SAP Transportation Management

Configuration Guide for International Inbound Logistics

CUSTOMER
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Icons in Body Text

Icon	Meaning
	Caution
	Example
	Note
	Recommendation
	Syntax

Additional icons are used in SAP Library documentation to help you identify different types of information at a glance. For more information, see *Help on Help → General Information Classes and Information Classes for Business Information Warehouse* on the first page of any version of *SAP Library*.

Typographic Conventions

Type Style	Description
Example text	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.
Example text	Emphasized words or phrases in body text, graphic titles, and table titles.
EXAMPLE TEXT	Technical names of system objects. These include report names, program names, transaction codes, table names, and key concepts of a programming language when they are surrounded by body text, for example, SELECT and INCLUDE.
`Example text`	Output on the screen. This includes file and directory names and their paths, messages, names of variables and parameters, source text, and names of installation, upgrade and database tools.
`Example text`	Exact user entry. These are words or characters that you enter in the system exactly as they appear in the documentation.
`<Example text>`	Variable user entry. Angle brackets indicate that you replace these words and characters with appropriate entries to make entries in the system.
`EXAMPLE TEXT`	Keys on the keyboard, for example, `F2` or `ENTER`.

Table of Contents

Configuration Guide for International Inbound Logistics

This document contains the configuration settings for the *International Inbound Logistics* scenario. You must implement this scenario as described and once you have verified the functionality, you can modify the data to suit your own environment and operating conditions.

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	Update to Creating Dangerous Goods Master Data [Page 45]
2.0	September 2012	• The Defining Schedule Types [Page 56] section has been added. • Defining Means of Transport [Page 52] and Defining Schedules [Page 57] have been updated as part of the SAP TM 9.0 setup: • The *Defining Departure Calendar* section has been removed.
3.0	December 2013	Updated for SAP Transportation Management 9.1

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 current version of each SAP Note, which you can find on SAP Service Marketplace at http://service.sap.com/notes.

SAP Note Number	Description
1738013	TM: Integration with ERP Enhancement Packages

1 The Scenario

Some settings in this guide can be copied from the existing SAP ERP configuration. In particular, SAP ERP Customizing settings can be reused for the following:

- Enterprise structure definition and relevant assignments
- Financial Accounting
- Controlling

If you require a scenario-specific enterprise structure, we recommend that you copy the existing, standard configuration settings (such as *Country Template for Company Codes incl. G/L Accounts*) and change them as necessary (such as addresses).

Business system groups, logical systems, RFC connections, and system connections used throughout this guide are examples only. Replace these with your own data.

This guide also assumes the use of Business Add-Ins (BAdIs), which add a prefix or suffix to master data objects transferred from SAP ERP to SAP TM (see SAP Note 458914). An overview of the prefixes and suffixes used is provided in the table below:

Business Object	Prefix	Suffix
Carrier	CA–	None
Customer	CU–	None
Plant	PL–	None
Shipping Point	SP–	None
Supplier	SU–	None
System	None	–@ERP001

Example:

Shipping point name in SAP ERP: 1200

Shipping point name in SAP TM: SP1200@ERP001

If you have not implemented the corresponding BAdI in your system, the names of the objects will not be changed.

Prerequisites

Before you begin to configure the *International Inbound Logistics* scenario, you must have configured the following guides in SAP Solution Manager under *SAP Transportation Management* > *Configuration Structures* > *Basic Settings for SAP TM 9.1*:

- Basic Settings and Integration for ERP

- Basic Settings for SAP TM
- Integration of SAP TM and SAP Event Management
- Integration of Output Management
- Basic Settings for Visual Business

Your SAP ERP system must also be configured to run the following processes:

- MM: Purchase-to-pay
    - Purchase order entry
    - Inbound delivery creation
    - Posting goods receipt
    - Logistics invoice verification
    - Invoice document creation (ERS settlement)
    - Transfer to accounting
- FI/CO
    - Supporting the processes listed above
    - Country-specific legal requirements (such as tax calculation)

If you want to integrate SAP TM with SAP EHS Dangerous Goods Management, you must configure your SAP ERP system to run this process:

- EHS – DGP
    - Dangerous goods master
    - Dangerous goods checks
    - Dangerous goods documents

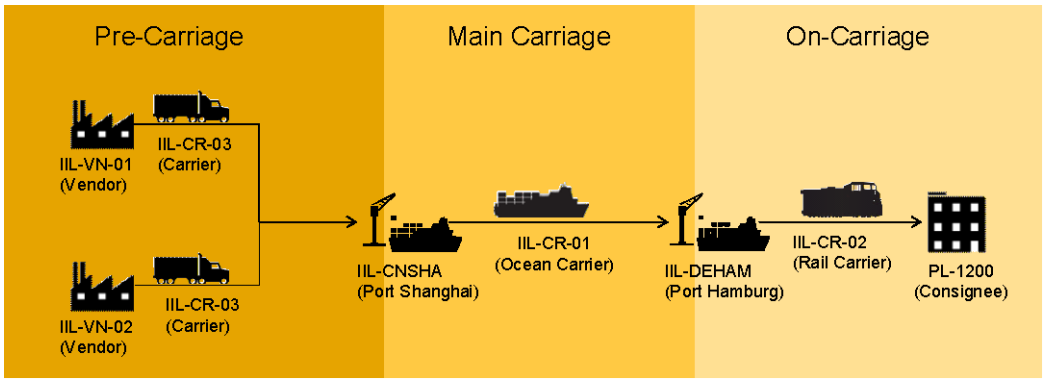
User Profile

Before you begin to configure the *International Inbound Logistics* scenario, you must configure user profile `TM_INVOICE_CLERK` in your SAP ERP system. To do so, proceed as follows:

1. In SAP ERP, choose *System* > *User Profile* > *Own Data*.
2. Choose the *Parameters* tab page.
3. In the *Parameter ID* column, enter `TM_INVOICE_CLERK`.
4. Save your entries.

Geography

The *International Inbound Logistics* scenario assumes an international overseas transportation network with two vendors located in China, ocean transport from the port in Shanghai to Hamburg, and a receiving/ordering plant located in Dresden, Germany.



Three Stages of the "International Inbound Logistics" Scenario

To use the transportation network as described in this document, you must ensure that the vendors and plant used in the customer system are located in the same vicinity.

The following organizational structures and document types are used by default, and you must change these to customer-specific organizational structures as required:

Company code	**1000**
Controlling area	1000
Plant	1200
Storage location	0001
Shipping point/receiving point	1200
Purchasing organization	1000
Sales organization	1000
Distribution channel	10
Purchase order document type	IIL4

2 Defining Organizational Setup in ERP

The following IDES data is used throughout this document:

- Controlling area 1000
- Company code 1000

You can also define your own organizational structure as required.

Defining Organizational Setup comprises the following processes:

2.1 Assigning Goods Receiving Points for Inbound Deliveries

In this Customizing activity, you assign goods receiving points to the combination of plant and storage location.

Procedure

1. In Customizing for SAP ERP, choose *Logistics Execution* > *Shipping* > *Basic Shipping Functions* > *Shipping Point and Goods Receiving Point Determination* > *Assign Goods Receiving Points for Inbound Deliveries*.

2. Create an entry with the following data:

Plant	Storage Location	Shipping Point
1200	0001	1200

2.2 Defining Material Type Attributes

In this Customizing activity, you define the attributes for material type `HALB`.

Procedure

1. In Customizing for SAP ERP, choose *Logistics – General* > *Material Master* > *Basic Settings* > *Material Types* > *Define Attributes of Material Types*.

2. For material type `HALB`, create the following entry:

Val. Area	Matl Type	Qty Updating	Value Updating
1200	HALB	X	X

2.3 Mapping Organizational Units for Purchasing

In this Customizing activity, you define how organizational units for purchasing in SAP TM are mapped to those in SAP ERP. You also configure additional settings for creating service purchase orders from freight settlement documents.

Procedure

1. In Customizing for SAP ERP, choose *Integration with Other SAP Components* > *Transportation Management* > *Invoice Integration* > *Invoicing* > *Mapping of Organizational Units* > *Assign Organizational Units for Purchasing*.
2. Choose *New Entries*.
3. Add the following entry:

Field	Value
Logical System	Logical system ID for your SAP TM system, for example, TM1CLNT001
TM Pur. Organization	Enter the internal number of the purchasing organization that you created in Creating Organizational Data in TM [Page 72]
TM Purchasing Group	Enter the internal number of the purchasing group that you created in Creating Organizational Data in TM [Page 72]
Settlement Type	IIL5
Purchasing Org.	1000
Purch. Group	002
Plant	1200
Company Code	1000
Document Type	IIL4
Material Group	007

4. Save your entries.

3 Defining Master Data in ERP: Material and Vendor Activities

3.1 Defining Vendor Master Data

In this procedure, you create vendor master data. The vendor master is then transferred to SAP TM via CIF. The corresponding locations with location type 1011 (Vendor) are created in SAP TM.

Procedure

1. On the *SAP Easy Access* screen for SAP ERP, choose *Logistics* > *Materials Management* > *Purchasing* > *Master Data* > *Vendor* > *Central* > *Create* .

2. Create the vendors assigned to the purchasing organization 1000 according to the tables below:

Vendor ID	Company Code	Purch. Organization	Account Group
IIL-VN-01	1000	1000	0001
IIL-VN-02	1000	1000	0001
IIL-CR-01	1000	1000	0005
IIL-CR-02	1000	1000	0005
IIL-CR-03	1000	1000	0005
IIL-CR-04	1000	1000	0005

3. On the *Create Vendor: Address* enter the following address data for each vendor:

Vendor ID	Name	Search Term	Address
IIL-VN-01	IIL Vendor 1	IIL VENDOR	4711 Main Street 100621 Beijing CN
IIL-VN-02	IIL Vendor 2	IIL VENDOR	7589 Main Street 518128 Shenzhen CN
IIL-CR-01	Ocean Carrier	Ocean Carrier	Musterstrasse 5570 60326 Frankfurt am Main DE
IIL-CR-02	DE Rail Carrier	DE Rail Carrier	Musterstrasse 1000 20095 Hamburg DE

IIL-CR-03	CN Truck Carrier	CN Truck Carrier	CN
IIL-CR-04	CN Forwarding Agent	CN Forwarding Agent	CN

4. On the *Create Vendor: Accounting Information Accounting* screen, enter the following data for each vendor:

Vendor ID	**Recon. Account**	**Cash Mgmnt Group**
IIL-VN-01	160000	A1
IIL-VN-02	160000	A1
IIL-CR-01	160000	A1
IIL-CR-02	160000	A1
IIL-CR-03	160000	A1
IIL-CR-04	160000	A1

5. On the *Create Vendor: Payment Transactions Accounting* screen, enter the following data for each vendor:

Vendor ID	**Payment Terms**
IIL-VN-01	Blank
IIL-VN-02	Blank
IIL-CR-01	0002
IIL-CR-02	0002
IIL-CR-03	0002
IIL-CR-04	0002

6. On the *Create Vendor: Purchasing Data* screen, enter the following data for each vendor:

Field	**IIL-VN-01**	**IIL-VN-02**	**IIL-CR-01**	**IIL-CR-02**	**IIL-CR-03**	**IIL-CR-04**
Order Crcy	EUR	EUR	EUR	EUR	EUR	EUR
Terms of Payment	0001	0001	0002	0002	0002	0002
Incoterms	FOB / Shanghai (IIL-CNSHA)	FOB / Shanghai (IIL-CNSHA)	Blank	Blank	Blank	Blank
Purch. Group	002	002	Blank	Blank	Blank	Blank
Plnd Dely Time	32 days	32 days	Blank	Blank	Blank	Blank

Conf. Ctrl	0004	0004	Blank	Blank	Blank	Blank
Shpg Cond.	01	01	Blank	Blank	Blank	Blank

3.2 Defining Material Master Data

Procedure

1. On the *SAP Easy Access* screen for SAP ERP, choose *Logistics* > *Materials Management* > *Material Master* > *Material* > *Create (Special)* > *Semifinished Product*.

