Administrator's Guide
Document Version: 1.0 – 2017-06-09

PUBLIC

Administrator's Guide: SAP Commercial Project Management 2.0 for SAP S/4HANA, Support Pack Stack 02

Typographic Conventions

Type Style	Description
Example	Words or characters quoted from the screen. These include field names, screen titles, pushbuttons labels, menu names, menu paths, and menu options. Textual cross-references to other documents.
Example	Emphasized words or expressions.
EXAMPLE	Technical names of system objects. These include report names, program names, transaction codes, table names, and key concepts of a programming language when they are surrounded by body text, for example, SELECT and INCLUDE.
Example	Output on the screen. This includes file and directory names and their paths, messages, names of variables and parameters, source text, and names of installation, upgrade and database tools.
Example	Exact user entry. These are words or characters that you enter in the system exactly as they appear in the documentation.
<Example>	Variable user entry. Angle brackets indicate that you replace these words and characters with appropriate entries to make entries in the system.
EXAMPLE	Keys on the keyboard, for example, F2 or ENTER.

Document History

The following table provides an overview of the most important document changes:

Version	Date	Change
1.0	2017-06-09	First published version

Table of Contents

1 Getting Started

Since SAP Commercial Project Management 2.0 for SAP S/4HANA, Support Pack Stack 02 is an add-on on SAP S/4HANA 1610 FPS02, this guide must be implemented after you have implemented the guides of SAP S/4HANA 1610 FPS02 (see https://help.sap.com/viewer/p/SAP_S4HANA_ON-PREMISE).

This guide provides you with the following information about SAP Commercial Project Management 2.0 for SAP S/4HANA:

- Technical components of the product
- A list of the tools and documentation you need for the installation
- Some important follow-up activities you need to consider after the installation
- Operation-related information
- Security-related information

Constraints

The scenarios that are presented here serve as examples of how you can use SAP software in your company. The scenarios are only intended as models and do not necessarily run the way they are described here in your customer-specific system landscape. Ensure to check your requirements and systems to determine whether these scenarios can be used productively at your site. Furthermore, we recommend that you test these scenarios thoroughly in your test systems to ensure they are complete and free of errors before going live.

2 Important Notes

Note Number	Description
2257218	Release Strategy for the ABAP Add-On CPM_S4H
2382542	SAP CPM 2.0 for S/4HANA 1610: Release Information Note

3 Overview of SAP Commercial Project Management 2.0 for SAP S/4HANA

SAP Commercial Project Management 2.0 for SAP S/4HANA consists of the following functional areas:

- Project Workspace
- Project Cost and Revenue Planning
- Project Issue and Change Management

Project Workspace, Project Cost and Revenue Planning, and Project Issue and Change Management, (CPM_S4H 200) are based on S4CORE 101 and SAP NetWeaver 7.51.

4 Important References

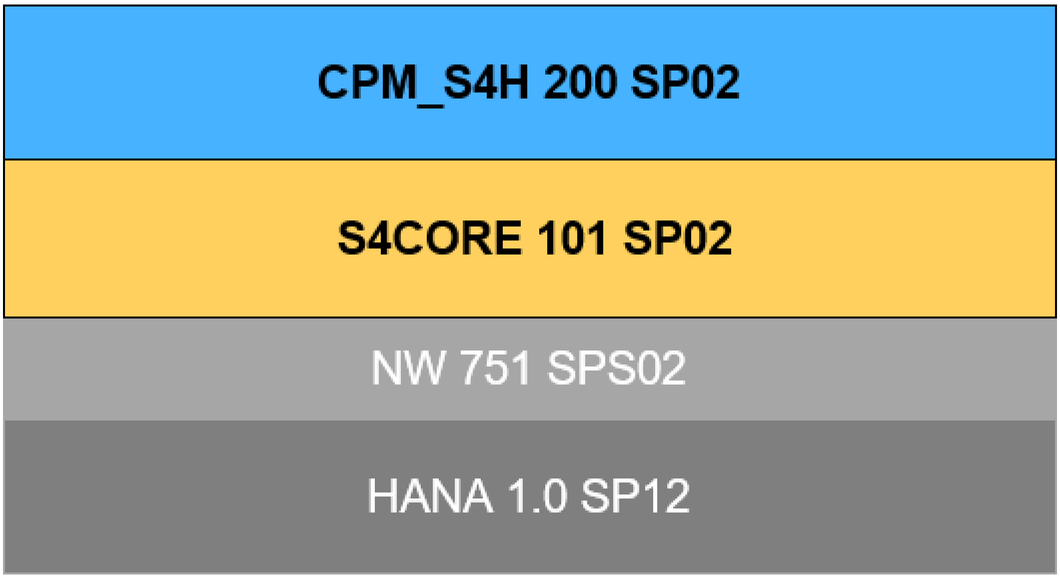
Source	Description
https://help.sap.com/viewer/p/SAP_S4HANA_ON-PREMISE	This page contains all the important documentation required for working with SAP S/4HANA 1610.
https://fioriappslibrary.hana.ondemand.com/sap/fix/externalViewer/index.html	This page provides a comprehensive library of all relevant SAP content for the SAP Fiori launchpad.
https://help.sap.com/viewer/p/SAP_BUSINESSOBJECTS_ANALYSIS_OFFICE	This page provides you information on SAP BusinessObjects Analysis, edition for Microsoft Office.

5 Installation

This section describes, with examples, how SAP Commercial Project Management 2.0 for SAP S/4HANA, Support Pack Stack 02 can be deployed in new or existing landscapes:

5.1.1.1 Example: New Installation of SAP Commercial Project Management 2.0 for SAP S/4HANA, Support Pack Stack 02

A new installation of SAP Commercial Project Management 2.0 for SAP S/4HANA needs to run on the SAP HANA database. It also requires 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. The minimum required stack levels are as follows:



Simple Deployment of SAP Commercial Project Management 2.0 for SAP S/4HANA

5.2 Architecture of SAP Commercial Project Management 2.0 for SAP S/4HANA

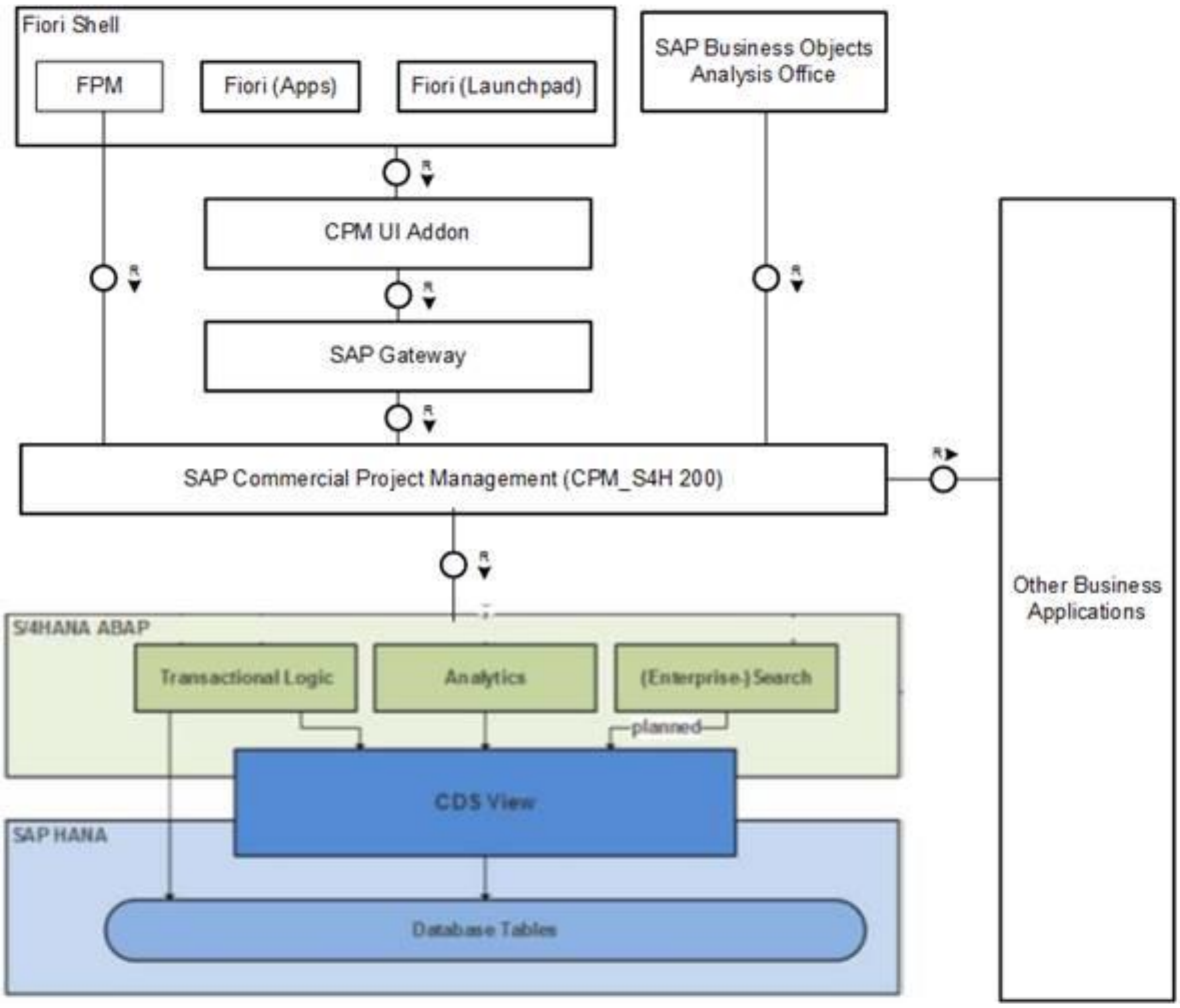


Figure 1: Architecture of SAP Commercial Project Management 2.0 for SAP S/4HANA

Components

The system landscape involves *Project Workspace*, *Project Cost and Revenue Planning* and *Project Issue and Change Management* (CPM_S4H 200). The Software Component UI is UIS4CPMA (UI for CPM Add-on 1.0). Apart from CDS views, CPM_S4H 200 also delivers HANA content (calculation views) as part of the sap.cpms4h.pfp and sap.cpms4h.avr packages.

Communication Between Back and Front Ends

The communication between back end and front end is HTTP. The *SAP Commercial Project Management 2.0 for SAP S/4HANA* applications use Fiori as the primary UI technology. Fiori-themed screens are used to render ABAP Web Dynpro applications. Analysis Office for Microsoft Excel is used as frontend for planning and analytics. You can use any end user client that is supported by these UI technologies.

5.3 Installation Documentation

5.3.1 Overall Implementation Sequence

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

NOTE

For the latest component version and support pack level requirements, as well as more detailed information about the installation process for *Project Workspace*, *Project Cost and Revenue Planning,* and *Project Issue and Change Management*, see the release strategy note: SAP note 2257218.

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	Analysis Office (AO)
Option 1	✓	✓	✓	✓
Option 2	✓	✓		✓
Option 3	✓		✓	✓
Option 4	✓			✓

Option 1: Install Project Workspace, Project Cost and Revenue Planning, and Project Issue and Change Management (CPM_S4H 200) with Analysis Office (AO):

1. Install (or update) SAP NW 7.51 including SAP BW 751
2. Install (or update) SAP S4CORE 101
3. Install (or update) CPM_S4H 200
4. 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.

5. Activate the /CPD/CA_CPD_PFP_1 business function (see transaction *SFW5 → Enterprise Business Functions → /CPD/CA_CPD_PFP_1*)
6. Activate the /PICM/CA_CPD_PICM_1 business function (see transaction *SFW5 → Enterprise Business Functions → /PICM/CA_CPD_PICM_1*)
7. Install NWBC for Desktop (optional)
8. Install AO (see SAP note 2188859)
9. Enable Planning Application Kit (PAK). PAK allows you to o use the workbooks of SAP BusinessObjects Analysis, edition for Microsoft Office as part of the SAP Commercial Project Management content. .

   Procedure

   a. Get the latest information posted in SAP note 1637199
   b. In the back-end system, launch table/view maintenance (transaction SM30).
   c. Enter RSPLS_HDB_ACT in the table/view field and choose Maintain.
   d. Choose New Entries
   e. In the HANA Integratn. Active column, select Deep HANA Integration Active and in the Functn. Active column, mark the checkbox.
10. *SAP Commercial Project Management* uses the BW layer that is available in each NetWeaver stack. *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.
11. You must activate the analytics content under info-areas /CPD/AVR and /PICM/AVR. For information about setting up *Analytics*, see SAP Note 1999149.
12. You must follow these steps to enable delivery customizing in the relevant clients:
    a. Go to transaction SFW_BROWSER
    b. Expand the business function /CPD/CA_CPD_PWS_1
    c. Double-click on switch /CPD/CA_CPD_SFWS_PWS_1 to implement BC set activation.
    d. Choose the Activate Dependent BC Sets button.
    e. In the dialog box, select Activate Switch BC Sets and choose Continue.
    f. In the next dialog box, select the following:
       i. Only Logon client for Cascading BC Sets
       ii. Activate in logon client for Non-Cascading BC sets
       iii. Activate for Cross-Client BC sets
       iv. Mark the checkboxes to ignore previous activations and ignore table delivery class for a new installation
    g. Repeat the BC set activation steps for the switch /CPD/CA_CPD_SFWS_PWS_S4_1.
    h. Expand the business function /CPD/CA_CPD_PFP_1
    i. Repeat the BC set activation steps for the switch /CPD/CA_CPD_SFWS_PFP_1
    j. Expand the business function /PICM/CA_CPD_PICM_1
    k. Repeat the BC set activation steps for the switch /PICM/CA_CPD_SFWS_PICM_1
13. Check and activate SICF services as follows:
    a. Go to transaction SICF
    b. Choose Execute
    c. Go to default host → sap → bc → webdynpro
    d. Ensure that all services under the cpd node are active

    e. Ensure that all services under the picm node are active

14. 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 7C63E6507DA2A220E10000000A428544
    4. Enter the object ID as 38EAA71741841EE59EFAD4B491883514
    5. Enter the object ID as F0D5105146757029E10000000A42852B
    6. 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. Mark the checkbox *Include Tasks in Requests*.
    5. Execute the transaction.

