Integration of SAP ERP with SAP EWM
Document History

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

Table 1

<table>
<thead>
<tr>
<th>Version</th>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>2015-08-04</td>
<td>Minor updates to release numbers</td>
</tr>
<tr>
<td>1.2</td>
<td>2016-01-15</td>
<td>Broken graphics fixed</td>
</tr>
</tbody>
</table>
## Content

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Integration of SAP ERP with SAP EWM</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>Prerequisites for System Connection in ERP and EWM</td>
<td>7</td>
</tr>
<tr>
<td>3</td>
<td>Cross-Client Settings in ERP</td>
<td>9</td>
</tr>
<tr>
<td>3.1</td>
<td>Activating Business Functions in Switch Framework in ERP</td>
<td>9</td>
</tr>
<tr>
<td>3.2</td>
<td>Activating Business Transaction Events in ERP</td>
<td>10</td>
</tr>
<tr>
<td>3.3</td>
<td>Configuring Logical Systems in ERP</td>
<td>11</td>
</tr>
<tr>
<td>4</td>
<td>Client-Dependent Settings in ERP</td>
<td>14</td>
</tr>
<tr>
<td>4.1</td>
<td>Assigning EWM Logical Systems to RFC Destinations in ERP</td>
<td>14</td>
</tr>
<tr>
<td>4.2</td>
<td>Configuring qRFC Communication in ERP</td>
<td>15</td>
</tr>
<tr>
<td>4.3</td>
<td>Configuring Additional Material Master Screens in ERP</td>
<td>20</td>
</tr>
<tr>
<td>5</td>
<td>Cross-Client Settings in EWM</td>
<td>22</td>
</tr>
<tr>
<td>5.1</td>
<td>Activating Business Functions in Switch Framework in EWM</td>
<td>22</td>
</tr>
<tr>
<td>5.2</td>
<td>Activation of Business Add-Ins for Master Data Transfer Using CIF in EWM</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>Activating BAdI: Inbound Processing for Product in EWM</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>Activating BAdI: Inbound Processing for Location in EWM</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>Handling Conflicts in Business Partner Numbering in EWM</td>
<td>26</td>
</tr>
<tr>
<td>5.3</td>
<td>Configuring Logical Systems in EWM</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>Example 1: EWM as SAP SCM Component Linked to an ERP</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>Example 2: EWM as Add-On to ERP Linked to an ERP</td>
<td>31</td>
</tr>
<tr>
<td></td>
<td>Example 3: EWM as SAP SCM Component Linked to an ERP (Distributed System Landscape)</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>Example 4: EWM as Add-On to ERP Linked to an ERP (Distributed System Landscape)</td>
<td>33</td>
</tr>
<tr>
<td></td>
<td>Example 5: EWM as SAP SCM Component Linked to Two ERPs (Distributed System Landscape)</td>
<td>35</td>
</tr>
<tr>
<td>6</td>
<td>Client-Dependent Settings in EWM</td>
<td>36</td>
</tr>
<tr>
<td>6.1</td>
<td>Configuring System Connection and Client Settings in EWM</td>
<td>36</td>
</tr>
<tr>
<td>6.2</td>
<td>Checking Basic Table Entries in EWM</td>
<td>37</td>
</tr>
<tr>
<td>6.3</td>
<td>Checking Standard Customizing in EWM</td>
<td>38</td>
</tr>
<tr>
<td>7</td>
<td>Warehouse Integration into the ERP Enterprise Structure</td>
<td>40</td>
</tr>
<tr>
<td>7.1</td>
<td>Warehouse Integration Before Core Interface Transfer</td>
<td>41</td>
</tr>
<tr>
<td>7.2</td>
<td>Warehouse Integration After Core Interface Transfer</td>
<td>42</td>
</tr>
<tr>
<td>7.3</td>
<td>Warehouse Integration Completion</td>
<td>43</td>
</tr>
<tr>
<td>7.4</td>
<td>Prerequisites for Warehouse Integration in ERP</td>
<td>45</td>
</tr>
<tr>
<td>7.5</td>
<td>Creating Organizational Units for Warehouse in ERP</td>
<td>46</td>
</tr>
<tr>
<td>7.6</td>
<td>Preparing Initial Transfer of Master Data and Organizational Units Using CIF in ERP</td>
<td>48</td>
</tr>
<tr>
<td>7.7</td>
<td>Transferring Organizational Units for Warehouse from ERP to EWM Using CIF</td>
<td>49</td>
</tr>
</tbody>
</table>
8 Warehouse Creation and Integration in EWM
8.1 Creating and Integrating a Warehouse in EWM
8.2 Verifying Synchronization of ERP and EWM Customizing
8.3 Checking HU Numbering in ERP and EWM

9 Data Transfer Activation in ERP and EWM
9.1 Activating Master Data Transfer Using CIF in ERP
9.2 Activating Transaction Data Transfer in ERP
9.3 Activating Additional Data Transfer in EWM
9.4 Activating Data Transfer for Batches in ERP and EWM

10 More Information about Additional ERP-EWM Integration Topics
10.1 List of EWM-Related BC Sets in ERP
1 Integration of SAP ERP with SAP EWM

This configuration content describes the detailed configuration for integrating SAP ERP and SAP Extended Warehouse Management (EWM).

**Note**
As an alternative to this detailed configuration document, see section *Integration of SAP ERP with SAP EWM* [external document] of the *Quick Implementation of Preconfigured Warehouse W001* [external document], which describes only the required actions from the detailed configuration document.

The configuration may differ, depending on the system landscape in which EWM is installed:
- EWM is installed on a system without SAP ERP. This system landscape is referred to as *EWM as own server*
- EWM is installed on a system with SAP ERP running in the same client. This system landscape is referred to as *EWM as Add-On to ERP*

**Note**
When the configuration differs for EWM installed on a system with or without ERP, it is explicitly mentioned.

The configuration content covers the following aspects of the integration between ERP and EWM:
- Configuration of communication between ERP and EWM using qRFC
- Definition of a warehouse in ERP and EWM, integration of the warehouse with the organizational structure of ERP and initial master data transfer from ERP to EWM for the setup of the organizational structure in EWM
- Creation and activation of a Core Interface (CIF) integration model for the master data transfer from ERP to EWM
- Creation and activation of a distribution model for the transfer of transaction data from ERP to EWM
- Creation of basic settings for the warehouse in EWM
  These are customizing entries required in all warehouses.
- Creation of a predefined warehouse structure and setup of preconfigured business processes
  This is an optional step needed for the scenario *Warehouse Management with Preconfigured Processes* [external document].

You use this process to create two kinds of warehouses in EWM and integrate them with ERP:
- The standard warehouse W001 with preconfigured business processes
  This is the recommended way of getting started with EWM. For more information, see *Warehouse Management with Preconfigured Processes* [external document].
- Your own warehouse

**Caution**
System administrators need to pay particular attention to the following:
- Prerequisites for System Connection in ERP and EWM [page 7]
- Cross-Client Settings in ERP [page 9]
- Cross-Client Settings in EWM [page 22]
Prerequisites

You have installed and correctly configured the following applications:

- SAP ERP 6.0 including SAP enhancement package 3 or higher
- SAP EWM 9.0 or higher

For more information, see the Master Guide for SAP EWM 9.0 or higher on SAP Service Marketplace at service.sap.com/instguides.

Process

Carry out the following steps to integrate ERP with EWM:

1. Prerequisites for System Connection in ERP and EWM [page 7]
2. Cross-Client Settings in ERP [page 9]
3. Client-Dependent Settings in ERP [page 14]
4. Cross-Client Settings in EWM [page 22]
5. Client-Dependent Settings in EWM [page 36]
6. Warehouse Integration into the ERP Enterprise Structure [page 40]
7. Warehouse Creation and Integration in EWM [page 52]
8. Data Transfer Activation in ERP and EWM [page 60]

Result

By following through this process, you create a warehouse in EWM and integrate it with ERP.

- If you have created and integrated the standard warehouse with preconfigured processes, the warehouse contains basic settings, the predefined warehouse structure, and customizing entries for the preconfigured processes.
  You can now proceed with the additional configuration of the warehouse structure and master data for the scenario Warehouse Management with Preconfigured Processes [external document]. For more information, see Configuration of Warehouse Structure and Master Data for SAP EWM [external document].

- If you have created and integrated your own warehouse, the warehouse contains basic settings in EWM.
  You can now create the warehouse structure and master data and configure the processes as needed in your warehouse. See Customizing for Extended Warehouse Management for the manual creation of the warehouse structure and the manual setup of the warehousing processes.

More Information

More Information about Additional ERP-EWM Integration Topics [page 71]
List of EWM-Related BC Sets in ERP [page 76]
2 Prerequisites for System Connection in ERP and EWM

System administrators have to make specific settings for the integration of SAP ERP and SAP Extended Warehouse Management (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 in the examples below. For example, for the EWM test client to use the RFC destination to the ERP test client, an RFC user exists in the ERP test client.
  
  For more information about the user authorizations, see the Component Security Guide for SAP EWM 9.0 or higher on SAP Service Marketplace at service.sap.com/instguides.

- RFC destinations exist between the corresponding ERP and EWM clients.

**Example 1: RFC Destination Setup in a Distributed System Landscape with EWM Installed on an Own Server**

An RFC destination from the EWM customizing system/client to the ERP customizing client (for example, from system **EWC** client **001** to system **ERC** client **001**) is required for the tool-based ERP integration as the EWM implementation tools described in Configuring System Connection and Client Settings in EWM [external document] need access to the ERP customizing data.

**Recommendation**

Use the naming convention `<SYS>CLNT<CLIENT>` for the RFC destinations. For example, RFC destination **XYZCLNT001** refers to system **XYZ** and client **001**.

**Example 2: RFC Destination Setup in a Distributed System Landscape with EWM Installed as an Add-On to ERP**

In case EWM is installed as an add-on to ERP, RFC destinations are still needed as both applications communicate via qRFC.

**Recommendation**

Use the following naming convention:

- `<SYS>CLNT<CLIENT>` for the RFC destination to ERP (example: **ABTCLNT001**)
- `<SYS>EWM<CLIENT>` for the RFC destination to EWM (example: **ABTEWM001**)

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### Example 1

<table>
<thead>
<tr>
<th>Customizing Systems</th>
<th>Test Systems</th>
<th>Production Systems</th>
</tr>
</thead>
<tbody>
<tr>
<td>ERC 001</td>
<td>ERT 001</td>
<td>ERP 001</td>
</tr>
<tr>
<td>RFC Destination</td>
<td>RFC Destination</td>
<td>RFC Destination</td>
</tr>
<tr>
<td>ERCLNT001</td>
<td>EWTCLNT001</td>
<td>EWPCLNT001</td>
</tr>
</tbody>
</table>

### Example 2

<table>
<thead>
<tr>
<th>Customizing System</th>
<th>Test System</th>
<th>Production System</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABC 001</td>
<td>ABT 001</td>
<td>ABP 001</td>
</tr>
<tr>
<td>RFC Destinations</td>
<td>RFC Destinations</td>
<td>RFC Destinations</td>
</tr>
<tr>
<td>ABCLNT001</td>
<td>ABTCLNT001</td>
<td>ABPCLNT001</td>
</tr>
<tr>
<td>ABTEWM001</td>
<td>ABTEWM001</td>
<td>ABPCLNT001</td>
</tr>
</tbody>
</table>

Figure 1: Examples 1 and 2
3 Cross-Client Settings in ERP

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

Process

Contact your system administrator to carry out the following steps:

1. Activating Business Functions in Switch Framework in ERP [page 9]
2. Activating Business Transaction Events in ERP [page 10]
3. Configuring Logical Systems in ERP [page 11]

Result

The ERP system is now ready to communicate with EWM.

3.1 Activating Business Functions in Switch Framework in ERP

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

Table 2

<table>
<thead>
<tr>
<th>Business Function</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOG_LE_INTEGRATION</td>
<td>LE, Extended Warehouse Management Integration</td>
</tr>
</tbody>
</table>

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

If you use business processes other than the preconfigured processes in the standard warehouse, check the documentation of the following EWM-related business functions in ERP and decide if they are relevant for your warehousing processes:

Table 3

<table>
<thead>
<tr>
<th>Business Function</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOG_PP_EWM_MAN</td>
<td>EWM Integration into Manufacturing</td>
</tr>
<tr>
<td>LOG_PP_EWM_MAN_2</td>
<td>EWM Integration into Manufacturing 2</td>
</tr>
<tr>
<td>Business Function</td>
<td>Description</td>
</tr>
<tr>
<td>----------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>LOG_SCM_MEAN_INT</td>
<td>SCM, CIF Transfer of Additional GTINs (EANs/UPCs) for Material</td>
</tr>
<tr>
<td>OPS_ADVRETURNS_1</td>
<td>Advanced Returns Management</td>
</tr>
<tr>
<td>OPS_ADVRETURNS_2</td>
<td>Advanced Returns Management 2</td>
</tr>
<tr>
<td>SPE_CI_1</td>
<td>Service Parts Management: Innovations in ERP</td>
</tr>
<tr>
<td>LOG_TM_ORD_INT_II</td>
<td>ERP-TMS: Order and Invoice Integration</td>
</tr>
<tr>
<td>LOG_SCM_EWM_INT</td>
<td>EWM Integration</td>
</tr>
</tbody>
</table>

### 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 ERP systems.

2. Activate the business function that you want to use. For running the preconfigured business processes in the standard warehouse, you must activate business function LOG_LE_INTEGRATION (LE, Extended Warehouse Management Integration).

### 3.2 Activating Business Transaction Events in ERP

You use this procedure to activate business transaction events (BTEs) for Core Interface (CIF) in SAP ERP. BTEs are used to replicate changes to master data from the ERP system to SAP Extended Warehouse Management (EWM) immediately.

In this procedure, you activate BTEs for CIF in the ERP system. In the procedure Preparing Initial Transfer of Master Data and Organizational Units Using CIF in ERP [page 48], you determine on client level which master data changes are transferred by means of BTEs to EWM.

**Procedure**

Carry out the following steps in your ERP customizing client and transport if necessary the settings to other ERP systems:

1. Activate online transfer using BTEs in Customizing for Integration with Other SAP Components under Advanced Planning and Optimization > Basic Settings for the Data Transfer > Change Transfer > Change Transfer for Transaction Data > Activate Online Transfer Using BTE.
2. Select the ND-APO (New Dimension Plug-In APO) and NDI (New Dimension Integration) checkboxes.
3. Save your changes.
3.3 Configuring Logical Systems in 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 ERP systems. Carry out the subsequent steps in all ERP systems (in a client allowing cross-client settings) that you want to connect to SAP Extended Warehouse Management (EWM).

1. Define a logical system for each ERP client (for example, ERPCLNT001) and a logical system for each 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. Transport if necessary these settings to other ERP systems.

Recommendation

Use the same naming conventions for the logical systems as for the RFC destinations.

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.