2. Create the material master for your semifinished product according to the tables below:

Material	Industry Sector
IIL-PROD-01	C Chemical Industry
IIL-PROD-02	C Chemical Industry
IIL-PROD-03	C Chemical Industry
IIL-PROD-04	C Chemical Industry

3. Choose *Select View(s)* and select the following views:
   - Basic Data 1
   - Basic Data 2
   - Sales: General/Plant Data
   - Purchasing
   - Accounting 1

4. In the *Organizational Levels* dialog box, enter the following data:
   - Plant: `1200`
   - Sales Org.: `1000`
   - Distr. Channel: `10`

5. Enter the data as shown in the following tables:

   On the *Basic Data 1* tab page:

Material ID	Description	Base Unit of Measure	Material Group	Gross Weight	Volume
IIL-PROD-01	Polymer Bulk (Int. Inbound Logistic)	TO	01	1000 kg	1 M3
IIL-PROD-02	DG Polymer Bulk (Int. Inbound Logistic)	TO	01	1000 kg	1 M3
IIL-PROD-03	DG Fertilizer	TO	01	1000 kg	1 M3

	Liquid (Int. Inbound Log.)				
IIL-PROD-04	DG Fertilizer Bulk (Int. Inbound Log.)	TO	01	1000 kg	1 M3

On the *Basic Data 2* tab page:

Material ID	**DG Indicator Profile**
IIL-PROD-01	Blank
IIL-PROD-02	GPP
IIL-PROD-03	GPP
IIL-PROD-04	GPP

On the *Sales: General/Plant* tab page:

Material ID	**Plant/Sales Org./Distr. Channel**	**Availability Check**	**Transport Group**	**LoadingGrp**
IIL-PROD-01	1200/none/none	KP (no check)	0001 (bulk)	0001 (Crane)
IIL-PROD-02	1200/none/none	KP (no check)	0001 (bulk)	0001 (Crane)
IIL-PROD-03	1200/none/none	KP (no check)	0002 (liquid)	0001 (Crane)
IIL-PROD-04	1200/none/none	KP (no check)	0001 (bulk)	0001 (Crane)

On the *Purchasing* tab page:

Material ID	**Purchasing Group**	**Material Group**	**Material Freight Grp (Optional)**
IIL-PROD-01	002	01	2821
IIL-PROD-02	002	01	2821
IIL-PROD-03	002	01	1475
IIL-PROD-04	002	01	1475

On the *Accounting 1* tab page:

Material ID	**Valuation Class**	**Standard Price**
IIL-PROD-01	7900	1000
IIL-PROD-02	7900	1100
IIL-PROD-03	7900	1200
IIL-PROD-04	7900	1300

If you want to use material freight groups, you must create them as follows:

1. In Customizing for SAP ERP, choose *Logistics Execution* > *Transportation* > *Basic Transportation Functions* > *Maintain Freight Code Sets and Freight Codes* >.
2. Choose *Define Material Freight Groups*.
3. Enter a material freight group and a description.

The material master and vendor master must be transferred to SAP TM via CIF. This process is not included in the scope of this document.

4 Setting Up Customizing for Purchase Document Transfer in ERP

Activities

4.1 Defining Purchase Order Types

Procedure

1. In Customizing for SAP ERP, choose *Materials Management* > *Purchasing* > *Purchase Order* > *Define Document Types*.

2. Copy type `NB` to a new order type `IIL4` and enter the description `Internat. Purchasing`.

4.2 Activating Transfer of Purchase Orders

In this Customizing activity, you activate the transfer of purchase orders to SAP TM.

Procedure

1. In Customizing for SAP ERP, choose *Integration with Other SAP Components* > *Transportation Management* > *Order Integration* > *Activate Transfer of Purchase Orders*.

2. Assign control key 0006 to purchasing organization 1000, purchasing group 002, and purchase order type IIL4:

Field	Value
POrg	1000
PGr	002
OTyp	IIL4
Ctrl Key	0006
TM No.	B050
Control Key Description	As required

In the PI settings, you must use technical transportation management number (TM No.) B050 to connect to the SAP TM system.

5 Setting Up Dangerous Goods

Activities

5.1 Activating EH&S Business Functions

In this Customizing activity, you activate the environmental health and safety services in the SAP TM system. In turn, this activates the integration processes between SAP TM and EHS Dangerous Goods Management.

Procedure

1. In Customizing for SAP TM, choose *Activate Business Functions*.
2. Select the business function `SCM_EHS_DG_CI_1` and choose *Activate Changes*.

5.2 Configuring EH&S Basic Services

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`.

5.3 Specifying Validity Area Categories

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 28].

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
DGREGULAT	THM063	LWDG	/SEHS/HM086_RVLID_DGREG_VALID
REGION	T005S	LAND1	/SEHS/C14Z_VAL_VALID_TABFIELD

You can also add other validity area categories as required for your installation.

5.4 Specifying Validity Areas

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

You specify validity areas on the basis of validity area categories [Page 27]. 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
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.

5.5 Specifying Dangerous Goods Regulations

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.

5.6 Specifying Dangerous Goods Classes

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.

5.7 Defining Dangerous Goods Profiles

In this Customizing activity, you define profiles for processing dangerous goods. The *Only Errors Read* and *All Messages Read* profiles are provided. You define general conditions for processing dangerous goods, for example, by specifying which messages are allowed to process certain dangerous goods or whether you are permitted to define dangerous goods manually.

You assign the profile when you define business object types for freight units or freight orders.

You can also specify the default modes of transport that have to be used for the dangerous goods check in case the information is not available in the business document.

Procedure

1. In Customizing for SAP TM, choose *Basic Functions* > *Dangerous Goods* > *Define Dangerous Goods Profile*.

2. Enter the following data:

Field	**Value**
DG Profile	IIL_DG_PR1
Short Desc.	`Dangerous Goods Profile – Int. Inbound L`
DG Check Active	Selected
DG Ind. Ctrl	`1` – Manual Entry Not Allowed
Message Level	`1` – All Messages
Default MOT	`03` (Sea)
Default MOT Pre	`01` (Road)
Default MOT On Carr	`02` (Rail)

5.8 Configuring Phrase Management

Activities

5.8.1 Specifying Number Ranges for Phrases

In this Customizing activity, you define number ranges for phrase keys. Each phrase is uniquely identified by a phrase key within one client.

Procedure

1. In Customizing for SAP TM, choose *SCM Basis* > *EH&S Services* > *Phrase Management* > *Specify Number Ranges for Phrases*.

2. Enter the following data:

No.	From Number	To Number	Ext
0E	000000000000001	500000000000000	x

5.8.2 Specifying Phrase Libraries and Phrase Groups

In this Customizing activity, you define an active phrase library. Make sure that the active phrase library is `CUST` (customer phrase library).

Procedure

1. In Customizing for SAP TM, choose *SCM Basis* > *EH&S Services* > *Phrase Management* > *Specify Phrase Libraries and Phrase Groups*.
2. Check that the active phrase library is `CUST`:

PhrLib	Description for Phrase Library	Active Library
CUST	Customer Phrase Library	X

5.8.3 Editing Dangerous Goods Phrases

Procedure

1. On the *SAP Easy Access* screen for SAP TM, choose *Master Data* > *Dangerous Goods Management* > *Phrase Management* > *Edit Phrases*.

2. Enter the following data:

Phrase **Library-No.**	**Phrase Group**	**Language key**	**Phrase Text**
CUST-000000000000001	DG-TEXT	EN	Dangerous Goods Phrase
CUST-400000000000000	DG-TEXT	EN	Dangerous Goods Phrase with Long text

5.8.4 Editing Phrase Sets

Procedure

1. On the *SAP Easy Access* screen, choose *Master Data* > *Dangerous Goods Management* > *Phrase Management* > *Edit Phrase Sets*.

2. Enter the following data:

Phrase Set	**Language Key**	**Phrase Set Name**
IIL_PHRASE_SET1	EN	Phrase Set – Int. Inbound Logistics

3. Assign phrases CUST-000000000000001 and CUST-400000000000000 to the phrase set.

5.8.5 Activating Phrase Assignments

Procedure

1. In Customizing for SAP TM, choose *SCM Basis* > *EH&S Services* > *Dangerous Goods Management* > *Dangerous Goods Master* > *Activate Phrase Assignment*.

2. Select *Attribute Activation* and choose *Execute*.

5.8.6 Editing Phrase Set-Attribute Assignments

Procedure

1. On the SAP Easy Access screen in your SAP TM system, choose *Master Data* > *Dangerous Goods Management* > *Phrase Management* > *Edit Phrase Set-Attribute Assignment*.
2. Choose *DGTMD* (DG: Dangerous Goods Master).
3. Assign phrase set `IIL_PHRASE_SET1` to field name `PDGNUD`.

6 Transferring Master Data from SAP ERP to 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* or enter transaction `CFM1` in the command field.

2. Create separate integration models for transferring materials, plant, vendor, and shipping point and take the following information into account:

    - IIL-IM-MAT (`<logical TM system name>`) for material and plant
    - IIL-IM-DAT (`<logical TM system name>`) for vendor and shipping point
    - Use the following details for both models:
        - Use the same logical TM system name
        - Use APO application TM
    - Prefix your material selection with the initial letters of the material and vendors: IIL*. Make sure that only material and plant are highlighted for model IIL-IM-MAT and that only shipping point and vendor are highlighted for model IIL-IM-DAT.
    - In model IIL-IM-DAT, make sure that you activate the creation of business partners in the *Vendors* section by entering `2` (create both) in the *Create Loc/BP* field.
    - Execute and save the models.

3. 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* or enter transaction `CFM2` in the command field.

4. Activate the two data models, and use transaction `SMQ1` to verify that all data is transported. Use transaction `SMQ2` in TM system to verify that data transfer completed successfully.

    When you transfer vendors to the SAP TM system, you must ensure that the *Create Loc./BP* function (create BPs in TM for location) is set to *2* on the Vendors tab page so that business partners are generated for vendors.

    You can also create business partners for plants and shipping conditions automatically by implementing a BAdI. For more information, see SAP Note 1410353.

If the same master data is present in more than one model, only one of the models must be activated at a time. Otherwise, data is not transferred properly.

Checking/Updating Transported Data in the TM System

1. On the *SAP Easy Access* screen for SAP TM, choose *Master Data* > *Transportation Network* > *Locations* > *Define Location*.

