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SAP S/4HANA Manufacturing for Planning & Scheduling - Implementation Guide

SAP S/4HANA 2022

Typographic Conventions

Type Style	Description
<i>Example</i>	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

Version	Date	Change
2022.0	2022-10-12	Initial Version for SAP S/4HANA 2022
2022.1	2022-11-16	Updated the Chapter 1.2 <i>Relevant SAP Notes</i> (p. 6). Added information related to the supported scenarios for Subcontracting. Updated chapter 7.4 <i>Additional Settings for Subcontracting</i> (p. 57). Added information related to real-time integration of SAP IBP with the DSC system. Added a new Chapter 7.7 <i>Real-time Integration of SAP Integrated Business Planning (IBP) with the DSC System</i> (p. 61).
2022.2	2023-01-06	Added information related to the Subcontracting without Source Location in PP/DS scenario. Updated chapter 7.4 <i>Additional Settings for Subcontracting</i> (p. 57)
2022.3	2023-02-20	Updated the relevant sections with changes related to the SAP S/4HANA 2022 FPS1 release.
2022.4	2023-03-06	Updated the Chapter 7.4 <i>Additional Settings for Subcontracting</i> (p. 57) by adding information related to support for the Subcontracting with Phantom Assembly in PP/DS scenario. Added a new Chapter 3.2.8 <i>Settings for Planning with Characteristics</i> (p. 20), which provides the necessary settings for planning with characteristics.

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1 Introduction

1.1 About this Document

The SAP S/4HANA Manufacturing for planning & scheduling capability of SAP Digital Supply Chain Management, edition for SAP S/4HANA (DSC system) is not a legal successor of the PP/DS component from the SAP SCM Server. A standard migration path does not exist for data migration and customer code migration from the SAP SCM Server to the PP/DS component. However, you can achieve this using a customer-specific implementation project.

This guide describes the detailed configuration for using the SAP S/4HANA Manufacturing for planning & scheduling capability of SAP Digital Supply Chain Management, edition for SAP S/4HANA (DSC system), in a side-by-side deployment with one or more additional ERP systems.

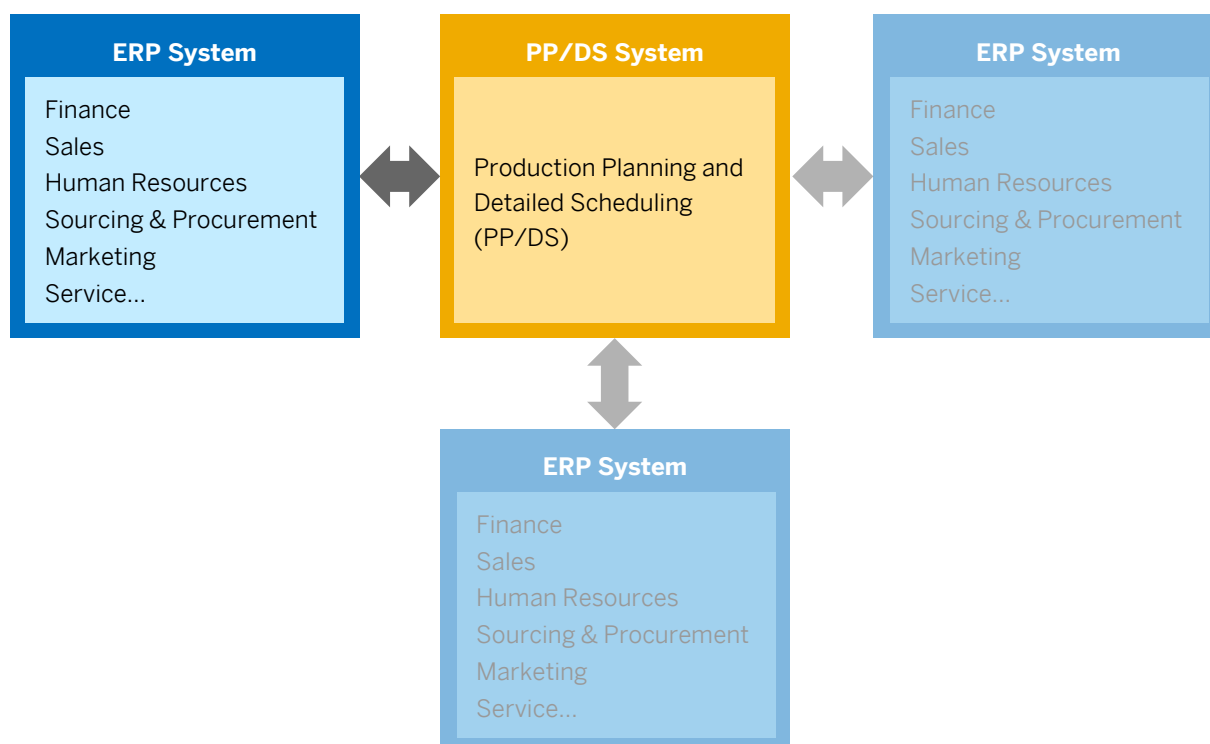
In the DSC system, you only use Production Planning and Detailed Scheduling (PP/DS) (aka Advanced Planning, embedded Production Planning and Detailed Scheduling, embedded PP/DS). In the ERP system, which can be another SAP S/4HANA system or an SAP ERP system, you can use all the available components.

i Note

This guide describes the settings that are only specific to the tested scenarios. Depending on your business processes, additional configuration settings and master data may be required.

For current constraints and restrictions, see SAP Note [3228432](#).

Deployment with One or Multiple Independent ERP Systems



i Note

For additional settings for a scenario where you use different ERP systems for customer and vendor, see chapter 7.3 *Setup for Distributed Customer/Vendor ERP Systems* (p. 51).

1.2 Relevant SAP Notes

You must read the following SAP Notes before you start the installation. These SAP Notes contain the most recent information on the installation, as well as corrections to the installation documentation.

Note

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

SAP Note	Title
3228432	Restrictions and Implementation Recommendations for Using Advanced Planning in an SAP S/4HANA (DSC Edition) 2022 System Connected Side-by-Side to an SAP ERP System
3244594	Release Information Note: Production Planning and Detailed Scheduling for SAP S/4HANA 2022
3230401	Restrictions and Implementation Recommendations for Production Planning and Detailed Scheduling in SAP S/4HANA 2022
3164190	General Restrictions and Implementation Recommendations for Production Planning and Detailed Scheduling for SAP S/4HANA 2022
3262411	Transferring Characteristics and Classes to the Connected SAP S/4HANA System (DSC Edition) using Core Interface (CIF)
3306890	CIF queue error for transfer of material from an SAP ERP system to an SAP S/4HANA system (DSC edition)
3262448	Transferring Advanced Planning Fields in Material Master to the Connected SAP S/4HANA System (DSC Edition) using Core Interface (CIF)
3227415	Transferring Material Classification Changes Using BTE to the Connected SAP S/4HANA System (DSC Edition)
3206946	Release information and restrictions of Digital Supply Chain, edition for S/4HANA in a single client
3126428	Support for SAP S/4HANA 1909 as an ERP system with an SAP S/4HANA (DSC) System
3004711	Connect an SAP ERP system with Advanced Planning (PP/DS) in an SAP S/4HANA system
3212509	CIF Queue Error during Transfer of Material from an SAP ERP System to an SAP S/4HANA System (DSC edition)
3243777	Missing Validation in the Case of CIF Class Creation
3198951	Material Classification Changes are not replicated properly to an SAP S/4HANA System (DSC edition)
3227009	Inaccurate Replication of Material Classification Changes in the SAP S/4HANA System (DSC edition)
3286572	General Restrictions and Implementation Recommendations for Segmentation integration with Production Planning and Detailed Scheduling for SAP S/4HANA 2022 FPS1

1.3 Naming Conventions

The term **ERP system** refers to the SAP ERP (or SAP S/4HANA) systems that are used for components other than PP/DS.

The term **PP/DS system** refers to the SAP S/4HANA system in which you use PP/DS.

2 Prerequisites

As **ERP systems**, you can use the following systems:

- SAP S/4HANA 2020 FPS1 with SAP Note [3020852](#) or higher.
- SAP S/4HANA 1909 with support package 6 or higher or SAP Note [3126428](#).
- SAP Enhancement Package 7 for ERP 6.0 with support package 23 or SAP Note [3004711](#).
- SAP Enhancement Package 8 for ERP 6.0 with support package 17 or SAP Note [3004711](#).

As **PP/DS system**, you can use SAP S/4HANA 2022.

SAP liveCache

SAP liveCache is installed for the PP/DS system. For more information, see SAP Note [2407589](#).

PP/DS Optimizer (Optional)

An **optimizer** is installed for the PP/DS system. For more information, see SAP Notes [1686826](#) and [712066](#).

RFC Users

Before performing any customizing activity, check whether an **RFC user** exists in each system/client you are using.

RFC Connections and Logical Systems

Ensure that the ERP systems and the PP/DS system are all connected via RFC connections, and logical systems are maintained.

Roles

For using integration via Core Interface (CIF), users need the roles described in the following table.

System Type	Release	Technical Name of Role	Comment
ERP system (for CIF outbound)	SAP Enhancement Package 7 for ERP 6.0	SAP_SCM_INTEGRATION_DIMP	See SAP Note 727839 .
	SAP Enhancement Package 8 for ERP 6.0	SAP_SCM_2_ERP_Integration	See SAP Note 2081387
	SAP S/4HANA 1909 or higher		
PP/DS system (for CIF inbound)	SAP S/4HANA 2020 or higher	SAP_SCM_Integration_2	See SAP Note 3061830 .

3 Customizing and Configuration

3.1 Settings in the ERP System

Prepare the ERP system for communication with the PP/DS system. The settings affect all clients of the ERP system and require authorizations for cross-client settings on a user and client level.

Note

In a multiple system landscape consisting of a customizing system (for example ERC client 100), test system (for example ERT client 001), and productive system (for example ERP, client 001), make all customizing settings in the customizing system, and transport these settings to all other ERP systems (for example, test system, productive system).

3.1.1 Basic Settings for Setting Up the System Landscape

The following settings are done in customizing under *Integration with Other SAP Components* → *Advanced Planning and Optimization* → *Basic Settings for Setting Up the System Landscape*.

Caution

Even though the names of the customizing activities are like the names of activities you used in the PP/DS system, these are not the same activities! Ensure that you are using the correct path.

Name Logical System

1. Open activity *Name Logical System* or use transaction BD54.
2. Define a logical system for the ERP system and a logical system for the PP/DS system.

Note

In a multiple system landscape consisting of a customizing system (for example ERC client 100), a test system (for example ERT client 001), and a productive system (for example ERP, client 001), you define multiple logical systems (for example, ERTCLNT001 and ERPCLNT001) in the customizing system.

Assign Logical System to a Client

1. Open activity *Assign Logical System to a Client* or use transaction SCC4.
2. Assign the logical systems to the correct client.
Specify all other settings for the client in alignment with your company's IT policy.

Specify SAP APO Release

1. Open activity *Specify SAP APO Release* or use transaction NDV2.
2. Specify system type `SAP_S4HANA` for the PP/DS system/client (for example, `PPSCLNT100 SAP_S4HANA, 105`).

Set Up RFC Destination

1. Open activity *Set Up RFC Destination* or use transaction SM59.
2. Choose the *Create* button.
3. Enter the destination name for the PP/DS system following pattern <SYSTEMID>CLNT<CLIENTNUMBER>, for example, PPSCCLNT100.
4. Select connection type *RFC connection to ABAP system* (3) and choose *Continue*.
5. On the *Technical Settings* view, enter the description and the target system settings.
6. On the *Log on & Security* view, enter the logon data for the RFC user.
7. In the *Select Protocol* screen area of the *Special Options* view:
 - o For an SAP S/4HANA system, set the *Outbound bgRFC Behavior* to *No outbound bgRFC* (1).
 - o For an SAP ERP system, set the *qRFC Version* to *t-/qRFC* (2).
8. Verify your settings by choosing *Remote Logon*. You should see a screen from which you can navigate to *SAP Easy Access*.

Assign RFC Destinations to Different Application Cases

1. Open activity *Assign RFC Destinations to Different Application Cases*.
2. Enter the RFC destination and the logical system. Leave the field *CIF Application Case* empty.

Set Target System and Queue Type

1. Open activity *Set Target System and Queue Type* or use transaction CFC1.
2. Create an entry for the logical system and set the queue type to *Inbound Queues* (I). The operating mode will be set to *Transactional Events Active (Standard)* (T) automatically after the initial transfer.

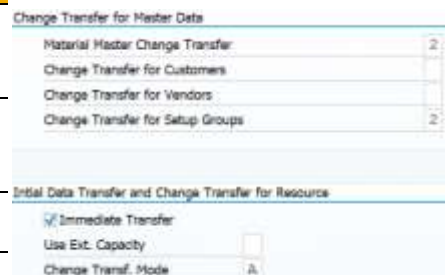
3.1.2 Basic Settings for the Data Transfer

The following settings are done in customizing under *Integration with Other SAP Components* → *Advanced Planning and Optimization* → *Basic Settings for the Data Transfer* → *Change Transfer*.