Option 2: Install Project Workspace and Project Cost and Revenue Planning, (CPM_S4H 200) with Analysis Office (AO):

1. Install (or update) SAP NW 7.51 including SAP BW 751
2. Install (or update) SAP S4CORE 101
3. Install (or update) CPM_S4H 200
4. 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.

5. Activate the /CPD/CA_CPD_PFP_1 business function (see transaction *SFW5 → Enterprise Business Functions → /CPD/CA_CPD_PFP_1*)
6. Install NWBC for Desktop (optional)
7. Install AO (see SAP note 2188859)
8. Enable Planning Application Kit (PAK). PAK allows you to o use the workbooks of SAP BusinessObjects Analysis, edition for Microsoft Office as part of the SAP Commercial Project Management content. .

   Procedure

   a. Get the latest information posted in SAP note 1637199
   b. In the back-end system, launch table/view maintenance (transaction SM30).
   c. Enter RSPLS_HDB_ACT in the table/view field and choose Maintain.

d. Choose New Entries
e. In the HANA Integratn. Active column, select Deep HANA Integration Active and in the Functn. Active column, mark the checkbox.

9. *SAP Commercial Project Management* uses the BW layer that is available in each NetWeaver stack. *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.
10. You must activate the analytics content under info-areas /CPD/AVR and /PICM/AVR. For information about setting up *Analytics*, see SAP Note 1999149.
11. You must follow these steps to enable delivery customizing in the relevant clients:
    a. Go to transaction SFW_BROWSER
    b. Expand the business function /CPD/CA_CPD_PWS_1
    c. Double-click on switch /CPD/CA_CPD_SFWS_PWS_1 to implement BC set activation.
    d. Choose the Activate Dependent BC Sets button.
    e. In the dialog box, select Activate Switch BC Sets and choose Continue.
    f. In the next dialog box, select the following:
        i. Only Logon client for Cascading BC Sets
        ii. Activate in logon client for Non-Cascading BC sets
        iii. Activate for Cross-Client BC sets
        iv. Mark the checkboxes to ignore previous activations and ignore table delivery class for a new installation
    g. Repeat steps d, e and f for the switch /CPD/CA_CPD_SFWS_PWS_S4_1.
    h. Expand the business function /CPD/CA_CPD_PFP_1
    i. Repeat steps d, e and f for the switch /CPD/CA_CPD_SFWS_PFP_1
12. Check and activate SICF services by following the below procedure
    a. Go to transaction SICF
    b. Click on Execute
    c. Go default host → sap → bc → webdynpro
    d. Ensure that all services under cpd node are active
13. BRF+ framework is used within analytics. Import BRF+ customizing application by following below steps:

    Client 000:

    1. Run the report FDT_TRANS.
    2. Provide the relevant customizing request.
    3. Enter the object ID as 7C63E6507DA2A220E10000000A428544
    4. Enter the object ID as 38EAA71741841EE59EFAD4B491883514
    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. Mark the checkbox *Include Tasks in Requests*.
    5. Execute the transaction.

Option 3: Install Project Workspace and Project Issue and Change Management (CPM_S4H 200) with Analysis Office (AO):

1. Install (or update) SAP NW 7.51 including SAP BW 751
2. Install (or update) SAP S4CORE 101
3. Install (or update) CPM_S4H 200
4. 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.

5. Activate the /PICM/CA_CPD_PICM_1 business function (see transaction *SFW5 → Enterprise Business Functions → /PICM/CA_CPD_PICM_1*)
6. Install NWBC for Desktop (optional)
7. Install AO (see SAP note 2188859)
8. You must activate analytics content under info-areas /CPD/AVR and /PICM/AVR. For information about setting up *Analytics*, see SAP Note 1999149. Technically, analytics requires activation of the /CPD/FPID info-object. Implement the steps mentioned in SAP note 2205102.
9. You must follow these steps to enable delivery customizing in the relevant clients:
   a. Go to transaction SFW_BROWSER
   b. Expand the business function /CPD/CA_CPD_PWS_1
   c. Double click on switch /CPD/CA_CPD_SFWS_PWS_1 to implement BC set activation.
   d. Choose the Activate Dependent BC Sets button.
   e. In the dialog box, select Activate Switch BC Sets and choose Continue.
   f. In the next dialog box, select the following:
      i. Only Logon client for Cascading BC Sets
      ii. Activate in logon client for Non-Cascading BC sets
      iii. Activate for Cross-Client BC sets
      iv. Mark the checkboxes to ignore previous activations and ignore table delivery class for a new installation
   g. Repeat the BC set activation steps for the switch /CPD/CA_CPD_SFWS_PWS_S4_1.
   h. Expand the business function /CPD/CA_CPD_PFP_1
   i. Repeat the BC set activation steps for the switch /CPD/CA_CPD_SFWS_PFP_1
10. Check and activate SICF services as follows:
   a. Go to transaction SICF
   b. Choose Execute
   c. Go default host → sap → bc → webdynpro
   d. 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 7C63E6507DA2A220E10000000A428544
4. Enter the object ID as 38EAA71741841EE59EFAD4B491883514
5. Enter the object ID as F0D5105146757029E10000000A42852B
6. 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. Mark the checkbox *Include Tasks in Requests*.
5. Execute the transaction.

12. Implement SAP note 2399608.

Option 4: Install Project Workspace (CPM_S4H 200) with Analysis Office (AO):

1. Install (or update) SAP NW 7.51 including SAP BW 751
2. Install (or update) SAP S4CORE 101
3. Install (or update) CPM_S4H 200
4. 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.

5. Install NWBC for Desktop (optional)
6. Install AO (see SAP note 2188859)
7. You must activate analytics content under info-areas /CPD/AVR and /PICM/AVR. For information about setting up *Analytics*, see SAP Note 1999149. Technically, analytics requires activation of the /CPD/FPID info-object. Implement the steps mentioned in SAP note 2205102.
8. You must follow these steps to enable delivery customizing in the relevant clients:
    a. Go to transaction SFW_BROWSER
    b. Expand the business function /CPD/CA_CPD_PWS_1
    c. Double-click on switch /CPD/CA_CPD_SFWS_PWS_1 to implement BC set activation.
    d. Choose the Activate Dependent BC Sets button.
    e. In the dialog box, select Activate Switch BC Sets and choose Continue.
    f. In the next dialog box, select the following:
        i. Only Logon client for Cascading BC Sets
        ii. Activate in logon client for Non-Cascading BC sets
        iii. Activate for Cross-Client BC sets

    iv. Mark the checkboxes to ignore previous activations and ignore table delivery class for a new installation
  g. Repeat the BC set activation steps for the switch /CPD/CA_CPD_SFWS_PWS_S4_1.
9. Check and activate SICF services by following the below procedure
  a. Go to transaction SICF
  b. Choose Execute
  c. Go default host → sap → bc → webdynpro
  d. Ensure that all services under cpd node are active
10. BRF+ framework is used within analytics. Import the BRF+ customizing application as follows:

    Client 000:

    6. Run the report FDT_TRANS.
    7. Provide the relevant customizing request.
    8. Enter the object ID as 7C63E6507DA2A220E10000000A428544
    9. Enter the object ID as 38EAA71741841EE59EFAD4B491883514
    10. Select the *Transport Whole Application(s)* radio button.

    Productive Client:

    6. Launch the transaction SCC1.
    7. Enter the source client as 000.
    8. Provide the transport request in which you have transported the application (from client 000).
    9. Mark the checkbox *Include Tasks in Requests*.
    10. Execute the transaction.

11. Implement SAP note 2399608.

5.3.2 Post-Installation Activities

5.3.2.1 Set-Up of Fiori Application

5.3.2.1.1 Replication of Backend Catalog

For more information about replicating the backend catalog, see Extract Transactions and Web Dynpro ABAP Applications from a Remote System.

5.3.2.1.2 Role for Adding Fiori Apps in the Fiori Launchpad

To add the Fiori apps of SAP Commercial Project Management 2.0 for SAP S/4HANA in the Fiori launchpad, the following role is required: SAP_BR_PROJECTMGR_COMMPRJ (Project Manager (CPM)).

In additon to this frontend role, you must also assign the backend roles detailed in the Authorizations section in this guide.

5.3.2.1.3 Activation of Relevant OData Services

Prerequisites

- You have made the prerequisite settings in Customizing for *SAP NetWeaver* → *SAP Gateway* → *OData Channel* → *Configuration* → *Activate or Deactivate SAP Gateway*.
- You have implemented the steps described in the *UI Technology Guide for SAP S/4HANA 1610* at the SAP Help Portal, under the address https://help.sap.com/viewer/p/SAP_S4HANA_ON-PREMISE → Product Documentation
- The CDS and HANA content of SAP S/4HANA Commercial Project Management 1610 are dependent on the CDS views of S4CORE. Therefore, all CDS views from the S4CORE component have to be active and created in the database.

In SAP Commercial Project Management 2.0 for SAP S/4HANA, Support Pack Stack 02, the following OData service must be activated: CPD_MASTERPROJECT_OVERVIEW_SRV

5.3.2.1.4 Enabling Enterprise Search

Prerequisites

You have implemented the required tasks listed in the *Configuration Using Task Lists* section in *UI Technology Guide for SAP S/4HANA 1610* at the SAP Help Portal, under the address https://help.sap.com/viewer/p/SAP_S4HANA_ON-PREMISE → Product Documentation.

In SAP Commercial Project Management 2.0 for SAP S/4HANA, Support Pack Stack 02, 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.

5.3.2.1.5 Schema Mapping

For the HANA content of SAP Commercial Project Management 2.0 for SAP S/4HANA to work, you must map the SAP_ECC schema to the SAP <SID> schema.

5.3.2.2 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. Mark the *Java Server Available* checkbox.

   Note that 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. Mark the *Allow Crystal Reports* checkbox.

NOTE

- *SAP 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.

5.3.2.3 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*.

5.3.2.4 Definition of RFC Destinations for Charts

The Fiori-themed analytics content of SAP Commercial Project Management 2.0 for SAP S/4HANA 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.

5.3.2.5 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 planning workbooks:

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

5.3.2.6 Enabling of Microsoft Excel Macro

The planning workbooks for Project Cost and Revenue Planning contain macros. To allow proper functioning of planning workbooks, see *the Other Security-Relevant Information* section of this guide.

5.3.2.7 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)).

5.3.2.8 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 *SAP Commercial Project Management* with *SAP Multiresource Scheduling*, see SAP Note 2363617.

5.3.3 Installation FAQ

5.3.3.1 Important Notes

Note Number	Description
2011052	Predefine Project Workspace Views Personalization for End Users
1800539	FAQ: SAP Commercial Project Management

5.3.3.2 Enhancing Planning Workbooks for SAP BusinessObjects Analysis, edition for Microsoft Office (Latest SP)

The delivered planning workbooks contain input-ready queries and planning objects, and launch 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

User Guide in the SAP Help Portal under Analytics → Business Intelligence → Analysis → SAP BusinessObjects Analysis, edition for Microsoft Office → End-User Information.

5.3.3.3 Enhancing Input-Ready Queries for Planning

We recommend that you use the delivered input-ready queries as templates and create your own queries to suit your requirements. For more information about input-ready queries, see *Input-Ready Query* (Input-Ready Query).

5.3.3.4 Disabling the Intelligent Double-Click Function in SAP BusinessObjects Analysis, edition for Microsoft Office (Latest SP)

> 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 the Registry Editor. To know more about maintaining registry settings for SAP BusinessObjects Analysis, edition for Microsoft Office, see the Administrator's Guide in the SAP Help Portal under *Analytics* → *Business Intelligence* → *Analysis* → *SAP BusinessObjects Analysis, edition for Microsoft 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*.

5.3.3.5 Enhancing HANA Views to Add New Resources

1. Launch HANA Studio.
2. Go to the package sap → cpms4h → pfp → Calculation Views.
3. Right-click on CV_RESOURCE_0ACT and choose Copy.

4. Right-click on the Calculation Views folder and paste the selection.
5. Enter the view name as CV_ RESOURCE_<resource type>, for example, CV_ RESOURCE_0MRS.
6. Open CV_ RESOURCE_<resource type>, select Projection_4.
7. On the right panel, right-click on RES_TYPE_ID and choose Remove.
8. Open the calculated column RES_TYP and change the name to RES_TYPE_ID.
9. Remove the check in the Hidden checkbox and in the expression editor, enter the resource type ID (for example 0MRS). Choose OK.

