



TEST CASE DESCRIPTION | PUBLIC  
SAP TM 9.6 SP00  
2018-12-14

# Intermodal Rail Freight: Test Case

# Content

- 1 Intermodal Rail Freight: Test Case. . . . . 4**
- 2 Prerequisites. . . . . 6**
  - 2.1 User-Specific Customizing. . . . . 6
  - 2.2 Master Data and Organizational Data. . . . . 6
  - 2.3 Roles. . . . . 9
- 3 Process Overview Table. . . . . 11**
- 4 Process Steps. . . . . 13**
  - 4.1 Manage Forwarding Orders. . . . . 13
    - Creating Forwarding Order. . . . . 13
    - Defining Actual Route and Transportation Proposals. . . . . 16
    - Checking Applied Charges. . . . . 17
  - 4.2 Plan Rail Freight. . . . . 17
    - Assigning Freight Unit to Railcar. . . . . 18
    - Creating Rail Freight Orders from Schedule. . . . . 19
    - Assigning Railcar to Rail Freight Order. . . . . 20
    - Creating Road Freight Order. . . . . 21
  - 4.3 Execute Rail Freight. . . . . 21
    - Executing Freight Orders. . . . . 22
    - Monitoring and Executing Freight from SAP Event Management. . . . . 23
  - 4.4 Forwarding Settlement. . . . . 24
    - Managing Forwarding Settlement. . . . . 25
    - Transferring Forwarding Settlement Document to SAP ERP. . . . . 25
  - 4.5 Manage Freight Settlement. . . . . 27
    - Billing. . . . . 27

# Legal Disclaimer

## ⚠ Caution

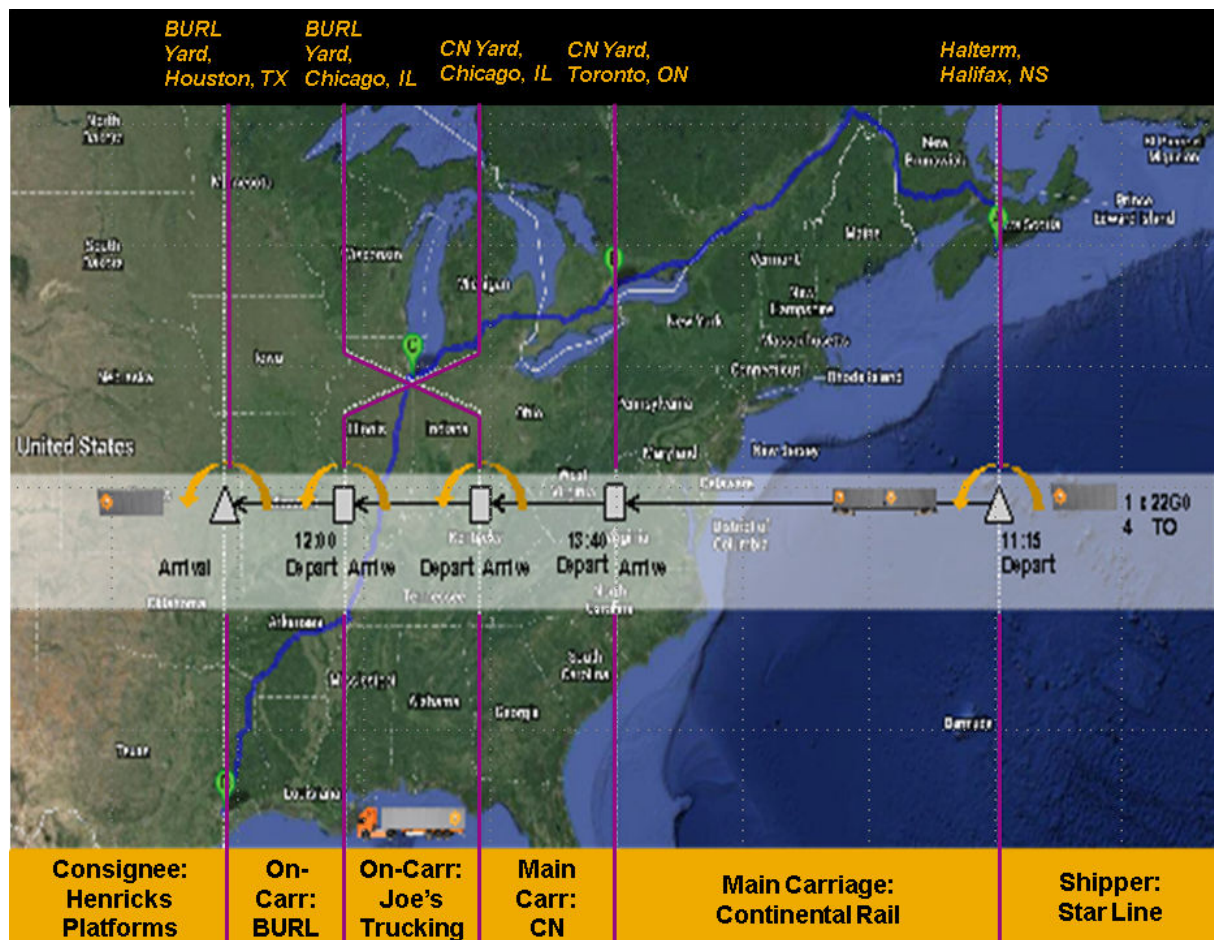
This document contains sample configuration content. Unless expressly stated otherwise in your agreements with SAP, this sample content is not part of SAP product documentation and you may not infer any product documentation claims against SAP based on this information.