Configure Change Transfer for Master Data

1. Open activity *Change Transfer for Master Data* → *Configure Change Transfer for Master Data* or use transaction CFC9.
2. Make the following settings:

Field	Value
Material Master Change Transfer	BTE Transfer, Immediately (2)
Change Transfer for Customers	No Change Transfer (empty)
Change Transfer for Vendors	No Change Transfer (empty)
Change Transfer for Setup Groups	BTE Transfer, Immediately (2)
Immediate Transfer	Selected
Use Ext. Capacity	No External Capacity (empty)
Change Transf. Mode	Chng Trans. for Pl.-Vers-Indep. Res. and all PVs Model 000 (A)



i Note

Settings for other fields in this activity are only relevant in the PP/DS system.

Activate ALE Change Pointers for Message Types

1. Open activity *Change Transfer for Master Data* → *Activate ALE Change Pointers for Message* or use transaction BD50.
2. Ensure that the change pointers for message type CIFSRC are active.

Activate Online Transfer Using BTE

1. Open activity *Change Transfer for Transaction Data* → *Activate Online Transfer Using BTE* or use transaction BF11.
2. Activate online transfer using business transaction events (BTEs) for the applications *New Dimension PlugIn APO* (ND-APO) and *New Dimension Integration* (NDI).

i Note

If you want to use block planning in context of variant configuration, create an entry for application *Matching Klassensystem CACL/CDP* (CACDP) as well. For more information, see SAP Note [3073717](#).

3.1.3 Register RFC Destination for the PP/DS System

1. Open transaction *qRFC Monitor (QOUT Scheduler)* (SMQS).
2. Choose *Registration* and enter the following data:

Field	Value
<i>Destination</i>	RFC destination of the PP/DS system, for example, PPSCLIENT001
<i>Max.Conn.</i>	10
<i>Max. Runtime</i>	60
<i>No tRFC</i>	Leave this field empty.

3.1.4 Register Queue Names

Configure the execution of inbound queues in the ERP system. This setting is relevant for the qRFC communication from the PP/DS system to the ERP system.

1. Open transaction *qRFC Monitor (QIN Scheduler)* (SMQR).
2. Choose *Registration* and enter the following data:

Field	Value
<i>Queue Name</i>	CF*
<i>Mode</i>	D
<i>Max. Runtime</i>	60
<i>Destination</i>	Leave this field empty.
<i>Retries/Attempts</i>	e.g. 30
<i>Pause</i>	300

3. Open transaction *Registration of Inbound Queues* (CFC2).
4. Add an entry for a generic user that allows all users to generate, debug, or log CIF queues:

Field	Value
<i>User Name</i>	*
<i>RFC Mode</i>	<i>Queued RFC (Q)</i>
<i>Logging Mode</i>	<i>Detailed (D)</i>
<i>Debugging On/Off</i>	<i>Debugging off (empty)</i>

User Name	RFC Mode	Logging	Debug
<input type="checkbox"/> *	Q	D	

You can create additional entries for specific users as needed.

3.1.5 Register Display Programs

This function enables you to display the data of a queue entry by double-clicking the queue name or to display the application log of a queue entry by double-clicking the status text in the qRFC monitor for inbound queues.

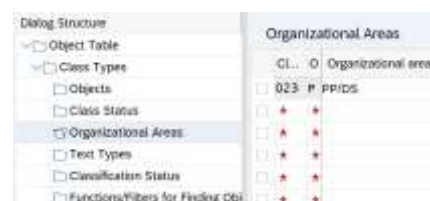
1. Open transaction *qRFC Administration* (SMQE).
2. In the menu, choose *Edit* → *Register Display Program*.
3. Enter *Queue Name* CF* and *Program Name* CIFQEV02.

3.1.6 Maintain Object Types and Class Types (for CDP)

If you use characteristics-dependent planning (CDP), you must assign classes to organizational areas.

1. In customizing activity *Cross-Application Components* → *Classification System* → *Classes* → *Maintain Object Types and Class Types*, choose *Object Table* and search for the MARA table by using the *Position* button.
2. Select the MARA table and choose *Organizational Areas* in the dialog structure.
3. Create at least the following new entry with the following values:

Field	Value
<i>Class Type</i>	023
<i>Organizational Area</i>	P (or any other value)
<i>Organizational Area Description</i>	PP/DS



4. Create additional entries according to your business needs.

3.2 Settings in the PP/DS System

Note

In a multiple system landscape with a customizing system (for example PPC client 100), test system (for example PPT client 001), and productive system (for example PPS, client 001), make all customizing settings in the customizing system, and transport these settings to all other PP/DS systems (for example, test system, productive system).

3.2.1 Basic Settings for Creating the System Landscape

The following settings are done in the PP/DS customizing system in customizing under *Advanced Planning* → *Integration via Core Interface (CIF)* → *Integration* → *Basic Settings for Creating the System Landscape*.

Caution

Even though the names of the customizing activities are like the names of activities you used in the ERP system, these are not the same activities! Ensure that you are using the correct path.

Name Logical Systems

1. Open activity *Name Logical System*.
2. Enter the name of the RFC connection to the ERP system.

Assign Logical System to a Client

1. Open activity *Assign Logical System to a Client*.
2. Assign the logical system to the correct client (for example, in system PPS, assign PPSCCLNT001 to client 001).

Set Up RFC Destination to ERP System

1. Open activity *Set Up RFC Destination* or use transaction SM59.
2. Choose the *Create* button.
3. Enter the destination name for the ERP system following pattern `<SYSTEMID>CLNT<CLIENTNUMBER>`, for example, ERPCLNT100.
4. Select connection type *RFC connection to ABAP system* (3) and choose *Continue*.
5. On the *Technical Settings* view, enter the description and the target system settings.
6. On the *Log on & Security* view, enter the logon data for the RFC user. Ensure that the RFC user has the role `SAP_SCM_Integration_2` assigned.
7. In the *Select Protocol* screen area of the *Special Options* view, ensure that the *Outbound bgRFC Behavior* is set to *No outbound bgRFC* (1).
8. Verify your settings by choosing *Remote Logon*. You should see a screen from which you can navigate to *SAP Easy Access*.

Set Up RFC Connection to ERP System for Order Navigation

To enable navigation to the ERP system to display orders like production orders or purchasing requisitions from the *Product View (/SAPAPO/RRP3)*, you create an additional RFC connection and assign it to the application case.

1. Open activity *Set Up RFC Destination* or use transaction SM59.
2. Choose the *Create* button.
3. Enter the destination name for the ERP system following pattern <SYSTEMID>CLNT<CLIENTNUMBER>_NAV, for example, ERPCLNT100_NAV.
4. Select connection type *RFC connection to ABAP system (3)* and choose *Continue*.
5. On the *Technical Settings* view, enter the description and the target system settings.
6. On the *Log on & Security* view, enter the logon data for the user that will use the navigation or select the *Current User* checkbox.
7. In the *Select Protocol* screen area of the *Special Options* view, ensure that the *Outbound bgRFC Behavior* is set to *No outbound bgRFC (1)*.
8. Verify your settings by choosing *Remote Logon*. You should see a screen from which you can navigate to *SAP Easy Access*.
9. Open activity *Assign RFC Destinations to Various Application Cases*.
10. Choose the *New Entries* button.
11. Enter the logical system and the RFC destination you just created and assign the CIF application *Order Navigation (XN)*.

Maintain Business System Group

1. Open activity *Maintain Business System Group* or use transaction */SAPAPO/C1*.
2. Define a business system group by specifying an ID and a description.

Assign Logical System and Queue Type

1. Open activity *Assign Logical System and Queue Type*.
2. Define two new entries for the just created business system group and the logical systems for the ERP and the PP/DS system with the following values:

Field	Value
<i>SAP System Indicator</i>	X
<i>Release</i>	700
<i>Queue Type</i>	<i>Inbound Queues (I)</i>
<i>Error Handling</i>	<i>Strict (Terminate at Errors) (empty)</i>
<i>Role</i>	<i>Not specified (empty)</i>

3.2.2 Register Queue Names

1. Open transaction *qRFC Monitor (QIN Scheduler) (SMQR)*.
2. Choose *Registration* and enter the following data:

Field	Value
Queue Name	CF*
Mode	D
Max. Runtime	60
Destination	Leave this field empty.
Retries/Attempts	e.g. 30
Pause	300

3. Open transaction *Registration of Inbound Queues (CFC2)*.
4. Add an entry for a generic user that allows all users to generate, debug, or log CIF queues:

Field	Value
User Name	*
RFC Mode	Queued RFC (Q)
Logging Mode	Detailed (D)
Debugging On/Off	Debugging off (empty)

You can create additional entries for specific users as needed.

3.2.3 Basic Settings

The following settings are done in the PP/DS customizing system in customizing under *Advanced Planning* → *Basic Settings*.

Activate Advanced Planning

1. Open activity *Activate Advanced Planning and Scheduling* → *Activate Advanced Planning and Scheduling*.
2. Choose *New Entries*.
3. Select the *Activate Advanced Planning and Scheduling* checkbox.

Specify Settings for Data Transfer

1. Open activity *Settings for Data Transfer*.
2. Deselect all order types.

Caution

In this scenario, all the data is transferred from the ERP system to the PP/DS system (and back) using Core Interface (CIF), therefore you must deselect all order types here.

Define Configuration Schema

1. Open activity *Define Configuration Schema (CDP or Variant Configuration)*.
2. Set the configuration relevance to *Characteristics-Dependent Planning (CDP) (C)* or *Variant Configuration (VC) (I)* according to your business needs.

3.2.4 Change Target-System-Independent Settings in CIF

1. Open transaction *Change Target-System-Independent Settings in CIF (CFC9)*.
2. Make the following settings:

Field	Value
<i>Material Master Change Transfer</i>	<i>BTE Transfer, Immediately (2)</i>
<i>Change Transfer for Customers</i>	<i>No Change Transfer (empty)</i>
<i>Change Transfer for Vendors</i>	<i>No Change Transfer (empty)</i>
<i>Change Transfer for Setup Groups</i>	<i>BTE Transfer, Immediately (2)</i>
<i>Immediate Transfer</i>	<i>Selected</i>
<i>Use Ext. Capacity</i>	<i>External Capacity for All Resources (A)</i>
<i>Change Transf. Mode</i>	<i>Chng Trans. for Pl.-Vers-Indep. Res. and all PVs Model 000 (A)</i>

Note

Define all other settings according to your business needs.

Activate ALE Change Pointers for Message Types

1. Open activity *Change Transfer for Master Data → Activate ALE Change Pointers for Message* or use transaction BD50.
2. Ensure that the change pointers for message type CIFSRC are active.

Activate Online Transfer Using BTE

1. Open activity *Change Transfer for Transaction Data → Activate Online Transfer Using BTE* or use transaction BF11.
2. Activate online transfer using business transaction events (BTEs) for the applications *New Dimension PlugIn APO (ND-APO)* and *New Dimension Integration (NDI)*.

Note

If you want to use block planning in context of variant configuration, also create an entry for application *Matching Klassensystem CACL/CDP (CACDP)*. For more information, see SAP Note [3073717](#).

3.2.5 Global Settings

The following settings are done in the PP/DS customizing system in customizing under *Advanced Planning* → *Global Settings*.

Maintain Number Ranges for Orders

1. Open activity *Maintain Number Ranges for Orders*.
2. Define the number ranges you want to use for planned orders.

Maintain Global Parameters and Default Values

1. Open activity *Maintain Global Parameters and Defaults*.
2. Choose the *Planning* view and make the following settings:

Field	Value
<i>Use Number Range</i>	Selected
<i>Number Range Number</i>	The number range you created before

For other settings, leave the default values or choose the settings that fit best to your business scenario.

3.2.6 Settings for Forecast and Sales Order Consumption

Maintain Category Groups

Depending on the requirements strategy you are using, specific category groups may be required. Ensure that at least the following category groups are defined.

1. In the PP/DS system, open customizing activity *Advanced Planning* → *Maintain Category Groups*.
2. If the following entries do not yet exist, create them, and assign categories.

Category Group	Categories	Quantity Type from Order Network
<i>Consumption Sales Orders (K01)</i>	<i>Sales Order (BM)</i>	<i>Requested Quantity (01)</i>
<i>Consumption Third Party Orders (K04)</i>	<i>Sales Order (BM)</i>	<i>Requested Quantity (01)</i>
	<i>Third-Party Purch. Req. Stat. Receipt (DG)</i>	<i>Requested Quantity (01)</i>
	<i>Third-Party Purch. Order Stat. Receipt (DI)</i>	<i>Requested Quantity (01)</i>

Check Settings in the ERP System

1. In customizing of the ERP system, open activity *Production* → *Production Planning* → *Demand Management* → *Planned Independent Requirements* → *Planning Strategy* → *Define Strategy* and check the details of the strategy you are using for your business scenario.
For example, you are using strategy *Planning without final assembly* (50).
2. On the *Details* screen for the strategy, check the requirements class and the allocation indicator that is specified under *Requirements type of customer requirements*.

For example, for strategy 50, the requirements type of customer requirements is *Make-to-order with consumption* (KEV), and the requirements class is *MTO val. with cons.* (045). The allocation indicator is *Consume planning w/o assembly* (2).

