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How-To Guide
SAP NetWeaver
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Integration of SAP ERP or SAP S/4HANA with decentralized EWM in S/4HANA

SAP S/4HANA 1909 and Higher

Document History

Document Version	Description
2.3	First official release of this guide for release SAP S/4HANA OP 1909, based on version 2.3 of SAP S/4HANA OP 1809
2.4	Second official release of this guide for release SAP S/4HANA OP 1909, based on version 2.3 of SAP S/4HANA OP 1909 - Chapter 6.1 Setup Configuration of IDoc Communication with Setup Reports - Chapter 6.4 Converting Data between Sender and Receiver
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1 Business Scenario

This how-to guide describes the detailed configuration for integrating SAP ERP or SAP S/4HANA with decentralized Extended Warehouse Management (EWM) based on SAP S/4HANA 1909.

It covers the following aspects of the configuration:

- Configuration of system connection and global settings between decentralized EWM based on SAP S/4HANA and SAP ERP
- Configuration of qRFC communication
- Configuration of IDoc communication
- Customizing settings in decentralized EWM
- Master Data Distribution via ALE/IDoc or via Data Replication Framework (DRF)
- Warehouse Integration into the SAP ERP enterprise structure
- Warehouse creation and integration in EWM
- Additional data transfer and settings in SAP ERP and EWM

Decentralized EWM on an SAP S/4HANA stack is a deployment option of the EWM application on the SAP S/4HANA on premise stack. It is an SAP S/4HANA on premise system for EWM usage. Compared to an embedded EWM in SAP S/4HANA, it provides integration capabilities to a remote enterprise management system, for example an SAP ERP system.

The wording ‘decentralized’ indicates a system landscape with a global enterprise management system which is hosted in the corporate central data center, and which is integrated with a decentralized deployment of an EWM system. In this guide, the global enterprise management system is an SAP ERP system or an SAP S/4HANA system.

'Decentralized' also means that stock for these warehouses does not have active MM-IM stock management in the same SAP S/4HANA system and client. Non-active MM-IM stock implies that the core enterprise management logistics applications (PP, SD, MM, etc.) are also not actively used in this system and client for the decentral warehouse-managed stock.

This guide does not cover the setup for quality management for a decentralized EWM. If you want to use quality management for your decentralized EWM, refer to the configuration guide in the attachments of SAP note 2775887.

2 Background Information

Before you continue with this how-to guide, make sure this how-to guide fits to your EWM deployment option:

- Decentralized EWM on an SAP S/4HANA OP 1909 stack, linked to
- SAP ERP 6.0 EhP 3 or higher

You can also use this guide for the following deployment option:

- Decentralized EWM on an SAP S/4HANA OP 1909 stack, linked to
- SAP S/4HANA OP 1610 or higher, used as global enterprise management system

Other guides are available for SAP EWM or other EWM deployment options. For more information, refer to SAP note 2782080).

> **Important**
>
> This guide is primarily intended for the integration of decentralized EWM with SAP ERP. You can also use it for the integration of decentralized EWM with an SAP S/4HANA system, even if only SAP ERP is mentioned in the text. In cases where the integration differs between SAP ERP and SAP S/4HANA, the differences are mentioned explicitly in the text.

> **Note**
>
> Especially in the area of master data integration, SAP offers several integration techniques. This guide focuses on a scenario where one ERP system is connected to one decentralized EWM and where no CVI (customer vendor integration) is used. In this guide the integration using ALE for master data is described as it supports this scenario. Other alternative integration techniques (like DRF) or interfaces which may serve the same purpose exist, but they are not covered in this guide. The only exception is for the transfer of business partners using DRF.

> **Note**
>
> You can also connect multiple SAP ERP or SAP S/4HANA systems with a decentralized EWM in S/4HANA system. For more details see chapter 12.

3 Prerequisites

You have installed and correctly configured the following applications:

- You have a running SAP ERP system with active MM-IM (Inventory Management) and LE-SHP (Logistics Execution – Shipping).
  Minimal release/patch level: EhP 3 for SAP ERP 6.0

  As an alternative, you have a running SAP S/4HANA system with active MM-IM and LE-SHP
  Minimal release/patch level: SAP S/4HANA 1610
- You have installed an SAP S/4HANA system to run as decentralized EWM.
  Minimal release/patch level: SAP S/4HANA OP 1909
- You have set up the decentralized EWM client with configuration content from client 000 (including all tables of delivery class C and G). The configuration is needed for warehouse-independent master data such as business partners, vendors, customers, and materials.

  > **Tip**
  >
  > In Appendix C, you will find a list of SAP Notes containing information about BC sets in EWM. The BC sets may help you with your EWM implementation following the basic integration described in this guide.

- You have checked the list of SAP Notes in Appendix D and implemented the notes which are marked as mandatory according to your release.

4 Configuration of System Connection and Global Settings

You use this process to configure the system landscape settings required for the queued remote function call (qRFC) communication between decentralized EWM and SAP ERP.

EWM communicates with SAP ERP via queued remote function call (qRFC) for parallel processing, using system resources in parallel to increase business throughput and reduce processing time.

4.1 Background Information About System Landscape Settings

You use this chapter to gain an overview of the system landscape entities used in the integration of SAP ERP with decentralized EWM.

Overview of System Landscape Entities

The following table provides an overview of system landscape entities required for the integration:

Entity	Setting Level	Customizing Transport	Comments

RFC Destination
Example:
`ERPCLNT001`
`EWMCLNT001`
	Cross-Client	No	Technical setting for RFC and qRFC communication;
			Naming convention: `<SID>CLNT<CLIENT>`;
			See chapter *Prerequisites for System Connection*

Logical System
Example:
`ERPCLNT001`
`EWMCLNT001`
	Cross-Client	Yes	Technical setting for RFC and qRFC communication;
			Naming convention: `<SID>CLNT<CLIENT>`;
			Can be created in the *System Landscape Directory*;
			The logical system is assigned to the RFC destination;
			Own logical system assigned to client.
			See chapter *Configuring Logical Systems in SAP ERP*

Business System Group Example: `ERP_BG1`	Client	No	Used in EWM for master data; 1:N relationship to logical system; See chapter *Configuring System Connection and Client Settings in EWM*

Business System
Example:
`ERP_001`
`EWM_001`
	Client	No	Used in EWM for transactional data;
			Naming convention: `<SID>_<CLIENT>`;
			The business system is assigned to a logical system;
			Can be created in the *System Landscape Directory*;
			Own business system assigned to client;
			See chapter *Configuring System Connection and Client Settings in EWM*

4.2 Prerequisites for System Connection

System administrators must make specific settings for the Remote Function Call (RFC) connection between SAP ERP and decentralized EWM before any customizing activity is carried out.

Contact your system administrator to ensure the following prerequisites are met:

- An RFC user exists in each target system/client defined as RFC destination. For example, for the decentralized EWM client to use the RFC destination to the ERP test client, an RFC user exists in the ERP client.
- RFC destinations exist between the corresponding ERP and EWM clients.

Procedure

1. In the decentralized EWM system, create an RFC destination (ABAP Connection) for the ERP client in Customizing for *SAP NetWeaver* under *Application Server → IDoc Interface / Application Link Enabling (ALE) → Communication → Create RFC Connections* using the naming convention `<SYS>CLNT<CLIENT>`, for example `ERPCLNT001`.
2. In the SAP ERP system, create an RFC destination (ABAP Connection) for the decentralized EWM client in Customizing for *SAP NetWeaver* under *Application Server → IDoc Interface / Application Link Enabling (ALE) → Communication → Create RFC Connections* using the naming convention `<SYS>CLNT<CLIENT>`, for example `EWMCLNT001`.

4.3 Cross-Client Settings in SAP ERP

You use this process to prepare SAP ERP for the communication with decentralized EWM. The settings affect all clients of the SAP ERP system and require authorizations for cross-client settings on user and client level.

4.3.1 Activating Business Functions in Switch Framework in SAP ERP

You use this procedure to activate business functions in the Switch Framework. To benefit from the tight integration of SAP ERP and decentralized EWM, you must activate the following business function in SAP ERP:

Business Function	Description
`LOG_LE_INTEGRATION`	*LE, Extended Warehouse Management Integration*

For more information, see the business function documentation in transaction `SFW5`.

> **Note**
>
> This business function is always active in SAP S/4HANA. There is no need to activate it if you integrate decentralized EWM with SAP S/4HANA instead of SAP ERP.

Other business functions from SAP ERP may be needed for your warehousing processes. Check the documentation of the following EWM-related business functions in SAP ERP and decide if they are relevant for your warehousing processes:

Business Function	Description
`LOG_PP_EWM_MAN`	*EWM Integration into Manufacturing*
`LOG_PP_EWM_MAN_2`	*EWM Integration into Manufacturing 2*
`OPS_ADVRETURNS_1`	*Advanced Returns Management*
`OPS_ADVRETURNS_2`	*Advanced Returns Management 2*
`SPE_CI_1`	*Service Parts Management: Innovations in ERP*
`LOG_TM_ORD_INT_II`	*ERP-TMS: Order and Invoice Integration*
`LOG_SCM_EWM_INT`	*EWM Integration*
`ISR_RET_CD/FT_EWM`	*Retail, Merchandise Distribution-SAP EWM Integration*
`/CWM/CM_2` *(available only if IS-CWM is installed)*	*CWM, Variable Valuation Unit of Measure (Reversible)*

> **Note**
>
> Most of these business functions are always active in SAP S/4HANA. There is no need to activate them if you integrate decentralized EWM with SAP S/4HANA instead of SAP ERP. In transaction `SFW5`, you will find them under *S/4H_ALWAYS_ON_FUNCTIONS*.

Procedure

Contact your system administrator to carry out the following steps in an ERP client allowing cross-client settings and the creation of workbench requests. If necessary, use the workbench request to transport the settings to other SAP ERP systems.

1. On the *SAP Easy Access* screen, call transaction `SFW5`.
2. Activate the business function that you want to use. Only business function `LOG_LE_INTEGRATION` (*LE, Extended Warehouse Management Integration*) is mandatory.

4.3.2 Configuring Logical Systems in SAP ERP

You use this procedure to define the logical systems in SAP ERP.

Procedure

Carry out the first step of the procedure in your ERP customizing client allowing cross-client settings and transport if necessary, the settings to other SAP ERP systems (for example, SAP ERP test system, SAP ERP productive system). Carry out the subsequent step in all SAP ERP systems (in a client allowing cross-client settings) that you want to connect to decentralized EWM.

1. Define a logical system for your ERP client (for example, `ERPCLNT001`) and a logical system for your EWM client (for example, `EWMCLNT001`) in Customizing for *Integration with Other SAP Components* under *Extended Warehouse Management → Basic Settings for Setting Up the System Landscape → Name Logical System.*
2. Assign the ERP logical system defined in the first step to the ERP client (for example, in system `ERP`, assign `ERPCLNT001` to client `001`) in Customizing for *Integration with Other SAP Components* under *Extended Warehouse Management → Basic Settings for Setting Up the System Landscape → Assign Logical System to a Client.*

   Example

   In a landscape with an SAP ERP customizing system (for example ERC, client 001), an SAP ERP test system (for example ERT client 001) and an SAP ERP productive system (for example ERP, client 001), you define multiple logical systems (for example, ERTCLNT001 and ERPCLNT001) in your SAP ERP customizing system. The same applies to the decentralized EWM systems (for example EWTCLNT001 and EWPCLNT001)

4.4 Cross-Client Settings in Decentralized EWM

You use this process to prepare decentralized EWM for the communication with SAP ERP. The settings affect all clients of the decentralized EWM system and require authorizations for cross-client settings on user and client level.

4.4.1 Configuring Logical Systems in EWM

You use this procedure to define the logical systems in decentralized EWM.

Procedure

Carry out the first step of the procedure in your EWM customizing client allowing cross-client settings and if necessary, transport the settings to other EWM systems (for example, EWM test system, EWM productive system). Carry out the subsequent step in all EWM systems (in a client allowing cross-client settings) that you want to connect to SAP ERP.

1. Define a logical system for your EWM client (for example, `EWMCLNT001`) and a logical system for your ERP client (for example, `ERPCLNT001`) in Customizing for *Extended Warehouse Management* under *SCM Basis → Integration → Basic Settings for Setting Up the System Landscape → Name Logical Systems.*
2. Assign the EWM logical system defined in the first step to the EWM client (for example, in system `EWM`, assign `EWMCLNT001` to client `001`) in Customizing for *Extended Warehouse Management* under *SCM Basis → Integration → Basic Settings for Setting Up the System Landscape → Assign Logical Systems to a Client.*

> **Example**
>
> In a landscape with an EWM customizing system (for example EWC, client 001), an EWM test system (for example EWT client 001) and an EWM productive system (for example EWP, client 001), you define multiple logical systems (for example, EWTCLNT001 and EWPCLNT001) in your EWM customizing system. The same applies to the SAP ERP systems (for example ERTCLNT001 and ERPCLNT001).

4.5 Client-Specific Settings in SAP ERP

You use this process to prepare the SAP ERP client for the communication with decentralized EWM.

4.5.1 Assigning EWM Logical Systems to RFC Destinations in SAP ERP

You use this procedure to assign the EWM logical systems defined in SAP ERP to RFC destinations in SAP ERP.

> **Note**
>
> These settings cannot be transported from your ERP customizing client to other SAP ERP systems and clients. Therefore, you must repeat the steps in every ERP client connected to decentralized EWM.

Procedure

Carry out the following steps in each ERP client you want to connect to decentralized EWM:

1. In Customizing for *SAP NetWeaver* , choose *Application Server → IDoc Interface/Application Link Enabling (ALE) → Communication → Determine RFC Destinations for Method Calls.*
2. Select the EWM logical system, for example, *EWMCLNT001*.
3. Choose *Standard BAPI destination*.
4. Enter the RFC destination created by your system administrator for the corresponding EWM system and choose `Enter`.
5. Save your entries.

4.5.2 Configuring Additional Material Master Screens in SAP ERP

You use this procedure to activate the following additional material master screens in SAP ERP:

- *WM Execution*
- *WM Packaging*

> **Note**
>
> Skip this chapter if you integrate decentralized EWM with SAP S/4HANA instead of SAP ERP as the procedure is not required in SAP S/4HANA.

The additional screens allow you to maintain material master data needed in SAP ERP in the warehousing processes with Extended Warehouse Management (EWM).

Additional material master screens are used in the standard warehouse with preconfigured processes. For example, you maintain the handling unit (HU) type for packaging materials on the additional screen *WM Packaging*. The data is transferred via IDoc to EWM.

> **Note**
>
> For some material master attributes (for example, HU types) it is necessary to maintain the allowed values in Customizing for *Integration with Other SAP Components* under *Extended Warehouse Management → Additional Material Attributes → Attribute Values for Additional Material Master Fields*. For more information, see the Customizing documentation and chapter *Verifying Synchronization of SAP ERP and EWM Customizing*.

Procedure

Carry out the following steps in your ERP customizing client and if necessary, transport the settings to other ERP clients or systems.

1. Activate the BC Set `/SPE/MATERIAL_SCREENS` containing additional entries for screen sequence *21* of the material master maintenance on the *SAP Easy Access* screen under *Tools → Customizing Business Configuration Sets → Activation of BC Sets*.
2. Maintain the screen sequence for the additional material master screens.
    1. In Customizing for *Logistics – General*, choose *Material Master → Configuring the Material Master → Maintain Order of Main and Additional Screens*.
    2. Select sequence *21* and display the details by choosing *Goto → Details* in the menu. You can ignore the warning message that the entry belongs to SAP.
    3. For screen number *56*, enter `300`.
    4. For screen number *57*, enter `310`.
    5. Save your entries.

4.6 Client-Specific Settings in Decentralized EWM

You use this process to configure settings at client level in decentralized EWM. The settings are valid for all warehouses of the client.

4.6.1 Specifying Output Format of Product Number

You use this procedure to specify the input and output length of product numbers in decentralized EWM as well as templates for displaying the product number.

> **Note**
>
> If you have specified an output format for material numbers in the SAP ERP system, it is recommended to specify the same output format for product numbers in EWM.

Procedure

Carry out the following steps in the EWM customizing client:

1. In Customizing for *Logistics - General*, choose *Material Master → Basic Settings → Define Output Format of Material Numbers*.
2. If not existing yet, create an entry to specify the output format for product numbers. Specify at least the product number length, for example 18.
3. Save your entry.

> **Note**
>
> If you connect decentralized EWM to an SAP ERP supporting 40 characters, you must also activate the field length extension for the communication to this system in Customizing for Cross-

Application Components under General Application Functions → Field Length Extension → Activate Extended Fields (transaction FLETS).

4.6.2 Configuring System Connection and Client Settings in EWM

You use this procedure to configure the following data with the help of the *Implementation Tool for System Connection* in decentralized EWM:

- Client setting to enable decentralized EWM based on SAP S/4HANA
- System landscape in EWM including definition and assignment of logical systems, business systems and business system groups
- Queued remote function call (qRFC) communication in EWM
- Basic number ranges (on client level) in EWM including packaging specifications, shipping and receiving activities, ERP deliveries created in EWM, Quality Inspection Engine (QIE) objects (samples, items, findings, and inspection documents)
- Output format of product number in EWM
- Control parameters for ERP version control
- Warehouse-independent basic settings using BC Set activation within the tool

> **Note**
>
> Some activities in the implementation tool are cross-client. However, if you have already configured the cross-client settings as described in chapter *Configuring Logical Systems in EWM*, the implementation tool automatically displays the existing cross-client settings. In this case, no cross-client authorization is required to use the implementation tool.

Procedure

Carry out the following steps in your EWM customizing client first and transport, if necessary, the data set to other EWM clients or EWM systems. After the transport, repeat the procedure with the transported data set in all EWM clients or EWM systems that you want to connect to EWM.

1. In Customizing for *Extended Warehouse Management*, choose *Interfaces* → *ERP Integration* → *Tool-Based ERP Integration* → *Implementation Tool for System Connection*.
2. Carry out the steps provided in the implementation tool.

> **Note**
>
> For more information, see the Customizing documentation of the implementation tool and the quick help provided within the tool.

5 Configuration of qRFC Communication

You use this process to configure the queued remote function call (qRFC) communication between decentralized EWM based on SAP S/4HANA and SAP ERP.

Decentralized EWM communicates transaction data like inbound and outbound deliveries with SAP ERP via queued remote function call (qRFC). Since the communication is bi-directional, you not only configure the sending of data to both systems but also the reception of data from both systems.

