INTEGRATION GUIDE | PUBLIC
SAP TM 9.6 FPS02
2019-10-09

Basic Settings for SAP Transportation Management

THE BEST RUN SAP

Content

Legal Disclaimer

⚠ Caution

This document contains sample configuration content. Unless expressly stated otherwise in your agreements with SAP, this sample content is not part of SAP product documentation and you may not infer any product documentation claims against SAP based on this information.

1 Basic Settings for SAP Transportation Management

Use

This guide provides information about the settings that you must configure in SAP Transportation Management (SAP TM) to enable integration with SAP ERP.

Change History

Version	Date	Description
1.0	December 2010	Initial version
1.1	April 2011	Harmonized configuration and master data; scenarios based on IDES
1.2	November 2011	• Updates to: ○ Defining Subcategory Codes [page 40] ○ Defining Charge Type Codes [page 41] • Added sections: ○ Defining Schedule Types [page 27] ○ Defining Stage Type Sequence for Movement Types [page 25] ○ Displaying SAP TM-Specific User Menu [page 26] ○ Configuring Inbound Integration of Shipments [page 50]
2.0	September 2012	Update for SAP TM 9.0

Version	Date	Description
2.1	March 2013	Update for SAP TM 9.0, SP04 Updates to: • Defining Schedule Types • Defining Conditions for OTR Type Determination • Defining Text Schemas Added sections: • Defining Resolution Strategy • Defining Transportation Service Level Codes • Scenario-Independent Functionality • Defining Number Ranges for Inbound Integration • Defining Freight Order Types for Inbound Integration • Assigning Freight Order Types to ERP Shipment Types • Maintaining Output Management Adapter Settings • Defining Number Ranges for Outbound Integration • Defining Freight Order Types for Outbound Integration • Configuring Delivery Split/Update Processing • Defining Delivery Split/Update Types • Adjusting Delivery-Based Transportation Requirements Removed sections (as it is already part of delivered Customizing): • Defining Equipment Groups and Types • Defining Default Freight Document Types for Stages

Version	Date	Description
2.2	June 2013	Update for SAP TM 9.0, SP05 Updates to: • Creating Active Versions and Models • Defining Stage Type Sequence for Movement Types • Defining Schedule Types • Defining Charge Type Codes
3.0	June 2014	Update for SAP TM 9.1 Added section: • Configuring Settings for Plant Maintenance (PM) Integration
4.0	December 2014	Update for SAP TM 9.2 The following sections have been moved from the *Configuration Guide for International Inbound Logistics* to the current guide: • Configuring EH&S Basic Services • Specifying Validity Area Categories • Specifying Validity Areas • Specifying Dangerous Goods Regulations • Specifying Dangerous Goods Classes
5.0	December 2015	Update for SAP TM 9.3 Updates to: • Important SAP Notes • Activating Business Functions

Important SAP Notes

You must read the following SAP Notes before you start using this test scenario. These SAP Notes contain the most recent corrections required to test the scenario.

Make sure that you have the up-to-date version of each SAP Note, which you can find on SAP Service Marketplace at http://service.sap.com/notes.

SAP Note Number	Description	Valid with Release
1561162	Address data not possible in Event Message reporting profile	SAP TM 8.1
1581944	Image Source does not work in Link to Action in FPM_TREE_UIBB	SAP TM 8.1
1620298	Port data incorrectly copied to referencing gateway schedule	SAP TM 8.1
1599238	Credit Segment information FWSD outbound structure	SAP TM 8.1
1624325	Empty lines appear in the beginning of a list UIBB	SAP TM 8.1
1622146	FBI: Action usages changed in Exit class not considered	SAP TM 8.1
1623764	FUB: error in message inbound	SAP TM 8.1
1634207	Error when trying to insert a schedule within Trans.Cockpit	SAP TM 8.1
1629698	/SCMTMS/XPRA_101_TC_RATES: usage of number range for scales	SAP TM 8.1
1634568	Event with reason code from EM is not propagated to TM	SAP TM 8.1
1679921	Views /SCMB/V_EQU_CODE and /SCMB/V_EQU_MOT are inconsistent	SAP TM 9.0
1722591	Disabling calling of PPF_Plugin methods in updates task	SAP TM 9.0
1729082	Actual Route data cleared when saving FWO	SAP TM 9.0 SP01
1736290	Authorization not working for waybill stock	SAP TM 9.0 SP01
1739767	Times not taken over from schedule	SAP TM 9.0 SP01
1736359	Misleading Error message in Freight Order Type customizing	SAP TM 9.0 SP01
2229144	Solution Manager Content Updates for SAP TM 9.3	SAP TM 9.3

Prerequisites

You have set up the system landscape as follows:

- You have completed the technical installation of SAP TM, SAP Integration Engine, SAP Event Management, SCM Optimizer, and SAP ERP IDES Enhancement Package 5.
- You have established the connection to the System Landscape Directory (SLD) for all systems.
- You have configured the settings that are required to connect a business system to an Integration Engine.
- You have configured the settings that are required to use the Core Interface (CIF) for master data transfer.
- You have established a trusted connection between the SAP ERP and SAP TM systems.
- You have defined all required RFC users, RFC connections, logical system names, technical system names, and business system names.
- You have configured Adobe Document Services.
- You have completed e-mail setup.

More Information

For information about setting up SAP NetWeaver Process Integration, see the following:

- SAP NetWeaver Process Integration installation documentation on SAP Service Marketplace at http://service.sap.com/instguides ▶ *SAP NetWeaver* ▶ *SAP NetWeaver PI 7.1* ▶
- SAP Library for SAP NetWeaver at http://help.sap.com ▶ *SAP NetWeaver* ▶ *SAP NetWeaver 7.0* ▶ *Configuration and Deployment Information* ▶ *Technology Consultant's Guide* ▶ *Business Process Management* ▶ *Configuration of Usage Type Process Integration (PI)* ▶.
  In particular, see *General Setup of Integration Engine* and *Configuration of Business Systems with an Integration Engine* sections.

For information about setting up the Core Interface (CIF), see the following:

- SAP Library for SAP Advanced Planning and Optimization (SAP APO) at http://help.sap.com ▶ *SAP Business Suite* ▶ *SAP Supply Chain Management* ▶ *SAP SCM Server* ▶ *Enhancement Package 1 for SAP SCM 7.0* ▶ *Application Help* ▶ *SAP Advanced Planning and Optimization (SAP APO)* ▶ *Integration via Core Interface (CIF)* ▶.
  In particular, see the section *Checklist for Setting Up the System Infrastructure* under ▶ *Technical Integration* ▶ *Core Interface (CIF)* ▶ *Setting Up the System Infrastructure* ▶.
- Best practices document on SAP Service Marketplace at http://service.sap.com ▶ *Application Life-Cycle Management* ▶ *Methodologies* ▶ *Run SAP* ▶ *Best Practice Documents* ▶ *Manage APO Core Interface in SAP APO (3.x) / SAP SCM (4.x, 5.x)* ▶

For information about setting up Adobe Document Services, see SAP Library for SAP NetWeaver 7.0 at http://help.sap.com/nw70 ▶ *SAP NetWeaver 7.0 including Enhancement Package 2* ▶ *Configuration and Deployment Information* ▶ *Technology Consultant's Guide* ▶ *Business Task Management* ▶ *Adobe Document Services (Configuration)* ▶.

For information about setting up e-mail in an SAP NetWeaver system, see SAP Library for SAP NetWeaver 7.0 at http://help.sap.com/nw70 ▶ *SAP NetWeaver 7.0 including Enhancement Package 2* ▶ *Application Help* ▶

Function-Oriented View > *SAP NetWeaver by Key Capability* > *Application Platform by Key Capability* > *Platform-Wide Services* > *Connectivity* > *Communication Interfaces for Mail and Telephony* > *SAPconnect (BC-SRV-COM)* > *SMTP Configuration Guide* .

See also the following SAP Notes:

- SAP Note 455140: Configuration of e-mail, fax, paging or SMS using SMTP
- SAP Note 455127: E-mail (SMTP) in different SAP releases
- SAP Note 557377: E-mail connection for internal SAP systems

For information about integrating SMC^3, see SAP Note 1636870.

2 Technical Settings

2.1 Naming Logical Systems for the Connection to SAP ERP and SAP TM

Context

You use this Customizing activity to name the logical system used in the remote function call (RFC) connection to SAP TM.

