



## Configuration of Direct Integration of Outbound Warehousing and Transportation

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
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Type Style	Description
<i>Example text</i>	Words or characters quoted from the screen. These include field names, screen titles, pushbuttons labels, menu names, menu paths, and menu options. Cross-references to other documentation.
<b>Example text</b> EXAMPLE TEXT	Emphasized words or phrases in body text, graphic titles, and table titles. Technical names of system objects. These include report names, program names, transaction codes, table names, and key concepts of a programming language when they are surrounded by body text, for example, SELECT and INCLUDE.
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<b>Example text</b>	Exact user entry. These are words or characters that you enter in the system exactly as they appear in the documentation.
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EXAMPLE TEXT	Keys on the keyboard, for example, F2 or ENTER.

## Table of Contents

Configuration of Direct Integration of Outbound Warehousing and Transportation .....	6
User Roles for SAP TM, SAP ERP and SAP EWM.....	11
Configuration Settings in SAP TM (Part I) .....	12
Naming Logical Systems for the Connection to SAP ERP and SAP TM in SAP TM.....	13
Assigning Logical Systems to Clients in SAP TM .....	14
Defining SLD Data of Business Systems in SAP TM.....	15
Maintaining Business System Groups in SAP TM .....	16
Activating Queues in SAP TM.....	17
Activating the Planning Version and Model for Master Data in SAP TM .....	18
Activating BADIs: Inbound Processing for Products and Locations in SAP TM.....	19
Inbound Processing for Products .....	20
Inbound Processing for Location .....	21
Configuration Settings in SAP ERP .....	22
Checking ECC-SE Add-On Installation in SAP ERP .....	23
Activating Business Functions in SAP ERP .....	24
Creating ISO Units in SAP ERP .....	25
Creating Units of Measurement in SAP ERP .....	26
Changing Units of Measurement in SAP ERP .....	27
Assigning SAP ERP Warehouse to SAP EWM Warehouse in SAP ERP .....	28
Configuring Core Interface in SAP ERP.....	29
Defining the Logical System for SAP TM in SAP ERP .....	30
Specifying the APO Release for SAP TM in SAP ERP .....	31
Setting Target System and Queue Type for SAP TM in SAP ERP .....	32
Generating an Integration Model for SAP TM .....	33
Activating the Integration Model for SAP TM.....	34
Activating BC Set ZZ_PRC_75_ERP in SAP ERP .....	35
Creating New Order Type in SAP ERP (BC-Set).....	36
Creating New Delivery Type in SAP ERP (BC-Set).....	37
Changing Order Type in SAP ERP (BC-Set) .....	38
Configuring Allowed Sales Area for Sales Document Type in SAP ERP (BC-Set) .....	39
Configure Subsequent Delivery Split in SAP ERP (BC-Set).....	40
Defining Packaging Material Type in SAP ERP (BC-Set).....	41
Defining Additional Shipping Conditions in SAP ERP (BC-Set).....	42
Creating Customers in SAP ERP .....	43
Configuring Shipping Point in SAP ERP (BC-Set) .....	44
Activating Transfer of Sales Documents in SAP ERP (BC-Set) .....	45
Activating Transfer of Outbound Deliveries in SAP ERP (BC-Set) .....	46
Configuring Output Determination for Sales Documents in SAP ERP.....	47
Assigning Output Type to Output Procedure in SAP ERP (BC-Set) .....	48
Assigning Output Determination Procedures to Document Types (SD) (BC-Set) .....	49
Creating Output Condition Records (SD) .....	50
Configuring Output Determination for Outbound Deliveries in SAP ERP .....	51
Assigning Output Type to Output Procedure in SAP ERP (BC-Set) .....	52
Assigning Output Determination Procedures (Outbound Deliveries) (BC-Set) .....	53
Creating Output Condition Records (Outbound Delivery) .....	54
Assigning Processing Class (Outbound Delivery) in SAP ERP (BC-Set) .....	55
Configuration Settings in SAP EWM.....	56
Activating Business Functions in SAP EWM.....	57
Defining the Logical System and Business System for SAP TM in SAP EWM .....	58
Activating BC Sets in SAP EWM.....	59
Activating Error and Conflict Handler in SAP EWM .....	60
Configuring Staging Area and Door Determination in SAP EWM.....	61
Configuring Access Sequence to Staging Areas and Door Determination in SAP EWM .....	62
Checking Packaging Material Type in SAP EWM.....	63
Configuring Means of Transport in SAP EWM (BC-Set).....	64
Defining the Link between Packaging Material and MTR in SAP EWM .....	65
Configuring Action Profiles for TU and Vehicle in SAP EWM .....	66
Creating Condition Records for Printing of Delivery Notes .....	68
Configuration Settings in SAP TM (Part II) .....	69

Activating Business Functions in SAP TM .....	70
Defining Resolution Strategy in SAP TM .....	71
Defining Freight Unit Building Rules .....	73
Activating BC Sets in SAP TM .....	74
Activating Error and Conflict Handler in SAP TM (BC-Set).....	75
Creating ISO Units in SAP TM (BC-Set) .....	76
Creating Units of Measurement in SAP TM (BC-Set) .....	77
Changing Units of Measurement in SAP TM (BC-Set) .....	78
Defining Packaging Material Type in SAP TM .....	79
Defining Means of Transport in SAP TM (BC-Set) .....	80
Defining Package Type Codes in SAP TM (BC-Set) .....	81
Defining Vehicle Resource in SAP TM.....	82
Defining Equipment Groups and Equipment Types in SAP TM (BC-Set) .....	83
Defining Transportation Service Level Codes in SAP TM (BC-Set) .....	84
Defining Incoterms in SAP TM (BC-Set) .....	85
Configuring Planning in SAP TM.....	86
Defining Freight Unit Types (BC-Set) .....	87
Changing Freight Unit Building Rules.....	89
Creating Delivery Profiles .....	90
Creating Selection Profiles .....	91
Defining Capacity Settings.....	92
Creating Planning Profiles .....	93
Configuring Order Management in SAP TM .....	95
Defining Order-Based Transportation Requirement Types (BC-Set).....	96
Defining Delivery-Based Transportation Requirement Types (BC-Set) .....	97
Changing Delivery-Based Transportation Requirement Types .....	98
Defining Conditions for OTR Type Determination .....	99
Defining Conditions for DTR Type Determination .....	101
Configuring Freight Order Management in SAP TM (BC-Set) .....	102
Defining Freight Order Types for Outbound SAP EWM Integration (BC-Set).....	103
Assigning Freight Order Type to Freight Unit Type (BC-Set).....	104
Additional Settings for Inbound Processes .....	105
Additional User Role for Inbound in SAP ERP .....	106
Creating New Delivery Type in SAP ERP .....	107
Activating Transfer of Inbound Deliveries in SAP ERP .....	108
Assigning Output Type to Output Procedure in SAP ERP (BC-Set).....	109
Assigning Output Determination Procedures (Inbound Deliveries) in SAP ERP .....	110
Creating Output Condition Records (Inbound Delivery) in SAP ERP .....	111
Configuring Determination of Document Types and Item Types in SAP EWM .....	112
Defining Freight Unit Types in SAP TM (BC-Set) .....	113
Defining Freight Unit Building Rules .....	115
Defining Delivery-Based Transportation Requirement Types (BC-Set).....	116
Changing Delivery-Based Transportation Requirement Types.....	117
Defining Conditions for DTR Type Determination .....	118
Defining Freight Order Types for Inbound SAP EWM Integration (BC-Set) .....	119
Assign Freight Order Type to Freight Unit Type (BC-Set) .....	120
Configuration Settings for SAP NetWeaver Process Integration .....	121
Creating Communication Components and Communication Channels in SAP NetWeaver PI .....	122
Creating Configuration Scenarios for Order Integration in SAP NetWeaver PI .....	123
Creating a Configuration Scenario for Loading Appointment Integration in SAP NetWeaver PI .....	125
Appendix A: Basic Table Entries Used in SAP TM, SAP ERP, and SAP EWM.....	127
Appendix B: Synchronization of Customizing between SAP TM, SAP ERP and SAP EWM .....	128

## Configuration of Direct Integration of Outbound Warehousing and Transportation

You use this process to configure the business scenario [Integration of Outbound Warehousing and Transportation \[External\]](#) using the direct integration between SAP Transportation Management (SAP TM) and SAP Extended Warehouse Management (SAP EWM) for shipment information.

The scenario is integrated into the preconfigured warehouse described in scenario [Warehouse Management with Preconfigured Processes \[External\]](#).

This guide describes the necessary settings and customizing activities in SAP ERP, SAP TM, SAP EWM, and SAP NetWeaver PI for configuring the following business processes:

- [Managing Order-Based Outbound Processes \(TM-EWM\) \[External\]](#)
- [Handling Cancellation in Order-Based Outbound Processes \(TM-EWM\) \[External\]](#)
- [Managing Delivery-Based Outbound Processes \(TM-EWM\) \[External\]](#)



BC Sets exist for most of the customizing activities described in this configuration guide. The chapters covered by BC Sets are marked with the suffix “(BC Set)”. If you have activated the corresponding BC Sets, you can skip these chapters. You must carry out the remaining settings manually.

### Prerequisites

You have implemented the configuration described in the configuration document [Quick Implementation of Preconfigured Warehouse W001 \[External\]](#).

### Process

Implement the following configuration steps for your chosen business processes:

1. [Configuration Settings in SAP TM \(Part I\) \[Page 12\]](#)



These settings are only necessary if SAP TM is deployed on a separate server.

2. [Configuration Settings in SAP ERP \[Page 22\]](#)
3. [Configuration Settings in SAP EWM \[Page 56\]](#)
4. [Configuration Settings in SAP TM \(Part II\) \[Page 69\]](#)
5. [Additional Settings for Inbound Processes \[Page 105\]](#)
6. [Configuration Settings for SAP NetWeaver Process Integration \[Page 121\]](#)

### Example

You configure the business process in your warehouse number using the following data:

## Organizational Units (ERP-TM-EWM)

### Plant-Related Organizational Units

Organizational Unit	ID	Description
Plant (SAP ERP)	PL01	Plant 0001
Vendor for plant (SAP ERP)	BPPL01V	Vendor for plant 0001
Customer for plant (SAP ERP)	BPPL01C	Customer for plant 0001
Business Partner for plant (SAP TM, SAP EWM)	BPPL01V	Vendor for plant 0001
Supply chain unit/location for plant (SAP TM, SAP EWM)	PLPL01	Plant 0001
Party entitled to dispose (SAP EWM)	BPPL01V	Vendor for plant 0001

### Warehouse-Related Organizational Units

Organizational Unit	ID	Description
Storage location (SAP ERP)	AFS	Available for Sale
Warehouse number (SAP ERP)	W01	Warehouse W01
Warehouse number (SAP EWM)	W001	Warehouse W001
SCU/Location for warehouse number (SAP EWM)	PLPL01	Plant 0001

### Sales-Related and Distribution-Related Organizational Units and Settings

Organizational Unit	ID	Description
Sales organization (SAP ERP)	0001	Sales organization 0001
Distribution channel (SAP ERP)	02	Distribution channel 02
Division (SAP ERP)	01	Division 01
Shipping point (SAP ERP)	0001	Shipping Point 0001
SCU/location for shipping point (SAP TM, SAP EWM)	SO0001	Shipping Point 0001
Shipping condition (SAP ERP, SAP TM, SAP EWM)	T1	Order Based TP
	T2	Delivery Based TP

## Master Data and Master Data Attributes (ERP-TM-EWM)

Products		
Master Data	ID	Description
Product (SAP ERP, SAP TM, SAP EWM)	PROD-S01	Small part, fast-moving 01
	PROD-S02	Small part, fast-moving 02
	PROD-S03	Small part, fast-moving 03
	PROD-S04	Small part, fast-moving 04
	PROD-S05	Small part, slow-moving 05
	PROD-S06	Small part, slow-moving 06
	PROD-M01	Medium part 01
	PROD-M02	Medium part 02
	PROD-M03	Medium part 03

	PROD-M11	<i>Medium part 11</i>
	PROD-L01	<i>Large part 01</i>
	PROD-L02	<i>Large part 02</i>
	PROD-L03	<i>Large part 03</i>
Packaging material (SAP ERP, SAP TM, SAP EWM)	MTR	<i>Means of Transport</i>
	EUROPALLET	<i>Europallet</i>

Customers and Carriers		
<b>Master Data</b>	<b>ID</b>	<b>Description</b>
Customer (SAP ERP)	CUST031	<i>Customer CUST031</i>
	CUST032	<i>Customer CUST032</i>
Vendor (SAP ERP)	CARR001	<i>Carrier CARR001</i>
Business partner (SAP TM, SAP EWM)	CUST031	<i>Customer CUST031</i>
	CUST032	<i>Customer CUST032</i>
	CARR001	<i>Carrier CARR001</i>
SCU/Location (SAP TM, SAP EWM)	CUCUST031	<i>Customer CUST031</i>
	CUCUST032	<i>Customer CUST032</i>

### Means of Transport

<b>Master Data</b>	<b>ID</b>	<b>Description</b>
Means of transport (SAP TM, SAP EWM)	EWM_FTL	<i>Full Truck Load</i>

Packaging		
<b>Master Data</b>	<b>ID</b>	<b>Description</b>
Packaging material type (SAP TM, SAP ERP, SAP EWM)	MTR2	<i>Transportation Unit</i>
	PT01	<i>Packaging Material</i>
Package type code (SAP TM)	PT01	<i>Packaging Material</i>
HU type (SAP ERP, SAP EWM)	E1	<i>Europallet</i>
	M1	<i>Means of Transport</i>
Packaging specification (SAP EWM)	Pick HU, Europallet	<i>Pick HU, Europallet</i>

Queue and Resources		
<b>Master Data</b>	<b>ID</b>	<b>Description</b>
Queue (SAP EWM)	Q-010-920	<i>Pick. T010 to T920</i>
	Q-020-920	<i>Pick. T020 to T920</i>
	Q-050-920	<i>Pick. T050 to T920</i>
Resource (SAP EWM)	HLOP1	<i>High Level Order Picker</i>
	HLOP2	<i>High Level Order Picker</i>
	FLT1	<i>Forklift Truck</i>
	FLT2	<i>Forklift Truck</i>



Printing		
Master Data	ID	Description
Spool data (SAP EWM)	01	Use if one copy is needed
Printer (SAP EWM)	PR04	<i>Printer located at the shipping office</i>
	PR07	<i>Printer located at the outbound packing stations (used in EWM-based process only)</i>
	PR09	<i>Printer located near the empty pallet area</i>
	PR10	<i>Printer located near staging area T920</i>

### Warehouse Structure (EWM)

Warehouse Structure	ID	Description
Storage type	T010	<i>Pallet Rack – Medium Parts</i>
	T020	<i>Pallet Rack – Small Parts</i>
	T050	<i>Pallet Rack – Large Parts</i>
	T920	<i>Provide in Goods Issue</i>
	T940	<i>Doors – Outbound</i>
Storage section	T010 S001	<i>Total Section</i>
	T020 S001	<i>Total Section</i>
	T050 S001	<i>Total Section</i>
	T920 S001	<i>Total Section</i>
Storage bin	T010*	<i>All bins starting with T010</i>
	T020*	<i>All bins starting with T020</i>
	T050*	<i>All bins starting with T050</i>
	STAGE-002	<i>Staging area</i>
	STAGE-003	<i>Staging area</i>
	DOOR-002	<i>Door in goods issue</i>
	DOOR-003	<i>Door in goods issue</i>
Activity area	T010	<i>Activity Area for Storage Type T010</i>
	T020	<i>Activity Area for Storage Type T020</i>
	T050	<i>Activity Area for Storage Type T050</i>
Door	DO02	<i>Door used for outbound process</i>
	DO03	<i>Door used for outbound process</i>

### Process-Specific Settings in SAP ERP, SAP EWM and SAP TM

#### Document Types

Process-Specific Settings	ID
Order types (SAP ERP)	ZOR
Delivery types (SAP ERP)	ZLF
Outbound delivery request (SAP EWM)	OTM
Outbound delivery order (SAP EWM)	OTM
Outbound delivery (SAP EWM)	OTM
Order-based transportation requirement type (SAP TM)	OTW1
Delivery-based transportation requirement type (SAP TM)	DTW1
Freight unit type (SAP TM)	FUW1
Freight order type (SAP TM)	FOW1

Warehouse Process Types	
<b>Process-Specific Settings</b>	<b>ID</b>
Warehouse process types (SAP EWM)	P212
	P370

## User Roles for SAP TM, SAP ERP and SAP EWM

The configuration of the direct integration of outbound warehousing and transportation contains process steps in SAP Transportation Management (SAP TM), SAP ERP and SAP Extended Warehouse Management (SAP EWM). You must assign the users in each system to specific user roles.