Prerequisites

You have configured the system connection and global settings as described in the previous chapter. RFC destinations and logical systems exist both in decentralized EWM and in SAP ERP. Business systems exist in decentralized EWM.

5.1 Configuring qRFC Communication in SAP ERP

You use this procedure to setup the qRFC communication in SAP ERP, i.e. to send transactional data to EWM and to receive transactional data from EWM.

Procedure

Carry out the following steps (except step 5) in each SAP ERP client you want to connect to decentralized EWM. Step 5 is a customizing activity, which you carry out in the ERP customizing client.

1. Register the RFC destination for EWM in the QOUT scheduler in SAP ERP. This setting is relevant for the qRFC communication from SAP ERP to EWM.
    a. In the SAP ERP system, on the *SAP Easy Access* screen, call transaction **SMQS**.
    b. On the *qRFC Monitor (QOUT Scheduler)* screen, choose *Registration*.
    c. Enter the data as shown in the following table:

Field	Value
Destination	<RFC Destination>, for example, **EWMCLNT001**
Max.Conn.	**10**
Max. Runtime	**60**
W/o tRFC	Leave this field empty.

    d. Choose *Continue*.
2. Register the queue names in the QIN scheduler to configure the execution of inbound queues in SAP ERP. This setting is relevant for the qRFC communication from EWM to SAP ERP.
    a. In the SAP ERP system, on the *SAP Easy Access* screen, call transaction **SMQR**.
    b. On the *qRFC Monitor (QIN Scheduler)* screen, choose *Registration*.
    c. Enter the data as shown in the following table:

Field	Value
Queue Name	<used queue name>, we recommend that you use either ***** or allof the following: **DLW***, **EWM***, **QI***, **QM***, **WM***
Mode	**D**
Max. Runtime	**60**
USERDEST	Leave this field empty.

Attempts	**30**
Pause	**300**

d. Choose *Continue*.

3. Register display programs for the inbound queue in SAP ERP. 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. This setting is relevant for the qRFC communication from EWM to SAP ERP.
   a. In the SAP ERP system, on the *SAP Easy Access* screen, call transaction `SMQE`.
   b. Choose *Edit → Register Display Program.*
   c. Enter the queue and program names as shown in the following table:

Queue Name	Program Name
`DLW*`	**/SPE/QUEUE_DISPLAY_TOOLS**
`EWM*`	**/SPE/QUEUE_DISPLAY_TOOLS**
`QI*`	**/SPE/QUEUE_DISPLAY_TOOLS**
`QM*`	**/SPE/QUEUE_DISPLAY_TOOLS**
`WM*`	**/SPE/QUEUE_DISPLAY_TOOLS**

4. Configure the queue for the communication of transaction data from SAP ERP to EWM.
   a. In Customizing for *Integration with Other SAP Components*, choose *Extended Warehouse Management → Basic Settings for EWM Linkage → Define Queue for Transfer to Extended WM.*
   b. Create an entry for the EWM logical system with the following data:

Field	Value
Receiver	`<logical system>`, for example, **EWMCLNT001**
Queue	**Inbound queue**
Agg SQueue	**No aggregation**
MQueue Act	**Mass queue disabled (=> Single queues)**
MQueue Par	**1**

   For more information, see the value help of the single fields.

5. Activate the automatic restart of erroneous inbound queues from EWM to SAP ERP.
   With this setting, inbound queues in SAP ERP that are erroneous due to locking issues will be restarted automatically again up to 25 times.
   a. In Customizing for *Logistics Execution*, choose *Shipping → System Modifications → Specify Characteristics for System Messages.*
   b. Choose activity *Define the message types of system messages*.

   Create a new entry with the following attributes:

Field	Value
Call Type	Leave this field empty.
Activity	Leave this field empty.
Application Area	**/SPE/IF_SERVICES**
Message Number	**023**

Message Type	**E**

c. Save your entries.

6. Check that the log for received messages is not disabled in Customizing for *Integration with Other SAP Components* under *Extended Warehouse Management → Basic Settings for EWM Linkage → Log Sent and Received Messages.*

5.2 Configuring qRFC Communication in Decentralized EWM

You have already configured the qRFC communication in decentralized EWM in chapter *Configuring System Connection and Client Settings in EWM*.

6 Configuration of Master Data Distribution

You use this process to setup the distribution of following master data from SAP ERP to decentralized EWM on SAP S/4HANA using SAP Standard technologies Application Link Enabling (ALE)-IDoc or the Data Replication Framework (DRF):

- Materials
- Customers
- Vendors and Carriers
- Addresses
- Batches
- Class system: Characteristics master
- Class system: Classes master
- Class system: Classification master

The master data distribution is always from SAP ERP to decentralized EWM. In the IDoc settings, the sender system is always SAP ERP and the receiver system is always decentralized EWM.

> **Important**
>
> For the data distribution of customers, vendors, carriers, and addresses there is also the option to use the Data Replication Framework instead of the ALE Communication. By this the business partner is replicated instead of the customer/supplier separately. If CVI is used and the business partner is the leading object this has certain advantages and should be considered (see note 2417298). If you are using an S/4 System as sender system according to this note it is recommended to use DRF for business partner transfer instead of ALE (see chapter 6.9). For further information also see Master Data Integration for Business Partners.
>
> For materials, batches and classes you must use the ALE configuration.

> **Note**
>
> Even if you use the Customer Vendor Integration (CVI) in SAP ERP or an S/4 system, the transfer of business partner data via ALE to decentralized EWM is based on the customer and vendor master data and not on the business partner master data.

> **Important**
>
> Some settings described in this chapter, such as the creation of reduced message types with transaction BD53 or report /SPE/R_DEC_EWM_REDUCE_MESSTYPE, require a workbench request. You must therefore clarify with your system administrator which SAP ERP system and client is appropriate to carry out these steps.

> **Note**
>
> The following description contains only an example for the ALE IDoc setup. ALE offers much more settings and possibilities. Therefore, you should get familiar with ALE in general. For more information, refer to the ALE implementation guide and also see the appendix (Appendix A – Additional Information about IDoc/ALE).

Prerequisites

You have configured the system connection and global settings as described in the previous chapter. RFC destinations and logical systems exist both in decentralized EWM and in SAP ERP.

6.1 Setup Configuration of IDoc Communication with Setup Reports

The following reports are available to support the configuration of the ALE customizing.

Report	Usage
/SPE/R_DEC_EWM_REDUCE_MESSTYPE	This report is used to create the reduced message types in the sender and receiver system (SAP ERP or SAP S/4HANA).
/SPE/R_DEC_EWM_ALE_CUST	This report is used to maintain ALE customizing in the sender system (SAP ERP or SAP S/4HANA).
/SCWM/R_DEC_EWM_ALE_SETUP	This report is used to maintain ALE customizing in the receiver system (decentralized EWM).

Note

The necessary steps for the ALE customizing which are performed by the reports can also be done manually. For additional information about the manual steps for the ALE customizing see chapter 6.2.

6.1.1 Creating Reduced Message Types in ERP System

You use the report /SPE/R_DEC_EWM_REDUCE_MESSTYPE to create reduced message types for materials, Customers, Vendors and Carriers in the SAP ERP system.

Procedure

Carry out the following steps in the SAP ERP client (sender system).

1. In SAP ERP, call transaction **SE38** (ABAP Editor)
2. Enter Program **/SPE/R_DEC_EWM_REDUCE_MESSTYPE**
3. Press *Execute (F8)*
4. On the next screen, use the default values or choose your own values:
    a. Select Reduce Material Message Type
    b. Enter Reduce Type for MATMAS, for example ZEWMMATMAS
    c. Enter Short Text, for example Reduced MATMAS for decentralized EWM
    d. Select Reduce Vendor Message Type
    e. Enter Reduce Type for CREMAS, for example ZEWMCREMAS
    f. Enter Short Text, for example Reduced CREMAS for decentralized EWM
    g. Select Reduce Customer Message Type
    h. Enter Reduce Type for DEBMAS, for example ZEWMDEBMAS
    i. Enter Short Text, for example Reduced DEBMAS for decentralized EWM
5. Select *Check and Perform Customizing*
6. Press *Execute (F8)*

Note

For more information, see the Application Help of the report.

Note

If you use DRF framework for the distribution of customers, vendors and carriers, you do not need to create the reduced message types for CREMAS and DEBMAS.

6.1.2 Creating Reduced Message Types in Decentralized EWM System

You use the report **/SPE/R_DEC_EWM_REDUCE_MESSTYPE** to create reduced message types for Materials, Customers, Vendors and Carriers in the decentralized EWM system.

> Note
>
> Instead of creating the reduced message types in the receiving EWM system with the report **/SPE/R_DEC_EWM_REDUCE_MESSTYPE** you can also ask your system administrator to transport the reduced message types to the decentralized EWM system by means of a transport request (see chapter 6.3.4).

Procedure

1. In SAP ERP, call transaction **SE38** (ABAP Editor)
2. Enter Program **/SPE/R_DEC_EWM_REDUCE_MESSTYPE**
3. Press *Execute (F8)*
4. On the next screen, use the default values or choose your own values
    a. Set Reduce Material Message Type
    b. Enter Reduce Type for MATMAS, for example ZEWMMATMAS
    c. Enter Short Text, for example Reduced MATMAS for decentralized EWM
    d. Set Reduce Vendor Message Type
    e. Enter Reduce Type for CREMAS, for example ZEWMCREMAS
    f. Enter Short Text, for example Reduced CREMAS for decentralized EWM
    g. Set Reduce Customer Message Type
    h. Enter Reduce Type for DEBMAS, for example ZEWMDEBMAS
    i. Enter Short Text, for example Reduced DEBMAS for decentralized EWM
5. Select *Check and Perform Customizing*
6. Press *Execute (F8)*

> Note
>
> For more information, see the Application Help of the report.

> Note
>
> If you use DRF framework for the distribution of customers, vendors and carriers, you do not need to create the reduced message types for CREMAS and DEBMAS.

6.1.3 Creating ALE Configuration in ERP System

You use the report **/SPE/R_DEC_EWM_ALE_CUST** to create ALE configuration in the SAP ERP system.

Procedure

1. In SAP ERP, call transaction **SE38 (ABAP Editor)**
2. Enter Program **/SPE/R_DEC_EWM_ALE_CUST**
3. Press *Execute (F8)*
4. On the next screen, use the default values or choose your own values:
    a. Enter the name of your EWM System, for example EWMCLNT001
    b. Enter the name of your Reduce Type for MATMAS, for example ZEWMMATMAS

c. Enter the name of your Reduce Type for CREMAS, for example ZEWMCREMAS
d. Enter the name of your Reduce Type for DEBMAS, for example ZEWMDEBMAS
e. Select Change Pointer Settings option, for example Activate Change Pointers
f. Set Maintain Distribution Model
g. Enter a name for the Distribution Model, for example EWMCLNT001

5. Select appropriate filters for the materials, vendors and customers you want to distribute to the decentralized EWM system
6. In the area Further Process Steps:
   a. Set Create Port for IDocs
   b. Set Maintain Partner Profiles and Outbound Parameters
   c. Select Immediate IDoc Mode or Collective IDoc Mode
   d. Set Create Conversion Rules for Material Maintenance Status
   e. Enter a Conversion Rule Name Prefix, for example ZEWM_PSTAT
   f. Set Activate Enhanced Filtering and Transfer Options
7. Select *Check and Perform Customizing*
8. Press *Execute (F8)*

Note

For more information, see the Application Help of the report.

Note

If you use DRF framework for the distribution of customers, vendors and carriers, you do not need to create the ALE configuration in ERP system for the reduced message types for CREMAS and DEBMAS.

6.1.4 Creating ALE Configuration in decentralized EWM System

You use the report **/SCWM/R_DEC_EWM_ALE_SETUP** to create ALE configuration in the decentralized EWM system.

Procedure

1. In SAP EWM, call transaction **SE38 (ABAP Editor)**
2. Enter Program **/SCWM/R_DEC_EWM_ALE_SETUP**
3. Press *Execute (F8)*
4. On the next screen, use the default values or choose your own values:
   a. Enter the name of your ERP System, for example ERPCLNT001
   b. Enter the name of your Reduce Type for MATMAS, for example ZEWMMATMAS
   c. Enter the name of your Reduce Type for CREMAS, for example ZEWMCREMAS
   d. Enter the name of your Reduce Type for DEBMAS, for example ZEWMDEBMAS
5. In the area Further Process Steps:
   a. Set Maintain Partner Profiles and Outbound Parameters
   b. Select Immediate IDoc Mode or Collective IDoc Mode
6. Select *Check and Perform Customizing*
7. Press *Execute (F8)*

> **Note**
>
> For more information, see the Application Help of the report.

> **Note**
>
> If you use DRF framework for the distribution of customers, vendors and carriers, you do not need to create the ALE configuration in EWM system for the reduced message types for CREMAS and DEBMAS.

6.2 Creating Port for IDoc Processing in Sender System

You use this procedure to create a port for the receiver system in the sender system.

> **Note**
>
> This procedure is supported by the report **/SPE/R_DEC_EWM_ALE_CUST** and does not have to be executed manually if you use the report **/SPE/R_DEC_EWM_ALE_CUST**.

Procedure

1. In SAP ERP, call transaction **WE21**(*Ports in IDoc Processing*)
2. Select the port type *Transactional RFC* and press *Create*.
3. Choose *own port name* and enter a port name for the EWM client, for example **EWMCLNT001**.
4. On the next screen, enter the RFC destination, for example **EWMCLNT001** and select the processing option *Use SAP Release of Receiving System in Control Record*.
5. Save the entry. You will be prompted to enter a transport request for the new message type.

6.3 Creating Reduced Message Types

You use this procedure to select segments and fields of the basic types for master data that you want to distribute. 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 distribute. 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.

6.3.1 Creating a Reduced Message Type for MATMAS

You use this procedure to create a reduced message type based on the basis message type MATMAS for the distribution of material master data to decentralized EWM

> **Note**
>
> This procedure is supported by the report **/SPE/R_DEC_EWM_REDUCE_MESSTYPE** and does not have to be executed manually if you use the report **/SPE/R_DEC_EWM_REDUCE_MESSTYPE**.

> **Note**
>
> The list of segments and fields mentioned below is just a proposal. The list of segments and fields may differ regarding for which release you want to create the reduced message type. It shows a set of fields EWM 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 decentralized EWM.

Procedure

1. In SAP ERP, call transaction **BD53** (*IDoc Reduction Maintenance*).
2. Enter a name for the reduced message type, for example **ZEWMMATMAS** and press *Create*.
3. Enter **MATMAS** as message type reference and press *Continue*
4. Enter a description for the reduced message type, for example *Reduced MATMAS (Material) for decentral EWM* and press *Continue*.
5. On the next screen, select the following segments:
    a. E1MARAM (already selected as it is mandatory)
    b. E1MARA1
    c. E1MAKTM (already selected as it is mandatory)
    d. E1MARCM
    e. E1MARMM with sub-segment E1MEANM
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 distributed to decentralized EWM:

Fields from Segment E1MARAM	Description
MSGFN (mandatory)	Function
MATNR (mandatory)	Material Number
ERSDA	Created On
LAEDA	Date of Last Change
PSTAT (mandatory)	Maintenance status
LVORM (mandatory)	Flag Material for Deletion at Client Level
MTART (mandatory)	Material Type
MBRSH (mandatory)	Industry Sector
MATKL (mandatory)	Material Group
MEINS (mandatory)	Base Unit of Measure
BSTME	Purchase Order Unit of Measure
GROES (mandatory)	Size/dimensions
WRKST (mandatory)	Basic material (basic constituent of a material) - obsolete
BRGEW	Gross Weight
NTGEW	Net Weight
GEWEI	Weight Unit
VOLUM	Volume
VOLEH	Volume Unit
BEHVO	Container requirements
RAUBE	Storage conditions
TEMPB	Temperature conditions indicator
TRAGR	Transportation Group
STOFF	Hazardous material number
SPART (mandatory)	Division
ETIAR	Label type
ETIFO	Label form
EAN11	International Article Number (EAN/UPC)
NUMTP	Category of International Article Number (EAN)
LAENG	Length
BREIT	Width
HOEHE	Height
MEABM	Unit of Dimension for Length/Width/Height
PRDHA	Product Hierarchy
ERGEW	Allowed packaging weight
ERGEI	Weight Unit
ERVOL	Allowed packaging volume
ERVOE	Volume Unit
GEWTO	Excess Weight Tolerance for Handling unit

VOLTO	Excess Volume Tolerance of the Handling Unit
KZKFG	Configurable Material
XCHPF	Batch management requirement indicator
VHART	Packaging Material Type
FUELG	Maximum level (by volume)
STFAK	Stacking factor
MAGRV	Material Group: Packaging Materials
BEGRU	Authorization Group
QMPUR	QM in Procurement is Active
MHDRZ	Minimum Remaining Shelf Life
MHDHB	Total shelf life
MHDLP	Storage percentage
VPSTA (mandatory)	Maintenance status of complete material
KZUMW	Environmentally Relevant
KOSCH	Product allocation determination procedure
PROFL	Dangerous Goods Indicator Profile
KZGVH	Packaging Material is Closed Packaging
COMPL	Material completion level
RDMHD	Rounding rule for calculation of SLED
IPRKZ	Period Indicator for Shelf Life Expiration Date
MTPOS_MARA	General item category group
MATFI	Material Is Locked
SATNR	Cross-Plant Configurable Material
SLED_BBD	Expiration Date
MATNR_LONG	Material Number (40 Characters, needed f. technical reasons)

Fields from Segment E1MARA1	Description
HUTYP_DFLT	Standard HU Type
PILFERABLE	Pilferable
WHSTC	Warehouse Storage Condition
WHMATGR	Warehouse Material Group
HNDLCODE	Handling Indicator
HAZMAT	Relevant for Hazardous Substances
HUTYP	Handling Unit Type
TARE_VAR	Variable Tare Weight
MAXC	Maximum Allowed Capacity of Packaging Material
MAXC_TOL	Overcapacity Tolerance of the Handling Unit
MAXL	Maximum Packing Length of Packaging Material
MAXB	Maximum Packing Width of Packaging Material
MAXH	Maximum Packing Height of Packaging Material
MAXDIM_UOM	Unit of Measure for Maximum Packing Length/Width/Height
HERKL	Country of Origin of Material (Non-Preferential Origin)
MFRGR	Material freight group
QQTIME	Quarantine Period
QQTIMEUOM	Time Unit for Quarantine Period
QGRP	Quality Inspection Group
SERIAL	Serial Number Profile
PS_SMARTFORM	Form Name
CWQPROC	EWM CW: Catch Weight Profile for Entering CW Quantity
CWQTOLGR	EWM-CW: Catch Weight Tolerance Group for EWM
ADPROF	Adjustment Profile
SCM_MATURITY_DUR	Maturation Time
SCM_SHLF_LFE_REQ_MAX	Required Maximum Shelf Life
SCM_PUOM	Preferred Alternative UoM for Warehouse Operations
SCM_KITCOMP	Product for Kit-to-Order

Fields from Segment E1MAKTM	Description
MSGFN (mandatory)	Function
SPRAS (mandatory)	Language Key
MAKTX (mandatory)	Material Description

Fields from Segment E1MARCM	Description
MSGFN (mandatory)	Function
WERKS (mandatory)	Plant
PSTAT (mandatory)	Maintenance status
LVORM	Deletion Indicator
SSQSS	QA Control Key
XCHPF	Batch management requirement indicator
SERNP	Serial Number Profile
PRFRQ	Interval Until Next Recurring Inspection

Fields from Segment E1MARAMM	Description
MSGFN (mandatory)	Function
MEINH (mandatory)	Alternative Unit of Measure for Stockkeeping Unit
UMREZ	Numerator for Conversion to Base Units of Measure
UMREN	Denominator for conversion to base units of measure
EAN11	International Article Number (EAN/UPC)
NUMTP	Category of International Article Number (EAN)
LAENG	Length
BREIT	Width
HOEHE	Height
MEABM	Unit of Dimension for Length/Width/Height
VOLUM	Volume
VOLEH	Volume Unit
BRGEW	Gross Weight
GEWEI	Weight Unit
GTIN_VARIANT	Global Trade Item Number Variant
/CWM/TY2TQ	Type of Parallel Unit of Measure
NEST_FTR	Remaining Volume after Nesting (in Percentage)
MAX_STACK	Maximum Stacking Factor
CAPAUSE	Capacity Usage

Fields from Segment E1MEANM	Description
MSGFN (mandatory)	Function
MEINH (mandatory)	Unit of Measure for Display
LFNUM (mandatory)	Consecutive Number
EAN11	International Article Number (EAN/UPC)
EANTP	Category of International Article Number (EAN)
HPEAN	Indicator: Main EAN

6.3.2 Creating a Reduced Message Type for DEBMAS

You use this procedure to create a reduced message type based on the basis message type DEBMAS for the distribution of customer master data to decentralized EWM.