Procedure

1. In Customizing for SAP TM, choose *SAP Transportation Management* > *SCM Basis* > *Integration* > *Basic Settings for Creating the System Landscape* > *Name Logical Systems*.

   > **i** Note
   >
   > This is a cross client-activity.

2. Define the logical system for SAP ERP, for example, `ERPCLNT500`. The standard naming convention is **`<SID>CLNT<client no.>`**.
3. Define the logical system for SAP TM, for example, `TM1CLNT750`. The standard naming convention is **`<SID>CLNT<client no.>`**.

Next Steps

For more information, see the Customizing activity documentation.

2.2 Assigning Logical Systems to Clients

Context

You use this Customizing activity to assign a logical system to a client in SAP TM.

Procedure

1. In Customizing for SAP TM, choose *SAP Transportation Management* > *SCM Basis* > *Integration* > *Basic Settings for Creating the System Landscape* > *Assign Logical Systems to a Client*.

   > **i** Note
   >
   > This is a cross-client activity.

2. Check whether the logical system for the TM client exists, for example, `TM1CLNT750`.

   If it does not exist, define the logical system for the ERP client first. For more information about how to define a logical system, see Naming Logical Systems for the Connection to SAP ERP and SAP TM [page 11].

Next Steps

For more information, see the Customizing activity documentation.

2.3 Defining SLD Data of Business Systems

Use

These settings should be published from your system landscape directory (SLD) automatically. Check whether the corresponding data sets have been imported into your SAP TM system.

Procedure

1. In Customizing for SAP TM, choose *SAP Transportation Management* > *Transportation Management* > *Integration* > *Define SLD Data of Business Systems*.
2. Check whether an entry exists for your SAP ERP system. If so, no further action is required. If not, 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_500**.
    3. In the *Logical System* field, enter your logical system in the format **<SID>CLNT<Client Number>**. For example, **ERPCLNT500**.
    4. In the *Manual Maint.* field, choose *Flag set. Event has occurred.*
    5. Save your entries.

> **i Note**
>
> If you have installed IDES as your SAP ERP system, the logical system name for the SAP ERP system is always `T90CLNT090`.

2.4 Maintaining Business System Groups

Context

In this step, you determine the assignment to a business system group of SAP TM, and the SAP ERP systems that are to be connected. By doing this, you create areas with the same naming convention that guarantee the unique naming of master data and its synchronization in distributed system landscapes. If you do not have a specific reason, your SAP TM system and your ERP system should be in the same business system group.

This example uses different business system groups due to internal restrictions of SAP systems.

Procedure

1. In Customizing for SAP TM, choose *SAP Transportation Management* > *SCM Basis* > *Integration* > *Basic Settings for Creating the System Landscape* > *Maintain Business System Group*.
2. Check whether an entry exists for your SAP ERP and your SAP TM system as `<SID><Client Number>` (for example, `ERP500` and `TM1750`) in the *Business System Group* table. If so, no further action is required. If not, create the two entries as follows:
    1. Choose *New Entries*.

2. In the *Business System Group* field, enter a name that relates to your system ID and client as `<SID><Client Number>`. For example, **ERP500** for your SAP ERP system.
3. In the *Description* field, enter a name that relates to your system ID and client as `<SID><Client Number>`. For example, **ERP500** for your SAP ERP system and **TM1750** for your SAP TM system.
4. Save your entries.
5. Repeat above steps 1 to 4 to create an entry for your SAP TM system (for example, **TM1750**) in the *Business System Group* table.
6. Enter a name that relates to the system and the client that you are integrating.

2.5 Assigning Logical Systems and Queue Types

Use

You use this Customizing activity to assign the logical system and queue types to a business system group (BSG).

Prerequisites

You have assigned all of the systems that form your system landscape to the same BSG.

Procedure

1. In Customizing for SAP TM, choose *SAP Transportation Management* > *SCM Basis* > *Integration* > *Basic Settings for Creating the System Landscape* > *Assign Logical System and Queue Type*.
2. In the *Assignment of Logical System to Business System Group* table, create entries using inbound queues, for example, for the two-client scenario for SAP SCM:

Business System Group	Logical System	SAP System Indicator	Release	Queue Type
`<SID><CLNT>` (for example, **TM1750**)	`<SID>CLNT<CLNT>` (for example, **TM1CLNT750**)	**X**	**SCM 7.0**	*Inbound Queues*
`<SID><CLNT>` (for example, **ERP500**)	`<SID>CLNT<CLNT>` (for example, **ERPCLNT500**)	**X**	**<ERP Release>**, for example, **600**	*Inbound Queues*

> **i Note**
>
> If the SAP ERP system has active IS-CWM (Catch Weight Management), enter **`Catch Weight Management ERP System`** in the *Role* field.

2.6 Activating Queues

Context

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

Procedure

1. In SAP TM, call the QIN scheduler using transaction **`SMQR`**.
2. Choose *Registration*.
3. Enter the following data:
   - Queue name: CF*
   - EXEMODE: D (Dialog processing) or B (Background processing)
   - MAXTIME: 10 (maximum processing time)
   - ATTEMPTS: 30 (number of repetitions for locked queues)
   - PAUSE: 300 (time between two repetitions)
4. Choose *Enter*.

2.7 Creating Active Versions and Models

Procedure

1. In Customizing for SAP TM, choose *SAP Transportation Management* > *Transportation Management* > *Master Data* > *Create Active Version and Model*.
2. Choose *Execute*.

3. Check if a system message appears saying something like `Model 000 and planning version 000 successfully created`.

2.8 Activating Business Functions

1. Call the *Switch Framework Customizing* (Transaction `SFW5`).
2. Choose *Continue*.
3. Expand the *Enterprise Business Functions* folder and set the indicator in the *Planned Status* column for the following business functions:
   - `/BCV/MAIN` – FND, Business Context Viewer
   - `/BCV/MAIN_1` – FND, Business Context Viewer 2
   - `FND_SOA_REUSE_1` – Improvements for SOA Reuse Functions
   - `FND_VISUAL_BUSINESS` – Visual Business
   - `SCM_SAPTM_SCMB_FND` – SAP TM-Specific Enhancements in SCM Basis
   - `SCM_SCMB_TM_FND1` – Foundation for External Transportation Management System
   - `SCM_SCMB_TR_NETWORK` – Enhanced Services for Transportation Network
   - `ILM` – Information Lifecycle Management
   - `BUPA_ILM_BF` – ILM-Based Deletion of Business Partner Data (prerequisite is Business Function `ILM`)
4. Choose *Activate Changes*.
   A system message appears saying that the activation job has started in the background.

> **i Note**
>
> If you do not see the column to change the planned status, you do not have the required authorization to activate business functions.

2.9 Activating Error and Conflict Handler

Context

You use this Customizing activity to activate the error and conflict handling to be able to specify how the system responds to errors and conflicts in service operations.

Procedure

1. In Customizing for SAP TM, 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.

Next Steps

For more information, see SAP Library for SAP ERP at http://help.sap.com/erp *SAP ERP Central Component* > *SAP Enhancement Package 5 for SAP ERP 6.0* > *Application Help* > *SAP ERP* > *Processes and Tools for Enterprise Applications* > *Error and Conflict Handler (CA-FS-ECH)*.

2.10 Defining Resolution Strategy

Context

You use this Customizing activity to specify the SAP default solution strategy if there are errors and conflicts in service operations. In particular, you can specify whether service operations are to be executed again or terminated. This activity is optional but recommended if you intend to use integration with SAP ERP.