2. Verify the plant, receiving point, and vendors:

ERP Data	TM Data
Plant 1200	*PL*1200@*ERP001*
Receiving Point 1200	*SP*1200@*ERP001*
Vendor IIL-VN-01	*SU*IIL-VN-01@*ERP001*
Vendor IIL-VN-02	*SU*IIL-VN-02@*ERP001*
Carrier IIL-CR-01	*CA*IIL-CR-01@*ERP001*
Carrier IIL-CR-02	*CA*IIL-CR-02@*ERP001*

3. Maintain the geocoordinates for the locations as follows:

Location	Longitude	Latitude
*PL*1200@*ERP001*	7	50
*SP*1200@*ERP001*	7	50
*SU*IIL-VN-01@*ERP001*	116	39
*SU*IIL-VN-02@*ERP001*	114	22

4. On the *SAP Easy Access* screen for SAP TM, choose *Master Data* > *Dangerous Goods Management* > *Dangerous Goods Master* > *Create Dangerous Goods Master*.

5. Verify the following materials:

ERP Data	TM Data
IIL-PROD-03	IIL-PROD-03@*ERP001*
IIL-PROD-02	IIL-PROD-02@*ERP001*
IIL-PROD-01	IIL-PROD-01@*ERP001*
IIL-PROD-04	IIL-PROD-04@*ERP001*

Remember to replace the suffix `@ERP001` with your own to check that the master data has been created correctly.

More Information

- Defining Business Partners for Plants and Shipping Points [Page 43]
- Assigning Business Partners to Plants [Page 44]
- Creating Dangerous Goods Master Data [Page 45]

6.1 Defining Business Partners for Plants and Shipping Points

If you have not implemented the BAdI for automatically creating business partners, you must create the business partners manually. For more information about creating business partners automatically, see SAP Note 1410353.

Procedure

1. On the *SAP Easy Access* screen for SAP TM, choose *Master Data* > *General* > *Define Business Partner*.
2. Create a business partner of type *Organization* using the following data:
   - BP Number: `PL-1200`
   - Country: `DE`
   - BP Role: *Business Partner (Gen.)*
3. Save your entries.
4. Create a business partner of type *Organization* using the following data:
   - BP Number: `SP-1200`
   - Country: `DE`
   - BP Role: *Business Partner (Gen.)*

6.2 Assigning Business Partners to Plants

Procedure

1. On the *SAP Easy Access* screen for SAP TM, choose *Master Data* > *Transportation Network* > *Locations* > *Define Location*.
2. Edit location *PL*1200*@ERP001*.
3. On the *General* tab page, enter `PL-1200` in the *BP Number* field.

6.3 Creating Dangerous Goods Master Data

Procedure

1. On the *SAP Easy Access* screen for SAP TM, choose *Master Data* > *Dangerous Goods Management* > *Dangerous Goods Master* > *Create Dangerous Goods Master*.

2. Enter the following data:

Product	DG Regulation	Ty.	ID No.
IIL-PROD-03@*ERP001*	ADR	UN	1456
IIL-PROD-03@*ERP001*	IMDG	UN	1456
IIL-PROD-03@*ERP001*	RID	UN	1456
IIL-PROD-03@*ERP001*	CN	UN	1456
IIL-PROD-02@*ERP001*	ADR	UN	1456
IIL-PROD-02@*ERP001*	IMDG	UN	1456
IIL-PROD-02@*ERP001*	RID	UN	1456
IIL-PROD-02@*ERP001*	CN	UN	1456
IIL-PROD-04@*ERP001*	ADR	UN	1456
IIL-PROD-04@*ERP001*	IMDG	UN	1456
IIL-PROD-04@*ERP001*	RID	UN	1456
IIL-PROD-04@*ERP001*	CN	UN	1456

3. Choose *Detail Views*.

4. Enter the following data on the *Classification* tab page:

Product	Regulation	Description	Class	Processing Status
IIL-PROD-03@*ERP001*	ADR	CUST-000000000000001	3	10 (Released)
IIL-PROD-03@*ERP001*	IMDG	CUST-000000000000001	3	10 (Released)
IIL-PROD-03@*ERP001*	RID	CUST-000000000000001	3	10 (Released)
IIL-PROD-03@*ERP001*	CN	CUST-000000000000001	3	10 (Released)
IIL-PROD-02@*ERP001*	ADR	CUST-400000000000000	5.2	10 (Released)
IIL-PROD-02@*ERP001*	IMDG	CUST-400000000000000	5.2	10 (Released)
IIL-PROD-02@*ERP001*	RID	CUST-400000000000000	5.2	10 (Released)
IIL-PROD-02@*ERP001*	CN	CUST-400000000000000	5.2	10 (Released)

IIL-PROD-04@*ERP001*	ADR	CUST-000000000000001	3	10 (Released)
IIL-PROD-04@*ERP001*	IMDG	CUST-000000000000001	3	10 (Released)
IIL-PROD-04@*ERP001*	RID	CUST-000000000000001	3	10 (Released)
IIL-PROD-04@*ERP001*	CN	CUST-000000000000001	3	10 (Released)

5. Enter the following data on the *Mixed Loading* tab page:

Product	**Regulation**	**Segregation Key – Seg key 1**
IIL-PROD-02@*ERP001*	ADR	5.2
IIL-PROD-02@*ERP001*	IMDG	5.2
IIL-PROD-02@*ERP001*	RID	5.2
IIL-PROD-02@*ERP001*	CN	5.2
IIL-PROD-03@*ERP001*	ADR	3
IIL-PROD-03@*ERP001*	IMDG	3
IIL-PROD-03@*ERP001*	RID	3
IIL-PROD-03@*ERP001*	CN	3
IIL-PROD-04@*ERP001*	ADR	3
IIL-PROD-04@*ERP001*	IMDG	3
IIL-PROD-04@*ERP001*	RID	3
IIL-PROD-04@*ERP001*	CN	3

7 Setting Up Transportation Network in SAP TM

Activities

7.1 Defining Locations

Procedure

1. In SAP NetWeaver Business Client, choose *Master Data* > *Transportation Network* > *Locations* > *Define Location*.

2. Create locations `IIL-CNSHA` and `IIL-DEHAM` with the following data:

Location	Name	Location Type	Time Zone	Address
IIL-CNSHA	Port of Shanghai	1002	UTC+8	Yanggao No.1 Road 88 200040 Shanghai CN
IIL-DEHAM	Port of Hamburg	1002	CET	Neuer Wandrahm 4 20457 Hamburg DE

3. For each port, enter the geocoordinates as follows:

Location	Longitude	Latitude
IIL-CNSHA	105	35
IIL-DEHAM	9	51

4. Save your entries.

7.2 Assigning Locations to Incoterm Locations in SAP TM

Procedure

1. On the *SAP Easy Access* screen in SAP TM, choose *Master Data* > *Transportation Network* > *Assign Location to Incoterm Location*.

2. Create an entry with the following data:

Incoterm Location (Free Text)	**Incoterm Location**
Shanghai (IIL-CNSHA)	IIL-CNSHA

The Incoterm location text can be freely defined in SAP ERP. Make sure that the value in the *Incoterm Location (Free Text)* field is exactly the same as the value entered for the Incoterm (in this case FUB) for the vendor used to create the purchase order. In this scenario, the vendor is `IIL-VN-01`. To display the vendor information, call transaction `XK01` in the SAP ERP system and choose the *Purchasing data* option).

This setting is used during the planning phase.

7.3 Defining Transportation Zones

In this scenario, two transportation zones are used: IIL-CN-CHINA and IIL-DE-GERMANY. If these zones do not exist in your system, you can use this procedure to define them.

A transportation zone is a business object that groups a number of locations. The system can partly transfer the properties that you assign to a transportation zone to all its locations. This function reduces the volume of master data that is stored in the system.

Procedure

1. On the *SAP Easy Access* screen for SAP TM, choose *Master Data* > *Transportation Network* > *Define Transportation Zones*.

2. Choose *Create* and create zone IIL-CN-CHINA as follows:

Zone	Description	Zone Type
IIL-CN-CHINA	China	M Mixed Zone

3. On the *Zone – Location* tab page, create the following locations:

    - SUIIL-VN-01@*ERP001*
    - SUIIL-VN-02@*ERP001*
    - IIL-CNSHA

4. Create zone IIL-DE-GERMANY as follows:

Zone	Description	Zone Type
DE-GERMANY	Germany	M Mixed Zone

5. On the *Zone – Location* tab page, create the following locations:

    - PL1200@*ERP001*
    - IIL-DEHAM

8 Defining Resources in SAP TM

Activities

8.1 Defining Means of Transport

Procedure

1. In Customizing for SAP TM, choose *Master Data* > *Resources* > *Define Means of Transport*.

2. Define the following means of transport if they do not yet exist in the system:

Means of Transport	**IIL_VESSEL**	**IIL_RAIL**	**IIL_FCL**
Description	Scheduled Vessel Shanghai – Hamburg	European Scheduled Train	Truckload (China)
Transportation Mode	03 SEA	02 RAIL	01 ROAD
Low Speed	20	35	35
Medium Speed	30	45	45
High Speed	40	55	55
Average Speed	30	45	45
Distance Factor	1	1	1
Scheduled Means of Transport	Selected	Selected	Not selected
GIS Quality	Not selected	Not selected	Not selected

This scenario setup does not use a geographical information system (GIS) and so you must enter a distance factor and an average speed. If you have a GIS provider connected to your system, you can select the GIS quality attribute and the three average speeds.

When you save your data, the system may issue a warning that the IGS or GIS tool is unavailable. You can ignore this message.

3. For means of transport IL_VESSEL, enter the following additional data:

Means of Transport	**Multires.**	**No. Res.**
IIL_VESSEL	Selected	15
IIL_RAIL	Blank	Blank
IIL_FCL	Blank	Blank

8.2 Assigning Transportation Modes to Equipment Groups

Procedure

1. In Customizing for *Transportation Management*, choose *Master Data* > *Resources* > *Define Equipment Groups and Equipment Types*.
2. Select *CN Container* and choose *Mode of Transport Assignment*.
3. Choose *New Entries* and select *2 Rail*.
4. Save your entries.

8.3 Creating Vehicle Resources

Procedure

1. On the *SAP Easy Access* screen for SAP TM, choose *Master Data* > *Resources* > *Define Resource*.

2. Use the following data for IIL-MS:

Field	Value
Factory Calendar	01
Time Zone	CET
Means of Transport	IIL_VESSEL
Start Date/Time	1970-01-01
End Date/Time	9999-12-31
In Service Date	1970-01-01
Continuous Dim.	No dimension
Capacity	14 TEU

3. Use the following data for IIL-EU-RAIL-01:

Field	Value
Factory Calendar	01
Time Zone	CET
Means of Transport	IIL_RAIL
Start Date/Time	1970-01-01
End Date/Time	9999-12-31
In Service Date	1970-01-01
Continuous Dim.	No dimension
Capacity	20 TEU

8.4 Defining Carrier Profiles

Procedure

1. In SAP NetWeaver Business Client, choose *Master Data* > *General* > *Define Carrier Profile*.
2. Define a carrier profile for business partner IIL-CR-02.
3. Select the partner and complete the data on the *Transportation* tab page as follows:

Setting	**Value**
Start Loc./Zone	`IIL-DEHAM`
Dest. Loc./Zone	*PL*1200*@ERP001*
Means of Transport	`IIL_RAIL`
Valid On	`2010-01-01`

8.5 Defining Schedule Types

Procedure

1. In Customizing for *Transportation Management*, choose *Master Data* > *Transportation Network* > *Schedule* > *Define Schedule Types*.