> **Note**
>
> This procedure is supported by the report **/SPE/R_DEC_EWM_REDUCE_MESSTYPE** and does not have to be executed manually if you use the report **/SPE/R_DEC_EWM_REDUCE_MESSTYPE.**

> **Note**
>
> If you use DRF framework for the distribution of customers, vendors and carriers, you do not need to create the reduced message types for DEBMAS.

> **Note**
>
> The list of segments and fields mentioned below is just a proposal. The list of segments and fields may differ regarding for which release you want to create the reduced message type. It shows a set of fields EWM 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 decentralized EWM.

Procedure

1. In SAP ERP, call transaction **BD53** (*IDoc Reduction Maintenance*).
2. Enter a name for the reduced message type, for example **ZEWMDEBMAS** 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 decentral EWM* and press *Continue*.
5. On the next screen, select the following segments:
    a. E1KNA1M (already selected as it is mandatory)
    b. 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 distributed to decentralized EWM:

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

6.3.3 Creating a Reduced Message Type for CREMAS

You use this procedure to create a reduced message type based on the basis message type CREMAS for the distribution of vendor and carrier master data to decentralized EWM.

> **Note**
>
> This procedure is supported by the report **/SPE/R_DEC_EWM_REDUCE_MESSTYPE** and does not have to be executed manually if you use the report **/SPE/R_DEC_EWM_REDUCE_MESSTYPE.**

> **Note**
>
> If you use DRF framework for the distribution of customers, vendors and carriers, you do not need to create the reduced message types for CREMAS.

> **Note**
>
> The list of segments and fields mentioned below is just a proposal. The list of segments and fields may differ regarding for which release you want to create the reduced message type. It shows a set of fields EWM 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 decentralized EWM.

Procedure

1. In SAP ERP, call transaction **BD53** (*IDoc Reduction Maintenance*).
2. Enter a name for the reduced message type, for example **ZEWMCREMAS** 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 decentral EWM* and press *Continue*.
5. On the next screen, select the following segments:
   a. E1LFA1M (already selected as it is mandatory)
   b. 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 distributed to decentralized EWM:

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

6.3.4 Transporting Reduced Message Types to Decentralized EWM

After activation, ask your system administrator to transport the reduced message types to the decentralized EWM system by means of a transport request.

> Note
>
> This procedure is supported by the report **/SPE/R_DEC_EWM_REDUCE_MESSTYPE** and does not have to be executed if you use the report **/SPE/R_DEC_EWM_REDUCE_MESSTYPE** in the EWM system.

6.4 Defining Data Distribution Model and Distributing Views

You use this procedure to define the messages in the distribution model in the sender system.

> Note
>
> This procedure is supported by the report **/SPE/R_DEC_EWM_ALE_CUST** and does not have to be executed manually if you use the report **/SPE/R_DEC_EWM_ALE_CUST**.

6.4.1 Creating New Filter Object Types

You use this procedure to define new filter object types for the reduced message types. This is only necessary if you want to make usage of one of the following enhanced filtering options.

- Filter sales organization and company code for customer message type ZEWMDEBMAS
- Filter purchase organization and company code for supplier message type ZEWMCREMAS
- Filter for storage location for material message type ZEWMMATMAS

> **Note**
>
> Skip this chapter if you do not need additional filters for the reduced message types.

> **Note**
>
> If you use DRF framework for the distribution of customers, vendors and carriers, you do not need to create filter object types for the reduced message types for DEBMAS and CREMAS.

> **Important**
>
> Since the fields mentioned above are not part of the reduced message types, they are not be taken into consideration by standard ALE mechanism. In order to achieve that the filtering of object types is supported for these specific fields, it has to be activated separately. See chapter 6.8

In the following it is shown how the filters mentioned above can be added.

Procedure

Carry out the following steps in an SAP ERP client allowing cross-client customizing changes.

1. To create a new filter object type for vendor distribution, call transaction **BD59** (*Allocation object type -> IDoc type*) in SAP ERP.
2. Enter the reduced message type for vendor distribution, for example **ZEWMCREMAS** and press *Continue*.
   Create a new entry with the data as shown in the following table:

ALE Object Type	Type	No.	Field
BUKRS (company code)	**E1LFB1M**	**1**	**BUKRS** (company code)
EKORG (purchase org.)	**E1LFM1M**	**1**	**EKORG** (purchase org.)

3. Save your entries.
4. Restart transaction **BD59** (*Allocation object type -> IDoc type*) in SAP ERP.
5. Enter the reduced message type for customer distribution, for example **ZEWMDEBMAS** and press *Continue*.
   Create a new entry with the data as shown in the following table:

ALE Object Type	Type	No.	Field
BUKRS (company code)	**E1LFB1M**	**1**	**BUKRS** (company code)
VKORG (sales org.)	**E1LFM1M**	**1**	**VKORG** (sales org.)

6. Save your entries.
7. Restart transaction **BD59** (*Allocation object type -> IDoc type*) in SAP ERP.
8. Enter the reduced message type for material distribution, for example **ZEWMMATMAS** and press *Continue*.
   Create a new entry with the data as shown in the following table:

ALE Object Type	Type	No.	Field
LGORT (storage location)	**E1MARDM**	**1**	**LGORT** (storage location)

9. Save your entries.

6.4.2 Creating Data Distribution Model

You use this procedure to create a data distribution model.

Procedure

1. In SAP ERP, call transaction **BD64** (*Maintenance of Distribution Model*).
2. Choose *Distribution Model* → *Switch Processing Mode*.
3. To create a new model view, press *Create Model View*.
   Enter the data as shown in the following table:

Field	Value
Short Text	For example, **EWMCLNT001: decentralized EWM** (replace EWMCLNT001 with the logical system name for decentralized EWM)
Technical Name	For example, **EWMCLNT001** (replace EWMCLNT001 with the logical system name for decentralized EWM)

   Press *Continue*.
4. To add message types to the model, select the new model on the list and press *Add Message Type*.
   For each message type, enter the data as shown in the following table:

Field	Value
Sender	<ERP logical system>, for example, **ERPCLNT001**
Receiver	<EWM logical system>, for example, **EWMCLNT001**
Message Type	See list of message types below

   The following message types are needed:
   - Reduced message type for vendors, for example ZEWMCREMAS
   - Reduced message type for customers, for example ZEWMDEBMAS
   - Reduced message type for materials, for example ZEWMMATMAS

   If you use batches, you also need the following message types:
   - CHRMAS: Class system: Characteristics master
   - CLSMAS: Class system: Classes master
   - CLFMAS: Class system: Classification master

   > **Note**
   >
   > If you use DRF framework for the distribution of customers, vendors and carriers, you do not need to create the distribution model for the reduced message types for DEBMAS and CREMAS.

5. Batches must be distributed using business object “Batch” and method “SaveReplica”. To add the transfer of batches to the distribution model, select the new model on the list and press Add BAPI (technically ALE/IDOC is used but as business objects/methods are used, the corresponding message type BATMAS cannot be entered directly but the BAPI method has to be used).
   Enter the data as shown in the following table:

Field	Value
Sender/client	<ERP logical system>, for example, **ERPCLNT001**
Receiver/server	<EWM logical system>, for example, **EWMCLNT001**
Obj. Name/Interface	**Batch**
Method	**SaveReplica**

6. Addresses (Company Addresses) must be distributed using business object “AddressOrg” and method “SaveReplica”. To add the transfer of Addresses to the distribution model, select the new model on the list and press Add BAPI (technically ALE/IDOC is used but as business objects/methods are used, the corresponding message type ADRMAS cannot be entered directly but the BAPI method has to be used). Enter the data as shown in the following table:

Field	Value
Sender/client	<ERP logical system>, for example, **ERPCLNT001**
Receiver/server	<EWM logical system>, for example, **EWMCLNT001**
Obj. Name/Interface	**AddressOrg**
Method	**SaveReplica**

> **Important**
>
> In this guide only the distribution of Company Addresses is described. Other addresses like Private Addresses (ADR2MAS) or Contact Person Addresses (ADR3MAS) are not contained.

7. To create a filter group for the reduced message type for materials, for example ZEWMMATMAS, double-click *No filter set* or *Data Filter Active* under message type ZEWMMATMAS in the tree, then press *Create Filter Group* on the dialog box.

   You can, for example, filter the materials to be distributed to decentralized EWM by plant. For this purpose, double-click filter object type *Plant* and enter the plants that will be linked to a decentralized EWM warehouse.

   You can also filter the materials by material type or material group.

   > **Important**
   >
   > Filters defined for child segments (for example the plant filter in this step) will only prevent the distribution of the child segment (E1MARCM in case of plant filter) but not of the header segment (E1MARAM). If you want to filter the distribution of the complete material master by plant (or by storage location), you must activate the enhanced settings as described in chapter 6.8.

8. Press *Continue*.
9. To create a filter group for reduced message type for vendors, for example ZEWMCREMAS, double-click *No filter set* or *Data Filter Active* under message type ZEWMCREMAS in the tree, then press *Create Filter Group* on the dialog box.

   You can, for example, filter the vendors and carriers (vendors who can be used as forwarding agents and will be created in the business partner role *Carrier* in EWM) to be distributed to decentralized EWM by account group. For this purpose, double-click filter object type *Account group,* and enter the account groups you use for vendors and carriers working with the decentralized warehouse, for example `0005` and `LIEF`.

   Press *Continue*.
10. To create a filter group for reduced message type for customers, for example ZEWMDEBMAS, double-click *No filter set* or *Data Filter Active* under message type ZEWMDEBMAS in the tree, then press *Create Filter Group* on the dialog box.

    You can, for example, filter the customers to be distributed to decentralized EWM by account group. For this purpose, double-click filter object type *Account group,* and enter the account groups you use for customers working with the decentralized warehouse, for example `KUNA`.

    Press *Continue*.
11. To create filter groups for BAPI method AddressOrg.SaveReplica (addresses), double-click *Receiver determination* under BAPI *AddressOrg.SaveReplica* in the tree, then press *Create Filter Group* on the dialog box.

    In the dialog box, create two filter groups. In the one group, only select the message type ZEWMCREMAS (use the entry with technical name “Address owner object ID” as multiple entries for the same message type may be shown). In the second group, only select the message type ZEWMDEBMAS (use the entry with technical name “Address owner object ID” as multiple entries for the same message type may be shown). Two groups are needed to achieve an OR expression between both message types.

> **Important**
>
> If you use filter groups for addresses, it is necessary to create both filter groups defined in step 11. If you use only one group no addresses are sent at all, since both selections are combined with an AND selection.

12. To create a filter group for BAPI method Batch.SaveReplica (batches), double-click *Receiver determination* under BAPI *Batch.SaveReplica* in the tree, then press *Create Filter Group* on the dialog box.

    You can re-use the same filter logic defined for message type ZEWMMATMAS for filtering batches via dependency. For this purpose, select attribute *Dependent Distribution* for message type ZEWMMATMAS in the same dialog box.

    Press *Continue*.
13. To create a filter group for message type CLSMAS (classes), double-click *No filter set* or *Data Filter Active* under message type CLSMAS in the tree, then press *Create Filter Group* on the dialog box.

    Double-click filter object type *Class Type* and enter the class types `022` and `023` for batch classes (depending on your system settings the value help may not show both values. You still can enter both values).

    Press *Continue*.
14. To create a filter group for message type CLFMAS (classifications), double-click *No filter set* or *Data Filter Active* under message type CLFMAS in the tree, then press *Create Filter Group* on the dialog box.

    Double-click filter object type *Class Type* and enter the class types `022` and `023` for batch classes (depending on your system settings the value help may not show both values. You still can enter both values).

    To ensure that only classifications for existing materials are transferred, select attribute *Dependent Distribution* for message type ZEWMMATMAS in the same dialog box. If you use *Dependent Distribution* for message ZEWMMATMAS, you have to implement SAP-Note 2896540.

    Press *Continue*.
15. Save the distribution model.
16. Choose *Edit* → *Model view* → *Distribute* to transport the distribution model to other systems.

6.5 Defining Partner Profile

You can generate the partner profile within transaction BD64 automatically or create it using transaction WE20 manually. You use this procedure to create the partner profile manually.

> **Note**
>
> This procedure is supported by the report **`/SPE/R_DEC_EWM_ALE_CUST`** and does not have to be executed manually if you use the report **`/SPE/R_DEC_EWM_ALE_CUST`**.

6.5.1 Creating Partner Profile in Sender System Manually

You use this procedure to create a partner profile in the sender system (SAP ERP).

Procedure

1. In SAP ERP, call transaction **`WE20`** (*Partner Profiles*).
2. Press *Create.*

   Enter the data as shown in the following table:

Field	Value
Partner No.	`<EWM logical system>`, for example, **`EWMCLNT001`**
Partner Type	**`LS`**

Ty. (Post processing)	`US (User)`
Agent	<RFC User>
Language	EN

3. Save the profile.
4. Add a new line to create outbound parameters for message type CHRMAS.

> **Note**
>
> The following values are exemplary. In terms of performance and productive reasons you may use different values. For more information see the IDoc documentation about performance in Appendix A.

Enter the data as shown in the following table:

Field	Value
Message Type	**CHRMAS**
Receiver Port	`<EWM port>`, for example, **EWMCLNT001**
Output Mode	`Pass IDoc Immediately`
Basic Type	Use value help and select the last entry from the list, for example `CHRMAS05`
Package Size	**100**
Cancel Processing After Syntax Error	**X**

5. Save your data.
6. Repeat steps 4 and 5 for the following message types:
   a. CLSMAS
   b. CLFMAS
   c. ADRMAS
   d. Reduced message type for materials, for example ZEWMMATMAS
   e. Reduced message type for vendors, for example ZEWMCREMAS (not required if you use DRF replication)
   f. Reduced message type for customers, for example ZEWMDEBMAS (not required if you use DRF replication)
   g. BATMAS

6.5.2 Creating Partner Profile in Receiver System Manually

You use this procedure to create a partner profile in the receiver system (decentralized EWM).

> **Note**
>
> This procedure is supported by the report **/SCWM/R_DEC_EWM_ALE_SETUP** and does not have to be executed manually if you use the report **/SCWM/R_DEC_EWM_ALE_SETUP**.

Procedure

1. In decentralized EWM, call transaction **WE20** (*Partner Profiles*).
2. Press *Create.*
   Enter the data as shown in the following table:

Field	Value
Partner No.	<ERP logical system>, for example, **ERPCLNT001**
Partner Type	**LS**
Ty. (Post processing)	US (User)
Agent	<RFC User>
Language	EN

3. Save the profile.
4. Add a new line to create inbound parameters for message type CHRMAS.

> **Note**
>
> The following values are exemplary. In terms of performance and productive reasons you may use different values. For more information see the IDoc documentation about performance in Appendix A.

Enter the data as shown in the following table:

Field	Value
Message Type	**CHRMAS**
Process Code	**CHRM**
Cancel Processing After Syntax Error	**X**
Trigger Immediately	**X**

5. Save your data.
6. Repeat steps 4 and 5 for the following message types:
   a. CLSMAS with process code CLSM
   b. CLFMAS with process code CLFM
   c. ADRMAS with process code BAPI
   d. Reduced message type for materials, for example ZEWMMATMAS, with process code MATM
   e. Reduced message type for vendors, for example ZEWMCREMAS, with process code CRE1 (not required if you use DRF replication)
   f. Reduced message type for customers, for example ZEWMDEBMAS, with process code DEBM (not required if you use DRF replication)
   g. BATMAS with process code BAPI

6.6 Converting Data Between Sender and Receiver

Due to the reduction of the message type ZEWMMATMAS, only a subset of all fields and maintained views are transferred to decentralized EWM. This can lead to errors during MATMAS inbound processing in the receiver system as the system detects that a view should be maintained but the relevant fields are not transferred. Field PSTAT (Maintenance Status) of segments E1MARAM and E1MARCM as well as the field VPSTA of segment E1MARAM defines which views of a material are maintained in the sender system.

To avoid this, you need to adjust the values of fields PSTAT and VPSTA (Maintenance Status of complete material) to be transferred.