Specify Requirement Strategies

1. In customizing of the PP/DS system, open activity *Advanced Planning* → *Specify Requirements Strategies*.
2. For the requirements strategy you are using for your materials, ensure that the correct category group is assigned, and that the assignment mode number is the same as the allocation indicator number in the ERP system.

For example, if you are using *Planning Without Final Assembly* (30), select the *Assignment Mode* that fits to the allocation indicator setting in the ERP system (e.g. 2 - *Assign customer requirements to planning without assembly*) and assign category group K01.

Caution

The descriptive text for the assignment mode can be different from the text for the allocation indicator. It is only important, that the technical values are the same.

Maintain Check Mode

1. In customizing of the PP/DS system, open activity *Advanced Planning* → *Maintain Check Mode*.
2. Define a check mode with the same number as the requirements class that is used in the ERP system (e.g. 045) and select the assignment mode that fits to the allocation indicator setting in the ERP system (e.g. 2 - *Assign customer requirements to planning without assembly*).

3.2.7 Maintain Object Types and Class Types (for CDP)

If you use characteristics-dependent planning (CDP), you must assign classes to organizational areas.

1. In customizing activity *Cross-Application Components* → *Classification System* → *Classes* → *Maintain Object Types and Class Types*, choose *Object Table* and search for the *MARA* table by using the *Position* button.
2. Select the *MARA* table and choose *Organizational Areas* in the dialog structure.
3. Create a new entry with the following values:

Field	Value
<i>Class Type</i>	023
<i>Organizational Area</i>	P (or any other value)
<i>Organizational Area Description</i>	PP/DS



4. Create additional entries according to your business needs.

3.2.8 Settings for Planning with Characteristics

To plan with characteristics, you must perform the following:

1. Using the following path in SAP customizing, maintain Configuration Schema:
Advanced Planning → *Basic Settings* → *Define Configuration Schema (CDP or Variant Configuration)*
2. If you use reference characteristics with object dependencies, maintain the appropriate characteristic mapping of the object, either in the Maintenance View */SAPAPO/CUCDPMAP* or in the implementation for BAdI */SAPAPO/CTINT*.

3.3 Customizing for Material Master Data in Both Systems

Ensure that the customizing settings for the following activities are the same, both in the ERP and PP/DS systems. In both systems, open the customizing path *Logistics - General* → *Material Master* and compare the following settings.

Field Selection

Open customizing activity *Field Selection* → *Maintain Field Selection for Data Screens* in both systems. Ensure that all the fields that are set as *Required Entry* in the PP/DS system are also defined as required entries in the ERP system, otherwise the integration might fail if the data is missing in the ERP system.

Fields that are needed in the ERP system for other business purposes but that are not relevant for PP/DS, should be defined as *Optional Entry* in the PP/DS system.



Example

In the ERP system, *Checking Group for Availability Check* (MARC_MTVFP) is defined as a required entry for raw material (ROH). Since the PP/DS system does not support Available-to-Promise (ATP) features, this entry should be set to optional.

Material Types

1. In customizing of both systems, choose *Basic Settings* → *Material Types* → *Define Attributes of Material Types*.
2. For each material type that you are using, choose *Details*.
3. Ensure that the settings in both systems match **except** for the setting *Value updating* in subsection *Quantity/value updating*.
In the ERP system, the setting can be defined per valuation area in the *Quantity/value updating* view according to your business needs.
In the PP/DS system however, you set the *Value updating* to *In no valuation area* or **deselect** the *Value Update* checkbox for all valuation areas in the *Quantity/value updating* view.

Settings for Key Fields

1. In customizing of both systems, choose the activities under *Settings for Key Fields*.
2. Define all settings according to your business needs.
3. Ensure that all the value lists in both systems are the same.

Organizational Areas

If you are using classes and characteristics, assign the classes and characteristics to an organizational area before they can be transferred via the Core Interface (CIF).

In both systems, use transaction *Maintain Class Types* (O1CL) to create the same organizational areas.

4 Setup and Integration of Master Data

Basically, all master data is created in the ERP system and the master data that is relevant for PP/DS is transferred to the PP/DS system via Core Interface (CIF). This means that, for the distribution of master data, the direction is **always** from ERP system to PP/DS system.

Note

The integration via CIF only transfers the data that is relevant for PP/DS. Material or work center attributes that are not relevant for PP/DS are not made available in the PP/DS system.

Master data changes made directly in the PP/DS system, will in most cases be overwritten with the data from the ERP system by the CIF integration. Therefore, we recommend changing master data only in the ERP system.

Important

If your ERP system is an SAP S/4HANA system, then in the Advanced Planning view of a material, you can maintain all the available Advanced Planning fields in the ERP system, with the exception of the following fields, which you must maintain in the DSC system:

- Scope Limitation
- Scope Profile
- Planning Package
- Int. Sourcing Profile
- Res. Network Name

Also, currently, we support only an initial transfer of the Advanced Planning fields via CIF for which you must first implement the SAP Note [3262448](#). The update transfer using BTE is not supported.

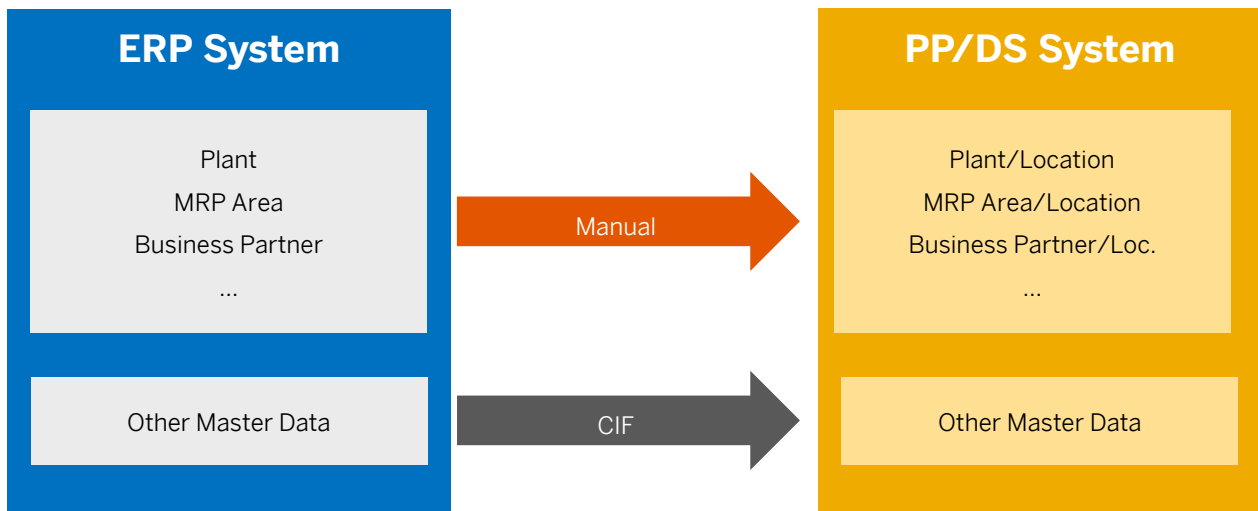
Nevertheless, some master data and master data attributes cannot be transferred using CIF and therefore must be maintained in the PP/DS system as described in chapter 4.1 *Manual Creation of Master Data in PP/DS System* (p. 23).

After the manual setup is done, you create CIF integration models for all master data objects as described in chapter 4.2 *Master Data Integration* (p. 29).

Note

If you are using classes and characteristics, see the necessary settings in chapter 7.1 *Master Data Integration with Classes and Characteristics* (p.35).

Main Master Data Object Types and How They Are Integrated



Caution

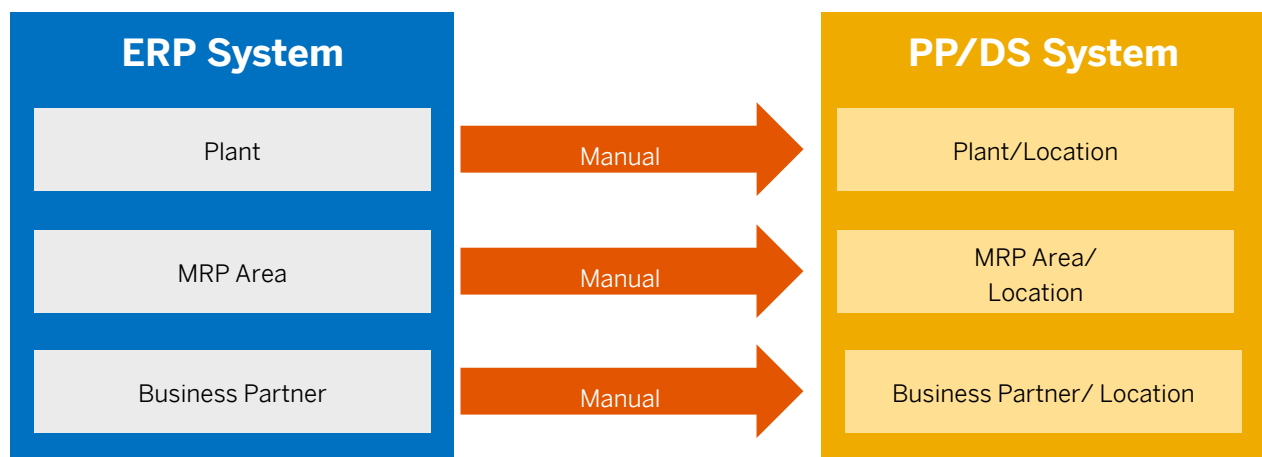
If you connect multiple ERP systems to one PP/DS system, ensure that the master data is unique in each ERP system, to ensure that the master data is not overwritten in the PP/DS system and that the related transactional data is sent back to the correct ERP system.

4.1 Manual Creation of Master Data in PP/DS System

Some master data cannot be transferred but must be created in both systems as described in the following sections.

Note

Depending on your business processes, additional master data may be required. In this document, we only describe the settings that were necessary for the scenarios that we tested.



4.1.1 Create Model and Planning Version for PP/DS

Before any master data can be transferred, model 000 and planning version 000 must be created manually in the PP/DS system as transferred data is automatically assigned to this model and planning version.

1. On the *SAP Easy Access* screen, choose *Logistics* → *Advanced Planning* → *Master Data* → *Planning Version Management* → *Model and Version Management* or use transaction /SAPAPO/MVM.
2. Choose *Create Model/Planning Version*.
3. Create model 000 and select it.
4. Create planning version 000 for this model with the following values:

Field	Value
<i>Change Planning Active</i>	Selected
<i>Standard Planning Horizon (Days)</i>	999
<i>Copy</i>	<i>In Foreground</i>

4.1.2 Create Factory Calendars

1. In customizing, choose *Advanced Planning* → *Master Data* → *Calendar* → *Maintain Factory Calendar*.
2. On the next screen, select *Factory Calendar* and choose *Change*.
3. On the next screen, choose *Create*.
4. Define the factory calendar as needed.

Important

Factory calendars are not client specific. Each change takes effect directly in all clients.

4.1.3 Create Plants

Plant must be created in the PP/DS system manually and cannot be transferred to the PP/DS system using the Core Interface (CIF).

1. In customizing, choose *Enterprise Structure* → *Definition* → *Logistics - General* → *Define, copy, delete, check plant*.
2. On the next screen, choose *Define Plant*.

Create new entries for all the plants you need. Ensure that the entries are the same as in the ERP system.

As the plants are only used in PP/DS, it is enough to define the country and region data of the plant.

4.1.4 Assign Plant to Company Codes

1. In customizing, choose *Enterprise Structure* → *Assignment* → *Logistics - General* → *Assign plant to company code*.
2. Assign each plant you created before to a company code. You can choose any dummy company code for your purpose.

4.1.5 Create Business Partners

Caution

The transfer of business partners from the ERP system via Core Interface (CIF) is currently not supported. Therefore, you must create business partners manually in the PP/DS system. You can also use ALE or DRF integration from the ERP system to the PP/DS system if Customizing for Customer-Vendor Integration (CVI) is defined. For more information, see chapter 7.2 *Master Data Integration of Business Partners, Customers, and Vendors* (p.39).

1. Open transaction *Create Business Partner* (BUP1).
2. Create a new business partner as *Person* and specify at least the following attributes with the same data as in the ERP system:
 - *Create in BP Role (Vendor)*
For business partners of type *Vendor*, ensure that you are using the correct BP role
 - *ID*
 - *Grouping*
 - On the *Address* view, specify the following attributes:
 - *Title, First Name, Last Name, Correspondence Lang.*
 - *Search Term 1/2*
 - *Street Address (Street/House Number, Postal Code/City, Country/Region)*
 - On the *Vendor: General Data* view, specify the following attributes:
 - *External Vendor No.*
 - *Account Group*
3. Switch to *Purchasing*, and specify the following attributes:
 - *Purchasing Organization*
 - *Order Currency*

4.1.6 Create MRP Areas

Note

All the MRP areas present in the relevant plants in the ERP system should be created in the PP/DS system as well. For information on exceptions, see chapter 7.6 *Integrate Material Master Data with MRP Areas* (p. 61).