If the process steps are performed by different users, you can use separate roles and users in each system, for example, a transportation planner working exclusively in SAP TM and a warehouse clerk working exclusively in SAP EWM.

### Standard Roles Available for the Business Scenario

Role name	Application	Description
/SCWM/EXPERT	SAP EWM	<i>Role for EWM Transactions</i>
/SCMTMS/TRANSPORTATION_MGR_V2	SAP TM	<i>Role for TM Transactions</i>
SAP_EP_LO_SD_VA00	SAP ERP	<i>LO - SD - Sales and Distribution</i>
SAP_EP_LO_LE_OUTB		<i>LO - LE - Goods Issue</i>

Alternatively, you can configure a cross-system role enabling users to execute transactions in SAP TM, SAP ERP, and SAP EWM from SAP NetWeaver Business Client. For more information, see [Configuration of Cross-System Roles for Processes Involving SAP TM, SAP ERP and SAP EWM \[External\]](#).



## Configuration Settings in SAP TM (Part I)

You use this process in SAP Transportation Management (SAP TM) to configure the transfer of master data from SAP ERP to SAP TM by Core Interface.



You need to configure these settings only if SAP TM is deployed on a separate server.

Unless otherwise stated, you perform all procedures in this configuration in SAP TM.

### Process

1. [Naming Logical Systems for the Connection to SAP ERP and SAP TM](#) [Page 13]
2. [Assigning Logical Systems to Clients in SAP TM](#) [Page 14]
3. [Defining SLD Data of Business Systems in SAP TM](#) [Page 15]
4. [Maintaining Business System Groups in SAP TM](#) [Page 16]
5. [Activating Queues in SAP TM](#) [Page 17]
6. [Activating the Planning Version and Model for Master Data in SAP](#) [Page 18]
7. [Activating BAdIs: Inbound Processing for Products and Locations in SAP TM](#) [Page 19]

### Result

SAP TM is ready to receive master data from SAP ERP.



## Naming Logical Systems for the Connection to SAP ERP and SAP TM in SAP TM

You use this procedure to name the logical system used in the remote function call connection to SAP Transportation Management.

### Procedure

1. In Customizing for *SCM Basis*, choose **Integration** **Basic Settings for Creating the System Landscape** **Name Logical Systems**. This is a cross client-activity.
2. Define the logical system for SAP ERP, for example, ERPCLNT001. The standard naming convention is `<SID>CLNT<client no.>`.
3. Define the logical system for SAP TM, for example, TM1CLNT001. The standard naming convention is `<SID>CLNT<client no.>`.



## Assigning Logical Systems to Clients in SAP TM

You use this procedure to assign a logical system to a client in SAP Transportation Management (SAP TM).

### Procedure

1. In Customizing for *SCM Basis*, choose ► *Integration* ► *Basic Settings for Creating the System Landscape* ► *Assign Logical Systems to a Client* ▾. This is a cross-client activity.
2. Assign the logical system for SAP TM to the client.
3. Save your entries.

## Defining SLD Data of Business Systems in SAP TM

These settings should be published from your System Landscape Directory (SLD) automatically. Check whether the corresponding data sets have been imported into SAP Transportation Management.

### Procedure

1. In Customizing for *Transportation Management*, choose ► *Integration* ► *Define SLD Data of Business Systems* ▾.
2. Check whether an entry exists for your SAP ERP system.

If the entry exists, you do not need to take any further action.

If the entry does not exist, create the entry as follows:

1. Choose *New Entries*.
2. In the *Business System* field, enter a name that relates to your system ID and client, for example, ERP\_001.
3. In the *Logical System* field, enter your logical system in the format `<SID>CLNT<client no.>`, for example, ERPCLNT001.
4. In the *Manual Maintenance* field, choose *Flag set. Event has occurred*.
5. Save your entries.



## Maintaining Business System Groups in SAP TM

You use this procedure to define the business system groups for SAP ERP and SAP Transportation Management (SAP TM) in SAP TM, and to assign the logical systems to the business system group. The system uses the business system group for the Core Interface transfer of master data from SAP ERP to SAP TM.

### Procedure

1. Define a business system group for the SAP ERP client, for example, ERP\_BG1, in Customizing for *SCM Basis* under **Integration** **Basic Settings for Creating the System Landscape** **Maintain Business System Group**.
2. Assign the logical systems for SAP ERP and SAP TM, and a queue type to the business system group in Customizing for *SCM Basis* under **Integration** **Basic Settings for Creating the System Landscape** **Assign Logical System and Queue Type**.

Create and save the following entries:

Business System Group	Logical System	SAP System Indicator	Release	Queue Type
For example, ERP_BG1	<SID>CLNT<client no.> (for example, TM1CLNT001)	X	<SAP Transportation Management Release>	Inbound Queues
For example, ERP_BG1	<SID>CLNT<client no.> (for example, ERPCLNT001)	X	<SAP ERP Release>	Inbound Queues



If applicable, enter a system role for the SAP ERP system. For example, enter system role **CW** (*Catch Weight Management ERP System*) for SAP ERP systems with the component **IS-CWM** installed.



## Activating Queues in SAP TM

In SAP Transportation Management (SAP TM), use transaction `SMQR` to register the queue types `CF*`. As the system uses inbound queues, the queues need to be registered at the inbound scheduler in the target system, that is, in SAP TM, only.

### Procedure

1. On the *SAP Easy Access* screen for SAP TM, start transaction `SMQR`.
2. Choose **▶ Edit ▶ Register Without Activation ▾**.

The scheduler is inactive and the queue is not triggered immediately.

3. Enter the following data:

Field	Value
<i>Queue Name</i>	<code>CF*</code>
<i>Mode</i>	D
<i>Maximum Runtime</i>	10
<i>Destination</i>	Leave this field empty
<i>Attempts</i>	30
<i>Pause</i>	300

4. Choose *Continue*.

## Activating the Planning Version and Model for Master Data in SAP TM

You use this procedure to create planning version 000 and model 000 for the creation of master data in SAP Transportation Management. This technical setting is required for the Core Interface communication.

### Procedure

1. In Customizing for *Transportation Management*, choose ► *Master Data* ► *Create Active Version and Model* ►.
2. Choose *Execute*.
3. The system informs you whether the planning version and model already exist or if the system just created them.



This setting requires authorization for objects `C_APO_MOD` and `C_APO_VERS` with activity 01. You can analyze failed authorization checks after report execution using transaction `SU53`.



## Activating BAdIs: Inbound Processing for Products and Locations in SAP TM

You use this procedure to activate the Business Add-Ins (BAdIs) for inbound processing before you transfer the master data to SAP Transportation Management, so that the system adds prefixes and suffixes to locations and products when they are transferred via Core Interface. For more information, see SAP Note [458914](#).

### Process

1. [Inbound Processing for Products](#) [Page 20] (Optional)
2. [Inbound Processing for Location](#) [Page 21]

## Inbound Processing for Products

You use this procedure to activate the Business Add-In (BAI) *Inbound Processing for Product* to create different product master records in SAP Transportation Management (SAP TM) when two SAP ERP clients send the same material number for two different products via Core Interface.

This BAI is not used in the standard warehouse with preconfigured processes (warehouse W001).



This BAI is only necessary if you connect one SAP TM client to several SAP ERP clients.

### Procedure

1. In Customizing for *SCM Basis*, choose **► Integration ► BAIs for Specific Applications ► Product ► BAI: Inbound Processing for Product ◀**.

A dialog box appears.

2. Select the APOCF005\_SYSDIF implementation and choose *Create*.
3. In the *Implementation Name* field, enter a name for your implementation, for example, Z\_APOCF005\_SYSDIF.

Choose *Continue*.

4. In the *Implementation Short Text* field, enter a description for your implementation.
5. Save your implementation in a custom package or as a local object.
6. Choose **► Goto ► Sample Code ► Copy ◀** and confirm the message in the *Copy Example Code* dialog box with *Yes*.
7. Choose **► Implementation ► Activate ◀**.

### Result

SAP ERP materials, for example material 1234 from system SAP ERP and client 001, are managed as products with a suffix, for example product 1234@ERP001, in SAP TM.

## Inbound Processing for Location

You use this procedure to activate the Business Add-In (BAI) *Inbound Processing for Location*. You use this BAI even if you connect one SAP Transportation Management (SAP TM) client to one SAP ERP client, because the same number might be used for different location types, for example, plant 0001 and shipping point 0001, or vendor 123456 and customer 123456.

### Procedure

1. In Customizing for *SCM Basis*, choose **► Integration ► BAIs for Specific Applications ► Location and Business Partner ► BAI: Inbound Processing for Location ►**.

A dialog box appears.

2. Select the sample implementation relevant to your use case.

If you connect one SAP ERP client to one SAP TM client, select `APOCF001_TYPEDIF` and choose *Display*.

3. On the *Interface* tab page, double-click the BAI method.
4. Select the source code and copy it.
5. Go back to Customizing for *Transportation Management*, and choose *BAI: Inbound Processing for Location* again.
6. In the dialog box, choose *Create*.
7. In the *Implementation Name* field, enter a name for your implementation, for example, `Z_APOCF001_TYPEDIF`. Choose *Continue*.
8. In the *Implementation Short Text* field, enter a description for your implementation.
9. Save your implementation in a custom package or as a local object.
10. On the *Interface* tab page, double-click the BAI method.
11. Replace the existing coding with the coding you copied in step 4.
12. Save the coding and go back to the *Business Add-In Builder* screen.
13. Choose **► Implementation ► Activate ►**.

### Result

SAP ERP locations, for example shipping point 0001, are managed as a location with a prefix, for example location `SP0001`, in SAP TM.



## Configuration Settings in SAP ERP

You use this process to configure the transfer of master data and the creation of sales orders and outbound deliveries in SAP ERP.



Unless otherwise stated, you perform all procedures in this process in SAP ERP.

### Process

1. [Checking ECC-SE Add-On Installation in SAP ERP](#) [Page 23]
2. [Activating Business Functions in SAP ERP](#) [Page 24]
3. [Creating ISO Units in SAP ERP](#) [Page 25]
4. [Creating Units of Measurement in SAP ERP](#) [Page 26]
5. [Changing Units of Measurement in SAP ERP](#) [Page 27]
6. [Assigning SAP ERP Warehouse to SAP EWM Warehouse in SAP ERP](#) [Page 28]
7. [Configuring Core Interface in SAP ERP](#) [Page 29]
8. [Activating BC Set ZZ\\_PRC\\_75\\_ERP in SAP ERP](#) [Page 35]
9. [Creating New Order Type in SAP ERP \(BC-Set\)](#) [Page 36]
10. [Creating New Delivery Type in SAP ERP \(BC-Set\)](#) [Page 37]
11. [Changing Order Type in SAP ERP \(BC-Set\)](#) [Page 38]
12. [Configuring Allowed Sales Area for Sales Document Type in SAP ERP \(BC-Set\)](#) [Page 39]
13. [Configure Subsequent Delivery Split in SAP ERP \(BC-Set\)](#) [Page 40]
14. [Defining Packaging Material Type in SAP ERP \(BC-Set\)](#) [Page 41]
15. [Defining Additional Shipping Conditions in SAP ERP \(BC-Set\)](#) [Page 42]
16. [Creating Customers in SAP ERP](#) [Page 43]
17. [Configuring Shipping Point in SAP ERP \(BC-Set\)](#) [Page 44]
18. [Activating Transfer of Sales Documents in SAP ERP \(BC-Set\)](#) [Page 45]
19. [Activating Transfer of Outbound Deliveries in SAP ERP \(BC-Set\)](#) [Page 46]
20. [Configuring Output Determination for Sales Documents in SAP ERP](#) [Page 47]
21. [Configuring Output Determination for Outbound Deliveries in SAP ERP](#) [Page 51]
22. [Assigning Processing Class \(Outbound Delivery\) in SAP ERP \(BC-Set\)](#) [Page 55]

### Result

You create sales orders with document type `ZOR` in SAP ERP. No outbound deliveries are automatically created in SAP ERP. In the case of order-based transportation planning, they are created later as a result of transportation planning in SAP TM. For delivery-based planning, you create an outbound delivery manually with document type `ZLF` with reference to the sales order in SAP ERP. The deliveries are used by SAP TM for delivery-based transportation planning.

## Checking ECC-SE Add-On Installation in SAP ERP

You use this procedure to check if the technical prerequisites for the SAP Transportation Management configuration in SAP ERP are complete in the system.

### Procedure

1. On the *SAP Easy Access* screen for SAP ERP, choose **► System ► Status ▾**.

A dialog box appears.

2. In the *SAP System Data* screen area, choose the *Component Information* button.
3. Check that component `ECC-SE` is installed. The release and support package level of the component depends on your SAP ERP release and support package level. Check the following information:
  - SAP ERP Release and Support Package Level: SAP\_APPL 605 or higher
  - ECC-SE Release and Support Package Level: ECC-SE 605 SP-Level 11.

If this component is installed with a lower support package level, implement SAP Note [1868733](#).

4. If component `ECC-SE` is not installed in your system, contact your system administrator and request the installation.



## Activating Business Functions in SAP ERP

You use this procedure to activate the business functions required for the processes involved in direct integration between SAP Transportation Management (SAP TM) and SAP Extended Warehouse Management (SAP EWM) integration in SAP ERP.



Carry out this procedure in an SAP ERP client that allows cross-client settings and the creation of workbench requests. If necessary, use the workbench request to transport the settings to other SAP ERP systems.

### Procedure

1. On the *SAP Easy Access* menu for SAP ERP, enter transaction `SFW5`.
2. Choose *Enterprise Business Functions*.
3. Check the following business functions and, if necessary, activate them:

<b>Business Function</b>	<b>Description</b>
FND_SOA_REUSE_1	<i>Improvements for SOA Reuse Functions</i>
LOG_ESOA_OPS_2	<i>Enhancement Package 3 - Service Enabling / ERP Operations</i>
LOG_LE_INTEGRATION	<i>LE, Extended Warehouse Management Integration</i>
LOG_TM_IV_INT	<i>TMS-ERP: Invoice Integration</i>
LOG_TM_ORD_INT	<i>ERP-TMS: Order Integration</i>
LOG_TM_ORD_INT_II	<i>ERP-TMS: Order Integration 2</i>
ESOA_OPS01	<i>Enhancement Package 2 - Service Enabling / ERP Operations</i>



## Creating ISO Units in SAP ERP

You use this procedure to define a new ISO unit in SAP ERP.

### Procedure

1. In Customizing for *SAP ERP*, choose **SAP NetWeaver** **General Settings** **Check Units of Measurement**.
2. Choose the *ISO Codes* button
3. Choose *New Entries*.
4. Create new ISO unit with the following data:

ISO Code	ISO Code Text
TEU	20-Foot Equivalent Unit

5. Save your entries.

## Creating Units of Measurement in SAP ERP

You use this procedure to define new units of measurements in SAP ERP.