This can be done by using ALE conversion rules. ALE conversion rules are highly flexible and offer various options. In the following example two possible options are shown.

You have two options to adjust the transferred field values:

- Set a fixed value using conversion rules. This can be used if the materials have the same views maintained.

- Set flexible values. As the material views often depend on the material types, you usually cannot use a common fixed value. In this case, a flexible value based on the specific maintenance status has to be set. In this example an EWM specific conversion routine is used to set a flexible value.

In this example, a combination is done also to illustrate both options:

- For MARC-PSTAT, a fixed value is set (since the possible combinations which can occur are less complex)
- For MARA-PSTAT and MARA-VPSTA a conversion routine with a specific implementation is used.

Conversion rules also provide many other options beyond this example. In customer projects, choose the option fitting to your requirements.

> **Important**
>
> For the following configuration steps, it is assumed that you are using the reduced message types and fields which are introduced in chapter 6.3. If you are using further segments or fields, you may need to adjust the conversion rules or using your own conversion exit. Without a correct maintenance status, fields may not get transferred correctly.
> See FAQ-note 2145027 for further details about the relevance and usage of the maintenance status.

6.6.1 Converting Data Using Conversion Rules with fixed value

You use this procedure to convert data between sender and receiver system using conversion rules and a fixed value.

> **Note**
>
> This procedure is supported by the report **/SPE/R_DEC_EWM_ALE_CUST** and does not have to be executed manually if you use the report **/SPE/R_DEC_EWM_ALE_CUST.**

Procedure

Carry out the following steps in SAP ERP:

1. Create a conversion rule in Customizing for *SAP NetWeaver* under *Application Server → IDoc Interface / Application Link Enabling (ALE) → Modelling and Implementing Business Processes → Converting Data Between Sender and Receiver → Create Rule*.

   Enter the data as shown in the following table:

Field	Value
Conversion rule	Enter a name for conversion rule, for example **ZEWM_PSTAT_MARC**
Description	**Set constant for PSTAT (MARC)**
IDoc segment name	**E1MARCM**

   Save your entries.

2. Maintain the conversion rule in Customizing for *SAP NetWeaver* under *Application Server → IDoc Interface / Application Link Enabling (ALE) → Modelling and Implementing Business Processes → Converting Data Between Sender and Receiver → Maintain Rules*.

   Choose *Maintain* and enter constant Q (Quality Management View) for field PSTAT.

   Save your entries.

3. Assign the conversion rule to the reduced message type, for example ZEWMMATMAS, in Customizing for *SAP NetWeaver* under *Application Server → IDoc Interface / Application Link Enabling (ALE) → Modelling and Implementing Business Processes → Converting Data Between Sender and Receiver → Assign Rule to Message Type*.

   Enter reduced message type, for example **ZEWMMATMAS**, and press *Continue*.

   Create a new entry and enter the data as shown in the following table:

Field	Value
Ty, (Sender)	**LS**
Sender	Enter sender logical system **ERPCLNT001**
Ty, (Receiver)	**LS**
Receiver	Enter receiver logical system (decentralized EWM) **EWMCLNT001**
Segment Type	**E1MARCM**
Conversion Rule	Enter name of conversion rule from step 1, for example **ZEWM_PSTAT_MARC**

Save your entry.

6.6.2 Converting Data Using Conversion Rules with flexible value

You use this procedure to convert data between sender and receiver system using conversion rules and a conversion routine to be able to assign flexible values.

> Note
>
> This procedure is supported by the report **/SPE/R_DEC_EWM_ALE_CUST** and does not have to be executed manually if you use the report **/SPE/R_DEC_EWM_ALE_CUST**.

> Example
>
> For this example, the fields PSTAT and VPSTA of reduced message type ZEWMMATMAS are used. Each of these fields contains a character string where each letter defines a view in the material maintenance. (for example, K = Basic data, L = Storage, E = Purchasing, V = Sales, Q = Quality Management). The fields PSTAT and VPSTA should contain at most the letters “KLEVQ”. For a material for which less views are maintained, the string contains less letters. Consider a material for which the “S” view is maintained. Since this view is not part of the reduced message type, it is removed when the fields PSTAT/VPSTA are transferred. The logic to compute the minimum amount of views which are needed to transfer the material(based on the reduced message type ZEWMMATMAS) is implemented in conversion exit WMPS0.

Procedure

Carry out the following steps in SAP ERP:

1. Create a conversion rule in Customizing for *SAP NetWeaver* under *Application Server* → *IDoc Interface / Application Link Enabling (ALE)* → *Modelling and Implementing Business Processes* → *Converting Data Between Sender and Receiver* → *Create Rule*.

   Enter the data as shown in the following table:

Field	Value
Conversion rule	Enter a name for conversion rule, for example **ZEWM_PSTAT_MARA**
Description	Use conversion exit for PSTAT/VPSTA of table MARA
IDoc segment name	**E1MARAM**

   Save your entries.

2. Maintain the conversion rule in Customizing for *SAP NetWeaver* under *Application Server → IDoc Interface / Application Link Enabling (ALE) → Modelling and Implementing Business Processes → Converting Data Between Sender and Receiver → Maintain Rules*.
    a. Select the created conversion rule and choose Maintain
    b. Select the field PSTAT and double click on the entry.
    c. In the new screen enter the data as shown in the following table

Field	Value
Sender field	**PSTAT**
Special conversion routine	**WMPSO**

    Save your entries.
    d. Go back and repeat this procedure for the field VPSTA, by using the following data

Field	Value
Sender field	**VPSTA**
Special conversion routine	**WMPSO**

    Save your entries.
3. Assign the conversion rule to the reduced message type, for example ZEWMMATMAS, in Customizing for *SAP NetWeaver* under *Application Server → IDoc Interface / Application Link Enabling (ALE) → Modelling and Implementing Business Processes → Converting Data Between Sender and Receiver → Assign Rule to Message Type*.

    Enter reduced message type, for example **ZEWMMATMAS**, and press *Continue*.

    Create a new entry and enter the data as shown in the following table:

Field	Value
Ty, (Sender)	**LS**
Sender	Enter sender logical system **ERPCLNT001**
Ty, (Receiver)	**LS**
Receiver	Enter receiver logical system (decentralized EWM) **EWMCLNT001**
Segment Type	**E1MARAM**
Conversion Rule	Enter name of conversion rule from step 1, for example **ZEWM_PSTAT_MARA**

    Save your entry.

6.7 Activating Change Pointers in Sender System

Change pointers are used for logging changes of master data. Change pointers must be activated in the system to be used. The loggings can be used to created IDoc for a delta transfer.

6.7.1 Activating Change Pointers at Client Level

You use this procedure to activate change pointers at client level.

Note

This procedure is supported by the report **/SPE/R_DEC_EWM_ALE_CUST** and does not have to be executed manually if you use the report **/SPE/R_DEC_EWM_ALE_CUST**.

Procedure

Activate change pointers at client level in Customizing for *SAP NetWeaver* under *Application Server → IDoc Interface / Application Link Enabling (ALE) → Modelling and Implementing Business Processes → Master Data Distribution → Replication of Modified Data → Activate Change Pointers - Generally* in SAP ERP.

6.7.2 Activating Change Pointers per Message Type

You use this procedure to activate change pointers for all message types assigned to your distribution model. The change pointers are needed to log changes to the master data and distribute them to the receiver system.

Note

This procedure is supported by the report **/SPE/R_DEC_EWM_ALE_CUST** and does not have to be executed manually if you use the report **/SPE/R_DEC_EWM_ALE_CUST**.

Procedure

Carry out the following steps in SAP ERP:

1. Activate change pointers for the following reduced message types:
   - Reduced message type for vendors, for example ZEWMCREMAS (not required if you use DRF replication)
   - Reduced message type for customers, for example ZEWMDEBMAS (not required if you use DRF replication)
   - Reduced message type for materials, for example ZEWMMATMAS

   For this purpose, call transaction BD53, enter a reduced message type, and press *Activate change pointers*.

2. Activate change pointers for the following message types in Customizing for *SAP NetWeaver* under *Application Server → IDoc Interface / Application Link Enabling (ALE) → Modelling and Implementing Business Processes →* Master Data Distribution *→ Replication of Modified Data → Activate Change Pointers for Message Types*:
   - CHRMAS: Class system: Characteristics master
   - CLSMAS: Class system: Classes master
   - CLFMAS: Class system: Classification master
   - BATMAS: Batch
   - ADRMAS: Address

   Important

   The activation of change pointers per message type creates entries for the fields of the message type in another table. For batches (message type BATMAS) it might happen that an entry for the batch status is missing as this depends on the setup of the system whether batch status management is activated or not. To verify this, start transaction BD52 for message type BATMAS and check that an entry exists for object CHARGE, table name MCHA, field name ZUSTD.

6.7.2.1 Extension of the Change Pointers of Message Types

You use this procedure to extend the change pointers for the reduced message types. This is only necessary if you want to make usage of one of the following enhanced filtering options.

- Filter sales organization and company code for customer message type ZEWMDEBMAS
- Filter purchase organization and company code for supplier message type ZEWMCREMAS
- Filter for storage location for material message type ZEWMMATMAS

> **Note**
>
> Skip this chapter if you do not need additional filters for the reduced message types.

> **Note**
>
> If you use DRF framework for the distribution of customers, vendors and carriers, you do not need to extend the change pointers for the reduced message types for DEBMAS and CREMAS.

> **Note**
>
> This procedure is supported by the report **/SPE/R_DEC_EWM_ALE_CUST** and does not have to be executed manually if you use the report **/SPE/R_DEC_EWM_ALE_CUST.**

Procedure

Carry out the following steps in SAP ERP:

1. Call transaction SM30 and enter the view V_TBD62.
2. Choose *Maintain*.
3. Enter the reduced message type for material, for example ZEWMMATMAS.
4. Add the following entries:

Object	Table name	Field Name
MATERIAL	**MARD**	**KEY**

5. Save your entries.
6. Repeat the steps for reduced message type for customers, for example ZEWMDEBMAS and add the following entries:

Object	Table name	Field Name
KRED	**LFB1**	**KEY**
KRED	**LFM1**	**KEY**

7. Save your entries.
8. Repeat the steps for reduced message type for vendors, for example ZEWMCREMAS and add the following entries:

Object	Table name	Field Name
DEBI	**KNB1**	**KEY**
DEBI	**KNVV**	**KEY**

9. Save your entries.

6.8 Additional Settings for Data Transfer

6.8.1 Activating Enhanced Settings for Data Transfer

You use this procedure to activate enhanced features for the data transfer. For example, filtering by plant/storage location (for material related IDocs) or other organizational units like purchase organization or company code (for customer/supplier). It also enables important features for transfer of batches.

Note

This procedure is supported by the report **/SPE/R_DEC_EWM_ALE_CUST** and does not have to be executed manually if you use the report **/SPE/R_DEC_EWM_ALE_CUST.**

Procedure

Carry out the following steps in SAP ERP:

Activate enhanced settings at client level in Customizing for *SAP Components*, choose *Extended Warehouse Management → Basic Settings for EWM Linkage → Settings for Decentralized EWM → Define enhanced Settings for data transfer to Decentralized EWM.*

Note

If the customizing path does not exist in the sending ERP system, you have the following option (For details see SAP note 2881061).

1. Enter transaction code SM30
2. Enter in the field "Table/View" the value "/SPE/V_EWM_DEST"
3. Press "Maintain"

1. Create a new entry and enter the data as shown in the following table:

Field	Value
Receiver	Enter receiver logical system (decentralized EWM) **EWMCLNT001**
Decentral	**X**
Material Filter	**X**
Customer Filter	**X**
Supplier Filter	**X**
Characteristics Filter	**X**

2. Save your entry.

Note

If you use DRF framework for the distribution of customers and vendors, you do not need to activate the Customer Filter and the Supplier Filter.

Note

If you activate “Material filters”, then for material filters only one filter group can be used if you want to filter by plant or storage location. Multiple filter groups for material are not supported.

6.8.2 Additional Settings if Master Data Governance (MDG) is active

You use this procedure to activate additional master data distribution settings which might be necessary if master data governance (MDG) is activated.

Important

For decentralized EWM the usage of MDG is not required. The following steps are only necessary if you have activated MDG (unintended or due to usage of other software components) and one of the below symptoms occur.

> **Note**
>
> If you are using DRF for master data transfer (see chapter 6.9), this chapter is not relevant for you.

6.8.2.1 In Sender System

This setting is only necessary if you, for example, face error MDG_BS_ECC_CUST 005 (“No DRF Customizing determined for Client...”) when you try to distribute customer data

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	Enter the name of your EWM business system, for example **`EWM_001`**
Logical System	Enter the name of the logical system of your EWM business system, for example **`EWMCLNT001`**
RFC Destination	Enter the name of the RFC Destination of your EWM business system, for example **`EWMCLNT001`**
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	159 (Customer)
System Filter	**`Inactive`**
Outp. Mode	For example, **`Object-Dependent Default`**

Field	Value
BO Type	266 (Supplier)
System Filter	**`Inactive`**
Outp. Mode	For example, **`Object-Dependent Default`**

   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 for each of your BO types

   Enter the data as shown in the following table:

Field	Value
C. Channel	**`2 Replication via IDoc`**
Key Harm	**`Not Defined`**

   Save your Entries.

6.8.2.2 In Receiver System

This setting is only necessary if you, for example, face error MDG_BS_ECC_CUST 005 (“No DRF Customizing determined for Client...”) when you try to distribute customer or vendor data. It may also occur that an exception is raised in classes CL_IM_MDG_ECC_CUSTOMER or CL_IM_MDG_ECC_VENDOR.

> **Note**
>
> For details see SAP note 2363365 (MDG-C/S: No DRF Customizing determined for Client System). As described above usage of MDG is usually not intended, therefore follow the steps in the note for “Unintended MDG Activation”. You should only deviate if you are very sure that you want to use MDG.

6.9 Transfer of Business Partners Using Data Replication Framework DRF (Only if You Do Not Use ALE Communication)

You use this process to setup the distribution of following master data from SAP ERP to decentralized EWM on SAP S/4HANA using SAP Standard technology Data Replication Framework (DRF)-with Web Services:

- Customers
- Vendors and Carriers
- Addresses

The master data distribution is always from SAP ERP to decentralized EWM. In the DRF communication settings, the sender system is always SAP ERP and the receiver system is always decentralized EWM.

> **Important**
>
> For the distribution of customers, vendors, carriers and addresses you should either use the ALE configuration setup or the DRF configuration.

> **Note**
>
> For the distribution of materials, batches and classes you must still use the ALE setup with IDOCs. You must configure the setup of IDOC communication for materials, batches and classes in parallel to the DRF configuration for customers, vendors, carriers and addresses.

> **Note**
>
> If you want to connect multiple SAP ERP or SAP S/4HANA systems with a decentralized EWM in S/4HANA with not harmonized business partners, you must use the DRF for the business partner distribution. You cannot achieve the mapping of overlapping business partner numbers with ALE distribution. For details see chapter 12.

Prerequisites

If you have a running SAP ERP system, the minimal release/patch level is EhP7 for SAP ERP 6.0. If you have a running SAP S/4HANA system, the minimal release/patch level is SAP S/4HANA 1610.

To use the DRF communication in your SAP ERP system the customer vendor integration (CVI) must be activated in the SAP ERP system.

You have configured the system connections and global settings. RFC destinations and logical systems exist both in decentralized EWM and in SAP ERP.

6.9.1 Setup Point-To-Point Communication for Webservices

You use this process to setup the point-to-point communication between your SAP ERP system and the decentralized EWM on SAP S/4HANA using SAP Standard technology Data Replication Framework (DRF)-with Web Services.

> **Important**
>
> The technical names of a few objects may contain the text MDG. This has no relation to the product SAP MDG (Master Data Governance). To set up your system it is not necessary to activate the product MDG or any Business Function starts with MDG_*. Activating such business functions could lead to unwanted consequences (e.g. additional license costs for Master Data Governance).

> **Note**
>
> There are two options to establish a connection between two systems to communicate with each other via Web Services. The communication messages can be sent and received via an

intermediate XI server or by a direct point-to-point communication between the systems. Here we describe the usage of a point to point communication.

> **Note**
>
> Using the following guide, your SAP ERP or SAP S/4HANA system plays the role of the provider system and your decentralized EWM in S/4HANA system plays the role of the receiver system.

The configuration guide can be found in the following link (you can choose the latest version of the guide next to the product's name in the dropdown list): Configuring SOA Manager for Business Partner

6.9.2 Activate Function Module for Master Data Governance Change Handling

In order to be able to transfer Business Partner changes you should activate Function Module MDG_BS_BP_OUTBOUND_DRF in the sender system only. For further details see note 2211045.

Procedure

Carry out the following steps in SAP ERP:

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.

6.9.3 Setup Data Replication Framework (DRF) for Business Partner Transfer

6.9.3.1 Define Technical Settings for Business Systems

You use this process to configure the technical business system settings for DRF transfer.

Procedure

Carry out the following steps in SAP ERP:

5. 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	Enter the name of your EWM business system, for example **EWM_001**
Logical System	Enter the name of the logical system of your EWM business system, for example **EWMCLNT001**

RFC Destination	Enter the name of the RFC Destination of your EWM business system, for example **EWMCLNT001**
Disabled for Replication	Inactive

Save your entries.

6. 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	For example, **P Pooled Out**

Save your Entries.

> **Note**
>
> In ECC ERP EhP7 and in S/4HANA system there are three options for the output mode:
> - *P – Pooled Output* (Changes of business partners are collected before they are transferred)
> - *D – Direct Output* (Changes of Business Partners will be distributed immediately)
> - *Space* – Object Dependent Default (for business partners equal to *D – Direct Output*)

7. 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.

6.9.3.2 Define Replication Model for Business Partner Transfer

You use this process to configure the Replication Model for Business Partner transfer. The replication model defines what is transferred, how it is transferred and the receiver system of the data transfer

Procedure

Carry out the following steps in SAP ERP:

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 replication model, for example **BP_EWM001**
Description	For example, **Business Partner Transfer to EWM001**

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	Enter the name of your EWM business system, for example **EWM_001**

   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** *(Package Size for Bulk Messages)*
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
   - Press button *Activate*

6.9.4 Define Filters for Business Partner Transfer with Data Replication Framework (DRF)

You use this process to configure filters for Business Partners which are distributed the EWM system.

6.9.4.1 Define Filter Criteria for Selection of Business Partners

You use this process to define filter criteria for Business Partners which are distributed the EWM system.