4.1.6.1 Create MRP Areas for Plant/Storage Locations

MRP areas for storage locations must be created in both systems with the same settings.

1. In customizing, choose *Production* → *Material Requirements Planning* → *Master Data* → *MRP Areas* → *Define MRP Areas for Plant/Storage Locations*.
2. Create a new entry by specifying the name, description, and plant.
3. Assign storage locations to the MRP area.

4.1.6.2 Create MRP Areas for Subcontracting

MRP areas for subcontracting must be created in both systems with the same settings.

1. In customizing, choose *Production* → *Material Requirements Planning* → *Master Data* → *MRP Areas* → *Define MRP Areas for Subcontractors*.
2. Create a new entry by specifying name, description, plant, and vendor.

4.1.7 Create Locations

Create locations for the plants, business partners, and MRP areas you created before.

1. Open transaction *ABAP Editor: Initial Screen* (see 38).
2. Enter program `/SAPAPO/CREATE_LOCATION`.
3. Execute.
4. On the next screen, select the plants, subcontracting MRP areas, and business partners you created in the previous steps.
5. Execute.

4.1.8 Publication to Connected System

The following settings are done in the PP/DS customizing system in customizing under *Advanced Planning* → *Integration via Core Interface (CIF)* → *Basic Settings for Data Transfer* → *Publication*.

Maintain Distribution Definition

1. Open activity *Maintain Distribution Definition* or use transaction `/SAPAPO/CP1`.
2. Create distribution definitions for the publication types *External Procurement* and *In-House Production* for all locations (plants) you use in this scenario by specifying the location and the logical system.

Note

If the locations do not exist yet, you have to create them first as described under *Manual Creation of Master Data in PP/DS System* → *Create Plants* (p. 24).

Maintain Object-Specific Settings

1. Open activity *Maintain Object-Specific Settings* or use transaction `/SAPAPO/CP3`.
2. Create an entry for publication type *In-House Production* and set the *Retransfer* to *Always Transfer (A)*.

Note

For more information, see the following SAP notes: [2456959](#), [2872226](#), [2728245](#), [446866](#).

4.1.9 Create Production Planners for Product and Resource Master

1. In customizing, choose *Advanced Planning* → *Master Data* → *Specify Person Responsible (Planner)*.
2. Create new entries for the production planners you need.

Note

We recommend using the same codes for the production planners that are used for MRP controllers in the ERP system.

4.1.10 Define MRP Groups

1. In customizing, choose *Production* → *Material Requirements Planning* → *MRP Groups*.
2. Define the MRP groups you need.

4.1.11 Define MRP Controllers

1. In customizing, choose *Production* → *Material Requirements Planning* → *Master Data* → *Define MRP Controllers*.
2. Create new entries for the MRP controllers you need. Use the same codes for the MRP controllers that are used for MRP controllers in the ERP system.

4.1.12 Define Special Procurement Types

1. In customizing, choose *Production* → *Material Requirements Planning* → *Master Data* → *Define Special Procurement Type*.
2. Create the new entries you need.

4.1.13 Define Special Procurement for Plants

1. In customizing, choose *Production* → *Material Requirements Planning* → *Plant Parameters* → *Carry Out Overall Maintenance of Plant Parameters*.
2. On the next screen, choose *Maintain*.
3. On the next screen, enter your plant.
4. On the next screen, choose *Special Procurement*.
5. On the next screen, define your special procurement settings.

Note

We recommend using the same codes for special procurement in your PP/DS system and the ERP system.

4.1.14 Create Work Center Responsible

1. In customizing, choose *Production* → *Basic Data* → *Work Center* → *General Data* → *Determine Person Responsible*.
2. Create a *Person Responsible for Work Center* that can be assigned to work centers.

4.1.15 Define Shifts, Formulas, and other Capacity-Relevant Objects

If you want to use shift, formulas, or other data objects that define the available capacity, define these objects in customizing under *Production* → *Basic Data* → *Work Center* → *Capacity Planning*.

4.1.16 Define Time-Dependent Safety Stock

Time-dependent safety stock that is stored in table `pph_dd_stk` cannot be integrated. You have to define the data manually by using report *Time Dependent Stock and Penalties* (`/SAPAPO/PPO_TIME_DEP_STOCK`, transaction `/SAPAPO/TDS`).

4.2 Master Data Integration Using Core Interface

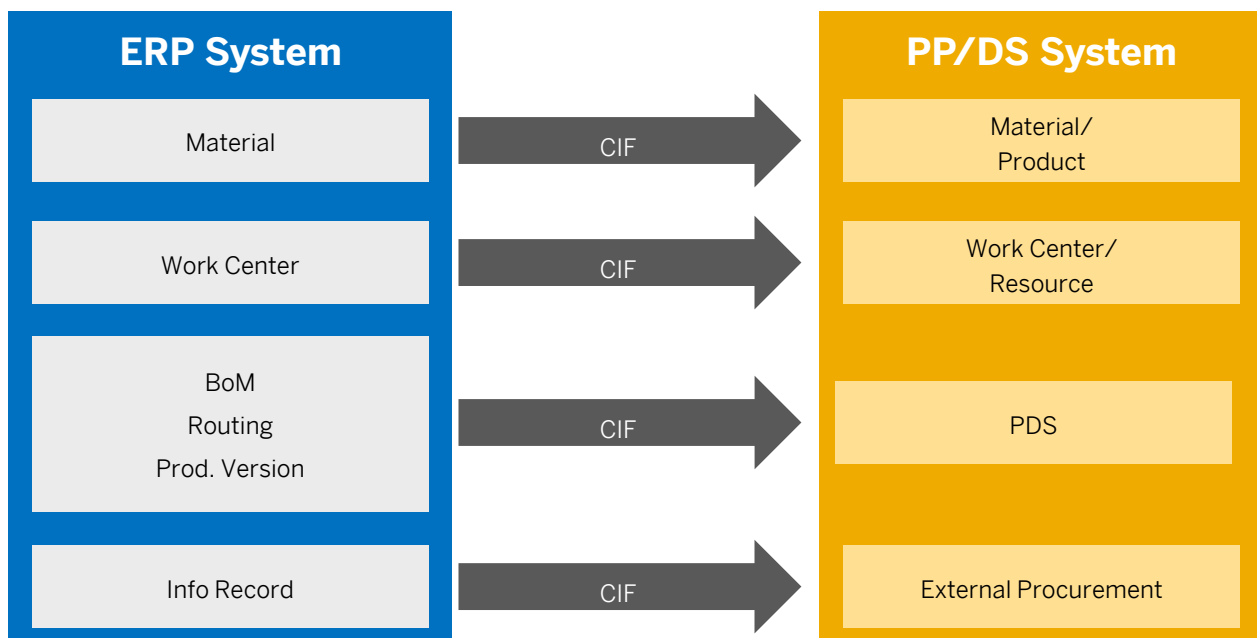
Some object types cannot be transferred via CIF but must be created manually in both connected systems (see chapter 4.1 *Manual Creation of Master Data in PP/DS System* (p. 23)). For all other object types, create integration models in the ERP system.

i Note

If you are using classes and characteristics, see the necessary settings in chapter 7.1 *Master Data Integration with Classes and Characteristics* (p. 35).

Most important object types are:

- Material
- Work center
- Production data structure (PDS) for in-house production
- Source of supply for external procurement (contracts, purchasing info records, scheduling agreements)



4.2.1 Create an Integration Model for Each Object Type in the ERP System

1. Open transaction *Create Integration Model* (CFM1)
2. On the *Create Integration Model* screen, enter the following values:

Field	Value
<i>Model Name</i>	Choose a name that describes the model
<i>Logical System</i>	Select the logical PP/DS system
<i>APO Application</i>	Specify a name (any value you like)

3. Select the object type for which this integration model is used.
For the integration model for materials, specify the selection criteria in the *General Selection Options for Materials* screen area and select the *Activate Planning* checkbox in the *Activate Planning in Target System* screen area.

Caution

If the ERP system is also an SAP S/4HANA system, ensure that the *Advanced Planning* indicator (PPSKZ) is not selected in the ERP system. Also ensure that the *Extended Service Parts Planning* indicator is not selected in the ERP system.

You must create a work center in the ERP system and then transfer it to the PP/DS system.

If you use pooled capacities and include a work center that uses the pooled capacity in an integration model, all other work centers that use the pooled capacity will also be integrated.

4. Execute.
5. On the next screen, check whether the *Filter Object* and *No. Filter Objects* is correct.
6. Choose *Generate IM*.

4.2.2 Activate Integration Models

1. Open transaction *Manually Activate Integration Models* (CFM2).
2. Enter the selection criteria for the models you defined in the previous step.
3. Execute.
4. On the next screen, select your integration model in the tree on the left.
Detailed information for the integration model is displayed.
5. Select the integration model in the table in the detail screen area and choose *Active/Inactive*.
In the *New Status* column, the integration model is marked as active.
6. Choose *Start*.

4.2.3 Define Additional Master Data Attributes in the PP/DS System

If your ERP system is not an SAP S/4HANA system, you can use the following Business Add-Ins (BADIs) to transfer attributes for PP/DS that cannot be maintained in the ERP system:

- *Change Product Data Before CIF Outbound to Connected SAP S/4HANA System* (CIF_S4_BADI_PRODUCT_OUTBOUND)

The default BAdI implementation sets the *PP Planning Procedure* to *Manual Without Check (2)*, if it's not yet defined.

Other product attributes that you can transfer via the BAdI are, for example, attributes for Production Planning Optimization (PPO):

- *Priority*
- *Safety Stock Penalty*
- *Product-Dependent Storage Costs*
- *Goods Issue Processing Time*
- *Procurement Costs*

- *Change Work Center Data Before CIF Outbound to Connected SAP S/4HANA System* (CIF_S4_WORK_CENTER_OUTBOUND)

The default implementation of this BAdI activates the work centers for Advanced Planning (PP/DS).

After the first transfer via CIF, the following attributes of materials or work centers must be defined manually in the PP/DS system as they are not transferred via CIF:

Material Attributes

Attributes	Maintenance View/Transaction
Penalties for PPO <ul style="list-style-type: none"> • <i>Delay Penalty</i> for customer demand and forecast demand • <i>Maximum Delay Penalty</i> for customer demand and forecast demand • <i>Non-Delivery Penalty</i> for customer demand and forecast demand 	Transaction /SAPAPO/PPO_DPEN
Time-dependent safety stock penalties for PPO	Transaction /SAPAPO/TDS

Work Center Attributes

Note

If your SAP ERP and PP/DS systems are SAP S/4HANA 2022 FPS0 (refer SAP Note [3296783](#)) and above, you can maintain the below attributes in your ERP system and transfer them using CIF. You do not have to maintain the below attributes manually.

Attributes	Maintenance View/Transaction
<i>PPO Capacity Constraints</i>	Transaction <i>Change Work Center (CR02)</i> → <i>Capacity Header</i> → <i>APO Resource view</i> → <i>PPO Capacity Constraints</i>

Attributes	Maintenance View/Transaction
<i>Time-Dependent Storage Data</i>	Transaction <i>Change Work Center (CR02)</i> → <i>Capacity Header</i> → <i>APO Resource view</i> → <i>Storage Characteristics</i>

i Note

If you change work center data after the initial transfer via CIF, the change is only transferred if at the same time data on the *Capacities* view that is relevant for PP/DS is changed. If your ERP system is an SAP S/4HANA system, changes are also transferred, if intervals or shifts are changed at the same time.

5 Integration of Transactional Data

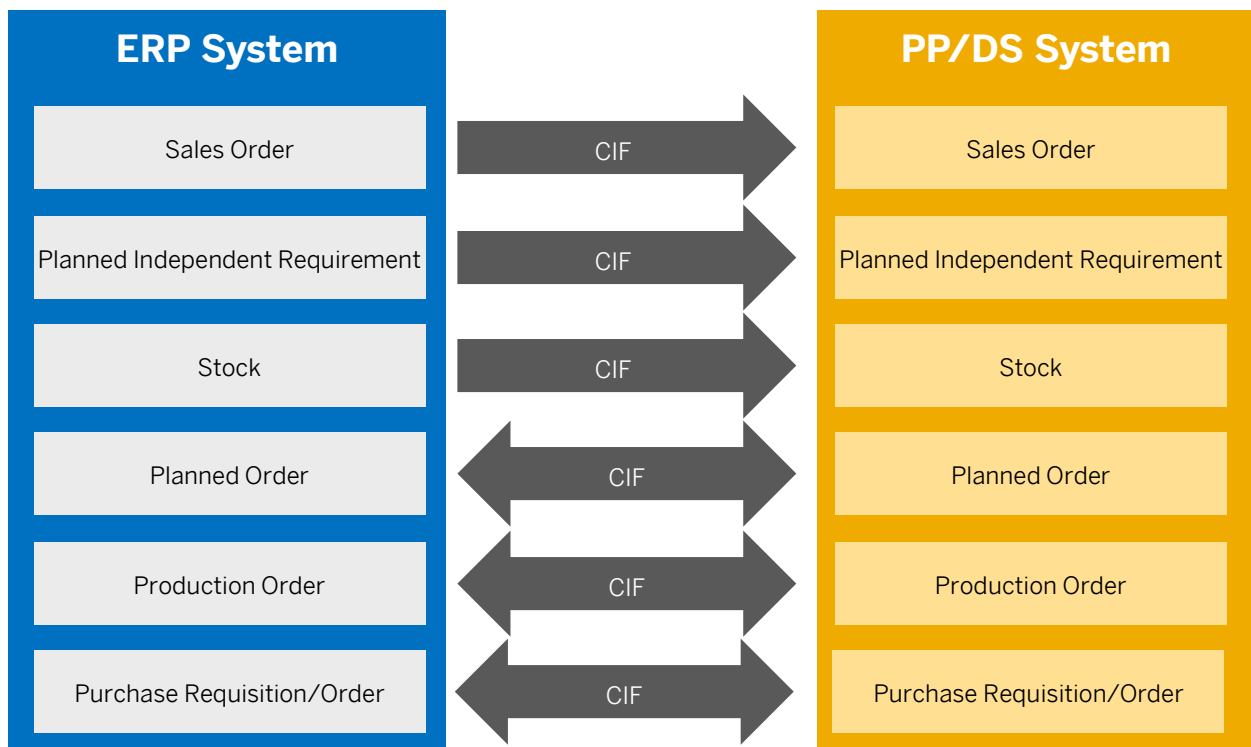
For the integration of transactional and master data between the ERP system and the PP/DS system, you use CIF integration models. The same CIF integration models transfer the transactional data that contains classification and configuration information. The integration of transactional data is bi-directional for most object types.