2. Create a new schedule with the following parameters:

Field	Value
Schedule Type	IILR
Description	IIL Rail Schedule Type
Transp. Mode	02 (Rail)
Document Type	IIL9 For information about creating this document type, see Defining Freight Order Types [Page 89].
Header No. Range	07
Voyage No. Range	01
Offset Time Type	A – Absolute

3. Save your entries.

8.6 Defining Schedules

Procedure

1. In SAP NetWeaver Business Client, choose *Master Data* > *Transportation Network* > *Schedule* > *Create Schedule*.

2. Create schedule `IIL-SCHED-OCEAN` as schedule type `1000` using the following data:

Schedule	Description	Valid From	Valid To	Means of Transport	Carrier
IIL-SCHED-OCEAN	Shanghai – Hamburg	2012–01–01	2099–01–31	IIL_VESSEL	IIL-CR-01

3. Enter the following standard port sequence (choose create for each line in the sequence):

Seq	Location	Port of Entry	Port of Exit
10	IIL-CNSHA	Selected	Not selected
20	IIL-DEHAM	Not selected	Selected

4. Enter the departure rules for the voyages as follows:

Rule	First Day of Validity	Last Day of Validity	Depature Frequency	Day	Vessel	Departure Time	Factory Calendar
1	2012–01–01	2099–12–31	Weekly	5	IIL_VESSEL	10:00:00	W8

5. Save your schedule.

6. Create schedule `IIL-SCHED-TRAIN` as schedule type `IILR` using the following data:

Schedule	Description	Valid From	Valid To	Means of Transport	Carrier
IIL-SCHED-TRAIN	European Scheduled Train	*<Today>*	*<Today + 1 Year>*	IIL_RAIL	IIL-CR-02

7. Enter the following standard stop sequence (choose create for each line in the sequence):

Seq	Location	Transit Duration (Hours)	Cargo Cut-Off Time	Availability Time	Time Zone
10	IIL-DEHAM	4	17:00:00	Not applicable	CET
20	SP1200@ERP001	Not applicable	Not applicable	23:00:00	CET

8. Enter the departure rules as follows:

Rule	First Day of Validity	Last Day of Validity	Monday	Wednesday	Friday	Departure Time	Time Zone
1	First day of current month	Last day of current year	Selected	Selected	Selected	18:00:00	CET

9. Select the new row and choose *Generate Departures*.

10. Choose the *Departures* tab page and check that departures have been created automatically.

11. Save your schedule.

8.7 Assigning Transshipment Locations

Procedure

1. On the *SAP Easy Access* screen for SAP TM, choose *Master Data* > *Transportation Network* > *Locations* > *Assign Transshipment Location*.

2. Assign location `IIL-CNSHA` to zone `IIL-CN-CHINA` and location `IIL-DEHAM` to zone `IIL-DE-GERMANY`.

To do so, enter `IIL-CN-CHINA` in the *Transportation Zone Selection* screen area and enter `IIL-CNSHA` and `IIL-CN-CHINA` in the *Transshipment Location Selection* screen area.

8.8 Defining Transshipment Location Chains

Procedure

1. On the *SAP Easy Access* screen for SAP TM, choose *Master Data* > *Transportation Network* > *Define Transshipment Location Chain*.

2. Create the new chain IIL-TRANSLOC-CHAIN1 with the following data:

T. Loc. Chain	Short Desc.	Valid-From	Valid-To
IIL_TRANSLOC_CHAIN1	Inbound Logistics – Vendor 1	2000–01–01	2099–01–01

3. On the *List of Transshipment Locations* tab page, create entries for each line of the following table:

Sequence Number	Transs. Location
1	*SU*IIL-VN-01*@ERP001*
2	IIL-CNSHA
3	IIL-DEHAM
4	*SP*1200*@ERP001*

4. Create the new chain IIL_TRANSLOC_CHAIN2 as follows:

T. Loc. Chain	Short Desc.	Valid-From	Valid-To
IIL_TRANSLOC_CHAIN2	Inbound Logistics – Vendor 2	2000–01–01	2099–01–01

5. On the *List of Transshipment Locations* tab page, create entries for each line of the following table:

Sequence Number	Transs. Location
1	*SU*IIL-VN-02*@ERP001*
2	IIL-CNSHA
3	IIL-DEHAM
4	*SP*1200*@ERP001*

8.9 Defining Transportation Lanes

Procedure

1. On the *SAP Easy Access* screen for SAP TM, choose *Master Data* > *Transportation Network* > *Define Transportation Lane*.
2. Choose the *Intra-Zone/Loc. Transp. Lane* tab page, enter *Loc-/Transp. Zone* `IIL-CN-CHINA`, and choose *Create*.
3. In the *Means of Transport* area, create an entry with the following data:

Means of Trans	Start Date	End Date
IIL_FCL	2010–01–01	2014–12–31

Strategy	Value
Relevant to Carrier Selection	Blank
Priority / Costs	X Neither Costs Nor Priority
Cost Origin	Internal Cost
Continuous Movement Type	No Continuous Move

4. In the *Carrier for Means of Transport* area, create an entry with the following data:

BP Number	Transportation Costs	per	Transportation Costs per KM	Priority
IIL-CR-04	1000	KM	1000	1
IIL-CR-03	500	KM	500	2

5. Save your entries.
6. Choose the *Tr.Lane* tab page and create two transportation lanes as follows:
   - Lane 1: *Start Location/Zone SU*IIL-VN-01@*ERP001*, *Dest. Loc./Zone* IIL-CNSHA
   - Lane 2: *Start Location/Zone SU*IIL-VN-02@*ERP001*, *Dest. Loc./Zone* IIL-CNSHA
7. Configure the following settings for both lanes.
8. In the *Means of Transport* area, create an entry with the following data:

Means of Trans	Start Date	End Date
IIL_FCL	2010–01–01	2014–12–31

Control Indicator	Value
Fixed Trsp. Duration	Selected
Fixed Trsp. Distance	Selected

9. Enter the following parameters:

Parameters	Value
Transportation Distance	1512
Trsp. Duration	34 hrs
Precision	1000

Strategy	Value
Relevant to Carrier Selection	Selected
Priority / Costs	X Neither Costs Nor Priority
Cost Origin	Internal Cost
Continuous Movement Type	No Continuous Move

10. In the *Carrier for Means of Transport* area, create a new entry with the following data:

BP Number	Transportation Costs	per	Transportation Costs per KM	Priority
IIL-CR-04	1000	KM	1000	1
IIL-CR-03	500	KM	500	2

11. Choose the *Intra-Zone/Loc. Transp. Lane* tab page, enter *Loc-/Transp. Zone* IIL-DE-GERMANY and choose *Create*.

12. In the *Means of Transport* area, create an entry with the following data:

Means of Trans	Start Date	End Date
IIL_RAIL	2010–01–01	2014–12–31

Control Indicator	Value
Fixed Trsp. Duration	Selected
Fixed Trsp. Distance	Blank

Parameters	Value
Transportation Distance	250
Trsp. Duration	2 hrs
Precision	1000

Strategy	Value
Relevant to Carrier Selection	Selected
Priority / Costs	X Neither Costs Nor Priority
Cost Origin	Internal Cost
Continuous Movement Type	No Continuous Move

14. In the *Carrier for Means of Transport* area, create an entry with the following data:

BP Number	Transportation Costs	per	Transportation Costs per KM
IIL-CR-02	500	KM	500

15. Save your entries.

16. Choose the *Tr.Lane* tab page, enter *Start Location/Zone* IIL-DEHAM, and *Dest. Loc./Zone* SP1200@ERP001, and choose *Create*.

17. In the *Means of Transport* area, create an entry with the following data:

Means of Trans	Start Date	End Date
IIL_RAIL	2010–01–01	2014–12–31

Control Indicator	Value
Fixed Trsp. Duration	Selected
Fixed Trsp. Distance	Selected

Parameters	Value
Transportation Distance	1512
Trsp. Duration	34 hrs
Precision	1000

Strategy	Value
Relevant to Carrier Selection	Selected
Priority / Costs	X Neither Costs Nor Priority
Cost Origin	Internal Cost
Continuous Movement Type	No Continuous Move

19. In the *Carrier for Means of Transport* area, create an entry with the following data:

BP Number	Transportation Costs	per	Transportation Costs per KM	Priority
IIL-CR-02	500	KM	500	1

8.10 Defining Transport Containers

Procedure

1. In Customizing for SAP TM, choose *Master Data* > *Resources* > *Define Means of Transport*.
2. Create the following entry:

Mtr	Description	Transp. Mode	Passive
IIL_CONT	Container	SEA	X

3. Save your entries.

8.11 Defining Resources in TM

Procedure

1. On the *SAP Easy Access* screen for SAP TM, choose *Master Data* > *Resources* > *Define Resource*.
2. Create the following TU resources as follows. Use resource category T (Transportation) and resource type 9 (Vehicle Resource).

Resource: IIL-CN-T03-TRUCK1

Field	**Value**
Resource	IIL-CN-T03-TRUCK1
Location	Blank
Means of Transport	IIL_FCL
Time Zone	UTC+6
Continuous Dimension	Mass
Factory Calendar	01
Capacity	40 TO
Passive Means of Transport	Deselected
Number of Individual Resources	Blank
Multiresource	Deselected

Resource: IIL-CN-T03-TRUCK2

Field	**Value**
Resource	IIL-CN-T03-TRUCK2
Location	Blank
Means of Transport	IIL_FCL
Time Zone	UTC+6
Continuous Dimension	Mass
Factory Calendar	01
Capacity	40 TO
Passive Means of Transport	Deselected
Number of Individual Resources	Blank

Multiresource	Deselected

Resource: IIL-EU-T03-RAIL01

Field	**Value**
Resource	IIL-EU-T03-RAIL01
Location	Blank
Means of Transport	IIL_RAIL
Time Zone	CET
Continuous Dimension	No Dimension
Factory Calendar	01
Capacity	• 25 TEU • 1200 TO • 1000 M3
Passive Means of Transport	Deselected
Number of Individual Resources	Blank
Multiresource	Deselected

Resource: IIL-T03-MS

Field	**Value**
Resource	IIL-T03-MS
Location	Blank
Means of Transport	IIL_VESSEL
Time Zone	CET
Continuous Dimension	No Dimension
Factory Calendar	01
Capacity	14000 TEU
Passive Means of Transport	Deselected
Number of Individual Resources	15
Multiresource	Selected

9 Setting Up Customizing for Output Management in TM

Prerequisites

You have entered your e-mail data under ▶ *System* ▶ *User Profile* ▶ *Own Data* ▶ or in transaction `SU01`.

More Information

Defining PPF Settings for Output Management [Page 69].