> **Note**
>
> The segment filters exclude business partner segments which are not required in EWM from the replication to the EWM system. With segment filters it is not possible to exclude specific fields. For field level filtering check chapter 6.9.4.2.

Procedure

Carry out the following steps in SAP ERP:

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 *DRFF)*
2. Select your Replication Model (for example **`Business Partner Transfer to EWM001`**) and press *Change*

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

Field	Value
Filter Criterion	Customer or Vendor account group
Relation	For example, **`is`**
Filter Value	Customer or vendor account group, for example **`DEBI`**

   Save your entries.

3. Press button *Show Segment Filters*
   - Select *Company Code Seg. replicated – 98602* from the list of segment filters (click on the name to navigate)
   - Press *Edit* in the new window
   - Enter the following data in *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 press button *Show Segment Filters*
   - Select *Purchasing Org Seg. replicated – 98603* from the list of segment filters (click on the name to navigate)
   - Press *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 press button *Show Segment Filters*
   - Select *Cust Company Code Seg. replicated – 98604* from the list of segment filters (click on the name to navigate)

- Press *Edit* in the new window
- Enter the following data in *Filter Criteria to Exclude Business Objects*

Field	Value
Filter Criterion	**Company Code**
Relation	**contains**
Filter Value	*****

Save your entries.

6. Navigate back to the Filter Criteria and press button *Show Segment Filters*
   - Select *Cust Sales Area Seg. replicated – 98605* from the list of segment filters (click on the name to navigate)
   - Press *Edit* in the new window
   - 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 press button *Show Segment Filters*
   - Select *BP Seg. Filter for TaxCategory – 98700* from the list of segment filters (click on the name to navigate)
   - Press *Edit* in the new window
   - 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.

> **Note**
>
> In transaction DRFOUT (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

6.9.4.2 Define Field-level Filters Using BAdIs

> **Note**
>
> The BAdIs described in this chapter are independent from the segment filters. You can use them alone and/or together (to have a more sophisticated filter set) as well.

You use this process to exclude parts of the business partner data set from the transfer. This process allows a more sophisticated filtering for complete segments and/or specific fields.

You can implement the corresponding BAdI either in the SAP ERP system (as provider system) or in the decentralized EWM in S/4HANA system (as receiver system):
in provider system. BAdI *MDG_SE_BP_BULK_REPLRQ_OUT* in Enhancement Spot *MDG_SE_SPOT_BPBUPA,*
in receiver system: BAdI *MDG_SE_BP_BULK_REPLRQ_IN* in Enhancement Spot *MDG_SE_SPOT_BPBUPA*.

In both cases the not necessary segments and/or fields can be deleted from the *OUT* structure. You can use the BAdI documentation as a reference.

You can find further information about field mapping between the database tables and transfer structures for BAdI *MDG_SE_BP_BULK_REPLRQ_OUT* among the attachments of note 2221398. In addition, in the following page, you can find information about the transfer structures for BAdI *MDG_SE_BP_BULK_REPLRQ_IN.*

6.9.5 Execute Initial Business Partner Data Transfer with Data Replication Framework (DRF)

You use this process to execute the initial transfer of Business Partners to the EWM system.

Procedure

Carry out the following steps in SAP ERP:

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 *DRFOUT)*

   Enter the following selection data

Field	Value
Replication Model	The name of your replication model, for example **`BP_EWM001`**
Outbound Implementation	**`986_3`** (Outbound Impl. for BP/REL via Services)
Replication Mode -> Initialization	*Active*
Options for Report Control -> Test Run Only	*Inactive*

   Press *Execute (F8).*

6.9.6 Execute Delta Business Partner Data Transfer with Data Replication Framework (DRF)

You use this process to execute the delta transfer of changed Business Partners to the EWM system.

Procedure

Carry out the following steps in SAP ERP:

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 *DRFOUT)*

   Enter the following selection data

Field	Value
Replication Model	The name of your replication model, for example **BP_EWM001**
Outbound Implementation	**986_3** (Outbound Impl. for BP/REL via Services)
Replication Mode -> Initialization	*Inactive*
Replication Mode -> Changes	*A*ctive
Options for Report Control -> Test Run Only	*Inactive*

   Press *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.

6.9.7 Monitoring Business Partner Transfer with Data Replication Framework (DRF)

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

6.10 Dependencies and Serialization of Master Data Distribution

There can be dependencies between the different master data objects which require that they are processed in a certain sequence.

For example, Characteristics master data needs to be created before Classes can be created. Or material master data needs to be created before batches can be created as a batch requires the material. The same applies to customer/vendor data and address data. See the following chapter for more details.

Dependencies are e.g. (in the following example Characteristics must exists before Classes can be created and Classes have to exist before Batches can be created. So, the arrow "→" indicates the sequence of the dependency):

- Characteristics → Classes (e.g. CHRMAS → CLSMAS)

- Classes → Classification (e.g. CLSMAS → CLFMAS)
- Classification of Material and Batches see following separate chapter 6.10.2 “Classifications”
- Classes → Material (e.g. CLSMAS → ZEWMMATMAS)
- Classes → Batches (e.g. CLSMAS → BATMAS)
- Materials → Batches (e.g. ZEWMMATMAS → BATMAS)
- Address → Customer/Vendor

During transfer (more precise the inbound processing) this sequence must be ensured in order to avoid the transfer of errors. Please note that data transfer and processing of the transferred data can be decoupled (e.g. in case of ALE). Therefore, the important point in time is when the data is processed and not when it is transferred.

In many cases this sequence can be ensured by doing the initial or delta transfer/processing in the mentioned sequence.

An alternative would be ALE serialization. This is described in Appendix A – Additional Information about IDoc/ALE.

6.10.1 Addresses

For transfer of address- and customer/vendor-data, serialization can be used to ensure the correct sequence. In the customer/vendor message type there is not the complete address information stored as the “address” is an independent message type. Therefore, in order that the customer/vendor get the linkage to the address object the address must be transferred in the correct sequence. For documentation go to help.sap.com/s4hana and select your release version. Go to Product Assistance → *Enterprise Technology* → *ABAP Platform* → *Application Server ABAP – Infrastructure* → *Other Services* → *Services for Business Users* → *Business Address Services (BC-SRV-ADR)* under *Distribution Addresses using ALE* → *Settings in ALE Customizing*. From this documentation the parts regarding maintenance of distribution model are not relevant as this is already described in this how-to guide. Especially do not execute the described IMG activity *“Proposal for Distribution Model: Customer and Vendor Masters”*.

Instead consider the steps for serialization groups and their processing. As in this how-to guide reduced ALE message types are used you must use your own serialization groups.

6.10.2 Classifications

In EWM materials or batches can be optionally classified (which means an assignment of the object to a class). Only in this case there is the following dependency which must be considered during processing.

- A material must be classified in order that a new batch can be created for the material in EWM.

In general, the material or batch must exist first before it can be classified.

Batches (BATMAS):

For batches the classification can be sent automatically together within the batch using BATMAS message type. For this the enhanced settings have to be activated as described in chapter 6.8.1 “Activating Enhanced Settings for Data ”. As soon as a logical system is marked in this setting as a decentralized EWM system, the classifications data is filled and transferred in the BATMAS message type. If this is used, the dependency between batch and classification gets resolved automatically. You only need to take care about dependency between classes and batches.

Materials (ZEWMMATMAS):

In case of an initial data transfer you can use the indicator “Send material in full” in transaction BD10, to send classifications together with the material. Here two messages are sent (one for the material and one for the classification). For details see the F1 documentation of this indicator in transaction BD10.

You still must ensure that the material is created before the classification is created/assigned.

7 Customizing Settings in Decentralized EWM

7.1 Checking Basic Table Entries in EWM

Basic tables like units of measures, currencies, countries, and languages are used both in SAP ERP and in decentralized EWM. You use this procedure to check that the entries (especially the ISO codes) needed in the warehousing processes are identical in all systems that are part of your system landscape.

Procedure

Carry out the following steps in your EWM customizing client.

1. On the *SAP Easy Access* screen, choose *Tools* → *Administration* → *Administration* → *Client Administration* → *Customizing Objects* → *Object Comparison*.
2. Compare the information in the following tables between the EWM client and the ERP customizing client. Compare the entries you plan to use in your warehousing processes. Adjust the tables in SAP ERP or EWM Customizing, if necessary.

View/Table	Description	Usage in Decentralized EWM
T002	Language keys	Material master and others
T005	Countries	Material master and others
T006	Unit of measure	Material master and others
TCURC	Currency codes	Material valuation data

7.2 Configuring Customer/Vendor Integration in EWM

You use this procedure to configure settings for vendors and customers in decentralized EWM.

In decentralized EWM, a business partner exists for every vendor or customer by means of the Customer/Vendor Integration (CVI), which is always active in an SAP S/4HANA system.

When a vendor or customer is distributed via IDoc to a decentralized EWM system, the system automatically creates a business partner in addition to the vendor or customer master data and links the business partner to the vendor or the customer.

The settings described in this procedure are necessary for the replication of the vendor or customer master data and for the Customer/Vendor Integration.

In the example entries below, the following assumptions are made:

- Customers with account group KUNA are transferred. In case you transfer customers from other account groups, you must to adjust the examples.
- Vendors with account groups LIEF and 0005 are transferred. In case you transfer vendors from other account groups, you must adjust the examples.

> **Note**
>
> You can find the settings related to Customer/Vendor Integration in Customizing for *Cross-Application Components* under *Master Data Synchronization* → *Customer/Vendor Integration*.

> **Note**
>
> In some scenarios (e.g. route determination), EWM uses carriers who are business partners with the business partner role CRM010. In SAP ERP this corresponds to a vendor who can be used as a forwarding agent. These vendors can be transferred as normal vendor from SAP ERP. In EWM, such vendors must be assigned to the role CRM010. You can either assign this role manually in EWM or use the procedure described below to assign the role automatically. The procedure for automatic

assignment is related to vendor account group 0005 (forwarding agent). If you use different account groups, adapt the example to these account groups.

Procedure

Carry out the following steps in your EWM customizing client.

1. Set BP Role Category for Direction BP to Customer (view V_TBD002)

   In Customizing for *Customer/Vendor Integration*, choose *Business Partner Settings → Settings for Customer Integration → Set BP Role Category for Direction BP to Customer*.

   If they do not exist yet, create the following entries:

BP Role Category	Description	Customer-Based
FLCU00	**Business Partner FI Customer (FS: BP)**	**X**
FLCU01	**Business Partner Customer (FS: BP)**	**X**

   Save your entries.

2. Define BP Role for Direction Customer to BP (view CVIV_CUST_TO_BP2)

   In Customizing for *Customer/Vendor Integration*, choose *Business Partner Settings → Settings for Customer Integration → Define BP Role for Direction Customer to BP*.

   If they do not exist yet, create the following entries, for example:

Group	BP Role
KUNA	**FLCU00**
KUNA	**FLCU01**

   In this step, you define which BP roles should be assigned based on the account group. If you do not create any entry for a group, all customer BP roles will be added. If you use additional account groups, add them here too.

   Save your entries.

3. Define Number Assignment for Direction BP to Customer (view V_TBD001)

   In Customizing for *Customer/Vendor Integration*, choose *Business Partner Settings → Settings for Customer Integration → Field Assignment for Customer Integration → Assign Keys → Define Number Assignment for Direction BP to Customer*.

   If it does not exist yet, create the following entry, for example:

Grouping	Account Group	Same Numbers	Flexible Grouping
0002	**KUNA**		**X**

   Save your entry.

4. Define Number Assignment for Direction Customer to BP (view CVIV_CUST_TO_BP1)

   In Customizing for *Customer/Vendor Integration*, choose *Business Partner Settings → Settings for Customer Integration → Field Assignment for Customer Integration → Assign Keys → Define Number Assignment for Direction Customer to BP*.

   If it does exist yet, create the following entry, for example:

Account Group	Grouping	Same Numbers
KUNA	**0002**	**X**

   Save your entry.

5. Set BP Role Category for Direction BP to Vendor (view V_TBC002)

   In Customizing for *Customer/Vendor Integration*, choose *Business Partner Settings → Settings for Vendor Integration → Set BP Role Category for Direction BP to Vendor*.

   If they do not exist yet, create the following entries:

BP Role Category	Description	Vendor-Based
CRM010	**Carrier**	**X**
FLVN00	**Business Partner FI Vendor (FS: BP)**	**X**
FLVN01	**Business Partner Vendor (FS: BP)**	**X**

   The CRM010 entry is required if you want to assign automatically a carrier role (CRM010) to your business partner based on the vendor account group.

   Save your entries.

6. Define BP Role for Direction Vendor to BP (view CVIV_VEND_TO_BP2)

   In Customizing for *Customer/Vendor Integration*, choose *Business Partner Settings → Settings for Vendor Integration → Define BP Role for Direction Vendor to BP*.

   In this step, you define which BP roles should be assigned based on the account group. If you do not create any entry for a group, all vendor BP roles will be added. If you use additional account groups, add them here too.

   In case you added CRM010 as vendor-based role category in the previous step, add entries for each vendor account group you transfer, as otherwise account groups with no entry will get all vendor roles, including the CRM010 role.

   In case you want to automate the CRM010 assignment for account group 0005, you also need an entry below for group 0005.

   If they do not exist yet, create the following entries, for example:

Group	BP Role
0005	**CRM010**
LIEF	**FLVN00**
LIEF	**FLVN01**

   In case you do not want to automate the CRM010 assignment for account group 0005 but instead create "normal" vendors then add the following entries similar to the example of LIEF.

0005	**FLVN00**
0005	**FLVN01**

   Save your entries.

7. Define grouping for carriers (view V_TB001)

   Call transaction `SM30` to maintain view `V_TB001`.

   Copy grouping `0002` to a new grouping, for example **ZCRR**.

8. Define Number Assignment for Direction BP to Vendor (view V_TBC001)

   In Customizing for *Customer/Vendor Integration*, choose *Business Partner Settings → Settings for Vendor Integration → Field Assignment for Vendor Integration → Assign Keys → Define Number Assignment for Direction BP to Vendor.*

   If they do not exist yet, create the following entries, for example:

Grouping	Account Group	Same Numbers	Flexible Grouping

0001	KRED		
0002	LIEF		X
GPEX	LIEF		
GPIN	KRED		
ZCRR	0005		X

Save your entries.

> **Note**
>
> If you want to connect multiple SAP ERP or SAP S/4HANA systems with a decentralized EWM in S/4HANA with not harmonized business partners, you must define the used groupings with internal number ranges in the receiving EWM system to get a valid business partner number mapping.

9. Define Number Assignment for Direction Vendor to BP (view CVIV_VEND_TO_BP1)

   In Customizing for *Customer/Vendor Integration*, choose *Business Partner Settings* → *Settings for Vendor Integration* → *Field Assignment for Vendor Integration* → *Assign Keys* → *Define Number Assignment for Direction Vendor to BP*.

   If they do not exist yet, create the following entries, for example:

Account Group	Grouping	Same Numbers
0005	ZCRR	X
LIEF	0002	X

   Save your entries.

7.3 Activating BC Sets for Client-Dependent Number Ranges

You use this procedure to create number ranges for the following objects in EWM:

- Packaging specifications
- Transportation units, vehicles and Shipping & Receiving activities
- ERP delivery documents created from EWM
- QIE (Quality Inspection Engine) objects:
  - Samples and Items
  - Findings
  - Inspection documents

The number ranges are valid for all warehouses of the client.

> **CAUTION**
>
> Use this procedure only if you have not created any of those objects in the EWM client yet, as it invalidates the previous number range status.

Procedure

Carry out the following steps in each EWM client you want to connect to SAP ERP:

1. In the EWM system, on the *SAP Easy Access* screen, choose *Tools* → *Customizing* → *Business Configuration Sets* → *Activation of BC Sets*. Alternatively, call transaction `SCPR20`.
2. Enter the following BC set and choose *Activate BC Set*:

BC Set Name	Description

/SCWM/PRC_10N	Number Range Intervals for Basic Settings (Client)
/SCWM/PRC_11_9A	Assignment Number Range Intervals for Basic Settings

The *Activation Options* screen appears.

3. On the *Activation Options* screen, press *Enter* to continue the activation.

> **Note**
>
> If the activation of the BC set fails due to missing entries in dependent tables, repeat the activation.

7.4 Verifying Synchronization of SAP ERP and EWM Customizing

You use this procedure to check the synchronization of SAP ERP customizing and customizing in decentralized EWM.

When transferring master data or transaction data from SAP ERP to EWM or the other way around, the system checks some attributes in customizing.

For example:

- You create a packaging material with handling unit (HU) type `E1` (*Europallet*) in SAP ERP. When the system transfers the material to EWM, it checks that HU type `E1` also exists in EWM customizing.
- You create an outbound delivery with shipping conditions and Incoterms in SAP ERP. When the system transfers the outbound delivery from SAP ERP to EWM, it checks that the shipping conditions and Incoterms also exist in EWM customizing.

> **Note**
>
> Some customizing tables (for example, table T137 below) are not used in any warehouse processes but they may be used as check table for mandatory IDoc fields. Therefore, you must also synchronize them to avoid IDoc errors.

Procedure

Check if you use some of the settings listed in the following table in your warehousing processes. Compare the entries between your EWM and your ERP customizing client and adapt if needed the entries in the EWM or in the ERP client. Depending on your settings and processes, you may need to synchronize additional tables.

1. On the *SAP Easy Access* screen, choose *Tools* → *Administration* → *Administration* → *Client Administration* → *Customizing Objects* → *Object Comparison* (or call transation **SCMP**).
2. Compare the information in the following table between the EWM client and the ERP customizing client. Compare the entries you plan to use in your warehousing processes. Adjust the tables in SAP ERP or EWM Customizing, if necessary.