Procedure

1. Start transaction `ECH_DEFLT_RESOL_SAP` to set up the `ECHS_DEFLTRESOL` view of *SAP Default Resolution Strategies* per error category.
2. Choose *New Entries*.
3. Enter the following values for each business process:

Field	Value
Component	`CA-SOA-ESM-SCM-SCE`

Field	Value
Business Process	TRQ_RQ
Error Category	PRE
Group	S40
Persistent	Checked
Retry Mode	3 – Automatically and Manually
Conf. Mode	2 – Manually Only
Disc.Mode	2 – Manually Only
Residence Time	5
Unit RT	S – Seconds
Transient	Checked
Repeat	5
Interval	5
Unit	S – Seconds
Rollover	1 – Linear

4. Repeat step 3 for the following business processes. Choose the same values as shown in step 3 for those fields which are not explicitly mentioned below:

Business Process	Transient	Repeat	Interval	Unit
TRQ_CNCLRQ	Checked	5	5	S - Seconds
TPNOR_CNF	Checked	5	7	S - Seconds
TORSCM_ST	Checked	5	4	S - Seconds
TORSCM_RQ	Checked	5	5	S - Seconds
TORSCM_CNC	Checked	5	5	S - Seconds
TORSCM_ASG	Checked	5	6	S - Seconds
TOR_PKGASG	Checked	5	5	S - Seconds
/CL_CPX002	Checked	5	5	S - Seconds

Business Process	Transient	Repeat	Interval	Unit
/CL_CPX003	Checked	5	5	S - Seconds
/CL_CPX005	Checked	5	5	S - Seconds
/CL_CPX006	Checked	5	5	S - Seconds

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

5. Save your entries.

3 General Customizing Settings

3.1 Defining Capacity Variants

Procedure

1. In Customizing for SAP TM, choose *SAP Transportation Management* > *Transportation Management* > *Master Data* > *Resources* > *Specify Capacity Variants*.
2. Choose *New Entries*.
3. Create a capacity variant with the following settings:

Field	Value
Cap. Var.	`1`
Status	*2 Normal Capacity*
Description	`Normal Capacity`

4. Save your entries.

3.2 Creating ISO Units

Procedure

1. In Customizing for SAP TM, choose *SAP NetWeaver* > *General Settings* > *Check Units 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 Container`
20	`20-Foot Equivalent Unit`

5. Save your entries.

3.3 Creating Units of Measurement

Procedure

1. In Customizing for SAP TM, choose *SAP NetWeaver* > *General Settings* > *Check Units of Measurement*.
2. In the dropdown box, select *AAAADL (no dimensions)* and choose *Units of measurement*.
3. Create a new unit of measurement as follows:
    1. In the *Int. meas. 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* and *float. point exp.* fields 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 *ALE/EDI* screen area, proceed as follows:
        - In the *ISO code* field, enter `TEU`.
        - Select the *Primary code* checkbox.
    5. In the *Application Parameters* screen area, select the *Commercial meas.unit* checkbox.
4. Save your entries.

3.4 Changing Units of Measurement

Procedure

1. In Customizing for SAP TM, choose *SAP NetWeaver* > *General Settings* > *Check Units of Measurement*.
2. In the dropdown box, select *Mass* and choose *Units of measurement*.
3. View the details of the `LB` unit and assign the ISO code **`LBR`** in the *ALE/EDI* screen area.
4. Press *Save* to apply your changes.
5. Return to the initial screen.
6. In the dropdown box, select *Volume* and choose *Units of measurement*.
7. View the details of the `FT3` unit and assign the ISO code **`FTQ`** in the *ALE/EDI* screen area.
8. Save your entries.

3.5 Defining Transportation Service Level Codes

Context

In this Customizing activity, you define transportation service level codes in SAP TM, which correspond to shipping conditions in SAP ERP.

Procedure

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

Example

Service Level Code	Description	Delivery in Days
`T1`	`Service Level T1`	Blank
`T2`	`Service Level T2`	Blank

5. Save your entries.

3.6 Maintaining Transportation Groups

Context

You use this Customizing activity to define transportation groups. A transportation group classifies or groups the important attributes to do with the transportation of a product. Each product is assigned to a transportation group. For example, product attributes could be “refrigerated transportation required” or “dangerous goods”.

Procedure

1. In Customizing for SAP TM, choose *SAP Transportation Management* > *SCM Basis* > *Master Data* > *Product* > *Maintain Transportation Group*.
2. Enter the following data:

Tr. Grp.	Trans. Group Description
0002	In Liquid Form
0001	On Pallets

3. Save your entries.

3.7 Specifying Language Selection

Context

In this Customizing activity, you specify the languages that you can use for phrases in *EH&S Services*.

Procedure

1. In Customizing for SAP TM, choose *SAP Transportation Management* > *SCM Basis* > *EH&S Services* > *Phrase Management* > *Specify Language Selection*.

   Enter the following data:

L	Name of Language	Sort
EN	English	1
DE	German	2

2. Save your entries.

3.8 Activating Usage of Transportation Allocations

Context

Transportation allocation stores information about transportation service provider allocations (TSP allocations) in geographical areas with a specific means of transport. A transportation allocation describes constraints of a maximum and minimum available transportation allocation that is used, for example, during TSP selection. A transportation allocation also stores allocated quantities, which are also used, for example, during TSP selection.

Procedure

1. In Customizing for SAP TM, choose *SAP Transportation Management* > *Transportation Management* > *Planning* > *General Settings* > *Define Transportation Allocation Settings*.
2. Select the *Activate TAL/BS* checkbox.
3. Save your entries.

3.9 Defining Stage Type Sequence for Movement Types

Prerequisites

You have maintained the Customizing settings for the required movement type.

Context

Movement types predefine stages in your forwarding order. In this procedure, you can specify which stages are to be added to your freight order when the corresponding movement type is used. Basically, this data should already be available with SAP TM delivery Customizing.

Check whether the following movement types exist in your system, and change them if required:

- DD: Door to door for *LCL Ocean Freight*
- CC: CFS to CFS for *International Outbound Transportation*

Procedure

1. In Customizing for SAP TM, choose *SAP Transportation Management* > *Transportation Management* > *Forwarding Order Management* > *Define Stage Type Sequence for Movement Types*.
2. Create the following entries if they do not already exist:

Mov. Type	Seq. No.	Stage Type	Stage Proposal	StgeTpeOcc
DD	1	01	Selected	Stage type must occur at least once

Mov. Type	Seq. No.	Stage Type	Stage Proposal	StgeTpeOcc
DD	2	02	Blank	Stage type can occur in any number
DD	3	03	Selected	Stage type must occur at least once
DD	4	04	Blank	Stage type can occur in any number
DD	5	05	Selected	Stage type must occur at least once
CC	1	02	Blank	Stage type can occur in any number
CC	2	03	Selected	Stage type must occur at least once
CC	3	04	Blank	Stage type can occur in any number

3.10 Displaying SAP TM-Specific User Menu

Use

In this Customizing activity, you define which area menu is to be used as the initial menu at logon.

Procedure

1. In Customizing for SAP TM, choose *SAP NetWeaver* > *Application Server* > *System Administration* > *Definition on initial menu*.
2. Check whether `/SCMB/MENUE` is specified as *current initial menue*. If so, no further action is required. If not, proceed with the next step.
3. Select the *Definition of initial menue* pushbutton.
4. Set the initial menu to `/SCMB/MENUE`.
5. Save your entries.

> **i Note**
>
> This setting is client-independent, which means that all clients are affected.

3.11 Defining Schedule Types

Use

Once you have defined the new number range, you must specify that it is to be used for the schedule types used in the scenarios.

Procedure

1. In Customizing for SAP TM, choose *SAP Transportation Management* > *Transportation Management* > *Master Data* > *Transportation Network* > *Schedule* > *Define Schedule Types*.
2. Change schedule type **1000** according to the following table:

Field	Value
Type	**1000**
Description	**Ocean Carrier Schedule**
Default Schedule Ty.	Selected
Transportation Mode	**03 - Sea**
Gateway	Selected
Reference	Blank
Document Type	**BSEA – Ocean Booking**
Template	Blank
Header No. Range	**07**
Voyage No. Range	**01**
CC Strategy	Blank
Deletion Strategy	Blank

3. Save your entries.

4. Change schedule type **2000** according to the following table:

Field	Value
Type	**2000**
Description	**Sailing Schedule**
Default Schedule Ty.	Blank
Transportation Mode	**03 - Sea**
Gateway	Selected
Reference	Blank
Document Type	**BSEA – Ocean Booking**
Template	Selected
Header No. Range	**07**
Voyage No. Range	**01**
CC Strategy	**SCHCHG_DEF – Default Schedule Change Strategy**
Deletion Strategy	**SCHDEL_DEF – Default Schedule Deletion Strategy**

5. Save your entries.
6. Change schedule type **2100** according to the following table:

Field	Value
Type	**2100**
Description	**Sailing Schedule with Reference**
Default Schedule Ty.	Blank
Transportation Mode	**03 - Sea**
Gateway	Selected
Reference	Selected
Document Type	**BSEA – Ocean Booking**
Template	Selected

Field	Value
Header No. Range	**07**
Voyage No. Range	**01**
CC Strategy	Blank
Deletion Strategy	Blank

7. Save your entries.

> **i Note**
>
> All above schedule types should already exist. The major change is that number range **07** should be selected for *Header No. Range* instead of **01** .

