<PS_NAME>
	P_GROUP	*
	ACTVT	Create (01)
S_DEVELOP	DEVCLASS	<Package>
	OBJTYPE	DDLS
	OBJNAME	<PS_NAME>_TF01
	P_GROUP	*
	ACTVT	Add or Create, Change, Display, Delete, Activate, generate (01, 02, 03, 06, 07)
S_DEVELOP	DEVCLASS	<Package>
	OBJTYPE	DDLS
	OBJNAME	<PS_NAME>_CDS01

Authorization Object	Field	Value in Business Catalog Role
	P_GROUP	*
	ACTVT	Add or Create, Change, Display, Delete, Activate, generate (01, 02, 03, 06, 07)
S_DEVELOP	DEVCLASS	<Package>
	OBJTYPE	VIEW
	OBJNAME	Z_*
	P_GROUP	*
	ACTVT	Display, Create in DB, Convert to DB (03, 40, 42)

15. On *Exit Authorization Maintenance*, select *Save*.

16. Select *Generate*.

## 7.10.3.2 Backend Authorization for Predictive Models

How to perform backend ABAP role configuration for Predictive Models.

### Context

Additional configuration is required for PAi-specific authorizations, which grant roles access to predictive scenarios and predictive models.

You will need to authorize a role to call the PAi OData service (ANA\_PAi\_REPOSITORY\_SRV) using the OData service authorization object (S\_SERVICE).

You also need to add authorizations for the authorization object RSANAUMMPS, which is required for predictive analytics.

To add authorizations for RSANAUMMPS, do the following:

### Procedure

1. In the SAP backend system, access the activity using the transaction code PFCG or on the IMG menu, navigate to *Tools > Administration > User Maintenance > Role Administration > Roles*.
2. On the *Role Maintenance* screen, create a new role. Enter the name of your role.
3. Choose *Single Role*.
4. Enter a description and save your created role.
5. Select the *Menu* tab.

6. Select the *SAP Fiori Tile Catalog* from the *Insert Node* dropdown menu.
7. Select the *Remote Front-End Server* radio button and provide the RFC variable or the RFC destination to establish a connection to the front-end server.
8. Enter the catalog *SAP\_CA\_BC\_ANA\_UMM*.
9. Select *Enter* to continue.
10. Select *Save*.
11. Choose the *Authorizations* tab.
12. Modify the authorization objects and populate the fields with these values:

Authorization Data

Authorization Object	Field	Value in Business Catalog Role
RSANAUMMPS	ACTVT	Read (03)
	PRED_SCEN	Enter the name of the business case. <b>&lt;PAi Predictive Scenario Name&gt;</b>
	PAI_OTYPE	PSCENARIO, MCONTEXT, ENHMODEL
RSANAUMMPS	ACTVT	Create, Change, Read, and Delete (01,02,03,06)
	PRED_SCEN	Enter the name of the business case. <b>&lt;PAi Predictive Scenario Name&gt;</b>
	PAI_OTYPE	MVERSION

13. On *Exit Authorization Maintenance*, select *Save*.
14. Select *Generate*.

## 7.10.4 Configuring Business Roles for the Frontend

Configuring ABAP frontend role authorization for *Predictive Models* and *Predictive Scenarios* apps.

### Authorization and Roles

All access to data and the execution of actions in the system requires authorization. The user must have authorization privileges to perform an operation, and to access the object to which the operation applies. Privileges can be granted to users either directly, or indirectly through roles.

A role is simply a set of access privileges. Roles are the standard mechanism for granting privileges. They allow you to implement different hierarchies of user access that can be modeled on business roles.

If you are using the SAP Fiori Launchpad as the user interface, you must have roles assigned to your Fiori user in the NetWeaver Gateway system.

## SAP Business Roles

SAP delivers a wide range of business roles as templates for customers. The analytics specialist role called `SAP_BR_ANALYTICS_SPECIALIST`, includes Fiori frontend role menu authorizations for the *Predictive Models* and *Predictive Scenarios* apps. It also gives you access to several other catalogs and groups.

To get the necessary privileges for using all features of the *Predictive Models* and *Predictive Scenarios* apps, further configuration is required for the frontend and backend of the system. To validate and train predictive models, the user needs the necessary privileges for the *Predictive Models* app. To review and publish custom predictive use cases, the user needs the necessary privileges for the *Predictive Scenarios* app.

## Related Information

[Frontend Authorization for Predictive Models \[page 41\]](#)

[Frontend Authorization for Predictive Scenarios \[page 40\]](#)

### 7.10.4.1 Frontend Authorization for Predictive Scenarios

How to perform frontend ABAP role configuration for predictive scenarios.

## Context

### Creating Frontend Authorizations

To utilize the PAi Fiori application, two Fiori (frontend) role menu authorizations are required:

- Predictive Scenarios Fiori Tile Catalog (object `SAP_CA_BC_ANA_UMM_PSC`)
- Predictive Models Fiori Tile Group (object `SAP_CA_BCG_ANA_UMM`)

This section briefly describes how you create a frontend authorization role using the PFCG (Profile Generator) transaction code.

Transaction code PFCG is for role maintenance and administration and allows you to manage roles and authorization data. It automatically creates authorization data based on selected menu functions which can then be fine-tuned as required.

### Creating PFCG Authorizations

Access to Fiori app catalogs and groups is controlled by PFCG authorizations in the ABAP frontend server. Access is granted to end users by assigning roles. You need to add authorizations for Fiori tile catalog (object name `SAP_CA_BC_ANA_UMM_PSC`) and Fiori tile group (object name `SAP_CA_BCG_ANA_UMM`).



To create a role for *Predictive Scenarios* app Fiori tile, do the following:

## Procedure

1. In the ABAP frontend server, access the activity using the transaction code PFCG.
2. On the Role Maintenance screen, input Role using a suitable role name for use with PAi. Choose *Single Role*.
3. Enter a description and save your created role.
4. Select the *Menu* tab.
5. Select *SAP Fiori Tile Catalog* and as *Catalog ID*, enter SAP Fiori Tile Catalog *SAP\_CA\_BC\_ANA\_UMM\_PSC* - Predictive Scenarios.
6. Select *SAP Fiori Tile Group* and as *Group ID*, enter SAP Fiori Tile Group *SAP\_CA\_BCG\_ANA\_UMM* - Predictive Models.
7. Select *Save*.
8. Select *Generate*.

## 7.10.4.2 Frontend Authorization for Predictive Models

How to perform frontend ABAP role configuration for predictive models.

### Context

#### Creating Frontend Authorizations

To utilize the PAi Fiori application, two Fiori (frontend) role menu authorizations are required:

- Predictive Models Fiori Tile Catalog (object *SAP\_CA\_BC\_ANA\_UMM*)
- Predictive Models Fiori Tile Group (object *SAP\_CA\_BCG\_ANA\_UMM*)

This section briefly describes how you create a frontend authorization role using the PFCG (Profile Generator) transaction code.

Transaction code PFCG is for role maintenance and administration, and allows you to manage roles and authorization data. It automatically creates authorization data based on selected menu functions, which can then be fine-tuned as required.

#### Creating PFCG Authorizations

Access to Fiori app catalogs and groups is controlled by PFCG authorizations in the ABAP frontend server. Access is granted to end users by assigning roles. You need to add authorizations for Fiori tile catalog (object name *SAP\_CA\_BC\_ANA\_UMM*) and Fiori tile group (object name *SAP\_CA\_BCG\_ANA\_UMM*).

To create a role for *Predictive Models* apps Fiori tile, do the following:

## Procedure

1. In the ABAP frontend server, access the activity using the transaction code PFCG.
2. On the Role Maintenance screen, input Role using a suitable role name for use with PAi. Choose *Single Role*.
3. Enter a description and save your created role.
4. Select the *Menu* tab.
5. Select *SAP Fiori Tile Catalog* and as *Catalog ID*, enter SAP Fiori Tile Catalog *SAP\_CA\_BC\_ANA\_UMM - Predictive Models*.
6. Select *SAP Fiori Tile Group* and as *Group ID*, enter SAP Fiori Tile Group *SAP\_CA\_BCG\_ANA\_UMM - Predictive Models*.
7. Select *Save*.
8. Select *Generate*.

## 7.11 Follow-Up Activities for Analytics and Planning

To enable the use of Analytics with SAP S/4HANA, you need to set up the Analytic Engine. For information how to do so, see SAP Note [2289865](#).

To set up embedded BW Reporting as well as SAP BPC for SAP S/4HANA for Finance purposes, please follow the instructions in SAP Note [1972819](#).

## 7.12 Follow Up Activities in Master Data Governance

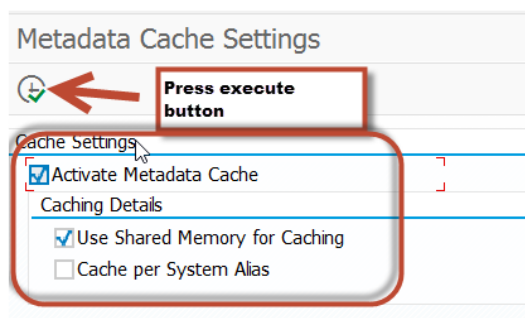
### Gateway Buffering in Test Systems

To avoid very slow performance, the metadata cache and usage of shared memory for caching options need to be activated. In productive systems, metadata caching is active by default. However, if you are working in test systems you have to activate the Gateway metadata caching (buffering) manually. These settings have to be performed on the frontend system where the Gateway server is installed.

To manually activate these settings, in a test system, you do the following:

1. Go to the Gateway system with transaction `/IWFND/MED_ACTIVATE`, or in Customizing by the IMG path  
▶ *SAP NetWeaver* ▶ *SAP Gateway* ▶ *OData Channel* ▶ *Administration* ▶ *Cache Settings* ▶ *Metadata* ▶  
*Activate or Deactivate Cache*. ▶
2. Select the *Activate Metadata Cache* check box

3. Select the *Use Shared Memory for Caching* check box



#### Manually Applying Settings

## 7.13 Follow-Up Activities for Environment, Health, and Safety

After the installation, you need to carry out the following activities for *Environment, Health, and Safety*:

- In transaction SICF, activate all EHFND\* and EHHSS\* WebDynpro services below the node / default\_host/sap/bc/webdynpro/sap/.
- Activate the SAPUI5 application handler on the path /default\_host/sap/bc/ui5\_ui5 and on the path /default\_host/sap/public/bc/ui5\_ui5.
- Copy the delivery Customizing from client 000 into your other clients.
- Make the relevant settings in the Customizing activities for *Environment, Health, and Safety* under *Foundation for EHS* and under *Incident Management*, under *Health and Safety Management*, or under *Environment Management*.

### i Note

In *SAP S/4HANA*, a new identity model for business users was introduced. You need to create business users before you can use the functions in *Environment, Health, and Safety*.

For more information about creating business users, see SAP Note [2570961](#).

## 7.14 Follow-Up Activities for Management of Change

After the installation, you need to carry out the following activities for Management of Change:

- In transaction `SICF`, activate the following WebDynpro services below the node /  
`default_host/sap/bc/webdynpro/moc/`:
  - `WDA_ACTIVITY`
  - `WDA_ACTIVITY_CHANGE_LOG`
  - `WDA_CHANGE_REQUEST`
  - `WDA_CHGREQ_CHANGE_LOG`
- Also activate the following services:
  - NWBC runtime node on the path /`default_host/sap/bc/nwbc`.
  - SAPUI5 application handler on the path /`default_host/sap/bc/ui5_ui5` and on the path /  
`default_host/sap/public/bc/ui5_ui5`.
- Copy the delivery Customizing from client 000 into your other clients.
- Make the relevant settings in the Customizing activities for Management of Change under ► [Cross-Application Components](#) ► [Management of Change](#) ▾.
- Example Customizing is delivered with the hierarchical BC set /`MOC/EXAMPLE_CUSTOMIZING`.

## 7.15 Follow-Up Activities for Enterprise Portfolio and Project Management

### 7.15.1 Follow-Up Activities for SAP Portfolio and Project Management

#### Navigation

To enable the navigation, carry out the following manual steps:

1. Maintain the Customizing settings in SAP Portfolio and Project Management under ► [Portfolio Management](#) ► [Global Customizing](#) ► [Process and Service Settings](#) ► [Navigation Settings](#) ▾. SAP delivers the Customizing entries as standard in the Customizing client.
2. From the delivery client, copy the data from the Customizing tables mentioned below using transaction /`n/RPM/CUST_COPY`:
  - /`RPM/DASH_PERS`: Dashboard Customization
  - /`RPM/DASH_ROLE`: Dashboard Attributes Override Table
  - /`INM_NAV_CTX`: INM Navigation Context

- INM\_NAV\_CTX\_W: INM Navigation Context Workcenter
  - INM\_NAV\_INF\_W: INM Navigation Information
3. Manually adjust and compare the Customizing data with the delivery client using transaction SCU0.
  4. Initially all dashboard fields are displayed as standard fields. With this, it is not possible to navigate to the object windows. To activate the links to the object windows, select the *Link* checkbox in Customizing for SAP Portfolio and Project Management under **Portfolio Management > Global Customizing > Global Field Settings > Dashboard Settings > Define Fields for Dashboards**.  
You can also copy the Customizing for the dashboards by copying /RPM/DASHBOARD using transaction /n/RPM/CUST\_COPY.

### ⚠ Caution

This transaction copies the standard Customizing for all dashboards and invalidates all customer-specific Customizing for the dashboards. Object-type-specific copying is not supported by transaction /n/RPM/CUST\_COPY.

## 7.15.2 Follow-Up Activities for Commercial Project Management

### 7.15.2.1 Overall Implementation Sequence

This section describes the implementation sequence for Project Workspace, Project Cost and Revenue Planning, and Project Issue and Change Management.