View/Table	Description	Usage in Decentralized EWM
T001W (V_T001W)	Plants	Material master, batch master Note: the plant definition is needed in EWM for master data replication.
TSPA (V_TSPA)	Organizational Unit: Sales Divisions	Material master
V_T077K	Vendor account group	Vendor master
V_T077D	Customer Account Group	Customer master
T134	Material Types	Material master

T137 (V137)	Industries for materials	Material master
T142 (V_142)	Storage Conditions for Materials	Material master
T143 (V_143)	Temperature Conditions for Storing Materials	Material master
T144 (V_144)	Container Requirements for Storing Materials	Material master
T023 (V023)	Material groups	Material master
TCSCP_COMP_LVL (V_TCSCP_COMP_LVL)	Material completion levels	Material master
TTGR (V_TTGR)	Material transportation groups	Material master
T179	Materials: Product Hierarchies	Material master
T190S (V_T190S)	Product Allocation: Definition Procedure	Material master
TVEGR	Material Group: Packaging Materials	Material master
THUTYP	Handling Unit Types	Material master
TWHMATGR	Warehouse Material Group	Material master
TWHSTC	Warehouse Storage Condition	Material master
THNDLCD	Handling Indicator	Material master
TPTM	Materials: Item Category Groups in Material Master	Material master
TMFG	Material freight groups	Material master
TQGRP	Quality Inspection Group	Material master
TCWQTOLGR	EWM-CW: Tolerance Groups	Material master
TCWQPROC	EWM-CW: EWM-CW: Catch Weight Quantity Input Control	Material master
V_TAPROF	Merchandise Distribution - Adjustment Profile	Material master
TNTP	International Article Number (EAN) Categories	Material master
TDG41 (DGV_TDG41)	DG Indicator Profiles for Material Master	Material master
T6WP3 (V_6WP3)	Labelling Type	Material master
T6WP4 (V_6WP4)	Label Shape	Material master
TQ08 (V_TQ08)	Control of QM in procurement - Control Key	Material master
TQ04A (V_TQ04A)	Control of QM in procurement - Delivery Block	Vendor master
V_TPRIO	Delivery Priority	Delivery
V_TINC	Incoterms	Delivery
V_TVSB	Shipping Conditions	Delivery
TSERIAL	Serial Number Profile	Material master
TCUCH	Batch Level and Batch Status Management	Batch master

V_CMG	Characteristics Groups	Classification
V_CMS	Characteristic Status	Classification
V_CPS	Define Characters in Templates	Classification
V_CPA	Templates	Classification
V_CLO	Key Fields of Objects	Classification
V_CLT	Object Table	Classification
V_CLA	Class Types	Classification
V_CLAO	Objects	Classification
V_CLU	Class Status	Classification
V_CLS	Organizational Areas	Classification
V_CLX	Text Types	Classification
V_CLC	Classification Status	Classification
V_CLR	Functions/Filters for Finding Objects	Classification
V_CLG	Class Groups	Classification

3. In Customizing for SAP ERP and in Customizing for decentralized EWM, compare the information in the following table between the EWM client and the ERP customizing client. Compare the entries you plan to use in your warehousing processes. Adjust the entries in SAP ERP or EWM Customizing, if necessary.

IMG Path in SAP ERP	IMG Path in Decentralized EWM
Logistics – General → Handling Unit Management → Basics → Define Packaging Material Types (View V_TVTY) Note: for number ranges, see chapter *Aligning HU Numbering*	*Extended Warehouse Management → Cross-Process Settings → Handling Units → Basics → Define Packaging Material Types* (View /SCWM/V_TPMTYPWM)

7.5 Creating Company Code Settings for Material Transfer

To receive material master with plant-specific data (database table MARC) in a decentralized EWM, a plant and an assignment to a company code must exist. The company code itself is not required in EWM for further processing therefore it is sufficient to create it with minimal or "dummy" data.

Procedure

Carry out the following steps in each EWM client you want to connect to SAP ERP:

1. Create a company code manually (or copy) via IMG path: *Enterprise Structure → Definition → Financial Accounting → Edit, Copy, Delete, Check Company Code*
   Maintain at least the company code, company name, currency and country code of the address.
2. Assign the plant to the company code via IMG path: *Enterprise Structure → Assignment → Logistics - General → Assign plant to company code*
   Here you assign the plant you created in chapter 7.5 to the company code.
3. Assign company code to a fiscal year variant via IMG path: *Financial Accounting (New) → Financial Accounting Global Settings (New) → Ledgers → Fiscal Year and Posting Periods → Assign Company Code to a Fiscal Year Variant*
   Here you assign the new company code to a fiscal year variant e.g. K4. If the fiscal year variant does not exist yet, create it via IMG path: *Financial Accounting (New) → Financial Accounting Global Settings (New) → Ledgers → Fiscal Year and Posting Periods → Maintain Fiscal Year Variant*
4. Assign company code to chart of accounts via IMG path: *Financial Accounting (New) → General Ledger Accounting (New) → Master Data → G/L Accounts → Preparations → Assign Company Code to Chart of Accounts*
   Here you assign the new company code to a chart of accounts e.g. INT. If the chart of accounts does not exist yet, create it via IMG path *Financial Accounting (New) → General Ledger Accounting (New) → Master Data → G/L Accounts → Preparations → Edit Chart of Accounts List*
5. Maintain company codes for Materials Management via IMG path: *Logistics - General → Product Lifecycle Management (PLM) → Material Master → Basic Settings → Maintain Company Codes for Materials Management*
   Here you set up the new company code for material management, e.g. fiscal year and posting period.
6. Deselect quantity/value updating for material types in your valuation area via IMG path: *Logistics - General → Product Lifecycle Management (PLM) → Material Master → Basic Settings → Define Attributes of Material Types*
   Here you deselect the check boxes for quantity updating and value updating for used material types in material master. The valuation area is created automatically in step 2 'Assign plant to company code'. It has the same number as the plant.

8 Master Data Distribution via ALE/IDoc

You use this process to start the distribution of master data via ALE/IDoc from SAP ERP as sender system to decentralized EWM as receiver system.

8.1 Executing Initial Transfer of Master Data

You use the following procedures to create IDocs for the initial master data transfer to decentralized EWM.

> **Note**
>
> Refer to appendix B of this document for a list of transactions you can use to monitor and process IDocs. For example, you use transaction `BD87` in SAP ERP and in decentralized to check the IDoc status after transfer.

8.1.1 Executing Initial Transfer of Characteristics

You use this procedure to transfer characteristics for classification of batches.

Procedure

Carry the following steps in SAP ERP:

1. Call transaction **BD91** (*Distribute All Characteristics Using ALE*).
2. Enter the data as shown in the following table:

Field	Value
Characteristic	Leave empty or enter an interval
Logical system	`<EWM logical system>`, for example, **EWMCLNT001**

3. Press *Execute*

> **Tip**
>
> Refer to chapter 11.3 in case standard characteristics `LOBM_*` should be used in the target system to get an overview how these characteristics can be imported.

8.1.2 Executing Initial Transfer of Classes

You use this procedure to transfer classes for classification of batches.

Procedure

Carry the following steps in SAP ERP:

1. Call transaction **BD92** (*Distribute Classes Using ALE: Send Direct*).
2. Enter the data as shown in the following table:

Field	Value
Class Type	**023** for batch classes
Class	Enter the classes you use for batch classification
Logical system	`<EWM logical system>`, for example, **EWMCLNT001**

3. Press *Execute*

8.1.3 Executing Initial Transfer of Materials

You use this procedure to transfer material master data.

Procedure

Carry the following steps in SAP ERP:

1. Call transaction **BD10** (*Send Material*).
2. Enter the data as shown in the following table:

Field	Value
Material	Leave empty or enter an interval
Class	Leave empty. Enter an interval only if you use material classification
Message Type (Standard)	Reduced message type for materials, for example **ZEWMMATMAS**
Logical system	<EWM logical system>, for example, **EWMCLNT001**
Send Material in Full	Leave empty. Set this indicator only if you use material classification. If the indicator is set, the material classification data will be transferred together with the material master data. As an alternative, you can transfer classification data with transaction BD93 after you have transferred the corresponding material or batch master data.

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

> **Tip**
>
> If a material master field is set as mandatory field in decentralized EWM but is not sent via IDoc, the IDoc is erroneous in EWM. In this case, you must either transfer the field by changing the reduced message type, or you must set the field as optional in decentralized EWM. For this purpose, check the selection group of the field in Customizing for *Logistics – General* under *Material Master* → *Field Selection* → *Assign Fields to Field Selection Group* and change the field to optional under *Material Master* → *Field Selection* → *Maintain Field Selection for Data Screens*.

8.1.4 Executing Initial Transfer of Batches

You use this procedure to transfer batch master data.

Prerequisites

SAP note 2745236 is implemented in your SAP ERP system.

Procedure

Carry the following steps in SAP ERP:

1. Call transaction **BD90** (*Batch Master Record Initial Transfer*).
2. Enter the data as shown in the following table:

Field	Value
Material	Leave empty
Batch	Leave empty
Logical system	<EWM logical system>, for example, **EWMCLNT001**

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

Note

Since the batch master records are dependent from the material master data, you want to transfer only those master records whose material master data has already been transferred. To achieve this, you must set a dependent filter in the batch distribution model that is not delivered in the standard configuration, see SAP note 2793298.

8.1.5 Executing Initial Transfer of Customers

You use this procedure to transfer customer master data.

> **Note**
>
> If you use DRF framework for the distribution of customers and vendors, you must skip this step. Use transaction DRFOUT instead, see chapter 6.9.5 Execute Initial Business Partner Data Transfer with Data Replication Framework (DRF)

Procedure

Carry the following steps in SAP ERP:

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

Field	Value
Customer	Leave empty
Output Type	Reduced message type for customers, for example **ZEWMDEBMAS**
Logical system	<EWM logical system>, for example, **EWMCLNT001**

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

8.1.6 Executing Initial Transfer of Vendors

You use this procedure to transfer vendor master data.

> **Note**
>
> If you use DRF framework for the distribution of customers and vendors, you must skip this step. Use transaction DRFOUT instead, see chapter 6.9.5 Execute Initial Business Partner Data Transfer with Data Replication Framework (DRF) Procedure.

Carry the following steps in SAP ERP:

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

Field	Value
Account Number of Vendor	Leave empty
Message Type	Reduced message type for vendors, for example **ZEWMCREMAS**
Target system	<EWM logical system>, for example, **EWMCLNT001**

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

8.2 Executing Delta Transfer of Master Data

After activating change pointers for the message types, IDocs can be created for the corresponding master data based on logging of master data changes. In a productive environment, you create IDocs to transfer changed master data automatically but in the implementation phase, you can also create these IDocs manually.

> **Note**
>
> If you use DRF framework for the distribution of customers and vendors, you must skip this step. Use transaction DRFOUT instead, see chapter 6.9.6 Execute Delta Business Partner Data Transfer with Data Replication Framework (DRF).

8.2.1 Creating IDoc Using Change Pointers Manually

You use this procedure to create IDocs manually based on change logging of master data:

Procedure

Carry the following steps in SAP ERP:

1. Call transaction **BD21** (*Creating IDoc Type from Change Pointers*)
2. Enter one of the following message types:
   - CHRMAS: Class system: Characteristics master
   - CLSMAS: Class system: Classes master
   - CLFMAS: Class system: Classification master
   - Reduced message type for vendors, for example ZEWMCREMAS (not required if you use DRF replication)
   - Reduced message type for customers, for example ZEWMDEBMAS (not required if you use DRF replication)
   - Reduced message type for materials, for example ZEWMMATMAS
   - BATMAS: Batch
3. Press *Execute*

8.2.2 Creating IDoc Using Change Pointers Automatically

You use this procedure to create IDocs manually based on change logging of master data:

Procedure

Carry the following steps in SAP ERP:

1. Call transaction **SA38** (*ABAP: Program Execution)*
2. Enter program RBDMIDOC
3. Create a variant for each of the following message types:
   - CHRMAS: Class system: Characteristics master
   - CLSMAS: Class system: Classes master
   - CLFMAS: Class system: Classification master
   - Reduced message type for vendors, for example ZEWMCREMAS (not required if you use DRF replication)
   - Reduced message type for customers, for example ZEWMDEBMAS (not required if you use DRF replication)
   - Reduced message type for materials, for example ZEWMMATMAS
   - BATMAS: Batch
4. Choose *Background* to define a job to execute all variants of program RBDMIDOC in the background.
5. Schedule the job to run periodically. With each job run, the system will create IDocs for changed master data automatically.

8.2.3 Creating BATMAS IDoc Automatically

You can use this feature to trigger the creation of BATMAS IDoc automatically whenever batch master data is changed.

Prerequisites

SAP note 2983820 is implemented in your SAP ERP system.

Procedure

Carry out the following steps in SAP ERP:

Activate enhanced settings at client level in Customizing for *SAP Components*, choose *Extended Warehouse Management → Basic Settings for EWM Linkage → Settings for Decentralized EWM → Define enhanced Settings for data transfer to Decentralized EWM.*

> **Note**
>
> If the customizing path does not exist in the sending ERP system, you have the following option (For details see SAP note 2881061).
>
> 1. Enter transaction code SM30
> 2. In the field "Table/View" enter the value "/SPE/V_EWM_DEST"
> 3. Press "Maintain"

9 Warehouse Integration into the SAP ERP Enterprise Structure

You use this process to integrate a warehouse into the enterprise structure in SAP ERP or SAP S/4HANA

> **Important**
>
> As the procedure for integrating decentralized EWM with SAP ERP differs from the procedure for integrating decentralized EWM with SAP S/4HANA, they are described in different chapters.

9.1 Prerequisites for Warehouse Integration in SAP ERP

In the SAP ERP system, you have created the following objects and settings:

- A plant (for example, `PL01`). The plant must be assigned to the enterprise structure in SAP ERP such as company code, purchasing organization, and sales organization.

  You can check the plant in Customizing for *Enterprise Structure* under *Definition → Logistics – General → Define, copy, delete, check plant.*
- One or more storage locations, for example storage locations `ROD` and `AFS` in plant `PL01`.

  You can check this setting in Customizing for *Enterprise Structure* under *Definition → Materials Management → Maintain storage location.*
- A customer linked to the plant. For example, customer `BPPL01C` according to the naming convention `BP<plant>C`.

  You can check this setting in Customizing for *Materials Management* under *Purchasing → Purchase Order → Set up Stock Transport Order → Define Shipping Data for Plants.* Choose an account group for which IDoc master data distribution is set up, for example, `KUNA` (*Customer (ext.number assgnmnt)*).
- A vendor linked to the plant. For example, vendor `BPPL01V` according to the naming convention `BP<plant>V`. Choose an account group for which IDoc master data distribution is set up, for example, `LIEF` (*Vendor (ext.number assgnmnt)*).

  You can check this setting in the following way:
  a. On the *SAP Easy Access* screen, choose *Logistics → Materials Management → Purchasing → Master Data → Vendor → Purchasing → Display (Current).*
  b. Enter the vendor number and select the *Purchasing Data* checkbox.

     If you do not know the vendor number, check table `T001W`.
  c. On the *Purchasing Data* screen, choose *Extras → Add. Purchasing Data.*
- A shipping point and a goods receiving point assigned to the plant, for example shipping point `0001` also used as receiving point and assigned to plant `PL01`. The shipping point should be allocated to the desired combinations of shipping condition and loading group for each plant.

  You can check this setting as follows:
  - In Customizing for *Enterprise Structure* under *Definition → Logistics Execution → Define, copy, delete, check shipping point*
  - In Customizing for *Enterprise Structure* under *Assignment → Logistics Execution → Assign shipping point to plant*
  - In Customizing for *Logistic Execution* under *Shipping → Basic Shipping Functions → Shipping Point and Goods Receiving Point Determination → Assign Shipping Points*
  - In Customizing for *Logistic Execution* under *Shipping → Basic Shipping Functions → Shipping Point and Goods Receiving Point Determination → Assign Goods Receiving Points for Inbound Deliveries*
- The current posting period for materials management is set for the company code. You can check this setting in Customizing for *Logistics – General* under *Material Master → Basic Settings → Maintain Company Codes for Materials Management.*
- The current posting period for materials management is included in the interval defined for the posting period variant assigned to the company code. Check that the last posting period allowed is in the future. You can check this setting in Customizing (depending which IMG path you are using) as follows.

- *Financial Accounting (New)* under *Financial Accounting Global Settings (New)* → *Ledgers* → *Fiscal Year and Posting Periods* → *Posting Periods* → *Open and Close Posting Periods.*

  or alternatively

- *Financial Accounting* → *Financial Accounting Global Settings* → *Document* → *Posting Periods* → *Open and Close Posting Periods*

- The current fiscal year is defined in the plan version assigned to the controlling area. This setting is only necessary if the *Profit Center Accounting* is active in the controlling area assigned to the company code.

  You can check this setting as follows:

  - In Customizing for *Controlling* under *Cost Center Accounting* → *Activate Cost Center Accounting in Controlling Area*, you can check whether the *Profit Center Accounting* is active in the controlling area.
  - In Customizing for *Controlling* under *Profit Center Accounting* → *Basic Settings* → *Controlling Area Settings* → *Activate Direct Postings* → *Plan Versions* → *Maintain Plan Versions*, you can check the settings for each fiscal year.

- A cost center is assigned to the cost elements used for scrapping. You can check this setting in Customizing for *Controlling* under *Cost Center Accounting* → *Actual Postings* → *Manual Actual Postings* → *Edit Automatic Account Assignment.* If you use the standard chart of account `INT` in the company code, check that a cost center is assigned to the cost elements used for scrapping, for example cost elements `400001` and `890001` for the scrapping of trading goods.

  > **Note**
  >
  > You can use the Customer Vendor Integration (CVI) in SAP ERP but it is not a prerequisite for the integration with decentralized EWM as the data transfer via ALE is based on customer and vendor master data and not on the business partner master data. In decentralized EWM, CVI is always active, meaning that the business partners are created automatically in EWM with the transfer of customer or vendor master data from SAP ERP.
  > If you use DRF framework for the distribution of customers and vendors the Customer Vendor Integration (CVI) must be active in SAP ERP.

9.2 Prerequisites for Warehouse Integration in SAP S/4HANA

In the SAP S/4HANA system used as global enterprise management system, you have created the following objects and settings:

- A plant (for example, `PL01`). The plant must be assigned to the enterprise structure such as company code, purchasing organization, and sales organization.

  You can check the plant in Customizing for *Enterprise Structure* under *Definition* → *Logistics – General* → *Define, copy, delete, check plant.*

- An active material ledger for the valuation area assigned to the plant.

  You can check this setting in Customizing for *Controlling* under *General Controlling* → *Multiple Valuation Approaches/Transfer Prices* → *Basic Settings* → *Check Material Ledger Settings* → *Activate Valuation Areas for Material Ledger* → *Check Material Ledger Settings.*

- One or more storage locations, for example storage locations `ROD` and `AFS` in plant `PL01`.

  You can check this setting in Customizing for *Enterprise Structure* under *Definition* → *Materials Management* → *Maintain storage location.*

- A business partner with predefined roles `FLCU00` (*FI Customer*) and `FLCU01` (*Customer*) linked as customer to the plant, for example business partner `BPPL01`, following the naming convention `BP<plant>`.