9.1 Defining PPF Settings for Output Management

In this Customizing activity, you configure the settings for the post processing framework (PPF). Since PPF is an output management framework, it helps you set up output that is specific to your installation. PPF generates output triggers based on the settings you configure for particular application data records. Based on these configuration settings, the system processes the triggers to send the actual output.

Procedure

1. In Customizing for SAP TM, choose *Cross-Application Components* > *Processes and Tools for Enterprise Applications* > *Reusable Objects and Functions for BOPF Environment* > *PPF Adapter for Output Management* > *Maintain PPF Settings* or enter transaction `SPPFCADM`.

2. Select Appl. `/SCMTMS/TRANSPORTATION` and choose *Condition Configuration (Transportable Conditions).*

3. Select the action profile *Actions for Print Documents Sea Freight* (`/SCMTMS/TOR_PRINT_SEA`) and action definition `/SCMTMS/PRINT_HBL`.

4. On the *Processing Details* tab page, select the *Recipients* subtab page.

5. Enter your e-mail information and choose *U Internet address* as the recipient type.

6. On the *Printer* subtab page, enter your printer in the *Printer* field.

7. Once the Customizing settings for action profiles have been completed, you will need to add the action profile `/SCMTMS/TOR_PRINT_SEA` to your freight order type in the output profile field.

10 Setting Up SAP Event Management

For technical information about how SAP Event Management is integrated with SAP Transportation Management, see the dedicated integration guide.

More Information

Assigning Users to Web Transactions [Page 71].

10.1 Assigning Users to Web Transactions

In this Customizing activity, you assign a user to a Web interface transaction and to an existing user profile so that the appropriate Web layout for sending event messages and querying event handler information is available to the user.

Procedure

1. In Customizing for SAP Event Management, choose *Event Messages, Status Queries, and Web Interface* > *Web Interface* > *Assign User Profiles and Web Interface Transactions to Users*.
2. Enter your user name.
3. Assign the Web interface transaction, user profile, and order Web to your user as follows:

Web Int. Tran.	User Profile	Order Web
ODT20_CONS_FO	ODT20_CONSIGNEE_FO	4
ODT20_CONS_FU	ODT20_CONSIGNEE_FU	3
ODT20_SHIP_FO	ODT20_SHIPPER_FO	2
ODT20_SHIP_FU	ODT20_CONSIGNEE_FU	1

11 Creating Organizational Data in TM

Procedure

1. On the *SAP Easy Access* screen for SAP TM, choose *Master Data* > *Organization* > *Create Organization and Staffing*.
2. Enter the validity period of January 1, 2010 to December 31, 9999 and choose *Continue*.
3. Create the purchasing organization *IIL-PORG-1* as follows:
    1. On the *Basic Data* tab page, enter organizational unit `IIL-PORG-1` and the description `IIL CHEMIC DE Purch. Org`.
    2. Choose the *Org. Data* tab page and enter organizational unit function `2` (purchasing) and organizational unit role `1` (organization).
    3. Choose the *Address* tab page and enter the city `Hamburg` and the country `DE`.
4. Select your purchase organization in the top-right window and choose *Create*.
5. In the *Choose Relationship* dialog box, choose *Is line supervisor of*.
6. Create purchasing group *IIL-PGRP-1* as follows:
    1. On the *Basic Data* tab page, enter organizational unit `IIL-PGRP-1` and the description `IIL Purchase Group`.
    2. Choose the *Org. Data* tab page and enter organizational unit function `2` (purchasing) and organizational unit role `3` (group).
    3. Choose the *Address* tab page and enter city `Hamburg` and country `DE`.
7. Save your entries.

Use the purchasing group organization ID `IIL-PGRP-01` as shown on the *Org. Data* tab page for SAP TM transactions.

12 Assigning Business Partners to Purchasing Organizations

Procedure

1. On the *SAP Easy Access* screen for SAP TM, choose *Master Data* > *General* > *Define Business Partner*.
2. Edit business partner `IIL-CR-04`.
3. In the *Display in BP role* field, choose *Carrier*.
4. On the *Vendor Org. Data* tab page, enter the purchasing organization by using the input help (`F4`). Select the organization with the description *IIL CHEMIC DE Purch. Org* (see Creating Organizational Data in TM [Page 72]).
5. Save your entries.

13 Setting Up Customizing in SAP TM

Activities

13.1 Defining Conditions

In this procedure, you define a condition to determine dependent values for incompatibilities.

Procedure

1. In SAP NetWeaver Business Client (NWBC), choose *Application Administration* > *General Settings* > *Conditions* > *Create Condition*.
2. Choose *Continue*.
3. In the header area, enter the following data:

Field	Value
Condition	IIL-INCOMP-COND-TRA-GROUP
Description	Incompatible Transportation Groups
Condition Type	/SCMTMS/INC_TR_ITEM
Origin of Condition	Direct Business Object Access

4. On the *Data Access Definition* tab page, choose *Create* and enter the following data:

Column Position	Data Access Definition for Condition	Data Element Used for Input Help
00	/SCMTMS/TRQ_TRAN_GRP	/SCMTMS/PROD_TRANSP_GRP_CD

5. In the 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	ITEM
Name of Field of the BO Node	PRD_TRANSP_GRP

13.2 Creating Incompatibilities

You use this procedure to define the compatibility of planning data that the system is to take into account during transportation planning, for example:

- Freight units with different Incoterms must not be transported together.
- Refrigerated goods must only be transported in appropriate means of transport (refrigerated trucks).
- A certain means of transport cannot be unloaded at a location, since the location does not have a suitable loading ramp.

In this way, you can control the assignment of freight units to transportation plans (in other words, planned transportation activities) and transportation plans to means of transport, for example.

Procedure

1. In SAP NetWeaver Business Client (NWBC), choose *Application Administration* > *Planning* > *General Planning Settings* > *Incompatibility Definitions* > *Create Incompatibility*.
2. In the *Incompatibility Definition* screen area, enter the following data:

Field	Value
Incompatibility	`IIL_INCOMP_TRANSP_GROUP`
Description	`Incompatible Transportation Groups`
Determination Method	Condition-Based Incompatibility
Identical Values Only	Selected
Incompatibility Area	`04` Freight Unit Building
Incompatibility Type	`52` Transportation Request Item
Manual Violation	Incompatibility Must Not Be Violated
Automatic Violation	Incompatibility Must Not Be Violated

3. In the *Conditions* screen area, enter the first condition `IIL-INCOMP-COND-TRA-GROUP`.

13.3 Defining Incompatibility Settings

Procedure

1. In SAP NetWeaver Business Client (NWBC), choose *Application Administration* > *Planning* > *General Settings* > *Incompatibility Settings* > *Create Incompatibility Settings*.

2. In the *General Data* screen area, enter the following data:

Field	Value
Incompatibility Settings	`IIL-INCOMP-SET-TRA-GROUP`
Description	Incompatible Transportation Groups
Incompatibility Area	Freight Unit Building

3. In the *Incompatibility Selection* table, enter the following data:

Incompatibility	Violation in Manual Planning	Violation in Automatic Planning
IIL_INCOMP_TRANSP_GROUP	According to Incompatibility Definition	According to Incompatibility Definition

13.4 Defining Freight Unit Types

Procedure

1. In Customizing for SAP TM, choose *Planning* > *Freight Unit* > *Define Freight Unit Types*.
2. Create a new freight unit type as follows:
    1. In the header area, enter freight unit type `IIL1` and the description `Freight Unit – Inbound Logistic`.
    2. In the *Change Controller Settings* screen area, enter `DEF_CHACO` in the *Default Change Strategy* field.
    3. In the *Execution Settings* screen area, select *3 Execution Tracking with External Event Management* in the *Execution Track. Relevance*.
    4. In the *Event Management Settings* subscreen area, enter the application object type `ODT20_FU` and the last expected event `ARRIV_DEST`.
    5. In the *Additional Settings* screen area, enter the dangerous goods profile `IIL_DG_PR1` and set the rule for the PU/DLV window to *A Earliest Pick-Up at Req. Day/Latest Delivery at Req. Day*.
    6. In the *Number Range Settings* screen area, select *I Draw Numbers Immediately* as the time for drawing and specify number range interval `02`.
    7. In the *Direct Shipment Options* screen area, enter the direct shipment option type as *No Determination of Direct Shipment* and the freight order type as *IIL6 Int. Inbound Logistics Freight Order*.
    8. In the *Organizational Unit Determination* screen area, enter purchasing organization `IIL-PORG-1`.
3. Save your entries.

13.5 Defining Freight Unit Building Rules

In this procedure, you define a freight unit building rule that determines how the system is to consolidate freight units. Freight units are the smallest units in transportation and cannot be split during transportation.

Procedure

1. In SAP NetWeaver Business Client (NWBC), choose *Application Administration* > *Planning* > *General Settings* > *Freight Unit Building Rule*.
2. Choose *Create Freight Unit Building Rule*.
3. Enter the following data:

   On the *General Data* tab page:

Field	Value
Freight Unit Building Rule	IIL-FUBR-20FOOT
Description	Inbound Logistics 20’ Container
Document Type	IIL1
Incompatibility Settings	IIL-INCOMP-SET-TRA-GROUP
Freight Unit Building Strategy	Consolidate as Much as Possible
Critical Quantity	Gross Weight
Item Split Allowed	Selected
Equipment Group	CN
Equipment Type	22GP

   On the *Advanced Settings* tab page:

Field	Value
Process Controller Strategy	FUB_DG

   On the *Planning Quantities* tab page, the system automatically completes the data using values specified in Customizing for the container. The split quantity is the maximum payload value from the corresponding equipment type.

4. Save your entries.
5. Create a second freight unit building rule using the following data:

   On the *General Data* tab page:

Field	Value
Freight Unit Building Rule	IIL-FUBR-40FOOT

Description	Inbound Logistics 40’ Container
Document Type	IIL1
Incompatibility Settings	IIL-INCOMP-SET-TRA-GROUP
Freight Unit Building Strategy	Consolidate as Much as Possible
Critical Quantity	Gross Weight
Item Split Allowed	Selected
Equipment Group	CN
Equipment Type	28GP

On the *Advanced Settings* tab page:

Field	**Value**
Process Controller Strategy	FUB_DG

On the *Planning Quantities* tab page, the system automatically completes the data using values specified in Customizing for the container. The split quantity is the maximum payload value from the corresponding equipment type.

13.6 Defining Conditions for Freight Unit Building Rule Determination

Procedure

1. In SAP NetWeaver Business Client (NWBC), choose *Application Administration* > *General Settings* > *Conditions* > *Create Condition*.

2. Enter the following data and choose *Continue*:

Field	Value
Condition	IIL-FUBR-DET-COND-VENDOR
Description	Inbound Logistics: FUBR Based on Vendor
Condition Type	/SCMTMS/FUBR
Origin of Condition	Condition Based on BRFplus Decision Table

3. Choose the *Data Access Definition* pushbutton and enter the following data:

Column Position	Data Access Definition for Condition	Data Element Used for Input Help
00	Blank	/SCMTMS/SOURCE_LOCATION

4. In the 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 Field of the BO Node	SRC_LOC_ID

5. Return to the decision table and create the following entries:

Srce Loc.	FUB Rule
*SU*IIL-VN-01@*ERP001*	IIL-FUB-20FOOT
*SU*IIL-VN-02@*ERP001*	IIL-FUB-40FOOT

13.7 Defining Order-Based Transportation Requirement Types

In this procedure, you specify types of order-based transportation requirements (OTR). You then use these types to define certain parameters of the OTR that influence how the system processes this business document.