4 Setting Up Dangerous Goods

4.1 Defining Common Settings for Dangerous Goods Processing

Context

In this Customizing activity, you define general settings for dangerous goods processing in SAP TM.

Procedure

1. In Customizing for SAP TM, choose *Basic Functions* > *Dangerous Goods* > *Define Common Settings for Dangerous Goods Processing*.
2. Enter the following data:

DG Activate	Strategy for DG Chk	DG Print Strat.	DG Activate FUB	DG Activate VSR
Selected	`DG_EHS_CHK`	`DG_EHS_PRT`	Selected	Selected

3. Save your entries.

4.2 Configuring EH&S Basic Services

Context

In this Customizing activity, you configure the environmental health and safety services in your SAP TM system.

Procedure

1. In Customizing for SAP Transportation Management, choose *SCM Basis* > *EH&S Services* > *Basic Services* > *Specify Environment Parameters*.
2. Set the `DG_SERVICES_ACTIVE` environment parameter to **x**.

4.3 Specifying Validity Area Categories

Use

In this Customizing activity, you define the validity area categories with which you group validity areas into organizational units. For more information, see Specifying Validity Areas [page 32].

Procedure

1. In Customizing for SAP Transportation Management, choose *SCM Basis* > *EH&S Services* > *Basic Settings* > *Specify Validity Area Categories*.
2. Create new validity area categories using the data in the following table:

Val. Area Cat.	Table	Field	Validity Area Check Function
DGREGION	THM063	LWDG	/SEHS/HM086_RVLID_DGREG_VALID

Val. Area Cat.	Table	Field	Validity Area Check Function
DGREGULAT	THM063	LWDG	/SEHS/HM086_RVLID_DGREG_VALID
REGION	T005S	LAND1	/SEHS/C14Z_VAL_VALID_TAB-FIELD

> **i** Note
>
> You can also add other validity area categories as required for your installation.

4.4 Specifying Validity Areas

Context

The **validity area** determines the jurisdictions in which data is commonly valid.

You specify validity areas on the basis of validity area categories [page 31]. You can use validity area categories to define validity areas such as plants, business areas, or regions.

You can assign individual jurisdictions or organizational units at a lower level to each validity area. For example, you can assign:

- Countries and regions from the country table as validity areas for the category REGION
- Other organizational units for validity areas of another category

Procedure

1. In Customizing for SAP Transportation Management, choose *SCM Basis* > *EH&S Services* > *Basic Services* > *Specify Validity Areas*.
2. Check that the following validity areas have been maintained:

VAreaCat	Val. Area	Description for Validity Area
REGION	ADNR	ADNR States

VAreaCat	Val. Area	Description for Validity Area
REGION	ADR	ADR States
REGION	DE	Germany
DGREGION	DGADNR	ADNR Regulation – Inland Waterway
DGREGION	DGADR	ADR Regulation – Road
DGREGION	DGCFR	CFR Regulation – All Modes of Trans. USA
DGREGION	DGGGVE	GGVE Regulation – Rail
DGREGION	DGGGVS	GGVS Regulation – Road
DGREGION	DGIATA_C	IATA_C Regulation – Plane / Cargo
DGREGION	DGIATA_P	IATA Regulation – Plane / Passenger
DGREGION	DGIMDG	IMDG Regulation – Sea
DGREGION	DGRID	RID Regulation – Rail
REGION	ES	Spain
REGION	FR	France
REGION	GB	Great Britain
REGION	REG_EU	European Union
REGION	REG_WORLD	World
REGION	RID	RID States
REGION	TEXAS	Texas
REGION	US	USA

3. Create a new validity area for China by choosing the *New Entries* pushbutton.
4. Enter following values:

VAreaCat	Val. Area	Description for Validity Area
REGION	CN	China

5. Save and select your new entry.
6. Choose *Assign Validity Area/Country* and enter the following data:

Cty	Name
CN	China

7. Save your entries.

4.5 Specifying Dangerous Goods Regulations

Context

In this Customizing activity, you assign dangerous goods regulations to a country and a means of transport.

Procedure

1. In Customizing for SAP Transportation Management, choose *SCM Basis* > *EH&S Services* > *Dangerous Goods Management* > *Dangerous Goods Master* > *Specify Dangerous Goods Regulations*.
2. Choose *New Entries* and enter the following data:

DG regulation	Validity Area	ModeTransCat
CN	CN	1

3. Save your entries.

4.6 Specifying Dangerous Goods Classes

Context

In this Customizing activity, you create dangerous goods classes for regulations RID and CN.

Procedure

1. In Customizing for SAP Transportation Management, choose *SCM Basis* > *EH&S Services* > *Dangerous Goods Management* > *Dangerous Goods Master* > *Specify Dangerous Goods Classes and Classification Codes*.
2. Choose the *New Entries* pushbutton and enter the following data:

DG regulation	Class	Desc. DG Class
RID	3	Flammable liquid
CN	3	Flammable liquid
RID	5.2	Organic peroxides
CN	5.2	Organic peroxides

3. Save your entries.

4.7 Specifying Settings for Mixed Loading Checks

4.7.1 Defining Segregation Keys

Context

In this Customizing activity, you specify segregation keys for the mixed loading checks.

Procedure

1. In Customizing for SAP TM, choose *SAP Transportation Management* > *SCM Basis* > *EH&S Services* > *Dangerous Goods Management* > *Dangerous Goods Checks and Dangerous Goods Documents* > *Dangerous Goods Checks* > *Specify Settings for Mixed Loading Checks* > *Specify Segregation Keys*.
2. Enter the following data:

Regulation	Segr. Key	Description of Segregation Key
ADR	3	Inflammable fluid substances
ADR	5.2	Organic peroxides
IMDG	3	Inflammable fluid substances
IMDG	5.2	Organic peroxides
RID	5.2	Organic peroxides
RID	3	Inflammable fluid substances
CN	3	Organic peroxides
CN	5.2	Inflammable fluid substances

3. Save your entries.

4.7.2 Defining Responses

Context

In this Customizing activity, you define responses that are used in the segregation rules for the following:

- Segregation keys
- Enterprise-specific mixed loading groups

Procedure

1. In Customizing for SAP TM, choose *SAP Transportation Management* > *SCM Basis* > *EH&S Services* > *Dangerous Goods Management* > *Dangerous Goods Checks and Dangerous Goods Documents* > *Dangerous Goods Checks* > *Specify Settings for Mixed Loading Checks* > *Specify Responses*.
2. Enter the following data:

Response	Desc. of Response	Resp. Type
E1	Error: Mixed loading not allowed	E

3. Save your entries.

4.7.3 Specifying Segregation Rules for Segregation Keys

Context

In this Customizing activity, you specify segregation rules for the segregation keys. The segregation rules are a regulation-dependent decision matrix in which you specify the combinations of segregation keys that are prohibited or permitted.