The Release Information Note (SAP Note [2824068](#)) contains important information and references related to Commercial Project Management. Based on your business needs, you can choose one of the following component combinations as a deployment option:

Deployment Option	Project Workspace	Project Cost and Revenue Planning	Project Issue and Change Management	SAP BusinessObjects Analysis for Microsoft Office (Analysis Office)
Option 1	x	x	x	x
Option 2	x	x		x
Option 3	x		x	x
Option 4	x			x

### i Note

By default, sample workbooks are delivered as front-end applications for planning. These sample workbooks require Analysis Office and use the delivered BW-IP content.

As an alternative, you may build your own front-end application using SAP Lumira. Please note that no sample application is delivered by default. For more information, see the following: .

- [SAP Lumira](#)
- [Application Designer Guide: Designing Analysis Applications](#)

## Option 1

Install Project Workspace, Project Cost and Revenue Planning, and Project Issue and Change Management with Analysis Office (AO):

1. Activate the `/CPD/CA_CPD_PWS_1` business function (see transaction `SFW5` ► [Enterprise Business Functions](#) ► `/CPD/CA_CPD_PWS_1` ►).

### Note

The activation of the business function `OPS_PS_CI_1` is a prerequisite for working with Project System (PS) projects.

2. Activate the `/CPD/CA_CPD_PFP_1` business function (see transaction `SFW5` ► [Enterprise Business Functions](#) ► `/CPD/CA_CPD_PFP_1` ►).
3. Activate the `/PICM/CA_CPD_PICM_1` business function (see transaction `SFW5` ► [Enterprise Business Functions](#) ► `/PICM/CA_CPD_PICM_1` ►).
4. Install NWBC for Desktop (optional).
5. If you wish to use workbooks as the front-end, install Analysis Office (see SAP note [2188859](#) ►).
6. Enable [Planning Application Kit](#) (PAK). PAK allows you to use the workbooks of SAP BusinessObjects Analysis, edition for Microsoft Office as part of the Commercial Project Management content.

### Procedure

1. Get the latest information posted in SAP note [1637199](#) ►.
2. In the 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, select the checkbox.
7. Commercial Project Management uses the BW layer that is available in each NetWeaver stack.

### Caution

Project Cost and Revenue Planning uses BW Integrated Planning (BW-IP), which uses real-time InfoCubes to capture data generated through input-ready queries and planning functions. Therefore, only a configuration of the local BI client is required (and not an additional BI system).

For setting up Project Cost and Revenue Planning, see SAP note [2363617](#) ►.

8. You must activate the analytics content under info-areas `/CPD/AVR` and `/PICM/AVR`. For information about setting up Analytics, see SAP Note [1999149](#) ►.
9. To link generated SQL views of CDS views to HANA views, implement SAP Note [2725814](#) ►.
10. You must follow these steps to enable delivery customizing in the relevant clients:
  1. Go to transaction `SFW_BROWSER`.
  2. Expand the business function `/CPD/CA_CPD_PWS_1`.

3. Double-click on switch `/CPD/CA_CPD_SFWS_PWS_1` to implement BC set activation.
4. Choose the *Activate Dependent BC Sets* button.
5. In the dialog box, select *Activate Switch BC Sets* and choose *Continue*.
6. In the next dialog box, select the following:
  1. *Only Logon client for Cascading BC Sets*
  2. *Activate in logon client for Non-Cascading BC sets*
  3. *Activate for Cross-Client BC sets*
  4. Select the checkboxes to ignore previous activations and ignore table delivery class for a new installation.
7. Repeat the BC set activation steps for the switch `/CPD/CA_CPD_SFWS_PWS_S4_1`.
8. Expand the business function `/CPD/CA_CPD_PFP_1`.
9. Repeat the BC set activation steps for the switch `/CPD/CA_CPD_SFWS_PFP_1`.
10. Expand the business function `/PICM/CA_CPD_PICM_1`.
11. Repeat the BC set activation steps for the switch `/PICM/CA_CPD_SFWS_PICM_1`.
11. Check and activate SICF services as follows:
  1. Go to transaction `SICF`.
  2. Choose *Execute*.
  3. Go to `▶ default host ▶ sap ▶ bc ▶ webdynpro ▶`.
  4. Ensure that all services under the `cpd` node are active.
  5. Ensure that all services under the `picm` node are active.
12. BRF+ framework is used within analytics and in the processing of change requests in Project Issue and Change Management. Import the BRF+ customizing application as follows:
  - **Client 000**
    1. Run the report `FDT_TRANS`.
    2. Provide the relevant customizing request.
    3. Enter the object ID as `38EAA71741841EE59EFAD4B491883514`.
    4. Enter the object ID as `F0D5105146757029E10000000A42852B`.
    5. Select the *Transport Whole Application(s)* radio button.
  - **Productive Client**
    1. Launch the transaction `SCC1`.
    2. Enter the source client as `000`.
    3. Provide the transport request in which you have transported the application (from client 000).
    4. Select the *Include Tasks in Requests* checkbox.
    5. Execute the transaction.

## Option 2

Install Project Workspace and Project Cost and Revenue Planning with Analysis Office (AO):

1. Activate the `/CPD/CA_CPD_PWS_1` business function (see transaction `SFW5 ▶ Enterprise Business Functions ▶ /CPD/CA_CPD_PWS_1 ▶`).

## Note

The activation of the business function `OPS_PS_CI_1` is a prerequisite for working with Project System (PS) projects.

2. Activate the `/CPD/CA_CPD_PFP_1` business function (see transaction `SFW5` ► [Enterprise Business Functions](#) ► `/CPD/CA_CPD_PFP_1` ►).
3. Install NWBC for Desktop (optional).
4. If you wish to use workbooks as the front-end, install Analysis Office (see SAP note [2188859](#) ►).
5. Enable [Planning Application Kit](#) (PAK). PAK allows you to use the workbooks of SAP BusinessObjects Analysis, edition for Microsoft Office as part of the Commercial Project Management content.

### Procedure

1. Get the latest information posted in SAP note [1637199](#) ►.
  2. In the 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, select the checkbox.
6. Commercial Project Management uses the BW layer that is available in each NetWeaver stack.

## Caution

Project Cost and Revenue Planning uses BW Integrated Planning (BW-IP), which uses real-time InfoCubes to capture data generated through input-ready queries and planning functions. Therefore, only a configuration of the local BI client is required (and not an additional BI system).

For setting up Project Cost and Revenue Planning, see SAP note [2363617](#) ►.

7. You must activate the analytics content under info-area/`CPD/AVR`. For information about setting up Analytics, see SAP Note [1999149](#) ►.
8. To link generated SQL views of CDS views to HANA views, implement SAP Note [2725814](#) ►.
9. You must follow these steps to enable delivery customizing in the relevant clients:
  1. Go to transaction `SFW_BROWSER`.
  2. Expand the business function `/CPD/CA_CPD_PWS_1`.
  3. Double-click on switch `/CPD/CA_CPD_SFWS_PWS_1` to implement BC set activation.
  4. Choose the [Activate Dependent BC Sets](#) button.
  5. In the dialog box, select [Activate Switch BC Sets](#) and choose [Continue](#).
  6. In the next dialog box, select the following:
    1. [Only Logon client for Cascading BC Sets](#)
    2. [Activate in logon client for Non-Cascading BC sets](#)
    3. [Activate for Cross-Client BC sets](#)
    4. Select the checkboxes to ignore previous activations and ignore table delivery class for a new installation
  7. Repeat the BC set activation steps for the switch `/CPD/CA_CPD_SFWS_PWS_S4_1`.
  8. Expand the business function `/CPD/CA_CPD_PFP_1`.
  9. Repeat the BC set activation steps for the switch `/CPD/CA_CPD_SFWS_PFP_1`.
10. Check and activate SICF services as follows:
  1. Go to transaction `SICF`.



2. Choose *Execute*.
  3. Go to [▶ default host ▶ sap ▶ bc ▶ webdynpro ▶](#).
  4. Ensure that all services under the `cpd` node are active.
11. BRF+ framework is used within analytics. Import the BRF+ customizing application as follows:
- **Client 000**
    1. Run the report `FDT_TRANS`.
    2. Provide the relevant customizing request.
    3. Enter the object ID as `38EAA71741841EE59EFAD4B491883514`.
    4. Select the *Transport Whole Application(s)* radio button.
  - **Productive Client**
    1. Launch the transaction `SCC1`.
    2. Enter the source client as **000**.
    3. Provide the transport request in which you have transported the application (from client 000).
    4. Select the *Include Tasks in Requests* checkbox.
    5. Execute the transaction.




## Option 3

Install Project Workspace and Project Issue and Change Management with Analysis Office (AO):

1. Activate the `/CPD/CA_CPD_PWS_1` business function (see transaction `SFW5 ▶ Enterprise Business Functions ▶ /CPD/CA_CPD_PWS_1 ▶`).

### i Note

The activation of the business function `OPS_PS_CI_1` is a prerequisite for working with Project System (PS) projects.

2. Activate the `/PICM/CA_CPD_PICM_1` business function (see transaction `SFW5 ▶ Enterprise Business Functions ▶ /PICM/CA_CPD_PICM_1 ▶`).
3. Install NWBC for Desktop (optional).
4. If you wish to use workbooks as the front-end, install Analysis Office (see SAP note [2188859](#) .
5. You must activate the analytics content under `info-areas/CPD/AVR` and `/PICM/AVR`. For information about setting up Analytics, see SAP Note [1999149](#) .
6. To link generated SQL views of CDS views to HANA views, implement SAP Note [2725814](#) .
7. You must follow these steps to enable delivery customizing in the relevant clients:
  1. Go to transaction `SFW_BROWSER`.
  2. Expand the business function `/CPD/CA_CPD_PWS_1`.
  3. Double-click on switch `/CPD/CA_CPD_SFWS_PWS_1` to implement BC set activation.
  4. Choose the *Activate Dependent BC Sets* button.
  5. In the dialog box, select *Activate Switch BC Sets* and choose *Continue*.
  6. In the next dialog box, select the following:
    1. *Only Logon client for Cascading BC Sets*
    2. *Activate in logon client for Non-Cascading BC sets*

3. [Activate for Cross-Client BC sets](#)
  4. Select the checkboxes to ignore previous activations and ignore table delivery class for a new installation.
  7. Repeat the BC set activation steps for the switch `/CPD/CA_CPD_SFWS_PWS_S4_1`.
  8. Expand the business function `/PICM/CA_CPD_PICM_1`.
  9. Repeat the BC set activation steps for the switch `/PICM/CA_CPD_SFWS_PICM_1`.
8. Check and activate SICF services as follows:
1. Go to transaction `SICF`.
  2. Choose *Execute*.
  3. Go to `default host > sap > bc > webdynpro`.
  4. Ensure that all services under the `cpd` node are active.
  5. Ensure that all services under the `picm` node are active.
9. BRF+ framework is used within analytics and the processing of change requests in Project Issue and Change Management. Import the BRF+ customizing application as follows:
- **Client 000**
    1. Run the report `FDT_TRANS`.
    2. Provide the relevant customizing request.
    3. Enter the object ID as `38EAA71741841EE59EFAD4B491883514`.
    4. Enter the object ID as `F0D5105146757029E10000000A42852B`.
    5. Select the *Transport Whole Application(s)* radio button.
  - **Productive Client**
    1. Launch the transaction `SCC1`.
    2. Enter the source client as `000`.
    3. Provide the transport request in which you have transported the application (from client 000).
    4. Select the *Include Tasks in Requests* checkbox.
    5. Execute the transaction.

## Option 4

Install Project Workspace with Analysis Office (AO):

1. Activate the `/CPD/CA_CPD_PWS_1` business function (see transaction `SFW5` [Enterprise Business Functions](#) `/CPD/CA_CPD_PWS_1`).

### i Note

The activation of the business function `OPS_PS_CI_1` is a prerequisite for working with Project System (PS) projects.

2. Install NWBC for Desktop (optional).
3. If you wish to use workbooks as the front-end application, install Analysis Office (see SAP note [2188859](#)).
4. You must activate the analytics content under the info-area `/CPD/AVR`. For information about setting up Analytics, see SAP Note [2188859](#).

5. To link generated SQL views of CDS views to HANA views, implement SAP Note [2725814](#).
6. You must follow these steps to enable delivery customizing in the relevant clients:
  1. Go to transaction `SFW_BROWSER`.
  2. Expand the business function `/CPD/CA_CPD_PWS_1`.
  3. Double-click on switch `/CPD/CA_CPD_SFWS_PWS_1` to implement BC set activation.
  4. Choose the *Activate Dependent BC Sets* button.
  5. In the dialog box, select *Activate Switch BC Sets* and choose *Continue*.
  6. In the next dialog box, select the following:
    1. *Only Logon client for Cascading BC Sets*
    2. *Activate in logon client for Non-Cascading BC sets*
    3. *Activate for Cross-Client BC sets*
    4. Select the checkboxes to ignore previous activations and ignore table delivery class for a new installation.
  7. Repeat the BC set activation steps for the switch `/CPD/CA_CPD_SFWS_PWS_S4_1`.
7. Check and activate SICF services as follows:
  1. Go to transaction `SICF`.
  2. Choose *Execute*.
  3. Go to `default host > sap > bc > webdynpro`.
  4. Ensure that all services under the `cpd` node are active.
8. BRF+ framework is used within analytics. Import the BRF+ customizing application as follows:
  - **Client 000**
    1. Run the report `FDT_TRANS`.
    2. Provide the relevant customizing request.
    3. Enter the object ID as `38EAA71741841EE59EFAD4B491883514`.
    4. Select the *Transport Whole Application(s)* radio button.
  - **Productive Client**
    1. Launch the transaction `SCC1`.
    2. Enter the source client as `000`.
    3. Provide the transport request in which you have transported the application (from client 000).
    4. Select the checkbox *Include Tasks in Requests*.
    5. Execute the transaction.