Create CIF integration models for all object types you need as described in chapter 4.2 *Master Data Integration* (p. 29).

i Note

In the PP/DS system, the transactional data is only available in the PP/DS transactions and not in classical PP transactions like the *Stock/Requirements List* (MD04).

Main Transactional Data Object Types and How They Are Integrated



6 Checks

After the integration models have been activated, check whether the data has transferred successfully to the PP/DS system.

Check Outbound Queues in the ERP System

1. Open transaction *qRFC Monitor (Outbound Queue)* (SMQ1).
2. Enter the client of your ERP system.
Optionally, you can also specify your queue or the queue destination.
3. Execute.
4. On the next screen, you see all outbound queues that could not be processed yet.
Ensure that your outbound queues are not listed.

Check Inbound Queues in the PP/DS System

1. Open transaction *qRFC Monitor (Inbound Queue)* (SMQ2).
2. Enter the client of your PP/DS system.
Optionally, you can also specify your queue or the queue destination.
3. Execute.
4. On the next screen, you see all inbound queues that could not be processed yet.
5. Ensure that your inbound queues are not listed.

Check Transfer Results in the PP/DS System

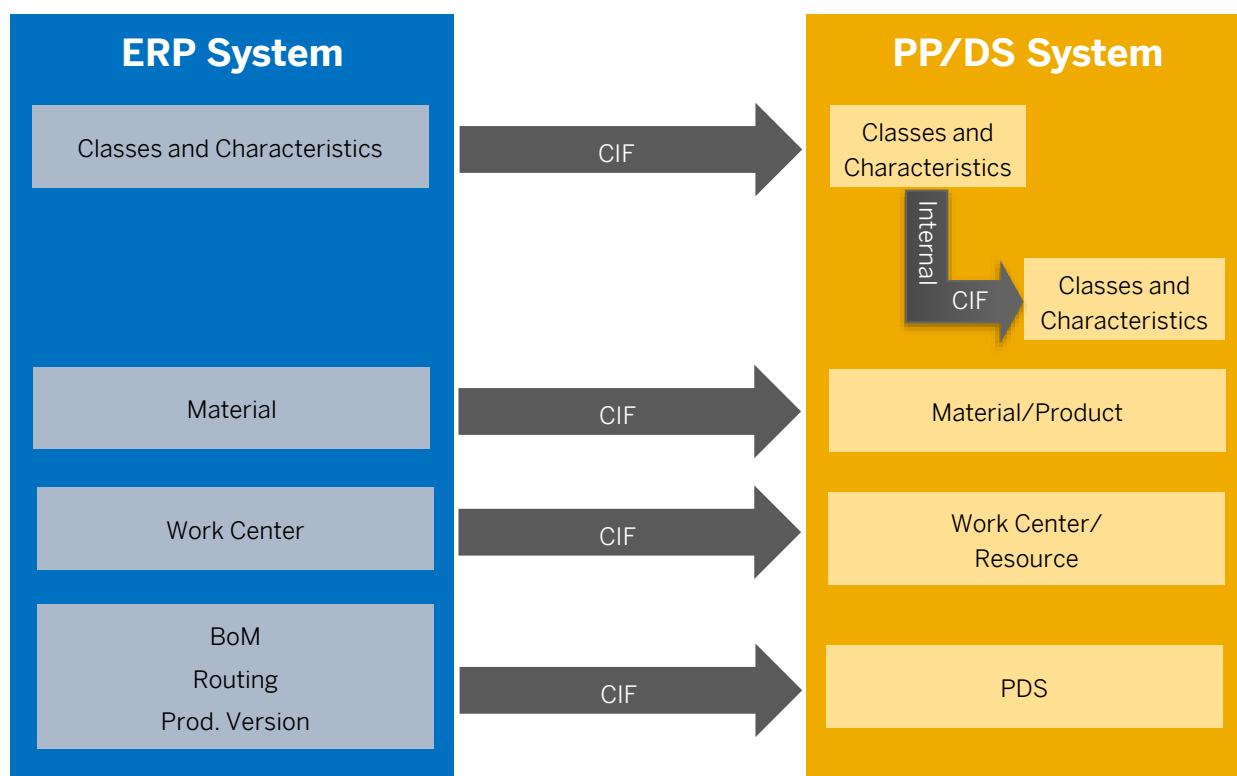
Open the master data objects and transactional data in the related transactions (e.g. *Material Master MM03*) and check whether they have been transferred correctly.

In particular, you should ensure that the *Advanced Planning* checkbox is selected for materials and work centers, and that the PP planning procedure is defined for materials.

7 Specific Topics

7.1 Master Data Integration with Classes and Characteristics

If you use classes and characteristics, you must setup the master data in the ERP system and ensure that it is transferred to the PP/DS system in the correct order.



! Important

In material classification, we only support the transfer of class types 001, 023, and 300.

i Note

To perform the initial transfer of material classifications using CIF, you must first implement the SAP Note [3212509](#) and [3243777](#). To perform the update transfer of material classifications using BTE, you must first implement the SAP Notes [3198951](#) and [3227009](#). If your ERP system is SAP ECC or SAP S/4HANA 2021 or lower, you must first implement the SAP Note [3227415](#).

! Important

If you are upgrading your PP/DS system from an SAP S/4HANA 2021 system or lower and have existing material classification data in your PP/DS system, then you must execute the report program `/SAPAPO/CHECK_INCON_TCL_CL_CHR` immediately after the upgrade, and then set up CIF integration models in your ERP system.

7.1.1 Set Up Integration Model for Classes and Characteristics in the ERP System

Note

If your ERP system is SAP ECC, you must first implement:

- The SAP Note [3262411](#) in your ERP system
- The SAP Note [3306890](#) in your PP/DS system

If your ERP system is SAP S/4HANA 2021 or lower, you must first implement the SAP Note [3262411](#) in your ERP system.

After you have created classes and characteristics in the ERP system, you must create an integration model to transfer the classes and characteristics from the ERP system to the PP/DS system via CIF.

1. Open transaction *Create Integration Model* (CFM1) in the ERP system.
2. Define the header data and select the *Classes/Charact* checkbox.
3. Choose the *Special Restrictions* button.
4. In the *Classes and Characteristics* screen area, define the *Org.area ind.* and select classes 023 and 300 (and all the other classes (e.g. 001) and additional characteristics like reference characteristics that are required).
5. Execute.
6. Open transaction *Activate or Deactivate Integration Model* (CFM2) in the ERP system and activate the integration model.
7. If your PP/DS system uses the characteristics-dependent planning (CDP) schema and if you have selected classes with class type 023 and 300 in step 4, then open transaction *Display Class* (CL02) and check whether classes 230 and 400 are created.

7.1.2 Create Internal Integration Model for Classes and Characteristics in the PP/DS System

You must create an internal integration model to transfer the classes and characteristics internally from the PP/DS system to embedded PP/DS via CIF.

1. Open transaction *Create Integration Model* (CFM1) in the PP/DS system.
2. Define the header data and select the *Classes/Charact* checkbox.
3. Choose the *Special Restrictions* button.
4. In the *Classes and Characteristics* screen area, define the *Org.area ind.* and select classes 023 and 300 (and all other classes (e.g. 001) and additional characteristics like reference characteristics that are required).
5. Execute.
6. Open transaction *Activate or Deactivate Integration Model* (CFM2) in the PP/DS system and activate the integration model.

Note

If you use reference characteristics, ensure that the table /SAPAPO/CUCDPMAP is maintained accordingly in the PP/DS system. For more information, see SAP Notes [2554539](#) and [610873](#).

7.1.3 Transfer Material Data from the ERP System to the PP/DS System via CIF

Create an integration model for materials in the ERP system as described in chapter 4.2.1 *Create an Integration Model for Each Object Type in the ERP System* (p. 30) and activate it as described in chapter 4.2.2 *Activate Integration Models* (p. 30).

Configuration profiles for KMATs (if existing) are transferred together with the material.

Check Material Master in the PP/DS System

Check whether all the material master data is transferred as expected.

1. Open the material master (transaction MM02) in the PP/DS system.
2. On the *Basic data 2* view check the settings under *Client-specific configuration*.
3. On the *Classification* view, check whether all classes are assigned correctly.
4. If the material is a material variant, check the *Plant-specific configuration* data on the MRP3 view.

Check Product Master in the PP/DS System

Check whether product master data for products is transferred as expected.

1. Open the product master (transaction /SAPAPO/MAT1).
2. Check settings on the *Classification* view, particularly the *Reference Product (Loc.-Indep.)* and *CDP Class* fields.

7.1.4 Change Material Classification and Variant Data

The changes you make in the material classification and variant data in the ERP system reflect immediately in the DSC system using business transaction events (BTE).

To add classification in the Classification view of a material that is already transferred to the DSC edition system and initially did not have any assigned classifications, perform the following:

The Recommended Approach

1. Deactivate the integration model of the already transferred material in the ERP system using the transaction CFM2 and then add classes in the Classification view of the material.
2. Reactivate the integration model that you deactivated in step 1 using the transaction CFM9.
3. After reactivating the integration model, all subsequent changes will automatically transfer to the DSC Edition system.

The Optional Approach

If for some reason you cannot perform the recommended approach, only then perform the following:

1. Add classes in the Classification view of the material in the ERP system.
2. Open your material in the DSC Edition system using the transaction MM01.
3. Add the Classification view in the material and then save the material.
4. Next, open the material in the DSC Edition system using the transaction MM03.

7.1.5 Transfer Work Centers and PDS

Create Integration Model for Work Centers and PDS in the ERP System

Create an integration model for work centers and production data structures (PDS) as described in chapter 4.2.1 *Create an Integration Model for Each Object Type in the ERP System* (p. 30) and activate it as described in chapter 4.2.2 *Activate Integration Models* (p. 30).

Note

Work center classification data is only needed in the ERP system where it is evaluated during creation of the PDS. It is therefore not transferred to the PP/DS system.

Check PDS

Check whether all configuration data for PDSs is transferred correctly.

1. Open transaction *Load Production Data Structure* (/SAPAPO/CURTO_SIMU) in the PP/DS system and load your PDS.
2. Select the PDS.
3. In the *Components* view, select a component that has configurable data assigned.
4. In the *Selection Conditions* screen area, check whether the configuration data is visible.

Define Additional Master Data Attributes in the PP/DS System

Define additional attributes as described in chapter 4.2.3 *Define Additional Master Data Attributes in the PP/DS System* (p. 31).

7.2 Master Data Integration of Business Partners, Customers, and Vendors

7.2.1 Customer and Vendor Master Data Integration via ALE/IDOC

You use this process to integrate customer and vendor master data via ALE/IDOC from the ERP system to the PP/DS system.

7.2.1.1 Preparational Settings

Include Port Definition in the ERP System

1. Open transaction *Ports in IDoc Processing* (WE21) in the ERP system.
2. Create a new port for the system/client of the PP/DS system with the following values:

Field	Value
<i>Port</i>	<SYSTEMID>CLNT<CLIENTNUMBER>
<i>Description</i>	Enter a description
<i>Version</i>	Select <i>IDOC record types SAP Release 4.x</i>
<i>RFC Destination</i>	Select the RFC destination you created for the PP/DS system

Maintain Partner Profiles in the ERP System

1. Open transaction *Partner profiles* (WE20) in the ERP system.
2. Create a new partner profile with type *Logical System* (LS). As partner number, choose <SYSTEMID>CLNT<CLIENTNUMBER> of the PP/DS system.
3. Define the following outbound message types with the PP/DS system as *Receiver Port* and the RFC user as *Processor*.