Procedure

1. In Customizing for SAP TM, choose *SAP Transportation Management* > *SCM Basis* > *EH&S Services* > *Dangerous Goods Management* > *Dangerous Goods Checks and Dangerous Goods Documents* > *Dangerous Goods Checks* > *Specify Settings for Mixed Loading Checks* > *Specify Segregation Rules for Segregation Keys*.
2. Enter the following data:

DG Regulation	Segr. Key	Segr. Key	Response
ADR	3	5.2	E1
IMDG	3	5.2	E1
RID	3	5.2	E1
CN	3	5.2	E1

3. Save your entries.

4.7.4 Defining Agreement Deactivation Reasons

Procedure

1. In Customizing for SAP TM, choose *SAP Transportation Management* > *Transportation Management* > *Master Data* > *Agreements and Service Products* > *Define Deactivation Reasons*.
2. Create the following entries:

Field	Value
01	`Incorrect Maintenance-No longer used`
02	`Outdated-No longer used`

3. Save your entries and ignore any warning messages.

5 Configuring Basic Settings for Charge Calculations

5.1 Defining Category Codes

Procedure

1. In Customizing for SAP TM, choose *SAP Transportation Management* > *Transportation Management* > *Basic Functions* > *Charge Calculation* > *Basic Settings for Charge Calculation* > *Define Charge Categories*.
2. Check that the following entries exist and create any that are missing:

Charge Category	Short Description
001	All Charges
002	Additional Charges
003	Transport Charges & Additional Charges
004	Basic Freight
005	Destination Haulage Charges
006	Disbursement
007	Destination Port Charges
008	Miscellaneous Charges
009	Transport Charges up to a Specified Loc.
010	Origin Port Charges
011	Origin Haulage Charges
012	Other Charges

Charge Category	Short Description
013	Specific Amount Payable
014	Transport Costs (Carriage Charges)
015	All Costs up to a Specified Loc.
016	Weight Charge
017	All Costs
018	Valuation Charges
019	Supply of Certificate of Shipment
020	Supply of Consular Formalities
021	Supply of Non-Categorized Documentation
022	Supply of Customs Formalities, Export
023	Supply of Customs Formalities, Transit
024	Supply of Customs Formalities, Import
025	Already Invoiced Amount
026	Adjustment / Quotation Amount

5.2 Defining Subcategory Codes

Procedure

1. In Customizing for SAP TM, choose *SAP Transportation Management* > *Transportation Management* > *Basic Functions* > *Charge Calculation* > *Basic Settings for Charge Calculation* > *Define Charge Subcategories*.
2. Check that the following entries exist and create any that are missing:

Charge Subcategory	Description
100000	Freight Charges

Charge Subcategory	Description
101000	Basic Freight
101021	Rate
103001	Bunker Adjustment Factor
103008	Fuel Surcharge
103009	Surcharge
104000	Toll Fee Fix
104007	Terminal Handling Charges
104012	Destination Port Additional
104013	Origin Port Additional
104130	Destination Port Service Charge
104131	Origin Port Service Charge
104132	Detention Charges
609102	Stop in Transit
710000	Discount

5.3 Defining Charge Type Codes

Context

In this Customizing activity, you define charge types that you can assign to calculation sheets and rate tables. Once assigned to a calculation sheet line item or a rate table, a charge type plays an important role how the system calculates the transportation charges for that line.

When defining charge types, you can make the following settings:

- Specify whether a charge type can result in a positive or negative value
- Specify whether a charge type can be an absolute value or a percentage value
- Specify whether you want to set the charge type as an absolute value or a percentage value each time you assign the charge type
- Assign a default calculation base to the charge type so you do not need to assign a charge type each time you create a calculation sheet line item

- Indicate whether a charge type is a leading charge type and so must have a value for the system to be able to calculate the charges
- Mark a charge type as inactive so the system cannot use the charge type to create any new calculation sheets or rate tables
- Enter a charge type description in multiple languages

Procedure

1. In Customizing for SAP TM, choose *SAP Transportation Management* > *Transportation Management* > *Basic Functions* > *Charge Calculation* > *Basic Settings for Charge Calculation* > *Define Charge Types*.
2. Check that the following entries exist and create any that are missing:

Charge Type	Charge Subcategory	Charge Category	Description	Positive/Negative	Value Type
FB00	100000	004	Basic Freight	Positive	Absolute
LMPR	104132	002	Lumper Charges	Positive	Absolute or Percentage
FUEL	103008	003	Fuel Surcharge	Positive	Absolute or Percentage
STOP	609102	002	Stop Off Charges	Positive	Absolute or Percentage
DISC	710000	004	Freight discount	Positive or Negative	Absolute or Percentage
CFI	100000	012	Customs Fine	Positive	Absolute
PAE	104131	010	Port Additionals / Port Dues – Export	Positive	Absolute or Percentage
PAI	104130	007	Port Additionals / Port Dues – Import	Positive	Absolute or Percentage
ULF	101021	012	Logistics Fee	Positive	Absolute
ROAD	100000	004	Road Transportation Charge	Positive	Absolute
PIO	101000	014	Pick-Up/ Drop-Off Charge	Positive	Absolute

Charge Type	Charge Subcategory	Charge Category	Description	Positive/Negative	Value Type
BSF	101021	003	Base Sea Freight	Positive	Absolute
IPSD	104012	002	Int. Port Security Destination	Positive	Absolute or Percentage
IPSO	104013	002	Int. Port Security Origin	Positive	Absolute or Percentage
THCD	104007	007	Terminal Handling Charge (THC) Destination	Positive	Absolute
THCO	104007	010	Terminal Handling Charge (THC) Origin	Positive	Absolute
RAIL	100000	003	Rail Transportation Charge	Positive	Absolute
HAUF	101000	003	FTL Haulage	Positive	Absolute or Percentage
ADJ	N/A	026	Adjustment / Quotation Amount	Positive or Negative	Absolute
BASE	100000	004	Base freight	Positive	Absolute
BAF	103001	012	Bunker Adj. Factor	Positive	Absolute
THC	104007	014	Terminal Handling Charge	Positive	Absolute
PEAK	103009	008	Peak Season Charge	Positive or Negative	Percentage
LSFS	103009	008	Low Sulphur Surcharge	Positive	Absolute
PRE	100000	014	Land Pre Carriage	Positive	Absolute
TOLL	104000	002	Toll Fee Fix	Positive	Absolute
BLAD	104000	002	B/L Fee Fix	Positive	Absolute
CAF	103009	012	Currency Adjustment Factor	Positive	Percentage

Charge Type	Charge Subcategory	Charge Category	Description	Positive/Negative	Value Type
PRS	103009	012	Piracy Risk Surcharge	Positive	Absolute or Percentage
EBAF	103001	002	E-BAF (Emergency Bunker Adj. Factor)	Positive	Percentage
ON	100000	014	On Carriage	Positive	Absolute
AMS	104000	002	Automated Manifest Submission Fee	Positive	Absolute
INS	103009	003	Insurance	Positive	Absolute or Percentage
QUALD	104130	012	Quality Survey Charge Destination (QUALD)	Positive or Negative	Absolute or Percentage
QUALO	104131	012	Quality Survey Charge Origin (QUALO)	Positive or Negative	Absolute or Percentage

6 Configuring Settings for ERP Order Integration

6.1 Defining Conditions for OTR Type Determination

Context

The system permits only one condition for determining order-based transportation requirements (OTRs). If a condition does not exist in your system, you must create one. Alternatively, you may have to change the condition.

> **i** Note
>
> Before you can maintain the decision table for this condition, you must create the corresponding document types in SAP TM. For more information, see the configuration guide for your scenario.

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:

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

3. Choose *Continue*.

> **i Note**
>
> If the system displays an error message stating that the condition already exists, choose *Application Administration* > *General Settings* > *Conditions* > *Edit Condition* and maintain or check the data specified below.

4. Choose *Data Access Definition*.
5. In the *Data Access Definition* area, choose *Create* and enter the following data in the new table row:

Field	Value
Column Position in BRFplus Table	`10`
Data Access Definition for Conditions	`/SCMTMS/TRQ_ORD_CAT`
Data Object Description	`TR: Original Order Category`

> **i Note**
>
> You may have to delete existing table content.