Procedure

1. In Customizing for SAP TM, choose *Integration* > *ERP Logistics Integration* > *Order-Based Transportation Requirement* > *Define Order-Based Transportation Requirement Types*.
2. Choose *New Entries*.
3. Enter the following data:

Field	**Value**
OTR Type	IIL2
Description	PO Transport Requirements
Number Range Interval	01
Automatic Freight Unit Building	Selected
EM Web Interface Transaction	ODT20_SHIP_FU
EM Integration Active	Selected
DG Profile	IIL_DG_PR1
Propagate Changes:	B Synchronous Propagation of Changes; Fallback to Asynchronous
Plan on Req/Cnf Qty	01 Plan on Requested Quantities
FU Building Rule Condition	IIL-FUBR-DET-COND-VENDOR

13.8 Defining Delivery-Based Transportation Requirement Types

In this procedure, you specify types of delivery-based transportation requirements (DTR). You then use these types to define certain parameters of the DTR that influence how the system processes this business document.

Procedure

1. In Customizing for SAP TM, choose *Integration* > *ERP Logistics Integration* > *Delivery-Based Transportation Requirement* > *Define Delivery-Based Transportation Requirement Types*.

2. Choose *New Entries* and enter the following data:

Field	Value
Transp. Reqmt Type	IIL3
Description	Int. Inbound Logistics – Delivery
Number Range Interval	02
Automatic Freight Unit Building	Selected
EM Web Interface Transaction	ODT20_SHIP_FU
DG Profile	IIL_DG_PR1
Propagate Changes	B Synchronous Propagation of Changes; Fallback to Asynchronous
FU Building Rule Condition	IIL-FUBR-DET-COND-VENDOR

13.9 Defining Conditions for OTR Type Determination

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

In this configuration step, the OTR type is determined when an order transferred from SAP ERP to SAP TM.

Prerequisites

You have defined the OTR document types.

Procedure

1. On the *SAP Easy Access* screen, call transaction `NWBC` to open the SAP Business Client.
2. Choose *Application Administration* > *General Settings* > *Conditions* > *Create Condition* > .
3. Choose *Continue.*

   If the system issues a message stating that the condition already exists, continue this process from the point at which you maintain values on the *Decision Table* tab page.

4. On the *New Condition Definition* screen, enter the data below:

   In the *General Data* screen area:

Field	Description	Value
Condition	Condition type supplied by the system	`ZOTR_TYPE`
Description	Description of the condition type	`OTR Type Determination Condition`

   In the *Settings* screen area:

Field	Description	Value
Condition Type	Condition type supplied by the system	`/SCMTMS/OTR_TYPE`
Origin of Condition	Source of the condition information	Condition based on BRFplus Decision Table

5. Choose the *Data Access Definition* tab page and enter the following data:

Field	Description	Value

Line 10	Select this row for further maintenance	Data Access Definition: `/SCMTMS/TRQ_ORD_CAT`
Line 20	Select this row for further maintenance	Data Access Definition: `/SCMTMS/TRQ_ORD_TYPE`

6. Choose the *Decision Table* tab page and enter the following data:

Field	Description	Value
Proc Type	Procedure type (incoming parameter)	`IIL4` Parameter: “is equal to”
BseDoc. Ty.	Incoming base document type	Parameter: “is equal to” Value: `001` – Purchase Order
OTR Type	Specify the data for integration here – the document type that is identified and used in SAP TM for OTR.	`IIL2`

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

7. Save your changes.

Result

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

13.10 Defining Conditions for DTR Type Determination

Procedure

1. On the *SAP Easy Access* screen, call transaction `NWBC` to open the SAP Business Client.
2. Choose *Application Administration* > *General Settings* > *Conditions* > *Create Condition* .
3. Choose *Continue.*

   If the system issues a message stating that the condition already exists, continue this process from the point at which you maintain values on the *Decision Table* tab page.

4. On the *New Condition Definition* screen, enter the data below:

   In the *General Data* screen area:

Field	Description	Value
Condition	Condition type supplied by the system	`ZDTR_TYPE`
Description	Description of the condition type	`DTR Type Determination Condition`

   In the *Settings* screen area:

Field	Description	Value
Condition Type	Condition type supplied by the system	`/SCMTMS/DTR_TYPE`
Origin of Condition	Source of the condition information	Condition based on BRFplus Decision Table

5. Choose the *Data Access Definition* tab page and enter the following data:

Field	Description	Value
Line 10	Select this row for further maintenance	Data Access Definition: `/SCMTMS/TRQ_ORD_CAT`
Line 20	Select this row for further maintenance	Data Access Definition: `/SCMTMS/TRQ_ORD_TYPE`

6. Choose the *Decision Table* tab page and enter the following data:

Proc Type	DTR Type
LF	IIL3

EL	IIL3

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

7. Save your changes.

13.11 Defining Freight Settlement Document Types

In this procedure, you define types of freight settlement documents (FSDs). You can use these types to specify certain parameters for certain types of FSDs, for example:

- Number ranges of freight settlement documents
- Freight settlement document categories
- Tracking of changes

You can also assign default FSD types to FSD categories. The system uses the default FSD type if you do not enter a FSD type when creating an FSD.

Procedure

1. In Customizing for SAP TM, choose *Settlement* > *Freight Settlement* > *Define Freight Settlement Document Types.*
2. Add a new entry as follows:

Field	**Value**
FSD Type	`IIL5`
FSD Category	`10` Freight Settlement Documents
Description	`Carrier Invoice Freight Settlement`
No. Range Interval	`01`
Weight UoM	`TO`
Default Volume UoM	`M3`
Default Pieces UoM	`EA`
Output Profile	`/SCMTMS/TOR_INV_PREP`
Add. Output *Profile*	`/SCMTMS/SFIR_PRINT`

13.12 Defining Freight Order Types

In this Customizing activity, you define new freight order types that contain an enhanced save strategy. These freight order types are used to create freight orders for the pre-carriage and on-carriage stages. Execution and settlement for these stages are based on the freight orders.

Procedure

1. In Customizing for *Transportation Management*, choose *Freight Order Management* > *Freight Order* > *Define Freight Order Types*.

2. Create a new freight order type for the pre-carriage stage using the following data:

Field	**Value**
Freight Order Type	IIL9
Description	Int. Inbound Logistics FO (CN)
Basic Settings	
Freight Order Can Be Subcontracted	02 - Not Relevant for Subcontracting
Shipper/Consignee Determination	P Determination based on Predecessor Documents
Enable Settlement	Select
Enable Charge Calculation	Select
Number Range Settings	
Time for Drawing	I Draw Number Immediately
Number Range Interval	04
Change Controller Settings	
Default Change Strategy	DEF_CHACO
Execution Settings	
Execution Track. Relev.	3 Execution Tracking with External Event Management
Immediate Processing	Select
Propagate Execution Info	Select
Event Management Settings	
Application Object Type	ODT20_TO
Last Exp. Event	ARRIV_DEST

Default MTr Determination	
Default MTr for Type	IIL_RAIL
Transportation Mode	02
Tendering Settings	
Use Default Settings	Select
Output Options	
Output Profile	/SCMTMS/TOR_PRINT_ROAD
Additional Settings	
Dangerous Goods Profile	IIL_DG_PR1
Default FSD Type	IIL5
Organizational Unit Determination	
Purchase Org.	*<IIL-PORG-1>*

3. Save your entries.

4. Create a second freight order type for the on-carriage stage using the following data:

Field	**Value**
Freight Order Type	IIL9
Description	Int. Inbound Logistics FO (DE)
Basic Settings	
Freight Order Can Be Subcontracted	02 - Not Relevant for Subcontracting
Shipper/Consignee Determination	P Determination Based on Predecessor Documents
Enable Settlement	Select
Enable Charge Calculation	Select
Number Range Settings	
Time for Drawing	I Draw Number Immediately
Number Range Interval	04
Change Controller Settings	
Default Change Strategy	DEF_CHACO
Execution Settings	

Execution Track. Relev.	3 Execution Tracking with External Event Management
Immediate Processing	Select
Propagate Execution Info	Select
Event Management Settings	
Application Object Type	ODT20_TO
Last Exp. Event	ARRIV_DEST
Default MTr Determination	
Default MTr for Type	IIL_FCL
Transportation Mode	01
Tendering Settings	
Use Default Settings	Select
Output Options	
Output Profile	/SCMTMS/TOR_PRINT_ROAD
Additional Settings	
Dangerous Goods Profile	IIL_DG_PR1
Default FSD Type	IIL5
Organizational Unit Determination	
Purchase Org.	<*IIL-PORG-1*>

5. Save your entries.

13.13 Defining Freight Booking Types

You use the freight booking that is created from this document type as the main document in this scenario. In particular, the freight booking is used to plan, execute, and settle the main-carriage stage.

Procedure

1. In Customizing for SAP TM, choose *Freight Order Management* > *Freight Booking* > *Define Freight Booking Types*.
2. Create a freight booking type for execution booking as follows:
    1. Enter the freight booking type `IIL7` and the description `Ocean Booking – Int. Inbound Logistics`.
    2. In the *Transportation Mode* field, choose *3 Sea*.
    3. In the *Basic Settings* screen area, set the *Shipper/Consignee Determination* field to *L Determine Based on First and Last Location* and select the *Booking Can Be Deleted* checkbox.
    4. In the *Change Controller Settings* screen area, enter the default change strategy `DEF_CHACO`.
    5. In the *Execution Settings* screen area:
        - Set the *Exec. Track. Relevance* field to *3 Execution Tracking with External Event Management*.
        - Set the *Immediate Processing* field to *X Life Cycle Is to Be Set to "In Process" Immediately*.
        - Select the *Propagate Execution Info* checkbox.
        - Enter the application object type `ODT20_FU`.
        - Enter the last expected event `ARRIV_DEST`.
    6. In the *Additional Settings* screen area, enter the dangerous goods profile `IIL_DG_PR1` and the Web dynpro application configuration `/SCMTMS/FRE_BOOK_OCEAN`.
    7. In the *Number Range Settings* screen area:
        - Set the *Time for Drawing* field to *I Draw Numbers Immediately*.
        - Enter number range interval `05`.
    8. In the *Service Definition* screen area, set the *Consolidation (Source / Dest.)* fields to *P Without Consolidation*.
    9. In the *Output Options* screen area, enter the output profile `/SCMTMS/TOR_PRINT_SEA`.

10. In the *Organization Unit Determination* screen area, enter the purchasing organization that you created in Creating Organizational Data in TM [Page 72]. In this scenario, the purchasing organization is `IIL-PORG-1`.