### Procedure

1. In Customizing for *SAP ERP*, choose **► SAP NetWeaver ► General Settings ► Check Units of Measurement**.
2. In the dropdown list, select *(no dimensions)*. Choose the *Units of Measurement* button.
3. Create a new unit of measurement, as follows:
  1. In the *Internal Measurement Unit* field, enter *TEU*.
  2. In the *Display* screen area, proceed as follows:
    - In the *Commercial* field, enter *TEU*.
    - In the *Technical* field, enter *TEU*.
    - Leave the *Decimal Places* field and the *Floating Point Exponent* field blank.
  3. In the *ALE/EDI* screen area, in the *ISO Code* field, enter *TEU*.
  4. In the *Measurement Unit Text* screen area, proceed as follows:
    - In the long field, enter *20' Container*.
    - In the short field, enter *20' Contr.*
  5. In the *Application Parameters* screen area, select the *Commercial Measurement Unit* checkbox.
4. Save your entries.

## Changing Units of Measurement in SAP ERP

You use this procedure to assign ISO codes to units of measurements in SAP ERP.

### Procedure

1. In Customizing for *SAP ERP*, choose **SAP NetWeaver** **General Settings** **Check Units of Measurement**.
2. In the dropdown list, select *Mass*. Choose the *Units of Measurement* button.
3. Select the **LB** unit and display the details.
4. In the *ALE/EDI* screen area, assign the ISO code **LBR**.

Save your entries.

5. Return to the initial screen.
6. In the dropdown list, select *Volume*. Choose the *Units of Measurement* button.
7. Select the **FT3** unit and display the details.
8. In the *ALE/EDI* screen area, assign the ISO code **FTQ**.
9. Save your entries.

## Assigning SAP ERP Warehouse to SAP EWM Warehouse in SAP ERP

You use this procedure to assign an SAP ERP warehouse number to an SAP Extended Warehouse Management (SAP EWM) warehouse number in SAP ERP. The SAP EWM warehouse number related to SAP ERP delivery is communicated to SAP Transportation Management to ensure that a stop in a freight order contains deliveries for the same warehouse.

### Procedure

1. In Customizing for *SAP ERP*, choose *Integration with other SAP Components* *Extended Warehouse Management* *Assign Warehouse Number to Warehouse Number of Decentralized SCM System*.
2. Assign the SAP ERP warehouse number to the SAP EWM warehouse number.

### Example

Warehouse Number	Warehouse Number of the Decentralized SCM System
W01	W001



## Configuring Core Interface in SAP ERP

You use this process to create and activate an integration model in the SAP ERP system for transferring a plant, shipping points, and a business partner for the plant to SAP Transportation Management (SAP TM).



These settings are only needed if SAP TM is deployed on a separate server.

### Process

1. [Defining the Logical System for SAP TM in SAP ERP](#) [Page 30]
2. [Specifying the APO Release for SAP TM in SAP ERP](#) [Page 31]
3. [Setting Target System and Queue Type for SAP TM in SAP ERP](#) [Page 32]
4. [Generating an Integration Model for SAP TM](#) [Page 33]
5. [Activating the Integration Model for SAP TM](#) [Page 34]

## Defining the Logical System for SAP TM in SAP ERP

For communication using Core Interface, you must have a logical system set up for each SAP Transportation Management client in customizing for SAP ERP.



Carry out these steps in an SAP ERP customizing client that allows cross-client settings.

### Procedure

1. In Customizing for *SAP ERP*, choose **Integration with Other SAP Components** **Extended Warehouse Management** **Basic Settings for Setting Up the System Landscape** **Name Logical System**.
2. Create the following entry:

Logical System	Name
TM1CLNT001	TM1CLNT001



## Specifying the APO Release for SAP TM in SAP ERP

You use this procedure to specify in SAP ERP the system type and release of the SAP Transportation Management (SAP TM) logical system.

### Procedure

Carry out this procedure in all SAP ERP clients that you want to connect to SAP TM.

1. In Customizing for *SAP ERP*, choose **Integration with Other SAP Components** **Extended Warehouse Management** **Basic Settings for Setting Up the System Landscape** **Specify SAP APO Release**
2. Enter the following values for the SAP TM logical system:

Field	Value
<i>Logical System</i>	<Logical System Name>, for example, TM1CLNT001
<i>System Type</i>	SAP SCMB
<i>Release</i>	<System Release>, for example, 702

## Setting Target System and Queue Type for SAP TM in SAP ERP

You use this procedure to set the queue type that the system uses to communicate master data by means of Core Interface (CIF) from SAP ERP to SAP Transportation Management (SAP TM).

### Procedure

Carry out the procedure in all SAP ERP clients you want to connect to SAP TM.

1. In Customizing for *SAP ERP*, choose **Integration with Other SAP Components** **Extended Warehouse Management** **Basic Settings for Setting Up the System Landscape** **Set Target System and Queue Type**.
2. Enter the following values for the SAP TM logical system:

Field	Value
Logical System	<Logical System Name>, for example, TM1CLNT001
Queue Type	I (Inbound Queues)



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





## Generating an Integration Model for SAP TM

You use this procedure to generate the integration model to transfer organizational units from SAP ERP to SAP Transportation Management (SAP TM).

### Procedure

1. On the *SAP Easy Access* screen for SAP ERP, choose **Logistics** **Central Functions** **Supply Chain Planning Interface** **Core Interface Advanced Planner and Optimizer** **Integration Model** **Create**. Alternatively, enter transaction `CFM1`.
2. In the *Model Name* field, enter a name for the integration model, for example, `IMTM1`.
3. In the *Logical System* field, enter the name of the target system, for example, `TM1CLNT001`.
4. In the *APO Application* field, enter the name of your application, for example, `TM`.
5. Select the required options, as follows:
  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 *Plant* field, for example, `PL01` (valid for standard warehouse `W001` with preconfigured processes).
  3. In the *Material Independent Objects* screen area, select the *Vendors* checkbox.
  4. Choose the *Special Restrictions* button and, in the *Vendor* field, enter the vendor assigned to the plant, for example, `BPPL01V` (valid for standard warehouse `W001` with preconfigured processes).
  5. In the *Create Locations/Business Partners* field, enter `2` (*Create Both*).
  6. In the *Material Independent Objects* screen area, select the *Shipping Points* checkbox.
  7. Choose the *Special Restrictions* button and, in the *Shipping Point* field, enter a name for the shipping points, for example: `0001` and `0002` (valid for standard warehouse `W001` with preconfigured processes).
6. Save your integration model as a variant for future reuse and give it a name, for example, `VIMTM1`.
7. Choose *Execute*.
8. Choose *Generate Integration Model*.



## Activating the Integration Model for SAP TM

You use this procedure to activate the generated integration model manually.



This setting is only needed if SAP Transportation Management (SAP TM) is deployed on a separate server.

### Procedure

1. On the *SAP Easy Access* screen for SAP ERP, 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, **TM**.

The 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. Select the relevant line and choose *Start*.

When you activate a model for the first time in a client, a dialog box appears. The system proposes 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.



## Activating BC Set ZZ\_PRC\_75\_ERP in SAP ERP

You use this procedure to activate BC Set `ZZ_PRC_75_ERP`, which contains the customizing setting for the direct integration of outbound warehousing and transportation scenario, in SAP ERP.

### Procedure

1. Open SAP Note [1888397](#) and upload BC Set `ZZ_PRC_75_ERP` as described in the note.
2. On the *SAP Easy Access* screen for SAP ERP, choose **Tools** **Customizing** **Business Configuration Sets** **Activation of BC Sets**, or enter transaction `SCPR20`.
3. Enter the BC Set name and choose **BC Set** **Activate**.

The *Enter Variable Field Values* dialog box appears.

4. Check the proposed values, for example, plant number, and replace them, if necessary, with your own values.
5. Choose the *Copy Values* button.



Perform the activation twice. Because of the sequence in the BC Set, you might get error messages after the first activation. After the second activation, only warning messages that you can ignore should appear.



## Creating New Order Type in SAP ERP (BC-Set)

You use this procedure to copy a standard document type for sales order to a new document type.

### Procedure

1. In Customizing for *SAP ERP*, choose **► Sales and Distribution ► Sales ► Sales Documents ► Sales Document Header ► Define Sales Document Types**.
2. Create an additional order type by copying order type **OR** to order type **ZOR**, including copy control.



## Creating New Delivery Type in SAP ERP (BC-Set)

You use this procedure to copy a standard document type for delivery to a new document type.

### Procedure

1. In Customizing for *SAP ERP*, choose ► *Logistics Execution* ► *Shipping* ► *Deliveries* ► *Define Delivery Types* ►.
2. Create an additional delivery type by copying delivery type `LF` to delivery type `ZLF`, including copy control.

## Changing Order Type in SAP ERP (BC-Set)

You use this procedure to change the new order type in such a way that the system does not automatically create a delivery document upon sales order creation.

### Procedure

1. In Customizing for *SAP ERP*, choose **► Sales and Distribution ► Sales ► Sales Documents ► Sales Document Header ► Define Sales Document Types ►**.
2. Select the new order type *ZOR*.
3. Change the new order type using the following entries:

Sales Document Type	Description	Delivery Type	Immediate Delivery
ZOR	Standard Order ZOR	ZLF	- (Create delivery separately)

### Result

This setting prevents the automatic creation of outbound deliveries upon sales order creation in SAP ERP.







In the case of order-based transportation planning in SAP Transportation Management (SAP TM), the outbound deliveries are created automatically from SAP TM.

In the case of delivery-based transportation planning in SAP TM, you create the outbound delivery in SAP ERP.

## Configuring Allowed Sales Area for Sales Document Type in SAP ERP (BC-Set)

You use this procedure to configure the allowed sales area for the sales document types you created in [Creating New Delivery Type in SAP ERP \(BC-Set\)](#) [Page 37].

### Procedure

1. In Customizing for *SAP ERP*, choose  *Sales and Distribution*  *Sales*  *Sales Documents*  *Sales Document Header*  *Assign Sales Area To Sales Document Types* .

A dialog box appears.

2. Choose the activity *Assign sales order types permitted for sales areas*.
3. Create or change the following entry, if necessary:

Reference Sales Organization	Name	Reference Distribution Channel	Name	Division	Name	Sales Document Type	Description
0001	Sales Org. 0001	02	Distribtn Channel 02	01	Product Division 01	ZOR	Standard Order

### Result

You have assigned the order type to distribution channel 02 so that the system proposes the sales unit of measure maintained in the product master for distribution channel 02.

If you create a sales order with order type ZOR in SAP ERP, you must use distribution channel 02. In the product master of the small and medium products, the sales unit of measure is carton and the proposed unit of measure during sales order creation for such products is cartons.



## Configure Subsequent Delivery Split in SAP ERP (BC-Set)

You use this procedure to configure the subsequent delivery split, which enables SAP ERP to receive deliveries that have been divided into smaller deliveries from SAP Extended Warehouse Management, for your delivery type in SAP ERP.

### Procedure

1. In Customizing for *SAP ERP*, choose ► *Logistics Execution* ► *Shipping* ► *Deliveries* ► *Subsequent Delivery Split* ►.
2. Select split profile 0003.
3. In the dialog structure, choose *Per Delivery Type*.
4. Copy the entry 0003 LF to 0003 ZLF.
5. Save your entries.





## Defining Packaging Material Type in SAP ERP (BC-Set)

You use this procedure to configure packaging material type `MTR2` used in packaging material `MTR`. SAP Extended Warehouse Management uses packaging material `MTR` for the creation of transportation units and vehicles.

### Procedure

1. In Customizing for *SAP ERP*, choose **Logistics - General** **Handling Unit Management** **Basics** **Define Packaging Material Types**.
2. Create the following entry:

Field	Value
<i>Packaging Material Type</i>	MTR2
<i>Description</i>	Transportation Unit
<i>Packaging Material Category</i>	A ( <i>Means of Transport</i> )
<i>Number Assignment</i>	B ( <i>Number range interval 'HU_VEKP'</i> )
<i>Handling Unit Type</i>	3 ( <i>Unknown</i> )
<i>Internal Interval</i>	01
<i>External Interval</i>	02

3. Save your entries.



## Defining Additional Shipping Conditions in SAP ERP (BC-Set)

You use this procedure to configure shipping conditions for customers in SAP ERP. With the shipping conditions, you can use different transportation planning processes for specific customers.

### Procedure

1. In Customizing for *SAP ERP*, choose **► Logistics Execution ► Shipping ► Basic Shipping Functions ► Shipping Point and Goods Receiving Point Determination ► Define Shipping Conditions ►**.
2. Create the following entries:

Shipping Condition	Description
T1	Order-Based Transportation Planning
T2	Delivery-Based Transportation Planning



## Creating Customers in SAP ERP

You use this procedure to create new customer master data in SAP ERP by copying customer data that already exists in the system, for example, you copy CUST001 to CUST031 and CUST002 to CUST032. Once your new customer master data is created, you update the data to the correct settings.

### Procedure

1. On the *SAP Easy Access* screen for SAP ERP, choose **Logistics** **Sales and Distribution** **Master Data** **Business Partner** **Customer** **Create** **Complete**.
2. Create new customers by copying customer CUST001 to CUST031 and CUST002 to CUST032.
3. Create or change the data as necessary to create the following entries:

Account Group	Customer	Company Code	Sales Area	Name	Street	Postal Code	City	Order Combination	Shipping Conditions	Tax Classification
KUNA	CUST031	0001	0001 01/02 01	CUST031	Hauptstr.	71083	Herrenberg	-	T1	0
KUNA	CUST032	0001	0001 01/02 01	CUST032	Hauptstr.	73230	Kirchheim unter Teck	-	T2	0



The *Order Combination* checkbox is not selected in order to prevent the building of cross-delivery HUs in SAP Extended Warehouse Management, which is not supported in the direct integration of outbound warehousing and transportation. Alternatively, you can set the *Order Combination* checkbox in the customer master records in SAP ERP and implement *BAdI: Define Consolidation Group* (/SCWM/EX\_CORE\_CONS) in SAP Extended Warehouse Management. Example implementation /SCWM/EI\_CORE\_CONS\_TRANSPL prevents cross-delivery HUs.

## **Configuring Shipping Point in SAP ERP (BC-Set)**

You use this procedure to configure the shipping points in SAP ERP

### **Procedure**

1. In Customizing for *SAP ERP*, choose **► Logistics Execution ► Shipping ► Basic Shipping Functions ► Shipping Point and Goods Receiving Point Determination ► Assign Shipping Points ►**.
2. Create the following entries:

<b>Shipping Condition</b>	<b>Loading Group</b>	<b>Plant</b>	<b>Proposed Shipping Point</b>
T1	0001	PL01	0001
T2	0001	PL01	0001

## Activating Transfer of Sales Documents in SAP ERP (BC-Set)

You use this procedure to activate the transfer of sales documents to SAP Transportation Management (SAP TM) by assigning a control key to the required sales document types. The control key determines whether a sales document and the corresponding outbound delivery are transferred to SAP TM, and also whether the system is to carry out sales order scheduling in SAP ERP or in SAP TM.

When you create a sales document for which the transfer has been activated, the system assigns the control key to the sales document (parameter `TM_CONTROL_KEY`) and to all relevant documents in the document chain (for example, the outbound delivery). This is a fixed parameter that cannot be changed in the sales document.

### Procedure

1. In Customizing for *SAP ERP*, choose **Integration with Other SAP Components** **Transportation Management** **Order Integration** **Activate Transfer of Sales Documents**.
2. On the *Sales Document Transfer* screen, add the following data:

Sales Organization	Distribution Channel	Division	Sales Document Type	Control Key	Shipping Condition	TM Number
0001	02	01	ZOR	0001	T1	<SAP TM System>



Enter a number in the *TM Number* field only if you connect more than one SAP TM system to your SAP ERP system

3. Save your entries.

### Result

The order type is active and can be integrated with SAP TM.

## Activating Transfer of Outbound Deliveries in SAP ERP (BC-Set)

You use this procedure to activate the transfer of sales documents to SAP Transportation Management (SAP TM) by assigning a control key to the required sales document types.

### Procedure

1. In Customizing for *SAP ERP*, choose **Integration with Other SAP Components** **Transportation Management** **Order Integration** **Activate Transfer of Delivery Documents**.
2. On the *Delivery Document Transfer* screen, add the following data:

Shipping Point	Delivery Type	Shipping Condition	Control Key	TM Number
0001	ZLF	T2	0005	<SAP TM System>



Enter a number in the *TM Number* field only if you connect more than one SAP ERP system to your SAP TM system

3. Save your entries.

### Result

The delivery type is active and can be integrated with SAP TM.