Message Type	Basic Type	Usage
CREMAS	CREMAS06	Vendors
DEBMAS	DEBMAS07	Customers

Include Port Definition in the PP/DS System

1. Open transaction *Ports in IDoc Processing* (WE21) in the PP/DS system.
2. Create a new port for the system/client of the ERP system with the following values:

Field	Value
<i>Port</i>	<SYSTEMID>CLNT<CLIENTNUMBER>
<i>Description</i>	Enter a description
<i>Version</i>	Select <i>IDOC record types SAP Release 4.x</i>
<i>RFC Destination</i>	Select the RFC destination you created for the ERP system

Maintain Partner Profiles in the PP/DS System

1. Open transaction *Partner profiles* (WE20) in the PP/DS system.
2. Create a new partner profile with type *Logical System* (LS). As partner number, choose <SYSTEMID>CLNT<CLIENTNUMBER> of the ERP system.
3. Define the following inbound message types with the PP/DS system as *Receiver Port* and the RFC user as *Processor*.

Message Type	Inbound Process Code	Usage
CREMAS	CRE1	Vendors
DEBMAS	DEBM	Customers

7.2.1.2 Creating Reduced Message Types

You use this procedure to select segments and fields of the basic types for master data that you want to integrate. By reducing the number of segments and fields, you also reduce the number of customizing tables (containing allowed field values for master data) that need to be synchronized between both systems.

Basic types for master data are supplied in the standard SAP System. If you want to reduce the basic types, you use transaction BD53 to select the segments and fields that you want to integrate. To do this you activate the segments and fields that you require and generate a new message type.

Mandatory segments and mandatory fields cannot be deactivated.

Note

If you change a reduced message type after you have set up filters, some entries may be reset. In this case, you will receive a warning in transaction BD53. You should then test the transfer again. For example, you must check new entries in transaction BD59 as they may be removed in case of changes of an existing reduced message type.

Note

If you use Data Replication Framework (DRF) for the integration of customers and vendors, you do not need to create the reduced message types for DEBMAS and CREMAS.

Creating a Reduced Message Type for DEBMAS

You use this procedure to create a reduced message type based on the DEBMAS message type for the integration of customer master data from the ERP system to the PP/DS system.

1. In the ERP system, open transaction BD53 (*IDOC Reduction Maintenance*).
2. Enter a name for the reduced message type, for example **ZPPDSDEBMAS** and press *Create*.
3. Enter **DEBMAS** as message type reference and press *Continue*.
4. Enter a description for the reduced message type, for example *Reduced DEBMAS (Customer) for PP/DS* and press *Continue*.
5. On the next screen, select the following segments:
 1. E1KNA1M (already selected as it is mandatory)
 2. E1KNA11
6. Select the fields for each segment as proposed in the tables below. Mandatory fields are already selected.
7. Save your entries. You will be prompted to enter a transport request for the new message type.

The following tables contain a proposal for segments and fields to be integrated with the PP/DS system:

Fields from Segment E1KNA1M	Description
MSGFN (mandatory)	Function
KUNNR (mandatory)	Customer Number
ANRED (mandatory)	Title
KTOKD (mandatory)	Customer Account Group
LAND1 (mandatory)	Country Key
LIFNR	Account Number of Vendor or Creditor
LOEVM (mandatory)	Central Deletion Flag for Master Record
NAME1 (mandatory)	Name 1
NAME2 (mandatory)	Name 2
ORT01 (mandatory)	City
ORT02 (mandatory)	District
PFACH (mandatory)	PO Box
PSTL2 (mandatory)	P.O. Box Postal Code
PSTLZ (mandatory)	Postal Code
REGIO	Region (State, Province, County)
SORTL (mandatory)	Sort field
SPRAS (mandatory)	Language Key
STRAS (mandatory)	Street and House Number
TELF1	First telephone number

TELFX

Fax Number

Fields from Segment E1MKNA11	Description
CVP_XBLCK	Business Purpose Completed Flag

Caution

The list of segments and fields mentioned in the above table is just a proposal. The list of segments and fields may differ depending on which release you want to create the reduced message type for. It shows a set of fields the PP/DS system requires for main processes. Depending on your requirements you may add/remove segments or fields. If you add a new field, check whether allowed values for this field are defined in a customizing table. If yes, entries for the table are also needed in the PP/DS system.

Creating a Reduced Message Type for CREMAS

You use this procedure to create a reduced message type based on the CREMAS message type for the integration of vendor master data from the ERP system to the PP/DS system.

1. In the ERP system, open transaction BD53 (*IDOC Reduction Maintenance*).
2. Enter a name for the reduced message type, for example **ZPPDSCREMAS** and press *Create*.
3. Enter **CREMAS** as message type reference and press *Continue*.
4. Enter a description for the reduced message type, for example *Reduced CREMAS (Vendor) for PP/DS* and press *Continue*.
5. On the next screen, select the following segments:
 1. E1LFA1M (already selected as it is mandatory)
 2. E1LFA1A
6. Select the fields for each segment as proposed in the tables below. Mandatory fields are already selected.
7. Save your entries. You will be prompted to enter a transport request for the new message type.

The following tables contain a proposal for segments and fields to be integrated with the PP/DS system:

Fields from Segment E1LFA1M	Description
MSGFN (mandatory)	Function
LIFNR (mandatory)	Account Number of Vendor or Creditor
KTOKK (mandatory)	Vendor account group
KUNNR	Customer Number
LAND1 (mandatory)	Country of Company
LOEVM	Central Deletion Flag for Master Record
NAME1 (mandatory)	Employee's last name
ORT01 (mandatory)	City
PSTL2 (mandatory)	Postal Code
PSTLZ (mandatory)	Postal Code
SORTL (mandatory)	Character Field Length = 10
SPRAS (mandatory)	Language Key
STRAS	Street and House Number
SPERQ	Function That Will Be Blocked
ADRNR	Address
SCACD	Standard carrier access code

Fields from Segment E1LFA1A	Description
CVP_XBLCK	Business Purpose Completed Flag

7.2.1.3 Executing Initial Transfer of Customers

To transfer customer master data, perform the following steps in the ERP system:

1. Open transaction BD12 (*Send Customers*).
2. Enter the data as shown in the following table:

Fields	Value
Customer	Select all customers you want to transfer
Output Type	DEBMAS or your reduced message type for customers
Logical System	Logical system of the PP/DS system

3. Press *Execute* or, if you expect a big amount of data to be transferred, choose *Program* → *Execute in Background*.

7.2.1.4 Executing Initial Transfer of Vendors

To transfer vendor master data, perform the following steps in the ERP system:

1. Open transaction BD14 (*Send Vendors*).
2. Enter the data as shown in the following table:

Fields	Value
Account Number of Vendor	Select all vendors you want to transfer
Message Type	CREMAS or reduced message type for vendors
Target System	Logical system of the PP/DS system

3. Press *Execute* or, if you expect a big amount of data to be transferred, choose *Program* → *Execute in Background*.

7.2.2 Business Partner Master Data Integration via Data Replication Framework (DRF)

You use this process to integrate business partner master data via DRF from the ERP system to the PP/DS system.

Prerequisites

1. Ensure that you have activated the customer vendor integration (CVI) in the SAP ERP system.
2. Ensure that you have configured the system connections and global settings. RFC destinations and logical systems exist both in the ERP and the PP/DS systems.

7.2.2.1 Activate Function Module for Master Data Governance Change Handling

To transfer Business Partner changes you should activate the Function Module **MDG_BS_BP_OUTBOUND_DRF** in the sender system only. For more information, see the SAP Note [2211045](#).

Perform the following steps in the ERP system:

1. Activate the function module in Customizing under *Cross-Application Components* → *SAP Business Partner* → *Data Distribution* → *Activate Function Modules*
2. Search for the following entry:
 - Event: **BPOUT** (Business Partner Outbound)
 - Object: **BUPX** (Business Partner and BP Relationships)
 - Item: **5000001**
 - Function Module: **MDG_BS_BP_OUTBOUND_DRF**
3. Set the checkbox *Call* to active for this entry.
4. Save your changes.

7.2.2.2 Setup DRF for Business Partner Transfer

Define Technical Settings for Business Systems

Perform the following steps in the ERP system:

1. Define a business system in the Customizing for *Data Replication* (transaction **DRFIMG**) under *Data Replication* → *Define Custom Settings for Data Replication* → *Define Technical Settings* → *Define Technical Settings for Business Systems* → *Define Business Systems*

Enter the data as shown in the following table:

Field	Value
Business System	Name of the PP/DS business system
Logical System	Logical system of the PP/DS system
RFC Destination	Name of the RFC Destination of the PP/DS system
Disabled for Replication	Inactive

Save your entries.

2. Select your defined business system and navigate to *Define Bus. Systems, BOs* to define the assigned BOs. Enter the data as shown in the following table:

Field	Value
BO Type	986 (Business Partner including Relationships)
System Filter	Inactive
Outp. Mode	P Pooled Out or any other output mode of your choice

Save your entries.

3. Select your defined business object type system and navigate to *Define Bus. Systems, BOs, Communication Channel* to define the communication channel.

Enter the data as shown in the following table:

Field	Value
C. Channel	1 Replication via Services
Key Harm	Not Defined

Save your entries.

Define Replication Model for Business Partner Transfer

Perform the following steps in the ERP system:

1. Define a replication model in the Customizing for *Data Replication* (transaction DRFIMG) under *Data Replication* → *Define Custom Settings for Data Replication* → *Define Replication Models*

Enter the data as shown in the following table:

Field	Value
Replication Model	Define a replication model
Description	Enter a description

Save your entries.

2. Select your defined replication model and navigate to *Assign Outbound Implementation*.

Enter the data as shown in the following table:

Field	Value
Outbound Implementation	986_3 (Outbound Impl. for BP/REL via Services)
Communication Channel	1 Replication via Services
Filter Time	2 Filter After Change Analysis

Save your entries.

3. Select your defined outbound implementation and navigate to *Assign Target Systems for Repl- Model / Outb. Impl.*

Enter the data as shown in the following table:

Field	Value
Business System	Name of the PP/DS business system

Save your entries.

4. Select your defined outbound implementation and navigate to *Assign Outbound Parameter*.

Enter the data as shown in the following table:

Field	Value
Outbound Parameter	PACK_SIZE_BULK (<i>Package Size for Bulk Messages</i>)
Mandatory	Active
Outbound Parameter Value	1

Save your entries.

5. Navigate back to *Define Replication Models* to activate the replication model.

- Select your defined Replication Model.
- Click *Activate*.

7.2.2.3 Define Filter Criteria for Business Partner Transfer via DRF

Perform the following steps in the ERP system:

1. Define filter criteria for business partner distribution in the SAP Easy Access Menu for *Data Cross Application Components* → *Processes and Tools for Enterprise Applications* → *Master Data Governance* → *Data Replication* → *Define Filter Criteria* (Transaction DREF)
2. Select your Replication Model and click *Change*.

Enter *Filter Criteria to Include Business Objects*. For example, for the account group, set:

Field	Value
Filter Criterion	Account Group
Relation	is or any other relation of your choice
Filter Value	DEBI or your customer or vendor account group

Save your entries.

3. Click *Show Segment Filters*.
 - Select *Company Code Seg. replicated – 98602* from the list of segment filters (click on the name to navigate).
 - Click *Edit* in the new window.
 - Enter the following data in the *Filter Criteria to Exclude Business Objects*:

Field	Value
Filter Criterion	Company Code
Relation	contains
Filter Value	*

Save your entries.

4. Navigate back to the Filter Criteria and click *Show Segment Filters*.
 - Select *Purchasing Org Seg. replicated – 98603* from the list of segment filters (click on the name to navigate).
 - Click *Edit* in the new window.
 - Enter the following data in *Filter Criteria to Exclude Business Objects*:

Field	Value
Filter Criterion	Purch Organization
Relation	contains
Filter Value	*

Save your entries.

5. Navigate back to the Filter Criteria and click *Show Segment Filters*.
 - o Select *Cust Company Code Seg. replicated – 98604* from the list of segment filters (click on the name to navigate)
 - o Click *Edit* in the new window.
 - o Enter the following data in *Filter Criteria to Exclude Business Objects*:

Field	Value
Filter Criterion	Company Code
Relation	contains
Filter Value	*

Save your entries.

5. Navigate back to the Filter Criteria and click *Show Segment Filters*.
 - o Select *Cust Sales Area Seg. replicated – 98605* from the list of segment filters (click on the name to navigate).
 - o Click *Edit* in the new window.
 - o Enter the following data in *Filter Criteria to Exclude Business Objects*:

Field	Value
Filter Criterion	Distribution Channel
Relation	contains
Filter Value	*

Field	Value
Filter Criterion	Division
Relation	contains
Filter Value	*

Field	Value
Filter Criterion	Sales Organization
Relation	contains
Filter Value	*

Save your entries.