10. Save and activate your changes.
11. Open the CV_RESOURCE HANA view and add the projection to the HANA view.

12. Add the newly created HANA view (CV_ RESOURCE_<resource type> (for example, CV_ RESOURCE_0MRS)) into Projection_7:

13. Right-click Projection_7 choose Add All To Output.

14. Connect Projection_7 to Union_1.
15. Map the source and target fields as follows:

Source	Target
MANDT	MANDT
PLAN_SCEN_ID	PLAN_SCEN_ID
RES_TYPE_ID	RES_TYPE_ID
SPRAS	SPRAS
MCTXT	MAKTG
LSTAR	MATNR
KOKRS	KOKRS

16. Save and activate your changes.

5.3.3.6 Set-Up of the User Assistance Plugin

To make context-sensitive user assistance available in the SAP Fiori Launchpad, you must set up the user assistance plugin. For more information, see the SAP S/4HANA 1610 Installation Guide at the SAP Help Portal, under the address https://help.sap.com/viewer/p/SAP_S4HANA_ON-PREMISE → Product Documentation.

6 Conversion to SAP Commercial Project Management 2.0 for SAP S/4HANA

After conversion to SAP Commercial Project Management for S/4 HANA 1610, the system automatically retains the data and configuration. The following table provides the simplification list for SAP Commercial Project Management for S/4 HANA 1610:

Note Number	Description
2318716	S4TWL – Rate Card
2318733	S4TWL – Interface of SAP Commercial Project Management with SAP Cloud for Customer
2320143	S4TWL – Fiori Apps of SAP Commercial Project Management
2318728	S4TWL – Launchpads of Gantt Chart and Commercial Project Inception
2323806	S4TWL - Workbooks Delivered in Project Cost and Revenue Planning

7 Upgrade Information

7.1 New and Changed Objects

The following SAP notes list the new and changed objects in this release:

- 2368510
- 2373146

7.2 Schema Mapping

For the HANA content of SAP Commercial Project Management 2.0 for SAP S/4HANA to work, you must map the SAP_ECC schema to the SAP <SID> schema.

7.3 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 SE38, run /BOFU/R_FBI_VIEW_CLEANUP_DDIC
2. In the selection screen, uncheck the 3 checkboxes (Inactive Only, Deleted Objects Only, Test Mode)
3. Execute
4. The system lists inconsistent objects (from the following list). Select the objects that are listed by the system.
   a. Business Object

      /BOBF/ATTACHMENT_FOLDER

   b. 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.

8 Operations

8.1 Introduction

Recommendation

This section does not replace the daily operations handbook that we recommend you to create for your specific production operations.

About This Section

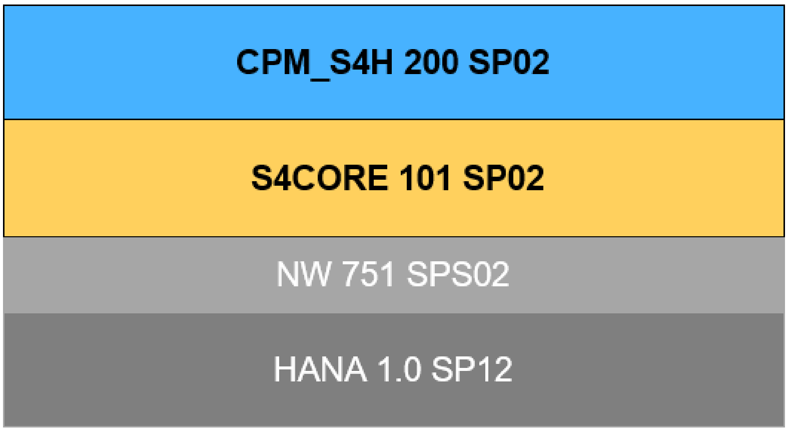
This section provides a starting point for managing your SAP applications and maintaining and running them optimally. It contains specific information for various tasks and lists the tools that you can use to implement them. This guide also provides references to the documentation required for these tasks, so you will also need to refer to other documentation, especially to the documentation *Technical Operations for SAP NetWeaver* at the SAP Help Portal under https://help.sap.com/viewer/p/SAP_S4HANA_ON-PREMISE → SAP NetWeaver for SAP S/4HANA.

8.2 System Landscape Information: SAP Commercial Project Management 2.0 for SAP S/4HANA

This section describes, with examples, how SAP Commercial Project Management 2.0 for SAP S/4HANA can be deployed in new or existing landscapes:

8.2.1 Example: New Installation of SAP Commercial Project Management 2.0 for SAP S/4HANA

A new installation of SAP Commercial Project Management 2.0 for SAP S/4HANA needs to run on the SAP HANA database. It also requires 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. Minimum required stack levels are shown below.



Simple SAP S/4HANA Deployment

8.3 Important Information

Source	Description
https://help.sap.com/viewer/p/SAP_S4HANA_ON-PREMISE	The *Operations Guide* section contains the important operations information required for working with SAP S/4HANA.

8.4 Monitoring

SAP provides you with an infrastructure to help your technical support consultants and system administrators effectively monitor your system landscape.

For more information about monitoring topics, see the SAP Help Portal under https://help.sap.com/viewer/p/SAP_S4HANA_ON-PREMISE → SAP NetWeaver for SAP S/4HANA Technical Operations for SAP NetWeaver Solution Life Cycle Management Solution Monitoring.

For more information about monitoring with SAP Solution Manager, see the SAP Help Portal under https://help.sap.com/viewer/p/SAP_S4HANA_ON-PREMISE → SAP NetWeaver for SAP S/4HANA Technical Operations for SAP NetWeaver Solution Life Cycle Management Connecting a Technical System to SAP Solution Manager.

8.4.1 Monitoring

Within the management of SAP technology, monitoring is an essential task. A section has therefore been devoted solely to this subject. You can find more information about the underlying technology in the SAP NetWeaver Administrator's Guide – Technical Operations Manual in:

SAP NetWeaver 7.51	http://help.sap.com/nw75 → *System Administration and Maintenance Information* → *Technical Operations for SAP NetWeaver*

8.4.1.1 Alert Monitoring

Proactive, automated monitoring is the basis for ensuring reliable operations for your SAP system environment. SAP provides you with the infrastructure and recommendations needed to set up your alert monitoring to recognize critical situations for *SAP Commercial Project Management 2.0 for SAP S/4HANA*. CPM_S4H 200 does not offer specific data in the Computer Center Management System (CCMS) for alert monitoring. Nevertheless general monitoring options can be used.

For information and detailed procedures related to the alert monitoring in SAP NetWeaver 7.51, see the Monitoring Setup Guide for SAP NetWeaver at:

Depending on the version of SAP NetWeaver installed:	
SAP NetWeaver 7.51	http://help.sap.com/nw75 → *System Administration and Maintenance Information* → *Technical Operations for SAP NetWeaver* → *Administration of SAP NetWeaver systems and components*→ *Administration of Application Server ABAP* → *Monitoring and Administration Tools for Application Server ABAP*

8.4.2 Monitoring Installation and Setup

In order to enable the auto-alert mechanism of CCMS, see SAP Note 617547.

8.4.3 Detailed Monitoring and Tools for Problem and Performance Analysis

CPM_S4H 200 is based on WebAS 7.51, part of SAP NetWeaver.

Project Workspace supports the use of *SAP Business Rules Framework plus (BRFplus)* to determine resource and resource type for cost elements and activity types.

Project Issue and Change Management supports the use of *SAP Business Rules Framework plus (BRFplus)* to:

- Determine business partners for issues and activities
- Determine additional activities for issues
- Find experts for certain activities

It is not recommended to activate these BRFplus traces for long periods of time as they are performance critical.

Procedure

Trace data can be found in the *BRFplus Workbench* as follows:

1. Start transaction BRFplus to open the *BRFplus Workbench*.
2. Switch to expert mode by choosing the *Personalize User* mode.
3. In the *Tools* menu choose *Lean Trace*.
4. Enter the required BRFplus function using the given selection data.
5. Start the search to see if any trace data is available.

8.4.3.1 Trace and Log Files

Trace files and log files are essential for analyzing problems. The standard SAP NetWeaver tools such as transactions ST22 (Run Time Errors) and SM21 (System Log) can be used to monitor trace and log files.

SAP NetWeaver 7.51	http://help.sap.com/nw75 → *System Administration and Maintenance Information → Technical Operations for SAP NetWeaver → Administration of SAP NetWeaver systems and components→ Administration of Application Server ABAP → Monitoring and Administration Tools for Application Server ABAP*

- The Project Cost and Revenue Planning application uses the tracing functions of Analysis Office to trace actions performed in the planning workbook (Analysis Office).
- You can also activate a trace file for Project Cost and Reveue Planning using the Activate Tracing button on the Financial Planning ribbon. Details of the items are recorded in the trace file (CACPDFP_TRACE_LOG.log).

Important Log Files for Project Cost and Revenue Planning:

In the CA-CPD-FP component, the following log objects are created in SLG0:
- Log Object ID: /CPD/PFP
- Subobject ID: /CPD/ERP_TRANSFER
- Subobject ID: /CPD/IMPORT_DATA

All the logs created during the transfer uses the log object and the subobject to identify the logs efficiently.

External ID: A unique external ID of the log is created whenever a new version is created. The external ID is used at the time of the creation of the log. The log database contains an index in the fields OBJECT/SUBOBJECT/LOG and EXTENAL ID. If these fields are specified, the system reads the log from the database, efficiently (without a full table scan).

The application logging infrastructure supports a hierarchical display of logs. The log is shown in a hierarchical format with two levels. To achieve this, all generic messages are added at level 1; and the granular and object-type-specific messages are added at level 2.

Important Trace Files for Project Cost and Revenue Planning:

Component	Content	File	Path
Project Cost and Revenue Planning	– Queries – Planning functions – Errors – Flow of subroutines and functions	CACPDFP_TRACE_LOG.log	Example: \sapdb\data\wrk\db

Activating Trace Files

When you launch the *Analysis Office* 1.3, choose *Activate Tracing* in the *Financial Planning* ribbon. A dialog box prompts you to choose a location to save the trace files (on the local disk). This activates the tracing in the *Project Cost and Revenue Planning* application. For information about tracing related to *Analysis Office*, see http://help.sap.com/boaa →

- *System Administration and Maintenance Information → Administrator's Guide*
- *End-User Information → User Guide*

Displaying Trace Files

To display the trace files, you must go to the location specified by you when you had activated the trace file using the *Activate Tracing* button in the *Financial Planning* ribbon.

Deleting Trace Files

You can use the *Delete Trace Log* pushbutton to delete an existing trace file. Note that if you change the name of the trace file from CACPDFP_TRACE_LOG.log to something else, you cannot delete the trace log. To create a new trace file, you can choose *Activate Tracing* again.

8.4.4Workload Monitors

Project Workspace and *Project Cost and Revenue Planning* use the standard NetWeaver workload monitor.

SAP NetWeaver 7.51	http://help.sap.com/nw75 → *System Administration and Maintenance Information → Technical Operations for SAP NetWeaver → Administration of SAP NetWeaver systems and components→ Administration of Application Server ABAP → Monitoring and Administration Tools for Application Server ABAP → Statistics*

8.4.5Data Consistency

If related or identical data is stored in multiple places there may be the possibility of inconsistencies (e.g. after a restore of a single component). The following table describes how consistency can be verified and how inconsistencies may be repaired.

Component / data store	Check tool / method	Detailed Description	Prerequisites
Project Cost and Revenue Planning	Transaction code: RSRT → execute query /CPD/PFP_MP01_Q0001	This report shows the consistency of plan data and the *Controlling* posting data (if it had been changed) after the transfer to S4CORE. This report only shows the data consistency of work breakdown structure elements.	The transfer to S4CORE is complete

8.5 Management of SAP Commercial Project Management 2.0 for SAP S/4HANA

SAP provides you with an infrastructure to help your technical support consultants and system administrators effectively manage all SAP components and complete all tasks related to technical administration and operation.

Additional information can be found in SAP Solution Manager documentation on SAP Help Portal at http://help.sap.com → SAP Solution Manager.

You can find more information about the underlying technology in the Technical Operations Manual in SAP Library under SAP NetWeaver.

8.5.1 Starting and Stopping

The Stop Sequence is in reverse order to the Start Sequence.

Start and Stop Sequences and Tools

Software Component	Sequence	Tool	Comments
SAP NW (7.51)	1	STARTSAP / STOPSAP (Unix) SAPMMC (Windows)	-
S4CORE 101	3	STARTSAP / STOPSAP (Unix) SAPMMC (Windows)	-
CPM_S4H ABAP Server	4	STARTSAP / STOPSAP (Unix) SAPMMC (Windows)	

SAP NetWeaver 7.51	http://help.sap.com/nw75 → *System Administration and Maintenance Information* → *Technical Operations for SAP NetWeaver*

8.5.2 Management of BW

The planning cube of *Project Cost and Revenue Planning* does not depend on data extraction from OLTP tables. It is a real-time cube into which data is directly written into and read from during planning activities. Using real-time data acquisition, new or changes to master data is constantly updated from source master data tables, into the InfoCube. Therefore, physical management of a data warehouse is not a mandatory activity.However, if you have a central BW installation and a local BW client for *SAP Commercial Project Management*, then it is necessary to monitor both BW systems.