## 7.15.2.2 Settings for Project Workspace

### Schema Mapping

For the HANA content of Commercial Project Management, you must map the `SAP_ECC` schema to the `SAP <SID>` schema.

## Configuration of Display Options for Analytical Reports

Analytical UIBBs are used in Project Workspace to display reports such as Progress Analysis, Work in Progress, and Project Cost Status. By default, these reports are displayed in a SAP List Viewer (ALV) table. However, you can also choose to view these reports as a graphic, or a table and graphic, or using Crystal Reports. To enable additional options for displaying reports, it is necessary to make the following Customizing settings:

To configure options for Graphic and Table and Graphic displays, follow these steps:

1. In Customizing for SAP NetWeaver, choose ► [UI Technologies](#) ► [SAP List Viewer \(ALV\)](#) ► [Maintain Web Dynpro ABAP-Specific Settings](#) ►.
2. Select the [Java Server Available](#) checkbox.

### i Note

The display options are available in the frontend only if you also have enabled a Java server.

To configure options for Crystal Reports, follow these steps:

1. In Customizing for SAP NetWeaver, choose ► [UI Technologies](#) ► [SAP List Viewer \(ALV\)](#) ► [Maintain SAP GUI-Specific Settings](#) ►.
2. Select the [Allow Crystal Reports](#) checkbox.

### i Note

- Commercial Project Management does not deliver any Crystal Report template for viewing reports.
- Crystal reporting requires a special viewer in the frontend. This setting is only meaningful if this viewer has been installed. For more information, see SAP note [1353044](#) ►.

## Set-Up for Launching Native Transactions in Project Workspace

To launch native SAP transactions using the launchpad in Project Workspace, you must activate the MIME Repository service in the following way:

1. On the [SAP Easy Access](#) screen, choose ► [Tools](#) ► [Administration](#) ► [Administration](#) ► [Network](#) ► [HTTP Service Hierarchy Maintenance](#) ►.
2. On the [Maintain Services](#) screen, select the hierarchy type [Service](#) and choose [Execute](#).
3. In the [Virtual Hosts / Services](#) hierarchy, navigate to the MIME Repository service by choosing ► [default\\_host](#) ► [sap](#) ► [public](#) ► [bc](#) ► [its](#) ► [mimes](#) ►.
4. Right-click and choose [Activate Service](#).

## Definition of RFC Destinations for Charts

The Fiori-themed analytics content of Commercial Project Management uses charts based on WebDynpro ABAP technology. To connect the IGS (Internet Graphics Server) to the SAP system, you have to create an RFC destination in the SAP system. For more information, see SAP note [454042](#) ►.

## Activation of Relevant OData Services

In Commercial Project Management, the following OData services must be activated:

- CPD\_MASTERPROJECT\_OVERVIEW\_SRV
- CPD\_PROJECT\_ACTIVITIES\_SRV

## Installation and Upgrade of BW

For information about the new and changed objects in this release, see SAP note [2526289](#).

## Enabling Enterprise Search

In Commercial Project Management, the following search connectors must be set up:

- Commercial Project
  - Model Name: MASTERPROJECT\_H
  - Connector Name: Commercial Project
- Financial Plan
  - Model Name: FINANCIALPLAN\_H
  - Connector Name: Financial Plan
- Change Request
  - Model Name: CHANGEREQUEST\_H
  - Connector Name: Change Request (Commercial Project)
- Issue
  - ISSUECHANGEREQ\_H
  - Connector Name: Issue (Commercial Project)

The connector ID is generated automatically when the connector is created and the name of the connector can be edited. For more information, see SAP note [2382734](#).

## Role for Adding Fiori Apps in the Fiori Launchpad


To add the Fiori apps of Commercial Project Management in the Fiori launchpad, the following roles are required:

- SAP\_BR\_PROJECTMGR\_COMMPRJ (Project Manager (CPM))
- SAP\_BR\_PRJTEAMMEMBER\_COMMPRJ (Project Team Member (CPM))

## Set-Up for Linking Commercial Projects to CRM Opportunities

To be able to link commercial projects to CRM opportunities, you must provide the HTTP connection to the CRM system (by defining the RFC destination (CPD\_CRM) (connection type H)).

## Predefinition of Project Workspace Views

For the predefinition of Project Workspace views for the personalization for end users, see SAP note [2011052](#) .


## 7.15.2.3 Settings for Project Cost and Revenue Planning

### Schema Mapping


For the HANA content of Commercial Project Management, you must map the SAP\_ECC schema to the SAP <SID> schema.

### Set-Up of the Planning Group

After installing the latest SP of SAP BusinessObjects Analysis, edition for Microsoft Office, follow these steps to activate the default planning options in workbooks:

1. Launch a planning workbook and navigate to **File** > **Commercial Project** > **Settings** .
2. In the **Settings** dialog box, choose the **Advanced** tab, select **Show Planning Group**.
3. Close and relaunch the planning workbook.

### Set-Up of SAP Multiresource Scheduling (MRS)

Project Cost and Revenue Planning allows you to update staffing information in SAP Multiresource Scheduling. For more information about the compatibility of Commercial Project Management with SAP Multiresource Scheduling, see SAP Note [2363617](#) .

## Enhancing Workbooks for SAP BusinessObjects Analysis, edition for Microsoft Office

The delivered workbooks contain input-ready queries and planning objects, launched in a Microsoft Excel-based frontend for planning. We recommend that you use the delivered workbooks as templates and create

your own workbooks to suit individual requirements. To know more about creating planning workbooks, see the relevant guides in [https://help.sap.com/viewer/p/SAP\\_BUSINESSOBJECTS\\_ANALYSIS\\_OFFICE](https://help.sap.com/viewer/p/SAP_BUSINESSOBJECTS_ANALYSIS_OFFICE). We also recommend that you use the delivered input-ready queries as templates and create your own queries to suit your requirements.

## Disabling the Intelligent Double-Click Function in SAP BusinessObjects Analysis, edition for Microsoft Office

### i Note

This setting is available only in SAP BusinessObjects Analysis, edition for Microsoft Office 1.4 SP02 and above.

When you double-click a cell, the intelligent double-click function (if enabled) automatically executes the first command in the context menu of the cell.

To disable the intelligent double-click function, do the following:

1. Launch *Registry Editor*. To know more about maintaining registry settings for SAP BusinessObjects Analysis, edition for Microsoft Office, see the relevant guides in [https://help.sap.com/viewer/p/SAP\\_BUSINESSOBJECTS\\_ANALYSIS\\_OFFICE](https://help.sap.com/viewer/p/SAP_BUSINESSOBJECTS_ANALYSIS_OFFICE).
2. Depending on the type of installation, do one of the following:
  - If you are using a 32-bit operating system, locate the AdvancedAnalysis folder either under HKEY\_CURRENT\_USER\Software\SAP or HKEY\_LOCAL\_MACHINE\Software\SAP.
  - If you are using a 64-bit operating system, locate the Wow6432Node either under HKEY\_CURRENT\_USER\Software\SAP or HKEY\_LOCAL\_MACHINE\Software\SAP.
3. In the identified path, create nested keys to form the path \*\Software\SAP\AdvancedAnalysis\Settings\ExcelGrid.
4. Under *ExcelGrid*, create the string `EnableDoubleClick`, and enter the value **False**.

## Installation and Upgrade of BW

For information about the new and changed objects in this release, see SAP note [2522216](#) .

## Enhancing HANA Views to Add New Resources

For more information about enhancing HANA views to add new resources, see SAP note [2560000](#) .

## Data Consistency of Forecasting Method Descriptions During Upgrade

If you upgrade to Commercial Project Management 1709 onwards from the lower add-on releases SAP Commercial Project Management for S/4HANA 2.0 SP01 and SP02, you must execute the following report to ensure data consistency of forecasting method descriptions: /CPD/PFP\_FORECAST\_DATA\_TRANS

## Clean-Up of Invalid FBI Structures

To clean up invalid FPM BOPF Integration (FBI) structures, you must run the /BOFU/R\_FBI\_VIEW\_CLEANUP\_DDIC report.

1. In transaction SE38, run /BOFU/R\_FBI\_VIEW\_CLEANUP\_DDIC
2. In the selection screen, remove the checks in the following checkboxes:
  - *Inactive Only*
  - *Deleted Objects Only*
  - *Test Mode*
3. Choose Execute
4. The system lists inconsistent objects (from the following list). Select the objects that are listed by the system.
  - Business Object
    - /BOBF/ATTACHMENT\_FOLDER
  - FBI View
    - /CPD/PWS\_MP\_STEXT
    - /CPD/PWS\_MP\_LIST
    - /BOFU/VIEW\_ATF\_DOC
    - /BOFU/VIEW\_ATF
    - /CPD/WDC\_PFP\_HEADER\_TEXT\_FBIVIEW
    - /CPD/WDC\_PFP\_HEADER\_FBIVIEW
    - /CPD/WDC\_PFP\_VERSION\_FBIVIEW
    - /CPD/WDC\_PFP\_STRUCTURE\_FBI\_VIEW
    - /CPD/PWS\_MP\_PROJ\_MEMBER
    - /CPD/PWS\_PM
    - /CPD/PWS\_TEAM\_ROLES
    - /CPD/PFP\_DETAIL\_MAPPING\_FBIVIEW
5. Choose *Cleanup*.



## 7.15.2.4 Conversion-Relevant Information

After conversion to SAP S/4 HANA, the system automatically retains the data and configuration. The following table provides the simplification list for Commercial Project Management delivered in SAP S/4 HANA:

SAP Note Number	Description
<a href="#">2318716</a>	S4TWL – Rate Card
<a href="#">2318733</a>	S4TWL – Interface of SAP Commercial Project Management with SAP Cloud for Customer
<a href="#">2320143</a>	S4TWL – Fiori Apps of SAP Commercial Project Management
<a href="#">2318728</a>	S4TWL – Launchpads of Gantt Chart and Commercial Project Inception
<a href="#">2323806</a>	S4TWL – Workbooks Delivered in Project Cost and Revenue Planning
<a href="#">2712156</a>	S4TWL - CPM - Personal Activity List
<a href="#">2711002</a>	S4TWL - CPM - Forecast from financial plan versions
<a href="#">2719743</a>	Commercial Project Management: Migrate Configuration Settings of Key Figures and Resource Types for Analytics
<a href="#">2741838</a>	Commercial Project Management: Reactivation of Business Switch After Conversion / Upgrade to S/4HANA 1709 and Above
<a href="#">2725814</a>	Mapping of CPM Analytics HANA views to CDS SQL views

## 7.16 Follow-Up Activities for Product Safety and Stewardship

### 7.16.1 Follow-Up Activities for Product Compliance for Discrete Industries

For successful installation, always check the release information note [2278589](#) for the most current implementation details.

After the installation, carry out the following activities for *Product Compliance for Discrete Industries*:

- Verify and activate the following BC sets depending on the processes you need.  
For the process *Managing Product Compliance*:
  - `EHPRC_SPECIAL` *Critical PRC Customizing from other components*
  - `EHPRC_BASIC` *Customizing for Product and REACH Compliance*

- EHPRC\_DI\_PRODUCT\_COMPLIANCE *Managing Product Compliance*

For the process *Managing IMDS Compliance*:

- EHPRC\_SPECIAL *Critical PRC Customizing from other components*
- EHPRC\_BASIC *Customizing for Product and REACH Compliance*
- EHPRC\_DI\_IMDS\_COMP *Managing IMDS Compliance*

For both above mentioned processes:

- EHPRC\_SPECIAL *Critical PRC Customizing from other components*
- EHPRC\_BASIC *Customizing for Product and REACH Compliance*
- EHPRC\_DI *Customizing for Product Compliance*

- Verify and carry out all Customizing steps under ► [SAP Customizing Implementation Guide](#) ► [Product Safety and Stewardship](#) ► [Product Compliance for Discrete Industries](#) ►.
- In transaction SICF, activate the following WebDynpro services below the node / default\_host/sap/bc/webdynpro/sap/:
  - All EHFND\* and EHPRC\* services
  - POWL
  - IBO\_WDA\_INBOX
  - WDR\_CHIP\_PAGE
- Also activate the following services:
  - NWBC runtime node on the path /default\_host/sap/bc/nwbc.
  - SAPUI5 application handler on the path /default\_host/sap/bc/ui5\_ui5.

## 7.16.2 Follow-Up Activities for Product Safety and Stewardship for Process Industries

For successful installation, always check the release information note [2278589](#) for the most current implementation details.

After the installation, you need to carry out follow-up activities as described in the following SAP Notes:

- For information regarding installation instructions for *Windows Wordprocessor Integration (WWI)* and *Expert / Open Content Connector (OCC)*, see SAP Note [568302](#).
- For information regarding installation instructions for the *WWI* server, see SAP Note [1394553](#).

## 7.17 Follow-Up Activities for Product Compliance

If you choose to use the configuration delivered with SAP Best Practices or with manual steps, please check the information provided at [https://help.sap.com/s4hana\\_op\\_1909](https://help.sap.com/s4hana_op_1909) ► [Product Assistance](#) ► [English](#) ► [Enterprise Business Applications](#) ► [R&D / Engineering](#) ► [Product Compliance](#) ► [Foundation for Product Compliance](#) ► [Configuration for Product Compliance](#) ►

## 7.18 Follow-Up Activities for Supplier Management

After the installation, you need to carry out the following activities for Supplier Management:

### Delivery Customizing

You have to copy the delivery Customizing for Supplier Management from client 000 to your relevant clients. You can run transaction *Customizing Cross-System Viewer* (SCU0) to compare Customizing contents in the 000 client and in the client in your system. For Supplier Management, the following application components are relevant:

- SLC-EVL, SLC-ACT, SLC-CAT for Supplier Management Customizing
- BC-SRV-NUM for number range intervals required for purchasing categories, activities, tasks, and for the objects used in Supplier Evaluation
- BC-SEC-AUT-PFC for PFCG role Customizing

In addition, you must copy alert texts with text ID 'ALRT ' and text names EVAL\_REMINDER\* and TASK\* to the productive client. For more information, see SAP Note [601619](#).