3. Specify in each ERP system the system type and release of each EWM logical system defined in the first step.

In Customizing for Integration with Other SAP Components under Extended Warehouse Management > Basic Settings for Setting Up the System Landscape > Specify SAP APO Release enter the values as shown in the following table for the EWM logical system:

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log. System</td>
<td>&lt;Logical System Name&gt;, for example, EWMCLNT001</td>
</tr>
<tr>
<td>Syst. type</td>
<td>SAP_SCMB</td>
</tr>
<tr>
<td>Release</td>
<td>&lt;System Release&gt;, for example, 702</td>
</tr>
</tbody>
</table>
Example

In a typical system landscape, you proceed as shown in the following examples.

Example 1: Logical System Setup in a Distributed System Landscape with EWM Installed on an Own Server

1. In the ERP customizing system (for example, system ERC client 001) you define a logical system for each ERP system/client connected to EWM and for each EWM system/client connected to ERP. For example, you define two ERP logical systems (ERP test and ERP production) and two EWM logical systems (EWM test and EWM production). You transport if necessary these settings from the ERP customizing system to other ERP systems (ERP test and ERP production).

2. In each ERP system connected to EWM you assign the ERP logical system to the corresponding ERP client so that each ERP client knows its own logical system. For example, in test system ERT client 001 you assign the logical system ERTCLNT001 to client 001.

3. In each ERP system connected to EWM you specify for the EWM logical system the system type and the release of the corresponding EWM system. For example, in test system ERT client 001 you specify the system type and release of the EWM test system EWTCLNT001.

4. In each ERP client connected to EWM you assign the EWM logical system to the corresponding RFC destination. For example, in test system ERT client 001 you assign the logical system EWTCLNT001 to the RFC destination EWTCLNT001. This activity is not a cross-client activity. For more information, see Assigning EWM Logical Systems to RFC Destinations in ERP [page 14].

Note

Only the definition of the logical systems can be transported from your ERP customizing client to other ERP systems/clients. The setup of the logical systems in ERP cannot be transported from your ERP customizing client to other ERP systems. Therefore you must repeat the steps in every ERP system connected to EWM.

Example 2: Logical System Setup in a Distributed System Landscape with EWM Installed as an Add-On to ERP

The steps represented in the figure below are the same as in example 1.

In case EWM is installed as add-on to ERP you still need two logical systems per client: one logical system for ERP and one logical system for EWM. The EWM logical system is necessary for the qRFC communication from the ERP application to the EWM application. The ERP logical system is used as own logical system.
Figure 3: Example 2: Logical System Setup in a Distributed System Landscape with EWM Installed as an Add-On to ERP
4  Client-Dependent Settings in ERP

You use this process to prepare the SAP ERP client for the communication with SAP Extended Warehouse Management (EWM).

**Process**

Carry out the following steps:

1. Assigning EWM Logical Systems to RFC Destinations in ERP [page 14]
2. Configuring qRFC Communication in ERP [page 15]
3. Configuring Additional Material Master Screens in ERP [page 20]

**Result**

The ERP client is now ready to communicate with EWM.

### 4.1 Assigning EWM Logical Systems to RFC Destinations in ERP

You use this procedure to assign the SAP Extended Warehouse Management (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 ERP systems and clients. Therefore you must repeat the steps in every ERP client connected to EWM.

**Prerequisites**

You have configured the logical systems for EWM as described in Configuring Logical Systems in ERP [page 11].

**Procedure**

Carry out the following steps in each ERP client you want to connect to 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.

### 4.2 Configuring qRFC Communication in ERP

You use this procedure to configure the queued remote function call (qRFC) communication in SAP ERP and gain an overview of the qRFC communication between ERP and SAP Extended Warehouse Management (EWM).

You set up the qRFC communication for the following types of data transfer:

- **Transfer of Master Data Using Core Interface (CIF)**
  To set up the communication for this type of data, in Customizing for **Integration with Other SAP Components**, choose the following:
  - Extended Warehouse Management > Basic Settings for Setting Up the System Landscape
  - Extended Warehouse Management > Basic Settings for Data Transfer

- **Transfer of Transaction Data (Inbound and Outbound Deliveries)**
  To set up the communication for this type of data, in Customizing for **Integration with Other SAP Components**, choose Extended Warehouse Management > Basic Settings for EWM Linkage.

Since the communication is bi-directional, you not only configure the sending of data to EWM but also the reception of data from EWM.

**Note**

The setup of the qRFC communication cannot be transported from your ERP customizing client to other ERP systems and clients. Therefore you must repeat the steps in every ERP client connected to EWM.

The following figure shows how the inbound and outbound queues in ERP and EWM work together.
For the **qRFC communication from ERP to EWM**, a message containing, for example, product master data or delivery data is sent from the ERP application to the outbound queue in the ERP system. The QOUT scheduler in ERP sends the message to EWM by means of tRFC. In EWM it is either executed immediately (ERP setting 2 in the figure: communication using outbound queue) or it is sent to the EWM inbound queue (ERP setting 1 in the figure: communication using inbound queue). The QIN scheduler in EWM controls the execution of the queue in EWM.

**Recommendation**

For performance reasons, use inbound queues for the communication with EWM. Using inbound queues means that you monitor data transferred from ERP to EWM in the EWM system using transaction SMQ2 or the warehouse management monitor.

Using this procedure you configure only the ERP side of the communication from ERP to EWM: the QOUT scheduler in ERP and the type of queue (inbound/outbound) used for the communication with EWM. For more information about the settings in EWM, see Configuring System Connection and Client Settings in EWM [page 36].

The main queue names for the communication from ERP to EWM are the following:

<table>
<thead>
<tr>
<th>Queue Name (Prefix)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CF*</td>
<td>Master data transferred using CIF</td>
</tr>
<tr>
<td>DLV*</td>
<td>Delivery data (from ERP to EWM)</td>
</tr>
</tbody>
</table>

For the **qRFC communication from EWM to ERP**, a message containing, for example, delivery confirmation data or goods movement data is sent from the EWM application to the outbound queue in the EWM system. The QOUT scheduler in EWM sends the message to ERP by means of tRFC. In ERP it is either executed immediately (EWM setting 4 in the figure: communication using outbound queue) or it is sent to the ERP inbound queue (EWM setting 3 in the figure: communication using inbound queue). The QIN scheduler in ERP controls the execution of the queue in ERP.
If you use inbound queues for the communication from EWM to ERP (this setting is done in EWM), it means that you monitor data transferred from EWM in the ERP system with transaction SMQ2. As an alternative, you can use outbound queues for the communication from EWM to ERP to monitor both communication channels (from ERP to EWM and from EWM to ERP) on the EWM side using the warehouse management monitor.

In this procedure, you configure only the ERP side of the communication from EWM to ERP: the QIN scheduler and the display of data or the application log of an inbound queue entry. For more information about the settings in EWM, see Configuring System Connection and Client Settings in EWM [page 36].

The main queue names for the communication from EWM to ERP (inbound queue in ERP) are the following:

<table>
<thead>
<tr>
<th>Queue Name (Prefix)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DLW*</td>
<td>Delivery data (from EWM to ERP)</td>
</tr>
<tr>
<td>EWM*</td>
<td>Goods movement data (without deliveries)</td>
</tr>
</tbody>
</table>

**Note**

Other processes not included in the standard warehouse with preconfigured processes use other queue names. For a complete list of messages between ERP and EWM and for queue monitoring, see the Application Operations Guide for SAP EWM 9.0 or higher on SAP Service Marketplace at service.sap.com/instguides.

This procedure describes only the basic setup for the qRFC communication between ERP and EWM using inbound queues in both directions. For more information, see the following:

- SAP Library for SAP NetWeaver on SAP Help Portal at help.sap.com/nw under SAP NetWeaver 7.0 Including Enhancement Package 3/English > SAP NetWeaver by Key Capability > Application Platform by Key Capability > Platform-Wide Services > Connectivity > Components of SAP Communication Technology > Classic SAP Technologies (ABAP) > RFC > Background Communication > Queued Remote Function Call (qRFC)
- Customizing documentation to check if you need additional settings in your system environment. For example, you can choose to log not only error messages but also success messages in the test and implementation phase of your project (see Customizing for Integration with Other SAP Components under Extended Warehouse Management > Basic Settings for EWM Linkage > Log Sent and Received Messages).
- SAP Note 400330 for the setup of the QOUT scheduler

**Procedure**

Carry out the following steps in all ERP clients you want to connect to EWM.

1. Register the RFC destination for EWM in the QOUT scheduler in ERP. This setting is relevant for the qRFC communication from ERP to EWM.
   1. In the ERP system, on the SAP Easy Access screen, call transaction SMQS.
   2. On the qRFC Monitor (QOUT Scheduler) screen, choose Register without activation. This means that the queue is not triggered immediately by the Outbound Scheduler.
   3. Enter the data as shown in the following table:
Table 7

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Destination</td>
<td><code>&lt;RFC Destination&gt;</code>, for example, EWMCLNT001</td>
</tr>
<tr>
<td>Max. Conn.</td>
<td>10</td>
</tr>
<tr>
<td>Max. Runtime</td>
<td>60</td>
</tr>
<tr>
<td>W/o tRFC</td>
<td>Leave this field empty.</td>
</tr>
</tbody>
</table>

4. Choose Continue.

2. Register the queue names in the QIN scheduler to configure the execution of inbound queues in ERP. This setting is relevant for the qRFC communication from EWM to ERP.
   1. In the ERP system, on the SAP Easy Access screen, call transaction SMQR.
   2. On the qRFC Monitor (QIN Scheduler) screen, choose Register without activation. This means that the queue is not triggered immediately; the scheduler is inactive.

3. Enter the data as shown in the following table:

Table 8

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Queue Name</td>
<td><code>&lt;used queue name&gt;</code>, we recommend that you use either * or any of the following: DLW*, EWM*, QI*, QM*, WM*</td>
</tr>
<tr>
<td>Mode</td>
<td>D</td>
</tr>
<tr>
<td>Max. Runtime</td>
<td>60</td>
</tr>
<tr>
<td>USERDEST</td>
<td>Leave this field empty.</td>
</tr>
<tr>
<td>Attempts</td>
<td>30</td>
</tr>
<tr>
<td>Pause</td>
<td>300</td>
</tr>
</tbody>
</table>

4. Choose Continue.

3. Register display programs for the inbound queue in 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 ERP.
   1. In the ERP system, on the SAP Easy Access screen, call transaction SMQE.
   2. Choose Edit Register Display Program.

3. Enter the queue and program names as shown in the following table:

Table 9

<table>
<thead>
<tr>
<th>Queue Name</th>
<th>Program Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>DLW*</td>
<td><code>/SPE/QUEUE_DISPLAYTOOLS</code></td>
</tr>
<tr>
<td>EWM*</td>
<td><code>/SPE/QUEUE_DISPLAYTOOLS</code></td>
</tr>
<tr>
<td>QI*</td>
<td><code>/SPE/QUEUE_DISPLAYTOOLS</code></td>
</tr>
<tr>
<td>QM*</td>
<td><code>/SPE/QUEUE_DISPLAYTOOLS</code></td>
</tr>
</tbody>
</table>
### Note
Since you have registered the display programs in this step, you do not need to register them in Customizing for Integration with Other SAP Components under | Extended Warehouse Management | Basic Settings for EWM Linkage | Register Navigation from Queue |.

4. Set the queue type for the communication of master data by means of CIF from ERP to EWM.
   1. In Customizing for Integration with Other SAP Components, choose | Extended Warehouse Management | Basic Settings for Setting Up the System Landscape | Set Target System and Queue Type |.
   2. Create an entry for the EWM logical system with the following data:

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log.System</td>
<td>Logical System</td>
<td>For example, EWMCLNT001</td>
</tr>
<tr>
<td>Q-Type</td>
<td>Queue type</td>
<td>I (Inbound Queues)</td>
</tr>
</tbody>
</table>

   **Note**
   The Operation Mode field is automatically filled by the system when you generate, activate or deactivate CIF integration models.

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

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receiver</td>
<td>&lt;logical system&gt;, for example, EWMCLNT001</td>
</tr>
<tr>
<td>Queue</td>
<td>Inbound queue</td>
</tr>
<tr>
<td>Agg SQueue</td>
<td>No aggregation</td>
</tr>
<tr>
<td>MQueue Act</td>
<td>Mass queue disabled (=&gt; Single queues)</td>
</tr>
<tr>
<td>MQueue Par</td>
<td>1</td>
</tr>
</tbody>
</table>

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

6. Activate the CIF application log in ERP.
   This setting makes it easier to search any errors that might have occurred in the qRFC communication of master data. You should keep the CIF application log active at least during the setup and test phases.
   1. In Customizing for Integration with Other SAP Components, choose | Extended Warehouse Management | Basic Settings for Data Transfer | Set User Parameters |.
   2. Create an entry with the following data:

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 12

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>User Name</td>
<td>*</td>
</tr>
<tr>
<td>RFC Mode</td>
<td>Q (Queued RFC)</td>
</tr>
<tr>
<td>Logging</td>
<td>D (Detailed)</td>
</tr>
<tr>
<td>Debug</td>
<td>Leave this field empty.</td>
</tr>
</tbody>
</table>

For more information, see the value help of the Logging field.

7. Activate the automatic restart of erroneous inbound queues from EWM to ERP.
   With this setting, inbound queues in ERP that are erroneous due to locking issues will be restarted automatically again up to 25 times.
   1. In Customizing for Logistics Execution, choose Shipping > System Modifications > Specify Characteristics for System Messages.
   2. Choose activity Define the message types of system messages
   3. Create a new entry with the following attributes:

   Table 13

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Call Type</td>
<td>Leave this field empty</td>
</tr>
<tr>
<td>Activity</td>
<td>Leave this field empty</td>
</tr>
<tr>
<td>Application Area</td>
<td>/SPE/IF_SERVICES</td>
</tr>
<tr>
<td>Message Number</td>
<td>023</td>
</tr>
<tr>
<td>Message Type</td>
<td>E</td>
</tr>
</tbody>
</table>

4. Save your entries.
5. Check in Customizing for Integration with Other SAP Components under Extended Warehouse Management > Basic Settings for EWM Linkage > Log Sent and Received Messages that the log for received messages in not disabled.

Result

The ERP client is prepared to communicate with EWM by means of qRFC. However, no communication can take place yet as you have created neither a CIF integration model for the master data nor a distribution model for the transaction data yet.

4.3 Configuring Additional Material Master Screens in ERP

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

- WM Execution
- WM Packaging
The additional screens allow you to maintain material master data needed in ERP in the warehousing processes with SAP 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 to EWM by means of Core Interface (CIF) but can be used in ERP as well.

**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 Verifying Synchronization of ERP and EWM Customizing [page 53].

**Procedure**

Carry out the following steps in your ERP customizing client and transport if necessary 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.
5 Cross-Client Settings in EWM

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

Process

Carry out the following steps:

1. **Activating Business Functions in Switch Framework in EWM** [page 22]
2. **Activation of Business Add-Ins for Master Data Transfer Using CIF in EWM** [page 23]
   - See also:
     - Activating BAdI: Inbound Processing for Product in EWM [page 23]
     - Activating BAdI: Inbound Processing for Location in EWM [page 24]
     - Handling Conflicts in Business Partner Numbering in EWM [page 26]
3. **Configuring Logical Systems in EWM** [page 27] (optional)
   - See also:
     - Example 1: EWM as SAP SCM Component Linked to an ERP [page 30]
     - Example 2: EWM as Add-On to ERP Linked to an ERP [page 31]
     - Example 3: EWM as SAP SCM Component Linked to an ERP (Distributed System Landscape) [page 32]
     - Example 4: EWM as Add-On to ERP Linked to an ERP (Distributed System Landscape) [page 33]
     - Example 5: EWM as SAP SCM Component Linked to Two ERPs ( Distributed System Landscape) [page 35]

Result

The EWM system is now ready to receive data from ERP.