6. In the *Business Object Based Data Access Definition* area below the table, enter the following data:

Field	Value
Name of BO Used in Condition	`/SCMTMS/TRQ`
Name of BO Node Used in Condition	`ROOT`
Name of the Field of the BO Node	`BASE_BTD_TCO`

7. In the *Data Access Definition* area, choose *Create* and enter the following data in the new table row:

Field	Value
Column Position in BRFplus Table	`20`
Data Access Definition for Conditions	`/SCMTMS/TRQ_ORD_TYPE`
Data Object Description	`TR: ERP Order Type`

8. In the *Business Object Based Data Access Definition* area below the table, enter the following data:

Field	Value
Name of BO Used in Condition	`/SCMTMS/TRQ`

Field	Value
Name of BO Node Used in Condition	**ROOT**
Name of the Field of the BO Node	**BASE_BTD_PROCTCO**

9. Choose *Save* and *Back* to save the entries and return to initial screen of the condition.
10. Choose *Edit*.
11. In the *Table Contents* area, choose *Insert New Row* to create a new condition record line.
12. Enter or check each parameter value for the new condition record as specified below.
    1. In the column with header description *TR: Original Order Category*, choose the icon in your new row and choose *Direct Value Input* from the context menu.
    2. In the dropdown menu, select *is equal to* and enter **001** (purchase order) in the adjacent field.
    3. Choose *OK*.
    4. In the same row, in the column with header description *TR: ERP Order Type* choose the icon in your new role and choose *Direct Value Input* from the context menu.
    5. In the dropdown menu, select *is equal to* and enter **DIT1** in the adjacent field.
    6. Choose *OK*.
    7. In the same row, in the column with header description *OTR Type*, choose the icon in your new role and choose*Direct Value Input* from the context menu.
    8. In the available field, enter **DIT1**.
    9. Save your entries.
13. Repeat the process above to create or check the following parameter values via *Direct Value Input* of the corresponding table cell:

Row	TR: Original Order Category	TR: ERP Order Type	OTR Type
2	*is equal to* 001	*is equal to* IIL4	**IIL2**
3	*is equal to* 114	*is equal to* ODOT4	**DOT1**
4	*is equal to* 114	*is equal to* OTTL	**OTTL**

> **i** Note
>
> These values are scenario-specific and need to be created only if you intend to implement the corresponding scenario:
>
> - OTR type DIT1 is required for the *Domestic Inbound Transportation* scenario.
> - OTR type IIL2 is required for the *International Inbound Transportation* scenario.
> - OTR type DOT1 is required for the *Domestic Outbound Transportation* scenario.
> - OTR type OTTL is required for the *Outsourced Transportation* scenario.

6.2 Defining Text Schemas

Procedure

1. In Customizing for SAP TM, choose *Cross-Application Components* > *Processes and Tools for Enterprise Applications* > *Reusable Objects and Functions for BOPF Environment* > *Dependent Object Text Collection* > *Maintain Text Schema*.
2. In the navigation tree, double-click *Text Type* and enter the following data:

Field	Value
Text Type	**TM01**
Description	**Driver Notes**

3. In the navigation tree, double-click *Text Schema* and enter the following data:

Field	Value
Txt Schema	**OT0001**
Description	**Text schema for OT**

4. Select your new text schema and double-click *Text Type to Text Schema Assignment* in the navigation tree.
5. Enter your data based on the following example:

Text Type	Mandatory	Internal	Lang. Text
TM01	Not selected	Not selected	Not selected
A0001	Not selected	Not selected	Not selected

6. In the navigation tree, double-click *Assign Text Schema to BO and Node* and enter the following data:

Business Object Name	Node Name
/SCMTMS/TOR	**ROOT**
/SCMTMS/TOR	**TENDERING**
/SCMTMS/TRQ	**ROOT**

> **i Note**
>
> A warning will be displayed for each line where value `OT0001` is automatically inserted in the *Txt Schema* column.

7. Save your changes.

6.3 Defining Text Types

Procedure

1. In Customizing for SAP TM, choose *Cross-Application Components* > *Processes and Tools for Enterprise Applications* > *Reusable Objects and Functions for BOPF Environment* > *Dependent Object Text Collection* > *Maintain Text Schema* .
2. Choose *New Entries* and create the following entry:

Field	Value
Text Type	**`020`**
Description	**`General Header Text`**

3. Choose *Text Schema*.
4. Select `ERP_DFLT`.
5. Choose *Text Type to Text Schema Assignment*.
6. Choose *New Entries*.
7. Enter the following data:

Text Type	Mandatory	Internal	Language Text
`020`	Not selected	Not selected	Not selected

8. Save your entries.

7 Configuring Settings for ERP Shipment Integration

7.1 Configuring Inbound Integration of ERP Shipments

Context

Once you have configured shipment integration in your SAP ERP system, you have to carry out the following steps in the SAP TM system.

Procedure

1. Specify the freight order type that the SAP TM system uses to create freight orders based on shipments received from SAP ERP.

   You have the following options:

   - You can assign freight order types to ERP shipment types in Customizing for SAP TM under *SAP Transportation Management* > *Transportation Management* > *Integration* > *ERP Logistics Integration* > *Shipment Integration* > *Assign Freight Order Types to ERP Shipment Types*.
   - You can specify a default freight order type that the system uses if it cannot find an entry for an ERP shipment type in the Customizing activity *Assign Freight Order Types to ERP Shipment Types*. To specify the default freight order type, select the *Default Type for ERP Shipment Integration* checkbox in the relevant freight order type in Customizing for SAP TM under *SAP Transportation Management* > *Transportation Management* > *Freight Order Management* > *Freight Order* > *Define Freight Order Types*.

   In the *Define Freight Order Types* Customizing activity, you also have to assign a suitable output profile to the freight order types and specify that they are relevant for subcontracting. You do this as follows:

   - In the *Basic Settings* screen area, set the value in the *Freight Order Can Be Subcontracted* field to *Relevant for Subcontracting*.
   - In the *Output Options* screen area, enter the output profile in the *Output Profile* field.
2. Enable PPF output agent `/SCMTMS/TOR_TENDERING`, which is used to send the tendering result to SAP ERP.

You do this in Customizing for *Cross-Application Components* under *Processes and Tools for Enterprise Applications* > *Reusable Objects and Functions for BOPF Environment* > *PPF Adapter for Output Management* > *Maintain Output Management Adapter Settings*.

You have to enable the following entry:

- Output Agent: `/SCMTMS/TOR_TENDERING`
- Business Object: `/SCMTMS/TOR`
- Node: `TENDERING`
- Agent Class for BO Node: `/SCMTMS/CL_PPF_SERV_TOR_TEND`

7.1.1 Defining Number Ranges for Inbound Integration

Context

For the inbound integration of SAP ERP shipments into SAP TM, you must use an external number range for the SAP TM freight orders and align this number range with the internal number range of the corresponding shipments in SAP ERP.

Procedure

1. In Customizing for *SAP Transportation Management*, choose *Transportation Management* > *Freight Order Management* > *Define Number Range Intervals for Freight Order Management*.
2. Choose *Change Intervals*.
3. Define the following new number ranges for freight orders:

   External Number Range for Freight Orders - Shipment Inbound Integration

No.	From No.	To No.	External
N2	6500000000	6699999999	Select

> **i Note**
>
> - Choose any available number to define the number ranges.
> - You can choose any available number range for inbound shipment integration in SAP TM. If you use an external number range in SAP TM, you must ensure that the number range for the freight order in SAP TM and the corresponding shipment in SAP ERP is the same. If you use an internal number range in SAP TM, which is possible, the number range used in SAP ERP does not have to be aligned.

7.1.2 Defining Freight Order Types for Inbound Integration

Procedure

1. In Customizing for *Transportation Management*, choose *Freight Order Management* > *Freight Order* > *Define Freight Order Types*.
2. On the *Freight Order Types: Overview* screen, choose *New Entries*.
3. Create freight order type `ZSHI` with the following details if you want to use inbound shipment integration with SAP TM:

Field	Description	User Action and Values
1. Freight Order Types (in the header area)		
Freight Order Type	Unique 4–character identification of the freight order	**ZSHI**
Description	Free-text description of the freight order type	**EWM: Freight Order Inbound Shipment Int.**
2. Basic Settings		
Freight Order Can Be Subcontracted	Indicator that controls if this freight order type can use subcontracting processes	**01 - Relevant for Subcontracting**
Shipper/Consignee Determination	Defines how the shipper and consignee partners are determined for the freight order	**Determination Based on Predecessor Documents**
Fix Document When Saving	None	Deselect
Freight Order Can Be Deleted	Indicates whether the freight order can be deleted	Select
3. Number Range Settings		
Time For Drawing	Determines the time at which a number is assigned to the freight order	**Draw Number When Saving Document**
Number Range Interval	Specifies the number range that is to be used for this document type.	**N2** (Use the internal number range you created previously)
4. Change Controller Settings		