### Important SAP Notes

Define the system characteristic as described in SAP Note [2224695](#).

### Activate Internet Communication Framework (ICF) Services

For information about the ICF services that you have to activate for Supplier Management, see the configuration information for Supplier Management. This documentation is included in the product assistance for SAP S/4HANA that is available on SAP Help Portal at [https://help.sap.com/s4hana\\_op\\_1909](https://help.sap.com/s4hana_op_1909).

#### i Note

This documentation also contains further information about the implementation of Supplier Management, such as jobs that must be scheduled and roles that need to be assigned.

## 7.19 Follow-Up Activities for Human Resources (Compatibility Packs)

### 7.19.1 Integration in SAP S/4HANA

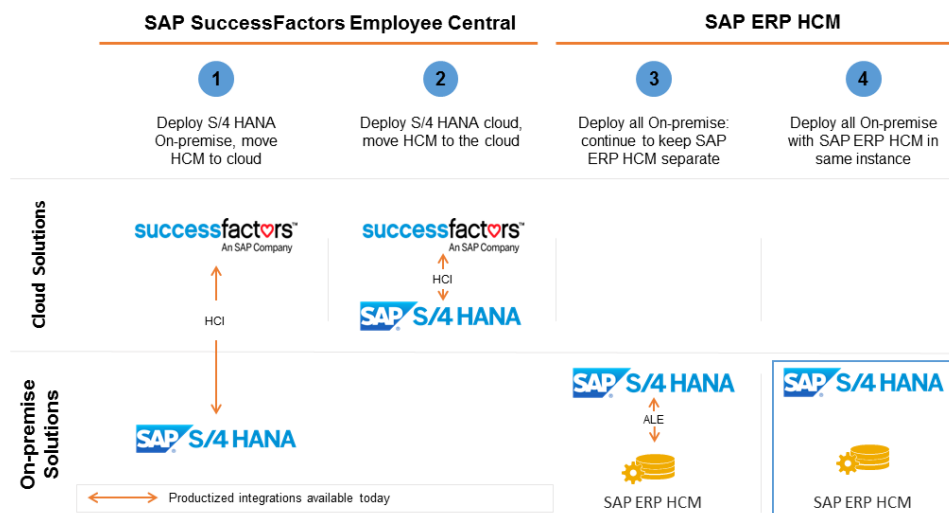
#### Introduction

The recommended HCM solution for SAP S/4HANA is the SAP SuccessFactors HCM Suite. You can use the existing integration based on HANA Cloud Integration (HCI) to connect SAP SuccessFactors to the SAP S/4HANA system.

#### Note

No integration is required if the SAP S/4HANA system is used to store the data. This information is only relevant if you want to replicate data from your HR master system to the SAP S/4HANA system.

To transition into SAP S/4HANA system, it is important that at least the basic employee master data related infotypes (that is, infotypes 0,1,2,3,6,7,9,17, 32, 105, 315) are moved into the PA table and then this data is synchronized with BP in SAP S/4HANA system. Currently, the following transition options are available:



#### Transition Options in SAP S/4HANA

This document is only relevant if you are using integration options for SAP S/4HANA, that is, options 1, 3 and 4.

- The following integration option is available for new customers:
  - If you are a new SAP HR or SAP S/4HANA (without a legacy SAP HCM system) customer, then you can implement SAP SuccessFactors and connect EC with SAP S/4HANA (Option 1 from the diagram)
- The following integration options are available for existing customers.

If you are an SAP S/4HANA customer also using SAP ERP HCM and are not able to make the move to SAP SuccessFactors in the near term, you can continue to use SAP ERP HCM. You have 2 options:

- Running SAP ERP HCM on a separate instance, integrated via ALE with SAP S/4HANA (Option 3 in diagram)
- Running SAP ERP HCM on same instance with SAP S/4HANA (co-deployed) (Option 4 in diagram)

This integration helps minimize disruption in your HR processes during the SAP S/4HANA migration and enables the ability to migrate your HR processes to SAP SuccessFactors whenever you are ready.

## 7.19.2 Integration Scenarios

### 7.19.2.1 Implementing SAP SuccessFactors

You can use this prepackaged integration to replicate employee master data and organizational data from SAP SuccessFactor Employee Central to the SAP S/4HANA system and cost center data from SAP S/4HANA to SAP SuccessFactor Employee Central, if you are using SAP SuccessFactors Employee Central as your HR master data system.

Based on your business requirements, you can:

- Replicate the employee mini master (basic infotypes) for using employee data in processes that are not HR specific.
- Replicate the employee global infotypes for using employee data in HR specific processes such as payroll.

#### Prerequisites

- In SAP S/4HANA system there has to be the Integration Add-On software component `PA_SE_IN` installed which does the inbound processing of the receiving Employee and Organizational data from SAP SuccessFactors via HCI.

#### Steps for Execution

##### Implementing HR Mini Master Data

You can replicate the basic PA infotypes and exclude the payroll infotypes from the integration. In this case, you can filter out the payroll specific infotypes during configuration and can skip the payroll related steps from the integration document.

For more information regarding the integration using HR mini master, download the documents from the Employee Integration: S/4HANA on-premise with Employee Central (1HW): [Employee Integration: S/4HANA on-premise with Employee Central \(1HW\)](#). Download the documents listed under Configuration:

- SuccessFactors: Integration of Employee Central and SAP S/4HANA (CSP)
- Integration of Employee Central to SAP S/4HANA(Employee, Org Data) with HCI (DSN)
- Integration of SAP S/4HANA to Employee Central (Cost Center Data) with HCI (DSI)

## Full Implementation

If you want to replicate employee data, organizational data, and cost center data for the full scope of integration, please refer to the documentation at [https://help.sap.com/s4hana\\_op\\_1909](https://help.sap.com/s4hana_op_1909) ► *Additional Information* ► *SAP SuccessFactors Employee Central Integration to SAP Business Suite* ► *Integration with SAP S/4HANA On Premise* ►.

## Employee-Business Partner Synchronization

Execute the employee synchronization after employee replication. For more details, refer to section [Employee-Business Partner Synchronization \[page 76\]](#).

## Notes

- The cost center and company code are owned by SAP S/4HANA Finance. The cost centers defined in financials need to replicate into SAP SuccessFactors Employee Central to enable the assignment of employee to the Cost Center, for example, during the Hiring Process. This integration is supported through HCI Middleware iFlow.
- Company Codes are not replicated and have to be manually created in SAP SuccessFactors Employee Central (SFSF EC) because the definition of Companies in SFSF EC requires some additional information.
- SAP SuccessFactors Employee Central is responsible for the employee administration including the organizational assignment of employees to a Cost Center. This employment information is replicated into SAP S/4HANA via HCI.
- The Inbound processing within SAP S/4HANA maps existing Users with the corresponding Employee, Business Partner, and Employment.

## 7.19.2.2 Running SAP ERP HCM on a Separate Instance, Integrated via ALE with SAP S/4HANA

The purpose of this section is to enable the integration of employee data in the SAP S/4HANA system for running the employee-related processes in SAP S/4HANA. The HR master system is the SAP ERP HCM system, which is the source of the employee data.

For this integration, the Application Link Enabling (ALE) from the SAP ERP HCM system is reused and no specific changes required for SAP S/4HANA. This section describes the steps involved in ALE configuration.

## Prerequisite

The Application Link Enabling (ALE) HR master data replication for employees is a 1:1 replication of the values. To ensure that the ALE replication works successfully both the systems must have the same HCM configuration.

## Steps for Execution

### ALE Configuration Steps

1. Create Users for ALE transfer in both receiving and sending systems.  
Create users in both systems. Provide the same user name and relevant authorizations in both systems. These user IDs are used to logon through the remote connection and to perform IDoc transfers.

Make the necessary Customizing settings under ► [IDOC Interface/ Application Link Enabling](#) ► [Basic Settings](#) ► [Logical Systems](#) ►.

2. Make entries in [ALE: Original System Active for HR Data](#).

1. Call up transaction `SALE` in the SAP ERP HCM (SSP Client 105) system.
2. In Customizing, go to ► [IDOC Interface/ Application Link Enabling](#) ► [Modelling and Implementing Business Processes](#) ► [Configure Predefined ALE Business Processes](#) ► [Human Resources](#) ► [Master Data Distribution](#) ► [Distributed HR Master Data](#) ►.
3. Choose [ALE: Original System Active for HR Data](#).
4. Make the following entries:

Field Name	Value
<i>Group</i>	ALE
<i>Sem.abbr.</i>	REPPA
<i>Value abbr.</i>	

5. Save your changes.
  6. Choose [Continue](#).
3. Define the logical systems.  
Create logical systems for both the SAP ERP HCM system and the SAP S/4HANA, on-premise edition system if system management has not yet done so.
    1. Call up transaction `SALE` in the SAP ERP HCM (SSP Client 105) system.
    2. In Customizing, go to ► [IDOC Interface/ Application Link Enabling](#) ► [Basic Settings](#) ► [Logical Systems](#) ► [Define Logical System](#) ►.
    3. Choose [New Entries](#).
    4. Make the following entries:

Logical System	Name
Enter Logical Systems with the naming convention ' <b>sys-tem name</b> +' <b>CLNT</b> +' <b>client no</b> , for example, SSPCLNT105 for the sending system.	

Logical System	Name
Enter Logical Systems with naming convention ' <b>system name</b> +'CLNT'+ <b>client no.</b> , for example, SEDCLNT800 for the receiving system.	Enter a name to identify your S/4HANA, on-premise edition system.

### Note

The distribution of data between systems requires that each system in the network has a unique identification. The logical system is used for this purpose.

- Save your entries and choose *Continue*.
  - In the SAP S/4HANA, on-premise edition system (SED client 800) repeat steps **1** through **5** to create the logical systems for the Sending and Receiving system (for example, SEDCLNT800 and SSPCLNT105) if system management has not yet done so.
4. Assign the logical system to the client.  
Assign the logical system for SAP ERP HCM system and the SAP S/4HANA, on-premise edition system to the corresponding client if system management has not yet done so.
- Call up transaction `SALE` in the SAP ERP HCM (SSP Client 105) system.
  - In Customizing, go to **IDOC Interface/ Application Link Enabling > Basic Settings > Logical Systems > Define Logical System**.
  - Search for the client you are currently logged in on (in this example 105) and choose the entry to display the details.
  - Check the following entry:

Field Name	Value
Logical System	Logical system: name of the system and client that you are logged in on, for example, SSPCLNT105

- Save your entry and choose *Continue*.
  - In the SAP S/4HANA, on-premise edition system (SED client 800): repeat steps **1** through **5** and check the logical system for the SAP S/4HANA, on-premise edition system/client (for example SEDCLNT800).
5. Create RFC connections.
- Call up transaction `SM59` in the SAP ERP HCM system (SSP Client 105).
  - Choose *Create* in the *Configuration of RFC Connections* view.
  - Make the following entries in the *RFC Destination* view:

Tabs	Field Name	User Action	Comments
	RFC Destination	Enter a destination name, for example, SEDCLNT800	<S/4HANA System ID>CLNT<Client>



Tabs	Field Name	User Action	Comments
	Connection Type	3 ABAP Connection	
	Description	Enter a description for the RFC	
Technical Settings	Load Balancing Status	Select 'NO'	
	Target Host	Enter the S/4HANA, on-premise edition host – fully qualified with domain	
	Instance No.	Enter the Instance number, for example, 45	
	Save to Database as	Host or IP Address	Save the target host or message server internally in the database either as the host name or as its IP address.
Logon & Security Tab	Client	Enter the Receiver System client, for example 800	
	User	User ID	Created in "Create Users for ALE transfer ..."
	Password	Enter user password	
	Current User	Not checked	
	Trust Relationship	"No" Checked	
Special Options Tab	Special Flags	Not checked	
	Activate RFC Trace	Not checked	
	Trace Export Methods	Default Gateway Value	
	Keep- Alive Timeout	Default Gateway Value	
	Transfer Protocol	Select "Classic with tRFC"	

4. Save your changes.
5. Choose [Remote Logon](#) to test the RFC.
6. In the SAP S/4HANA, on-premise edition system (SED client 800): repeat steps **1** through **5** and create an ABAP connection `SSPCLNT105` pointing to the SAP ERP HCM system giving logon credentials to client 105.

6. Maintain the distribution model.

The distribution model is created in the original system (sending system) and then distributed to other systems.



You can create a distribution model using the following steps:

1. Call up transaction BD64, in the SAP ERP HCM system (SSP client 105).
2. Choose *Create Model view* (CTRL + F4) in the *Distribution Model* view (in change mode).
3. In the **Create Model View** dialog box, enter a short text (for example, SAP HCM to SAP S/4) and a technical name (for example, <ZSSP\_SED>).
4. Choose *Continue* and save your entries.
5. Select the newly created model and choose *Add Message Type*.
6. In the **Add Message Type** dialog box, enter the logical system of the SAP ERP HCM system in the *Sender* field (SSPCLNT105) and the logical system of the SAP S/4HANA, on-premise edition system in the *Receiver* field (SEDCLNT800). As message type, select HRMD\_A.
7. Expand the model view and double-click *No filter set*.
8. Select *Create Filter Group* in the **Change Filter** view and restrict the replication to the required objects.