5.1 Activating Business Functions in Switch Framework in EWM

You use this procedure to activate business functions in the Switch Framework. To benefit from the complete EWM functionality, you must activate the following business function in SAP Extended Warehouse Management (EWM):
Table 14

<table>
<thead>
<tr>
<th>Business Function</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCM_EWM_FND</td>
<td>EWM, Essential Foundation Functions</td>
</tr>
</tbody>
</table>

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

**Procedure**

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

2. Activate the business function that you want to use. To benefit from the complete EWM functionality, you must activate business function SCM_EWM_FND.

### 5.2 Activation of Business Add-Ins for Master Data Transfer Using CIF in EWM

You use this process to prepare in SAP Extended Warehouse Management (EWM) the transfer of master data using Core Interface (CIF).

**Process**

Carry out the following steps:

1. Activating BAdI: Inbound Processing for Product in EWM [page 23] (optional)
2. Activating BAdI: Inbound Processing for Location in EWM [page 24]
3. Handling Conflicts in Business Partner Numbering in EWM [page 26] (optional)

#### 5.2.1 Activating BAdI: Inbound Processing for Product in EWM

You can use this optional procedure to activate a Business Add-In (BAdI) for creating different product master records in SAP Extended Warehouse Management (EWM) when two SAP ERP clients send the same material number for two different products by means of Core Interface (CIF). It is not used in the standard warehouse with preconfigured processes.

**Note**

This procedure is not necessary if you connect one EWM client to one ERP client.
To create two different product master records in EWM, you implement the BAdI `SMOD_APOCF005`.

**Caution**

Activate the BAdI **before** you transfer the first product to EWM using CIF.

**Procedure**

Carry out the following steps in an EWM client allowing the creation of workbench requests only if you use the same material numbers for different products in ERP clients connected to the same EWM client. If necessary, transport the workbench request to other EWM systems.

1. In Customizing for **SCM Basis** under **Integration** > **BAdls for Specific Applications** > **Product** > **BAdI: Inbound Processing for Product** select the `APOCF005_SYSDIF` implementation.
2. Choose **Create**.
3. In the **Implementation Name** field, enter a name for your implementation, for example, `Z_APOCF005_SYSDIF`.
4. Choose **Continue**.
5. In the **Implementation Short Text** field, enter a description for your implementation.
6. Save your implementation in a customer-own package or as a local object.
7. In the menu, choose **Goto** > **Sample Code** > **Copy** and confirm the message in the **Copy Example Code** dialog box with **Yes**.
8. In the menu, choose **Implementation** > **Activate**.

**Example**

SAP provides a sample implementation for the BAdI. The sample implementation adds a suffix to the ERP material number when creating the EWM product master record.

<table>
<thead>
<tr>
<th>ERP Material Number</th>
<th>Material Description</th>
<th>ERP System/Client</th>
<th>EWM Product Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>4711</td>
<td>Small Part</td>
<td>ABC/001</td>
<td>4711@ABC001</td>
</tr>
<tr>
<td>4711</td>
<td>Large Part</td>
<td>XYZ/001</td>
<td>4711@XYZ001</td>
</tr>
</tbody>
</table>

You can copy the sample implementation to your own implementation as described in the procedure above.

### 5.2.2 Activating BAdI: Inbound Processing for Location in EWM

You use this procedure to activate a Business Add-in (BAdI) for creating different location and supply chain unit (SCU) master data in SAP Extended Warehouse Management (EWM) for the following use cases:

- Use Case 1
Two different location-related objects have the same number in the SAP ERP client connected to EWM. For example, plant 0001 and shipping office 0001 or vendor 123456 and customer 123456. This use case is relevant for the standard warehouse with preconfigured processes.

- **Use Case 2**
  Two different location-related objects of the same type have the same number in two ERP clients connected to the same EWM client. For example, plant 0001 in ERP systems ABC client 001 and XYZ client 001.

- **Use Case 3**
  Combination of use case 1 and 2

---

**Note**
If you connect one EWM client to one ERP client, only use case 1 might occur.

To create two different location/SCU master records in EWM, you implement the BAdI SMOD_APOCF001.

---

**Caution**
Activate the BAdI before you transfer the first location-related object to EWM using Core Interface (CIF).

---

**Procedure**

Carry out the following steps in an EWM client allowing the creation of workbench requests. If necessary, transport the workbench request to other EWM systems.

1. In Customizing for SCM Basis under Integration > BAdIs for Specific Applications > Location and Business Partner > BAdI: Inbound Processing for Location select the sample implementation relevant to your use case. For example, select APOCF001_TYPEDIF if you connect one ERP client to one EWM client and choose Display.
2. On the Interface tab, double-click the BAdI method.
3. Select the source code and copy it.
4. Go back to the Customizing and choose the same node as in step 1.
5. Choose Create.
6. In the Implementation Name field, enter a name for your implementation, for example, Z_APOCF001_TYPEDIF.
7. Choose Continue.
8. In the Implementation Short Text field, enter a description for your implementation.
9. Save your implementation in a customer-own package or as a local object.
10. On the Interface tab, double-click the BAdI method.
11. Replace the existing coding with the coding you copied in step 3.
12. Save the coding and go back to the Business Add-In Builder screen.
13. In the menu, choose Implementation > Activate.
Example

SAP provides a sample implementation for the BAdI in all three use cases. The sample implementations handle the location/SCU number as follows:

<table>
<thead>
<tr>
<th>Sample Implementation</th>
<th>Relevant For</th>
<th>Handling of Location/SCU Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>APOCF001_TYPEDIF</td>
<td>Use Case 1</td>
<td>Adds the location type as prefix</td>
</tr>
<tr>
<td>APOCF001_SYSDIF</td>
<td>Use Case 2</td>
<td>Adds the ERP system and client as suffix</td>
</tr>
<tr>
<td>APOCF001_TYPESYSDIF</td>
<td>Use Case 3</td>
<td>Adds the location type as prefix and the ERP system and client as suffix</td>
</tr>
</tbody>
</table>

Example for use case 1:

<table>
<thead>
<tr>
<th>ERP Object</th>
<th>Description</th>
<th>EWM Location/SCU</th>
</tr>
</thead>
<tbody>
<tr>
<td>0001</td>
<td>Plant 0001</td>
<td>PL0001</td>
</tr>
<tr>
<td>0001</td>
<td>Shipping Point 0001</td>
<td>SP0001</td>
</tr>
</tbody>
</table>

The following table shows the prefixes used in use case 1 and 3 for the EWM-relevant objects:

<table>
<thead>
<tr>
<th>Location Type</th>
<th>Name</th>
<th>Prefix Added</th>
</tr>
</thead>
<tbody>
<tr>
<td>1001</td>
<td>Plant</td>
<td>PL</td>
</tr>
<tr>
<td>1003</td>
<td>Shipping Point</td>
<td>SP</td>
</tr>
<tr>
<td>1005</td>
<td>Transportation Zone</td>
<td>No prefix</td>
</tr>
<tr>
<td>1010</td>
<td>Customer</td>
<td>CU</td>
</tr>
<tr>
<td>1011</td>
<td>Supplier</td>
<td>SU</td>
</tr>
<tr>
<td>1020</td>
<td>Carrier</td>
<td>CA</td>
</tr>
</tbody>
</table>

You can copy one of the sample implementations to your own implementation as described in the procedure above.

5.2.3 Handling Conflicts in Business Partner Numbering in EWM

You use this optional procedure to handle conflicts in business partner numbering in SAP Extended Warehouse Management (EWM). It is not used in the standard warehouse with preconfigured processes.

If you use the same number range for customers and vendors and have overlapping numbers within one SAP ERP client or if you use the same numbers for vendors (or customers) across several ERP clients connected to one EWM client, conflicts might arise when creating the business partners for the vendors and customers in EWM. Since the business partner number in EWM has the same length as the customer number and vendor number in
ERP, it is not possible to add a prefix or suffix to the business partner number using a BAdI as in case of products and locations.

**Procedure**

With the activation of business function SCM_EWM_FND, the following new activities are available in Customizing for SCM Basis:

- Master Data  >  Business Partner  >  Business Partner ID Mapping  >  Define General Settings
- Master Data  >  Business Partner  >  Business Partner ID Mapping  >  Map Differentiator

You can use these activities to set up business partner ID mapping.

## 5.3 Configuring Logical Systems in EWM

You use this optional procedure to define the logical systems manually in SAP Extended Warehouse Management (EWM). This is a cross-client setting. It is the recommended procedure if only some users have the authorization for cross-client settings or if you configure cross-client settings in a separate client.

**Note**

In case EWM is installed as add-on to SAP ERP, you have already configured the logical systems in Configuring Logical Systems in ERP [page 11]. No action is necessary in here.

**Note**

This procedure is an optional step in the ERP-EWM integration. As an alternative you can use the implementation tool for system integration to carry out the steps. In this case you need authorization for cross-client activities to use the implementation tool. For more information, see Configuring System Connection and Client Settings in EWM [page 36].

Additionally this procedure gives you an overview of the entities used in EWM to configure the system connections. Some deployment examples illustrate the relationship between these system connection entities.

**Overview of Entities Used in EWM to Configure the System Connections**

While the queued remote function call (qRFC) communication in ERP involves only RFC destinations and logical systems, EWM uses additional entities for the system connections:
<table>
<thead>
<tr>
<th>Entity</th>
<th>Setting Level</th>
<th>Customizing Transport</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>RFC Destination</td>
<td>Cross-Client</td>
<td>No</td>
<td>Technical setting for RFC and qRFC communication; Can be created in the System Landscape Directory; See Prerequisites for System Connection in ERP and EWM [page 7]</td>
</tr>
<tr>
<td>Logical System</td>
<td>Cross-Client</td>
<td>Yes</td>
<td>Technical setting for RFC and qRFC communication; Can be created in the System Landscape Directory; 1:1 relationship to RFC destination except for own logical system assigned to client; See Configuring Logical Systems in ERP [page 11]</td>
</tr>
<tr>
<td>Business System Group</td>
<td>Client</td>
<td>No</td>
<td>Used in EWM for master data related to CIF; 1:N relationship to logical system; See Configuring System Connection and Client Settings in EWM [page 36]</td>
</tr>
<tr>
<td>Business System</td>
<td>Client</td>
<td>No</td>
<td>Used in EWM for transaction data relevant for qRFC; Can be created in the System Landscape Directory; 1:1 relationship to logical system; Own business system assigned to client; See Configuring System Connection and Client Settings in EWM [page 36]</td>
</tr>
</tbody>
</table>

In Customizing for Extended Warehouse Management you find the settings regarding the logical systems and business system groups under Interfaces > ERP Integration > General Settings.

In Customizing for SCM Basis you find the settings regarding the business systems under Integration > Basic Settings for Creating the System Landscape.
**Note**

Although no customizing transport is possible for the business system groups and business systems, you create them in the EWM customizing client using the *Implementation Tool for System Connection* in EWM and transport the data set created by the tool to the other EWM systems and clients. For more information, see *Configuring System Connection and Client Settings in EWM* [page 36].

The following deployment examples illustrate the relationship between the system connection entities and explain the steps required to set up the system connection:

### Table 20

<table>
<thead>
<tr>
<th>Example</th>
<th>Relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example 1 [page 30]</td>
<td>One unique EWM system installed on an own server linked to one unique ERP</td>
</tr>
<tr>
<td>Example 2 [page 31]</td>
<td>One unique EWM system installed as an add-on to ERP</td>
</tr>
<tr>
<td>Example 3 [page 32]</td>
<td>One EWM system (installed on an own server) linked to one ERP system</td>
</tr>
<tr>
<td>Example 4 [page 33]</td>
<td>One EWM installed as an add-on to ERP</td>
</tr>
<tr>
<td>Example 5 [page 35]</td>
<td>One EWM test system (installed on an own server) linked to two ERP test systems</td>
</tr>
</tbody>
</table>

### Procedure

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

1. **Define a logical system for each ERP client** (for example, `ERPCLNT001`) and a **logical system for each EWM client** (for example, `EWMCLNT001`) in Customizing for *SCM Basis* under *Integration > Basic Settings for Creating the System Landscape > Name Logical Systems*.

   In a typical system landscape, you define three logical systems for ERP (ERP customizing, ERP test, and ERP production system) and two logical systems for EWM (EWM test and EWM production system). Transport if necessary these settings to other EWM systems.

   **Recommendation**

   Use the same naming conventions for the logical systems as for the RFC destinations.

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 *SCM Basis* under *Integration > Basic Settings for Creating the System Landscape > Assign Logical Systems to a Client*.
5.3.1 Example 1: EWM as SAP SCM Component Linked to an ERP

The figure below shows the system connection settings in a unique EWM (test) system allowing customizing changes. The EWM system EWX client 001 communicates with an ERP system ERX client 001.

The remote function call (RFC) destination to the ERP system is a prerequisite (see Prerequisites for System Connection in ERP and EWM [page 7]).

You configure the cross-client settings manually (see Configuring Logical Systems in EWM [page 27]) or you use the Implementation Tool for System Connection to configure them as follows:

1. You define the logical systems (1) for the EWM system and the ERP system.
2. You assign the own logical system (2) to the EWM client.
3. You use the implementation tool for system connection in the EWM customizing system to do the following:
   ○ Assign the ERP logical system to the RFC destination (3)
   ○ Define the business system group for master data related to Core Interface (CIF). Using the tool, you define one common business system group ERP_BG1 for the ERP system and the EWM system.
   ○ Assign the business system group to both logical systems
   ○ Define the business systems
     One business system is needed for each logical system.
   ○ Assign the business system (for example, ERX_001) to the corresponding logical system (for example, ERXCLNT001)
   ○ Assign the own business system (4) to the EWM client
   ○ Maintain business system attributes (for example, RFC queue control and ERP version control)
- Maintain the QIN and QOUT scheduler for the qRFC communication from EWM to ERP
- Create the SAP APO planning version 000 (needed for CIF)

5.3.2 Example 2: EWM as Add-On to ERP Linked to an ERP

The figure below shows the system connection settings in a unique EWM (test) system allowing customizing changes. In system ABX client 001 the EWM application communicates with the ERP application in the same client.

Note
For this option you have already configured the logical systems (1). For more information, see Configuring Logical Systems in ERP [page 11].

The dummy EWM logical system (for example, ABXEWM001) is used for the communication from ERP to EWM and is already assigned to the RFC destination (for example, ABXEWM001) while the ERP logical system (for example, ABXCLNT001) is assigned as own logical system (2) to the client.

Since all cross-client settings already exist, you use the Implementation Tool for System Connection for the remaining settings.

This deployment example differs from deployment example 1 as follows:
- Two RFC destinations are needed for the same client: One for the communication from EWM to ERP and one for the communication from ERP to EWM.
Although the ERP logical system (for example, ABXCLNT001) is the own logical system (2) of the client, it also needs an RFC destination (for example, ABXCLNT001) (3).