## Configuring Output Determination for Sales Documents in SAP ERP

You must create the settings to send sales documents from SAP ERP to SAP Transportation Management (SAP TM). The system uses output determination to create XML messages, which are then sent to SAP TM.

### Process

1. [Assigning Output Type to Output Procedure in SAP ERP \(BC-Set\)](#) [Page 48]
2. [Assigning Output Determination Procedures to Document Types \(SD\) \(BC-Set\)](#) [Page 49]
3. [Creating Output Condition Records \(SD\)](#) [Page 50]

## Assigning Output Type to Output Procedure in SAP ERP (BC-Set)

You use this procedure to assign an output type to the output determination procedure.

### Procedure

1. In Customizing for SAP ERP choose **► Sales and Distribution ► Basic Functions ► Output Control ► Output Determination ► Output Determination Using the Condition Technique ► Maintain Output Determination for Sales Documents ► Maintain Output Determination Procedure**.
2. Select procedure **V10000**. In the dialog structure, choose *Control Data*.
3. Choose *New Entries*.
4. Enter the following data:

Field	Value
<i>Step</i>	60
<i>Counter</i>	1
<i>Condition Type</i>	TRSO
<i>Requirement</i>	27


5. Save your entries.



## Assigning Output Determination Procedures to Document Types (SD) (BC-Set)

You use this procedure to assign output determination procedures to document types. You can also specify an output type that is to be displayed when the relevant document is displayed or changed.

### Procedure

1. In Customizing for *SAP ERP*, choose **► Sales and Distribution ► Basic Functions ► Output Control ► Output Determination ► Output Determination Using Condition Technique ► Maintain Output Determination for Sales Documents ► Assign Output Determination Procedure** .

A dialog box appears.

2. Choose *Allocate Sales Document Header*.
3. Assign the output determination procedures as follows:

Sales Document Type	Output Determination Procedure	Output Type
ZOR	V10000	TRSO



It is sufficient to assign an output determination procedure (such as `V10000`) to a sales order type (such as `ZOR`) in this Customizing activity. The output type may differ from that specified here, but it must be defined for the corresponding output determination procedure. As long as the relevant output type (such as `TRSO`) is defined for the output determination procedure, the system takes it into account at processing time here.

## Creating Output Condition Records (SD)

You use this procedure to link the order type of your sales document with an output type that is configured for the data transfer to SAP Transportation Management. You define the message attributes, for example, the processing time or the language. From a technical point of view, you create condition records.

### Procedure

1. On the *SAP Easy Access* screen for SAP ERP, choose **Logistics** > **Sales and Distribution** > **Master Data** > **Output** > **Sales Document** > **Create** or enter transaction VV11.
2. In the *Output Type* field, enter TRS0. Choose *Enter*.
3. Enter the following data:

Sales Document Type	Function	Partner	Medium	Date/Time	Language
ZOR	-	-	8 <i>Special Function</i>	4 <i>Send Immediately (When Saving the Application)</i>	EN

4. Save your entries.



## Configuring Output Determination for Outbound Deliveries in SAP ERP

You must create the settings to send sales documents from SAP ERP to SAP Transportation Management (SAP TM). The system uses output determination to create XML messages, which are then sent to SAP TM.

### Process

1. [Assigning Output Type to Output Procedure in SAP ERP \(BC-Set\)](#) [Page 52]
2. [Assigning Output Determination Procedures \(Outbound Deliveries\) \(BC-Set\)](#) [Page 53]
3. [Creating Output Condition Records \(Outbound Delivery\)](#) [Page 54]

## Assigning Output Type to Output Procedure in SAP ERP (BC-Set)

You use this procedure to assign an output type to the output determination procedure.

### Procedure

1. In Customizing for *SAP ERP*, choose **► Logistics Execution ► Shipping ► Basic Shipping Functions ► Output Control ► Output Determination ► Maintain Output Determination for Outbound Deliveries ► Maintain Output Determination Procedure ►**.
2. Select procedure **∇10000** and choose *Control Data*.
3. Choose *New Entries*.
4. Enter the following data:

Field	Value
<i>Step</i>	40
<i>Counter</i>	4
<i>Condition Type</i>	TRD0
<i>Requirement</i>	440

5. Save your entries.

## Assigning Output Determination Procedures (Outbound Deliveries) (BC-Set)

You use this procedure to assign output determination procedures to document types. You can also specify an output type for the system to display when the relevant document is displayed or changed.

### Procedure

1. In Customizing for *SAP ERP*, choose **► Logistics Execution ► Shipping ► Basic Shipping Functions ► Output Control ► Output Determination ► Maintain Output Determination for Outbound Deliveries ► Assign Output Determination Procedures ►**.
2. Choose *Assign deliveries (header)*.
3. In the overview, assign the output determination procedures as follows:

Delivery Type	Output Determination Procedure	Output Type
ZLF	V10000	TRD0



It is sufficient to assign an output determination procedure (such as `V10000`) to a delivery (such as `ZLF`) in this Customizing activity. The output type may differ from that specified here, but it must be defined for the corresponding output determination procedure. As long as the relevant output type (such as `TRD0`) is defined for the output determination procedure, the system takes it into account at processing time here.



## Creating Output Condition Records (Outbound Delivery)

You use this procedure to link the delivery type with an output type that is configured for the data transfer to SAP Transportation Management. You define the message attributes, for example, the processing time or the language. From a technical point of view, you create condition records.

### Procedure

1. On the *SAP Easy Access* screen for SAP ERP, choose **Logistics** **Logistics Execution** **Master Data** **Output** **Shipping** **Outbound Deliveries** **Create** or enter transaction `VV21`.
2. In the *Output Type* field, enter `TRD0`, and choose *Enter*.
3. Enter the following data:

Sales Document Type	Function	Partner	Medium	Date/Time	Language
ZLF	-	-	8 <i>Special Function</i>	4 <i>Send Immediately (When Saving the Application)</i>	EN

4. Save your entries.

## Assigning Processing Class (Outbound Delivery) in SAP ERP (BC-Set)

You use this procedure to assign the output type to a processing class. This enables the system to send a message as a repeat message when you delete a delivery.

### Prerequisites

You have defined output types.

### Procedure

1. In Customizing for *SAP ERP*, choose **► Logistics Execution ► Shipping ► Basic Shipping Functions ► Output Control ► Assign Processing Class**.
2. Check that the following entry exists or, if necessary, create it.

Application	Output Type	Class
V2	TRD0	CL SHP XI MESSAGE TRD0



## Configuration Settings in SAP EWM

You use this process to configure settings in SAP Extended Warehouse Management (SAP EWM) in addition to the settings contained in the preconfigured warehouse.



Unless otherwise stated, you perform all procedures in this configuration in SAP EWM.

### Process

1. [Activating Business Functions in SAP EWM](#) [Page 57]
2. [Defining the Logical System and Business System for SAP TM in SAP EWM](#) [Page 58]
3. [Activating BC Sets in SAP EWM](#) [Page 59]
4. [Activating Error and Conflict Handler in SAP EWM](#) [Page 60]
5. [Configuring Staging Area and Door Determination in SAP EWM](#) [Page 61]
6. [Configuring Access Sequence to Staging Areas and Door Determination in SAP EWM](#) [Page 62]
7. [Checking Packaging Material Type in SAP EWM](#) [Page 63]
8. [Configuring Means of Transport in SAP EWM \(BC-Set\)](#) [Page 64]
9. [Defining the Link Between Packaging Material and MTR in SAP EWM](#) [Page 65]
10. [Configuring Action Profiles for TU and Vehicle in SAP EWM](#) [Page 66]
11. [Creating Condition Records for Printing of Delivery Notes](#) [Page 68]





## Activating Business Functions in SAP EWM

You use this procedure to activate the business functions required for using the Shipping Cockpit in SAP Extended Warehouse Management (SAP EWM).

### Procedure

Carry out these steps in an SAP EWM client that allows cross-client settings and the creation of workbench requests. If necessary, use the workbench request to transport the settings to other SAP EWM systems.

1. On the *SAP Easy Access* screen for SAP EWM, enter transaction `SEW5`.
2. Check the following business functions and, if necessary, activate them:

<b>Business Function</b>	<b>Description</b>
FND_SOA_REUSE_1	<i>Improvements for SOA Reuse Functions</i>
/BCV/MAIN	<i>FND, Business Context Viewer Main Application</i>
/BCV/MAIN_1	<i>FND, Business Context Viewer Main Application 2</i>
/BCV/NWBC_SIDE_PANEL	<i>FND, Business Context Viewer NWBC Side Panel (Reversible)</i>

## Defining the Logical System and Business System for SAP TM in SAP EWM

For the communication of transportation units between SAP Transportation Management (SAP TM) and SAP Extended Warehouse Management (SAP EWM), you must have a logical system set up for each SAP TM client in Customizing for SAP EWM.



If SAP EWM and SAP TM are installed on the same system and use the same client, you do not have to do anything here.

If you use the System Landscape Directory to create your SAP systems, you do not have to do anything here as the logical systems and business systems are already transferred from the SLD to all systems.

This setting is required for all integration processes between SAP TM and SAP EWM.

This is a cross-client setting.

### Procedure

Carry out the first step of the procedure in the SAP EWM customizing client that allows cross-client settings and, if necessary, transport the settings to your other SAP EWM systems. Carry out the second step in all SAP EWM systems in which you want to use the process, using a client that allows cross-client settings.

1. In Customizing for *SCM Basis*, choose **Integration** **Basic Settings for Creating the System Landscape** **Name Logical Systems**.
2. Create the following entry:

Logical System	Name
TM1CLNT001	TM1CLNT001

3. In Customizing for *Extended Warehouse Management*, choose **Interfaces** **ERP Integration** **General Settings** **Define Business System**.
4. Define a business system for each SAP TM client, for example, TM1\_001, and assign the logical system defined in the previous step to the business system as follows:

Business System	Logical System	Manual Maintenance
TM1_001	TM1CLNT001	Flag set. Event has occurred

## Activating BC Sets in SAP EWM

You use this procedure to activate the BC sets /SCWM/DLV\_OUTBOUND\_TM, /SCWM/TMERPINT\_CL, and /SCWM/TMERPINT\_WH in SAP Extended Warehouse Management (SAP EWM).

### Procedure

1. On the *SAP Easy Access* screen for SAP EWM choose **Tools** **Customizing** **Business Configuration Sets** **Activation of BC Sets**, or enter transaction SCPR20.
2. Activate the BC Sets in the following sequence:

Sequence	BC Set	Description	Required Entry
1	/SCWM/DLV_OUTBOUND_TM	<i>Outbound Delivery with Transport Integration</i>	None
2	/SCWM/TMERPINT_CL	<i>TM-ERP-EWM Integration - Client Settings</i>	<ERP Business System>
3	/SCWM/TMERPINT_WH	<i>TM-ERP-EWM Integration - Warehouse Settings</i>	<EWM Warehouse Number>



## Activating Error and Conflict Handler in SAP EWM

You use this procedure to activate the error and conflict handling in service operations. This enables you to access detailed information about queues with errors in the XI monitor and to restart the queues after error resolution.

### Procedure

1. In Customizing for *Extended Warehouse Management*, choose **► Cross-Application Components ► Processes and Tools for Enterprise Applications ► Enterprise Services ► Error and Conflict Handler ► Activate Error and Conflict Handler ►**.
2. Check whether the *Activated* checkbox is selected.
3. If the checkbox is not selected, choose *New Entries*.
4. In the *Activate FEH for Clients* screen area, select the *Activated* checkbox.
5. Save your entries.

## Configuring Staging Area and Door Determination in SAP EWM

You use this procedure to configure the staging area and door determination for outbound deliveries.

### Procedure

1. On the *SAP Easy Access* screen for SAP Extended Warehouse Management, choose **Settings** > **Shipping and Receiving** > **Staging Area and Door Determination (Outbound)**.
2. Create the following entries:

Route	Warehouse Process Type	Departure Calendar	To	Staging Area Group	Staging Area	Staging Bay	Warehouse Door
-	P212	-	-	T920	S001	STAGE-002	-
-	P211	-	-	T920	S001	STAGE-002	-

3. Save your entries.



## Configuring Access Sequence to Staging Areas and Door Determination in SAP EWM

You use this procedure to configure the sequence for access to staging areas and door determination in SAP Extended Warehouse Management (SAP EWM).

### Procedure

1. On the *SAP Easy Access* menu for SAP EWM choose ► *Settings* ► *Shipping and Receiving* ► *Access Sequence to Staging Areas and Door Determination* ►.
2. Create the following entries:

Warehouse Number	Direction	Access Sequence Number	Route	Warehouse Process Type	Party
W001	O Outbound	1	-	X	-
W001	O Outbound	2	-	X	X
W001	O Outbound	3	X	X	-

3. Save your entries.

## Checking Packaging Material Type in SAP EWM

You use this procedure to check if the packaging material type `MTR2`, used in packaging material `MTR`, exists. You use the packaging material `MTR` for the creation of transportation units and vehicles in SAP Extended Warehouse Management.

### Procedure

1. In Customizing for *Extended Warehouse Management*, choose **► Cross-Process Settings ► Handling Units ► Basics ► Define Packaging Material Types ►**.
2. Check that the following entry exists:

Packaging Material Type	Description	Packaging Material Category	Control for Handling Units About to Become Empty	Type of External Handling Unit Number Assignment
MTR2	<i>Transportation Unit</i>	<i>A (Means of Transport)</i>	-	-

## Configuring Means of Transport in SAP EWM (BC-Set)

You use this procedure to configure the use of transportation units (TUs) in SAP Extended Warehouse Management (SAP EWM). For a freight order created in SAP Transportation Management (SAP TM), SAP EWM creates one transportation unit or one vehicle with transportation unit(s), using the means of transport configured in this step.

This setting is required for all integration processes between SAP TM and SAP EWM.

### Procedure

1. In Customizing for *SCM Basis*, choose **Master Data** > **Transportation Lane** > **Maintain Means of Transport**.
2. Check that the following entry exists:

Means of Transport	Means of Transport Description	Standard Code	Average Speed	Average Working Time	Transportation Mode
EWM_FTL	Full Truck Load	031	80	24:00	ROAD

3. In Customizing for *Extended Warehouse Management*, choose **Cross-Process Settings** > **Shipping and Receiving** > **General Settings** > **Define Control Parameters for Forming Vehicles/Transportation Units**.
4. Check that the following entries exist:

Means of Transport	Vehicle/TU	Number Range Number	Action Profile	Status Profile	Default Owner	Maximum Number of Seals
EWM_FTL	TU (Transportation Unit)	01	/SCWM/TU	-	-	-
EWM_FTL	VEH (Vehicle)	01	/SCWM/VEH	-	-	-





## Defining the Link between Packaging Material and MTR in SAP EWM

You use this procedure to create the necessary link between the packaging material and the means of transport for the creation of a transportation unit or a vehicle.

### Procedure

1. On the *SAP Easy Access* screen for SAP Extended Warehouse Management, choose **Settings** **Shipping and Receiving** **Link Between Packaging Material (TU) and Means of Transport**.
2. Check that the following entry exists and, if necessary, create it:

Means of Transport	Packaging Material	Optional	Sequence of Packaging Materials	Number of Packaging Materials in Means of Transport	Container Packaging Material
EWM_FTL	MTR	X	-	-	X

3. Save your entries.






## Configuring Action Profiles for TU and Vehicle in SAP EWM

You use this procedure to activate the action definitions of transportation unit (TU) and vehicle for sending messages to SAP Transportation Management.



For performance purposes, SAP recommends deactivating the PPF actions that are not needed for the business scenario, as shown in the tables below. However, you should not deactivate a PPF action if you use it in other scenarios or processes.