8.5.3 Software Configuration

This chapter explains which components or scenarios used by this application are configurable and which tools are available for adjusting.

The Implementation Guide (IMG) is the standard SAP tool for component Customizing.

Customizing settings for *SAP Commercial Project Management* can be found under *Cross-Application Components* → *SAP Commercial Project Management*.

8.5.4 Backup and Restore

You need to back up your system landscape regularly to ensure that you can restore and recover it in case of failure.

S4CORE 101 is based on SAP NetWeaver technology. All related SAP NetWeaver backup procedures also work for S4CORE 101. Therefore, there is no special procedure for S4CORE 101.

8.6 Periodic Tasks

8.6.1 Scheduled Periodic Tasks

This chapter describes all automatable tasks required to run periodically in order to keep the application running smoothly over time. Such tasks may be required on component level and are therefore relevant in each scenario that uses the component. Other tasks may be relevant for certain scenarios only. It is important that you monitor the successful execution of these tasks on a regular basis.

Scenario specific scheduled periodic tasks in Project Workspace:

Required for scenario	Program Name/Task	Task scheduling tool	Recommended Frequency	Detailed Description
To load *Cross-Project View* faster, when large commercial project (master projects) are involved (when you use Cross-Project View (WebDynpro)	/CPD/R_MPROJ_BUFFRNG_FOR_USERS	Transaction SM36	Daily	This program is used to calculate the data related to Analytics, KPIs, and alerts; and then to buffer this data. With this, when a user opens the *Cross-Project View*, the system loads data from the buffer (there is no calculation at the time of loading), and therefore, the *Cross-Project View* is loaded relatively fast.

Scenario specific scheduled periodic tasks in Project Cost and Revenue Planning:

Required for scenario	Program Name/Task	Task scheduling tool	Recommended Frequency	Detailed Description
Removes inconsistencies from the BW InfoCube; these may be caused by changes in the project structure	/CPD/PFP_MAINTAIN_CONSISTENCY	Transaction SM36	Weekly	If there is any change (deletion of nodes) in the project structure on which the planning has already been done, this report deletes the planned line items against the deleted

				node, from the BW InfoCube of *Project Cost and Revenue Planning*. This removes the inconsistencies caused by changes in the project structure.
Saves cost elements and activity types for a line item (only relevant when planning on cost elements)	/CPD/PFP_CREATE_COSTELM_ACTTYP	Transaction SM36	Every Week	When a user creates a new plan record in the planning workbook (*Analysis Office*), this report determines the cost elements and activitytypes defined in Customizing, and saves this into the BW InfoCube of *Project Cost and Revenue Planning*.
Updates staffed quantities for a request number from the MRS system to the BW InfoCube (relevant only if MRS integration exists)	/CPD/PFP_SET_MRS_STAFFED_QTY	Transaction SM36	Every Week	For each plan record, a document number is generated. The user enters the staffed quantity in the MRS system for a request. This quantity gets reflected in the MRS planning workbook after running this report.
Process chain to compress data of the BW InfoCube	/CPD/PFP_PC01	Transaction RSPC	Weekly	This process chain is used to compress the

(/CPD/PFP_R01)				data of the BW InfoCube before data compression. The process chain closes the open data request and drops and recreates the cube index.
To delete plan data for employees who no longer have an active HR master record	/CPD/PFP_EMP_DATA_CONSISTENCY	Transaction SM36	Monthly	You can use this report to delete plan data for an employee who no longer has an active HR master record. The report deletes plan data from the InfoCube /CPD/PFP_R01.

8.7 Software Change Management

The tools and processes in *Software Logistics* help you to manage the system landscape in all lifecycle phases. Besides initial implementation of an application, the tools also support on-going system optimization and adaptation to evolving demands, as well as implementing additional functions.

Note

Some software logistics tools are delivered and regularly updated with the *Software Logistics Toolset*. For more information about these tools, see the documentation on the SAP Help Portal under http://help.sap.com/sltoolset.

Software Change Management standardizes and automates the distribution of software in system landscapes.

For more information, see the SAP Help Portal under https://help.sap.com/viewer/p/SAP_S4HANA_ON-PREMISE SAP NetWeaver for SAP S/4HANA Technical Operations for SAP NetWeaver Solution Life Cycle Management Software Logistics.

8.7.1 Transport and Change Management

SAP S/4HANA uses the SAP NetWeaver tool *Change and Transport System* (CTS) to organize development projects in ABAP Workbench and customizing, and to then transport the changes between the SAP systems in your system landscape. In addition to ABAP objects, you can transport non-ABAP objects and non-SAP applications in your system landscape.

For more information about the CTS tool, see *Technical Operations for SAP NetWeaver* at the SAP Help Portal under https://help.sap.com/viewer/p/SAP_S4HANA_ON-PREMISE SAP NetWeaver for SAP S/4HANA.

8.7.2 Development Requests and Development Release Management

Corrections for SAP S/4HANA are available in support packages.

8.7.3 Support Packages and Patch Implementation

We recommend that you implement Support Package Stacks (SP-Stacks), which are sets of support packages and patches for a specific product version that must be used in a specific combination.

You can find detailed information about the availability of SP-Stacks for SAP S/4HANA at the SAP Support Portal under support.sap.com/sp-stacks. Check the corresponding Release and Information Notes (RIN) before you apply any support packages or patches of the selected SP-Stack. The RIN for SAP S/4HANA 1610 is SAP Note 2346431. See also the Support Package Levels for SAP S/4HANA in SAP Note 2236608.

For more information about the implementation of support packages, see information on the SAP Support Portal under support.sap.com/patches SAP Support Packages.

For more information about the tools for implementing patches, see also the SAP Help Portal under https://help.sap.com/viewer/p/SAP_S4HANA_ON-PREMISE → SAP NetWeaver for SAP S/4HANA Technical Operations for SAP NetWeaver Solution Life Cycle Management Software Logistics.

8.8 Troubleshooting

For more information about troubleshooting for SAP NetWeaver based systems, see the SAP Help Portal under https://help.sap.com/viewer/p/SAP_S4HANA_ON-PREMISE → SAP NetWeaver for SAP S/4HANA Technical Operations for SAP NetWeaver Solution Life Cycle Management.

8.8.1 Support Desk Management

You can set up problem resolution procedures tailored to your requirements. The procedure should integrate your business users, internal support personnel, partners and SAP support.

8.8.2 Remote Support Setup

If you want to use SAP remote services (for example, SAP EarlyWatch or Remote Consulting), or if you would like to permit an SAP support consultant to work directly in your system to make a more precise problem diagnosis, then you need to set up a remote service connection.

For more information about setting up remote service connections to SAP, see the SAP Support Portal under support.sap.com/access-support and the SAP Help Portal under https://help.sap.com/viewer/p/SAP_S4HANA_ON-PREMISE → SAP NetWeaver for SAP S/4HANA Technical Operations for SAP NetWeaver Solution Life Cycle Management Remote Support Setup.

8.8.3Problem Message Handover

SAP S/4HANA uses the functions of the SAP Solution Manager to create internal support messages and to forward them to SAP.

For more information, see the SAP Help Portal under http://help.sap.com/solutionmanager/ SAP Solution Manager 7.1 Application Help SAP Engagement and Service Delivery.

To send problem messages to SAP, use the relevant application component in the SAP application component hierarchy.

9 Security

9.1 Introduction

Target Audience

- Technology consultants
- Security consultants
- System administrators

The Security Guides provide information that is relevant for all life cycle phases.

Why Is Security Necessary?

With the increasing use of distributed systems and the Internet for managing business data, the demands on security are also on the rise. When using a distributed system, you need to be sure that your data and processes support your business needs without allowing unauthorized access to critical information. User errors, negligence, or attempted manipulation of your system should not result in loss of information or processing time. These demands on security apply likewise to SAP S/4HANA.

To assist you in securing SAP S/4HANA, we provide this Security Guide.

About this Document

The Security Guide provides an overview of the security-relevant information that applies to SAP S/4HANA, in general. In particular it comprises general considerations regarding the system access via SAP Fiori Apps. In case there are specific aspects for the underlying scenarios or applications these are described in an area-specific chapter.

9.1.1.1 Fundamental Security Guides

SAP Commercial Project Management 2.0 for SAP S/4HANA, SPS02 is based on SAP S/4HANA 1610 FPS02, SAP NetWeaver and the SAP HANA Platform. With respect to Fiori Apps SAP NetWeaver Gateway plays a fundamental role. This means that the corresponding Security Guides are also applicable for SAP Commercial Project Management 2.0 for SAP S/4HANA.

9.1.1.2 Important Security Notes

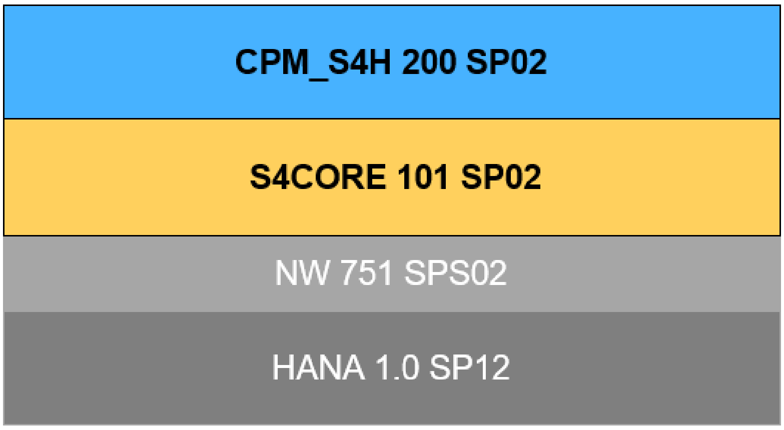
SAP Note 1538539 contains information about saving temporary files when using Adobe® Acrobat® Reader in SAP applications. SAP Note 138498 contains information on single sign-on solutions. SAP Notes relating to security for the subcomponents of SAP S/4HANA, are referenced in the documentation for the individual components in this guide. For a list of additional security-relevant SAP Hot News and SAP Notes, see the SAP Support Portal athttp://support.sap.com/securitynotes.

9.2 System Landscape Information: SAP Commercial Project Management 2.0 for SAP S/4HANA

This section describes, with examples, how SAP Commercial Project Management 2.0 for SAP S/4HANA, Support Pack Stack 02 can be deployed in new or existing landscapes:

9.2.1.1 Example: New Installation of SAP Commercial Project Management 2.0 for SAP S/4HANA, Support Pack Stack 02

A new installation of SAP Commercial Project Management 2.0 for SAP S/4HANA needs to run on the SAP HANA database. It also requires 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. Minimum required stack levels are shown below.



Simple SAP Commercial Project Management 2.0 for SAP S/4HANA Deployment

9.2.1.2 User Administration and Authentication

SAP Commercial Project Management 2.0 for SAP S/4HANA uses the user management and authentication mechanisms provided with the SAP NetWeaver platform, in particular the SAP NetWeaver Application Server ABAP. Therefore, the security recommendations and guidelines for user administration and authentication as described in the SAP NetWeaver Application Server ABAP Security Guide also apply to SAP Commercial Project Management 2.0 for SAP S/4HANA.

9.2.2 User Management

User management for SAP Commercial Project Management 2.0 for SAP S/4HANA uses the mechanisms provided with the SAP NetWeaver Application Server (ABAP), for example, tools, user types, and password policies.

9.2.3 Integration into Single Sign-On Environments

SAP Commercial Project Management 2.0 for SAP S/4HANA supports the Single Sign-On (SSO) mechanisms provided by SAP NetWeaver. Therefore, the security recommendations and guidelines for user administration and authentication as described in the SAP NetWeaver Security Guide also apply.

9.3 Authorizations

SAP Commercial Project Management 2.0 for SAP S/4HANA uses the authorization concept provided by the SAP NetWeaver AS ABAP. Therefore, the recommendations and guidelines for authorizations as described in the SAP NetWeaver AS Security Guide ABAP also apply to *SAP Commercial Project Management 2.0 for SAP S/4HANA*.

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.

Standard Roles

The tables below show the standard roles that are used by SAP Commercial Project Management 2.0 for SAP S/4HANA. The authorization objects for these roles are supplied by SAP in the profiles.

Project Workspace

Role	Description
SAP_SR_CPD_PWS_USER_1	Display authorizations for the commercial project (master project) object
SAP_SR_CPD_PM_1	This sample role allows the creation, change, and display of commercial projects (master projects) and financial plans and provides authorizations to users working as project managers.
SAP_SR_CPD_PICM_PM_1	This role provides create authorization, change authorization, and display authorization for objects in Project Issue and Change Management and is required for the integrated deployment scenario.

The delivered roles must be adjusted in the following way, for the creation and changing of commercial projects (master projects):

Role Adjustment

1. In the *Role Maintenance* screen (transaction PFCG), launch the role *Project Workspace User* (SAP_SR_CPD_PWS_USER_1) for editing.
2. In the *Authorizations* tab, choose *Change Authorization Data*.
3. Under the authorization hierarchy for *Commercial Project Management*, navigate to *Authorization Object for Project Workspace* → *Activity*.
4. Choose *Change* to set the attributes for this authorization field.
5. To allow commercial project (master project) creation, select the change authorization.
6. Save the role authorization.