You define only one business system for ERP and EWM (for example, business system ABX_001) and assign it to the ERP logical system (for example, ABXCLNT001). The business system is assigned as own business system (4) to the client.

The EWM logical system (for example, ABXTEWM001) is not assigned to any business system. It is only assigned to the RFC destination (for example, ABXTEWM001).

### 5.3.3 Example 3: EWM as SAP SCM Component Linked to an ERP (Distributed System Landscape)

The figure below shows the system connection settings in the EWM customizing, EWM test and EWM production system. The EWM test system EWT client 001 is linked to an ERP test system ERT client 001 and the EWM production system EWP client 001 is linked to an ERP production system ERP client 001.

![Figure 7: EWM as SAP SCM Component Linked to an ERP (Distributed System Landscape)](image)

The remote function call (RFC) destination to the corresponding ERP system is a prerequisite (see Prerequisites for System Connection in ERP and EWM [page 7]). The RFC destination in the EWM customizing system is necessary for the implementation tool to read the settings from the ERP system.

You configure the cross-client settings manually (see Configuring Logical Systems in EWM [page 27]) or you use the Implementation Tool for System Connection to configure them as follows:

1. You define the logical systems (1) in EWM customizing system (cross-client setting) for the EWM and ERP test systems and for the EWM and ERP production systems. You transport the settings to the EWM test system and production system.
2. In the EWM test system you assign the own logical system (2) to the EWM client. You repeat the step in the EWM production system.

3. You use the Implementation Tool for System Connection in the EWM customizing system to do the following:
   ○ Define the business system groups for master data related to Core Interface (CIF). In this deployment option (with one ERP system linked to one EWM system) you define one common business system group `ERP_BG1` for all systems. No conflict can arise as the EWM test system receives master data from the ERP test system only and the EWM production system receives master data from the ERP production system only.
   ○ Assign the business system group (for example, `ERP_BG1`) to all logical systems
   ○ Define the business systems: One business system is needed for each logical system
   ○ Assign the business system (for example, `ERT_001`) to the corresponding logical system (for example, `ERTCLNT001`)
   ○ Maintain business system attributes (for example, RFC queue control and ERP version control)

4. You transport the data set created by the implementation tool to the EWM test system and EWM production system.
   You process the data set with the Implementation Tool for System Connection in the EWM test system and EWM production system to do the following:
   ○ Repeat in the EWM test system and production system the steps performed in the customizing system
   ○ Assign the ERP logical system to the RFC destination (3)
   ○ Assign the own business system (4) to the EWM client
   ○ Maintain the QIN and QOUT scheduler for the qRFC communication from EWM to ERP
   ○ Create the SAP APO planning version 000 (needed for CIF)

5.3.4 Example 4: EWM as Add-On to ERP Linked to an ERP (Distributed System Landscape)

In this deployment option, the EWM application communicates with the ERP application installed on the same system.
Note

For this option you have already configured the logical systems (1). For more information, see Configuring Logical Systems in ERP [page 11].

The dummy EWM logical system (for example, ABTEWM001) is used for the communication from ERP to EWM and is already assigned to the remote function call (RFC) destination (for example, ABTEWM001), while the ERP logical system (for example, ABTCLNT001) is assigned as own logical system (2) to the client. Since all cross-client settings already exist, you use the Implementation Tool for the System Connection for the remaining settings.

This deployment example differs from deployment example 3 as follows:

- Two RFC destinations are needed for the same client: One for the communication from EWM to ERP and one for the communication from ERP to EWM.
- Although the ERP logical system (for example, ABTCLNT001) is the own logical system (2) of the client, it also needs an RFC destination (for example, ABTCLNT001) (3).
- You define only one business system for ERP and EWM (for example, business system ABT_001 for the test client 001) and assign it to the ERP logical system (for example, ABTCLNT001). The business system is assigned as own business system (4) to the client.
- The EWM logical system (for example, ABTEWM001) is not assigned to any business systems. It is only assigned to the RFC destination (for example, ABTEWM001).
5.3.5 Example 5: EWM as SAP SCM Component Linked to Two ERPs (Distributed System Landscape)

In this deployment example, the EWM system communicates with two ERP systems, each sending its own master data to EWM.

The figure below shows only the settings in the EWM test system. Corresponding settings also exist in the EWM customizing system and in the EWM production system as described in example 3.

For each ERP system you define a remote function call (RFC) destination, a logical system, a business system group, and a business system. You assign the EWM logical system to one of the business system groups. As an alternative you define an own business system group for the EWM logical system. When you create a material in one of the ERP systems and transfer the product using Core Interface (CIF) to EWM, the product master record contains the business system group assigned to the ERP system.

**Note**

Another deployment example with two ERP systems would be to connect the same EWM system to one ERP used for master data and one ERP used for transaction data. When EWM receives an inbound delivery from the ERP transaction system, it needs to access the product master data sent by the ERP master data system. For this purpose, you must assign both ERP systems to the same business system group.
6 Client-Dependent Settings in EWM

You use this process to prepare the SAP Extended Warehouse Management (EWM) client for the communication with SAP ERP.

Process

Carry out the following steps:

1. Configuring System Connection and Client Settings in EWM [page 36]
2. Checking Basic Table Entries in EWM [page 37] (optional)
3. Checking Standard Customizing in EWM [page 38] (optional)

Result

The EWM client is now ready to receive data from ERP.

6.1 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 SAP Extended Warehouse Management (EWM):

- System landscape in EWM including definition and assignment of logical systems, business systems and business system groups. For an overview of the system landscape in EWM, see Configuring Logical Systems in EWM [page 27].
- The queued remote function call (qRFC) communication in EWM. The settings are similar to the settings on the SAP ERP side as described in Configuring qRFC Communication in ERP [page 15]
- 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
- 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 Configuring Logical Systems in EWM [page 27], 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.

More Information

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

6.2 Checking Basic Table Entries in EWM

Basic tables like units of measures, currencies, countries, and languages are used both in SAP ERP and SAP Extended Warehouse Management (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.

---

**Note**

This process is not necessary if EWM is installed as add-on to ERP and is implemented in the same client as ERP as both applications use the same tables.

---

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 ERP or EWM Customizing, if necessary.

Table 21

<table>
<thead>
<tr>
<th>Table</th>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>T006</td>
<td>ISOCODE</td>
<td>Unit of measure</td>
</tr>
<tr>
<td>T002</td>
<td>LAISO</td>
<td>Language keys</td>
</tr>
<tr>
<td>TCURC</td>
<td>ISOCD</td>
<td>Currency codes</td>
</tr>
<tr>
<td>T005</td>
<td>INTCA</td>
<td>Countries</td>
</tr>
</tbody>
</table>
6.3 Checking Standard Customizing in EWM

You use this procedure to get an overview of the configuration already contained in the SAP Extended Warehouse Management (EWM) customizing client.

**Note**
This procedure is optional if you create the standard warehouse with preconfigured processes or if you implement the preconfigured processes in your own warehouse.

The standard customizing delivered by SAP for EWM in client 000 consists of the following:
- Warehouse-independent settings
- Settings for sample warehouse 0001

**Note**
The standard warehouse W001 with preconfigured processes is not part of standard customizing (and thus not contained in client 000).

The standard customizing for EWM is **not** a prerequisite for the standard warehouse W001 with preconfigured processes as the settings are created by means of BC Set activation. However, you can use the customizing entries for warehouse 0001 as reference if you intend to implement processes not contained in the standard warehouse W001.

The customizing data already contained in your EWM customizing client depends on how the EWM client was created:
- If you created the EWM client as a copy of standard client 000, it contains the EWM standard customizing.
- If you did not create the EWM client as a copy of standard client 000, it does not contain any standard customizing for EWM. In this case you have the possibility to transport all customizing entries related to warehouse 0001 from client 000 to your EWM client as described in this procedure.

**Note**
This transport does not contain warehouse-independent settings, which you must create either manually or by means of BC Set activation.

**Note**
In case EWM is installed as add-on to an existing SAP ERP system, the ERP clients created before the add-on installation do not contain any standard customizing for EWM. See step 2 below.

**Procedure**

If you intend to implement processes not contained in the standard warehouse W001 and want to use settings from the sample warehouse 0001 as a reference when creating your own warehouse, carry out the following steps in your EWM customizing client.

1. Check if warehouse number 0001 exists in Customizing for Extended Warehouse Management, under
   - Master Data > Define Warehouse Numbers
As an alternative you can check any other warehouse-dependent customizing activities. Entries for
warehouse number 0001 mean that the standard customizing from client 000 exists in your EWM client.

2. If warehouse number 0001 does not exist and you want to use the settings for warehouse 0001 as a
reference for creating your own settings, you can transport all warehouse-dependent entries for warehouse
number 0001 from client 000 to your EWM customizing client. For this purpose use client 000 and carry out
the activity in Customizing for Extended Warehouse Management under Cross-Process Settings > Copy
Warehouse Number Customizing.

For more information, see the Customizing documentation.

Result

If your EWM customizing client contains the standard customizing from client 000, you can use the customizing
entries for warehouse 0001 as a reference to implement processes not contained in the standard warehouse
W001.
7 Warehouse Integration into the ERP Enterprise Structure

You use this process to integrate a warehouse into the enterprise structure in SAP ERP and to transfer the organizational units related to the warehouse to SAP Extended Warehouse Management (EWM). The process description begins with an overview of the organizational units in ERP and in EWM. You then create the warehouse in ERP, integrate it into the enterprise structure in ERP, and transfer the organizational units to EWM using CIF to prepare the creation of the warehouse in EWM.

Note

If you migrate a warehouse from LE-WM, you already have a warehouse integrated into the enterprise structure in ERP. For more information, see SAP Library for SAP Extended Warehouse Management 9.0 or higher at help.sap.com/ewm under SAP Extended Warehouse Management (SAP EWM) Migration from LE-WM.

We distinguish the following points of time in the definition and integration of a warehouse:

- **Warehouse Integration Before Core Interface Transfer** [page 41]
  
  The organizational units related to the warehouse exist in ERP only. They are connected to each other in ERP. No organizational data exists in EWM yet.

- **Warehouse Integration After Core Interface Transfer** [page 42]
  
  The organizational units related to the warehouse exist in ERP and EWM. They are connected to each other in ERP. However, they are not connected to each other in EWM yet.

- **Warehouse Integration Completion** [page 43]

  The organizational units related to the warehouse exist in ERP and EWM and are connected to each other in ERP and EWM.

**Process**

Carry out the following steps:

1. **Prerequisites for Warehouse Integration in ERP** [page 45]
2. **Creating Organizational Units for Warehouse in ERP** [page 46]
3. **Preparing Initial Transfer of Master Data and Organizational Units Using CIF in ERP** [page 48]
4. **Transferring Organizational Units for Warehouse from ERP to EWM Using CIF** [page 49]

**Result**

You have created a warehouse in ERP, integrated it into the enterprise structure in ERP, and transferred the organizational units to EWM. You have prepared the transfer of master data using CIF. You can now create the warehouse in EWM.
7.1 Warehouse Integration Before Core Interface Transfer

The figure below gives an overview of the organizational units of the standard warehouse in ERP before Core Interface (CIF) transfer. This is the situation in your ERP system after you have configured the system as described in Creating Organizational Units for Warehouse in ERP [page 46].

In ERP the warehouse (3-digit number, for example W01) is flagged as EWM warehouse. It is connected to one or several storage locations in the plant (for example, PL01). Two storage locations in one warehouse allow you more flexibility in the availability of the stock. For example, stock in storage location ROD (Received On Dock) has been received in the warehouse but has not been put away into the final bin yet and as such is not available yet for customer orders; stock in storage location AFS (Available For Sale) is stored in the final bin in the warehouse and is ready to be picked for customer orders.

The assignment of the warehouse to a plant and storage location is necessary for inventory management (the warehouse stock is managed in ERP on plant and storage location level) and for logistics execution purposes. The system automatically determines the warehouse number when you create a delivery for a plant and storage location.

Note

If you use other processes (for example, transportation cross-docking or production supply processes) than the preconfigured processes in the standard warehouse, you may need to link additional storage locations to your warehouse.

In ERP shipping points and goods receiving points are assigned to the plant. There is no direct connection between the warehouse and the shipping points and goods receiving points in ERP. At least one shipping point is necessary to work with an EWM warehouse. You can also use the shipping point as goods receiving point or you create one shipping point (for example, 0001) as shipping point and one shipping point (for example, 0002) as goods receiving point. Shipping points and goods receiving points are used in logistics execution.

In ERP the plant is linked to a vendor master data and a customer master data. This setting is made in ERP when customizing stock transport orders between two plants.
**Recommendation**

Use different numbers for the vendor and the customer (for example, **BPPL01V** for the vendor and **BPPL01C** for the customer) as they can be handled automatically by CIF when transferring the data to EWM.

**Note**

The vendor or customer number linked to the plant plays an important role in EWM: It exists as business partner in EWM and has the function of **party entitled to dispose** of the stock. The party entitled to dispose represents the plant in EWM. Therefore choose the name of the vendor or customer carefully. In our example we use the naming convention **BP<plant>V** for the business partner of the vendor assigned to the plant.

### 7.2 Warehouse Integration After Core Interface Transfer

The figure below gives an overview of the organizational units of the standard warehouse in SAP ERP and SAP Extended Warehouse Management (EWM) after Core Interface (CIF) transfer. This is the situation in your ERP and EWM system after you have configured the system as described in Transferring Organizational Units for Warehouse from ERP to EWM Using CIF [page 49].

![Figure 11: Warehouse Integration After Core Interface Transfer](image)

The ERP warehouse and the storage locations are not transferred to EWM.

The plant and shipping points exist in EWM as **location** and **supply chain units** (SCU). Note that only the SCU is needed to build the organizational structure in EWM. During the CIF transfer, a Business Add-In (BAdI) implementation adds a prefix to the plant and the shipping points to build the SCU number (for example, SCU number **PLPL01** for ERP plant **PL01**, SCU number **SP0001** for ERP shipping point **0001**). In EWM the SCUs for shipping points and goods receiving points are used as **shipping office** and **goods receipt office**. As such they contain the business attributes **SO** (shipping office) and **RO** (receiving office) after CIF.
The customer and vendor linked to the plant exist as locations, supply chain units and business partners in EWM. Note that only the business partner of the customer or of the vendor is needed to build the organizational structure in EWM. It represents the plant in EWM. During CIF the system automatically takes the ERP vendor/customer number as EWM business partner number unless conflicts arise (see Handling Conflicts in Business Partner Numbering in EWM [page 26]). In the business partner data, you can find the ERP customer number as external identification CRM002 and the ERP vendor number as external identification CRM004. However, on the EWM side there is no information yet that one of those business partners is linked to an ERP plant.

If you use the same number for the customer and vendor linked to the plant, only one business partner exists in EWM. It has either the external identification CRM002 or the external identification CRM004. You must manually add the missing external identification to the business partner.

In EWM there is no link yet between the entities transferred from ERP.

### 7.3 Warehouse Integration Completion

The figure below gives an overview of the organizational units of the standard warehouse in ERP and EWM after you have completed the ERP-EWM integration. This is the situation in your ERP and EWM system after you have configured the system as described in Creating and Integrating Warehouse in EWM [page 52].