### Procedure

1. In Customizing for *Extended Warehouse Management*, choose  *Cross-Process Settings*  *Shipping and Receiving*  *Message Processing*  *Define Action Profiles for Vehicles* .
2. Select the action profile `/SCWM/TU` and choose *Action Definition* in the dialog structure. Choose *Edit*.
3. Activate actions `/SCWM/SR_PRINT_TU_WAYBILL` and `/SCWM/SR_SEND_TU_LDAP_NOTI`.
4. Deactivate the other PPF actions, unless you use them in other scenarios or processes, as shown in the following table:

Action Definition	Inactive
<code>/SCWM/BIF TAPP CANCELLED NOTI</code>	X
<code>/SCWM/BIF TAPP CHANGED NOTI</code>	X
<code>/SCWM/BIF TAPP CREATED NOTI</code>	X
<code>/SCWM/SR PRINT TU WAYBILL</code>	-
<code>/SCWM/SR SEND SHIPPL</code>	X
<code>/SCWM/SR SEND SHPMNT</code>	X
<code>/SCWM/SR SEND TU</code>	X
<code>/SCWM/SR SEND TU FINAL</code>	X
<code>/SCWM/SR SEND TU FINAL CANCEL</code>	X
<code>/SCWM/SR SEND TU LDAP NOTI</code>	-
<code>/SCWM/SR SET TU SYNC DLV</code>	X
<code>/SCWM/SR TU HU TO CREATE</code>	X
<code>PRINT LOADLISTTU</code>	X
<code>TRIG TO CREATION</code>	X

5. Save your changes and choose *Back* (F3).
6. Select the action profile `/SCWM/VEH` and choose *Action Definition* in the dialog structure. Choose *Edit*.
7. Activate actions `/SCWM/SR_PRINT_VEH_WAYBILL` and `/SCWM/SR_SEND_VEH_LDAP_NOTI`.
8. Deactivate the other PPF actions, unless you use them in other scenarios or processes, as shown in the following table:

Action Definition	Inactive
<code>/SCWM/BIF VAPP CANCELLED NOTI</code>	X
<code>/SCWM/BIF VAPP CHANGED NOTI</code>	X
<code>/SCWM/BIF VAPP CREATED NOTI</code>	X
<code>/SCWM/SR PRINT VEH WAYBILL</code>	-
<code>/SCWM/SR SEND SHIPPL VEH</code>	X

/SCWM/SR SEND VEH	X
/SCWM/SR SEND VEH FINAL LOAD	X
/SCWM/SR SEND VEH LDAP_NOTI	-
PRINT_LOADLISTVEH	X
TRIG_INVOICE	X
TRIG_PGIPGR	X
TRIG_PRD_TO_FD	X

9. Save your entries.



## Creating Condition Records for Printing of Delivery Notes

You use this procedure to create condition records for printing of delivery notes

### Procedure

1. On the *SAP Easy Access* screen for SAP Extended Warehouse Management, choose **Delivery Processing** **Actions** **Maintain Condition Records for PPF Schedule Conditions**.
2. Enter application `DPP`, maintenance group `DLVP`, and maintenance context `GCM`.
3. Create the following entries for the time range from today's date to 31.12.9999:

Condition Type	Action Definition	Document Type	Goods Movement Status Changes	Change Mode at Header Level	Ship-To Party	Warehouse Number
ODDN	/SCWM/FDO_01_PRINT	-	NSFI	I	-	W001
ODDN	/SCWM/FDO_01_PRINT	-	NSFI	U	-	W001

4. Save your entries.



## Configuration Settings in SAP TM (Part II)

You use this process to configure settings in SAP Transportation Management (SAP TM) for the scenario *Integration of Outbound Warehousing and Transportation* using the direct integration between SAP TM and SAP Extended Warehouse Management.



Unless otherwise stated, you perform all procedures in this configuration in SAP TM.

### Process

1. [Activating Business Functions in SAP TM](#) [Page 70]
2. [Defining Resolution Strategy in SAP TM](#) [Page 71]
3. [Defining Freight Unit Building Rules](#) [Page 73]
4. [Activating BC Sets in SAP TM](#) [Page 74]
5. [Activating Error and Conflict Handler in SAP TM \(BC-Set\)](#) [Page 75]
6. [Creating ISO Units in SAP TM \(BC-Set\)](#) [Page 76]
7. [Creating Units of Measurement in SAP TM \(BC-Set\)](#) [Page 77]
8. [Changing Units of Measurement in SAP TM \(BC-Set\)](#) [Page 78]
9. [Defining Packaging Material Type in SAP TM](#) [Page 79]
10. [Defining Means of Transport in SAP TM \(BC-Set\)](#) [Page 80]
11. [Defining Package Type Codes in SAP TM \(BC-Set\)](#) [Page 81]
12. [Defining Vehicle Resource in SAP TM](#) [Page 82]
13. [Defining Equipment Groups and Equipment Types in SAP TM \(BC-Set\)](#) [Page 83]
14. [Defining Transportation Service Level Codes in SAP TM \(BC-Set\)](#) [Page 84]
15. [Defining Incoterms in SAP TM \(BC-Set\)](#) [Page 85]
16. [Configuring Planning in SAP TM](#) [Page 86]
17. [Configuring Order Management in SAP TM](#) [Page 95]
18. [Configuring Freight Order Management in SAP TM \(BC-Set\)](#) [Page 102]



## Activating Business Functions in SAP TM

You use this procedure to activate the business functions `/BCV/MAIN`, `/BCV/MAIN_1`, `FND_SOA_REUSE_1`, `FND_VISUAL_BUSINESS`, and `SCM_SAPTM_SCMB_FND` required for the TM-EWM integration processes in SAP Transportation Management (SAP TM).

### Procedure

Carry out this procedure in an SAP TM client that allows cross-client settings and the creation of workbench requests. If necessary, use the workbench request to transport the settings to other SAP TM systems.

1. On the *SAP Easy Access* screen for SAP TM, enter transaction `SFW5`.
2. Check the following business functions and, if necessary, activate them:

<b>Business Function</b>	<b>Description</b>
<code>/BCV/MAIN</code>	<i>FND, Business Context Viewer Main Application</i>
<code>/BCV/MAIN_1</code>	<i>FND, Business Context Viewer Main Application 2</i>
<code>FND_SOA_REUSE_1</code>	<i>Improvements for SOA Reuse Functions</i>
<code>FND_VISUAL_BUSINESS</code>	<i>Visual Business (Reversible)</i>
<code>SCM_SAPTM_SCMB_FND</code>	<i>SAP TM-Specific Enhancements in SCM Basis</i>



## Defining Resolution Strategy in SAP TM

You use this procedure to specify the SAP default solution strategy for if there are errors and conflicts in service operations. In particular, you can specify whether service operations are executed again or terminated.

### Procedure

1. On the *SAP Easy Access* screen for SAP Transportation Management, enter transaction `ECH_DEFLT_RESOL_SAP`.
2. Choose *New Entries*.
3. Enter the following values for business process `TRQ_RQ`:

Field	Value
<i>Component</i>	CA-SOA-ESM-SCM-SCE
<i>Business Process</i>	TRQ_RQ
<i>Error Category</i>	PRE
<i>Group</i>	S40
<i>Persistent</i>	X
<i>Retry Mode</i>	<i>Automatically and Manually</i>
<i>Confirm Mode</i>	<i>Manually Only</i>
<i>Discard Mode</i>	<i>Manually Only</i>
<i>Residence Time</i>	5
<i>Unit Residence Time</i>	<i>S - Seconds</i>
<i>Transient</i>	X
<i>Repeat</i>	5
<i>Interval</i>	5
<i>Unit</i>	<i>Seconds</i>
<i>Rollover</i>	<i>Linear</i>

4. Repeat step 3 for each of the following business processes. Choose the same values as in business process `TRQ_RQ` for those fields which are not explicitly listed in the following table:

Business Process	Interval
TRQ_CNCLRQ	5
TPNOR_CNF	7
TORSCM_ST	4
TORSCM_RQ	5
TORSCM_CNC	5
TORSCM_ASG	6
TOR_PKGASG	5
/CL_CPX002	5
/CL_CPX003	5
/CL_CPX005	5
/CL_CPX006	5



You can change the values in this Customizing activity according to your business needs. The values given are just examples. Using different values in the *Interval* field helps to avoid locking issues during parallel inbound processing of service operations.

5. Save your entries.



## Defining Freight Unit Building Rules

You use this procedure to define the freight unit building rules (FUBRs) assigned to the order-based transport request (OTR) or delivery-based transport request (DTR) type. The rules specify how the freight units are to be built when an OTR or DTR is created.

### Procedure

1. In SAP NetWeaver Business Client, choose **► Application Administration ► Planning ► General Settings ► Freight Unit Building Rule ► Create Freight Unit Building Rule ►**.
2. On the *New Freight Unit Building Rule* screen, on the *General Data* tab page, enter the following values:

Field	Value
<i>Freight Unit Building Rule</i>	EWM-FUBR-STANDARD-OUT
<i>Description</i>	EWM FUB - Standard
<i>Document Type</i>	-
<i>Incompatibility Setting</i>	-
<i>Freight Unit Building Strategy</i>	<i>Consolidate per Request (Compatible parts)</i>
<i>Critical Quantity</i>	<i>Gross Weight</i>
<i>Item Split Allowed</i>	X

3. On the *Advanced Settings* tab page, in the *Process Controller Strategy* field, enter FUB\_AUTO.
4. In the *Planning Quantities* table, enter the following data:

Field	Value
<i>Planning Quantity for Freight Unit Building</i>	<i>Gross Weight</i>
<i>Unit of Measure of Split Quantity</i>	KG
<i>Split Quantity</i>	100,00
<i>Rounding Quantity</i>	1

5. Save your entries.

## Activating BC Sets in SAP TM

You use this procedure to activate BC set /SCMTMS/PRE\_EWMINT\_01 in SAP Transportation Management (SAP TM).

### Procedure

1. On the *SAP Easy Access* screen for SAP TM, choose **Tools** **Customizing** **Business Configuration Sets** **Activation of BC Sets**, or enter transaction SCPR20.
2. Activate the following BC Set:

BC Set	Description	Required Entry
/SCMTMS/PRE_EWMINT_01	TM EWM Integration TM	None



## Activating Error and Conflict Handler in SAP TM (BC-Set)

You use this procedure to activate the error and conflict handling in service operations. This allows you to display detailed information about erroneous queues in the XI monitor and to restart the queues after error resolution.

### Procedure

1. In Customizing for *Transportation Management*, choose **► Cross-Application Components ► Processes and Tools for Enterprise Applications ► Enterprise Services ► Error and Conflict Handler ► Activate Error and Conflict Handler ►**.
2. Check whether the *Activated* checkbox is selected.
3. If the checkbox is not selected, choose *New Entries*.
4. In the *Activate FEH for Clients* screen area, select the *Activated* checkbox.
5. Save your entries.

## Creating ISO Units in SAP TM (BC-Set)

You use this procedure to define the new ISO units.

### Procedure

1. In Customizing for *Transportation Management* choose **SAP NetWeaver** **General Settings** **Check Unit of Measurement**.
2. Choose *ISO Codes*.
3. Choose *New Entries*.
4. Create a new ISO unit with the following data:





ISO Code	ISO Code Text
TEU	20-Foot Equivalent Unit

5. Save your entries.

## Creating Units of Measurement in SAP TM (BC-Set)

You use this procedure to define new units of measurement.

### Procedure

1. In Customizing for *Transportation Management*, choose  *SAP NetWeaver*  *General Settings*  *Check Units of Measurement* .
2. In the dropdown list, select *(no dimensions)* and choose *Units of Measurement*.
3. Create a new unit of measurement as follows:
  1. In the *Internal Measurement Unit* field, enter *TEU*.
  2. In the *Display* screen area, proceed as follows:
    - In the *Commercial* field, enter *TEU*.
    - In the *Technical* field, enter *TEU*.
    - In the *ISO Code* field, enter *TEU*.
    - Leave the *Decimal Places* field and the *Floating Point Exponent* field blank.
  3. In the *Measurement Unit Text* screen area, proceed as follows:
    - In the long field, enter *20' Container*.
    - In the short field, enter *20' Contr.*
  4. In the *Application Parameters* screen area, select the *Commercial Measurement Unit* checkbox.
4. Save your entries.



## Changing Units of Measurement in SAP TM (BC-Set)

### Procedure

1. In Customizing for *Transportation Management*, choose ► *SAP NetWeaver* ► *General Settings* ► *Check Units of Measurement* ▲.
2. In the dropdown list, select *Mass* and choose *Units of Measurement*.
3. In the *ALE/EDI* screen area, display the details of the **LB** unit and assign the ISO code **LBR**.
4. Save your entries.
5. Return to the initial screen.
6. In the dropdown list, select *Volume* and choose *Units of Measurement*.
7. In the *ALE/EDI* screen area, display the details of the **FT3** unit and assign the ISO code **FTQ**.
8. Save your entries.

## Defining Packaging Material Type in SAP TM

You use this procedure to configure packaging material type `MTR2`, which is used in packaging material `MTR`. The system communicates packaging material `MTR` to SAP Extended Warehouse Management (SAP EWM) for the creation of transportation units (TUs) and vehicles in SAP EWM.

### Procedure

1. In Customizing for *SCM Basis*, choose **► Pack ► Handling Units ► Define Packaging Material Types**.
2. Create the following entry:

Packaging Material Type	Description	Packaging Material Category	Control for Handling Units About to Become Empty	Type of External Handling Unit Number Assignment
MTR2	<i>Transportation Unit</i>	<i>A (Means of Transport)</i>	-	-

3. Save your entries.



## Defining Means of Transport in SAP TM (BC-Set)

### Procedure

1. In Customizing for *Transportation Management*, choose ► *Master Data* ► *Resources* ► *Define Means of Transport* ⌵.
2. Enter the following data:

Means of Transport	Means of Transport Description	Transportation Mode	Multiresource	Number of Individual Resources	Average Speed	Distance Factor
EWM_FTL	Full Truck Load	Road	X	999	80	1

3. Save your entries.



Since this scenario does not currently use a geographical information system (GIS), you must enter an average speed and a distance factor. If you have a connection to a GIS provider, you can select the checkbox for GIS quality and enter the three different average speeds instead. When you save, the system might display a message stating that the IGS or GIS tool is unavailable. You can ignore this message.



## Defining Package Type Codes in SAP TM (BC-Set)

Packaging material types of handling units in SAP Extended Warehouse Management (SAP EWM), for example, `PT01`, must be defined as package type codes in SAP Transportation Management (SAP TM). This is also true for the packaging material types of sub handling units.

### Procedure

1. In Customizing for *Transportation Management*, choose **► Forwarding Order Management** **► Define Package Type Codes**.
2. On the *Change View Define Package Type Codes: Overview* screen, check whether package type code `PT01` exists.
3. If package type code `PT01` does not exist, create it using the description `Package Type PT01`.
4. Save your entries.

## Defining Vehicle Resource in SAP TM

### Procedure

1. In SAP NetWeaver Business Client, choose ► *Master Data* ► *Resources* ► *Define Resource* .
2. Choose the *Create Resources* button.
3. On the *Vehicle* tab page, enter the following data:

Field	Value
<i>Resource</i>	EWM TRUCK FTL
<i>Resource Class</i>	Truck
<i>Means of Transport</i>	EWM FTL
<i>Time Zone</i>	CET
<i>Factory Calendar</i>	01
<i>Continuous Dim.</i>	Mass
<i>Capacity</i>	<maximum weight of the truck>, for example 20000
<i>Unit</i>	KG

4. On the *Transportation* tab page, in the *Packaging Material* field, enter MTR.
5. Save your entries.

## Defining Equipment Groups and Equipment Types in SAP TM (BC-Set)

### Procedure

1. In Customizing for *Transportation Management*, choose **► Master Data ► Resources ► Define Equipment Groups and Equipment Types**.
2. In the dialog structure, choose *Transportation Unit Groups*.
3. Select equipment group CN, with the description *Container*, and the resource class *Container*.
4. In the dialog structure, choose *Mode of Transport Assignment*.
5. Select transportation mode category 1 *Road*.
6. Choose *Transportation Unit Type* and create a new entry with the following data:

Equipment Type	Description	TEU Capacity	Payload Weight	Unit of Measure	Cubic Capacity	Unit of Measure	Packaging Material
20B0	20 ft Bulk Cont, 20x8	1	29930	KG	32	M3	MTR

7. Save your entries.

## Defining Transportation Service Level Codes in SAP TM (BC-Set)

You must define the shipping conditions from SAP ERP as transportation service level codes in SAP Transportation Management (SAP TM).