  You can check this setting in Customizing for *Materials Management* under *Purchasing* → *Purchase Order* → *Set up Stock Transport Order* → *Define Shipping Data for Plants*.

- The same business partner (or a second business partner) with pre-defined roles `FLVN00` (*FI Vendor*) and `FLVN01` (*Vendor*) linked as supplier to the plant.

  d. Using the *SAP Easy Access* menu, choose *Logistics* → *Materials Management* → *Purchasing* → *Master Data* → *Vendor* → *Purchasing* → *Display (Current)*.

e. Enter the vendor number and select the *Purchasing Data* checkbox

   The system automatically redirects you to the *Display Business Partner* transaction.

   If you do not know the vendor number, check table `T001W`.

f. In the *Display in BP role* field, check that the role `FLVN01` - *Vendor* is selected.

g. Choose *Goto* → *General Data*

h. Check the assigned plant in the *Vendor: General Data* tab page

- A shipping point and a goods receiving point assigned to the plant, for example shipping point `0001` also used as receiving point and assigned to plant `PL01`. The shipping point should be allocated to the desired combinations of shipping condition and loading group for each plant.

  You can check this setting as follows:

  - In Customizing for *Enterprise Structure* under *Definition* → *Logistics Execution* → *Define, copy, delete, check shipping point*
  - In Customizing for *Enterprise Structure* under *Assignment* → *Logistics Execution* → *Assign shipping point to plant*
  - In Customizing for *Logistic Execution* under *Shipping* → *Basic Shipping Functions* → *Shipping Point and Goods Receiving Point Determination* → *Assign Shipping Points*
  - In Customizing for *Logistic Execution* under *Shipping* → *Basic Shipping Functions* → *Shipping Point and Goods Receiving Point Determination* → *Assign Goods Receiving Points for Inbound Deliveries*
- The current posting period for materials management is set for the company code. You can check this setting in Customizing for *Logistics – General* under *Material Master* → *Basic Settings* → *Maintain Company Codes for Materials Management.*
- The current posting period for materials management is included in the interval defined for the posting period variant assigned to the company code. You can check this setting in Customizing for *Financial Accounting (New)* under *Financial Accounting Global Settings (New)* → *Ledgers* → *Fiscal Year and Posting Periods* → *Posting Periods* → *Open and Close Posting Periods.* Check that the last posting period allowed is in the future.
- The current fiscal year is defined in the plan version assigned to the controlling area. This setting is only necessary if the *Profit Center Accounting* is active in the controlling area assigned to the company code.

  You can check this setting as follows:

  - In Customizing for *Controlling* under *Cost Center Accounting* → *Activate Cost Center Accounting in Controlling Area*, you can check whether the *Profit Center Accounting* is active in the controlling area.
  - In Customizing for *Controlling* under *Profit Center Accounting* → *Basic Settings* → *Controlling Area Settings* → *Activate Direct Postings* → *Plan Versions* → *Maintain Plan Versions*, you can check the settings for each fiscal year.
- A cost center is assigned to the cost elements used for scrapping. You can check this setting in Customizing for *Controlling* under *Cost Center Accounting* → *Actual Postings* → *Manual Actual Postings* → *Edit Automatic Account Assignment.* If you use the standard chart of account `INT` in the company code, check that a cost center is assigned to the cost elements used for scrapping, for example cost elements `400001` and `890001` for the scrapping of trading goods.

9.3 Creating Organizational Units for Warehouse in SAP ERP

You use this procedure to define the 3-digit warehouse in Logistics Execution in SAP ERP. It will be linked later to the 4-digit EWM warehouse.

Procedure

1. Define the 3-digit warehouse number as follows:
   a. In Customizing for *Enterprise Structure*, choose *Definition* → *Logistics Execution* → *Define, copy, delete, check warehouse number.*
   b. In *Define, copy, delete, check warehouse number*, choose the activity *Define warehouse number*.
   c. Create for example the following entry:

Warehouse Number	Description

W01	**Warehouse W01 (EWM)**

2. Assign the warehouse to the plant and storage locations in Customizing for *Enterprise Structure* under *Assignment → Logistics Execution Assign warehouse number to plant/storage location.* Create and save an entry for each assignment.

   Example:

Plant	Storage Location	Warehouse
PL01	**ROD**	**W01**
PL01	**AFS**	**W01**

3. Maintain EWM-specific parameters for the warehouse in Customizing for *Logistics Execution* under *Extended Warehouse Management Integration → Basic Setup of EWM Connectivity → Maintain Extended WM-Specific Parameters.*

   Enter or select the data for your warehouse as shown in the following table:

Field	Value
Ext. WM	**E** (*ERP with Extended Warehouse Management*)
Comm. WM	**Q** (*Queued and Serialized Asynchronous RFC*)
Dist. Mode	**Distribution Immediately at Document Creation**

4. Assign the 3-digit warehouse number to the 4-digit EWM warehouse number in Customizing for *Integration with other SAP Components* under *Extended Warehouse Management → Assign Warehouse Number to Warehouse Number of Decentralized SCM System.*

   Example:

Warehouse Number	WHNDecSCM
W01	**W001**

> **Note**
>
> This setting is optional but recommended. It is currently not used in the ERP-EWM integration, but it has the advantage of a higher data transparency in SAP ERP and may be needed for future processes.

10 Warehouse Creation and Integration in EWM

You use this process to create a warehouse in decentralized EWM and assign it to the organizational units from SAP ERP. This includes:

- Warehouse definition and assignment to the 3-digit warehouse number
- Assignment of following organizational units to the EWM warehouse:
  - Supply chain unit (SCU) of the warehouse
  - Custodian
  - Parties entitled to dispose (plants) linked to the warehouse
  - Default party entitled to dispose (optional)
- Activation of BC sets for warehouse-dependent basic settings and warehouse-dependent number ranges
- Assignment of EWM stock types to the corresponding plants and storage locations by means of availability groups
- Alignment of handling unit numbering

10.1 Creating a Supply Chain Unit in EWM

You use this procedure to create a supply chain unit in EWM which will be assigned to your ERP Plant.

Procedure

Carry out the following steps in each EWM client you want to connect to SAP ERP:

1. In the EWM system, on the *SAP Easy Access* screen, choose *Logistics → SCM Extended Warehouse Management → Extended Warehouse Management → Master Data → Maintain Supply Chain Unit*
2. Enter the following values

Field	Value
Supply Chain Unit	**PL01**
Type	**1001 (Production Plant)**

3. Press button *Create*

4. Enter the following values

Field	Value
Description	**SCU for Plant PL01**
Time Zone	**Time zone of your warehouse, for example, CET**
Address Data	**The address of your warehouse**
Country	**The country of your warehouse**

5. Save your data

10.2 Creating and Integrating an EWM Warehouse

You use this procedure to create a 4-digit warehouse number in decentralized EWM and assign organizational units to the warehouse.

With the *Implementation Tool for Warehouse Integration*, you configure the following data in decentralized EWM:

- Warehouse definition and assignment to the 3-digit warehouse
- Assignment of following organizational units to the EWM warehouse:
  - Supply chain unit (SCU) of the warehouse
  - Custodian
  - Parties entitled to dispose (ERP plants) linked to the warehouse
  - Default party entitled to dispose (optional)
  - Shipping offices and receiving offices used in the warehouse
- Assignment of EWM stock types to the corresponding ERP plants and storage locations by means of availability groups
- Warehouse-dependent basic settings

Procedure

Carry out the following steps in your EWM customizing client first and transport, if necessary, the data set created in step 2 to other EWM clients or EWM systems. After the transport, carry out the procedure with the transported data set in all EWM clients or EWM systems that you want to connect to EWM.

1. Assign a party entitled to dispose to each plant you want to link to an EWM warehouse. The party entitled to dispose is a business partner. It is used in EWM as an attribute of each stock you manage in the warehouse.
   a. In Customizing for *Extended Warehouse Management*, choose *Interfaces* → *ERP Integration* → *General Settings* → *Assign Business Partners to Plant*
   b. Create and save for example the following entry:

Field	Value
Plant	**PL01**
Logical System	**ERPCLNT001**
Local	**<space>**
Party Entitled to Dispose	**BPPL01V** (example for SAP ERP) or **BPPL01** (example for SAP S/4HANA)

> **Note**
>
> In this example, the party entitled to dispose is the business partner linked to the vendor assigned to the plant. The business partner was created automatically in EWM with the initial transfer of vendors from SAP ERP. As an alternative, you can create a business partner manually in EWM only and assign it to the plant in this step.

2. Create the 4-digit warehouse using the implementation tool:
   a. In Customizing for *Extended Warehouse Management*, choose *Interfaces* → *ERP Integration* → *Tool-Based ERP Integration* → *Implementation Tool for Warehouse Integration*.
   b. Carry out the steps provided in the implementation tool.

> **Note**
>
> For more information, see the Customizing documentation of the implementation tool and the quick help provided within the tool.

   c. In step 1 (*Data Set*) define the name and a description of your data set

d. In step 2 (*System Selection*) select the logical system of your ERP system
e. In step 3 (*Warehouse Definitions*) define your EWM warehouse number (W001) and a description for your ERP warehouse number (W01)
f. In step 4 (*Organizational Units*) define your supply chain unit (from step 10.1) and your defined Custodian (the customer assigned to your plant in chapter 9) and Entitled to Dispose (the vendor assigned to your plant in chapter 9)
g. In step 5 (*Availability Groups*) define the availability groups and stock types for your storage locations ROD and AFS, for example

Stock Type	Description	Avail.Grp	Non-Dep. Stock Type	RI
F1	**Unrestricted in PL01/ROD**	**PL01/ROD**	**FF**	Normal Stock
F2	**Unrestricted in PL01/AFS**	**PL01/AFS**	**FF**	Normal Stock
Q3	**Quality Insp. in PL01/ROD**	**PL01/ROD**	**QQ**	Normal Stock
Q4	**Quality Insp. in PL01/AFS**	**PL01/AFS**	**QQ**	Normal Stock
B5	**Blocked in PL01/ROD**	**PL01/ROD**	**BB**	Normal Stock
B6	**Blocked in PL01/AFS**	**PL01/AFS**	**BB**	Normal Stock
S5	**Scrapping in PL01/ROD**	**PL01/ROD**	**BB**	Scrapping Stock
S6	**Scrapping in PL01/AFS**	**PL01/AFS**	**BB**	Scrapping Stock
R7	**Returns in PL01/ROD**	**PL01/ROD**	**RR**	Normal Stock
R8	**Returns in PL01/AFS**	**PL01/AFS**	**RR**	Normal Stock

Tip

For more information, see IMG activity documentation in Customizing for *Extended Warehouse Management* under *Goods Receipt Process* → *Configure Availability Group for Putaway,* and field help of availability group.

Important

If you create a second warehouse and link it to other plants or storage locations, for example W002 linked to plant PL02 and storage locations ROD and AFS, you can reuse the same stock types but enter a different stock type description in each warehouse, for example F1 with description 'Unrestricted in PL02/ROD' in warehouse W002.

h. In step 6 (*ERP Communication of the Q-Inspection Results*) select the ERP Communication of the Q-Inspection Results
i. In step 7 (*Number Ranges*) select to Create all Number Ranges
j. In step 8 (*Activation*) Save and Activate your data

The data creation runs asynchronously in a batch job in the system. Check later in step 9 (*Activation Logs*) the progress of your warehouse configuration.

10.3 Activating BC Sets for Warehouse-Dependent Number Ranges

You use this procedure to create number ranges at warehouse level in EWM.

CAUTION

Use this procedure only for a newly created warehouse, as it invalidates the previous number range status.

Procedure

Carry out the following steps in each EWM client you want to connect to SAP ERP:

1. In the EWM system, on the *SAP Easy Access* screen, choose *Tools* → *Customizing* → *Business Configuration Sets* → *Activation of BC Sets*. Alternatively, call transaction **SCPR20**.
2. Enter the following BC set and choose *Activate BC Set*:

BC Set Name	Description
/SCWM/PRC_20N	Number Range Intervals for Basic Settings (Warehouse)

   The *Enter Variable Field Values* screen appears.
3. Change, if necessary, the warehouse number, and choose *Copy values*.
   The *Activation Options* screen appears.
4. On the *Activation Options* screen, press *Enter* to continue the activation.

10.4 Aligning HU Numbering

You use this procedure to align the handling unit (HU) numbering in Logistics Execution in SAP ERP and in decentralized EWM and to activate, if necessary, the lean HU status update in Logistics Execution.

HUs used in deliveries are communicated from EWM to Logistics Execution or the other way around. The HU number used in one application must not overlap with the free internal HU number range defined in the other application, as this would lead to queue errors.

The following table gives an example of aligned HU number range intervals in Logistics Execution and in EWM:

Application / System	Internal Ranges	External Ranges
Logistics Execution in SAP ERP	1000000000 - 7999999999 (10 digits)	8000000000 - 9999999999 (10 digits)
Decentralized EWM (warehouse-specific)	800000000 - 899999999 (9 digits) 1000000 - 1999999 (7 digits)	None (all numbers outside the internal number ranges allowed)

If you use several warehouses to the same SAP S/4HANA system, you must check manually that the warehouse-specific number ranges do not overlap, especially if you use stock transport orders for the transfer of goods between warehouses.

For this purpose, we review the basic rules for HU numbering and give an overview of the applications (Logistics Execution or EWM) in which HUs are created and of the ways the HUs are created (using internal or external numbers).

Basic Rules for HU Numbering in EWM in SAP S/4HANA

- Logistics Execution (LE) accepts all HU numbers from EWM except if they are within the free internal LE number range. For example, in case of an internal LE number range from 1000 to 7999 with a current number range status 1555, LE accepts all numbers from EWM except in the interval of free numbers 1556-7999.
- EWM accepts HU numbers from LE if they are within the external EWM number range or within the assigned internal EWM number range (reusing existing HUs).
- If no external number range is defined explicitly in EWM, all numbers outside the free internal number range belong to the external number range. This is an implicit external number range.

➡ Recommendation

It is technically not necessary to define an external number range in Logistics Execution for HU numbers communicated by EWM. When working with multiple warehouses, however, we recommend defining external number ranges in Logistics Execution for documentation purposes.

The following table lists the number range definitions based on where and how you create HUs:

New HU Created In	Number Range Definition
EWM (internal)	EWM: internal number range necessary LE: external number range not necessary. EWM number must be outside the free internal LE number range
EWM (external)	EWM: implicit or explicit external number range necessary LE: external number range not necessary. EWM number must be outside the free internal LE number range
Logistic Execution (internal)	LE: internal number range necessary EWM: implicit or explicit external number range necessary
Logistic Execution (external)	LE: external number range necessary EWM: implicit or explicit external number range necessary

➡ Recommendation

If you receive advanced shipping notifications (ASNs) from vendors and want to reuse the HU number from the vendors in the warehouse, we recommend using Serial Shipping Container Code (SSCC) instead of HU numbers from HU number ranges. The SSCC number ranges should not overlap with the HU number ranges.

In addition to the definition of the HU number ranges, you can use this procedure to activate the lean HU status update and the non-unique HU numbering in Logistics Execution. This setting is necessary for stock transport order (STO) processes involving cross-delivery HUs.

Procedure

If you implement your own warehouse or if you implement the standard warehouse in a more complex system landscape, carry out the following steps:

1. Check if HU number ranges are already defined in EWM:
    a. Note the internal number range numbers assigned to the packaging material types in Customizing for *Extended Warehouse Management* under *Cross-Process Settings → Handling Units → External Identification → Assign Number Range Intervals to Packaging Material Types.*
    b. Note the internal and external number ranges defined in your warehouse in Customizing for *Extended Warehouse Management* under *Cross-Process Settings → Handling Units → External Identification → Define Number Range for HU Identification.*
2. Check if HU number ranges are already defined in Logistics Execution in SAP ERP:
    a. Note the internal and external number range numbers assigned to the packaging material types in Customizing for *Logistics – General*, under *Handling Unit Management → External Identification → Define Number Assignment for Each Packaging Material Type.*
    b. Note the internal and external number ranges defined in Customizing for *Logistics – General*, under *Handling Unit Management → External Identification → Number Range Maintenance for HU Identification.*
3. Decide in which application (Logistics Execution in SAP ERP or EWM) you create HUs and if you use an internal or an external number range for the HUs. Define the number ranges in EWM and LE following the rules described above and transport if necessary, the settings to other systems or clients.
4. If you use STO processes with cross-delivery HUs, activate the lean HU status update in SAP ERP in Customizing for *Logistics Execution* under *Extended Warehouse Management Integration → Cross-*

Process Settings → Handling Unit Management → Set Lean HU Status Update in Non-unique HU Numbering Scenario.

For more information about this setting, see the Customizing documentation.

11 Additional Data Transfer and Settings in SAP ERP and EWM

You use this process to activate the data transfer from SAP ERP to decentralized EWM.

You activate the following types of data transfer:

- Transaction data transfer from SAP ERP using queued remote function call (qRFC)
  This data transfer is triggered in SAP ERP.
- Transfer of additional data (material valuation data) from SAP ERP to EWM
  This data transfer is triggered in EWM (according to a “pull” principle).
- If you use batch-managed products in EWM, you also use this process to configure additional settings related to batch-specific data.

11.1 Activating Transaction Data Transfer in SAP ERP

You use this procedure to activate in SAP ERP the transfer of transaction data (inbound deliveries, outbound deliveries, and production material requests) to decentralized EWM using queued remote function call (qRFC).

Since only deliveries created in the Logistics Execution warehouse linked to EWM should be transferred to EWM, you activate the delivery split by warehouse to ensure that no deliveries are created containing centrally-managed and EWM-managed items in the same document.

You then generate a distribution model containing the 3-digit Logistics Execution warehouse.