![Figure 12: Warehouse Integration Completion](image)

In EWM the warehouse (4-digit number, for example W001) is connected to the ERP warehouse.

Additionally the EWM warehouse is connected to a supply chain unit (SCU) with business attribute INV (SCU used as warehouse). If your warehouse is connected to one plant, you can use the SCU of the plant as warehouse SCU as shown in the figure. If your warehouse is connected to several ERP plants, you can do one of the following:

- Use the SCU of one of the plants as warehouse SCU (if the address of the plant is identical to the address of the warehouse)
Use a warehouse SCU that you manually create in EWM. If you use routes in EWM, the SCU must also exist as location. For this purpose, do the following:

1. In transaction /SCMB/SCUMAIN, create the SCU with a type also foreseen as location type in transaction /SAPAPO/LOC3 and assign the business attribute PLOC (planning location) in addition to the business attribute INV (warehouse) to the SCU.

2. In transaction /SAPAPO/LOC3, assign a model to the location.

The SCUs of the shipping points and goods receiving points are contained in the SCU hierarchy of the warehouse. In the SCU hierarchy the business attribute SO is assigned to shipping points and the business attribute RO is assigned to goods receiving points. In an EWM warehouse, you can only use shipping offices and receiving offices contained in the SCU hierarchy of the warehouse. If several plants are linked to your warehouse you can either insert the shipping offices and receiving offices in the SCU hierarchy directly under the warehouse SCU or build a multilevel hierarchy including the plant SCUs.

One of the business partners linked to the vendor/customer of the plant has an explicit link to the ERP plant in EWM. In the business partner data, you can find the ERP plant number as external identification CRM011. In our example the business partner of vendor BPPL01V is linked to ERP plant PL01. If your warehouse is connected to several plants, you need for each plant exactly one business partner with external identification CRM011 and the corresponding plant number. This business partner represents the plant in EWM and has the function of party entitled to dispose of the stock. Any stock in EWM must be assigned to a party entitled to dispose. If your warehouse is connected to one plant, you can assign a default party entitled to dispose to the warehouse for usability purposes.

The EWM warehouse is connected to a custodian. The custodian represents the organization managing the warehouse and can differ from the party entitled to dispose of the stock. If your warehouse is connected to one ERP plant, you can use one of the business partners (for example, vendor) linked to the plant as custodian as shown in the figure. If your warehouse is connected to several ERP plants, you can use as custodian either a business partner linked to one of the plants or a business partner (representing the warehouse) that you manually create in EWM. The custodian is stored as information in EWM but is not used in any warehousing processes.

Every ERP plant and storage location is connected to an availability group in the warehouse. For example, storage location ROD is linked to availability group 001 (goods in putaway) and storage location AFS is linked to availability group 002 (goods completely available).

**Recommendation**

If your warehouse is linked to only one storage location, use availability group 002.

Each availability group is linked to several stock types in EWM. The two-digit stock type in EWM represents the ERP storage location and the ERP stock type. In our example, stock type F1 is used for unrestricted-use stock in storage location ROD; stock type B6 is used for blocked stock in storage location AFS. Any stock in EWM must be assigned to a stock type.

**Note**

If you use other processes than the preconfigured processes in the standard warehouse (for example, transportation cross-docking or production supply processes), you may need additional availability groups and stock types in your warehouse.

For more information about the completion of the warehouse integration, see Creating and Integrating Warehouse in EWM [page 52].
7.4 Prerequisites for Warehouse Integration in ERP

A prerequisite for the warehouse integration is a running SAP ERP application, especially the components Logistics Execution and Purchasing. We do not handle the setup of the ERP application here but only mention the main objects relevant for the warehouse integration.

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

- **A plant.** For the standard warehouse with preconfigured processes we recommend to create the plant (for example, PL01) as a copy of plant 0001. The plant must be assigned to the enterprise structure in 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 |

  **Note**
  Check that the plant contains address data (name and street address) on the address screen. This data is needed for the route determination and for the printing of delivery notes in SAP Extended warehouse Management (EWM).

- **One or more storage locations.** For the standard warehouse with preconfigured processes we recommend creating 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 |

  **Note**
  If you migrate a warehouse from LE-WM, you already have one or more storage locations. Depending on the migration scenario, however, you create additional storage locations. For more information, see SAP Library for SAP Extended Warehouse Management 9.0 or higher at help.sap.com/ewm under | SAP Extended Warehouse Management (SAP EWM) > Migration from LE-WM |

- **A customer linked to the plant.** For the standard warehouse with preconfigured processes we recommend creating customer BPPL01C according to the naming convention BP<plant>C. Choose an account group for which CIF is set up, for example, KUNA (Customer (ext. number assignmmt).

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

- **A vendor linked to the plant.** For the standard warehouse with preconfigured processes we recommend creating vendor BPPL01V according to the naming convention BP<plant>V. Choose an account group for which CIF is set up, for example, LIEF (Vendor (ext. number assignmmt).

  You can check this setting in the following way:

  1. On the SAP Easy Access screen, choose | Logistics > Materials Management > Purchasing > Master Data > Vendor > Purchasing > Display (Current)|

  2. Enter the vendor number and select the Purchasing Data checkbox.

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

  3. On the Purchasing Data screen, choose | Extras > Add. Purchasing Data |

- **A shipping point and a goods receiving point** assigned to the plant. The shipping point should be allocated to the desired combinations of shipping condition and loading group for each plant. For the standard
warehouse with preconfigured business processes, create shipping point 0001 and receiving point 0002, and assign them to plant PL01.

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 **dummy 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 dummy cost center (for example, the standard cost center SAP-DUMMY) is assigned to the cost elements 400001 and 890001.

For more information, see the documentation of the Customizing activities.

### 7.5 Creating Organizational Units for Warehouse in ERP

You use this procedure to create a warehouse number in SAP ERP, select it as a warehouse managed by SAP Extended Warehouse Management (EWM), and assign it to the ERP plant and ERP storage locations.

**Note**

If you migrate a warehouse from LE-WM, you already have a warehouse integrated into the enterprise structure in ERP. For more information, see SAP Library for SAP Extended Warehouse Management 9.0 or higher at help.sap.com/ewm under SAP Extended Warehouse Management (SAP EWM) Migration from LE-WM
Procedure

Carry out the following steps and transport, if necessary, the settings to other ERP clients or ERP systems.
If you migrate a warehouse from LE-WM, carry out the steps in your ERP customizing system but do not transport them yet to your ERP production system.

1. Define the warehouse number as follows:
   1. In Customizing for Enterprise Structure, choose Definition > Logistics Execution > Define, copy, delete, check warehouse number.
   2. In Define, copy, delete, check warehouse number, choose the activity Define warehouse number.
   3. Create the following entry (the example is valid for the standard warehouse with preconfigured processes):

   Table 22
<table>
<thead>
<tr>
<th>Warehouse Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>W01</td>
<td>Warehouse W01 (EWM)</td>
</tr>
</tbody>
</table>

   If you migrate a warehouse from LE-WM, you either use an existing ERP warehouse number or create a new ERP warehouse number, depending on the migration scenario.

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 (valid for the standard warehouse with preconfigured processes):

   Table 23
<table>
<thead>
<tr>
<th>Plant</th>
<th>Storage Location</th>
<th>Warehouse</th>
</tr>
</thead>
<tbody>
<tr>
<td>PL01</td>
<td>ROD</td>
<td>W01</td>
</tr>
<tr>
<td>PL01</td>
<td>AFS</td>
<td>W01</td>
</tr>
</tbody>
</table>

   If you migrate a warehouse from LE-WM, you have three options for this step, depending on your migration scenario:
   ○ You use existing entries
   ○ You change existing entries
   ○ You create new entries


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

   Table 24
<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ext. WM</td>
<td>E (ERP with Extended Warehouse Management)</td>
</tr>
<tr>
<td>Comm. WM</td>
<td>Q (Queued and Serialized Asynchronous RFC)</td>
</tr>
<tr>
<td>Dist. Mode</td>
<td>Distribution Immediately at Document Creation</td>
</tr>
</tbody>
</table>

   Use the value help of the single fields to check if other settings are relevant in your warehouse.
Result

The situation in your ERP system now matches the situation described in Warehouse Integration Before Core Interface Transfer [page 41].

7.6 Preparing Initial Transfer of Master Data and Organizational Units Using CIF in ERP

You use this procedure to prepare in SAP ERP the transfer of master data (for example, products, vendors, customers) and of the organizational units (for example, plant, shipping points) to SAP Extended Warehouse Management (EWM).

You can assign the ERP warehouse to the EWM warehouse number on the ERP side to reduce the amount of material master data being transferred by means of Core Interface (CIF) from ERP to EWM. Due to this assignment you can enter the EWM warehouse number as selection criteria when creating the CIF integration model. Only the materials with plant data created in the plants linked to the EWM warehouse number are transferred to EWM using CIF.

You activate in ERP the immediate transfer of master data changes by means of business transaction events (BTEs). This means that changes to existing master data records are transferred immediately to EWM.

You generate a runtime version of the active integration model for performance purposes. The runtime version is adjusted after each activation or deactivation of integration models. For more information, see the documentation of the report RCIFINA.X.

Note

This document describes the basic settings for the transfer of master data using CIF. If you want to familiarize yourself with CIF, you can use the following documentation. However, be aware that the notes sometimes refer to CIF functions not used in EWM as EWM only uses CIF for the transfer of EWM-relevant master data and not for the transfer of transaction data.

- SAP Note 563806 (FAQ: APO CIF)
  It explains where to find additional information about CIF (Best Practice document, Tips and Tricks document).

- SAP Note 187455 (Generat. and activation of integr. models in batch)
  It explains which reports you must schedule as background jobs for a periodic transfer of master data using CIF.

- SAP Library for SCM Extended Warehouse Management 9.0 or higher at help.sap.com/ewm under SCM Basis Integration via Core Interface (CIF)

Prerequisites

You have activated BTEs in the ERP system. For more information, see Activating Business Transaction Events in ERP [page 10].
Procedure

Carry out the first two steps of the following procedure in your ERP customizing client and transport, if necessary, the settings to other ERP clients or ERP systems. Carry out step 3 in the ERP client in which you create the master data for EWM.

1. Assign the ERP warehouse number to the EWM warehouse number for CIF in Customizing for Integration with other SAP Components under Extended Warehouse Management Assign Warehouse Number to Warehouse Number of Decentralized SCM System.

Example:

<table>
<thead>
<tr>
<th>Warehouse Number</th>
<th>WHNDecSCM</th>
</tr>
</thead>
<tbody>
<tr>
<td>W01</td>
<td>W001</td>
</tr>
</tbody>
</table>

Note

This setting is optional. It is only needed if you have material master data in several plants (some of them not linked to EWM) and want to transfer using CIF only the material master data of the plants linked to your EWM warehouse.

2. Configure change transfer of master data using BTEs in Customizing for Integration with other SAP Components under Extended Warehouse Management Basic Settings for Data Transfer Change Transfer for Master Data Configure Change Transfer for Master Data.

Enter the value 2 (BTE Transfer, Immediately) in the following fields:

- Material Master Change Transfer
- Change Transfer for Customers
- Change Transfer for Vendors

3. Generate the runtime version of the active integration model.

1. On the SAP Easy Access screen, choose Tools ABAP Workbench Development ABAP Editor.
2. In the Program field, enter RCIFIMAX and choose Execute.
3. In the Action to Execute screen area, choose Generation and then Execute.

Result

You have prepared the ERP client for the initial transfer of master data and organizational units to EWM. You have activated the online transfer of master data changes using BTE so that master data changes are replicated immediately in EWM. You have generated a runtime version of the integration model for performance purposes. No master data is communicated to EWM as you have not created a CIF integration model yet.

7.7 Transferring Organizational Units for Warehouse from ERP to EWM Using CIF

You use this procedure to transfer the organizational units related to the warehouse in SAP ERP. You transfer the following data:
• **Plant**
After the transfer the plant exists as location and supply chain unit (SCU) in SAP Extended Warehouse Management (EWM).

**Note**
Only the SCU is needed to build the organizational structure in EWM.

• **Vendor or customer master record linked to the ERP plant**
After the transfer the vendor or customer exists as location, SCU, and business partner in EWM.

**Note**
Only the business partner is needed to build the organizational structure in EWM. In the procedure below you include the vendor in the integration model. As an alternative, you can include the customer.

• **Shipping points and goods receiving points**
After the transfer the shipping points and goods receiving points exist as location and SCU in EWM.

To transfer data using Core Interface (CIF), you first create an integration model. In the integration model you define the selection criteria for the data. You then activate the integration model manually. The data is transferred upon activation of the model.

Once the data is contained in an active integration model, every change is communicated immediately to EWM as you have already activated the online transfer using BTE. For more information, see Preparing Initial Transfer of Master Data and Organizational Units Using CIF in ERP [page 48].

**Procedure**

Carry out the following steps in the ERP client in which you create master data for EWM:

1. Create an integration model:
   1. On the **SAP Easy Access** screen, choose **Logistics ➤ Central Functions ➤ Supply Chain Planning Interface ➤ Core Interface Advanced Planner and Optimizer ➤ Integration Model ➤ Create**.
   2. In the **Model Name** field, enter a name for the integration model, for example, **IMEWM1**.
   3. In the **Logical System** field, enter the name of the target system, for example, **EWMCLNT001**.
   4. In the **APO Application** field, enter, for example, **EWM**.
   5. Enter the plant you want to transfer:
      1. In the **Material Dependent Objects** screen area, select the **Plants** checkbox.
      2. In the **General Selection Options for Materials** screen area, enter the name of the plant in the **Plnt** field, for example (valid for the standard warehouse with preconfigured processes): **PL01**.
   6. Enter the vendor you want to transfer:
      1. In the **Material Independent Objects** screen area, select the **Vendors** checkbox.
      2. Choose **Special Restrictions** and enter the following:
         ○ In the **Vendor** field, enter a name for the business partner, for example **BPPL01V**.
         ○ In the **Create Loc/BP.** field, enter the number **2 (Create Both)**.
   7. Enter the shipping points and goods receiving points you want to transfer:
      1. In the **Material Independent Objects** screen area, select the **Shipping Points** checkbox.
2. Choose **Special Restrictions** and in the **Shipping Point** field, enter a name for the shipping points, for example (valid for the standard warehouse with preconfigured processes): **0001** and **0002**.

8. Save the model as a variant, for example **VIMEWM1**, and go back to the selection screen.

9. Choose **Execute**.

10. On the next screen, choose **Generate IM**.

2. Activate the integration model manually:
   1. On the **SAP Easy Access** screen, choose **Logistics** > **Central Functions** > **Supply Chain Planning Interface** > **Core Interface Advanced Planner and Optimizer** > **Integration Model** > **Activate**.
   2. In the **Selection Criteria** screen area, enter the model name, the logical system, and the APO application that you used to create the integration model.
   3. Choose **Execute**.
      The **Activate or Deactivate Integration Model** screen appears.
   4. In the screen area on the left, choose the APO application, for example, **EWM**.
      Your integration model appears in the screen area on the right.
   5. In the screen area on the right, select the relevant line and choose **Active/Inactive**.
      The status of your integration model is displayed in the **New Status** field.
   6. In the screen area on the right, select the relevant line and choose **Start**.
      If you activate a model for the first time in a client, the system proposes in a dialog box to automatically create a number range interval for the object **CIF_LOAD**. Accept the proposal.
      The system confirms the activation of the model in a dialog box.