URL Parameter Entry

1. In the *Role Maintenance* screen (transaction PFCG), open the role Project Workspace User (SAP_SR_CPD_PWS_USER_1) for editing.
2. In the *Menu* tab, navigate through the role hierarchy by choosing *Role Menu* → *Commercial Project Overview* → *Create* → *Master Project*.
3. Right-click and choose *Details*.
4. In the *Web Dynpro Application* dialog box, add the parameter change_mode with the value C.
5. Save the role.

Project Cost and Revenue Planning

Role	Description
SAP_SR_CPD_PFP_USER_1	Display authorizations for objects relevant to *Project Cost and Revenue Planning*. However according to the business needs of the customer, you can create roles specific to your enterprise. For example, an admin user can be provided with display, change, create, and delete authorizations for the financial plan object.
SAP_SR_CPD_PM_1	This sample role allows the creation, change, and display of commercial projects (master projects) and financial plans and provides authorizations to users working as project managers.
SAP_SR_CPD_PICM_PM_1	This role provides create authorization, change authorization, and display authorization for objects in Project Issue and Change Management.

Project Issue and Change Management

Role	Description
SAP_SR_CPD_PICM_USER_1	This role provides display authorizations for objects in Project Issue and Change Management.

Role	Description
SAP_SR_CPD_PICM_PM_1	This role provides create authorization, change authorization, and display authorization for objects in Project Issue and Change Management

The delivered roles must be adjusted in the following way, for the creation and changing of financial plans:

Role Adjustment

1. In the *Role Maintenance* screen (transaction PFCG), launch the role *Project Cost and Revenue Planning User* (SAP_SR_CPD_PFP_USER_1) for editing.
2. In the *Authorizations* tab, choose *Change Authorization Data*.
3. Under the authorization hierarchy for *Commercial Project Management*, navigate to the corresponding authorization object of the business object → *Activity*.
4. Choose *Change* to set the attributes for this authorization field.
5. To allow the creation of the business object, select the change authorization.
6. Save the role authorization.

SAP Commercial Project Management

Role	Description
SAP_BPR_CPD_USER_1	Display authorizations (role for the integrated deployment of *Project Workspace* and *Project Cost and Revenue Planning*.

Authorization Objects

The tables below show the authorization objects that are used by *Project Workspace*, *Project Cost and Revenue Planning*, and *Project Issue and Change Management*.

Project Workspace

Authorization Object	Description
/CPD/MP	Authorization object to determine the kind of activity that a user can perform on a commercial project (master project) (including the specific areas of a master project). The fields are: • ACTVT: Activity • /CPD/MP_TY: Master Project Type • /CPD/MP_ID: Master Project ID • /CPD/MP_OR: Organization • /CPD/MP_IN: Involvement in Master Project

Authorization Object	Description
	• SUB_ACTVT: Subactivity for Master Project Authorization • /CPD/ASPCT: Aspect ID • /CPD/MP_CF: Confidential Indicator for Master Project
/CPD/ANLY	Authorization object for Analytics; the fields are: • BUKRS: Company Code • GSBER: Business Area • KOKRS: Controlling Area • ACTVT: Activity
/CPD/MC	Authorization object for checklist activities; the field is: • /CPD/MC_AC: Checklist: Authorization Values
/CPD/OAUTH	Authorization object to override access control; the field is: • /CPD/MP_TY: Master Project Type

Project Cost and Revenue Planning

Authorization Object	Description
/CPD/FPH	Authorization object for the financial plan
S_TCODE	Authorization object that performs a transaction code check at the start of a transaction.
S_RS_AO	Authorization object for *Analysis Office*
S_RS_AUTH	Authorization object for BI Analysis (Authorizations in Role)
S_RS_COMP	Authorization object for Business Explorer – Components
S_RS_COMP1	Authorization object for Business Explorer - Components: Enhancements to the Owner

Project Issue and Change Management

Authorization Object	Description
PICM_STAT	Authorization object to check if the user has the authority to change lifecycle status of the activity
PICM_ISTAT	Authorization object to check if the user has the authority to change lifecycle status of the issue or change request
/IAM/OREF	Authorization object for Reference Objects for Issue, Change Request, and Activity
IAM_CAT_AC	Authorization to Restrict Access to *Project Issue and Change Management* Worklist Object
/IAM/AAUTH	Authorization Object for Activity
/IAM/ATTMT	Authorization Object for Attachments for Issue and Activity
/IAM/A_ATTR	Authorization Object for Attribute Maintenance for Activity

Authorization Object	Description
IAM_CODEGR	Authorization Object for Code Groups
/IAM/TXTTY	Authorization Object for Descriptions
/IAM/IAUTH	Authorization Object for Issue Requests
IAM/A_STAT	Authorization Object for Lifecycle Status (Activity)
IAM/I_STAT	Authorization Object for Lifecycle Status (Issue)
IAM/A_RLCD	Authorization Object for Role Codes in Activity
IAM/I_RLCD	Authorization Object for Role Codes in Issue
/IAM/CODGR	Authorization Object for Selection of Code Groups, Codes

9.4 Session Security Protection

9.4.1 Secure Session Management

To increase security and prevent access to the SAP logon ticket and security session cookie(s), we recommend activating secure session management. We also highly recommend using SSL to protect the network communications where these security-relevant cookies are transferred.

9.4.2 Session Security Protection on the AS ABAP

For NetWeaver version 7.0 and higher, it is recommended to activate HTTP security session management using transaction SICF_SESSIONS. In particular it is recommended to activate extra protection of security-related cookies.

The HttpOnly flag instructs the browser to deny access to the cookie through client side script. As a result, even if a cross-site scripting (XSS) flaw exists, and a user accidentally accesses a link that exploits this flaw, the browser will not reveal the cookie to a third party.

The Secure flag tells the browser to send the cookie only if the request is being sent over a secure channel such as HTTPS. This helps protect the cookie from being passed over unencrypted requests.

These additional flags are configured through the following profile parameters:

Profile Parameter	Recommended Value	Description	Comment
icf/set_HTTPonly_flag_on_cookies	0	Add HttpOnly flag	Client-dependent
login/ticket_only_by_https	1	Add Secure flag	Not client-dependent

For more information, a list of the relevant profile parameters, and detailed instructions, see *Activating HTTP Security Session Management on AS ABAP* in the AS ABAP security documentation.

9.5 Network and Communication Security

Your network infrastructure is extremely important in protecting your system. Your network needs to support the communication necessary for your business needs without allowing unauthorized access. A well-defined network topology can eliminate many security threats. These threats can be based on software flaws, at both the operating system level and application level, or network attacks, such as eavesdropping.

If users cannot log on to your application or database servers at the operating system or database layer, then there is no way for intruders to compromise the machines and gain access to the backend system database or files.

Additionally, if users are not able to connect to the server local area network (LAN), they cannot exploit well-known bugs and security holes in network services on the server machines.

9.5.1 Communication Channel Security

SAP S/4 HANA uses several protocols for communication to internal and external applications. These can be SAP systems or third-party systems. The following protocols are supported:

- HTTPS

  HTTP connections are protected by the Transport Layer Security (TLS) protocol. This protocol used to be known as Secure Sockets Layer (SSL).

- RFC

  RFC connections can be protected using Secure Network Communications (SNC).

- SOAP

  SOAP connections are protected with Web services security.

- IDoc
- REST

Note

We strongly recommend using secure protocols (TLS, SNC) whenever possible.

For more information on securing the protocols above, see the respective chapters in the SAP NetWeaver Security Guide.

9.5.2 Network Security

9.5.2.1 Network

SAP S/4HANA is based on SAP NetWeaver technology. Therefore, for information about network security, see the respective sections in the SAP NetWeaver Security Guide at https://help.sap.com/nw75 -> Security Guide -> English. This includes information on using firewall systems for access control and using network segmentation.

If your system provides Internet services, you should ensure you protect your network infrastructure with a firewall at least. You can further increase the security of your system (or group of systems) by diving the system into groups, placing the groups in different network segments, and then protecting each segment from unauthorized access by a firewall.

Bear in mind that unauthorized access is also possible internally if a malicious user has managed to gain control of one of your systems.

9.5.2.2 Ports

SAP S/4HANA is executed in SAP NetWeaver and uses the ports of AS ABAP. For more information, see the corresponding security guides for SAP NetWeaver under the topics for AS ABAP Ports.

9.5.3 Communications Destinations

The use of users and authorizations in an irresponsible manner can pose security risks. You should therefore follow the security rules below when communicating with other systems:

- Employ the user types system and communication.
- Grant a user only the minimum authorizations.
- Choose a secure password and do not divulge it to anyone else.
- Only store user-specific logon data for users of type system and communication.
- Wherever possible, use trusted system functions instead of user-specific logon data.

9.6 Data Storage Security

Project Cost and Revenue Planning

- The header data of the financial plan is stored in the database tables of *Project Cost and Revenue Planning*.
- Data is saved in the database tables of *Project Cost and Revenue Planning* when the user explicitly chooses the *Save* pushbutton on the financial planning screen.
- The planning data is stored in the BW InfoCube and can be transferred to the S4CORE database tables by the user.
- Data is saved in the BW InfoCube when the user explicitly chooses the *Save Data* pushbutton in the *Analysis Office* workbook.
- Data is saved in S4CORE database tables when the user explicitly chooses the *Transfer Data* pushbutton on the financial planning screen.

Using Logical Paths and File Names to Protect Access

Some applications in SAP S/4HANA save data in files in the file system. Therefore, it is important to explicitly provide access to the corresponding files in the file system without allowing access to other directories or files - a security issue also known as directory traversal. This is achieved by specifying logical paths and file names in the system that map to the physical paths and file names. This mapping is validated at runtime. If access is requested to a directory that does not match a stored mapping, then an error occurs.

In the application-specific part of this guide, there is a list of the logical file names and paths for each component. It also specifies for which programs these file names and paths apply.

Activating the Validation of Logical Paths and File Names

You enter the logical paths and file names in the system for the corresponding programs. For downward compatibility, the validation at runtime is deactivated by default. To activate the validation on path level at runtime, enter the physical path using the transactions FILE (client-independent) and SF01 (client-dependent). To determine which paths are used by your system, you can activate the appropriate settings in the Security Audit Log.

For new installations it is recommended to enforce path validation as a default by setting the value ON for parameter REJECT_EMPTY_PATH in table FILECMCUST (transaction SM30). For details see SAP Note 2251231 - *File validation enforcement switch for empty physical path*.

For information about data storage security, see:

SAP NW 7.5 SAP NetWeaver	http://help.sap.com/nw75 → *Security Information* → *Security Guide* → *Security Guides for the Operating System and Database Platforms*

9.7 Data Archiving

9.7.1 Archiving Commercial Projects (Master Projects) with /CPD/PWS_M

You can use *Archiving Object for Master Projects* (/CPD/PWS_M) to archive commercial projects (master projects) that are no longer needed. Archiving allows you to reduce the load on your database.

1.1.1.1 Structure

1.1.1.1.1 Tables

Table	Description
/CPD/S_MP_HDR_K	Master Project Header
/CPD/D_MP_HDR_S	Master Project Header Short Text
/CPD/D_MP_ITEM	Master Project Structure Elements
/CPD/D_MP_MEMBE	Project Member
/CPD/D_MP_REP_AT	Reporting Attribute Node
/CPD/D_MP_RESP	Responsibility Node
/CPD/D_MP_STATUS	Status Header
/CPD/D_MP_ST_ARV	Table for Status Area Version
/CPD/D_MP_ST_HRA	Status Header Area
/CPD/D_MP_ST_VHR	Status Versions
/CPD/D_MP_TEAM	Team
/CPD/D_MP_TEAM_M	Team Member Subnode
/CPD/D_MP_TEAM_R	Team Role Subnodes

1.1.1.1.2 Programs

The following programs are available for /CPD/PWS_M:

- Preprocessing Program: /CPD/PWS_ARCH_MP_PRE

  This program makes the following checks for commercial projects (master projects):

  - Whether the master project (CA-CPD) meets the residence period. The residence period check is first made against the *End Date* of the master project; if the end date is not available, then the program checks for the *Last Changed On* date.
  - Whether the master project stage indicates completion and all related financial plans, issues, and activities have been archived.

  If both these conditions are satisfied, the program sets the archiving status of the commercial project (master project) to *Archiving in Process* (*02*).

NOTE

After the preprocessing program has run, the objects marked for archiving are no longer made available on the UI.

- Write Program: /CPD/PWS_ARCH_MP_WRITE

  This program checks if an object has the status *Archiving in Process* (*02*). If the status is *02*, the program archives the object to the archive file.

- Delete Program: /CPD/PWS_ARCH_MP_DELETE

  This program verifies archived files against the data in the database, and deletes all objects in the database that have been successfully archived.

1.1.1.2 More Information

To change the residence time, you can make settings in Customizing for *Cross-Application Components* under *Processes and Tools forEnterprise Applications* → *Reusable Objects and Functions for BOPF Environment* → *Archiving Adapter* → *Maintain BO-Specific Residence Periods*.