7. Navigate back to the Filter Criteria and click *Show Segment Filters*.
 - o Select *BP Seg. Filter for TaxCategory – 98700* from the list of segment filters (click on the name to navigate).
 - o Click *Edit* in the new window.
 - o Enter the following data in *Filter Criteria to Exclude Business Objects*:

Field	Value
Filter Criterion	Tax Number Category
Relation	contains
Filter Value	*

Save your entries.

i Note

In transaction DRFOU^T (SAP Easy Access Menu for *Data Cross Application Components* → *Processes and Tools for Enterprise Applications* → *Master Data Governance* → *Data Replication* → *Execute Data Replication*) it is possible to maintain manual filter criteria for the execution of the business partner data transfer. This does not affect the filters defined for the data replication model in this chapter. The same logic can be used for defining filters for execution

7.2.2.4 Execute Initial Business Partner Data Transfer via DRF

You use this process to execute the initial transfer of Business Partners to the PP/DS system.

Perform the following steps in the ERP system:

1. Execute the initial data transfer of business partners in the SAP Easy Access Menu for *Data Cross Application Components* → *Processes and Tools for Enterprise Applications* → *Master Data Governance* → *Data Replication* → *Execute Data Replication* (Transaction DRFOU^T).

Enter the following selection data:

Field	Value
Replication Model	Name of your replication model
Outbound Implementation	986_3 (Outbound Impl. for BP/REL via Services)
Replication Mode > Initialization	Active
Options for Report Control > Test Run Only	Inactive

Click *Execute* (F8).

7.2.2.5 Execute Delta Business Partner Data Transfer via DRF

You use this process to execute the delta transfer of changed Business Partners to the PP/DS system.

Perform the following steps in the ERP system:

1. Execute the delta data transfer of business partners in the SAP Easy Access Menu for *Data Cross Application Components* → *Processes and Tools for Enterprise Applications* → *Master Data Governance* → *Data Replication* → *Execute Data Replication* (Transaction DRFOU^T).

Enter the following selection data:

Field	Value
Replication Model	Name of your replication model
Outbound Implementation	986_3 (Outbound Impl. for BP/REL via Services)
Replication Mode > Initialization	Active
Options for Report Control > Test Run Only	Inactive

Click *Execute* (F8).

Note

You can schedule the corresponding report RDRF_MESSAGE_OUT as a background job to transfer the changes of business partner data regularly.

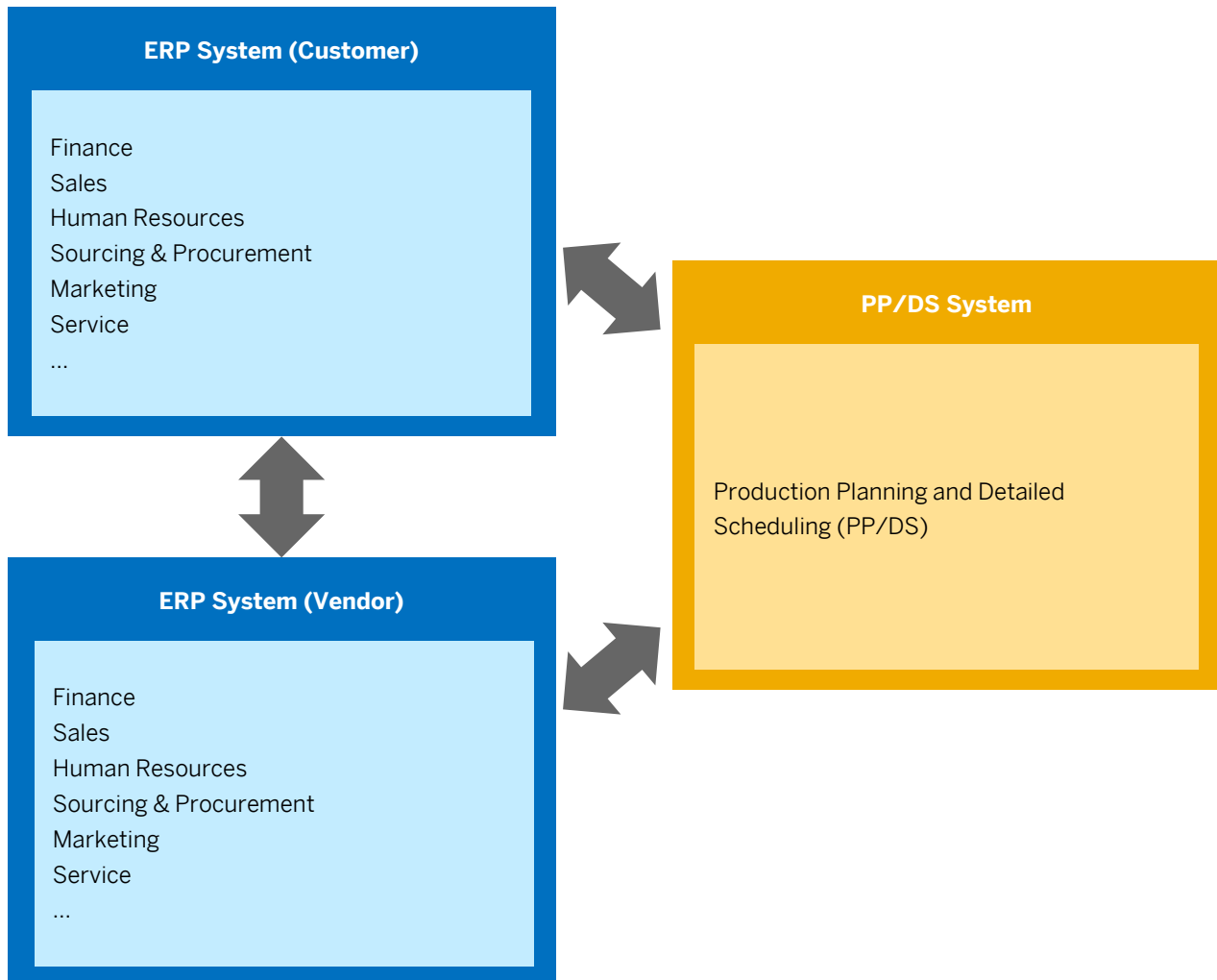
7.2.2.6 Monitoring the DRF Transfer of Business Partners

If you use point-to-point direct communication for the DRF data transfer, you can use the transaction SRT_MONI (Web Services Message Monitor) to monitor the data exchange between the ERP and the PP/DS systems.

If you use an XI server for the communication, you can use transaction SXI_MONITOR (XI: Message Monitoring) to monitor the data exchange between the ERP and PP/DS systems.

7.3 Setup for Distributed Customer/Vendor ERP Systems

You can also deploy a PP/DS system in combination with multiple ERP systems between which stock transfers are distributed. For different sources of supply, one ERP system is used as customer, another ERP system as vendor. In addition to the settings that are described for the standard scenario, additional settings are required to ensure that the communication between the ERP systems works.



In both ERP systems, you define the materials and vendors and customer master data for all plants that you need for the business purposes.

Additionally, you set up the *Application Link Enabling* (ALE) communication via between both systems.

i Note

Depending on the SAP ERP release and depending on the Customer Vendor Integration (CVI) that is activated, also business partners are required. If you want to process returns, you define a customer assignment for each vendor and a vendor assignment for each customer.

7.3.1 Settings in the Customer ERP System

7.3.1.1 Additional Settings for Business Partners

For all business partners with role *Vendor* in each purchasing organization, enter the ID of the related customer that is defined in the delivering system in field *Account with supplier* (or *Acc. with vendor* depending on your system).

7.3.1.2 Additional Settings for Purchasing Info Records

For all purchasing info records, enter the material number that is used in the delivering system in field *Supplier Material Group* (or *Vendor Material Group* depending on your system).

7.3.1.3 ALE Settings

Maintain Ports

1. Open transaction *Ports in IDoc Processing* (WE21).
2. Select *Transactional RFC* and choose *Create*.
3. Enter the vendor ERP system as RFC destination.
4. Leave all other options deselected and save.

Define Outbound Partner Profile

1. Open transaction *Partner Profiles* (WE20).
2. Select *Partner Type LI* (vendor) and choose *Create*.
3. In the *Outbound* screen area, choose *Create outbound parameter*.
4. Create three new outbound parameters of type *Vendor* (LI) with the RFC user as processor.
5. On the *Outbound Options* view, enter the following data:

Partner Role	Message Type	Receiver Port	Output Mode	Basic Type
(empty)	SYNCH	The port you created in the previous step	<i>Pass IDoc Immediately</i>	SYNCHRON
<i>Vendor</i> (VN)	ORDERS			ORDERS05
<i>Vendor</i> (VN)	ORDCHG			ORDERS05

6. On the *Message Control* view, enter the following data:

Partner Role	Message Type	Application	Message Type	Process Code	Change Message
<i>Vendor</i> (VN)	ORDERS	EF	NEU	ME10	deselected
<i>Vendor</i> (VN)	ORDCHG			ME11	selected

Note

Depending on your system landscape, it might also be necessary to define settings on the *EDI Standard* view.

Define Output Conditions

1. Open transaction *Change Output – Condition Records* (NACR).
2. Enter application **EF** and output type **NEU**.
3. Choose key combination *Purchasing Output Determination: Purch. Org./Vendor for EDI*.
4. For each supplier/vendor in your purchasing organization, define condition records with the following attributes:

Field	Value
<i>Function</i>	<i>Vendor</i> (VN)
<i>Message Transmission Medium</i>	<i>EDI</i> (6)
<i>Dispatch Time</i>	<i>Send immediately (when saving the application)</i> (4)
<i>Language Key</i>	<i>English</i> (EN)

Define Inbound Partner Profile

1. Open transaction *Partner Profiles* (WE20).
2. Select *Partner Type LS* (logical system) and choose *Create*.
3. In the *Inbound* screen area, choose *Create inbound parameter*.
4. Create a new inbound parameter of type *Logical System* (LS) with the RFC user as processor.
5. On the *Inbound Options* view, enter the following data:

Partner Role	Message Type	Process Code	Processing by Function Modules
(empty)	ORDRSP	ORDR	<i>Trigger Immediately</i>
(empty)	DESADV	DELS	
(empty)	INVOIC	IV01	
(empty)	ORDERS	ORDE	

7.3.2 Settings in the Vendor ERP System

7.3.2.1 Material Master Data

Define all master data as described above. Ensure that all master data have a sales organization, distribution channel, division data, and unit of measure conversions defined.

7.3.2.2 Additional Settings for Business Partners

Create business partner or customer for each plant that is defined in the ordering system with the sales organization, distribution channel, and division data that is defined in your material master data.

Ensure that the partner function *Ship-to Party* (SH) is defined.

7.3.2.3 ALE Settings

Maintain Ports

1. Open transaction *Ports in IDoc Processing* (WE21).
2. Select *Transactional RFC* and choose *Create*.
3. Enter the customer ERP system as RFC destination,
4. Leave all other options deselected and save.

Define Outbound Partner Profile

1. Open transaction *Partner Profiles* (WE20).
2. Select *Partner Type KU* (customer) and choose *Create*.
3. In the *Outbound* screen area, choose *Create outbound parameter*.
4. Create two new outbound parameters of type *Customer (KU)* with the RFC user as processor.
5. On the *Outbound Options* view, enter the following data:

Partner Role	Message Type	Receiver Port	Output Mode	Basic Type
(empty)	SYNCH	The port you created in the previous step	Pass IDoc Immediately	SYNCHRON
<i>Ship-to Party (SP)</i>	ORDRSP			ORDERS05
<i>Ship-to Party (SP)</i>	DESADV			DELVRY07
<i>Ship-to Party (SP)</i>	INVOIC			INVOIC02

6. On the *Message Control* view, enter the following data:

Partner Role	Message Type	Application	Message Type	Process Code	Change Message
<i>Ship-to Party (SP)</i>	ORDERSP	V1	BA00	SD10	Deselected
<i>Ship-to Party (SP)</i>	DESADV	V2	LD00	DELV	Deselected
<i>Ship-to Party (SP)</i>	INVOIC	V3	RD00	SD09	Deselected

Note

Depending on your system landscape, it might also be necessary to define settings on the *EDI Standard* view.

Define Output Conditions

1. Open transaction *Change Output – Condition Records* (NACR).
2. Enter application V1 and output type BA00.
3. Choose key combination *Sales Organization/Customer Number*.
4. For each customer in your sales organization, define condition records with the following attributes:

Field	Value
<i>Function</i>	<i>Sold-to Party (SP)</i>
<i>Message Transmission Medium</i>	<i>EDI (6)</i>
<i>Dispatch Time</i>	<i>Send immediately (when saving the application) (4)</i>
<i>Language Key</i>	<i>English (EN)</i>

5. Define the same output conditions for application V2 and output type LD00 as described in the previous steps.
6. Define the same output conditions for application V3 and output type RD00 as described in the previous steps.

Define Inbound Partner Profile

1. Open transaction *Partner Profiles* (WE20).
2. Select *Partner Type LS* (logical system) and choose *Create*.
3. In the *Inbound* screen area, choose *Create inbound parameter*.
4. Create two new inbound parameters of type *Logical System (LS)* with the RFC user as processor.
5. On the *Inbound Options* view, enter the following data:

Partner Role	Message Type	Process Code	Processing by Function Modules
(empty)	ORDRCHG	ORDC	<i>Trigger Immediately</i>
(empty)	ORDERS	ORDE	

Define Mapping of Customers to Sales Organization Data

1. Open transaction *View for Table EDSDC* (VOE2).
2. Select your customers and assign a sales organization, distribution channel, and division as defined for the location material and select a suitable sales order type.