**Result**

The situation in your ERP system and your EWM system now matches the situation described in **Warehouse Integration After Core Interface Transfer** [page 42].

In the EWM client, you can now display the supply chain units and the business partner created using CIF. To do so, on the **SAP Easy Access** screen for **Extended Warehouse Management**, choose **Master Data** > **Maintain Supply Chain Unit** or **Master Data** > **Maintain Business Partner**.
8 Warehouse Creation and Integration in EWM

You use this process to create a warehouse in SAP Extended Warehouse Management (EWM) and to integrate it into the organizational units in EWM. This is supported by the Implementation Tool for Warehouse Integration.

If you use the implementation tool to create the standard warehouse with preconfigured processes, the system automatically activates BC Sets containing the warehouse-dependent customizing and the delivery customizing needed for the preconfigured processes.

Additionally, you configure settings for the handling unit (HU) numbering in SAP ERP and in EWM. In a simple EWM deployment with one ERP system containing one warehouse, these settings are supported by the implementation tool. In a more complex deployment with several ERP warehouses (EWM-managed warehouses or not) you must manually align the HU numbering across all warehouses.

Process

Carry out the following steps:

1. Creating and Integrating a Warehouse in EWM [page 52]
2. Verifying Synchronization of ERP and EWM Customizing [page 53]
3. Configuring HU Numbering in ERP and EWM [page 57] (optional)

Result

The situation in your ERP system and your EWM system now matches the situation described in Warehouse Integration Completion [page 43].

You have created a warehouse in EWM. You have aligned the HU numbering across all warehouses in ERP and EWM.

If you have chosen to create the standard warehouse with preconfigured processes, your EWM client now contains the warehouse-dependent customizing and the delivery customizing needed for the preconfigured processes.

8.1 Creating and Integrating a Warehouse in EWM

You use this procedure to create one of the following:

- The standard warehouse with preconfigured processes
- Your own warehouse
With the Implementation Tool for Warehouse Integration, you configure the following data in SAP Extended Warehouse Management (EWM):

- Warehouse definition and assignment to the SAP ERP warehouse
- Assignment of following organizational units to the EWM warehouse:
  - Supply chain unit (SCU) of the warehouse and SCU hierarchy
  - 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 and warehouse-independent number ranges

Additionally, if you choose to create the standard warehouse with preconfigured processes, the system automatically activates BC Sets containing the following data:

- Warehouse-dependent customizing used in the preconfigured processes
- Delivery customizing used in the preconfigured processes

**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, carry out 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 under Interfaces > ERP Integration > Tool-Based ERP Integration > Implementation Tool for Warehouse Integration.
2. Carry out the steps provided in the implementation tool.

**More Information**

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

**8.2 Verifying Synchronization of ERP and EWM Customizing**

You use this procedure to check the synchronization of SAP ERP and SAP Extended Warehouse Management (EWM) customizing.

When transferring master data or transaction data from 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 \( \text{E1} \) (Europallet) in ERP. When the system transfers the material using Core Interface (CIF) to EWM, it checks that HU type \( \text{E1} \) also exists in EWM customizing.
You create an outbound delivery with shipping conditions and Incoterms in ERP. When the system transfers
the outbound delivery from ERP to EWM, it checks that the shipping conditions and Incoterms also exist in
EWM customizing.

If you have created the standard warehouse with preconfigured processes, the HU types and packaging material
types already exist in EWM but not yet in ERP. You use this procedure to adapt the settings for those customizing
objects on the ERP side.

Note
Some settings are defined on client level in ERP but on warehouse level in EWM. If you connect several EWM
warehouses to an ERP client, you must synchronize the entries across all warehouses.

Procedure

Configuring the Standard Warehouse with Preconfigured Processes

If you implement the standard warehouse with preconfigured processes, carry out the following steps in your ERP
customizing client and transport if necessary the settings to other ERP clients or ERP systems:

1. Create the following HU types if they do not exist yet in ERP Customizing for Integration with Other SAP
Components under Extended Warehouse Management Additional Material Attributes Attribute Values
for Additional Material Master Fields Define Handling Unit Type

<table>
<thead>
<tr>
<th>Table 26</th>
</tr>
</thead>
<tbody>
<tr>
<td>Handling Unit Type</td>
</tr>
<tr>
<td>C1  Carton</td>
</tr>
<tr>
<td>D1  Dummy HU</td>
</tr>
<tr>
<td>E1  Europallet</td>
</tr>
<tr>
<td>M1  Means of Transport</td>
</tr>
<tr>
<td>W1  Wire Basket</td>
</tr>
</tbody>
</table>

2. Create the following packaging material types in ERP Customizing for Logistics-General under Handling
Unit Management Basics Define Packaging Material Types

<table>
<thead>
<tr>
<th>Table 27</th>
</tr>
</thead>
<tbody>
<tr>
<td>Packaging Material Type</td>
</tr>
<tr>
<td>Description</td>
</tr>
<tr>
<td>Plant Determination</td>
</tr>
<tr>
<td>PM Category</td>
</tr>
<tr>
<td>Number Assignment</td>
</tr>
<tr>
<td>HU Type</td>
</tr>
<tr>
<td>Internal Number Range Interval</td>
</tr>
<tr>
<td>External Number Range Interval</td>
</tr>
<tr>
<td>PT01 Pack Material</td>
</tr>
<tr>
<td>– (Plant is entered manually in the handling unit)</td>
</tr>
<tr>
<td>C (Packaging Materials)</td>
</tr>
<tr>
<td>B (Number range interval HU_VEKP)</td>
</tr>
<tr>
<td>3 (Unknown) 01 02</td>
</tr>
<tr>
<td>PT02 Transportation Unit</td>
</tr>
<tr>
<td>– (Plant is entered manually in Means of Transport)</td>
</tr>
<tr>
<td>A (Means of Transport)</td>
</tr>
<tr>
<td>B (Number range interval HU_VEKP)</td>
</tr>
<tr>
<td>3 (Unknown) 01 02</td>
</tr>
</tbody>
</table>
Configuring Your Own Warehouse

If you implement your own warehouse, 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.

### Note

You can either compare the settings manually or use the Customizing Scout, which is a tool delivered with the SAP Solution Manager (transaction SMSY).

#### Table 28

<table>
<thead>
<tr>
<th>Setting</th>
<th>Customizing Path in ERP</th>
<th>Customizing Path in EWM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Catch Weight Tolerance Group</td>
<td>Integration with Other SAP Components ➤ Extended Warehouse Management ➤ Additional Material Attributes ➤ Attribute Values for Additional Material Master Fields ➤ Define Catch Weight Tolerance Groups</td>
<td>Master Data ➤ Product ➤ Catch Weight ➤ Define Catch Weight Tolerance Groups</td>
</tr>
<tr>
<td>Catch Weight Profile for Catch Weight Quantities</td>
<td>Integration with Other SAP Components ➤ Extended Warehouse Management ➤ Additional Material Attributes ➤ Attribute Values for Additional Material Master Fields ➤ Define Catch Weight Input Control</td>
<td>Master Data ➤ Product ➤ Catch Weight ➤ Define Catch Weight Profile for Catch Weight Quantities</td>
</tr>
<tr>
<td>Setting</td>
<td>Customizing Path in ERP</td>
<td>Customizing Path in EWM</td>
</tr>
<tr>
<td>-------------------------</td>
<td>----------------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Delivery Priority</td>
<td><img src="#" alt="Logistics Execution" /> <img src="#" alt="Shipping" /> <img src="#" alt="Basic Shipping Functions" /> <img src="#" alt="Partners" /> <img src="#" alt="Master Data" /> <img src="#" alt="Define Delivery Priorities" /></td>
<td><img src="#" alt="Cross-Process Settings" /> <img src="#" alt="Delivery Processing" /> <img src="#" alt="General Settings" /> <img src="#" alt="Define Delivery Priority" /></td>
</tr>
<tr>
<td>Handling Indicator</td>
<td><img src="#" alt="Integration with Other SAP Components" /> <img src="#" alt="Extended Warehouse Management" /> <img src="#" alt="Additional Material Attributes" /> <img src="#" alt="Attribute Values for Additional Material Master Fields" /> <img src="#" alt="Define Handling Indicator" /></td>
<td><img src="#" alt="Master Data" /> <img src="#" alt="Product" /> <img src="#" alt="Define Handling Indicator" /></td>
</tr>
<tr>
<td>Handling Unit Type</td>
<td><img src="#" alt="Integration with Other SAP Components" /> <img src="#" alt="Extended Warehouse Management" /> <img src="#" alt="Additional Material Attributes" /> <img src="#" alt="Attribute Values for Additional Material Master Fields" /> <img src="#" alt="Define Handling Unit Type" /></td>
<td><img src="#" alt="Cross-Process Settings" /> <img src="#" alt="Handling Units" /> <img src="#" alt="Basics" /> <img src="#" alt="Define HU Types" /></td>
</tr>
<tr>
<td>Incoterms</td>
<td><img src="#" alt="Sales and Distribution" /> <img src="#" alt="Master Data" /> <img src="#" alt="Business Partners" /> <img src="#" alt="Customers" /> <img src="#" alt="Billing Document" /> <img src="#" alt="Define Incoterms" /></td>
<td><img src="#" alt="Cross-Process Settings" /> <img src="#" alt="Delivery Processing" /> <img src="#" alt="General Settings" /> <img src="#" alt="Define Incoterms" /></td>
</tr>
<tr>
<td>Packaging Material Type</td>
<td><img src="#" alt="Logistics – General" /> <img src="#" alt="Handling Unit Management" /> <img src="#" alt="Basics" /> <img src="#" alt="Define Packaging Material Types" /></td>
<td><img src="#" alt="Cross-Process Settings" /> <img src="#" alt="Handling Units" /> <img src="#" alt="Basics" /> <img src="#" alt="Define Packaging Material Types" /></td>
</tr>
<tr>
<td>Packing Group</td>
<td><img src="#" alt="Logistics – General" /> <img src="#" alt="Handling Unit Management" /> <img src="#" alt="Basics" /> <img src="#" alt="Define Material Group for Packaging Materials" /></td>
<td><img src="#" alt="Cross-Process Settings" /> <img src="#" alt="Handling Units" /> <img src="#" alt="Basics" /> <img src="#" alt="Define Packing Groups for Products" /></td>
</tr>
<tr>
<td>Quality Inspection Group</td>
<td><img src="#" alt="Integration with Other SAP Components" /> <img src="#" alt="Extended Warehouse Management" /> <img src="#" alt="Additional Material Attributes" /> <img src="#" alt="Attribute Values for Additional Material Master Fields" /> <img src="#" alt="Define Quality Inspection Group" /></td>
<td><img src="#" alt="Cross-Process Settings" /> <img src="#" alt="Quality Management" /> <img src="#" alt="Settings for Inspection Rules" /> <img src="#" alt="Define Quality Inspection Group" /></td>
</tr>
<tr>
<td>Serial Number Profile</td>
<td><img src="#" alt="Integration with Other SAP Components" /> <img src="#" alt="Extended Warehouse Management" /> <img src="#" alt="Additional Material Attributes" /> <img src="#" alt="Attribute Values for Additional Material Master Fields" /> <img src="#" alt="Define Serial Number Profile" /></td>
<td><img src="#" alt="Master Data" /> <img src="#" alt="Product" /> <img src="#" alt="Define Serial Number Profiles" /> <img src="#" alt="Define Warehouse Number-Independent Serial Number Profiles" /></td>
</tr>
<tr>
<td>Shipping Conditions</td>
<td><img src="#" alt="Logistics Execution" /> <img src="#" alt="Shipping" /> <img src="#" alt="Basic Shipping Functions" /> <img src="#" alt="Shipping Point and Goods Receiving Point" /></td>
<td><img src="#" alt="Cross-Process Settings" /> <img src="#" alt="Delivery Processing" /> <img src="#" alt="General Settings" /> <img src="#" alt="Define Shipping Conditions" /></td>
</tr>
</tbody>
</table>
8.3 Checking HU Numbering in ERP and EWM

You use this procedure to align the handling unit (HU) numbering in SAP ERP and SAP Extended Warehouse Management (EWM) and to activate if necessary the lean HU status update in ERP.

**Note**
This procedure is an optional step in the ERP-EWM integration.

HUs used in deliveries are communicated from EWM to ERP 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.

If you implement the standard warehouse with preconfigured processes in EWM, the Implementation Tool for Warehouse Integration checks that the HU number ranges defined in EWM do not overlap with the free internal number range in ERP. In this case, you do not need to carry out this procedure.

The following table gives an overview of HU number ranges delivered in the standard system:

<table>
<thead>
<tr>
<th>Application</th>
<th>Internal Ranges</th>
<th>External Ranges</th>
</tr>
</thead>
<tbody>
<tr>
<td>ERP</td>
<td>1000000000-7999999999 (10 digits)</td>
<td>8000000000-9999999999 (10 digits)</td>
</tr>
</tbody>
</table>
In case you link several decentralized warehouses (EWM warehouses or LE-WM warehouses) to the same ERP system or in case you link several ERP systems to the same EWM system, you must check manually that the number ranges defined across all systems 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 systems (ERP 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 ERP-EWM Integration

- **ERP** accepts all HU numbers from EWM except if they are within the free internal ERP number range. For example, in case of an internal ERP number range from 1000 to 7999 with a current number range status 1555, ERP accepts all numbers from EWM except in the interval of free numbers 1556-7999.
- **EWM** accepts HU numbers from ERP 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 ERP for HU numbers communicated by EWM. In a multiple system landscape, however, we recommend defining external number ranges in ERP for documentation purposes.

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

<table>
<thead>
<tr>
<th>New HU Created In</th>
<th>Number Range Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>EWM (internal)</td>
<td>EWM: internal number range necessary&lt;br&gt;ERP: external number range not necessary. EWM number must be outside the free internal ERP number range</td>
</tr>
<tr>
<td>EWM (external)</td>
<td>EWM: implicit or explicit external number range necessary&lt;br&gt;ERP: external number range not necessary. EWM number must be outside the free internal ERP number range</td>
</tr>
<tr>
<td>ERP (internal)</td>
<td>ERP: internal number range necessary&lt;br&gt;EWM: implicit or explicit external number range necessary</td>
</tr>
<tr>
<td>ERP (external)</td>
<td>ERP: external number range necessary&lt;br&gt;EWM: implicit or explicit external number range necessary</td>
</tr>
</tbody>
</table>

**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 ERP. This setting is necessary for stock transport order (STO)
processes involving cross-delivery HUs. It is not relevant for the standard warehouse with preconfigured processes.

**Procedure**

If you implement the standard warehouse with preconfigured processes in EWM in a system landscape including one EWM-managed warehouse and one plant, no action is necessary.