### Procedure

1. In Customizing for *Transportation Management*, choose **► Forwarding Order Management ► Define Transportation Service Level Codes ►**.
2. In the dialog structure, choose *Define Transportation Management-Independent Service Level Codes*.
3. Choose *New Entries*.
4. Create the following service level codes:

Service Level Code	Description	Delivery in Days
T1	Service Level T1	-
T2	Service Level T2	-

5. Save your entries.



## Defining Incoterms in SAP TM (BC-Set)

You use this procedure to define the Incoterms you want to transfer from SAP ERP in SAP Transportation Management (SAP TM).

### Procedure

1. In Customizing for *SCM Basis*, choose ► *Master Data* ► *Define Incoterms* ▾.
2. Check whether the Incoterms that you want to transfer from SAP ERP to SAP TM have been defined, for example, *CFR Costs and Freight*.
3. If you do not want to transfer the Incoterm location from SAP ERP to SAP TM, deselect the *Locaction* checkbox.
4. Save your entries.



## Configuring Planning in SAP TM

If you intend to set up the business processes for order-based or delivery-based planning, you use this process to configure the settings for planning in SAP Transportation Management.

### Process

1. [Defining Freight Unit Types \(BC-Set\)](#) [Page 87]
2. [Changing Freight Unit Building Rules](#) [Page 89]
3. [Creating Delivery Profiles](#) [Page 90]
4. [Creating Selection Profiles](#) [Page 91]
5. [Defining Capacity Settings](#) [Page 92]
6. [Creating Planning Profiles](#) [Page 93]

## Defining Freight Unit Types (BC-Set)

### Procedure

1. In Customizing for *Transportation Management*, choose **► Planning ► Freight Unit ► Define Freight unit Types**.
2. Create the following entry:

Screen Area	Field	Value
Freight Unit Types	Freight Unit Type	FUW1
	Description	FU Type - EWM Integration Outbound
Basic Settings	Freight Unit Can Be Deleted	X
Number Range Settings	Time for Drawing	Draw Numbers When Saving Document
	Number Range Interval	For example, FU
Change Controller Settings	Default Change Strategy	-
	Change Strategy Determination Condition	-
	Quantity Tolerance Condition	-
	Date Tolerance Condition	-
Additional Strategies	Creation Strategy	-
	Save Strategy	-
	Deletion Strategy	-
Execution Settings	Execution Track. Relevance	Execution Tracking
	Immediate Processing	-
Event Management Settings	Application Object Type	-
	Last Exp. Event	-
Direct Shipment Options	Direct Shipment Option Type	No Determination of Direct Shipment Options
	Carrier Selection Settings	-
	Carrier Selection Condition	-
	Direct Shipment Strategy	-
Freight Order Determination	Freight Order Type	FOW1  This entry will be created later. Leave it blank and complete this field once the freight order type has been created.
	Freight Order Type Condition	-
Default Means of Transport Definition	Default Means of Transport for Type	-
	Condition for Default Means of Transport	-
Default Units of Measure	Weight	Kilogram
	Volume	Cubic Meter
Additional Settings	Dangerous Goods	-

	<i>Profile</i>	
	<i>Rule for PU / DLV Window</i>	<i>Pick-up and Delivery as Defined in the Forwarding Order, Forwarding Quotation, Order-Based, or Delivery-Based Transportation Request</i>
	<i>Condition for PU/DLV Window Determination</i>	-
	<i>BW Relevance</i>	-
	<i>Track Changes</i>	-
	<i>Archiving Retention Period in Days</i>	-
	<i>Web Dynpro Application Conf.</i>	-
<i>Organizational Unit Determination</i>	<i>Purchasing Organization</i>	-
	<i>Purchasing Group</i>	-
<i>Determination Rules</i>	<i>Consider Organization of User</i>	-
	<i>Condition</i>	-

3. Choose *Enter*.
4. Save your entries.





## Changing Freight Unit Building Rules

You use this procedure to specify in the freight unit building rule (FUBR) which freight unit type is to result from the generation of freight units.

### Procedure

1. In SAP NetWeaver Business Client, choose **Application Administration** **Planning** **General Settings** **Freight Unit Building Rule** **Edit Freight Unit Building Rule**.
2. Enter freight unit building rule `EWM-FUBR-STANDARD-OUT` and choose *Continue*.
3. On the *Edit Freight Unit Building Rule* screen, on the *General Data* tab page, enter document type `FUW1`.
4. Save your entries.

## Creating Delivery Profiles

You can use delivery profiles to control how delivery proposals are created in SAP Transportation Management. If you do not use a delivery profile, the system creates delivery proposals for each order-based transportation requirement.

### Procedure

1. In SAP NetWeaver Business Client, choose ► *Application Administration* ► *Planning* ► *General Settings* ► *Delivery Profile* ► *Create Delivery Profile* ►.
2. On the *New Delivery Profile* screen, enter the following values:

Field	User Action and Values
<i>Delivery Profile</i>	EWM-DEL-PRFL-STANDARD
<i>Description</i>	EWM: Std. Delivery Profile
<i>Fix Planning Results</i>	-
<i>Delivery Creation</i>	<i>Per OTR</i>
<i>Incompatibility Settings</i>	-

3. Save your entries.

## Creating Selection Profiles

You use this procedure to create a selection profile for the transportation planning cockpit.

### Procedure

1. In SAP NetWeaver Business Client, choose **Application Administration** **Planning** **Selection Profiles** **Create Selection Profile**.
2. On the *New Selection Profile* screen, on the *Selection Profile* tab page, enter the following values:

Field	Value
<i>Selection Profile</i>	EWM-GEN-SEL-01
<i>Description</i>	EWM: Selection Profile
<i>Maximum Number of Selected Objects</i>	100
<i>Time-Related Selection Attributes</i>	-
<i>Geographical Selection Attributes</i>	-
<i>Additional Selection Attributes</i>	-

3. Save your entries.
4. Choose *Edit*.
5. Beside the *Geographical Selection Attributes* field, choose *New*.

A dialog box appears.

6. Enter the following information:
  - o *Profile Name*: EWM-GEO-SEL-01
  - o *Description*: EWM: Geographical Selection Attributes
7. On the *Geographical Selection Attributes* tab page, select the *Both Locations* checkbox.
8. Enter the following data:

Tab Page	Sign	Option	Lower Value	Upper Value
<i>Source Locations</i>	Inclusive	Pattern	*0001*	-
<i>Destination Locations</i>	Inclusive	Pattern	*CUST*	-

9. Save your entries.



The *Additional Selection Attributes* tab page is not used in this scenario.

## Defining Capacity Settings

You use this procedure to define the resource capacity used during optimization.

### Procedure

1. In SAP NetWeaver Business Client, choose ► *Application Administration* ► *Planning* ► *Planning Profile Settings* ► *Capacity Selection Settings* ► *Create Capacity Selection Settings* .
2. On the *New Capacity Selection Profile* screen, enter the following values:

Field	Value
<i>Capacity Selection Settings</i>	EWM-CAP-SEL-01
<i>Description</i>	EWM: Capacity Selection Settings
<i>Attributes for Vehicle Resource Selection</i>	VEHICLERES_ID
<i>Sign</i>	Inclusive
<i>Option</i>	Pattern
<i>Lower Limit</i>	EWM*
<i>Upper Limit</i>	-

3. Save your entries.

## Creating Planning Profiles

You use this procedure to create a planning profile to define settings for the planning process.

### Procedure

1. In SAP NetWeaver Business Client, choose **Application Administration** **Planning** **Planning Profiles** **Create Planning Profile**.
2. On the *Planning Profile* tab page, in the *General Data* screen area, enter the following data:

Field	Value
<i>Planning Profile</i>	EWM-PLAN_PROF-01
<i>Description</i>	EWM: Planning Profile

3. In the *Business Document Type* screen area, enter the following data:

Field	Value
<i>Type</i>	<i>Defined per Category in Planning Profile</i>
<i>Determination Rule</i>	
<i>Default Type for Road FO</i>	FOW1
	Use the input help to complete this field. If this default type is not available, choose any type and replace the entry once FOW1 has been created.

4. In the *Planning Horizon* screen area, enter the following data:

Field	Value
<i>Duration in Days</i>	180
<i>Additional Duration (hh:mm)</i>	-
<i>Offset in Days</i>	-
<i>Additional Offset (hh:mm)</i>	-
<i>Factory Calendar for Offset/Duration Calculation</i>	-
<i>Round Horizon to Full Days</i>	X
<i>Time Zone for Rounding the Horizon</i>	CET

5. In the *Profile Assignments* screen area, enter the following data:

Field	Value
<i>Selection Profile for Freight Orders</i>	-
<i>Capacity Selection Settings</i>	EWM-CAP-SEL-01
<i>Optimizer Settings</i>	-
<i>Planning Costs Settings</i>	-
<i>Incompatibility Settings</i>	-
<i>Carrier Selection Settings</i>	-

6. In the *Manual Planning* screen area, enter the following data:

Field	Value
<i>Manual Planning Strategy</i>	VSRI_DEF
<i>Consider Fixing Status</i>	<i>Warning When Changing Fixed Documents</i>

7. In the *Scheduling* screen area, enter the following data:

<b>Field</b>	<b>Value</b>
<i>Scheduling Strategy</i>	VSS_DEF
<i>Scheduling Direction</i>	<i>Not Specified</i>
<i>Consider Freight Unit Dates</i>	<i>Consider Freight Unit Dates</i>

8. In the *Check* screen area, enter the following data:

<b>Field</b>	<b>Value</b>
<i>Check Strategy</i>	VSR_CHECK
<i>Take Capacities into Account</i>	<i>Warning</i>

9. In the *Loading and Unloading Durations* screen area, enter the following data:

<b>Field</b>	<b>Value</b>
<i>Dependence</i>	<i>Freight Unit and MTr Independent</i>
<i>Loading/Unloading Duration</i>	00:30:00

10. Save your entries.



## Configuring Order Management in SAP TM

If you intend to set up the business processes for order-based or delivery-based planning, you use this process to configure the settings for order management in SAP Transportation Management (SAP TM).

### Process

1. [Defining Order-Based Transportation Requirement Types \(BC-Set\)](#) [Page 96]
2. [Defining Delivery-Based Transportation Requirement Types \(BC-Set\)](#) [Page 97]
3. [Changing Delivery-Based Transportation Requirement Types](#) [Page 98]
4. [Defining Conditions for OTR Type Determination](#) [Page 99]
5. [Defining Conditions for DTR Type Determination](#) [Page 101]

## Defining Order-Based Transportation Requirement Types (BC-Set)

You use this document type to model the order-based transportation requirement (OTR) that is received from SAP ERP.

### Prerequisites

You have defined a freight unit building rule. You can also define a freight unit building rule at a later point and then enter it here.

### Procedure

1. In Customizing for *Transportation Management*, choose **Integration** **ERP Logistics Integration** **Order-Based Transportation Requirement** **Define Order-Based Transportation Requirement Types**.
2. Choose *New Entries*.
3. On the *New Entries: Details of Added Entries* screen, enter the following values:

OTR Type	Type Description	Default Type	Number Range Interval
OTW1	OTR - EWM Integration Outbound	-	01

4. On the *Process Control/Business Object Mode* screen area, enter the following values:

BW Relevance	Automatic Freight Unit Building	Output Profile	Propagate Changes
X	X	-	<i>Synchronous Propagation of Changes, Fallback to Asynchronous</i>

5. On the *Default Values* screen area enter the following data:

Default Weight Unit of Measure	Default Volume Unit of Measure	Plan on Requested/Confirmed Quantity	Planning Profile	Freight Unit Building Rule
KG	M3	<i>Plan on Requested Quantities</i>	EWM-PLAN-PROF-01	EWM-FUBR-STANDARD-OUT

6. Save your entries.





## Defining Delivery-Based Transportation Requirement Types (BC-Set)

You use this document type to model the delivery-based transportation requirement (DTR) that is received from SAP ERP.

### Prerequisites

You have defined a freight unit building rule. You can also define a freight unit building rule at a later point and then enter it here.

### Procedure

1. In Customizing for *Transportation Management*, choose **Integration** **ERP Logistics Integration** **Delivery-Based Transportation Requirement** **Define Delivery-Based Transportation Requirement Types**.
2. Choose *New Entries*.
3. On the *New Entries: Details of Added Entries* screen, enter the following values:

Transport Requirement Type	TypeDescription	Default Type for Category	Number Range Interval
DTW1	DTR (EWM Integration Outbound)	-	02

4. On the *Process Control/Business Object Mode* screen area, enter the following values:

BW Relevance	Automatic Freight Unit Building	Output Profile	Propagate Changes
X	X	-	<i>Synchronous Propagation of Changes, Fallback to Asynchronous</i>

5. On the *Default Values* screen area, enter the following data:

Default Weight Unit of Measure	Default Volume Unit of Measure	Freight Unit Building Rule
KG	M3	EWM-FUBR-STANDARD-OUT

6. Save your entries.

## Changing Delivery-Based Transportation Requirement Types

If you activated BC set /SCMTMS/PRE\_EWMINT\_01, the freight unit building rule is missing in the Customizing to create delivery-based requirement types. You must enter the building rule now.



If you have created the entries described in the previous chapter manually, you do not need to perform this procedure.

### Procedure

1. In Customizing for *Transportation Management*, choose **Integration** **ERP Logistics Integration** **Delivery-Based Transportation Requirement** **Define Delivery-Based Transportation Requirement Types**.
2. Select DTR Type `DTW1` and choose *Details*.
3. In the *Default Values* screen area, in the *Planning Profile* field, enter `EWM-FUBR-STANDARD-OUT`.
4. Save your entries.



## Defining Conditions for OTR Type Determination

You use this procedure to determine the order-based transportation requirement (OTR) type used when an order is transferred from SAP ERP to SAP Transportation Management (SAP TM).

When SAP TM receives a sales order, it creates an OTR. This requirement must be mapped to a document in the SAP TM system, which then determines the subsequent workflow process.

### Prerequisites

You have defined OTR document type OTW1.

### Procedure

1. In SAP NetWeaver Business Client, choose **Application Administration** **General Settings** **Conditions** **Create Condition**.
2. On the *New Condition Definition* screen, enter the following data:

Condition	Description	Condition Type	Origin of Condition
ZOTR_TYPE	OTR Type Determination	/SCMTMS/OTR_TYPE	Condition Based on BRFplus Decision Table

3. Choose *Continue*.



The system permits only one condition for determining OTRs. If a condition does not exist in your system, you must create one. Alternatively, you may have to change an existing condition. Therefore, if the system issues a message stating that the condition already exists, choose the *Edit Condition Entry* button, and continue this process from step 5.

4. On the *Data Access Definition* screen, enter the following data:

Data Access Definition Line 10	Data Access Definition Line 20
/SCMTMS/TRQ_ORD_CAT	/SCMTMS/TRQ_ORD_TYPE

5. On the *Decision Table* tab page, enter the following data:

Base Document Type	Process Type	OTR Type
<i>Is Equal To</i>	<i>Is Equal To</i>	OTW1
114 - Sales Order	ZOR	



To enter values on the *Decision Table* tab page, you may have to switch to edit mode and choose *Insert New Row*.

6. Save your entries.

## Result

You have configured the integration settings between the incoming sales document and the OTR document type.



## Defining Conditions for DTR Type Determination

You use this procedure to determine the delivery-based transportation requirement (DTR) type used when a delivery is transferred from SAP ERP to SAP Transportation Management (SAP TM).

When SAP TM receives a delivery, it creates a DTR. This requirement must be mapped to a document in the SAP TM system, which then determines the subsequent workflow process.

### Prerequisites

You have defined DTR document type DTW1.