3. Save your entries.

4. Create a new freight booking type for pre-booking as follows:

    1. Enter the freight booking type `IIL8` and the description `Ocean Pre-Booking – Int. Inbound Logistics`.

    2. In the *Transportation Mode* field, choose *3 Sea*.

    3. In the *Basic Settings* screen area, set the *Shipper/Consignee Determination* field to *L Determine Based on First and Last Location* and select the *Booking Can Be Deleted* checkbox.

    4. In the *Change Controller Settings* screen area, enter the default change strategy `DEF_CHACO`.

    5. In the *Execution Settings* screen area:

        - Set the *Exec. Track. Relevance* field to *3 Execution Tracking with External Event Management*.
        - Select the *Immediate Processing* checkbox.
        - Enter the application object type `ODT20_FU`.
        - Enter the last expected event `ARRIV_DEST`.

    6. In the *Additional Settings* screen area:

        - Enter the dangerous goods profile `IIL_DG_PR1`.
        - Choose the default FSD type *IIL5 Carrier Invoice Freight Settlement*.
        - Enter the Web dynpro application configuration `/SCMTMS/FRE_BOOK_OCEAN`.

    7. In the *Number Range Settings* screen area:

        - Set the *Time for Drawing* field to *I Draw Numbers Immediately*.
        - Enter number range interval `05`.
        - Enter the HBL number range `05`.

    8. In the *Service Definition* screen area, set the *Consolidation (Source)* and *Consolidation (Dest.)* fields to *P - Without Consolidation*.

    9. In the *Output Options* screen area, enter the output profile `/SCMTMS/TOR_PRINT_SEA`.

    10. In the *Organization Unit Determination* screen area, enter the purchasing organization that you created in Creating Organizational Data in TM [Page 72]. In this scenario, the purchasing organization is `IIL-PORG-1`.

5. Save your entries.

14 Setting Up Application Administration

Activities

- Defining Carrier Selection Settings [Page 96]
- Defining Capacity Settings [Page 97]
- Defining Optimizer Settings [Page 98]
- Defining Planning Profiles [Page 99]
- Defining Selection Profiles [Page 101]

14.1 Defining Carrier Selection Settings

Procedure

1. In SAP NetWeaver Business Client (NWBC), choose *Application Administration* > *Planning* > *Planning Profile Settings* > *Carrier Selection Settings* > *Create Carrier Selection Settings*.

2. Create carrier selection setting IIL-CAR-SEL-OCSP with the following data:

Field	**Value**
Carrier Selection Settings	`IIL-CAR-SEL-OCSP`
Description	`Int. Inbound Logistics Ocean Carrier Selection Profile`
Check Incompatibilities	Deselected
Type of Carrier Selection Settings	General Carrier Selection
Trsp. Alloc. Usage	Use Transportation Allocations
BS Usage	Do Not Use Business Shares
Strategy	Costs
Carrier Cost Origin	Use Internal Costs

3. On the *Advanced Settings* tab page, enter the following data:

Field	**Value**
Planning Strategy	TSPS_DEF
Optimizer Runtime	`6`
Action for Manual Rankings	Remove
Transportation Charge Interpretation	Accept Carrier with Charges of Zero
Action After Carrier Selection Run	No Action
Continuous Move Type	Use Transportation Lane Settings
Check Dist. and Dur.	Selected
CM Cost Recalculation of TCM	No Recalculation

14.2 Defining Capacity Settings

You can use this procedure to define a user-specific grouping of capacities that is taken into account during transportation planning.

Procedure

1. In SAP NetWeaver Business Client (NWBC), choose *Application Administration* > *Planning* > *Planning Profile Settings* > *Capacity Selection Settings* > *Create Capacity Selection Settings*.

2. Create capacity selection setting IIL-CAP-SEL-STD with the following data:

   Description: Inbound Logistic – Capa. Prof.

   Vehicle Resource

Veg. Res. Sel. Attr.	**Sign**	**Option**	**Lower Limit**
VEHICLERES_ID	Inclusive	Pattern	IIL*

   Schedules

Attr. For Schd. Sel.	**Sign**	**Option**	**Lower Limit**
SCH_ID	Inclusive	Pattern	IIL*

14.3 Defining Optimizer Settings

Procedure

1. In SAP NetWeaver Business Client (NWBC), choose *Application Administration* > *Planning* > *Planning Profile Settings* > *Optimizer Settings* > *Create Optimizer Settings.*
2. Create optimizer setting `IIL-OPT-SET-STD` using the following data:

Field	Value
Optimizer	`IIL-OPT-SET-STD`
Description	`Inbound Logistics - Optimizer Settings`
Planning Strategy	`VSR_DEF`
FO Building Rule	New Freight Order when Resource is Empty
Accept Transp. Prop	Save Route and Freight Orders
Planning Strategy for Transp. Prop	`VSR_DEF`
Max. Number of Trans Proposals	`5`
Max. No. of Parallel Processes	`2`
Maximum No of Transshipment Loc	`2`
Maximum Runtime (Seconds)	`10`
Consider Capacity During Optimization	Consider Capacities During Optimization

14.4 Defining Planning Profiles

In this procedure, you define a planning profile that contains all of the relevant settings for optimizer planning and creating transportation proposals using the routing guide.

Procedure

1. In SAP NetWeaver Business Client (NWBC), choose *Application Administration* > *Planning* > *Planning Profiles* > *Create Planning Profile*.

2. On the *Planning Profile* tab page, create planning profile `IIL-PLAN-PROF-STD` as follows:

    1. In the *General Data* screen area, enter planning profile `IIL-PLAN-PROF-STD` and the description `Inbound Logistic Planning Prof`.

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

Field	Value
Duration in Days	`180`
Round Horizon to Full Days	Selected
Time Zone for Rounding the Horizon	`CET`

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

Field	Value
Capacity Selection Settings	IIL-CAP-SEL-STD
Optimizer Settings	`IIL-OPT-SET-STD`
Carrier Selection Settings	`IIL_CAR_SEL_OCSP`

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

Field	Value
Type Determination Rule	Defined per Category in Planning Profile
Default Type for Vehicle Resource	`IIL6`
Default Type for Bookings (Ocean)	`IIL7`

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

Field	Value
Manual Planning Strategy	`VSRI_DEF`
Consider Fixing Status	Error When Changing Fixed Document

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

Field	Value
Scheduling Strategy	VSS_DEF
Consider Freight Unit Dates	Do Not Consider Freight Unit Dates
Scheduling Direction	Backward

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

Field	Value
Check Strategy	VSR_CHECK
Take Capacities into Account	Warning

8. In the Loading and Unloading screen area, enter the following data:

Field	Value
Dependence	Freight Unit and MTr Independent
Loading/Unloading Duration	00:00:00

14.5 Defining Selection Profiles

In this procedure, you create selection profiles, which define the selection of the freight units based on geography, pick-up dates, and delivery dates. You need to create three selection profiles for each stage. This leads to stage level planning, so that transportation planners with regional expertise may select only those transportation requirements for which they are responsible.

Procedure

1. In SAP NetWeaver Business Client (NWBC), choose *Application Administration* > *Planning* > *Selection Profile Attributes* > *Geographical Selection Attributes* > *Create Geographical Selection Attributes*.

2. Create selection profile `IIL-GEO-SEL-MAIN` for main carriage as follows:

    1. In the *General Data* screen area, enter the following data:

Field	Value
Geographical Sel. Attributes	`IIL-GEO-SEL-MAIN`
Description	`Inbound Logistic - MainLeg Selection Profile`
Both Locations	Selected

    2. Choose the *Source Zones* tab page and enter the following data:

Sign	Option	Lower Value	Upper Value
Inclusive	=	IIL-CN-CHINA	Blank

    3. Choose the *Destination Locations* tab page and enter the following data:

Sign	Option	Lower Value	Upper Value
Inclusive	=	IIL-DEHAM	Blank
Inclusive	=	*SP*1200@*ERP001*	Blank

3. Create selection profile `IIL-GEO-SEL-PRE` for pre-carriage as follows:

    1. In the *General Data* screen area, enter the following data:

Field	Value
Geographical Sel. Attributes	`IIL-GEO-SEL-PRE`
Description	`Inbound Logistic - Pre-Carriage`
Both Locations	Selected

    2. Choose the *Source Locations* tab page and enter the following data:

Sign	Option	Lower Value	Upper Value
Inclusive	Within Range	*SU*IIL-VN-01@*ERP001*	*SU*IIL-VN-02@*ERP001*

3. Choose the *Destination Locations* tab page and enter the following data:

Sign	Option	Lower Value	Upper Value
Inclusive	=	IIL-CNSHA	Blank

4. Create selection profile `IIL-GEO-SEL-ON` for on-carriage as follows:

    1. In the *General Data* screen area, enter the following data:

Field	Value
Geographical Sel. Attributes	IIL-GEO-SEL-ON
Description	`Inbound Logistic – On-Carriage`
Both Locations	Selected

    2. Choose the *Source Locations* tab page and enter the following data:

Sign	Option	Lower Value	Upper Value
Inclusive	=	IIL-DEHAM	Blank

    3. Choose the *Destination Locations* tab page and enter the following data:

Sign	Option	Lower Value	Upper Value
Inclusive	=	*SP*1200@*ERP001*	Blank

5. In SAP NetWeaver Business Client (NWBC), choose *Application Administration* > *Planning* > *Selection Profile Attributes* > *Additional Selection Attributes* > *Create Additional Selection Attributes*.

6. Create additional selection attributes `IIL-ADD-SEL-EXCLUDE-PLANNED` by entering the following data in the *General Data* screen area:

Field	Value
Additional Sel. Attributes	`IIL-ADD-SEL-EXCLUDE-PLANNED`
Description	Exclude Planned Req.
Planned Requirements	Exclude in Selection

7. In SAP NetWeaver Business Client (NWBC), choose *Application Administration* > *Planning* > *Selection Profiles* > *Create Selection Profile*.

8. Create selection profile `IIL-GEN-SEL-MAIN-WO-TIME` for main carriage with the following data:

Field	Value
Selection Profile	IIL-GEN-SEL-MAIN-WO-TIME
Description	Inbound Logistics – Main Carriage
Maximum Number of Selected Objects	100
Geographical Sel. Attributes	IIL-GEO-SEL-MAIN
Additional Sel. Attributes	IIL-ADD-SEL-EXCLUDE-PLANNED

9. Create selection profile IIL-GEN-SEL-PRE-WO-TIME for precarriage with the following data:

Field	Value
Selection Profile	IIL-GEN-SEL-PRE-WO-TIME
Description	Inbound Logistics – Pre-Carriage
Maximum Number of Selected Objects	42
Geographical Sel. Attributes	IIL-GEO-SEL-PRE
Additional Sel. Attributes	IIL-ADD-SEL-EXCLUDE-PLANNED

10. Create selection profile IIL-GEN-SEL-ON-WO-TIME for on-carriage with the following data:

Field	Value
Selection Profile	IIL-GEN-SEL-ON-WO-TIME
Description	Inbound Logistics – On-Carriage
Maximum Number of Selected Objects	42
Geographical Sel. Attributes	IIL-GEO-SEL-ON
Additional Sel. Attributes	IIL-ADD-SEL-EXCLUDE-PLANNED

15 Setting Up Transportation Charge Management

Activities

- Defining Calculation Sheets [Page 105]
- Defining Freight Agreement Types [Page 107]
- Defining Freight Agreements [Page 108]

15.1 Defining Calculation Sheets

You use this procedure to define a calculation sheet. This informs the TM system of the transportation charges to be calculated and how to calculate them. This helps to bill the customer for transportation services and to pay the supplier for subcontracted transportation services.