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 the HU number ranges used in EWM:
   1. 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.
   2. 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 the HU number ranges used in ERP:
   1. 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.
   2. 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 (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 ERP 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 the ERP customizing system 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.
9   Data Transfer Activation in ERP and EWM

You use this process to activate the data transfer from SAP ERP to SAP Extended Warehouse Management (EWM).

You activate the following types of data transfer:

- Master data transfer from ERP using Core Interface (CIF)
  This data transfer is triggered in ERP.

- Transaction data transfer from ERP using queued remote function call (qRFC)
  This data transfer is triggered in ERP.

- Transfer of additional data (material valuation data) from 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 set up the transfer of batch-specific data. The step is not required in the standard warehouse with preconfigured processes.

Process

Carry out the following steps:

1. Activating Master Data Transfer Using CIF in ERP [page 60]
2. Activating Transaction Data Transfer in ERP [page 64]
3. Activating Additional Data Transfer in EWM [page 65]
4. Activating Data Transfer for Batches in ERP and EWM [page 66] (optional)

Result

You have activated the data transfer from ERP to EWM.

The system transfers existing master data not transferred yet to EWM with the next activation of the integration model. If you now create new materials in an ERP plant linked to the EWM warehouse, the system transfers the master data with the periodic activation of the integration model. Furthermore, it immediately communicates changes to master data already transferred to EWM.

If you create an inbound delivery or an outbound delivery in an ERP plant and ERP storage location linked to the EWM warehouse, the system transfers the delivery data from ERP to EWM.

The system also transfers additional data like the material valuation data periodically to EWM.

9.1   Activating Master Data Transfer Using CIF in ERP

You use this procedure to activate in SAP ERP the transfer of all master data used in SAP Extended Warehouse Management (EWM). The master data transfer uses the Core Interface (CIF).
You have already prepared the master data transfer as follows:

- You have created an integration model containing only few data and activated it manually. This was the initial data transfer for the integration model.
  
  See Transferring Organizational Units for Warehouse from ERP to EWM Using CIF [page 49].

- You have also done the following:
  
  ○ You have activated the online transfer of changes using Business Transaction Events (BTEs). This means that changes to master data already transferred to EWM are communicated immediately to EWM.
  
  ○ You have generated a runtime version of the active integration model for performance purposes
  
  See Preparing Initial Transfer of Master Data and Organizational Units Using CIF in ERP [page 48].

The integration model already contains the following data:

- Plant
- Shipping points
- Vendor or customer linked to the plant

In this procedure you add the following data to the integration model so that it contains all master data needed in the EWM processes:

- Materials
- Vendors (including carriers)
- Customers

**Recommendation**

If you expect large amount of master data to be transferred to EWM, think about parallelizing the data transfer.

For more information, see SAP Library for SAP Extended Warehouse Management 9.0 or higher on SAP Help Portal at help.sap.com/ewm. In SAP Library, choose SCM Basis > Integration via Core Interface > Core Interface (CIF) > Data Transfer > Initial Data Transfer.

You then schedule a regular job to activate the data transfer.

The regular job consists in the following steps:

<table>
<thead>
<tr>
<th>Step</th>
<th>Program</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>RIMODEL</td>
<td>Delete inactive integration models from the previous job run</td>
</tr>
<tr>
<td>2</td>
<td>RIMODGEN</td>
<td>Generate new versions of the integration model. When you create a new master record included in the selection criteria of the active integration model, the program RIMODGEN automatically generates a new inactive version of the integration model.</td>
</tr>
<tr>
<td>3</td>
<td>RIMODAC2</td>
<td>Deactivate the old version and activate the new version of the integration model at the same time. Using the runtime version of the integration model, the program RIMODAC2 compares the old</td>
</tr>
<tr>
<td>Step</td>
<td>Program</td>
<td>Purpose</td>
</tr>
<tr>
<td>------</td>
<td>---------</td>
<td>---------</td>
</tr>
<tr>
<td>1.</td>
<td>RIMODGEN</td>
<td>and the new version of the integration model and triggers only the transfer of the differences (as delta transfer). The old version is deleted in step 1 of the next job run.</td>
</tr>
</tbody>
</table>

For each program you create a variant, which you use in the job scheduling.

### Procedure

Carry out the following steps in the ERP client in which you create master data for EWM:

1. Change the integration model and create a variant for program RIMODGEN:

   ![Note](image)

   The selection criteria for the integration model described in step 1 of the procedure refer to the master data needed in the standard warehouse with preconfigured processes.

   If you create your own warehouse, adapt the selection criteria for the integration model according to your master data. If you use batch-managed products, see Activating Data Transfer for Batches in ERP and EWM [page 66] for the transfer of batches and classification data using CIF.

   1. On the SAP Easy Access screen, choose Logistics > Central Functions > Supply Chain Planning Interface > Core Interface Advanced Planner and Optimizer > Integration Model > Create .
   2. In the menu, choose Goto > Variant > Get Variant and enter the name of the variant that you created previously, for example, VIMEWM1.
   3. Enter the materials you want to transfer:
      1. In the Material Dependent Objects screen area, select the Materials checkbox.
      2. In the General Selection Options for Materials screen area, enter, for example, plant PL01 or warehouse number W001. (The selection criteria are valid for the standard warehouse with preconfigured processes.)
   4. Enter the vendors you want to transfer:
      1. In the Material Independent Objects screen area, select the Vendors checkbox.
      2. Choose Special Restrictions and in the Vendors screen area enter the following:
         ○ Enter, for example, purchasing organization 0001. (The selection criteria are valid for the standard warehouse with preconfigured processes.)
         ○ In the Create Loc/BP. field, enter the number 2 (Create Both).
   5. Enter the customers you want to transfer:
      1. In the Material Independent Objects screen area, select the Customers checkbox.
      2. Choose Special Restrictions and in the Customers screen area, enter the following:
         ○ Enter, for example, sales organization 0001. (The selection criteria are valid for the standard warehouse with preconfigured processes).
         ○ In the Create Loc/BP. field, enter the number 2 (Create Both).
   6. Save the changed integration model as a variant, for example, VIMEWM1.
7. Choose **Execute**.
8. Choose **Generate IM**.

2. Create a variant for program **RIMODEL**:  
   1. On the **SAP Easy Access** screen, choose **Logistics > Central Functions > Supply Chain Planning Interface > Core Interface Advanced Planner and Optimizer > Integration Model > Delete**.
   2. Enter the integration model, logical system, and APO application you changed in step 1.
   3. Select the **Select Inactive IMs Only** checkbox.
   4. Save as a variant, for example, **VIMEWM1**.

3. Create a variant for program **RIMODAC2**:  
   1. On the **SAP Easy Access** screen, call transaction **CFM3**.
   2. Enter the integration model, logical system, and APO application you changed in step 1.
   3. Select the following checkboxes:
      ○ **Ignore Faulty Queue Entries**
      ○ **Do Not Issue Warning in Case of Parallel CIF Load**
   4. Save as a variant, for example, **VIMEWM1**.

4. Define a background job for programs **RIMODEL**, **RIMODGEN**, and **RIMODAC2**. In this example the job runs hourly.
   1. On the **SAP Easy Access** screen, in the menu choose **System Services > Jobs > Define Job**.
   2. Enter the name of the job, for example, **EWM CIF W001** (naming convention: EWM CIF_<warehouse>).
   3. Create step number 1 by choosing **Step**.
      1. In the **ABAP program** screen area, enter program **RIMODEL** and variant **VIMEWM1**.
      2. Save your entries.
      The **Step List Overview** screen appears.
   4. Create step number 2 by choosing **Create**.
      1. In the **ABAP program** screen area, enter program **RIMODGEN** and variant **VIMEWM1**.
      2. Save your entries.
      The **Step List Overview** screen appears.
   5. Create step number 3 by choosing **Create**.
      1. In the **ABAP program** screen area, enter program **RIMODAC2** and variant **VIMEWM1**.
      2. Save your entries.
      The **Step List Overview** screen appears.
   6. Go back.
   7. Choose **Start Condition**.
      The **Start Time** screen appears.
   8. Choose **Date/Time**.
   9. Enter the scheduled start date and time.
10. Select the **Periodic job** checkbox.
11. Choose **Period values**.
      The **Period Values** screen appears.
12. Select, for example, **Hourly** and save.
13. On the **Start Time** screen, save your entries.

9.2 Activating Transaction Data Transfer in ERP

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

Since only deliveries created in the ERP 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 ERP warehouse.

Procedure

Carry out the first step of the following procedure in the ERP Customizing client and transport if necessary the settings to other ERP clients or ERP systems. Carry out the second step in the ERP client in which you create transaction data for EWM:

1. Define delivery split by warehouse in ERP in Customizing for Logistics Execution under Shipping Deliveries Define Split Criteria for Deliveries Delivery Split by Warehouse Number:
   1. In Delivery Split by Warehouse Number, choose the activity Define delivery split per delivery type.
   2. 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)
   3. In Delivery Split by Warehouse Number, choose the activity Determine delivery split per warehouse number.
   4. Select the Delivery Split checkbox for your warehouse.

2. Generate the distribution model for the ERP warehouse:
   1. In Customizing for Logistics Execution, under SAP EWM Integration Basic Setup of Connectivity Generate Distribution Model from SAP ERP to SAP EWM:
   2. 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
   3. In the Objects screen area, select All to create entries for inbound deliveries, outbound deliveries and production material requests.
   4. In the Action screen area, select Create Entries.
   5. Choose Execute.
A protocol for all selected warehouses is created.

**Note**

If you have not yet completed the configuration of the 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 > Basic Setup of Connectivity > Configure SAP EWM-Specific Parameters**.

### 9.3 Activating Additional Data Transfer in EWM

You use this procedure to activate in SAP Extended Warehouse Management (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 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 (business partner of the ERP plant) and the ERP client from which the data should be transferred.

**Procedure**

Carry out the following steps in the EWM client in which you use master data from ERP:

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:
   1. On the **SAP Easy Access** screen, choose **System > Services > Jobs > Define Job**.
   2. Enter the name of the job, for example, `EWMVAL_W001` (naming convention: `EWMVAL_<warehouse>`).
   3. Create step number 1 by choosing **Step**.
   4. In the **ABAP program** screen area, enter program `/SCWM/R_VALUATION_SET` and variant `VW001`.
   5. 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.

9.4 Activating Data Transfer for Batches in ERP and EWM

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

Since the batch management requirement indicator is set on product level in EWM, batch numbers must be unique at client or material level in ERP.

You can create batches either in ERP or in EWM:
- If you create a batch in ERP, it is transferred immediately to EWM using Core Interface (CIF)
- If you create a batch in EWM, EWM communicates synchronously with ERP to create the batch in ERP first and transfer it immediately to EWM using CIF. In case of a communication error it is possible to create the batch locally in EWM first (except if it is the first batch of a product; You must always create the first batch of a product in ERP first to connect the batch to a class).

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

EWM uses classification data to manage the following batch-relevant data:
- Standard batch attributes such as shelf life expiration date, country of origin, or batch status, which are managed in the batch master record in ERP. To use these attributes in EWM, you must define them as characteristics in a batch class in ERP. When you maintain a standard attribute in the batch master record in ERP, it is copied automatically to the corresponding characteristic of the batch class. The standard characteristics used in ERP for the EWM integration begin with LOBM_*.  
- Customer-specific batch attributes, which are managed as batch classification data in ERP
- Selection criteria for batch determination in outbound deliveries

Batch-relevant classes must belong to predefined class types in ERP and EWM:

<table>
<thead>
<tr>
<th>Class Type Used For</th>
<th>ERP</th>
<th>EWM as an Add-On to ERP</th>
<th>EWM on Own Server</th>
</tr>
</thead>
<tbody>
<tr>
<td>Batch attributes</td>
<td>023</td>
<td>023</td>
<td>230</td>
</tr>
<tr>
<td>Selection criteria in outbound deliveries</td>
<td>023</td>
<td>231</td>
<td>231</td>
</tr>
</tbody>
</table>

You assign the classes and class characteristics used in EWM to an organizational area. The organizational area is used for the following purposes:
- As selection criterion in the CIF integration model
In the authorization check for the maintenance of classification data: All EWM and ERP users maintaining classification data for batches need an authorization for the authorization object C_TCLS_BER for the maintained class type and organizational area. For more information, see SAP Note 1073116.

You use CIF integration models to transfer the following batch-relevant data from ERP to EWM:

Table 33

<table>
<thead>
<tr>
<th>Data Transferred by CIF</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Characteristics and classes</td>
<td>You activate the CIF integration model manually for the transfer of characteristics and classes. Since no automatic change transfer exists for characteristics and classes, you must generate and activate the integration model manually after each change.</td>
</tr>
<tr>
<td>Batches and batch classification data</td>
<td>You activate the CIF integration model manually for the initial transfer of batches. The system transfers new batches and changes to existing batches immediately to EWM if they are contained in an active integration model. If you change the attributes of a batch with existing stock in EWM, the system not only adapts the batch classification data but also updates the stock attributes.</td>
</tr>
</tbody>
</table>

Selection criteria for batch determination in outbound deliveries are transferred together with the delivery data from ERP to EWM. You do not create a CIF integration model for this transfer.

**Recommendation**

Use one integration model for the transfer of characteristics and classes and one integration model for the transfer of batches and batch classification data.

**Note**

The transfer of characteristics and classes is not necessary in case EWM is installed as add-on to ERP as both applications use the same classification data.

**Note**

If you use batches without attributes, you do not need classification data for batches. In this case you only create an integration model for the batches but you do NOT transfer classes and characteristics via CIF. You can skip steps 4-9 in the procedure.

**Procedure**

Carry out the following steps:

1. Check batch level in ERP as follows:
   
   1. In Customizing for *Logistics – General*, choose **Batch Management** > **Specify Batch Level and Activate Status Management**.
2. Choose *Batch Level* and check that batch numbers are unique on material level or client level for a material. If you manage batch numbers on plant level, see SAP Note [533377](#) for the conversion of batch level.

If you change the batch level, a conversion is always necessary, even if you have not created a batch in your system yet.

2. Check internal number ranges for batches in ERP and EWM.

   1. 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.

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

3. Set update control for batches in EWM. This is an optional step.

   In Customizing for *Extended Warehouse Management* under *Cross-Process Settings > Batch Management > Set Update Control (Centralized, Decentralized)* check how EWM should react to a communication error during the creation of batches triggered in EWM. If no entry exists for the ERP business system, EWM uses the default value *Synchronous, Cancel Update If Errors Occur*.

4. Copy standard characteristics `LOBM_*` from client 000 to the ERP client. Carry out this step in all ERP clients linked to EWM.

   1. In Customizing for *Logistics – General* under *Batch Management > Batch Valuation > Update Standard Characteristics* execute the update.

   2. 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.

5. Create an organizational area for the batch class type 023 in ERP. The organizational area is needed for the CIF integration model. This step is not necessary in case EWM is installed as add-on to ERP.

   1. In Customizing for *Cross-Application Components*, choose *Classification System > Classes > Maintain Object Types and Class Types*.

   2. Select table `MCHA` and in the dialog structure choose *Organizational Areas*.

   3. Create a new entry for class type 023 and organizational area `W` for EWM. If organizational area `W` is already used by another application, enter another character as organizational area.

   4. Save your entries.

6. Create an organizational area for the batch class type 230 in EWM. This step is not necessary in case EWM is installed as add-on to ERP.