### Procedure

1. In SAP NetWeaver Business Client, choose **Application Administration** **General Settings** **Conditions** **Create Condition**.
2. On the *New Condition Definition* screen, enter the following data:

Condition	Description	Condition Type	Origin of Condition
ZDTR_TYPE	DTR Type Determination	/SCMTMS/DTR_TYPE	Condition Based on BRFplus Decision Table

3. Choose *Continue*.



If the system issues a message stating that the condition already exists, choose the *Edit Condition Entry* button, and continue this process from step 5.

4. On the *Data Access Definition* screen, in *Data Access Definition Line 10*, enter /SCMTMS/TRQ\_DLV\_TYPE.
5. On the *Decision Table* tab page, enter the following data:

TR: ERP Delivery Type	DTR Type
<i>Is Equal To</i>	DTW1
ZLF	



To enter values on the *Decision Table* tab page, you may have to switch to edit mode and choose *Insert New Row*.

6. Save your entries.

### Result

You have configured the integration settings between the incoming delivery document and the DTR document type.



## Configuring Freight Order Management in SAP TM (BC-Set)

You use this process to configure the freight order types and assign them to freight unit types.

### Process

1. [Defining Freight Order Types for Outbound SAP EWM Integration \(BC-Set\)](#) [Page 103]
2. [Assign Freight Order Type to Freight Unit Type \(BC-Set\)](#) [Page 104]

## Defining Freight Order Types for Outbound SAP EWM Integration (BC-Set)

### Procedure

1. In Customizing for *Transportation Management*, choose **Freight Order Management** > **Freight Order** > **Define Freight Order Types**.
2. Create the following outbound freight order type:

Field	Value
<i>Freight Order Type</i>	FOW1
<i>Description of Document Type</i>	FO Type - EWM Integration Outbound

3. In the *Basic Settings* screen area, enter the following data:

Field	Value
<i>Freight Order can be Subcontracted</i>	<i>Relevant for Subcontracting</i>
<i>Shipper/Consignee Determination</i>	<i>Determination Based on Predecessor Documents</i>
<i>Freight Order Can Be Deleted</i>	X

4. In the *Number Range Settings* screen area, enter the following data:

Field	Value
<i>Time for Drawing</i>	<i>Draw Number When Saving Document</i>
<i>Number Range Interval</i>	FO

5. In the *Additional Strategies* screen area, make sure there is no data in the *Creation Strategy* field.
6. In the *Defaults Units of Measure* screen area, enter the following data:

Field	Value
<i>Weight</i>	<i>Kilogram</i>
<i>Volume</i>	<i>Cubic Meter</i>

7. In the *Execution Settings* screen area, enter the following data:

Field	Value
<i>Execution Tracking Relevance</i>	<i>Execution Tracking</i>
<i>Immediate Processing</i>	X

8. In the *Event Management Settings* screen area, in the *Last Expected Event* field, enter ARRIV\_DEST
9. In the *Tendering Settings* screen area, select the *Use Type-Specific Settings* checkbox.
10. In the *Additional Settings* screen area, in the *Document Creation Relevance* field, enter *E Transportation Activity Creation in SAP EWM*.
11. In the *Output Options* screen area, in the *Output Profile* field, enter /SCMTMS/TOR.
12. Save your entries.

## Assigning Freight Order Type to Freight Unit Type (BC-Set)

### Procedure

1. In Customizing for *Transportation Management*, choose ► *Planning* ► *Freight Unit* ► *Define Freight Unit Types* ⌵.
2. Double-click freight unit type F0W1.
3. In the *Freight Order Type* field, enter F0W1.
4. Save your entries.





## Additional Settings for Inbound Processes

You use this process to configure additional settings for the delivery-based transportation planning of inbound processes in SAP ERP and SAP Transportation Management.

### Process

1. [Additional User Role for Inbound in SAP ERP](#) [Page 106]
2. [Creating New Delivery Type in SAP ERP](#) [Page 107]
3. [Activating Transfer of Inbound Deliveries in SAP ERP](#) [Page 108]
4. [Assigning Output Type to Output Procedure in SAP ERP \(BC-Set\)](#) [Page 109]
5. [Assigning Output Determination Procedures \(Inbound Deliveries\) in SAP ERP \(BC-Set\)](#) [Page 110]
6. [Creating Output Condition Records \(Inbound Delivery\) in SAP ERP](#) [Page 111]
7. [Configuring Determination of Document Types and Item Types in SAP TM](#) [Page 112]
8. [Defining Freight Unit Types in SAP TM \(BC-Set\)](#) [Page 113]
9. [Defining Freight Unit Building Rules](#) [Page 115]
10. [Defining Delivery-Based Transportation Requirement Types \(BC-Set\)](#) [Page 116]
11. [Changing Delivery-Based Transportation Requirement Types](#) [Page 117]
12. [Defining Conditions for DTR Type Determination](#) [Page 118]
13. [Defining Freight Order Types for Inbound SAP EWM Integration \(BC-Set\)](#) [Page 119]
14. [Assign Freight Order Type to Freight Unit Type \(BC-Set\)](#) [Page 120]

## Additional User Role for Inbound in SAP ERP

In addition to the user roles described [User Roles for SAP TM, SAP ERP and SAP EWM](#) [Page 11], the user working on the inbound process in SAP ERP needs a user role for creating inbound deliveries.



You perform this procedure in SAP ERP.

### Standard roles available for the business scenario

Role Name	Application	Description
SAP_EP_LO_LE_INB	SAP ERP	LO - LE - Goods Receipt

## Creating New Delivery Type in SAP ERP

You use this procedure to copy a standard document type for delivery to a new document type.



You perform this procedure in SAP ERP.

### Procedure

1. In Customizing for *SAP ERP*, choose ► *Logistics Execution* ► *Shipping* ► *Deliveries* ► *Define Delivery Types* ⌵.
2. Create an additional delivery type, for example, by copying `EL` to `ZEL1`, including copy control.

## Activating Transfer of Inbound Deliveries in SAP ERP

You use this procedure to activate the transfer of sales documents to SAP Transportation Management (SAP TM) by assigning a control key to the required sales document types.



You perform this procedure in SAP ERP.

### Procedure

1. In Customizing for SAP ERP, choose **Integration with Other SAP Components** > **Transportation Management** > **Order Integration** > **Activate Transfer of Delivery Documents**.
2. On the *Delivery Document Transfer* screen, add the following data:

Shipping Point	Delivery Type	Shipping Condition	Control Key	TM Number
0001	ZEL1	01	0010	<SAP TM System>



Enter a SAP TM Number only if you are connecting more than one SAP ERP system to your SAP TM system

3. Save your entries.

### Result

The delivery type is active and can be integrated with SAP TM.

## Assigning Output Type to Output Procedure in SAP ERP (BC-Set)

You use this procedure to assign an output type to the output determination procedure.



You perform this procedure in SAP ERP.

### Procedure

1. In Customizing for *SAP ERP*, choose **► Logistics Execution ► Shipping ► Basic Shipping Functions ► Output Control ► Maintain Output Determination ► Output Determination for Inbound Deliveries ► Maintain Output Determination Procedure ►**.
2. Select procedure **E10001** and choose *Control Data* in the dialog structure.
3. Choose *New Entries*.
4. Enter the following data:

Field	Value
<i>Step</i>	3
<i>Counter</i>	30
<i>Condition Type</i>	TRD0

5. Save your entries.

## Assigning Output Determination Procedures (Inbound Deliveries) in SAP ERP

You use this procedure to assign output determination procedures to document types. You can also specify an output type for the system to display when the relevant document is displayed or changed.



You perform this procedure in SAP ERP.

### Procedure

1. In Customizing for *SAP ERP*, choose **► Logistics Execution ► Shipping ► Basic Shipping Functions ► Output Control ► Output Determination ► Maintain Output Determination for Inbound Deliveries ► Assign Output Determination Procedure ►**.
2. Choose *Allocate Deliveries*.
3. In the overview, assign the output determination procedures as follows:

<b>Delivery Type</b>	<b>Output Determination Procedure</b>	<b>Output Type</b>
ZEL1	E10001	TRD0



It is sufficient to assign an output determination procedure (such as E10001) to a delivery type (such as ZEL1) in this Customizing activity. The output type may differ from that specified here, but it must be defined for the corresponding output determination procedure. As long as the relevant output type (such as TRD0) is defined for the output determination procedure, the system takes it into account at processing time here.

## Creating Output Condition Records (Inbound Delivery) in SAP ERP

You use this procedure to link the delivery type with an output type that is configured for the data transfer to SAP Transportation Management. You define the message attributes, for example, the processing time or the language. From a technical point of view, you create condition records.



You perform this procedure in SAP ERP.

### Procedure

1. On the *SAP Easy Access* screen for SAP ERP, choose **Logistics** **Logistics Execution** **Master Data** **Output** **Shipping** **Inbound Deliveries** **Create**, or enter transaction `MN24`.
2. In the *Output Type* field, enter `TRD0`, and choose *Enter*
3. Enter the following data:

Sales Document Type	Function	Partner	Medium	Date/Time	Language
ZEL1	-	-	8 Special Function	4 Send Immediately (When Saving the Application)	EN

4. Save your entries.



## Configuring Determination of Document Types and Item Types in SAP EWM

You use this procedure to configure how the system determines document types and item types for inbound delivery notifications and inbound deliveries.



You perform this procedure in SAP EWM.

### Procedure

1. Create the following entry in Customizing for *Extended Warehouse Management* under **Interfaces** **ERP Integration** **Delivery Processing** **Map Document Types from ERP System to EWM**:

Document Type from ERP	Document Type
ZEL1	IERP

2. Create the following entries in Customizing for *Extended Warehouse Management* under **Interfaces** **ERP Integration** **Delivery Processing** **Map Item Types from ERP System to EWM**:

Document Type from ERP	Item Type from ERP	Document Type	Item Type
ZEL1	ELN	IERP	IDRP
ZEL1	ELTX	IERP	ITXT



## Defining Freight Unit Types in SAP TM (BC-Set)



You perform this procedure in SAP Transportation Management.

### Procedure

1. In Customizing for *Transportation Management*, choose **► Planning ► Freight Unit ► Define Freight Unit Types**.
2. Create the following entries:

Screen Area	Field	Value
<i>Freight Unit Types</i>	<i>Freight Unit Type</i>	FUW2
	<i>Description</i>	FU Type - EWM Integration Inbound
<i>Basic Settings</i>	<i>Freight Unit Can Be Deleted</i>	X
<i>Number Range Settings</i>	<i>Time for Drawing</i>	<i>Draw Numbers When Saving Document</i>
	<i>Number Range Interval</i>	For example, FU
<i>Change Controller Settings</i>	<i>Default Change Strategy</i>	-
	<i>Change Strategy Determination Condition</i>	-
	<i>Quantity Tolerance Condition</i>	-
	<i>Date Tolerance Condition</i>	-
<i>Additional Strategies</i>	<i>Creation Strategy</i>	-
	<i>Save Strategy</i>	-
	<i>Deletion Strategy</i>	-
<i>Execution Settings</i>	<i>Execution Tracking Relevance</i>	<i>Execution Tracking</i>
	<i>Immediate Processing</i>	-
<i>Event Management Settings</i>	<i>Application Object Type</i>	-
	<i>Last Exp. Event</i>	-
<i>Direct Shipment Options</i>	<i>Direct Shipment Option Type</i>	<i>No Determination of Direct Shipment Options</i>
	<i>Carrier Selection Settings</i>	-
	<i>Carrier Selection Condition</i>	-
	<i>Direct Shipment Strategy</i>	-
<i>Freight Order Determination</i>	<i>Freight Order Type</i>	FOW2  This entry will be created later. Leave it blank and complete this field once the freight order type has been created.
	<i>Freight Order Type Condition</i>	-
<i>Default Means of</i>	<i>Default Means of</i>	-

<i>Transport Definition</i>	<i>Transport for Type</i>	
	<i>Condition for Default Means of Transport</i>	-
<i>Default Units of Measure</i>	<i>Weight</i>	<i>Kilogram</i>
	<i>Volume</i>	<i>Cubic Meter</i>
<i>Additional Settings</i>	<i>Dangerous Goods Profile</i>	-
	<i>Rule for PU/DLV Window</i>	<i>Pick-up and Delivery as Defined in the Forwarding Order, Forwarding Quotation, Order-Based, or Delivery-Based Transportation Request</i>
	<i>Condition for PU/DLV Window Determination</i>	-
	<i>BW Relevance</i>	-
	<i>Track Changes</i>	-
	<i>Archiving Retention Period in Days</i>	-
	<i>Web Dynpro Application Conf.</i>	-
<i>Organizational Unit Determination</i>	<i>Purchasing Organization</i>	-
	<i>Purchasing Group</i>	-
<i>Determination Rules</i>	<i>Consider Organization of User</i>	-
	<i>Condition</i>	-

3. Choose *Enter*.
4. Save your entries.



## Defining Freight Unit Building Rules

Freight unit building rules (FUBRs) are assigned to the order-based transportation requirement (OTR) type and delivery-based transportation requirement (DTR) type. The rules specify how the freight units are to be built when an OTR or DTR is created.



You perform this procedure in SAP Transportation Management.

### Procedure

1. In SAP NetWeaver Business Client, choose **Application Administration** > **Planning** > **General Settings** > **Freight Unit Building Rule** > **Create Freight Unit Building Rule**.
2. On the *New Freight Unit Building Rule* screen, on the *General Data* tab page, enter the following values:

Field	Value
<i>Freight Unit Building Rule</i>	EWM-FUBR-STANDARD-IN
<i>Description</i>	EWM FUB - Standard A
<i>Document Type</i>	FUW2
<i>Incompatibility Setting</i>	-
<i>Freight Unit Building Strategy</i>	<i>Consolidate per Request (Compatible Parts)</i>
<i>Critical Quantity</i>	<i>Gross Weight</i>
<i>Item Split Allowed</i>	X

3. On the *Advanced Settings* tab page, in the *Process Controller Strategy* field, enter FUB\_AUTO.
4. In the *Planning Quantities* table, enter the following data:

Field	Value
<i>Planning Quantity for Freight Unit Building</i>	<i>Gross Weight</i>
<i>Unit of Measure of Split Quantity</i>	KG
<i>Split Quantity</i>	100,00
<i>Rounding Quantity</i>	1

5. Save your entries.

## Defining Delivery-Based Transportation Requirement Types (BC-Set)

You use this document type to model the delivery-based transportation requirement (DTR) that is received from SAP ERP.



You perform this procedure in SAP Transportation Management (SAP TM).

### Prerequisites

You have defined a freight unit building rule. You can also define a freight unit building rule at a later point and then enter it here.

### Procedure

1. In Customizing for *Transportation Management*, choose **Integration** **ERP Logistics Integration** **Delivery-Based Transportation Requirement** **Define Delivery-Based Transportation Requirement Types**.
2. Choose *New Entries*.
3. On the *New Entries: Details of Added Entries* screen, enter the following data:

Transport Requirement Type	Type Description	Default Type for Category	Number Range Interval
DTW2	DTR - EWM Integration Inbound	-	02

4. On the *Process Control/Business Object Mode* screen area, enter the following data:

BW Relevance	Automatic Freight Unit Building	Output Profile	Propagate Changes
X	X	-	<i>Synchronous Propagation of Changes, Fallback to Asynchronous</i>

5. On the *Default Values* screen area, enter the following data:

Default Weight Unit of Measure	Default Volume Unit of Measure	Freight Unit Building Rule
KG	M3	EWM-FUBR-STANDARD-IN

## Changing Delivery-Based Transportation Requirement Types

If you have created the entries described in [Defining Delivery-Based Transportation Requirement Types \(BC-Set\)](#) [Page 116] manually, you can skip this procedure.

If you have activated BC set /SCMTMS/PRE\_EWMINT\_01, the freight unit building rule is missing in Customizing for delivery-based requirement types and you must enter it now.



You perform this procedure in SAP Transportation Management.

### Procedure

1. In Customizing for *Transportation Management*, choose **► Integration ► ERP Logistics Integration ► Delivery-Based Transportation Requirement ► Define Delivery-Based Transportation Requirement Types**.
2. Select DTR Type `DTW2` and choose *Details*.
3. In the *Planning Profile* field, enter `EWM-FUBR-STANDARD-IN`.
4. Save your entries.