1.1.1.3 Information Lifecycle Management (ILM)

Information Lifecycle Management (ILM) allows you to define rules for storing archived business data, set legal holds on stored data, and destroy the data in adherence to legal requirements.

The ILM object CPD_PWS_M is available for commercial projects (master projects) and this ILM object allows you to model retention rules based on the following fields:

- Condition Fields
  - *Archiving Status*
  - *Master Project Type*
  - *Organization*
- Time Reference Fields
  - *End Date*

You can use the transaction *IRMPOL* to define policies and rules for ILM.

1.1.1.4 Prerequisites

The prerequisites for *Retention Management* are:

- You have activated the business function ILM
- You have assigned the following objects to an audit area:
  - CPD_PWS_M

9.7.2 Archiving Checklist Activities with /CPD/MC_H (Header) and /CPD/MC_I (Item)

You can use the archiving objects *Checklist Header* (/CPD/MC_H) and *Checklist Items* (/CPD/MC_I) to archive the checklist headers and checklist items that are no longer needed. Archiving allows you to reduce the load on your database.

1.1.1.5 Structure

1.1.1.5.1 Tables for Checklist Headers and Items

The system archives data from the following tables for the checklist header:

Table	Description
/BOBF/D_ATF_DO	Document node of attachment folder
/BOBF/D_ATF_RT	Root nodes of attachment folder
/BOBF/D_TXCCON	Text content
/BOBF/D_TXCROOT	Root node of text collection
/BOBF/D_TXCTXT	Text
/IAM/D_I_ATT	Attachment
/IAM/D_I_DATE	Date
/IAM/D_I_DESC	Description node
/IAM/D_I_DESC_TX	Language-dependent description text node
/IAM/D_I_OBJ_REF	Issue reference node
/IAM/D_I_OREF_DT	Language-dependent, reference, description text node
/IAM/D_I_PARTY	Party node
/IAM/D_I_QTY	Quantity
/IAM/D_I_ROOT	Root node

The system archives data from the following tables for the checklist item:

Table	Description
/BOBF/D_ATF_DO	Document node of attachment folder
/BOBF/D_ATF_RT	Root nodes of attachment folder
/BOBF/D_TXCCON	Text content
/BOBF/D_TXCROOT	Root node of text collection
/BOBF/D_TXCTXT	Text
/IAM/D_ACT_ROOT	Root
/IAM/D_ACT_ATT	Attachment
/IAM/D_ACT_DATE	Date
/IAM/D_ACT_DESC	Description
/IAM/D_ACT_DTXT	Description text
/IAM/D_ACT_FOA	Follow-up action
/IAM/D_ACT_FOA_P	Follow-up action parameter
/IAM/D_ACT_OBJ_RF	Object reference
/IAM/D_ACT_OREF_DT	Language-dependent description texts

/IAM/D_ACT_PARTY	Party
/IAM/D_ACT_QTY	Activity quantity

1.1.1.5.2 Programs

The following programs are available for /CPD/MC_H:

- Preprocessing: /CPD/ARCH_MC_HEADER_PRE

  This program checks if an object is ready for archiving by verifying the following conditions:

  - The adherence to the specified residence time
  - The availability of checklist items for the object

  If the object is ready, this program sets the status as *Archiving in Process (02)* in the database. After the preprocessing program has run, the objects marked for archiving are no longer made available on the UI.

- Writing: /CPD/ARCH_MC_HEADER_WRITE

  This program checks if an object has the status *Archiving in Process (02)*. If the status is *02*, the program archives the object to the archive file.

- Deletion: /CPD/ARCH_MC_HEADER_DELETE

  This program verifies archived files against the data in the database; and deletes all objects in the database that have been successfully archived.

The following programs are available for /CPD/MC_I:

- Preprocessing: /CPD/ARCH_MC_ITEM_PRE

  This program checks if an object is ready for archiving by verifying the adherence to the specified residence time. If the object is ready, this program sets the status as *Archiving in Process (02)* in the database. After the preprocessing program has run, the objects marked for archiving are no longer made available on the UI.

- Writing: /CPD/ARCH_MC_ITEM_WRITE

  This program checks if an object has the status *Archiving in Process (02)*. If the status is *02*, the program archives the object to the archive file.

- Deletion: /CPD/ARCH_MC_IEM_DELETE

  This program verifies archived files against the data in the database; and deletes all objects in the database that have been successfully archived.

1.1.1.6 More Information

To change the residence time, make settings in Customizing for *Cross-Application Components* under *Processes and Tools for Enterprise Applications* → *Reusable Objects and Functions for BOPF Environment* → *Archiving Adapter* → *Maintain BO-Specific Residence Periods*.

1.1.1.7 Information Lifecycle Management (ILM)

Information Lifecycle Management (ILM) allows you to define rules for storing archived business data, set legal holds on stored data, and destroy the data in adherence to legal requirements.

The following ILM objects are available for checklist headers and items:

- Checklist headers: CPD_MC_H
- Checklist items: CPD_MC_I

These ILM objects allow you to model retention rules based on the following fields:

- Condition Field:

  APPLICATION

- Time Reference Fields:

  Last Changed On

NOTE

The date of the last change of the checklist headers and items is considered in the time reference field.

CAUTION

When you create retention rules for a checklist item, ensure that the retention time specified does not exceed the retention time specified for the parent (checklist header).

You can use *ILM Policies* (transaction IRMPOL) to define policies and rules for ILM.

EXAMPLE

You want to specify that the data of checklist activities must be retained for a period of 2 years from the date when the last change was made. You specify this as a rule by using the IRMPOL transaction.

Prerequisites

The prerequisites for *Retention Management* are:

- You have activated the business function ILM
- You have assigned the following objects to an audit area:
  - CPD_MC_H
  - CPD_MC_I

9.7.3 Archiving Financial Plans with /CPD/PFP_P

You can use *Archiving Object for Financial Plans* (/CPD/PFP_P) to archive financial plans that are no longer needed. Archiving allows you to reduce the load on your database.

9.7.3.1 Structure

Table	Description
/CPD/D_PFP_PH	Plan Header
/CPD/D_PFP_PV	Plan Version
/CPD/D_PFP_PS	Plan Structure
/CPD/D_PFP_PER	Plan Exchange Rate
/CPD/D_PFP_PHTXT	Plan Header Text
/BOBF/D_ATF_RT	Attachment Root
/BOBF/D_ATF_DO	Attachment Document
/BOBF/D_TXCROOT	Text Collection Root
/BOBF/D_TXCTXT	Text Collection Text
/BOBF/D_TXCCON	Text Collection Text Content

9.7.3.2 Programs

The following programs are available for /CPD/PFP_P:

- Preprocessing Program: /CPD/PFP_ARCH_PH_PRE

  This program checks whether a financial plan is ready for archiving. A financial plan is ready for archiving when:

  - Related financial plan versions have a status that indicates completion.
  - All related change requests and change request alternatives are ready for archiving, with the status as Archiving in Process (02). This is only applicable if you are also using Project Issue and Change Management.
  - The financial plan has a status that indicates completion.

  If the object is ready, this program sets the status as *Archiving in Process* (*02*) in the database.

  NOTE

  After the preprocessing program has run, the objects marked for archiving are no longer made available on the UI. The program also deletes corresponding data from the real-time InfoCube (/CPD/PFP_R01) and transfers the data into the InfoCube for archiving (/CPD/PFP_C01).

- Write Program: /CPD/PFP_ARCH_PH_WRITE

  This program checks if an object has the status *Archiving in Process* (*02*). If the status is *02*, the program archives the object to the archive file.

- Delete Program: /CPD/PFP_ARCH_PH_DELETE

  This program verifies archived files against the data in the database; and deletes all objects in the database that have been successfully archived.

9.7.3.3 More Information

To change the residence time, you can make settings in customizing for *Cross-Application Components* under *Processes and Tools for Enterprise Applications* → *Reusable Objects and Functions for BOPF Environment* → *Archiving Adapter* → *Maintain BO-Specific Residence Periods*.

9.7.3.4 Information Lifecycle Management (ILM)

Information Lifecycle Management (ILM) allows you to define rules for storing archived business data, set legal holds on stored data, and destroy the data in adherence to legal requirements.

The ILM object for financial plans is CPD_PFP_P and this ILM object allows you to model retention rules based on the following fields:

- Condition Fields
  - *Plan Scenario ID*
  - *Plan Type ID*
  - *Archiving Status*
- Time Reference Fields
  - *End Date*

    The end date of the financial plan is considered.

You can use the transaction *IRMPOL* to define policies and rules for ILM.

Prerequisites

The prerequisites for *Retention Management* are:

- You have activated the business function ILM
- You have assigned the following object to an audit area:
  - CPD_PFP_P

9.7.4 Archiving Issues and Change Requests with /PICM/BO_I

You can use the archiving object *Issues and Change Requests* (/PICM/BO_I) to archive issues and change requests that are no longer needed. Archiving allows you to reduce the load on your database.

9.7.4.1 Structure

9.7.4.1.1 Tables

The system archives data from the following tables:

Table	*Description*
/BOBF/D_ATF_DO	Document node of attachment folder
/BOBF/D_ATF_RT	Root nodes of attachment folder
/BOBF/D_TXCCON	Text content
/BOBF/D_TXCROOT	Root node of text collection
/BOBF/D_TXCTXT	Text
/IAM/D_I_ATT	Attachment
/IAM/D_I_DATE	Date
/IAM/D_I_DESC	Description node
/IAM/D_I_DESC_TX	Language-dependent description text node
/IAM/D_I_OBJ_REF	Issue reference node
/IAM/D_I_OREF_DT	Language-dependent, reference, description text node
/IAM/D_I_PARTY	Party node
/IAM/D_I_QTY	Quantity
/IAM/D_I_ROOT	Root node

9.7.4.1.2 Programs

The following programs are available for /PICM/BO_I:

- Preprocessing Program: /PICM/ARCH_ISSUE_CR_ROOT_PRE

  This program checks if an object is ready for archiving by verifying the following conditions:

  - The adherence to the specified residence time
  - The availability of activities for the object

  If the object is ready, this program sets the status as *Archiving in Process* (*02*) in the database. After the preprocessing program has run, the objects marked for archiving are no longer made available on the UI.

- Write Program: /PICM/ARCH_ISSUE_CR_ROOT_WRITE

  This program checks if an object has the status *Archiving in Process* (*02*). If the status is *02*, the program archives the object to the archive file.

- Delete Program: /PICM/ARCH_ISSUE_CR_ROOT_DEL

  This program verifies archived files against the data in the database; and deletes all objects in the database that have been successfully archived.

9.7.4.2 More Information

To change the residence time, make settings in Customizing for *Cross-Application Components* under *Processes and Tools for Enterprise Applications → Reusable Objects and Functions for BOPF Environment → Archiving Adapter → Maintain BO-Specific Residence Periods*.

9.7.5 Archiving Activities with /PICM/BO_A

You can use the archiving object *Activities* (/PICM/BO_A) to archive activities that are no longer needed. Archiving allows you to reduce the load on your database.

9.7.5.1 Structure

9.7.5.1.1 Tables

The system archives data from the following tables:

Table	*Description*
/BOBF/D_ATF_DO	Document node of attachment folder
BOBF/D_ATF_RT	Root nodes of attachment folder
/BOBF/D_TXCCON	Text content
/BOBF/D_TXCROOT	Root node of text collection
/BOBF/D_TXCTXT	Text
/IAM/D_ACT_ROOT	Root
/IAM/D_ACT_ATT	Attachment
/IAM/D_ACT_DATE	Date
/IAM/D_ACT_DESC	Description
/IAM/D_ACT_DTXT	Description text
/IAM/D_ACT_FOA	Follow-up action
/IAM/D_ACT_FOA_P	Follow-up action parameter
/IAM/D_ACT_OBJ_RF	Object reference
/IAM/D_ACT_OREF_DT	Language-dependent description texts
/IAM/D_ACT_PARTY	Party
/IAM/D_ACT_QTY	Activity quantity

9.7.5.1.2 Programs

The following programs are available for /PICM/BO_A:

- Preprocessing Program: /PICM/ARCH_ACTIVITY_ROOT_PPROC

This program checks if an object is ready for archiving by verifying the adherence to the specified residence time. If the object is ready, this program sets the status as *Archiving in Process* (*02*) in the database. After the preprocessing program has run, the objects marked for archiving are no longer made available on the UI.

- Write Program: /PICM/ARCH_ACTIVITY_ROOT_WRITE

  This program checks if an object has the status *Archiving in Process* (*02*). If the status is *02*, the program archives the object to the archive file.

- Delete Program: /PICM/ARCH_ACTIVITY_ROOT_DEL

  This program verifies archived files against the data in the database; and deletes all objects in the database that have been successfully archived.

9.8 Data Protection

Data protection is associated with numerous legal requirements and privacy concerns. In addition to compliance with general data privacy acts, it is necessary to consider compliance with industry-specific legislation in different countries. This section describes the specific features and functions that SAP provides to support compliance with the relevant legal requirements and data privacy.