Field name	Value
Type of related objects	CP
	P
Infotype	0000
	0001
	0002
	0003
	0006
	0007
	0009
	0105
	1000
	1001
Object Type	CP
	P

9. Choose *Enter*.
10. Save your entry.
11. Select the model view that you have created and go to ► *Environment* ► *Generate Partner Profiles* ►.
12. Select *Transfer IDOC Immediately* and *Trigger Immediately* in the **Generate Partner Profile** view.
13. Choose *Execute*. Go back to the main view.  
If it has been executed successfully, a green list is displayed.
14. Select the model view again and choose ► *Edit* ► *Model view* ► *Distribute* ►.
15. Choose *Continue*.

A list is displayed with a message to inform you that the model view has been successfully distributed.

7. Activate the change pointer.
  1. Call up transaction `SALE` in the SAP ERP HCM (SSP Client 105) system.
  2. In Customizing, go to [IDOC Interface/ Application Link Enabling](#) > [Modelling and Implementing Business Process](#) > [Master Data Distribution](#) > [Replication of Modified Data](#) > [Activate Change Pointers for Message Types](#). 
  3. In the change view **Activate Change pointers for Message Type**, verify that the activation is set for message type `HRMD_A`.
8. Maintain the port.
  1. Call up transaction `WE21` in the SAP ERP HCM (SSP Client 105) system.  
Alternatively, you can go to Customizing under [SAP Menu](#) > [Tools](#) > [ALE](#) > [ALE Administration](#) > [Runtime Settings](#) > [Port Maintenance](#). 
  2. Select *Transactional RFC* in the navigation panel of the **Ports in IDOC processing** view.
  3. Choose *Create*.
  4. In the **Ports in IDoc processing** view, select *own port name* and enter a technical name, for example `<SEDCLNT800>`.
  5. Choose *Enter*.
  6. Make the following entries on the **Creating a tRFC port** view:

Field name	Value
Description	Enter a description for your port name.
Version	
IDoc record types SAP Release 4.x	X
RFC destination	Enter the technical name of your RFC destination for the receiving SAP S/4HANA, on-premise edition system, for example, SEDCLNT800.

7. Save your entries.
9. Create partner profiles
  1. Call up transaction `WE20` in the SAP ERP HCM (SSP Client 105) system.
  2. Select *Partner Type LS* in the navigation panel of the **Partner profiles** view.
  3. Choose *Create* and make the following entries:

Field name	Value
Partner No.	Enter the ID for your partner no. Your ALE partner is an SAP system that is addressed by your system (using RFC), in this case the SAP S/4HANA, on-premise edition system, for example, SEDCLNT800

Field name	Value
Partn. Type	LS

- On the **Post processing: permitted agent** tab, specify the job (person or group of people) to be notified if processing errors occur.
- In the *Outbound parmtrs.* section, choose *Create outbound Parameter*.
- In the **Partner profiles: Outbound parameters** view, make the following entries:

Field name	Value
Message Type	HRMD_A
Receiver Port	Enter the technical Name of the created port, for example, SEDCLNT800
Pack. Size	For example, 100 (for the first testing use 1)
Output Mode	
Transfer IDoc Immed.	X
Basic Type	HRMD_A07
Cancel Processing After Syntax Error	X

Field Name	Value
Message Type	SYNCH
Receiver Port	Enter the technical Name of the created port, for example, SEDCLNT800
Pack. Size	For example, 100
Output Mode	
Transfer IDoc Immed.	X
Basic Type	SYNCHRON
Cancel Processing After Syntax Error	X

- Save your entries.
- Call up transaction `WE20` in the SAP S/4HANA, on-premise edition system (SED client 800).
- Select *Partner Type LS* in the navigation panel of the **Partner profiles** view.
- Choose *Create* and make the following entries:

Field name	Value
Partner No.	Enter the ID for your partner no. Your ALE partner is an SAP system that is addressed by your system (using RFC), in this case the SAP ERP HCM system, for example SSPCLNT105
Partn. Type	LS

11. On the **Post processing: permitted agent** tab, specify the job (person or group of people) to be notified if processing errors occur.
12. In the *Inbound parmtrs.* section, choose *Create inbound Parameter*.
13. In the **Partner profiles: Inbound parameters** view in the *Inbound options* section, make the following entries:

Field name	Value
Message Type	HRMD_A
Process Code	HRMD
Cancel Processing After Syntax Error	X
Processing by Function Module	
Trigger Immediately	X

14. Save your entries.

### **i** Note

By default, in the receiving system IDocs are grouped together and received.

10. Run the initial distribution.
  1. Call up transaction `PFAL` in the SAP ERP HCM system (SSP client 105)
  2. On the **HR: ALE Distribution of HR Master Data** view, specify the required Object Type, Object ID, and so on, before executing and choose the following option:

Field Name	Value
Insert (complete distribution: delete in target system, re-create)	X

3. Choose *Execute*.
11. Check IDocs.  
In the receiving system (SED client 800) check the inbound IDocs (transaction: `WE02/WE05`). Some inbound IDocs may have errors. This may be due to some HR specific Data and configuration issues in the receiving system. In this case, contact an HR functional consultant.

12. Define a background job for delta distribution.

To schedule the background job in the sending system (SSP client 105), create a variant of ABAP program RBDMIDOC.

1. Create a variant.

1. Go to transaction SE38 in the SAP ERP HCM (SSP Client 105) system.

Alternatively, you can go to customizing under **SAP Menu > Tools > ABAP Workbench Development > ABAP Editor.**

2. On the **ABAP Editor: Initial Screen**, enter **RBDMIDOC** in the `Program` field.

3. Choose *Execute*.

4. In the **Creating IDoc Type from Change Pointers** view, enter the following value:

Field Name	Value
Message Type	HRMD_A

5. Choose *Save as Variant* to create a new variant.

6. On the **Variant Attributes** view, enter the following values:

Field Name	Value
Variant Name	YK_HRMD_A
Description	Enter a description for the variant

7. Save your entries.

**i Note**

A system notification confirms the creation.

2. Schedule a job

1. Call up transaction SM36 in the SAP ERP HCM (SSP Client 105) system.

Alternatively, you can go to Customizing under **SAP Menu > System > Services > Jobs > Define Job**

2. In the **Define Background Job** view, choose *Define Job using Wizard* (Ctrl+F1).

3. In the **Create a Job** dialog box, choose *Continue*.

4. In the **General Job Information** dialog box, make the following entries:

Field Name	Value
Job Name	YK_ALE_DELTA_HRMD_A
Job Class	C – Low priority
Job Status	Scheduled

Field Name	Value
Target Server	

5. Choose *Continue*.
6. In the **Job-Definition: Job step** dialog box, select *ABAP program step* and choose *Continue*.
7. In the **ABAP program step** dialog box, make the following entries:

Field Name	Value
ABAP program name	RBDMIDOC
Variant	YK_HRMD_A
Execution language	EN

8. Choose *Continue*.
9. In the **Multi-step option** dialog box, choose *Continue*.
10. In the **Job Definition: Start conditions** view, choose *Immediately*. Choose *Continue*.
11. In the **Def. of start immediately** dialog box, select the *Period* checkbox in the **Periodic jobs** section and choose *Continue*.
12. In the **Period definition** dialog box, choose *None of the Above*.
13. Choose *Other Periods*.
14. In the **Other Period** dialog box, schedule the service for a convenient time interval.
15. Choose *Create*.
16. Choose *Continue*.
17. In the **Set job** dialog box, choose *Complete* to finish the setup.

## Employee-Business Partner Synchronization

After employee replication, you must execute the employee synchronization. For more details, refer to section [Employee-Business Partner Synchronization \[page 76\]](#).

### 7.19.2.3 Running SAP ERP HCM on the Same Instance with SAP S/4HANA (Co-deployed)

The purpose of this section is to enable you to run SAP S/4HANA HCM on the same instance with SAP S/4HANA. All the required steps to implement this integration are listed in the Customizing documentation under [► Personnel Management ► SAP S/4HANA for Human Resources ► Synchronization of Business Partner for SAP HCM Employee Role](#).

All the existing employees have to be synchronized during business downtime. For more information, refer to the section [Employee-Business Partner Synchronization \[page 76\]](#).

## Prerequisites

You must have an existing SAP ERP HCM solution as your HR master data system.

## Notes

### Report like HRALXSYNC (report)

You cannot use this sync report for employee synchronization in SAP S/4HANA. For any other (organizational unit) object synchronization, you can use this report.

### Transaction PRAA

This transaction was used for employee vendor creation in the SAP ERP system for travel expenses. You cannot create employee vendors using this transaction and it is no longer valid in the SAP S/4HANA system.

## 7.19.3 Conversion from SAP ERP to SAP S/4HANA

This section is relevant only if you are converting from SAP ERP to SAP S/4HANA.

There are 2 processes involved in the conversion to SAP S/4HANA:

- CVI Conversion in the SAP ERP system  
This can be considered as a pre-conversion process which has to be performed in the SAP ERP system. This is relevant only if you are using employee vendor in the SAP ERP system. For more information about the CVI conversion process, refer to the SAP Note [2265093](#).
- Employee-BP Synchronization in the SAP S/4HANA System  
This is the post conversion process that has to be performed in the SAP S/4HANA system during business downtime. For more information, refer to section [Employee-Business Partner Synchronization \[page 76\]](#).

## BP Synchronization Data Models for SAP ERP and SAP S/4HANA

### Source Data Model (SAP ERP )



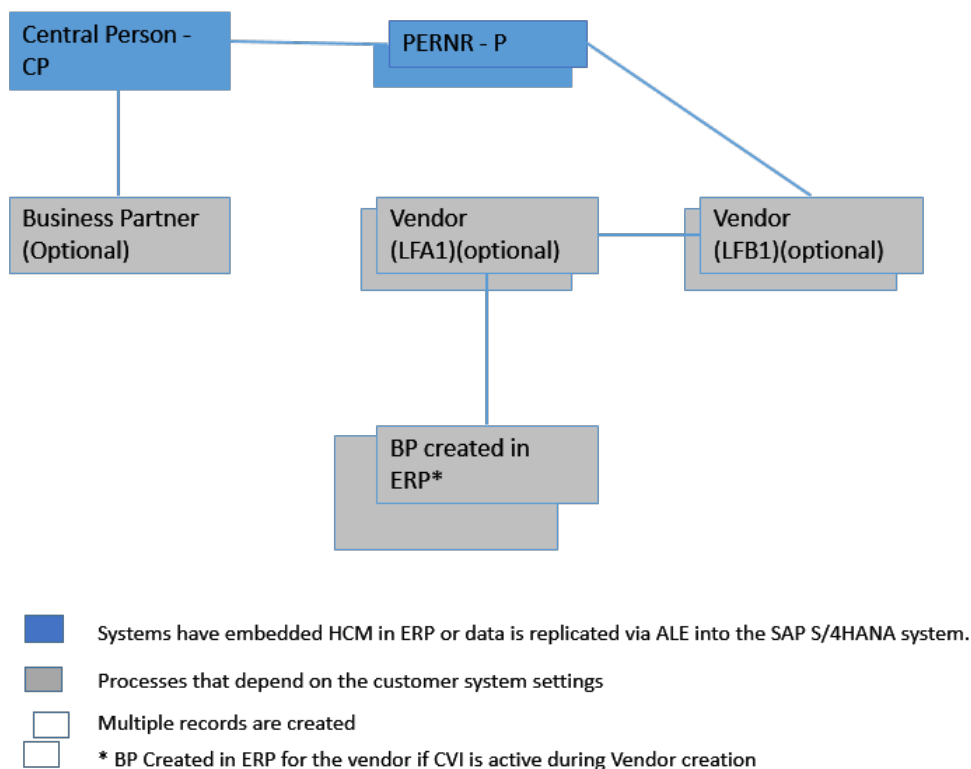


Diagram 1

In the above data model, each central person can have a single or multiple PERNR associated with it. A vendor can be created for a PERNR. This is an optional step. In case of concurrent employment, multiple vendors can be created for a person.

**Example:** If a record 100(CP) exists and a PERNR 500 (P) exists for the CP, a business partner BP1 is created for this CP. In case of additional assignment PERNR 501 also exist (for CP-100). You can create vendors for PERNR, For example, V1, V2. Another business partner is created for each of these associated vendors, for example, BPV1, BPV2 (if CVI is active during Vendor creation). Hence in the SAP ERP model, each employee can have 2 or more BP associated, depending on the number of vendors and configuration.

### i Note

To reuse the BP or to create a new BP in Person category in the CVI for vendor you can apply the following SAP notes:

- [2539457](#) : if CVI is active, during Vendor creation or conversion BP is created in Person category.
- [2542175](#) : if CVI is active, during Vendor creation or conversion Employee-BP is reused (instead of creating new BP for the Vendor).