   1. In Customizing for *Cross-Application Components*, choose *Classification System > Classes > Maintain Object Types and Class Types*.

   2. Select table `/SAPAPO/VERSKEY` and in the dialog structure choose *Organizational Areas*.

   3. Create a new entry for class type 230 and organizational area `W` for EWM.

   4. Save your entries.

7. Create or change a batch class with standard characteristics in ERP. Carry out this step in all ERP clients linked to EWM.

   If you do not use classes for batches yet, create a class in ERP.

   1. On the *SAP Easy Access* screen, choose *Cross-Application Components > Classification System > Master Data > Classes*.
2. Create a class in class type 023 containing the characteristics you want to use in EWM.

3. In case EWM is not installed as add-on to ERP: On the Basic Data tab, assign the organizational area W to the class. On the Char. tab, assign the organizational area W to all characteristics you want to use in EWM too.

   If you already use a class of class type 023 in ERP, add if necessary standard characteristics beginning with LOBM_* to the class. In case EWM is not installed as add-on to ERP, assign the organizational area W to the class and to the class characteristics.

4. Save your entries.

8. Create an integration model for the classes and characteristics in ERP. This step is not necessary in case EWM is installed as add-on to ERP. Carry out this step in all ERP clients linked to EWM.

   1. On the SAP Easy Access screen, choose Logistics > Central Functions > Supply Chain Planning Interface > Core Interface Advanced Planner and Optimizer > Integration Model > Create.

   2. In the Model Name field, enter a name for the integration model, for example, IMEMCLASS.

   3. In the Logical System field, enter the name of the target system, for example, EWMCLNT001.

   4. In the APO Application field, enter, for example, EWM.

   5. In the Material Independent Objects screen area, select the Classes/Charact checkbox.

   6. In the Classes and Characteristics screen area, enter the organizational area W and the class type 023.

   7. Choose Execute.

   8. On the next screen, choose Generate IM.

9. Activate the integration model for the classes and characteristics in ERP. This step is not necessary in case EWM is installed as add-on to ERP. Execute this step in all ERP clients linked to EWM.

   1. On the SAP Easy Access screen, choose Logistics > Central Functions > Supply Chain Planning Interface > Core Interface Advanced Planner and Optimizer > Integration Model > Activate.

   2. In the Selection Criteria screen area, enter the model name, the logical system, and the APO application you used to create the integration model.

   3. Choose Execute.

      The Activate or Deactivate Integration Model screen appears.

   4. In the screen area on the left, choose the APO application, for example, EWM.

      Your integration model appears in the screen area on the right.

   5. In the screen area on the right, select the relevant line and choose Active/Inactive.

      The status of your integration model is displayed in the New Status field.

   6. In the screen area on the right, select the relevant line and choose Start.

      The system confirms the activation of the model in a dialog box.

10. Create an integration model for the batches in ERP. Execute this step in all ERP clients linked to EWM.

    1. On the SAP Easy Access screen, choose Logistics > Central Functions > Supply Chain Planning Interface > Core Interface Advanced Planner and Optimizer > Integration Model > Create.

    2. In the Model Name field, enter a name for the integration model, for example, IMEMBATCH.

    3. In the Logical System field, enter the name of the target system, for example, EWMCLNT001.

    4. In the APO Application field, enter, for example, EWM.

    5. In the Material Dependent Objects screen area, select the Batches checkbox.

    6. In the General Selection Options for Materials screen area, enter for the batches the same selection criteria as in the integration model containing the materials.
7. Choose **Execute**.
8. On the next screen, choose **Generate IM**.
11. Activate the integration model for the batches in ERP. Carry out this step in all ERP clients linked to EWM. Proceed as described in step 9 for the integration model **1MEWMBATCH**.

**Note**
Since it is not possible to activate an empty integration model, at least one batch must exist within the selection criteria defined in the model before you can carry out this step.

**More Information**

For more information about the integration of batches in ERP and EWM, see SAP Notes [1305698](#) and [1305605](#).
10 More Information about Additional ERP-EWM Integration Topics

This procedure is used to get an overview about additional integration topics. The topics are not part of the standard warehouse with preconfigured processes. This configuration content does not describe how to configure these additional integration topics but only where to find information about them. Using this information you can decide whether some of those integration topics are relevant for your warehousing processes.

Possible sources of information are the following:

Table 34

<table>
<thead>
<tr>
<th>Source of Information</th>
<th>Where to find it</th>
</tr>
</thead>
<tbody>
<tr>
<td>Documentation of business functions in SAP ERP and SAP Extended Warehouse Management (EWM)</td>
<td>Transaction SFW5&lt;br&gt;See also the following:&lt;br&gt;- Activating Business Functions in Switch Framework in ERP [page 9]&lt;br&gt;- Activating Business Functions in Switch Framework in EWM [page 22]</td>
</tr>
<tr>
<td>Documentation of BC Sets</td>
<td>List of EWM-Related BC Sets in ERP [page 76]</td>
</tr>
<tr>
<td>SAP Library for additional ERP integration transactions in EWM</td>
<td>On the SAP Easy Access screen for Extended Warehouse Management under Interfaces ERP Integration choose one of the available transactions and then Help Application Help.</td>
</tr>
<tr>
<td>SAP Library</td>
<td>See table below</td>
</tr>
<tr>
<td>Business Process Repository in SAP Solution Manager</td>
<td>See table below</td>
</tr>
<tr>
<td>Customizing documentation</td>
<td>See table below</td>
</tr>
</tbody>
</table>

Sources of information for additional integration topics are the following:

Table 35

<table>
<thead>
<tr>
<th>Integration Topic</th>
<th>SAP Library for SAP EWM 9.0 or higher</th>
<th>Business Process Repository in SAP Solution Manager</th>
<th>Customizing for EWM</th>
<th>Customizing for ERP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Catch Weight</td>
<td>SAP Extended Warehouse Management (SAP EWM) → Catch Weight</td>
<td>N/A</td>
<td>• Master Data → Product → Catch Weight&lt;br&gt;• SCM Basis → Integration → Basic Settings for Creating the System Landscape</td>
<td>• Integration with Other SAP Components → Extended Warehouse Management → Additional Material Attributes</td>
</tr>
<tr>
<td>Integration Topic</td>
<td>SAP Library for SAP EWM 9.0 or higher</td>
<td>Business Process Repository in SAP Solution Manager</td>
<td>Customizing for EWM</td>
<td>Customizing for ERP</td>
</tr>
<tr>
<td>-----------------------------------------------------</td>
<td>---------------------------------------</td>
<td>-----------------------------------------------------</td>
<td>---------------------</td>
<td>--------------------</td>
</tr>
<tr>
<td>Direct Outbound Delivery Orders (with Account Assignments)</td>
<td>[SAP Extended Warehouse Management](SAP EWM) &gt; Delivery Processing &gt; Direct Outbound Delivery Order</td>
<td>N/A</td>
<td>Assign Logical System and Queue Type</td>
<td>Attribute Values for Additional Material Master Fields &gt; Define Catch Weight Tolerance Groups</td>
</tr>
<tr>
<td>Documentary Batch</td>
<td>[SAP Extended Warehouse Management](SAP EWM) &gt; Batch</td>
<td>N/A</td>
<td>[Logistics Execution](Extended Warehouse Management Integration) &gt; Outbound Process &gt; Direct Outbound Deliveries</td>
<td></td>
</tr>
<tr>
<td>Integration Topic</td>
<td>SAP Library for SAP EWM 9.0 or higher</td>
<td>Business Process Repository in SAP Solution Manager</td>
<td>Customizing for EWM</td>
<td>Customizing for ERP</td>
</tr>
<tr>
<td>-----------------------------------</td>
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<td>---------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>Kit to Order</td>
<td>SAP Extended Warehouse Management (SAP EWM) ➤ Goods Issue ➤ Kit to Order ➤ Documentary Batch</td>
<td>N/A</td>
<td>➤ Goods Issue Process ➤ Make Settings for Kitting ➤ Logistics Execution ➤ Extended Warehouse Management Integration ➤ Outbound Process ➤ Kit to Order</td>
<td></td>
</tr>
<tr>
<td>Merchandise Distribution</td>
<td>SAP Extended Warehouse Management (SAP EWM) ➤ Cross-Docking (CD) ➤ Planned Cross-Docking ➤ Merchandise Distribution ➤ Configuration content for the business process Merchandise Distribution under Logistics</td>
<td>N/A</td>
<td>➤ Cross-Process Settings ➤ Cross-Docking (CD) ➤ Planned Cross-Docking ➤ Merchandise Distribution ➤ Basic Settings for Merchandise Distribution ➤ Integration with Other SAP Components ➤ Extended Warehouse Management ➤ Additional Material Attributes ➤ Attribute Values for Additional Material Master Fields ➤ Define Adjustment Profile ➤ Logistics – General ➤ Merchandise Distribution ➤</td>
<td></td>
</tr>
<tr>
<td>Migration from LE-WM to EWM</td>
<td>SAP Extended Warehouse Management (SAP EWM)</td>
<td>N/A</td>
<td>➤ Interfaces ➤ Migration from LE-WM ➤</td>
<td>N/A</td>
</tr>
<tr>
<td>Production Supply</td>
<td>SAP Extended Warehouse Management (SAP EWM) ➤ Goods Issue ➤ Integration of Production Supply (PP) in Extended Warehouse Management (EWM) ➤</td>
<td>N/A</td>
<td>➤ Goods Issue Process ➤ Outbound Delivery ➤ Supply Production Supply ➤ Logistics Execution ➤ Extended Warehouse Management Integration ➤ Production Planning and Control ➤</td>
<td></td>
</tr>
<tr>
<td>Integration Topic</td>
<td>SAP Library for SAP EWM 9.0 or higher</td>
<td>Business Process Repository in SAP Solution Manager</td>
<td>Customizing for EWM</td>
<td>Customizing for ERP</td>
</tr>
<tr>
<td>-------------------------------------------------------</td>
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<td>-----------------------------------------------------</td>
<td>---------------------------------------------------------</td>
<td>----------------------------------------------------------</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Logistics – General Advanced Returns Management</td>
</tr>
<tr>
<td>Serial Numbers</td>
<td>SAP Extended Warehouse Management (SAP EWM) &gt; Serial Number</td>
<td>N/A</td>
<td>Master Data Product Define Serial Number Profiles</td>
<td>Integration with Other SAP Components Extended Warehouse Management Additional Material Attributes Attribute Values for Additional Material Master Fields Define Serial Number Profile</td>
</tr>
<tr>
<td>Stock Transport Orders</td>
<td>SAP Extended Warehouse Management (SAP EWM)</td>
<td>N/A</td>
<td>N/A</td>
<td>Logistics Execution Extended Warehouse Management Integration Cross-Process Settings Proof of Delivery</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Logistics Execution Extended Warehouse Management Integration Transfer and Inventory Management</td>
</tr>
</tbody>
</table>

More Information about Additional ERP-EWM Integration Topics
<table>
<thead>
<tr>
<th>Integration Topic</th>
<th>SAP Library for SAP EWM 9.0 or higher</th>
<th>Business Process Repository in SAP Solution Manager</th>
<th>Customizing for EWM</th>
<th>Customizing for ERP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transportation Integration</td>
<td>SAP Extended Warehouse Management (SAP EWM)</td>
<td>Configuration content for the following business processes under Logistics: ▶ Warehouse Inbound Processing with Transportation Integration ▶ Warehouse Outbound Processing with Transportation Planning in SAP ERP ▶ Warehouse Outbound Processing with Transportation Planning in SAP EWM</td>
<td>▶ Goods Issue Process ▶ Inbound Delivery ▶ Integration with Transportation ▶ Goods Issue Process ▶ Outbound Delivery ▶ Integration with Transportation</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Check if the integration topics mentioned in the table above are relevant for your warehousing processes. If yes, see the available documentation for the configuration of this topic.
## 10.1 List of EWM-Related BC Sets in ERP

The following table lists BC Sets in SAP ERP that are related to SAP Extended Warehouse Management (EWM).

<table>
<thead>
<tr>
<th>ERP BC Set</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>/SPE/COMPLETE</td>
<td>Complete Set of SPE BC Sets</td>
</tr>
<tr>
<td>/SPE/MATERIAL_SCREENS</td>
<td>Enhance material screen sequences</td>
</tr>
<tr>
<td>/SPE-TVSHP</td>
<td>Shipping parameters on client level</td>
</tr>
<tr>
<td>/SPE/SPM_RETURNS_SHIPPED_IMG</td>
<td>Basic Setting SPM Complaints &amp; Returns IMG Shipped (NO ORG)</td>
</tr>
<tr>
<td>/SPE/STO_DISCREPANCIES</td>
<td>Basic customizing for STO Discrepancies</td>
</tr>
<tr>
<td>/SPE/TRANSPORTATION_CROSS_DOCK</td>
<td>Service Parts Management: Transportation Cross-Docking</td>
</tr>
<tr>
<td>/SPE/TNAPR</td>
<td>Message processing routines</td>
</tr>
<tr>
<td>/SPE/DIRECT_OUTBOUND_DELIVERIES</td>
<td>Customizing for Direct Outbound Deliveries</td>
</tr>
<tr>
<td>/SPE/DIRODO_ACC_ASSIGNMENT</td>
<td>Account Assignments for Direct Outbound Deliveries</td>
</tr>
<tr>
<td>/SPE/KIT_TO_ORDER</td>
<td>Kit-to-Order BC-Set</td>
</tr>
</tbody>
</table>

For more information, see the documentation of the BC Sets in transaction Activation of BC Sets on the SAP Easy Access screen under Tools > Customizing > Business Configuration Sets.
## Typographic Conventions

<table>
<thead>
<tr>
<th>Example</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>&lt;Example&gt;</code></td>
<td>Angle brackets indicate that you replace these words or characters with appropriate entries to make entries in the system, for example, “Enter your <code>&lt;User Name&gt;</code>”.</td>
</tr>
<tr>
<td>Example</td>
<td>Arrows separating the parts of a navigation path, for example, menu options</td>
</tr>
<tr>
<td>Example</td>
<td>Emphasized words or expressions</td>
</tr>
<tr>
<td><code>www.sap.com</code></td>
<td>Textual cross-references to an internet address</td>
</tr>
<tr>
<td><code>/example</code></td>
<td>Quicklinks added to the internet address of a homepage to enable quick access to specific content on the Web</td>
</tr>
<tr>
<td>123456</td>
<td>Hyperlink to an SAP Note, for example, SAP Note 123456</td>
</tr>
</tbody>
</table>
| Example    | • Words or characters quoted from the screen. These include field labels, screen titles, pushbutton labels, menu names, and menu options.  
|            | • Cross-references to other documentation or published works               |
| Example    | • Output on the screen following a user action, for example, messages      
|            | • Source code or syntax quoted directly from a program                     
|            | • File and directory names and their paths, names of variables and parameters, and names of installation, upgrade, and database tools |
| EXAMPLE    | Technical names of system objects. These include report names, program names, transaction codes, database table names, and key concepts of a programming language when they are surrounded by body text, for example, SELECT and INCLUDE |
| EXAMPLE    | Keys on the keyboard                                                      |