Assign Partner Function Ship-To

Assign the ship-to partner function for the plant defined in the ordering system to an internal customer number.

1. Open transaction *View for Table EDPAR* (VOE4).
2. Select your customers and external function *Ship-to* (SH) and assign an internal customer number.

7.3.3 Settings in the PP/DS Systems

1. Create all plants that are used in the ERP systems in the PP/DS system and ensure that the related locations are available in PP/DS.
2. Open transaction *Location Alias* (/SAPAPO/LOCALI) and create the following location aliases for the relevant locations:
 - For the logical customer systems, create a new alias for each relevant plant that exists in the supplier system with type *Vendor* (C).
 - For the logical supplier systems, create a new alias for each relevant plant that exists in the customer system with type *Customer* (B).

7.4 Additional Settings for Subcontracting

We support the following Subcontracting scenarios:

- Subcontracting with Source Location in PP/DS
- Subcontracting with Scheduling Agreements in PP/DS
- Subcontracting with Third-party Provision of Components in PP/DS
- Subcontracting with Phantom Assembly in PP/DS
- Subcontracting without Source Location in PP/DS

Note

To use the Subcontracting without Source Location in PP/DS scenario, you must first implement the SAP Note [3133251](#).

If you want to implement a subcontracting scenario, you need to make additional settings as described in the following section. For more information on subcontracting scenarios, see SAP Note [3164190](#).

Create Business Partners

1. Create a business partner in the PP/DS system with role Vendor (for example, FLVN00) as described under 4.1.5 *Create Business Partners* (p. 25).
2. Select an account group with external number assignment, for example, LIEF.
3. Use the same vendor number as the vendor number that is used in the ERP system on the *Vendor: General Data* view.

Create MRP Areas (for Subcontracting with Source Location)

1. Create an MRP area in the PP/DS system as described under 4.1.6.2 *Create MRP Areas for Subcontracting* (p. 25) and assign the vendor. Ensure that the names of the MRP areas in the ERP and the PP/DS system are identical.
2. Add the MRP area to material master of the relevant components in both systems.

Caution

If you use a subcontracting scenario without source location, you must not use MRP areas.

Create Locations

Create locations for plants, MRP areas, and vendors in the PP/DS system as described under 4.1.7 *Create Locations* (p. 26).

Integration Model

Create and activate an integration model for subcontracting in the ERP system.

Ensure that the *Production Data Structure (PDS)* with type *PP/DS Subcont.*, the relevant info record, and the scheduling agreement are included in the same integration model.

Caution

Don't include the vendor in the integration model!

7.5 Supported and Unsupported Scenarios for Planning Products in the ERP and/or PP/DS Systems

In a side-by-side deployment of the PP/DS system with an ERP system, you can plan the materials and components present in the BoM structure either in the ERP and/or PP/DS systems.

In a BoM structure, if a BoM header material is relevant for planning in the PP/DS system and its components are relevant for planning either in the ERP and/or PP/DS systems, you must perform the following:

1. In the PP/DS system, use *Product Heuristic* to plan the BoM header material and all its components that are relevant for planning in the PP/DS system.
2. After the PP/DS system saves the planning results, ensure that the updated transactional data is available in the ERP system. For more information, see chapter 5 *Integration of Transactional Data* (p. 33).
3. Ensure that the ERP system creates the requirements for components that are relevant for planning in the ERP system.
4. In the ERP system, plan the materials and components that are relevant for planning in the ERP system.

Caution

In a BoM structure, for a BoM header material relevant for planning in the ERP system, you cannot plan the components that are relevant for planning in the PP/DS system.

7.5.1 Examples of Supported and Unsupported Planning Scenarios

The examples given below provide a better understanding of the supported and unsupported planning scenarios.

Context

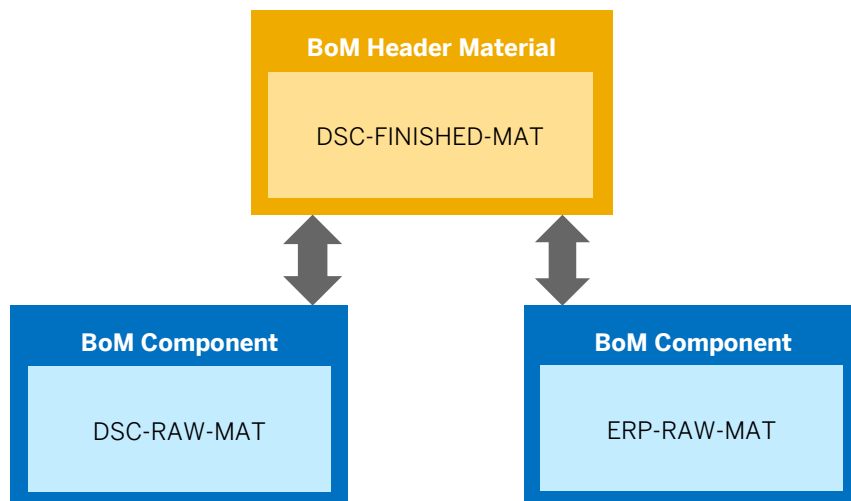
In the examples given below, the materials ERP-RAW-MAT and ERP-FINISHED-MAT:

- Are created in the ERP system and are not relevant for planning by Advanced Planning in the PP/DS system.
- Are not transferred to the PP/DS system using Core Interface.
- Exist only in the ERP system together with their transactional data.

In the examples given below, the materials DSC-RAW-MAT and DSC-FINISHED-MAT:

- Are created in the ERP system and are relevant for planning by Advanced Planning in the PP/DS system.
- Are transferred to the PP/DS system using CIF.
- Have the MRP Type *X0*.

Example 1: Supported Planning Scenario



This example explains how you can plan the components that are relevant for planning either in the ERP and/or PP/DS systems and have a BoM header material that is relevant for planning in the PP/DS system.

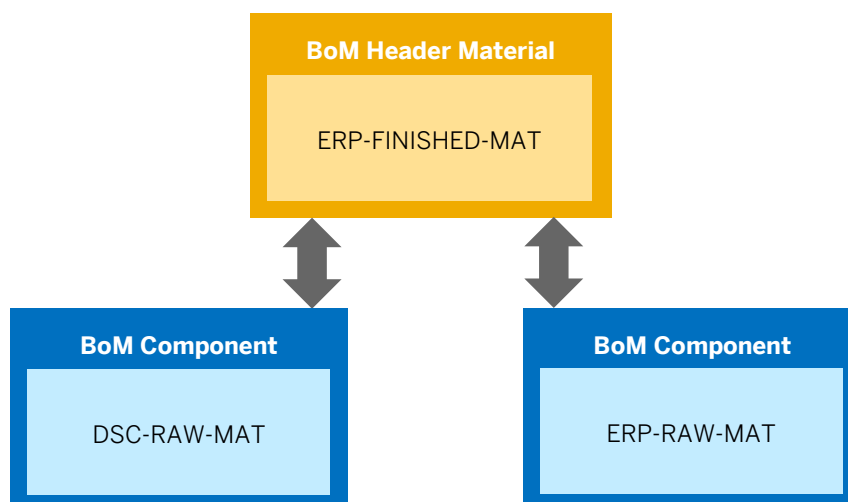
i Note

In this example, the Production Data Structure (PDS) will display only DSC-RAW-MAT as a component under DSC-FINISHED-MAT.

When a demand for DSC-FINISHED-MAT is placed:

1. The PP/DS system plans DSC-FINISHED-MAT and DSC-RAW-MAT using *Product Heuristic*.
2. After the PP/DS system saves the planning results, the updated transactional data should become available in the ERP system.
3. The ERP system then creates a requirement for ERP-RAW-MAT based on the BoM structure present in the ERP system.
4. The ERP system plans the component ERP-RAW-MAT, either using MRP Live (if the ERP system is an SAP S/4HANA system) or any of the *MDXX* transactions.

Example 2: Unsupported Planning Scenario



This example explains why you cannot plan the components that are relevant for planning in the PP/DS system and have a BoM header material that is relevant for planning in the ERP system.

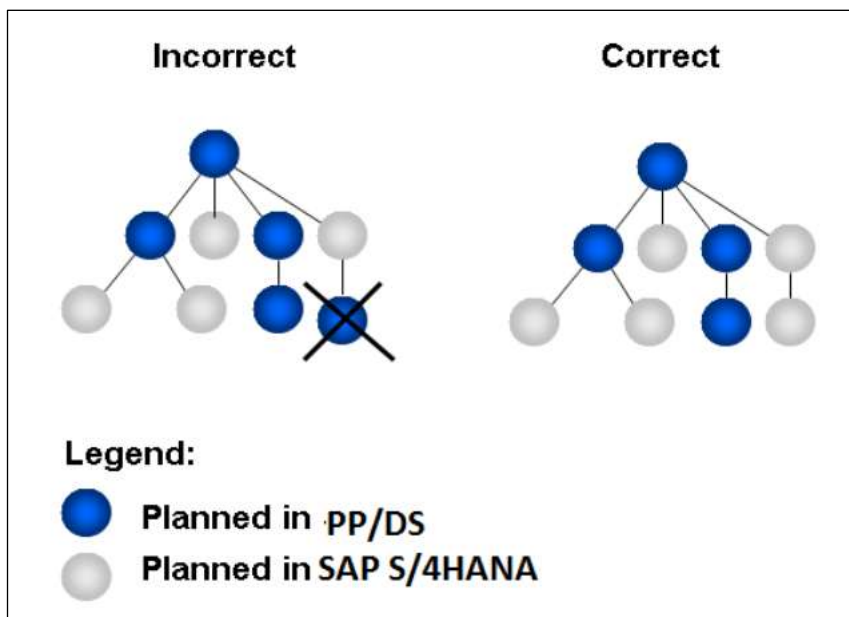
If a demand for ERP-FINISHED-MAT is placed:

1. The ERP system plans ERP-FINISHED-MAT and ERP-RAW-MAT, either using MRP Live (if the ERP system is an SAP S/4HANA system) or any of the *MDXX* transactions.
2. The ERP system creates a requirement for DSC-RAW-MAT in the ERP system, but does not plan it in the ERP system because DSC-RAW-MAT has MRP Type *X0*.
3. The requirement for DSC-RAW-MAT depends on the planned order created for ERP-FINISHED-MAT. Therefore, because ERP-FINISHED-MAT and its transactional documents are not transferred to the PP/DS system, the requirement for DSC-RAW-MAT is not available in the PP/DS system.
4. Now, because the requirement for DSC-RAW-MAT is not available in the PP/DS system, it cannot be planned in the PP/DS system. And, because DSC-RAW-MAT has MRP Type *X0* in the ERP system, it cannot be planned in the ERP system as well.

Conclusion

In a BoM structure:

- If you plan a component in the PP/DS system, then you must plan all components up to the BoM header material in the PP/DS system.
- If you plan a component in the ERP system, then you must plan all its sub-components in the ERP system.



7.6 Integrate Material Master Data with MRP Areas

1. Create an MRP area in the ERP system and the PP/DS system as described in chapter 4.1.6 *Create MRP Areas* (p. 25). You must create the MRP Areas in the ERP system and the PP/DS system with identical names.
2. In the ERP system, add the MRP area to the material master using transaction MM01.
3. Create an integration model using transaction CFM1 to enable an initial transfer of the MRP area data for materials from the ERP system to the PP/DS system via Core Interface (CIF).

Caution

After the initial transfer, if you update the MRP area data for materials, the changes to the MRP area data for materials will not be transferred to the PP/DS system using business transaction events (BTEs). This is because currently the transfer of updates to the MRP area data for materials using BTE is not supported. For more information on transferring this data to the PP/DS system, see SAP Note [1875164](#).

Note

If you want to restrict the transfer of one or more MRP areas in the material master, use the following BAdI:
CIF_S4_BADI_PRODUCT_OUTBOUND

7.7 Real-time Integration of SAP Integrated Business Planning (IBP) with the DSC System

You can use SAP Integrated Business Planning (IBP) 2211 and above for Supply Chain order-based planning in combination with the DSC system.

With SAP IBP 2211 and above, you can perform operational supply planning (OSP), which allows you to create a rough-cut plan to optimize the use of your supply chain network. In the DSC system, you can use Advanced Planning (PP/DS) to optimize the use of the production resources in your plants and finitely schedule planned orders and production or process orders.

The DSC system performs the short-term detailed planning and scheduling of an SAP IBP production plan. The changes to the planned dates and times of all supply elements are available in SAP IBP order-based planning.

For more information, see [Using Order-Based Planning with Flexible Master Data](#).

7.8 Integration of Segmentation

You can use the PP/DS system for production planning based on Demand and Supply Segmentation.

However, you must first ensure that:

- Your ERP system should be SAP S/4HANA 2022 and above.
- The segmentation structure, strategy, rules, and characteristics must be replicated manually in the PP/DS system.

For more information on restrictions and implementation recommendations for segmentation integration, see SAP Note [3286572](#).

Appendix

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