### Target Data Model (SAP S/4HANA)

# Compatible Data Model (S/4)

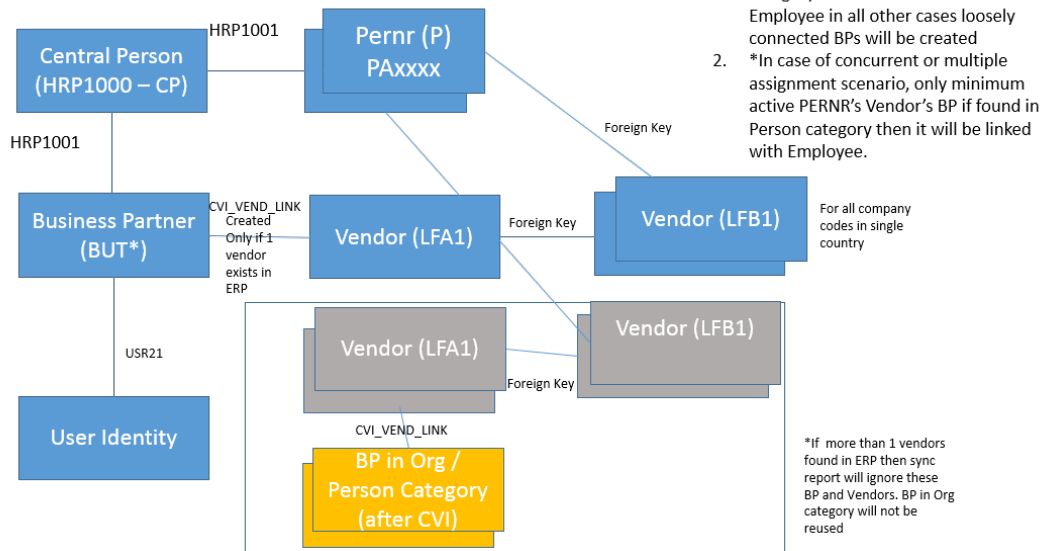


Diagram 2

In the new data model, each Central Person (CP) is associated with PERNRs. If a BP is already associated with the CP, then information is synchronized to this BP and BP is linked to the user identity (if user is maintained in infotype 105 subtype 0001 for the employee).

If Employee-BP (HRP1001 table, CP-P, and, CP-BP relationship exist) also Vendor-BP (of type Person category) exist, then sync report does not update the Employee BP with Vendor roles. Vendor BP will be reported in the application log. It is a warning or a conflicting scenario, as which BP is to be linked with Employee and Vendor is not known (as it depends on business scenario). In such scenario, you need to remove one of the BP or relationships.

If no BP exists for the Employee (CP-BP relationship) then the system checks for the associated vendor.

In case of single assignment: If one vendor exists for the employee with BP of Person category then the BP (of category Person) associated with the vendor is linked with the CP and user identity. If no vendor exists, a new vendor is created for PERNR depending on the data and configuration i.e. if Permanent address (subtype 1 of infotype 6) and Payment (Main Bank or Travel Expense – subtype 0 or 2 of Infotype 9) is assigned for the employee. This is a mandatory step. For more information refer notes [2632026](#) and [2517507](#).

In case of multiple assignment: only minimum active PERNR's vendor's BP if found in Person category then it will be linked with the Employee.

## Note

In case of concurrent employment or multiple assignment in ERP system vendor exists for each assignment, then during employee synchronization:

- Employee-BP will be linked with minimum-active PERNR's vendor. In case minimum active PERNR's vendor has different BP (Case 1: HRP1001 CP-BP exist in ERP and vendor also has BP & Case 2: Vendor has BP of category Organization) then Employee-BP will not be linked with the vendor.
- Only loosely coupled BPs exist. Loosely coupled BP will be created for additional assignment (PERNRs). For more information refer to [2517507](#).

## i Note

Vendor has BP of type Organization category, then it will NOT be deleted, but a warning message is displayed in the application log so that BP of type Organization category is found. Customer can remove the BP or retain it as standalone BP in case it is still consumed in business processes

**Example:** If a record 100(CP) exists, then a PERNR 500 (P) is associated with it. After the integration, if a BP1 is found that is associated with this CP, then this data is used for synchronization. The user identity is also linked to this BP1. If vendors are associated with this PERNR, for example, V1. Vendor has BPV1. In case, the BP1 already exists for the CP 100, then a warning message is displayed that multiple BPs found. In case, no BP exists for CP 100, then the Vendor BP, BPV1 is used for synchronization in case BPV1 is of category Person. Otherwise this BP will be reported in the warning message and new BP of category Person will be created and linked with the objects.

## Differences Between SAP ERP and SAP S/4HANA Data model

- Synchronization  
This process was optional and base on switch setting in the SAP ERP system, but it is a mandatory step in the SAP S/4HANA system.
- Vendor and BP relation  
An employee could have multiple vendors and BPs associated with his PERNR in the SAP ERP system. In case of single assignment in SAP S/4HANA system: a single BP and Vendor\* is created for an employee (\*Depends on the data and customizing).

## i Note

In case of concurrent employment or multiple assignment loosely coupled BP will be created for additional assignment (PERNRs). Refer note [2517507](#) for more information.

- User Identity
  - In SAP S/4HANA, User identity is connected to BP only it is maintained in Infotype 105.
  - In the SAP ERP system, workplace address was modeled using the BP (Organization) -> BP (Employee) relationship. In SAP S/4HANA, Workplace Address information (business phone, e-mail) is stored in workplace address connected to BP.

## i Note

You can only maintain one workplace address for an employee.

- In SAP S/4HANA, if a BP and user relationship exists then it's always modeled as 1:1. Hence, it is recommended to use only single user (SY-UNAME) across all employment (P) of employee(CP).
- Address Types and Identification  
In SAP ERP, employees were linked BP through Personnel Number field in BP. In SAP S/4HANA, New Address types (HCM001, private address of employee) and New Identification (HCM001) are created for BP employee.

## i Note

In S/4HANA it is recommended to use HRP1001 table (relationship P-CP and CP-BP) to determine the BP for an Personnel Number (PERNR).

## Conversion Scenarios for Employee Vendors in SAP S/4HANA

In SAP S/4HANA, each employee will have a corresponding business partner and vendor (if address, bank, and configurations exist) for the employee. So any vendors created manually in the SAP ERP system (using the transaction PRAA or other transactions) have to be migrated consistently into the SAP S/4HANA system. The following scenarios might exist:

- No business partner or vendor exists for an employee  
After the synchronization business partner is created. Vendor will be created if the appropriate configurations and information is maintained like Permanent address (subtype 1 of infotype 6) and Payment (Main Bank or Travel Expense – subtype 0 or 2 of Infotype 9) is assigned for the employee.

### i Note

In case of Concurrent Employment or multiple assignment loosely coupled BP will be created for additional assignment (PERNRs). Refer note [2517507](#) for more information.

- Only a business partner exists  
In this case the business partner has to be enriched. For the BP vendor role and the vendor has to be created (if appropriate configurations and information are maintained) in case Vendor and payment information is maintained for the employee (LFB1-PERNR as to be filled).
- A vendor for an employee exists with LFB1-PERNR but is assigned to a different business partner of category Person than the business partner related to the Central Person of PERNR. This will be error scenario, customer need to correct one of the BusinessPartner and need to adjust the relationships.

The first two scenarios are transformed using the Employee-Business partner Synchronization. This is triggered by any change made on Employee side effecting integration relevant infotypes (0, 1, 2, 6, 9, 17, 32, 105).

## 7.19.4 Employee-Business Partner Synchronization

The following steps enable you to synchronize employee information to the business partners. This synchronization is a mandatory activity for SAP S/4HANA to make sure the follow-up activities and the CDS views work.

For more information, you can also refer to the Customizing under [Personnel Management](#) > [SAP S/4HANA for Human Resources](#) > [Synchronization of Business Partner for SAP HCM Employee Role](#).

For more information on selection, refer the report `/SHCM/RH_SYNC_BUPA_FROM_EMPL` documentation in the system.

### i Note

- Initial synchronization of all employees must be done during the initial business downtime before the production starts.
- In case of large volume of employee data, standard report `/SHCM/RH_SYNC_BUPA_FROM_EMPL` will take lot of time to synchronize the employees. You could try the recommendations in FAQ note for [2409229](#) regarding process the employees in parallel jobs.

## Notes (SAP S/4HANA)

### HRALXSYNC (report)

You cannot use this sync report for employee synchronization in SAP S/4HANA. For any other (organizational unit) object synchronization, you can use this report.

### Transaction PRAA

This transaction was used for employee vendor creation in the SAP ERP system for travel expenses. You cannot create employee vendors using this transaction and it is no longer valid in the SAP S/4HANA system.

## Prerequisites

- Set the following switches in the table T77S0:
  - Set `HRALX_HRAC` to 'X' and `HRALX_PBPN` to 'ON'

### i Note

From 1709 SPS1 or after applying the SAP note [2535438](#) and [2549563](#) in 1709, set `HRALX_HRAC` to 'X' and `HRALX_PBPN` to 'ON' to synchronize Employee information.

In earlier releases (before 1709 SPS1) Set `HRALX_PBPN` to OFF.

- `HRALX_PNUMB` Business Partner Number Assignment (Employee) and `HRALX_PSUBG` Business Partner Subgroup (Employees): use this to provide to different number range to BP. Refer to the T77S0 switch documentation.
- `PLOGI_PLOGI` Integration Plan Version / Active Plan Version: determines the active integrated plan version.

### i Note

All other switches under `HRALX` are not relevant in SAP S/4HANA for Employee BP Synchronization.

- Set up the BP customizing for CVI and vendor account
- CP (central person) should exist for all the employee records (HRP1001 table should have CP-P relationship record for all the employees).
- All the employee's should have atleast infotype 0-Actions, 1-Organizational Assignment, and 2-Personal Data maintained.
- You need to install the following notes before you start replicating employee master data and organizational data:
  - [2539457](#): Business Person is created in Person category during Vendor creation or conversion when CVI is active.
  - [2542175](#): Employee Business Person is reused during Vendor creation or conversion when CVI is active.
  - [2517507](#): Reference Vendor data, company code, and bank account is created based on HR master data.
  - [2568251](#): Deleting the invalid business partner assignments.

For more information regarding the customizing, see [Requirement](#) section in the Customizing document under [Personnel Management](#) > [SAP S/4HANA for Human Resources](#) > [Synchronization of Business Partner for SAP HCM Employee Role](#).

## 7.19.4.1 SAP S/4HANA BUPA Synchronization Report

You can use the BUPA Synchronization Report (technical name: /SHCM/RH\_SYNC\_BUPA\_FROM\_EMPL) to synchronize employee data stored in HCM master data persistence (infotypes) with the business partner, vendor, and linking BP to User (if Infotype 105 subtype 0001 is maintained) and Workplace Address.

Employee synchronization report (technical name: /SHCM/RH\_SYNC\_BUPA\_FROM\_EMPL) processes employees:

- Employee(s) HCM infotypes are modified from last synchronization
- Employee(s) failed during previous synchronization processing
- Employee(s) has split records (records which were delimited like the begin date of the split record is on the synchronization date or end date of the split record was yesterday) were synchronized

For more information, you can also refer to the Customizing under:

- [Personnel Management](#) > [SAP S/4HANA for Human Resources](#) > [Synchronization of Business Partner for SAP HCM Employee Role](#)
- [Personnel Management](#) > [SAP S/4HANA for Human Resources](#) > [Define Default Vendor Data for Employees in Role FI Supplier](#)

Data is synchronized if employee data is created or changed in the following ways:

- Inbound processing using ALE  
The synchronization is triggered using the following BAdI implementation: HRALE00INBOUND\_IDOC : /SHCM/BUPA\_SYNC\_TRIG

### i Note

This implementation is not active (by default).

- Personnel master data maintenance (for example, transaction PA30/PA40)

### i Note

- HCM master data is time-independent, but some business partner data is not. Therefore, schedule this report to run on a daily basis (or required frequency) to update the business partner and receive up-to-date employee data.
- If a synchronization is unsuccessful, all the employee data is updated in the next synchronization run.

## Field mapping used for employee synchronization

### BP Fields:

- BP Grouping: If BP grouping is created with BPEE then it will be considered for BP creation otherwise:
  1. In case switch `HRALX_PNUMB` is 1 and internal number range scenario, then set true value to `XINST` (Standard Grouping for Internal Number Assignment) for the BP Grouping, that is, BP group of internal number range type and field `XINST` is set is considered.
  2. In case `HRALX_PNUMB` is 2 or 3 then BP grouping should be same as switch `HRALX_PSUBG` in `T77S0`.
- BP category: 1 (Person)
- Identification Category:
  - Employee: `HCM001`
- Identification ID: minimum active `PERNR` in case of CE or single assignment the same `PERNR` or `105-ECUS` in case of SAP SuccessFactors Integration is used.
- Roles:
  - Employee: `BUP003`, 1511- till SP1: `FLVN01`, 1511 SP2 & higher releases `FLVN00`.