Procedure

1. Define delivery split by warehouse in SAP ERP in Customizing for *Logistics Execution* under *Shipping* → *Deliveries* → *Define Split Criteria for Deliveries* → *Delivery Split by Warehouse Number:*
   a. In *Delivery Split by Warehouse Number*, choose the activity *Define delivery split per delivery type*.
   b. Select the *Delivery Split* checkbox for all delivery types you use in your warehouse.
      In the standard warehouse with preconfigured processes, select the checkboxes for the following delivery types:
      - `EL` (*Inbound Delivery*)
      - `LF` (*Outbound Delivery*)
      - `LO` (*Delivery w/o Ref*)
      - `LR` (*Returns Delivery*)
   c. In *Delivery Split by Warehouse Number*, choose the activity *Determine delivery split per warehouse number*.
   d. Select the *Delivery Split* checkbox for your warehouse.
2. Generate the distribution model for the 3-digit warehouse:
   a. In Customizing for *Logistics Execution*, under *SAP EWM Integration* → *Basic Setup of Connectivity* → *Generate Distribution Model from SAP ERP to SAP EWM.*

      > **Note**
      >
      > In SAP S/4HANA, choose the following Customizing path instead: *Logistics Execution* → *Extended Warehouse Management Integration* → *Basic Setup of Connectivity* → *Generate Distribution Model from SAP S/4HANA to SAP EWM*

   b. Enter data in the following fields:
      - *Warehouse Number*, for example, **`W01`**
      - *Logical System of SAP EWM*, for example, **`EWMCLNT001`**
      - *Distribution Model View*, for example, **`EWM`**
   c. In the *Objects* screen area, select *All* to create entries for inbound deliveries, outbound deliveries and production material requests.
   d. In the *Action* screen area, select *Create Entries*.

e. Choose *Execute*.
   A protocol for all selected warehouses is created.

Result

You have activated the data transfer to EWM. If you create an inbound delivery or an outbound delivery in a plant and storage location linked to the EWM warehouse, the system transfers the delivery data to EWM.

> **Note**
>
> If you have not yet completed the configuration of the warehouse requests used for deliveries on the EWM side, the automatic distribution might lead to queue errors. You can prevent this by stopping temporarily the distribution of deliveries for the warehouse in Customizing for *Logistics Execution* under *SAP EWM Integration* (or *Extended Warehouse Management Integration*) → *Basic Setup of Connectivity* → *Configure SAP EWM-Specific Parameters.*

11.2 Activating Additional Data Transfer in EWM

You use this procedure to activate in decentralized EWM the transfer of additional data (material valuation data) from SAP ERP to EWM. This data transfer is triggered in EWM (following a "pull" principle). The data is transferred by means of synchronous remote function call (RFC).

The material valuation data is required for the following functions in EWM:

- Physical inventory
- Quality management
- Split valuation without batches

You schedule a job in EWM to receive regularly material valuation data from SAP ERP for the products used in the EWM warehouse. Based on the EWM warehouse entered as selection criteria, the system automatically determines the party entitled to dispose and the ERP client from which the data should be transferred.

Procedure

1. On the *SAP Easy Access* screen, choose *Extended Warehouse Management* → *Interfaces* → *ERP Integration* → *Determine and Set Prices from ERP.*
2. Enter the EWM warehouse number, for example, **W001**.
3. Save as a variant, for example, **VW001**.
4. Define a background job for program `/SCWM/R_VALUATION_SET`. In this example, the job runs daily:
   a. On the *SAP Easy Access* screen, choose *System* → *Services* → *Jobs* → *Define Job.*
   b. Enter the name of the job, for example, **EWMVAL_W001** (naming convention: `EWMVAL_<warehouse>`).
   c. Create step number 1 by choosing *Step*.
   d. In the *ABAP program* screen area, enter program **/SCWM/R_VALUATION_SET** and variant `VW001`.
   e. Save your entries.
      The *Step List Overview* screen appears.
5. Go back.
6. Choose *Start Condition*.
   The *Start Time* screen appears.
7. Choose *Date/Time*.
8. Enter the scheduled start date and time.
9. Select the *Periodic job* checkbox.
10. Choose *Period values*.
    The *Period Values* screen appears.
11. Select for example *Daily* and save your entries.
12. On the *Start Time* screen, save your entries.

13. On the *Define Background Job* screen, save your entries.

11.3 Configuring Additional Settings for Batches

You can use this optional procedure to gain an overview of the integration of batches in SAP ERP and EWM. This procedure is only necessary if you use batch-managed products in EWM.

In decentralized EWM based on SAP S/4HANA 1909 the following batch levels are supported

- Batch unique at plant level

  Remark: plant level will run in decentralized EWM based on SAP S/4HANA 1909 out of the box. The prerequisite and limitation of SAP EWM 9.5 (see SAP note 2221258) DO NOT apply anymore
- Batch unique at material level
- Batch unique at client level for a material

You can create batches either in SAP ERP or in EWM:

- If you create a batch in SAP ERP see chapter *Executing Initial Transfer of Batches* for the initial transfer and chapter *Executing Delta Transfer of Master Data* for the delta transfer.
- If you create a batch in EWM maintaining the EWM inbound delivery, the batch and related classification data are synchronously created in decentralized EWM and updated asynchronously in the connected SAP ERP system.

If you use internal number ranges for batches, you must check that the internal number ranges defined in SAP ERP and EWM do not overlap.

You can use batch master attributes such as shelf life expiration date, country of origin, or batch status without the need to set up classification. In this case a dummy class will be used in the background that contains all standard attributes corresponding to the standard characteristics LOBM_*- Note that you cannot have a mixed usage of batch master attributes and batch characteristics in a batch class.

Procedure

Carry out the following steps:

1) Check internal number ranges for batches in SAP ERP and EWM.

   a) In Customizing for *Logistics – General* under *Batch Management → Batch Number Assignment*, check if you use internal batch number assignment and how the internal number range is defined.

   b) In Customizing for *Extended Warehouse Management* under *Cross-Process Settings → Batch Management → Batch Management for Decentralized EWM → Define Number Range for Batch*, check that the internal number range for batches (if existing) does not overlap with the internal number range in SAP ERP. Change if necessary, the internal number range in EWM.

2) Copy standard characteristics `LOBM_*` from client `000` to the SAP ERP and EWM client. Carry out this step in all ERP clients linked to EWM and the decentralized EWM client as well.

   a) Customizing for *Logistics – General* under *Batch Management → Batch Valuation → Update Standard Characteristics*, execute the update.

   b) On the SAP Easy Access screen under *Cross-Application Components → Classification System → Master Data*, use the value help of field Characteristic to check that characteristics beginning with LOBM_* now exist in the ERP client.

Navigate to *Enterprise Business Applications → Supply Chain → Extended Warehouse Management (EWM) → Batch Management.*

12 Connect Multiple ERPs with a Decentralized EWM in S/4HANA

It is possible to connect multiple SAP ERP or SAP S/4HANA systems with a decentralized EWM in S/4HANA system.
You can also connect a combination of SAP ERP and S/4HANA systems with a decentralized EWM in S/4HANA system.

For the material master you must ensure that your materials have different material numbers in the relevant ERP systems. There is currently no option to have a material number mapping between the different systems using ALE.

For your business partners (vendors, carriers, and customers) you can use the UKMS key mapping services provided by the Data Replication Framework (DRF) to activate a mapping of business partner numbers between the different systems.

By using the DRF for distribution of the business partners you can connect several SAP ERP or SAP S/4HANA systems which have overlapping business partner numbers with a decentralized EWM in S/4HANA system.

If you use ALE/IDocs for your business partner distribution you must ensure that your business partners have different business partner numbers in the corresponding ERP systems.

Appendix

In this section, you will find additional information for the integration of decentralized EWM with SAP ERP:

- Appendix A - Additional Information about IDoc/ALE
- Appendix B - List of EWM-Related BC Sets in SAP ERP
- Appendix C - Additional Information about BC Sets in EWM
- Appendix D – List of SAP Notes Related to the Integration of a Decentralized EWM

Appendix A – Additional Information about IDoc/ALE

Frequently used transactions:

- /SCWM/MON: Warehouse Monitor. you can view EWM relevant IDocs under *Tools → IDocs.*
  Using this monitor node, you can easily view business attributes (like material key) or status message without having to drill down into single segments or protocols.

  Prerequisite: EWM-relevant message types must exist in Customizing for *Extended Warehouse Management* under *Monitoring → Message Queue Monitoring → Define IDoc Mapping*.
- WE05: IDoc List
- WE02: Display IDoc
- BD87: Status Monitor for ALE Messages. You can use it to reprocess failed IDocs in receiver system
- SM58: Transactional RFC
- SALE: Customizing for ALE

Useful menu paths from the SAP Easy Access menu:

- *ALE → ALE Administration* or *ALE → ALE Development*
- *ALE → ALE Administration → Services → Periodic Processing*.
- *ALE → ALE Administration → Services → Change Pointers*: you use activities in this path to reorganize change pointers.

ALE documentation:

For ALE Documentation go to help.sap.com/s4hana and select your release version. Go to *Product Assistance → SAP S/4HANA → Enterprise Technology → ABAP Platform → Application Server ABAP – Infrastructure → Connectivity → Components of SAP Communication Technology → Classic SAP Technologies (ABAP) → IDoc Interface/ALE*. Here you can find all kind of relevant information for ALE/IDoc. For example:

- Periodic tasks are explained under *IDoc Interface/ALE → Administration → Administration of ALE Functions → Periodic Tasks*
- Performance aspects are explained under *IDoc Interface/ALE → Administration → Administration of ALE Functions → Optimizing ALE Performance*
- Enhancing an IDoc type (with own data) is explained under *IDoc Interface/ALE → Development →* Structure, Documentation, and Definition of IDoc Types→ Defining New IDoc Types-> Enhancing an IDoc Type (this can also be done with reduced message types like ZEWMMATMAS)
- Serialization is explained under *IDoc Interface/ALE → Administration → Administration of ALE Functions → Serialization of Messages*

Appendix B - List of EWM-Related BC Sets in SAP ERP

The following table lists BC Sets in SAP ERP that are related to decentralized EWM and may be relevant for your warehouse processes.

BC Set	Description
/SPE/COMPLETE	*Complete Set of SPE BC Sets*
/SPE/MATERIAL_SCREENS	*Enhance material screen sequences*
/SPE/TVSHP	*Shipping parameters on client level*
/SPE/SPM_RETURNS_SHIPPED_IMG	*Basic Setting SPM Complaints & Returns IMG Shipped (NO ORG)*
/SPE/STO_DISCREPANCIES	*Basic customizing for STO Discrepancies*
/SPE/TRANSPORTATION_CROSS_DOCK	*Service Parts Management: Transportation Cross-Docking*
/SPE/TNAPR	*Message processing routines*
/SPE/DIRECT_OUTBOUND_DELIVERIES	*Customizing for Direct Outbound Deliveries*

/SPE/DIRODO_ACC_ASSIGNMENT	*Account Assignments for Direct Outbound Deliveries*

Appendix C – List of SAP Notes Related to EWM Implementation

The following SAP Notes may help you with your EWM implementation:

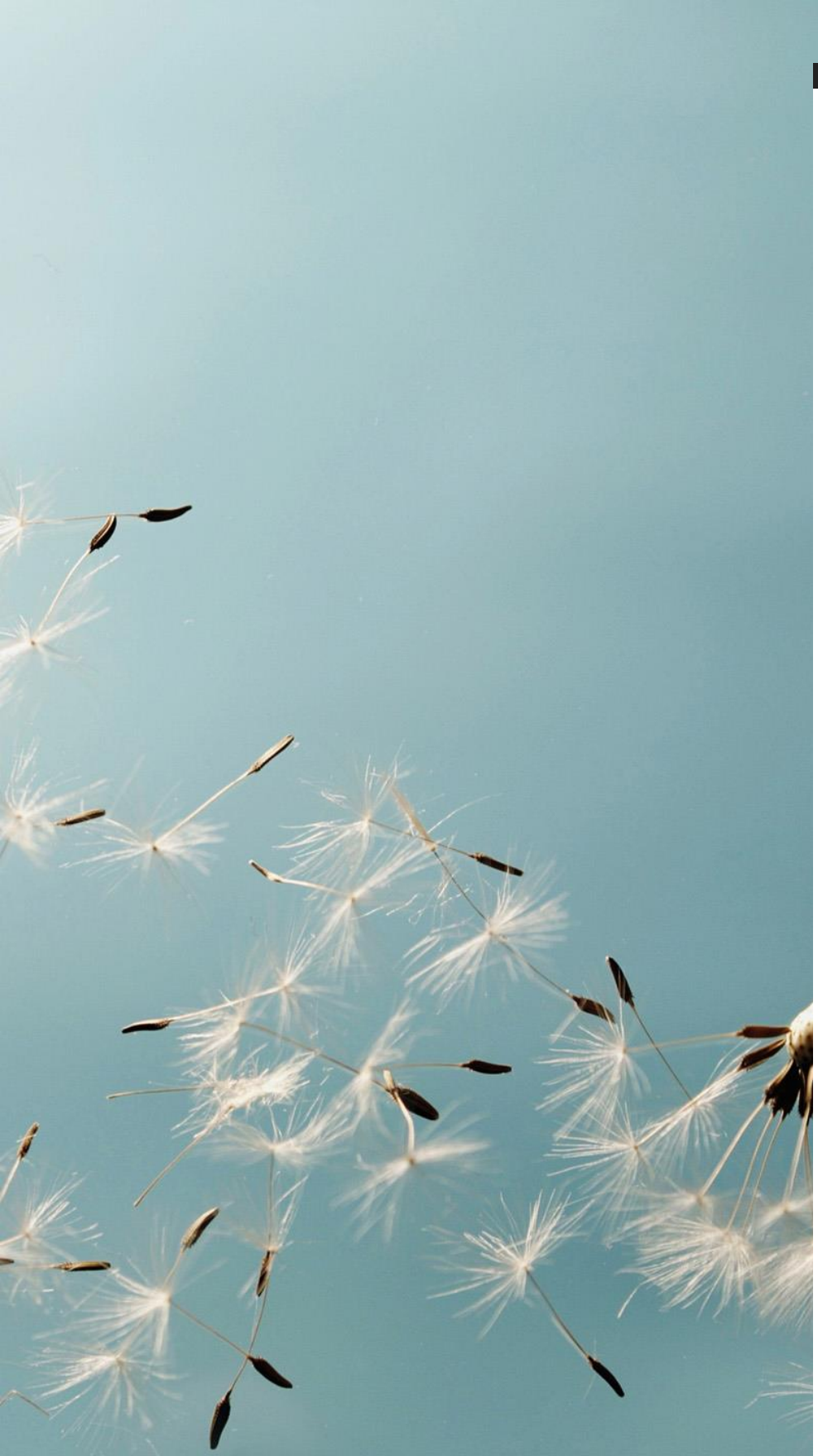
SAP Note	Description / Comment
2450387	*Which document type or item type for which warehouse request?* The SAP Note contains as *attachment* an overview of available BC Sets for EWM warehouse requests.
2464460	*Restricted usage of BC sets in embedded EWM in S/4HANA and in decentral EWM*
2840129	*Restrictions of Decentralized EWM on S/4HANA 1909*
2782080	*Overview of Guides or Best Practices Documents for Extended Warehouse Management* The SAP Note contains a list of available guides for each EWM deployment option.
2145027	*FAQ: Maintenance status in data transfer* The SAP Note contains information about the maintenance status which is crucial for the material master data transfer.
2889206	*Decentralized EWM: Setup Reports for Configuration of IDoc Communication* The SAP Note contains information about how to do the IDOc communication
2863720	*Unblock PDI documents with missing batch info when master data arrives from ERP*

Appendix D – List of SAP Notes Related to the Integration of a Decentralized EWM

The following SAP Notes refer to enhancements of the ALE data distribution model, batch transfer and other topics related to the integration of a decentralized EWM.

SAP Note	Description / Comment	System
2864574	*Automated pre-implementation steps for SAP Note 2852596*	ERP
2852596	*Decentralized EWM in S/4HANA: Simplified ALE Integration. DDIC changes*	ERP
2860052	*Automated pre-implementation steps for SAP Note 2854728*	ERP
2854728	*Decentralized EWM in S/4HANA: Simplified ALE Integration. Maintenance View*	ERP
2860297	*Automated post-implementation steps for SAP Note 2854786*	ERP
2854786	*Decentralized EWM in S/4HANA: Simplified ALE Integration. BAdI for enhanced Filters*	ERP
2880277	*Change field control for maintenance view /SPE/V_EWM_DEST*	ERP
2852915	*ALE: DEBMAS and CREMAS dependent distribution simplification*	ERP
2855929	*Allow dependent distribution in ALE for material and MATQM*	ERP
2775887	*How to set up Quality Management (QM) in decentralized EWM*	EWM
2745236	*Initial Transfer of Batch Master*	ERP

2793298	*Distribution of batch master records to an external system using Distribution models*	ERP
2355214	*Change pointers for message type BATMAS are not written*	ERP
2753665	*Initial Transfer (ALE) of Batches: F4 Help on the Batch Field of the selection screen does not work*	ERP
709550	*Error B1803 for BUS1001006 during receiver determination*	ERP
2602744	*Unlock PDI documents with missing batch info when master data arrives from ERP*	EWM
2856493	*Automated pre-implementation steps for SAP Note 2839077*	ERP
2839077	*ALE: Sending article data using the MATMAS IDoc (BD10, BD21)*	ERP
2822440	*Sending article data using the MATMAS-ALE change pointer*	ERP
2838158	*DIMP LAMA enabling of Decentralized EWM in S/4HANA*	EWM
2873714	*ALE Customizing Report in Receiver System for Decentral EWM*	EWM
2873713	*ALE Message Type Reduction Report for Decentral EWM*	ERP/EWM
2843956	*ALE Customizing Report in Sender System for Decentral EWM*	ERP
2862283	*Transfer of Classification in BATMAS for decentralized EWM*	ERP
2883558	*Business Partner Number conversion error using DRF*	EWM
2896540	*Dependent Distribution: CLFMAS extension for OBJVALUE*	ERP
2906932	*Changes in ALE Customizing Report in Sender System for Decentral EWM - Change pointer settings*	ERP
2882794	*No business system possible for warehouse number assignment*	EWM
2952430	*Distribution of Master Data via ALE, correction of enhanced filters on material, vendor and customer*	ERP
2942290	*Corrections for /SPE/R_DEC_EWM_ALE_CUST Report*	ERP
2999144	*Decentralized EWM in S/4HANA: Corrections for Initial Batch Master transfer*	ERP
3006422	*Automated pre-implementation steps for SAP Note 2983820*	ERP
2983820	*Decentralized EWM in S/4HANA: Simplified ALE Integration - Immediate Batch Replication from ERP to EWM*	ERP
3008469	*Decentralized EWM in S/4HANA: Immediate Batch Replication. Maint. View Adjustments*	ERP
2363365	*MDG-C/S: No DRF Customizing determined for Client System*	ERP
2853332	*Unblock PDI documents with missing batch info when master data arrives from ERP*	EWM
2211045	*Function module to enable outbound web service for business partner replication*	ERP
2221398	*MDG-BP/C/S/CA: (Un-)Supported Fields in Data Model BP*	ERP



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