Field	Description	User Action and Values
Default Change Strategy	Default strategy used for tendering behavior when any changes are made to the freight order key fields, such as partners and quantities.	**DEF_CHACO**
Change Strategy Determination Cond.	Specifies the condition that the system uses to determine a change controller strategy at runtime. If you have defined several change controller strategies, you can use a condition for determining the appropriate change controller strategy. The condition type of this condition is `/SCMTMS/CC_TOR_STRAT`.	Blank
Quantity Tolerance Condition	Condition that determines the tolerances for a quantity change in a business document	Blank
Date Tolerance Condition	Condition that determines the tolerances for a date change in a business document	Blank
5. Additional Strategies		
Creation Strategy	None	Blank
6. Default Units of Measure		
Weight	Weight	**Kilogram**
Volume	Volume	**Cubic Meter**
7. Execution Settings		
Execution Tracking Relevance	None	Blank
Check Condition "Ready for Execution"	Not used	Blank
Immediate Processing	Set the status *In Process* as soon as the document is created and saved	Select
Propagate Execution Info	None	Blank
8. Event Management Settings		
Application Object Type	Application object type	Blank

Field	Description	User Action and Values
Last Exp. Event	Last expected event	Blank
9. Organizational Unit Determination		
Execution Organization	Execution Organization	Blank
Purchasing Organization	Purchasing Organization	Blank
Execution Group	Execution Group	Blank
Purchasing Group	Purchasing Group	Blank
Cons Org. Unit of User	Considers organizational unit of groups	Deselect
Condition	Condition	Blank
10. Tendering Settings		
Use Default Settings	Use default settings	Deselect
Use Condition for Sett. Determ.	Use condition for settlement determination	Deselect
Use Type-Specific Settings	Allows further definition of the freight order type-specific processes for process settings and communication settings	Select
Process Setting	Controls the tendering process settings	Blank
Communication Setting	Communication Setting	Blank
11. Default MTr Determination		
Default Means of Transport for Type	Specifies the default means of transport for the freight order type	Blank
Cond for Def MTr	Condition for default means of transport	Blank
Transportation Mode	Transportation Mode	Road
12. Additional Settings		
DG Profile	Dangerous goods profile	Blank
Customs Profile	Customs profile	Blank

Field	Description	User Action and Values
Default FSD Type	Default freight settlement document type	Blank
HBL Number Range	Number range for house bill of lading	Blank
Deflt Carrier Selection Settings	Default carrier selection settings	Blank
Shipment Creation Relevance	Shipment creation relevance	**N – No Shipment Creation in SAP ERP**
13. Output Options		
Output Profile	Output profile	**/SCMTMS/TOR**
Add. Output Profile	Additional output profile	Blank
Text Profile	Text profile	Blank
Dynamic Determination of Output	Dynamic determination of output	Deselect

4. Save your entries.

7.1.3 Assigning Freight Order Types to ERP Shipment Types

Use

Once you have configured inbound shipment integration in your SAP ERP system, you have to carry out the following steps in SAP TM to determine an SAP TM freight order type for an SAP ERP shipment type and process the shipment inbound from SAP ERP.

Prerequisites

You have defined shipment type `ZTMI` in SAP ERP.

Procedure

1. In Customizing for *SAP Transportation Management*, choose *Transportation Management* > *Integration* > *ERP Logistics Integration* > *Shipment Integration* > *Assign Freight Order Types to ERP Shipment Types*.
2. Choose *New Entries*.

3. Specify the freight order type that SAP TM uses to create freight orders based on shipments received from SAP ERP. Add an entry for the following combinations:

ERP Shipment Type	Freight Order Type
`ZTMI`	`ZSHI`

4. Save your entries.

> **i Note**
>
> You can also specify a default freight order type that the system is to use if it cannot determine an entry for an SAP ERP shipment type in the Customizing activity *Assign Freight Order Types to ERP Shipment Types*. To specify the default freight order type, select the *Default Type for ERP Shipment Integration* checkbox in the relevant freight order type in Customizing for *Transportation Management* under *Freight Order Management* > *Freight Order* > *Define Freight Order Types*.

7.1.4 Maintaining Output Management Adapter Settings

Prerequisites

If you intend to use inbound integration of ERP shipments to perform tendering in SAP TM and to send the results back to ERP, you must enable the PPF output agent `/SCMTMS/TOR_TENDERING`, which is used to send the tendering result to SAP ERP.

Procedure

1. In Customizing for SAP TM, choose *Cross-Application Components* under *Processes and Tools for Enterprise Applications* > *Reusable Objects and Functions for BOPF Environment* > *PPF Adapter for Output Management* > *Maintain Output Management Adapter Settings*.
2. Select the *Enable* checkbox for the following entry:
   - Output Agent: `/SCMTMS/TOR_TENDERING`
   - Business Object: `/SCMTMS/TOR`
   - Node: `TENDERING`
   - Agent Class for BO Node: `/SCMTMS/CL_PPF_SERV_TOR_TEND`

> **i Note**
>
> To enable the tendering functionality, you have to make the following additional settings for the freight order type. In the *Define Freight Order Types* Customizing activity, you have to assign a suitable output

profile to the freight order types and specify that they are relevant for subcontracting. You do this as follows:

1. In the *Basic Settings* screen area, set the value in the *Freight Order Can Be Subcontracted* field to *Relevant for Subcontracting*.
2. In the *Output Options* screen area, enter the `/SCMTMS/TOR_TENDERING` output profile in the *Output Profile* field.

7.2 Configuring Outbound Integration of ERP Shipments

Context

Outbound integration of shipments enables you to create, change, and delete shipments in SAP ERP based on freight orders received from SAP TM. To send a freight order to SAP ERP, you have to set up the freight order type accordingly.

Procedure

1. In Customizing for SAP TM, choose *SAP Transportation Management* > *Transportation Management* > *Freight Order Management* > *Freight Order* > *Define Freight Order Types*.
2. Select the relevant freight order type.
3. In the *Output Options* screen area, enter output profile `/SCMTMS/TOR`.
4. In the *Additional Settings* screen area, select *Shipment Creation in SAP ERP*.

7.2.1 Defining Number Ranges for Outbound Integration

Use

For the outbound integration of SAP ERP shipments into SAP TM, you must use an internal number range for the SAP TM freight orders and align this number range with the external number range of the corresponding shipments in SAP ERP.

Procedure

1. In Customizing for *SAP Transportation Management*, choose *Transportation Management* > *Freight Order Management* > *Define Number Range Intervals for Freight Order Management*.
2. Choose *Change Intervals*.
3. Define the following new number ranges for freight orders:

   Internal Number Range for Freight Orders - Shipment Outbound Integration

No.	From No.	To No.	External
`N1`	`6100000000`	`6199999999`	Deselect

> **i Note**
>
> - Choose any available number to define the number ranges.
> - You can choose any available number range for the shipment outbound integration. However, you must ensure that the number range for the freight order in SAP TM and the corresponding shipment in SAP ERP is the same.

7.2.2 Defining Freight Order Types for Outbound Integration

Procedure

1. In Customizing for *Transportation Management*, choose *Freight Order Management* > *Freight Order* > *Define Freight Order Types*.
2. On the *Freight Order Types: Overview* screen, choose *New Entries*.
3. Create freight order type `ZSHI` with the following details if you want to use outbound shipment integration with SAP TM:

Field	Description	User Action and Values
1. Freight Order Types (in the header area)		
Freight Order Type	Unique 4–character identification of the freight order	`ZSHO`
Description	Free-text description of the freight order type	`Freight Order Outbound Shipment Int.`
2. Basic Settings		

Field	Description	User Action and Values
Freight Order Can Be Subcontracted	Indicator that controls whether the freight order type can use subcontracting processes	**01 - Relevant for Subcontracting**
Shipper/Consignee Determination	Defines how the shipper and consignee partners are determined for the freight order	**Determination Based on Predecessor Documents**
Fix Document When Saving	None	Deselect
Freight Order Can Be Deleted	Indicates whether the freight order can be deleted	Select
3. Number Range Settings		
Time For Drawing	Determines the time at which a number is assigned to the freight order	**Draw Number When Saving Document**
Number Range Interval	Specifies the number range that is to be used for this document type	**N1** (Use the internal number range you created previously)
4. Change Controller Settings		
Default Change Strategy	Default strategy used for tendering behavior when any changes are made to the freight order key fields, such as partners and quantities	**DEF_CHACO**
Change Strategy Determination Cond.	Specifies the condition that the system uses to determine a change controller strategy at runtime. If you have defined several change controller strategies, you can use a condition for determining the appropriate change controller strategy. The condition type of this condition is `/SCMTMS/CC_TOR_STRAT`.	Blank
Quantity Tolerance Condition	Condition that determines the tolerances for a quantity change in a business document	Blank
Date Tolerance Condition	Condition that determines the tolerances for a date change in a business document	Blank
5. Additional Strategies		