	Field description	Infotype	Field Name	Comments	BP Field name
Employee	First Name	2	VORNA		BUT000 - NAME_FIRST
	Last Name	2	NACHN		BUT000 - NAME_LAST
	Middle Name	2	MIDNM		BUT000 - NAME-MIDDLE
	Second Name	2	NACH2		BUT000 - NAME_LST2
	Initials	2	INITS		BUT000 - INITIALS
	Academic Title 1	2	TITEL	TSAD2	BUT000-TITLE_ACA1
	Title	2	Based on ANRED and GESCH	BBP_TSAD3HR or TSAD3HR	BUT000 - TITLE
	Academic Title 2	2	TITL2	TSAD2	BUT000- TITLE_ACA2
	Name Supplement	2	NAMZU	TSAD5	BUT000- TITLE_ROYL
	Name Affix 1	2	VORSW	TSAD4	BUT000- PREFIX1
	Name Affix 2	2	VORS2	TSAD4	BUT000- PREFIX2

	Field description	Infotype	Field Name	Comments	BP Field name
	Gender	2	GESCH	Value 1 is mapped to 2 and vice versa because of domain value differences	BUT000 - XSEXF or XSEXM
	Preferred Language	2	SPRSL		BUT000 - LANGU_CORR BUT000- BU_LANGU
	Nationality	2	NATIO		BUT000 - NATIO
	Date of Birth	2	GBDAT		BUT000 - BIRTHDT
	Name at Birth	2	NAME2		BUT000- NAME_LAST2
	Nick name	2	RUFNM		BUT000- NICK-NAME
	Place of Birth	2	GBORT		BUT000- BIRTHPL
	Marital Status	2	FAMST	BBP_TSAD3HR or TB027HR	BUT000- MARST
	Search term 1	2	NCHMC		BUT000- BU_SORT1
	Search term 2	2	VNAMC		BUT000- BU_SORT2
	Full Name	2		CNAME or ENAME or Concatenation of VORNA MIDNM NACHN	BUT000- NAME1_TEXT
Address	From Date	6	BEGDA	Permanent Address (subtype 1) is synchronized	BUT020 - ADDR_VALID_FROM
	End Date	6	ENDDA		BUT020 - ADDR_VALID_TO
	Country	6	LAND1		ADRC - COUNTRY



	Field description	Infotype	Field Name	Comments	BP Field name
	Region	6	STATE		ADRC - REGION
	City	6	ORT01		ADRC -CITY1
	District	6	ORT02		ADRC -CITY2
	Postal Code	6	PSTLZ		ADRC – POST_CODE1
	Street	6	STRAS		ADRC – STREET
	Street 2	6	ADR03		ADRC – STR_SUPPL1
	Street 3	6	ADR04		ADRC - STR_SUPPL2
	Street 4	6	LOCAT		ADRC - STR_SUPPL3
	House number supplement	6	POSTA		ADRC – HOUSE_NUM2
	c/o	6	NAME2		ADRC – NAME_CO
	Building Code	6	BLDNG		ADRC –BUILDING
	Floor	6	FLOOR		ADRC –FLOOR
	House Number	6	HSNMR		ADRC – HOUSE_NUM1
	telephone	6	TLNR		ADCP - TEL NUM- BER
Payment	Account Holder Name	1	EMFTX	If infotype 9-EMFTX is not present then map infotype 1 ENAME	BUTOBK-KOINH
	Bank	9	BANKS	If Travel Expenses (subtype 2) Bank information exists then it is synchronized to Business Partner or Vendor else Main Bank (subtype 0) is synchronized. If	BUTOBK - BANKS
	Bank Account	9	BANKN		BUTOBK - BANKN
	Control Key	9	BKONT		BUTOBK - BKONT
	Bank Key	9	BANKL		BUTOBK - BANKL

	Field description	Infotype	Field Name	Comments	BP Field name
	Reference specifications for bank details	9	BKREF	both do not exist then vendor will not be created.	BUTOBK - BKREF
	IBAN No.	9	IBAN		BUTOBK - IBAN
	Valid From	9	BEGDA		BUTOBK - BK_VALID_FROM
	Valid To	9	ENDDA		BUTOBK - BK_VALID_TO
Vendor Company Code	BUKRS	1	BUKRS		LFB1 -BUKRS
	ZLSCH	9	ZLSCH		LFB1 -ZWELS
	PERNR	1	PERNR		LFB1 -PERNR
	Reconciliation account		(see comment)	Read from /SHCM/ RECON based on Employee's company code (IT0001-BUKRS)	LFB1 -AKONT

### i Note

You can maintain the view `PTRV_VENDOR_SYNC` per company code to fulfill the additional requirements concerning:

- Roles
- Source of company code for company code segments
- Source of subtype for address
- Additional information for vendor company code segments (LFB1), vendor general data (LFA1) as well as for dunning data (LFB5) and withholding tax data (LFBW)
- Source of bank account, bank account key on business partner as well as partner bank type in vendor bank data LFBK
- Setting payment lock for inactive employees
- Used identification category for loosely coupled business partners
- Address type to be used for business partners

Refer to either the F1 help for the fields in maintenance view `PTRV_VENDOR_SYNC` or read the knowledge based article [2632026](#) to learn more about the usage of the control table `PTRV_VENDOR_SYNC`.

### Field mapping for Workplace Address:

- In case User (infotype 105, subtype 0001) is maintained for the Employee. During employee synchronization, if the user is of type 00 (user's old Type 3 Address, that is, `USR21-IDADTYPE: 00`), then the existing workplace address data is retained and only the following information is updated or overwritten if present in the infotypes.

- In case no user is maintained then following information is updated as workplace address.

Field Description	Infotype	Field Name	Comments	BP Field Name
Department	1	ORGEH	ORGEH's text from text table T527X	ADCP - DEPARTMENT
Function	1	PLANS	PLANS text from text table T528T	ADCP - FUNCTION
Room Number	32	ZIMNR		ADCP - roomnumber
Building Number	32	GEBNR		ADCP - building
Telephone	105		In case SAP Success Factors integration is used Infotype 105, Subtype ECPB is used else Infotype 105, subtype 0020 is used.	ADR2 - telnr_long
				<b>i Note</b> Additional condition that r3_user = '1'
Cell Phone	105		In case SAP Success Factors integration is used, Infotype 105, Subtype ECPC is used else Infotype 105, subtype CELL is used.	ADR2 - telnr_long
				<b>i Note</b> Additional condition that r3_user = '3'
E-Mail Address	105		infotype 105, subtype 10	ADR6 - flgdefault = 'X' ADR6- SMTP_ADDR

### 7.19.4.1.1 Authorizations

Human Resources uses the authorization concept provided by the AS ABAP or AS Java. Therefore, the recommendations and guidelines for authorizations as described in the SAP NetWeaver AS Security Guide ABAP and SAP NetWeaver AS Security Guide Java also apply.

The SAP NetWeaver authorization concept is based on assigning authorizations to users based on roles. For role maintenance, use the profile generator (transaction PFCG) on the AS ABAP and the User Management Engine's user administration console on the AS Java.

#### **i Note**

For more information about how to create roles, see the information on user administration and authentication in the Product Assistance at [https://help.sap.com/s4hana\\_op\\_1909](https://help.sap.com/s4hana_op_1909) **Product Assistance** **English** **Enterprise Technology** **ABAP Platform** **Securing the ABAP Platform**.

## Standard Roles

The table below shows the standard roles that are used.

Role	Front-end Role	Back-end Role	Both (Front-end + Back-end)	Description
SAP_BR_ADMINISTRATOR_HRINFO	Yes	-	-	Administrator App (For example, Monitoring Employee Synchronization )
SAP_BR_EMPLOYEE	Yes	-	-	Employee can search and display an overview of the employee data in Employee fact-sheet

## Standard Authorization Objects

The table below shows the security-relevant authorization objects that are used.

Authorization Object	Field	Value	Description
B_BUPA_RLT (Business Partner: BP Roles)	ACTVT		Activity
	RLTYP		BP Role
B_BUPA_GRP	BEGRU		Authorization Group
	ACTVT		Activity
B_BUP_PCPT	ACTVT		Activity
F_LFA1_APP (Vendor: Application Authorization)	ACTVT		Activity
	APPKZ		Customer and Vendor Master Data Application Authorization
F_LFA1_BUK (Vendor: Authorization for Company Codes)	BUKRS		Company Code
	ACTVT		Activity
F_LFA1_GEN (Vendor: Central Data)	ACTVT		Activity

Authorization Object	Field	Value	Description
F_LFA1_GRP (Vendor: Account Group Authorization)	KTOKK		Vendor account group
	ACTVT		Activity
P_ORGIN (HR: Master Data)	INFTY		Infotype
	SUBTY		Subtype
	AUTHC		Authorization level
	PERSA		Personnel Area
	PERSG		Employee Group
	PERSK		Employee Subgroup
	VDSK1		Organizational Key
PLOG (Personnel Planning)	PLVAR		Plan Version
	OTYPE		Object Type
	INFOTYP		Infotype
	SUBTYP		Subtype
	ISTAT		Planning Status
	PPFCODE		Function Code
S_USER_GRP (User Master Maintenance: User Groups)	CLASS		User group in user master maintenance
	ACTVT		Activity

## Business Partner End of Purpose (EoP) Check in Human Resources

Human Resources provides an (EoP) check to determine whether employee business partner is still relevant for business activities in the application or can be blocked.

Application Name	Application Description
BUCP	Central Business Partner: Employee

### i Note

For more information, refer [2142308](#).

## 7.19.4.2 Design Constraints

### Workplace Address Data

If the infotype 105, system User Name (SY-Username) 0001 is maintained for the employee and workplace address is synchronized then User will be converted to type 04 (Identity with Workplace Address).

In case User assignment is removed (infotype 105, subtype 0001 is removed for the employee) then after the employee synchronization report execution, then user need to be unassigned from the business partner by running the report RSUID\_REMOVE\_FALSE\_BP\_ASGN. Refer note [2568251](#) for more information.

In case User is converted to 02 or 04 -IDADTYPE then Workplace address or address section will not be editable in User Administration transaction like SU01.

## 7.19.5 FAQ

For more information about the FAQs, refer to the SAP Note [2409229](#).

## 7.19.6 Related Notes

- [2265093](#) - S4TWL - Business Partner Approach
- [2570961](#) - Simplification item S4TWL - Business User Management
- [2383837](#) - S4TWL - SAP Learning Solution not available in Compatibility Mode
- [2340095](#) - S4TWL - Conversion of Employees to Business Partners
- [2273108](#) - S4TWL - General HCM Approach within SAP S/4HANA
- [2383888](#) - S4TWL - SAP E-Recruiting not available in Compatibility Mode
- [2383879](#) - S4TWL - Java-based ESS and MSS not available in Compatibility Mode
- [2393462](#) - All changes in 1610
- [2241838](#) - Limitations to PRAA transaction in S/4HANA
- [2399801](#) - Workplace Address synchronization corrections

## 7.20 Follow-Up Activities for SAP S/4HANA for Central Procurement

### 7.20.1 Integration in SAP S/4HANA

This section describes the integration of an on-premise SAP S/4HANA system or SAP S/4HANA Cloud system with some other enterprise resource planning systems in your system landscape (for example, SAP S/4HANA OP, SAP S/4HANA Cloud, or SAP ERP) to offer centralized procurement processes over your entire system

landscape. With Central Procurement, the on-premise SAP S/4HANA system or SAP S/4HANA Cloud system acts as a hub system and the enterprise resource planning systems act as connected systems.

Central Procurement enables you to manage the procurement processes of several connected systems from a single-source system. The hub system can be operated centrally by the company headquarters, whereas the respective connected systems are operated by the subsidiaries. Using this approach, you can simplify certain aspects of your procurement processes. For example, employees from different subsidiaries raise requests to procure materials by creating self-service purchase requisitions in the hub system of the company headquarters. When employees create purchase requisitions, they are only able to select materials from the subsidiary that they belong to. They are also provided with information about available sources of supply, for example, contracts and purchasing info records, for the selected material. After an employee has completed and saved the purchase requisition, it goes to the approval process. After the approval process is completed, the purchase requisition is replicated to the respective connected system of the subsidiary that the employee belongs to. After successful replication, a purchase order is created automatically to procure the material, and the number of the purchase order is updated back to the self-service purchase requisition.

If you want to use the SAP S/4HANA system that you have installed as one of the connected systems for Central Procurement, then the following information is relevant to you.

The integration of the hub system with SAP S/4HANA system as the connected system is supported in on-premise and cloud integration scenarios. If you want to integrate the hub system with the SAP S/4HANA system as the connected system, you must install the `HUBS4IC` add-on.

#### **i Note**

You only need to install this add-on if your SAP S/4HANA-based hub system or connected system is an on-premise system.

## **7.20.2 Integration Scenarios**

This section describes the integration scenarios that use SAP S/4HANA system as a connected system for Central Procurement.

This section is relevant only if you are using the SAP S/4HANA system as the connected system when using Central Procurement. If you consider your current SAP S/4HANA system installation to be the connected system, continue reading.

You can use your current integration based on SAP S/4HANA to implement SAP S/4HANA for Central Procurement. If you are an SAP S/4HANA customer also using SAP ERP, you can continue to use SAP ERP.

### **Prerequisites**

To open the connectivity of the hub system and the connected systems, an integration add-on must be installed for each of the connected systems. The add-ons for SAP ERP and SAP S/4HANA system are as follows:

- `HUBS4IC`  
This add-on is used to integrate the hub system with an on-premise SAP S/4HANA system as the connected system.

- HUBERPI

This add-on is used to integrate the hub system with SAP ERP system as the connected system.

## Integration Scenarios

The following integration scenarios are available:

### On Premise (OP)

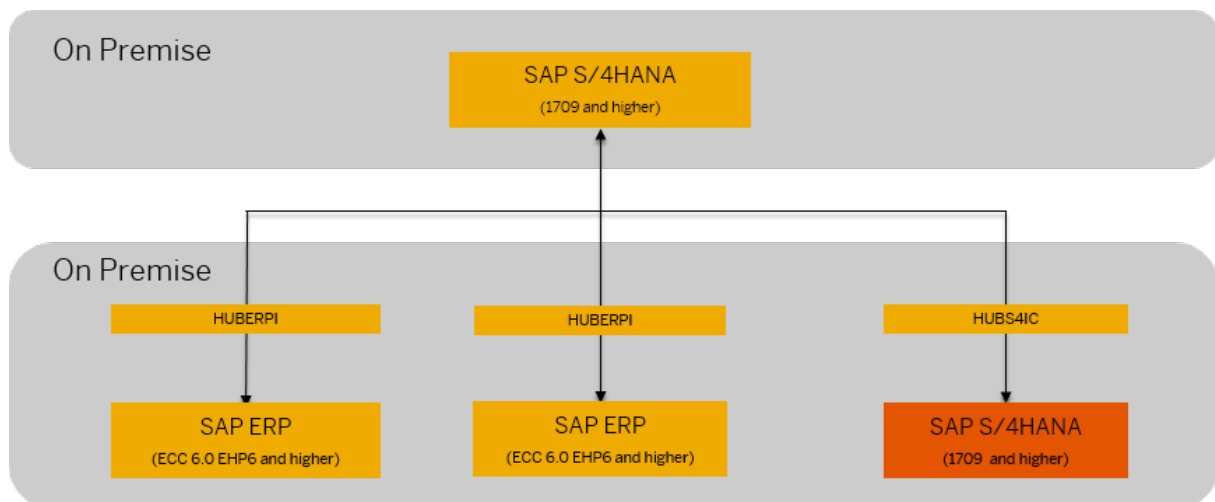
This scenario is relevant if you want to connect one or more SAP ERP or SAP S/4HANA systems as the connected systems to the hub system to carry out procurement processes in an OP environment.