This section and any other sections in this Security Guide do not give any advice on whether these features and functions are the best method to support company, industry, regional or country-specific requirements. Furthermore, this guide does not give any advice or recommendations with regard to additional features that would be required in a particular environment; decisions related to data protection must be made on a case-by-case basis and under consideration of the given system landscape and the applicable legal requirements.

> Note
>
> In the majority of cases, compliance with data privacy laws is not a product feature.
>
> SAP software supports data privacy by providing security features and specific data-protection-relevant functions such as functions for the simplified blocking and deletion of personal data.
>
> SAP does not provide legal advice in any form. The definitions and other terms used in this guide are not taken from any given legal source.

Glossary

Term	Definition
Personal data	Information about an identified or identifiable natural person.
Business purpose	A legal, contractual, or in other form justified reason for the processing of personal data. The assumption is that any purpose has an end that is usually already defined when the purpose starts.
Blocking	A method of restricting access to data for which the primary business purpose has ended.
Deletion	Deletion of personal data so that the data is no longer usable.

Retention period	The time period during which data must be available.
End of purpose (EoP)	A method of identifying the point in time for a data set when the processing of personal data is no longer required for the primary business purpose. After the EoP has been reached, the data is blocked and can only be accessed by users with special authorization.

Some basic requirements that support data protection are often referred to as technical and organizational measures (TOM). The following topics are related to data protection and require appropriate TOMs:

- Access control: Authentication features as described in section User Administration and Authentication.
- Authorizations: Authorization concept as described in section Authorizations.
- Availability control as described in:
  - Section *Data Storage Security*
  - SAP NetWeaver Database Administration documentation
  - SAP Business Continuity documentation in the SAP NetWeaver Application Help under Function-Oriented View -> Solution Life Cycle Management -> SAP Business Continuity
- Separation by purpose: Is subject to the organizational model implemented and must be applied as part of the authorization concept.

Caution

The extent to which data protection is ensured depends on secure system operation. Network security, security note implementation, adequate logging of system changes, and appropriate usage of the system are the basic technical requirements for compliance with data privacy legislation and other legislation.

Configuration of Data Protection Functions

Certain central functions that support data protection compliance are grouped in Customizing for Cross-Application Components under Data Protection.

Additional industry-specific, scenario-specific or application-specific configuration might be required.

For information about the application-specific configuration, see the application-specific Customizing in SPRO.

9.8.1 Deletion of Personal Data

Use

Project Workspace

Project Workspace might process data (personal data) that is subject to the data protection laws applicable in specific countries as described in SAP Note 1825544.

The SAP Information Lifecycle Management (ILM) component supports the entire software lifecycle including the storage, retention, blocking, and deletion of data. The *Project Workspace* application (CA-CPD-WS) uses SAP ILM to support the deletion of personal data as described in the following sections.

End of Purpose Check (EoP)

An end of purpose check determines whether data is still relevant for business activities based on the retention period defined for the data. The retention period of data consists of the following phases.

- *Phase one: The relevant data is actively used.*
- *Phase two: The relevant data is actively available in the system.*
- *Phase three: The relevant data needs to be retained for other reasons.*
    - For example, processing of data is no longer required for the primary business purpose, but to comply with legal rules for retention, the data must still be available. In phase three, the relevant data is blocked.
    - Blocking of data prevents the business users of SAP applications from displaying and using data that may include personal data and is no longer relevant for business activities.

Blocking of data can impact system behavior in the following ways:

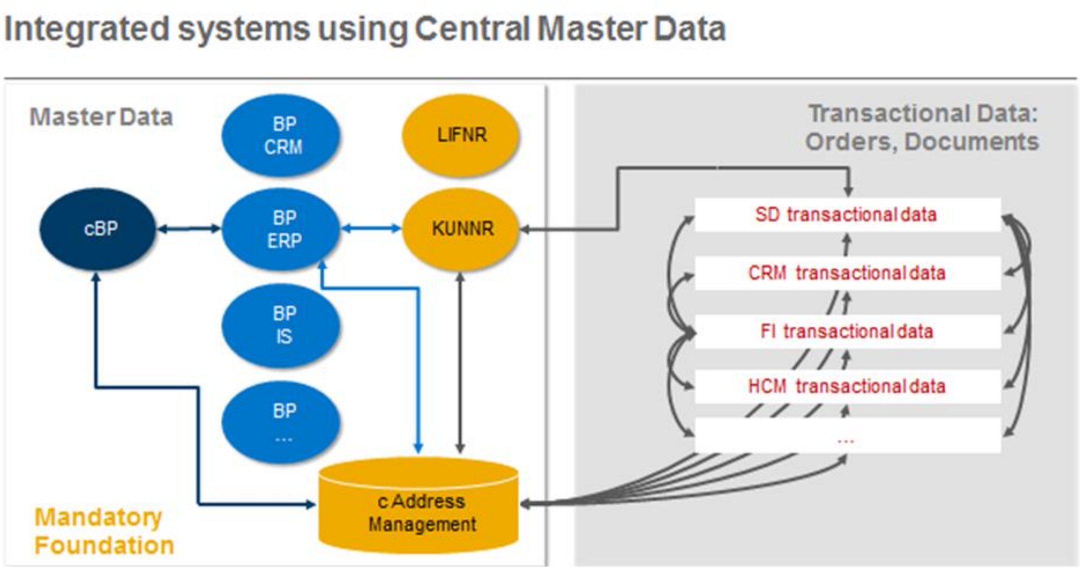
- *Display: The system does not display blocked data.*
- *Change: It is not possible to change a business object that contains blocked data.*
- *Create: It is not possible to create a business object that contains blocked data.*
- *Copy/Follow-Up: It is not possible to copy a business object or perform follow-up activities for a business object that contains blocked data.*
- *Search: It is not possible to search for blocked data or to search for a business object using blocked data in the search criteria.*

It is possible to display blocked data if a user has special authorization; however, it is still not possible to create, change, copy, or perform follow-up activities on blocked data.

SAP delivers an end of purpose check for *Project Workspace*. The delivered end of purpose function module is /CPD/PWS_WS_BUPA_EOP_CHECK.

Integration with Other Solutions

In the majority of cases, different installed applications run interdependently as shown in following graphic.



Example of interdependent applications

An example of an application that uses central master data is an SAP for Healthcare (IS-H) application that uses the purchase order data stored in Financial Accounting (FI) or Controlling (CO).

Relevant Application Objects and Available Deletion Function

Application	*Detailed Description*	*Provided Deletion Function*
Project Workspace	Project Workspace stores personal information of business partners for the *Team* function.	The ILM-enabled deletion program for commercial projects (master projects): /CPD/PWS_ARCH_MP_DELETE

Relevant Function Modules

Application	*Function Module*	*Description*
Project Workspace -> Risk Management	/CPD/BUPA_EOP_CHECK	You can use this API to check the retention period of business partners.
Project Workspace -> Risk Management	/CPD/RM_BUPA_EVENT_ARCH1	You can use this API to archive business partners.
Project Workspace -> Risk Management	/CPD/RM_BUPA_EVENT_DELE1	You can use this API to delete business partners.

Relevant Programs

Application	*Program*	*Description*
Project Workspace	/CPD/R_DPP_CONTACT_PERSON_S4H	This program is relevant for contact persons who have been added using the *Create Contact* feature in the *Define Master Project Types* view in Customizing for SAP Commercial Project Management -> Master Data -> Master Project -> Make Settings for Master Projects.

Application	*Program*	*Description*
		When a contact person leaves a company, to comply with data privacy and protection rules, you can use this program to identify all the projects that this person is assigned to; and then proceed to delete the contact from all projects in one go.

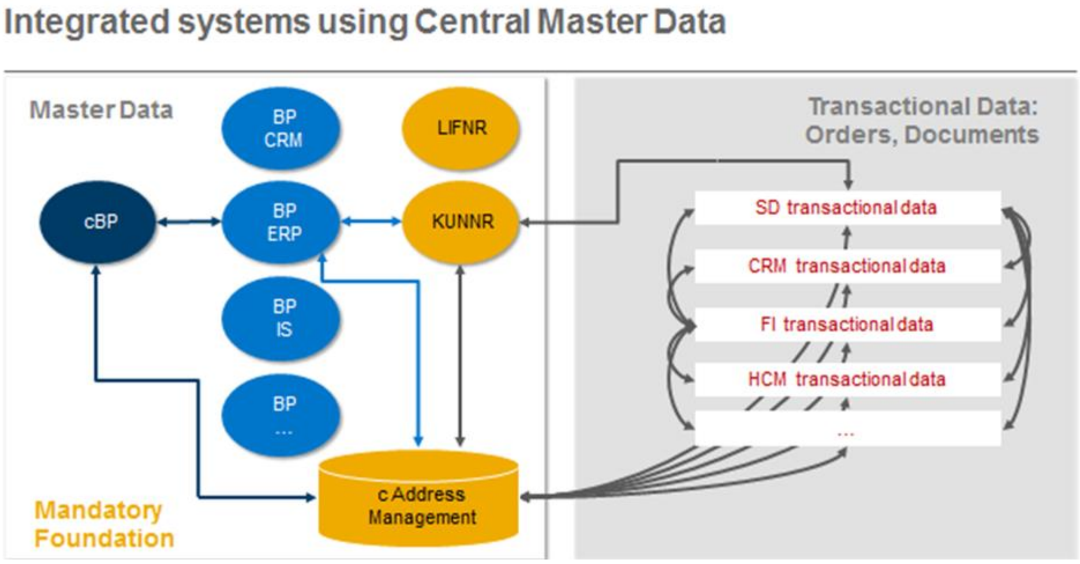
Project Cost and Revenue Planning

Project Cost and Revenue Planning might process data (personal data) that is subject to the data protection laws applicable in specific countries as described in SAP Note 1825544.

The SAP Information Lifecycle Management (ILM) component supports the entire software lifecycle including the storage, retention, blocking, and deletion of data. The *Project Cost and Revenue Planning* application (CA-CPD-FP) does not use SAP ILM to support the deletion of personal data since the data required for transactional purposes is stored in a BW InfoCube.

Integration with Other Solutions

In the majority of cases, different installed applications run interdependently as shown in following graphic.



Example of interdependent applications

An example of an application that uses central master data is an SAP for Healthcare (IS-H) application that uses the purchase order data stored in Financial Accounting (FI) or Controlling (CO).

Relevant Application Objects and Available Deletion Function

Application	*Detailed Description*	*Provided Deletion Function*
Project Cost and Revenue Planning	Project Cost and Revenue Planning stores personal information of business partners only when resources are planned together with *SAP Multiresource Scheduling* (MRS). This information is then stored in a BW InfoCube, for real-time planning.	The deletion program /CPD/PFP_EMP_DATA_CONSISTENCY checks the HR master and delete information from the InfoCube, for employee records that are not found in the HR master.

Relevant Programs

Application	*Program*	*Description*
Project Cost and Revenue Planning	/CPD/PFP_CREATE_RES_MSTER_DATA	This program replicates employee master data from HR to the BW master data of SAP Commercial Project Management 2.0 for SAP S/4HANA. The program blanks out the names of employees that are inactive in the HR master data, so that when you search for these employees, you do not get the corresponding data. This is useful for the purpose of data privacy and protection, for example, when an employee leaves a company the employee's name is not made available in the project details.

Project Issue and Change Management

Project Issue and Change Management might process data (personal data) that is subject to the data protection laws applicable in specific countries as described in SAP Note 1825544.

The SAP Information Lifecycle Management (ILM) component supports the entire software lifecycle including the storage, retention, blocking, and deletion of data. The *Project Issue and Change Management* application (CA-CPD-PCM) uses SAP ILM to support the deletion of personal data as described in the following sections.

End of Purpose Check (EoP)

An end of purpose check determines whether data is still relevant for business activities based on the retention period defined for the data. The retention period of data consists of the following phases.

- *Phase one: The relevant data is actively used.*
- *Phase two: The relevant data is actively available in the system.*
- *Phase three: The relevant data needs to be retained for other reasons.*
  - For example, processing of data is no longer required for the primary business purpose, but to comply with legal rules for retention, the data must still be available. In phase three, the relevant data is blocked.
  - Blocking of data prevents the business users of SAP applications from displaying and using data that may include personal data and is no longer relevant for business activities.