Procedure

1. In SAP NetWeaver Business Client (NWBC), choose *Master Data* > *Charge Management* > *Calculation Sheets* > *Create Calculation Sheet*.
2. Create calculation sheet IIL-TCCS-FCL-SHIP.
3. Enter description `IIL-TCCS-FCL-SHIP`.

   Charge Usage: *Service Provider*.
4. Enter the following data:

Line No.	Instruction Type	Charge Type	Amount	Currency	Resolution Base
20	Standard	THCO	156	USD	STAGE
30	Standard	IPSO	16	USD	BOOKING
40	Standard	BSF	850	USD	STAGE
50	Standard	THCD	156	EUR	STAGE
60	Standard	IPSD	16	EUR	BOOKING

5. Create calculation sheet IIL-TCCS-ONCARR-RAIL.
6. Enter description `IIL-TCCS-ONCARR-RAIL`.

   Charge Usage: *Service Provider*.
7. Enter the following data:

Line No.	Instruction Type	Charge Type	Amount	Currency	Resolution Base
20	Standard	BSF	337	EUR	STAGE

8. Create new calculation sheet IIL-TCCS-CN-A184.
9. Enter description `IIL-TCCS-CN-A184`.

   Charge Usage: *Service Provider*.
10. Enter the following data:

Line No.	Instruction Type	Charge Type	Amount	Currency
20	Standard	BASE	500	EUR

11. Create new calculation sheet IIL-TCCS-CN-A183.
12. Enter description `IIL-TCCS-CN-A183`.

    Charge Usage: *Service Provider*.
13. Enter the following data:

Line No.	Instruction Type	Charge Type	Amount	Currency
20	Standard	BASE	600	EUR

15.2 Defining Freight Agreement Types

You use this Customizing activity to define freight agreement types. You must specify a freight agreement type when you create freight agreements.

Procedure

1. In Customizing for SAP TM, choose *Transportation Management* > *Master Data* > *Agreements and Service Products* > *Define Freight Agreement Types*.

2. Enter the following values that will apply to all your freight agreements.

Field	Description	User Action and Values
Type	Blank	`IILA`
Short Description	Blank	`IIL Freight Agreement Type`
Dflt Type	Default Type	Deselected
TrackChang	Blank	Deselected
Mul Pty	Blank	Deselected
Txt Schema	Blank	Blank
Calc. Sheet Template	Blank	Blank

15.3 Defining Freight Agreements

Procedure

1. In SAP NetWeaver Business Client (NWBC), choose *Master Data* > *Charge Management* > *Freight Agreements* > *Create Freight Agreement.*

2. Create new freight agreement `IIL-FA-SEA-CAR-01` as follows:

    1. On the *New Freight Agreement* screen, enter the type `IILA` and choose *Continue*.

    2. On the *General Data* tab page, enter the following data:

Field	Value
Agreement	IIL-FA-SEA-CAR-01
Description	`IIL-FA-SEA-CAR-01`
Valid From	As required
Valid To	As required
Purchase Organization	`IIL-PORG-1`
Carrier	`IIL-CR-01`

    3. In the *Items* screen area, add calculation sheet `IIL-TCCS-FCL-SHIP` to the table.

    4. Release.

3. Create freight agreement `IIL-FA-RAIL-CAR-01` as follows:

    1. On the *New Freight Agreement* screen, enter the type `IIL9` and choose *Continue*.

    2. On the *General Data* tab page, enter the following data:

Field	Value
Agreement	`IIL-FA-RAIL-CAR-01`
Description	`IIL-FA-RAIL-CAR-01`
Valid From	As required
Valid To	As required
Purchase Organization	`IIL-PORG-1`
Carrier	`IIL-CR-02`

    3. In the *Items* screen area, add calculation sheet `IIL-TCCS-ONCARR-RAIL` to the table.

4. Release.

4. Create freight agreement `IIL-FA-CN-A183-01` as follows:

    1. On the *New Freight Agreement* screen, enter the type `IIL9` and choose *Continue*.

    2. On the *General Data* tab page, enter the following data:

Field	**Value**
Agreement	`IIL-FA-CN-A183-01`
Description	`IIL-FA-CN-A183-01`
Valid From	As required
Valid To	As required
Purchase Organization	`IIL-PORG-1`
Carrier	`IIL-CR-04`

    3. In the *Items* screen area, add calculation sheet `IIL-TCCS-CN-A183` to the table.

    4. Release.

5. Create freight agreement `IIL-FA-CN-A184-01` as follows:

    1. On the *New Freight Agreement* screen, enter the type `IIL9` and choose *Continue*.

    2. On the *General Data* tab page, enter the following data:

Field	**Value**
Agreement	`IIL-FA-CN-A184-01`
Description	`IIL-FA-CN-A184-01`
Valid From	As required
Valid To	As required
Purchase Organization	`IIL-PORG-1`
Carrier	IIL-CR-03

    3. In the *Items* screen area, add calculation sheet `IIL-TCCS-CN-A183` to the table.

    4. Release.

16 Setting Up Customizing for Freight Settlements

Activities

- Defining Settlement Profiles [Page 111]
- Defining Charge Calculation Profiles [Page 112]
- Defining General Settings for Charge Calculations [Page 113]

16.1 Defining Settlement Profiles

In this Customizing activity, you define the profile for creating invoices. The settlement profile consists of a set of parameters with which you can control how the system creates invoices.

Procedure

1. In Customizing for SAP TM, choose *Transportation Management* > *Settlement* > *Define Settlement Profile.*.
2. Create an entry with the following data:

Field	Value
Settlement Prof	IIL_SP_01
Medium Desc.	*<Your description>*
Data Source	01 Planned Data
Split/Cons.	FSD_CREAT
Calculation Option	A Copy Fixed Charges and Redetermine Others
Invoicing Level	2 (Settlement on Item)
Collective Invoice	Selected

16.2 Defining Charge Calculation Profiles

Procedure

1. In Customizing for SAP TM, choose *Transportation Management* > *Basic Functions* > *Charge Calculation* > *Basic Settings for Charge Calculation* > *Define Calculation Profile*.

2. Choose *New Entries* to create a new entry with the following data:

Field	Value
Calculation Profile	`IIL_CLCPRF`
Description	`IIL: Charge Calculation Profile`
Calculation Date Type	`EET_DATE` (Expected End Date of Complete Carriage)
Calculation Level	`1` (Calculation on Header Level)
Freight Agreement Determination Rule	Blank
Calculation Sheet Determination Rule	Blank
Through Rate	Deselected
Dimensional Weight Profile	Blank
Dimensional Weight Condition	Blank
Exchange Rate Type	Blank
Data Source	Actual Route

3. Save your entries.

16.3 Defining General Settings for Charge Calculations

You can specify a default assignment of different charge calculation parameters such as the settlement profile, currency, and exchange rate for the sales and purchasing organization units.

Prerequisites

You have defined the organizational units.

Procedure

1. In Customizing for SAP TM, choose *Transportation Management* > *Basic Functions* > *Charge Calculation* > *Basic Settings for Charge Calculation* > *Define General Settings*.
2. Enter the following data:

Field	Value
Org. Unit	Enter the internal number of the purchasing organization that you previously created in Creating Organizational Data in TM [Page 72]
Settlement Prof	Enter the settlement profile that you previously created in Defining Settlement Profile [Page 111]
Calculation Profile	`IIL_CLCPRF`
Local Currency	`EUR`

3. Save your entries.

17 Integrating ERP Invoices

Activities

- Defining Service Masters [Page 115]
- Assigning Organizational Units for Purchasing [Page 116]
- Defining PPF Settings for ERP Invoicing Integration [Page 117]

17.1 Defining Service Masters

You use this procedure to store frequently procured services centrally as master records and use them on a cross-application basis.

Procedure

1. On the *SAP Easy Access* screen for SAP ERP, choose *Logistics* > *Materials Management* > *Service Master* > *Service* > *Service Master*.

2. Enter your data using the example provided in the table below for each of the following four service masters

   - Rail freight (internal number range) IIL-RAIL
   - Port Charges Destination (SIT_PORTD) IIL-PORTD
   - Port Charges Origin (SIT_PORTO) IIL-PORTO
   - Ocean freight (SIT_OCEAN) IIL-OCEAN

   You can identify these service masters either by system-generated numbers or names, but whichever numbers or names you use will need to be supplied in following procedures.

Field	Value
Service Category	`SERV` Service: Purchasing
Base Unit of Measure	`AU` (Activ. Unit)
Mat/Srv. Grp	`01` (Material Group 1)
Valuation Class	`3200` (Services)

17.2 Assigning Organizational Units for Purchasing

In this procedure, you can assign the purchasing business areas from an external transportation management system to the organizational units in purchasing in the ERP system.

Prerequisites

You have created organizational unit IDs in SAP TM.

Procedure

1. In Customizing for SAP ERP, choose *Integration with Other SAP Components* > *Transportation Management* > *Invoice Integration* > *Invoicing* > *Mapping of Organizational Units* > *Assign Organizational Units for Purchasing*.

2. Create an entry with the following data:

   The values given in this table are for illustration purposes only.

Field	Value
Logical System	*<logical system name of your TM system>*
TM Pur. Organization	Purchasing organization that you created in Creating Organizational Data in TM [Page 72]
Purchasing Org.	IIL-PORG-1
Purch. Group	001
Plant	1200
Company Code	1000

17.3 Defining PPF Settings for ERP Invoicing Integration

In this procedure, you configure the settings for the post processing framework (PPF). Since PPF is an output management framework, it helps you set up output that is specific to your installation. PPF generates output triggers based on the settings you configure for particular application data records. Based on the configuration settings, the system processes these triggers to send the actual output.

Procedure

1. In Customizing for SAP TM, choose *Cross-Application Components* > *Processes and Tools for Enterprise Applications* > *Reusable Objects and Functions for BOPF Environment* > *PPF Adapter for Output Management* > *Maintain PPF Settings*.
2. Select entry Appl. `/SCMTMS/TRANSPORTATION` and choose *Condition Configuration (Transportable Conditions)*.
3. In the *Scheduling of Actions* table, select *Transfer Freight Settlement Document to ERP* (`/SCMTMS/TOR_INV_PREP`).
4. Create action definitions `/SCMTMS/TOR_INV_PREP_CANCEL` and `/SCMTMS/TOR_INV_PREP_REQUEST`.
5. Select action definition `/SCMTMS/TOR_INV_PREP_CANCEL` and select the *Schedule Condition* tab page.
6. Enter schedule condition `/BOFU/EVAL_SCHEDULE_CONDITION`.
7. Select action definition `/SCMTMS/TOR_INV_PREP_REQUEST` and choose the *Schedule Condition* tab page.
8. Enter schedule condition `/BOFU/EVAL_SCHEDULE_CONDITION`.
9. Choose the *Start Condition* tab page and enter start condition `/BOFU/EVAL_START_CONDITION`.