Field	Description	User Action and Values
Creation Strategy	Creation Strategy	Blank
6. Default Units of Measure		
Weight	Weight	`Kilogram`
Volume	Volume	`Cubic Meter`
7. Execution Settings		
Execution Tracking Relevance	None	Blank
Check Condition "Ready for Execution	Not used	Blank
Immediate Processing	Set the status *In Process* as soon as the document is created and saved	Select
Propagate Execution info	None	Blank
8. Event Management Settings		
Application Object Type	Application object type	Blank
Last Exp. Event	Last expected event	Blank
9. Organizational Unit Determination		
Execution Organization	Execution organization	Blank
Purchasing Organization	Purchasing organization	Blank
Execution Group	Execution group	Blank
Purchasing Group	Purchasing group	Blank
Cons Org. Unit of User	Considers organizational unit of group	Deselect
Condition	Condition	Blank
10.Tendering Settings		
Use Default Settings	Use default settings	Deselect
Use Condition for Sett. Determ.	Use condition for settlement determination	Deselect
Use Type Specific Settings	Allows further definition of the freight order type-specific processes for process settings and communication settings.	Select

Field	Description	User Action and Values
Process Setting	Controls the tendering process settings	Blank
Communication Setting	Communication setting	Blank
11. Default MTr Determination		
Default Means of Transport for Type	Specifies the default means of transport for the freight order type	Blank
Cond for Def MTr	Condition for default means of transport	Blank
Transportation Mode	Transportation Mode	Road
12. Additional Settings		
DG Profile	Dangerous goods profile	Blank
Customs Profile	Customs profile	Blank
Default FSD Type	Default freight settlement document type	Blank
HBL Number Range	Number range for house bill of loading	Blank
Deflt Carrier Selection Settings	Default carrier selection settings	Blank
Shipment Creation Relevance	Shipment creation relevance	**`C – Shipment Creation with HUs for Container Only`**
13. Output Options		
Output Profile	Output profile	**`/SCMTMS/TOR`**
Add. Output Profile	Additional output profile	Blank
Text Profile	Text profile	Blank
Dynamic Determination of Output	Dynamic determination of output	Deselect

> **i** Note
>
> Alternatively, you can set the *Shipment Creation Relevance* field to one of the following values:
>
> - **`V – Shipment Creation with HUs for Vehicles Only`** if you want to transfer a vehicle handling unit to SAP ERP and SAP EWM.
> - **`H – Shipment Creation with HUs for Vehicles and Containers`** if you want to transfer a container handling unit and a vehicle handling unit to SAP ERP and SAP EWM.

4. Save your entries.

7.3 Configuring Delivery Split/Update Processing

Delivery split/update processing enables you to send delivery splits or delivery updates to SAP ERP if there are relevant planning changes in SAP TM. To enable the delivery split/update processing, you must set up the corresponding Customizing accordingly. Delivery splits and updates only consider outbound deliveries. Inbound deliveries are not covered.

7.3.1 Defining Delivery Split/Update Types

Context

To enable delivery split/update processing, you have to define delivery split/update types and assign them to your delivery-based transportation requirement type in a second step.

Procedure

1. In Customizing for SAP TM, choose *SAP Transportation Management* > *Transportation Management* > *Integration* > *ERP Logistics Integration* > *Delivery-Based Transportation Requirement* > *Define Delivery-Split/Update Types*.
2. Choose *New Entries*.
3. Enter a delivery split/update type and a corresponding description.
4. Select the *Send Delivery Split/Update* attribute to enable the processing of delivery splits and updates with this type.
5. Specify other settings according to the business requirements.
6. Save your entries.

7.3.2 Adjusting Delivery-Based Transportation Requirements

Context

As the system processes delivery splits or updates based on the data of delivery-based transportation requirements, you must assign a delivery split/update type and an output profile to those delivery-based transportation requirements types, which you intend the system to process delivery splits or updates for.

Procedure

1. In Customizing for SAP TM, choose *SAP Transportation Management* > *Transportation Management* > *Integration* > *ERP Logistics Integration* > *Delivery-Based Transportation Requirement* > *Define Delivery-Based Transportation Requirement Types*.
2. Select the *Delivery-Based Transportation Requirement Type* you want to enable the delivery split/update functionality for, and choose *Details*.
3. Assign a *Delivery Split/Update Type* to your *Delivery-Based Transportation Requirement Type*.
4. Enter the `/SCMTMS/TRQ_DTR` profile in the *Output Profile* field.
5. Save the delivery-based transportation requirement type.

7.4 Configuring Settings for Plant Maintenance (PM) Integration

Use

You use this process to configure the settings in SAP Transportation Management (SAP TM) that enable you to integrate plant maintenance (PM) processing of SAP ERP and resource master data of SAP TM.

Prerequisites

You have defined data like the resource type and other mandatory information to allow the creation of resources in SAP TM. You maintained the data in SAP TM based on data of technical objects from SAP ERP in Customizing for *SAP Transportation Management* under *Transportation Management* > *Integration* > *Master Data Integration* > *Integration of Technical Objects with TM Resources*. There are activities available for defining resource attributes based on equipments and on functional locations.

> **Note**
>
> If the equipment has no fleet data and functional locations, the equipment group and type is mandatory to determine the capacity of a resource.

Activities

Logging

You can view the application logging for processing using transaction **SLG1** (Application Log: Display Log) through object `CIFSCM` and sub object `RESTM`.

Enhancement Possibilities

To modify the data to be transferred from SAP ERP to SAP TM, the following BAdIs are available in Customizing:

- *SAP Transportation Management* > *Transportation Management* > *Business Add-Ins (BAdIs) for Transportation Management* > *Integration* > *Integration of Technical Objects* > *BAdI: Change Data in Resource BAPIs*

  > **Note**
  >
  > There is an example implementation that resolves naming conflicts between the internal resource name and the external resource name.

- *SAP Transportation Management* > *Transportation Management* > *Business Add-Ins (BAdIs) for Transportation Management* > *Integration* > *Integration of Technical Objects* > *BAdI: CIF Inbound Processing for TM Resource*

8 Setting Up SAPconnect E-Mail

For information about how to configure your SAPconnect e-mail, see SAP Note 455140.

Important Disclaimers and Legal Information

Hyperlinks

Some links are classified by an icon and/or a mouseover text. These links provide additional information.
About the icons:

- Links with the icon  : You are entering a Web site that is not hosted by SAP. By using such links, you agree (unless expressly stated otherwise in your agreements with SAP) to this:
  - The content of the linked-to site is not SAP documentation. You may not infer any product claims against SAP based on this information.
  - SAP does not agree or disagree with the content on the linked-to site, nor does SAP warrant the availability and correctness. SAP shall not be liable for any damages caused by the use of such content unless damages have been caused by SAP's gross negligence or willful misconduct.
- Links with the icon  : You are leaving the documentation for that particular SAP product or service and are entering a SAP-hosted Web site. By using such links, you agree that (unless expressly stated otherwise in your agreements with SAP) you may not infer any product claims against SAP based on this information.

Beta and Other Experimental Features

Experimental features are not part of the officially delivered scope that SAP guarantees for future releases. This means that experimental features may be changed by SAP at any time for any reason without notice. Experimental features are not for productive use. You may not demonstrate, test, examine, evaluate or otherwise use the experimental features in a live operating environment or with data that has not been sufficiently backed up.
The purpose of experimental features is to get feedback early on, allowing customers and partners to influence the future product accordingly. By providing your feedback (e.g. in the SAP Community), you accept that intellectual property rights of the contributions or derivative works shall remain the exclusive property of SAP.

Example Code

Any software coding and/or code snippets are examples. They are not for productive use. The example code is only intended to better explain and visualize the syntax and phrasing rules. SAP does not warrant the correctness and completeness of the example code. SAP shall not be liable for errors or damages caused by the use of example code unless damages have been caused by SAP's gross negligence or willful misconduct.

Gender-Related Language

We try not to use gender-specific word forms and formulations. As appropriate for context and readability, SAP may use masculine word forms to refer to all genders.

www.sap.com/contactsap

THE BEST RUN SAP