Blocking of data can impact system behavior in the following ways:

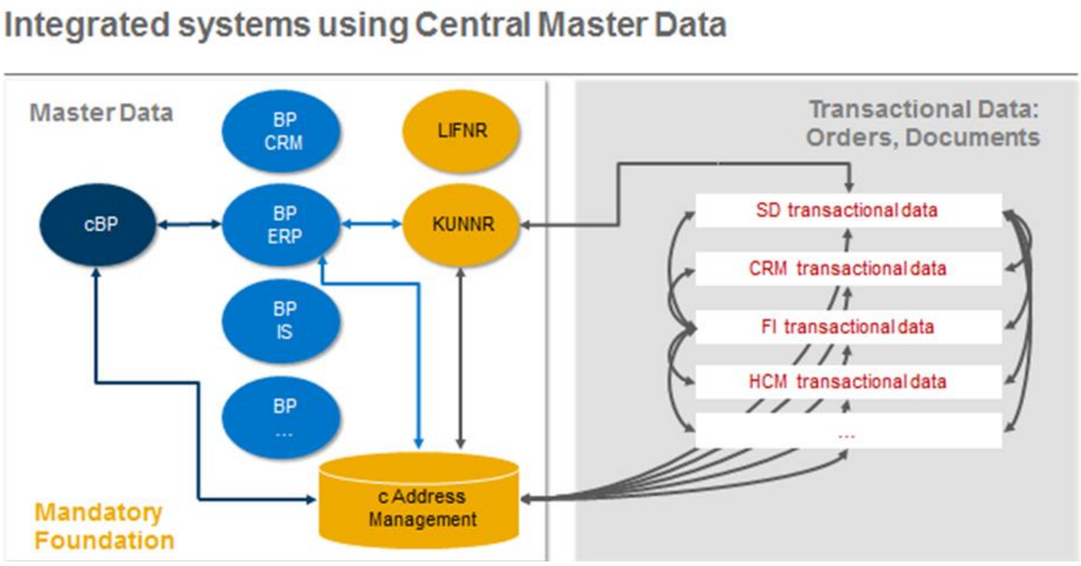
- *Display: The system does not display blocked data.*
- *Change: It is not possible to change a business object that contains blocked data.*
- *Create: It is not possible to create a business object that contains blocked data.*
- *Copy/Follow-Up: It is not possible to copy a business object or perform follow-up activities for a business object that contains blocked data.*
- *Search: It is not possible to search for blocked data or to search for a business object using blocked data in the search criteria.*

It is possible to display blocked data if a user has special authorization; however, it is still not possible to create, change, copy, or perform follow-up activities on blocked data.

SAP delivers an end of purpose check for *Project Issue and Change Management*. The delivered end of purpose function module is /PICM/BUPA_EOP_CHECK.

Integration with Other Solutions

In the majority of cases, different installed applications run interdependently as shown in following graphic.



Example of interdependent applications

An example of an application that uses central master data is an SAP for Healthcare (IS-H) application that uses the purchase order data stored in Financial Accounting (FI) or Controlling (CO).

Relevant Application Objects and Available Deletion Function

Application	*Detailed Description*	*Provided Deletion Function*
Project Issue and Change Management	Project Issue and Change Management stores personal information of business partners for the *Partner* function.	• The ILM-enabled deletion program for issues and change requests: /PICM/ARCH_ISSUE_CR_ROOT_DEL • The ILM-enabled deletion program for activities: /PICM/ARCH_ACTIVITY_ROOT_DEL • Function module to check (before deletion) if business partner is used in the application: /PICM/BUPA_EVENT_DELE1

9.9 Other Security-Relevant Information

Before you use the digitally-signed Analysis Office (AO) workbooks delivered by SAP Commercial Project Management 2.0 for SAP S/4HANA, you must follow these steps:

Caution:

These settings are valid if you want to use the workbooks in a secure way by only enabling digitally-signed macros. However, if you use custom workbooks or make any changes and save it back to the standard, you must enable all macros.

1. Launch Microsoft Excel.
    a. File -> Options -> Trust Center -> Trust Center Settings -> Macro Settings
    b. Choose -> Disable all macros except digitally signed macros
    c. Mark the Trust access to the VBA project object model checkbox
2. Launch the digitally-signed workbook and implement the following steps to add the certificate as a trusted publisher:
    a. File -> Info tab -> Enable Control- Security Warning is shown
    b. Select Advanced Options.
    c. A Security Warning PopUp is shown with options
    d. Select Trust all documents from this publisher
       Note: This is a one-time activity to add the certificate
3. Follow these steps to change the default system in the workbook:
    a. File -> Commercial Project tab -> Settings
    b. In the dialog box, choose Platform
    c. Choose Replace System
    d. Choose your relevant system in the Replace by System column
    e. Save the workbook (with the correct standard workbook name) in your required system.

9.10 Security-Relevant Logging and Tracing

The trace and log files of *SAP Commercial Project Management 2.0 for SAP S/4HANA* use the standard mechanisms of SAP NetWeaver.
For more information, see the following sections in the SAP NetWeaver Security Guide at:

SAP NW 7.51 SAP NetWeaver	http://help.sap.com/nw75 → *Security Information* → *Security Guide* → *Security Aspects for System Management* → *Auditing and Logging*

If there is no information about trace and log files in the sections for the individual components of *Project Workspace and Project Cost and Revenue Planning*, you can assume that no sensitive data is updated in these files.

Project Cost and Revenue Planning (CA-CPD-FP)

- *The* Project Cost and Revenue Planning *application uses the tracing functions of* Analysis Office *to trace actions performed in the planning workbook (*Analysis Office*).*
- *You can also activate a trace file for* Project Cost and Reveue Planning *using the* Activate Tracing *button on the* Financial Planning *ribbon. Details of the items are recorded in the trace file (CACPDFP_TRACE_LOG.log).*
- *Note that the file does not record user-specific personal information such as user name or IP address.*

For information about tracing related to *Analysis Office*, see http://help.sap.com/boaa → *System Administration and Maintenance Information* → *Administrator's Guide*.

9.11 Important Information

Source	Description
https://help.sap.com/viewer/p/SAP_S4HANA_ON-PREMISE	The *Security Guide* section contains the important security information required for working with SAP S/4HANA.

10 Solution-Wide Topics

10.1 List of References

The following table lists references to technologies used for *SAP Commercial Project* Management

Web Dynpro ABAP	http://help.sap.com/nw75 → *Application Help* → *Function-Oriented View* → *SAP NetWeaver by Key Capability* → *Application Platform by Key Capability* → *ABAP Technology* → *UI Technologies in ABAP* → *Web Dynpro ABAP*
Floorplan Manager	http://help.sap.com/nw75 → *Application Help* → *Function-Oriented View* → *SAP NetWeaver by Key Capability* → *Application Platform by Key Capability* → *ABAP Technology* → *UI Technologies in ABAP* → *Floorplan Manager for Web Dynpro ABAP*

10.2 Application Program Interfaces (APIs)

10.2.1 APIs for Project Workspace

The following table lists APIs that can be used as alternatives to the application:

Technical Name	Description
/CPD/CREATE_MP_HEADER	You can use this API to create a new commercial project (master project).
/CPD/UPDATE_MP_HEADER	You can use this API to update a commercial project (master project).
/CPD/DELETE_MP_HEADER	You can use this API to delete a commercial project (master project).
/CPD/ADD_MP_ITEM	You can use this API to add a related business object to a commercial project (master project).
/CPD/DELETE_MP_ITEM	You can use this API to delete a related business object from a commercial project (master project).
/CPD/CREATE_MP_ITEM_REP_ATTR	You can use this API to create reporting attributes and values.
/CPD/UPDATE_MP_ITEM_REP_ATTR	You can use this API to update reporting attribute values.
/CPD/DELETE_MP_ITEM_REP_ATTR	You can use this API to delete reporting attributes and values.
/CPD/RM_RISK_CREATE	You can use this API to create system entries for risks.
/CPD/RM_RISK_UPDATE	You can use this API to change the system entries of risks.

/CPD/BUPA_EOP_CHECK	You can use this API to check the retention period of business partners.
/CPD/RM_BUPA_EVENT_ARCH1	You can use this API to archive business partners.
/CPD/RM_BUPA_EVENT_DELE1	You can use this API to delete business partners.
/CPD/CUD_MULTIPLE_MP_SERVICE	You can use this API to create/Update/Delete multiple commercial projects (master projects) with header reporting attributes, Contact Details, related business object with item reporting attributes, Status & Trends details.
/CPD/CREATE_MULTI_MP_REP_ATTR	You can use this API to create multiple commercial projects (master projects) with header reporting attributes.
/CPD/UPDATE_MULTI_MP_REP_ATTR	You can use this API to update multiple commercial projects (master projects) with header reporting attributes.
/CPD/DELETE_MULTI_MP_REP_ATTR	You can use this API to delete multiple commercial projects (master projects) with header reporting attributes.
/CPD/CREATE_MULTI_MP_ITEM_RP_A	You can use this API to assign multiple related business objects to multiple commercial projects (master projects) with item reporting attributes.
/CPD/UPDATE_MULTI_MP_ITEM_RP_A	You can use this API to update multiple related business objects data of multiple commercial projects (master projects) with item reporting attributes.
/CPD/DELETE_MULTI_MP_ITEM_RP_A	You can use this API to delete multiple related business objects to multiple commercial projects (master projects) with item reporting attributes.
/CPD/UPDATE_MULTIPLE_MP_CONTCT	You can use this API to Create/Update/Delete multiple contact details of multiple commercial projects (master projects).
/CPD/UPDATE_MULTI_MP_HDR_ST	You can use this API to Create/Update/Delete multiple Status & Trends details of multiple commercial projects (master projects).
/CPD/PWS_WS_GET_REP_ATTRIBUTES	You can use this API to get reporting attributes.

10.2.2 APIs for Project Cost and Revenue Planning

The following table lists APIs that can be used as alternatives to the application, for example, to create master data such as financial plans, versions, and plan line items:

Technical Name	Description
/CPD/PFP_RFC_CREATE_PLAN	You can use this remote-enabled function module (RFC) to create a financial plan for a commercial project (master project). Note that this RFC simultaneously creates the BOPF object and updates the real-time InfoCube.
/CPD/PFP_RFC_UPDATE_PLAN	You can use this RFC to update details for a financial plan, a plan version, or create a new plan version.

/CPD/PFP_RFC_DELETE_PLAN	You can use this RFC to delete a financial plan.
/CPD/PFP_UPLOAD_PLAN_LINEITEMS	You can use this RFC to upload and save plan line items into the real-time planning InfoCube.
/CPD/PFP_RFC_TRANSFER_CO_MRS	You can use this RFC to transfer plan data from the real-time InfoCube to a backend system such as ERP or *SAP Multiresource Scheduling* (MRS).
/CPD/PFP_RFC_CREATE_PLAN_MASS	You can use this RFC to create financial plans for commercial projects (master projects), for example, to create financial plans in batch processing. Note that in this RFC, the BOPF objects are created first, followed by updates to the real-time InfoCube. Hence, this also provides optimized performance.
/CPD/PFP_RFC_UPDATE_PLAN_MASS	You can use this RFC to update details in financial plans and plan versions, as a batch process. You can also use this RFC to create new plan versions for financial plans.
/CPD/AUTH_CHECK_MP_ACCESS	You can use this function module to establish if a user has access to a commercial project (master project). This function module can be used when the access control check does not depend on the user's responsibility in the master project.
/CPD/AUTH_CHECK_MP_ITEM_HIER	You can use this function module to establish if a user has access control to an element in the commercial project (master project) structure.
/CPD/AUTH_CHECK_OBJECT_ACCESS	You can use this function module to determine the list of objects a user can access, based on the user's responsibility in a commercial project (master project).
/CPD/FP_RFC_GET_PLN_VER_DETAIL	You can use this RFC to get details of all the financial plans along with the version details, under a commercial project (master project).
/CPD/PFP_CRA_MSTER_DATA_CREATE	You can use this RFC to create master data for change request alternatives of a financial plan.
/CPD/PFP_CRA_MSTER_DATA_DELETE	You can use this RFC to delete the master data of change request alternatives of a financial plan, from the InfoCube.
/CPD/PFP_CRA_STATUS_UPDATE	You can use this RFC to update statuses of change request alternatives in the real-time InfoCube.
/CPD/PFP_CRA_TEXT_UPDATE	You can use this RFC to update the texts of change request alternatives in the real-time InfoCube
/CPD/PFP_CR_MASTER_DATA_CREATE	You can use this RFC to create master data for change requests.
/CPD/PFP_CR_TEXT_UPDATE	You can use this RFC to update the texts of change requests, in the real-time InfoCube.
/CPD/PFP_GET_CRA_VALUES	You can use this RFC to get key figure values of change requests or change request alternatives, at a summary level.
/CPD/PFP_GET_PLAN_ACT_VER_VAL	You can use this RFC to get summary records of each key figure

	(such cost, quantity, revenue) for each version of a financial plan.
/CPD/PFP_REASSIGN_OBJ_AT_MP_LV	You can use this RFC to check whether a business object can be reassigned from the source commercial project (master project) to a target commercial project (master project).
/CPD/PFP_RFC_COPY_LINE_ITEM	You can use this RFC to copy line items from the source change request or change request alternative to the target change request alternative of the active plan version.
/CPD/PFP_RFC_CR_WORKBOOKS	You can use this RFC to get the list of workbooks maintained in the Customizing activity for planning for change requests.
/CPD/PFP_RFC_DELETE_LINE_ITEM	You can use this RFC to delete line items for a given change request or change request alternative of the active plan version.
/CPD/PFP_RFC_IMPORT_FR_CO	You can use this RFC to initiate the *Import* function to import the quantity from a *PS* project to *SAP Commercial Project Management*.
/CPD/PFP_RFC_LAUNCH_AO	You can use this RFC to launch the planning and forecasting workbooks in *Analysis Office*, for a specified financial plan and plan version.

10.2.1APIs for Project Issue and Change Management

The following table lists APIs that can be used as alternatives to the application:

Technical Name	Description
/PICM/FM_ISSUE_CR_CREATE_NEW	You can use this API to create issues with all nodes.
/PICM/FM_ISSUE_CR_UPDATE_API	You can use this API to update issues and change requests.

www.sap.com/contactsap