#### i Note

Depending on the support pack that you install, you get different functionalities. For example, if you install SP02 of HUBERPI, it includes the functionality for central contracts and central requisitioning but if you install SP00 of HUBERPI, you get the functionality for central requisitioning only.

Make sure you read the availability matrix contained in the release information note [2491065](#) for more information on the functionalities available with different support packages for HUBERPI,.

For more information on the functionalities available with different support packages for HUBS4IC, see release information note [2573672](#).

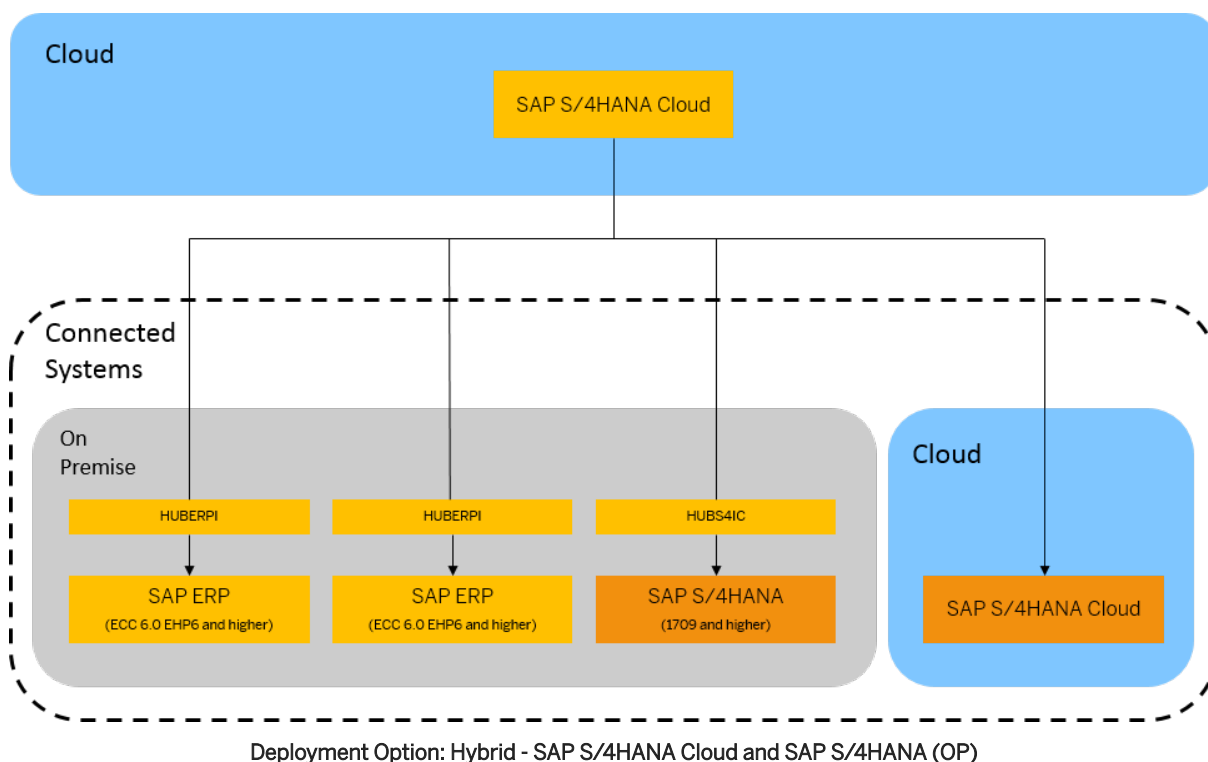


Deployment Option: On Premise

### Hybrid - SAP S/4HANA Cloud and SAP S/4HANA back-end (OP)

This scenario is relevant if you want to address your strategic procurement needs in the cloud and at the same time continue to maintain OP investments for operational procurement.





## More Information

[General Instructions to Install Add-ons](#)

## 7.21 Follow-Up Activities for Agricultural Contract Management

Once the installation is complete, you need to perform the following activities for Agricultural Contract Management (ACM):

### Delivery Customizing

You must copy the delivery customizing for ACM from client 000 to your system-relevant clients. To compare the customizing content contained in these clients, you can execute the transaction [Customizing Cross-System Viewer](#) (SCU0). For ACM, the following application components are relevant:

- LO-AGR-LDC
- LO-AGR-APP
- LO-AGR-STL



- LO-AGR-CC

## Important SAP Notes

Make sure that you read the following SAP Notes before you start implementing Agricultural Contract Management (ACM).

List of SAP Notes relevant to Agricultural Contract Management

SAP Note Number	Title	Description
<a href="#">2775664</a>	Information of features for ACM on S/4 HANA 1809 FPS2	<p>This note provides following information:</p> <ul style="list-style-type: none"> <li>• List of all new features for ACM on 1809 FPS02</li> </ul> <div style="border: 1px solid #ccc; background-color: #f0f0f0; padding: 5px; margin: 5px 0;"> <p><b>i Note</b></p> <p>These features are available in ACM on 1909 FPS00.</p> </div> <ul style="list-style-type: none"> <li>• List of all SAP Notes that must be implemented as follow-up activities for ACM after the general installation of SAP S/4HANA 1809 FPS02</li> </ul>
<a href="#">2734569</a>	ACM on 1809 FPS1: New Feature and Additional Information	<p>This note provides following information:</p> <ul style="list-style-type: none"> <li>• List of all new features for ACM on 1809 FPS01</li> </ul> <div style="border: 1px solid #ccc; background-color: #f0f0f0; padding: 5px; margin: 5px 0;"> <p><b>i Note</b></p> <p>These features are available in ACM on 1909 FPS00.</p> </div> <ul style="list-style-type: none"> <li>• List of all SAP Notes that must be implemented as follow-up activities for ACM after the general installation of SAP S/4HANA 1809 FPS01</li> </ul>

SAP Note Number	Title	Description
<a href="#">2675731</a> 	ACM 1809 FPS0 Post Installation Note	<p>This note provides following information:</p> <ul style="list-style-type: none"> <li>List of all new features for ACM on 1809 FPS00</li> </ul> <div style="border: 1px solid #ccc; background-color: #f0f0f0; padding: 5px; margin: 10px 0;"> <p><b>i Note</b></p> <p>These features are available in ACM on 1909 FPS00.</p> </div> <ul style="list-style-type: none"> <li>List of all SAP Notes that must be implemented as follow-up activities for ACM after the general installation of SAP S/4HANA 1809 FPS00</li> </ul>
<a href="#">1909425</a> 	SFW- Activation error in Dictionary: clear up the inconsistencies	<p>This note provides information about how you can copy missing delivery customizing in your relevant client by activating all the switch BC sets that are associated with the ACM switch.</p>

## 7.21.1 Integration with Oil & Gas and Commodity Management

Agricultural Contract Management (ACM) is delivered as part of Oil & Gas (IS-OIL) and is integrated with Commodity Management (CM). This integration enables the user to use various CM functions for the commodities processed based on the ACM scenarios.

### Integration

To activate the ACM business function (/ACCGO/BF\_ECC), either the IS-OIL or the I-TSW business functions must be activated as a prerequisite:

- IS-OIL business functions:
  - BUSINESS\_FUNCTION\_BASIS\_COM
  - COMMODITY\_MGMT\_&\_BULK\_LOGISTIC
  - LOG\_COMMODITY\_TRANSPORT\_MGMT\_5
- I-TSW business functions:
  - LOG\_TSW\_ECC

The integration with CM has been achieved through incorporation of various CM switches in the ACM business function /ACCGO/BF\_ECC.

## 7.22 Follow-Up Activities for Policy Management

With Policy Management (FS-PM), you can map the whole life cycle of an insurance contract, starting from the creation of an application, through policy issuance and ongoing contract maintenance, right up to the termination of the contract.

### SAP Notes for the Installation of Policy Management

SAP Note Number	Title
<a href="#">2823310</a>	Release Information Note (RIN) for Policy Management in SAP S/4HANA 1909

### Activating Business Function /PM0/INS\_FSPM

To use the functions of Policy Management, you must activate the `/PM0/INS_FSPM` (*Insurance, SAP Policy Management*) business function (with transaction `SFW5`, **► INSURANCE ► /PM0/INS\_FSPM ►**).

### Connecting a Product Engine

Each policy is based on a product that is defined in a product engine. For this reason, Policy Management for Insurance is always connected to a single product engine, which is usually one of the following:

- `msg.PMQ` (see also [Follow-Up Activities for Insurance Product Engine msg.PMQ \[page 93\]](#))
- SAP Product Lifecycle Management for Service Industries (FS-PRO)

#### i Note

Only one product engine can be connected to Policy Management for Insurance. It is not possible to integrate multiple FS-PRO systems, or multiple `msg.PMQ` systems, with Policy Management for Insurance.

### Customer Variants for Group Insurance Features

If you want to use Group Insurance Features in Policy Management you have to check if the corresponding customer variant is activated in Policy Based Technology (PBT). To do so proceed as follows:

1. Start transaction `/PM0/3FW_START`.

2. In the context menu of *Workplace*, choose *Customer Variant*.
3. Enter application **00001** for FS-PM.
4. Check if the customer variant **PMG** is available.  
If it is not there proceed as follows:
  1. Add the customer variant **PMG** and assign **PM0** as the previous customer variant.
  2. Change the customer variant **MVA** (for *Auto* line of business) by assigning **PMG** as the previous customer variant.
  3. Select the *Active* checkbox for the customer variant **MVA**.

The *Customer Variants* screen should look like as follows:

Sequence	Customer Variant	Active	Previous Customer Variant
1	PM0	not active	<No entry>
2	PMG	not active	PM0
3	MVA	X (= active)	PMG

5. If you have an own customer variant, add this customer variant with the following settings:
  - Make sure that this and only this entry is selected as *Active*.
  - Enter **MVA** as the previous customer variant.

## 7.23 Follow-Up Activities for Insurance Product Engine msg.PMQ

You can use the product engine msg.PMQ to define and calculate insurance products. msg.PMQ consists of the following:

- **PMQ.Designer**  
PMQ.Designer is a desktop application that has to be installed on the client computer of a PMQ.Designer user.  
For the distributed development, as well as for the central storage of the product data, a version control system is also required, which is not part of the shipment of PMQ.Designer. It has to be installed and administered separately.  
PMQ.Designer generally supports all version control systems that are capable of being integrated into Eclipse.  
For the operation, we recommend a version control system on the basis of Apache Subversion (SVN).
- **MSGPMCON**  
The msg.PM connection (MSGPMCON) is the link between msg.PMQ and Insurance Policy Management (FS-PM) as part of SAP S/4HANA.  
The main tasks of MSGPMCON are the following:
  - Management of the product data for the import into In-Force Business Configurator (IFBC) of FS-PM
  - Forwarding of calculation requests from FS-PM to TOMATOSJ
- **TOMATOSJ**

TOMATOSJ has to be installed as a software component on SAP HANA XSA. Installation and administration is handled by mechanisms of the XSA platform.  
During the installation, a customer-specific configuration file can be specified to adapt several default values.

For more information, see the attachments in SAP Note [2635864](#).

## 7.24 Follow-Up Activities for Transportation Management

In order to use automatic planning with the optimizer, you must install the SAP SCM Optimizer. In order to use detailed mixed package building, you must install the Package Building Optimizer. For more information, see SAP Note [1686826](#).

## 7.25 Follow-Up Activities for Data Quality Management, version for SAP Solutions

After installation, several follow-up activities are necessary to set up Data Quality Management, version for SAP Solutions.

Your follow-up activities depend on whether you are using SAP HANA smart data quality, SAP Data Services, and/or SAP Data Quality Management, microservices for location data as the underlying engine.

For more information, see the product assistance at: [https://help.sap.com/s4hana\\_op\\_1909](https://help.sap.com/s4hana_op_1909) ► *Product Assistance* ► *English* ► *Enterprise Technology* ► *Data Quality Management, version for SAP Solutions* ►.

## 7.26 Follow-Up Activities for Service

After the installation, you need to carry out the following activities for Service:

### Activate Internet Communication Framework (ICF) Services

For information about the ICF services that you have to activate for WebClient UI apps, see the section *Activate ICF Services of WebClient UI Apps* in the *UI Technology Guide for SAP S/4HANA* at [https://help.sap.com/s4hana\\_op\\_1909](https://help.sap.com/s4hana_op_1909) ► *Product Documentation* ►. SAP Note [2825458](#) contains information on the services required for WebClient UI apps.

## Object Navigation

You can navigate from WebClient UI applications directly to other apps available in SAP Fiori launchpad. For more information, see the product assistance for SAP S/4HANA on the SAP Help Portal at [https://help.sap.com/s4hana\\_op\\_1909](https://help.sap.com/s4hana_op_1909) under ► *Product Assistance* ► *English* ► *Enterprise Business Applications* ► *Service* ► *WebClient UI Framework* ► *Integration with SAP Fiori Launchpad* ► *Outbound Navigation* ▾.

## 7.27 Troubleshooting

### Unable to Create New Clients



If you are unable to create new clients in transaction SCC4 or SM30 (table T000) because the *New Entries* button is missing, see SAP Note [2140167](#) .

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