## Defining Conditions for DTR Type Determination



You perform this procedure in SAP Transportation Management.

### Prerequisites

You have defined delivery-based transportation requirement (DTR) document type DTW2.

### Procedure

1. In SAP NetWeaver Business Client, choose **Application Administration** **General Settings** **Conditions** **Create Condition**.
2. On the *New Condition Definition* screen, enter the following data:

Condition	Description	Condition Type	Origin of Condition
ZDTR_TYPE	DTR Type Determination	/SCMTMS/DTR_TYPE	Condition Based on BRFplus Decision Table



If the system issues a message stating that the condition already exists, choose the *Edit Condition Entry* and continue this process from step 5.

3. On the *Data Access Definition* screen, in *Data Access Definition Line 10*, enter /SCMTMS/TRQ\_DLV\_TYPE.
4. On the *Decision Table* tab page, enter the following data:

TR: ERP Delivery Type	DTR Type
<i>Is Equal To</i>	DTW2
ZEL1	



To enter values on the *Decision Table* tab page, you may have to switch to edit mode and choose *Insert New Row*.

5. Save your entries.

## Defining Freight Order Types for Inbound SAP EWM Integration (BC-Set)



You perform this procedure in SAP Transportation Management.

### Procedure

1. In Customizing for *Transportation Management*, choose **Freight Order Management** > **Freight Order** > **Define Freight Order Types**.
2. Create the following outbound freight order type:

Field	Value
<i>Freight Order Type</i>	FOW2
<i>Description</i>	FO Type - EWM Integration Inbound

3. In the *Basic Settings* screen area, enter the following data:

Field	Value
<i>Freight Order Can Be Subcontracted</i>	<i>Relevant for Subcontracting</i>
<i>Shipper/Consignee Determination</i>	<i>Determination Based on Predecessor Documents</i>
<i>Freight Order Can Be Deleted</i>	X

4. In the *Number Range Settings* screen area, enter the following data:

Field	Value
<i>Time for Drawing</i>	<i>Draw Number When Saving Document</i>
<i>Number Range Interval</i>	FO

5. In the *Additional Strategies* screen area, check that there is no data in the *Creation Strategy* field.
6. In the *Default Units of Measure* screen area, enter the following data:

Field	Value
<i>Weight</i>	<i>Kilogram</i>
<i>Volume</i>	<i>Cubic Meter</i>

7. In the *Execution Settings* screen area, enter the following data:

Field	Value
<i>Execution Tracking Relevance</i>	<i>Execution Tracking</i>
<i>Immediate Processing</i>	X

8. In the *Event Management Settings* screen area, in the *Last Expected Event* field, enter ARRIV\_DEST.
9. In the *Tendering Settings* screen area, select the *Use Type-Specific Settings* checkbox.
10. In the *Additional Settings* screen area, in the *Document Creation Relevance* field, enter *E Transportation Activity Creation in SAP EWM*.
11. In the *Output Options* screen area, in the *Output Profile* field, enter /SCMTMS/TOR.
12. Save your entries.

## Assign Freight Order Type to Freight Unit Type (BC-Set)



You perform this procedure in SAP Transportation Management.

### Procedure

1. In Customizing for *Transportation Management*, choose **► Planning ► Freight Unit ► Define Freight Unit Types**.
2. Double-click freight unit type F0W2.
3. In the *Freight Order Type* field, enter F0W2.
4. Save your entries.





## Configuration Settings for SAP NetWeaver Process Integration

You use this process to configure SAP NetWeaver Process Integration (SAP NetWeaver PI) for order integration between SAP Transportation Management (SAP TM) and SAP ERP and for loading appointment integration between SAP TM and SAP Extended Warehouse Management (SAP EWM).

### Prerequisites

The application systems need to be defined as business systems in the System Landscape Directory (SLD). You have checked this in your application system for SAP ERP, SAP TM and SAP EWM by entering transaction `SLDCHECK` in each system.

If the system displays error messages after you execute transaction `SLDCHECK`, proceed as follows:

1. Enter transaction `SXMB_ADMIN`.
2. In the *Configuration* folder, execute *Integration Engine Configuration*.
3. Choose the *Configuration* button to check the following data and, if necessary, enter it:

Category	Parameters	Subparameter	Prefix	Current Value	Default Value
RUNTIME	ENGINE TYPE	-	-	LOC	UNDEFINED
RUNTIME	IS_URL	-	-	Dest://IS_<3-digit SID of PI system>, for example, Dest://IS_X3X	-
RUNTIME	LOGGING SYNC	-	-	1	0

### Process

1. [Creating Communication Components and Communication Channels in SAP NetWeaver PI](#) [Page 122]
2. [Creating Configuration Scenarios for Order Integration in SAP NetWeaver PI](#) [Page 123]
3. [Creating a Configuration Scenario for Loading Appointment Integration in SAP NetWeaver PI](#) [Page 125]

## Creating Communication Components and Communication Channels in SAP NetWeaver PI

In the SAP NetWeaver Process Integration (SAP NetWeaver PI) system, you have to set up a business system (communication component), and a communication channel before you can create a configuration scenario.

### Procedure

1. Start the Integration Directory in the SAP NetWeaver PI system by choosing **Start Integration Builder: Configuration > Integration Directory** or entering transaction `SXMB_IFR`.
2. In the object list, choose **Communication Component Without Party > Business System**.
3. In the context menu *Business System*, choose *Assign Business System* to start the *Assign Business System* wizard.

Choose *Continue*.

4. Select *Business Systems for SAP TM, SAP EWM and SAP ERP*.
5. Choose the *Create Communication Channels for Following Adapters* button.
6. Select *XI* and choose the *Finish* button to create the communication components and communication channels.
7. Close the wizard.
8. Activate all changes.

For example, in the context menu for the business system, choose *Activate*. The system displays a screen on which you can select and activate all changes.

### More Information

- For more information about communication components, see SAP Library for SAP NetWeaver 7.4 at <http://help.sap.com/netweaver> > *SAP NetWeaver Platform > SAP NetWeaver 7.4 > Application Help > Function-Oriented View*. Choose **SAP NetWeaver Library: Function-Oriented View > Process Integration > Integration Directory > Integration Directory (Dual Stack) > Defining Communication Components > Define Business System as Communication Component**.
- For more information about communication channels, see SAP Library for SAP NetWeaver 7.4 at <http://help.sap.com/netweaver> > *SAP NetWeaver Platform > SAP NetWeaver 7.4 > Application Help > Function-Oriented View*. Choose **SAP NetWeaver Library: Function-Oriented View > Process Integration > Integration Directory > Integration Directory (Dual Stack and AEX) > Defining Communication Channels**.



## Creating Configuration Scenarios for Order Integration in SAP NetWeaver PI

In the SAP NetWeaver PI system, you create configuration scenarios for the following integration scenarios between SAP TM and SAP ERP:

- Order integration: `TM_ERPOrderIntegration`
- Sales order scheduling: `TM_ERPSalesOrderScheduling`

### Procedure

1. Start the Integration Directory in the SAP NetWeaver PI system by choosing **Start Integration Builder: Configuration > Integration Directory** or calling transaction `SXMB_IFR`.
2. In the *Integration Builder: Configuration* screen, choose **Tools > Apply Model from ES Repository**.
3. Select *Process Integration Scenario*.
4. Select the integration scenario `TM_ERPOrderIntegration`, delivered by SAP, from the list and choose *Continue*.
5. Enter a name for the configuration scenario, for example `TM_ERPOrderIntegration_TMS_001_ERP_001`. Use the naming convention: `<scenario name>_<TM business system>_<ERP business system>`.
6. Choose *Finish* and close the wizard.

The *Process Configurator* starts.

7. In the Configurator, click on the title of the first swimlane (SAP ERP) and, on the *Business System Component for A2A* tab page, enter the communication component for SAP ERP, for example `ERP_001`.
8. Click on the title of the second swimlane (SAP TM) and, on the *Business System Component for A2A* page tab, enter the communication component for SAP TM, for example `TMS_001`.
9. Choose the *Configure Connection* button.
10. On the *Connections from Component Assignment* tab page, assign the communication channel for the *Receiver Business System Component*, for example `GeneratedReceiverChannel_XI`.



It is not necessary to assign a communication channel to the *Sender Business System Component*.

11. Choose *Next Connection* (blue arrow) and repeat step 10 for all connections.
12. Create configuration objects by choosing the *Create Configuration Objects* button.

The *Create Configuration Objects* dialog box appears.

13. Select *Generation* and choose the *Start* button.

The system displays the result of the generation process in a log. You do not have to save the log.

14. Choose *Save* to save your entries and *Apply* to leave the wizard.

15. Activate all changes.

For example, in the context menu for the configuration scenario, choose *Activate*. The system displays a screen on which you can select and activate all changes.

16. Repeat steps 2-16 for integration scenario `TM_ERPSalesOrderScheduling`.



Since all configuration data is stored in the main memory, you must refresh the runtime cache in SAP NetWeaver PI with transaction `SXI_CACHE`, or SAP NetWeaver PI will not use the settings.

## More Information

For more information about configuring integration scenarios, see SAP Library for SAP NetWeaver 7.4 at <http://help.sap.com/netweaver> > *SAP NetWeaver Platform* > *SAP NetWeaver 7.4* > *Application Help* > *Function-Oriented View* . Choose [SAP NetWeaver Library: Function-Oriented View](#) > *Process Integration* > *Integration Directory* > *Integration Directory (Dual Stack)* > *Using Tools to Configure Efficiently* > *Using the Process Model as a Configuration Template* > *Configuring Process Integration Scenarios* .

## Creating a Configuration Scenario for Loading Appointment Integration in SAP NetWeaver PI

In the SAP NetWeaver PI system, you create a configuration scenario between SAP Transportation Management (SAP TM) and SAP Extended Warehouse Management (SAP EWM) by using the following integration scenario `Loading appointment integration: TM_EWMLoadingAppointmentIntegration` as a template.

### Procedure

1. Start the Integration Directory in the SAP NetWeaver PI system by choosing **Start Integration Builder: Configuration > Integration Directory** or entering transaction `SXMB_IFR`.
2. In the *Integration Builder: Configuration* screen, choose **Tools > Apply Model from ES Repository**.
3. Select *Process Integration Scenario*.
4. Select the integration scenario `TM_EWMLoadingAppointmentIntegration`, delivered by SAP, from the list and choose *Continue*.
5. Enter a name for the configuration scenario, for example `TM_EWMLoadingAppointmentIntegration_TMS_001_EWM_001`. Use the naming convention: `<scenario name>_<TM business system>_<EWM business system>`.
6. Choose *Finish* and close the wizard.

The *Process Configurator* starts.

7. In the Configurator, click on the title of the first swimlane (SAP TM) and, on the *Business System Component for A2A* tab page, enter the communication component for SAP TM, for example, `TMS_001`.
8. Click on the title of the second swimlane (SAP EWM) and, on the *Business System Component for A2A* tab page, enter the communication component for SAP EWM, for example, `EWM_001`.
9. Click on the connector between *Send Loading Appointment Request* in the SAP TM swimlane and *Receive Loading Appointment Request* in the SAP EWM swimlane. On the *Connections from Component Assignment* page tab, assign the communication channel for the *Receiver Business System Component*, for example `GeneratedReceiverChannel_XI`.



It is not necessary to assign a communication channel to the *Sender Business System Component*.

10. Click on the connector between *Send Loading Appointment Notification* in the SAP EWM swimlane and *Receive Loading Appointment Notification* in the SAP TM swimlane. On the *Connections from Component Assignment* page tab, assign the communication channel for the *Receiver Business System Component*, for example `GeneratedReceiverChannel_XI`.
11. Create configuration objects by choosing the *Create Configuration Objects* button.

The *Create Configuration Objects* dialog box appears.

12. Select *Generation* and choose the *Start* button.

The system displays the result of the generation process in a log. You do not have to save the log.

13. Choose *Save* to save your entries and *Apply* to leave the wizard.
14. Activate all changes.

For example, in the context menu for the configuration scenario, choose *Activate*. The system displays a screen on which you can select and activate all changes.



Since all configuration data is stored in the main memory, you must refresh the runtime cache in SAP NetWeaver PI with transaction `SXI_CACHE`, or SAP NetWeaver PI will not use the settings.

## More Information

For more information about configuring integration scenarios, see SAP Library for SAP NetWeaver 7.4 at <http://help.sap.com/netweaver> > *SAP NetWeaver Platform* > *SAP NetWeaver 7.4* > *Application Help* > *Function-Oriented view* . Choose *SAP NetWeaver Library: Function-Oriented View* > *Process Integration* > *Integration Directory* > *Integration Directory (Dual Stack)* > *Using Tools to Configure Efficiently* > *Using the Process Model as a Configuration Template* > *Configuring Process Integration Scenarios* .

## Appendix A: Basic Table Entries Used in SAP TM, SAP ERP, and SAP EWM

Basic tables such as units of measures, currencies, countries, and languages are used commonly by SAP ERP, SAP Transportation Management (SAP TM) and SAP Extended Warehouse Management (SAP EWM). Entries used in processes involving these applications must be identical in all systems.

The following is a list of common basic tables:

Table	Description
T006	Unit of measure
T002	Language keys
TCURC	Currency codes
T005	Countries

For more information on how to compare entries across several systems, see *Checking Basic Table Entries in EWM* in [Integration of SAP ERP with SAP EWM \[External\]](#).

## Appendix B: Synchronization of Customizing between SAP TM, SAP ERP and SAP EWM

Some customizing entries must be defined in different tables in SAP ERP, SAP Transportation Management (SAP TM) and SAP Extended Warehouse Management (SAP EWM). For example, packaging material types of handling units in SAP EWM must be defined as package type codes in SAP TM.

The following table gives an overview of table entries that must be synchronized across these applications:

Setting	Customizing Path in SAP ERP	Customizing Path in SAP TM	Customizing Path in SAP EWM
Incoterms	▶ Sales and Distribution ▶ Master Data ▶ Business Partners ▶ Customers ▶ Billing Document ▶ Define Incoterms ▶	▶ SCM Basis ▶ Master Data ▶ Define Incoterms ▶	▶ Cross-Process Settings ▶ Delivery Processing ▶ General Settings ▶ Define Incoterms ▶
Means of Transport	Not applicable	▶ Master Data ▶ Resources ▶ Define Means of Transport ▶	▶ SCM Basis ▶ Master Data ▶ Transportation Lane ▶ Maintain Means of Transport ▶
Packaging Material Type (for transportation units in SAP EWM)	▶ Logistics – General ▶ Handling Unit Management ▶ Basics ▶ Define Packaging Material Types ▶	▶ SCM Basis ▶ Pack ▶ Handling Units ▶ Basics ▶ Define Packaging Material Types ▶	▶ Cross-Process Settings ▶ Handling Units ▶ Basics ▶ Define Packaging Material Types ▶
Packaging Material Type (for handling units in SAP EWM) or Package Type Code (SAP TM)	▶ Logistics – General ▶ Handling Unit Management ▶ Basics ▶ Define Packaging Material Types ▶	▶ Forwarding Order Management ▶ Define Package Type Codes ▶	▶ Cross-Process Settings ▶ Handling Units ▶ Basics ▶ Define Packaging Material Types ▶
Shipping Conditions (SAP ERP and SAP EWM) or Transportation Service Level Code (SAP TM)	▶ Logistics Execution ▶ Shipping ▶ Basic Shipping Functions ▶ Shipping Point and Goods Receiving Point Determination ▶ Define Shipping Conditions ▶	▶ Forwarding Order Management ▶ Define Transportation Service Level Codes ▶	▶ Cross-Process Settings ▶ Delivery Processing ▶ General Settings ▶ Define Shipping Conditions ▶

For more information about synchronization of table entries between SAP ERP and SAP EWM, see *Verifying Synchronization of ERP and EWM Customizing* in [Integration of SAP ERP with SAP EWM \[External\]](#).