# 1 Intermodal Rail Freight: Test Case

This document provides steps for testing the *Intermodal Rail Freight* scenario in SAP Transportation Management (SAP TM).

In this scenario, a 20-foot container is handed to Continental Rail by the shipper Star Line at the container terminal in Halterm in Halifax, NS. The container, which contains dangerous goods, is transported on a scheduled train to Toronto by Continental Rail as per the order placed by the customer. The order also states that the interchange to Burlington is to take place in the yard in Toronto, ON.

The container continues its journey to Oklahoma City, crossing the U.S. border in Detroit, MI. Ocean Bond is responsible for transporting the container through the United States. The final destination of the container is Houston, TX. It is transported to Houston on a scheduled train operated by Burlington. In Houston, the container is picked up at the yard by the consignee Hendricks Platforms Inc.

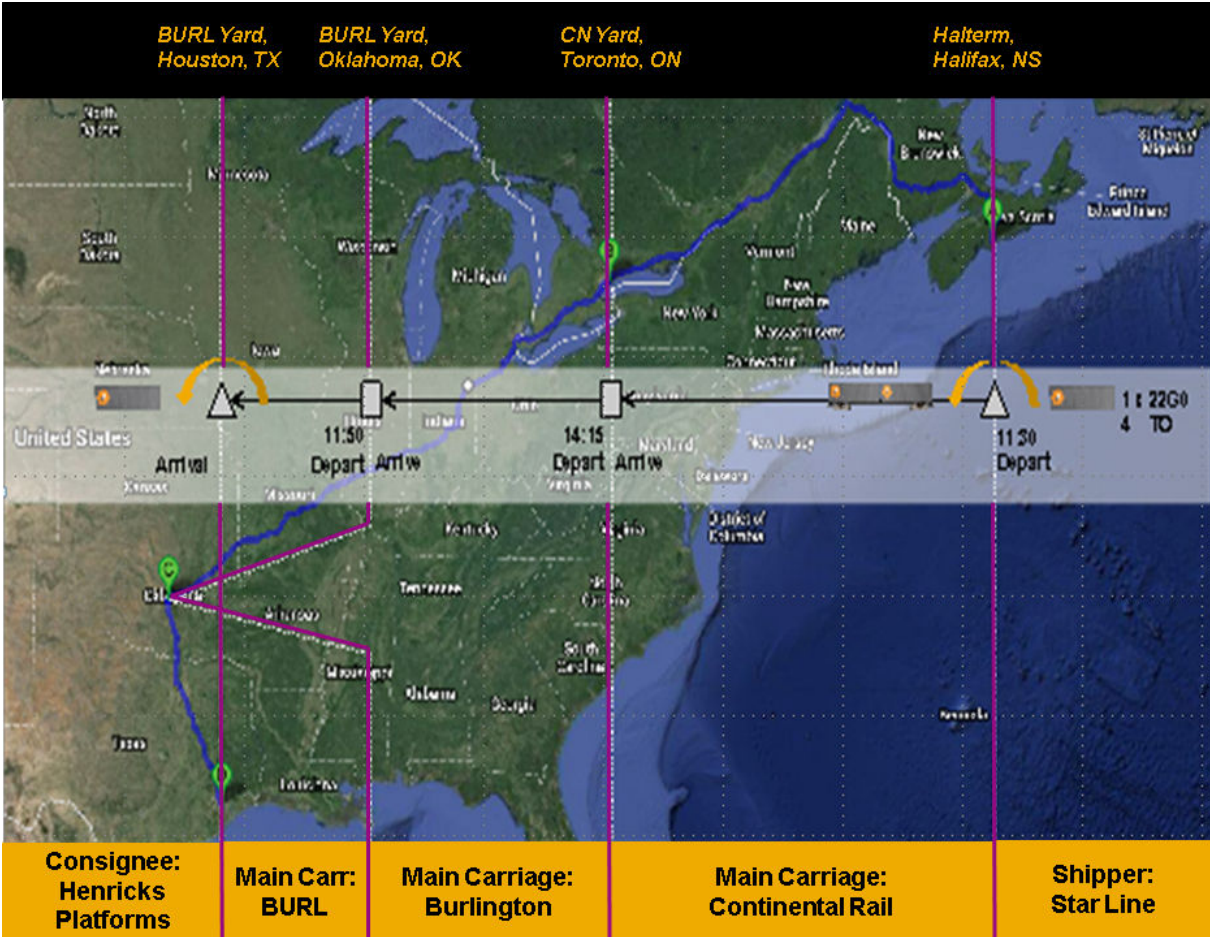


Intermodal Rail Freight (1)

As an alternative, the container can be routed via Chicago, IL. Since congestion on the ordered, default route is heavy, the container can be transported along the actual route via Chicago.



Continental Rail manages the transport from Toronto, ON to Chicago Heights Yard, and arranges for the container to be subsequently moved for interchange to Burlington at Chicago IM EX Yard. For the cross-town transport from Chicago Heights to Chicago IM EX, Continental Rail orders a truck subcontracted to Joe's Trucking. The container is unloaded from the railcar and loaded onto the truck. Once transported, it is unloaded from the truck in Chicago IM EX and loaded onto a railcar. It then continues its journey to its final destination in Houston, TX. In Houston, the container is picked up at the yard by the consignee Hendricks Platforms Inc.



Intermodal Rail Freight (2)

Charges are invoiced based on the ordered route and rule 11. Continental Rail and Burlington each send an invoice to Star Line for their section of the journey. The charges on each of the invoices include the respective terminal handling at the source and destination locations.

In addition to the charges for transport and supplemental services, there may be costs incurred during execution. These event-driven charges will be added to the invoices as supplemental charges.

In this scenario, you assume the role of Continental Rail, which is running the SAP Transportation Management system that you are in the process of setting up. All of the settings and data that are referred to as "internal" in the following document therefore refer to Continental Rail.

## 2 Prerequisites

Before you begin this test case, you must complete the following tasks:

- Configure your user data (see [User-Specific Customizing \[page 6\]](#)).
- Set up your master data and organizational data (see [Master Data and Organizational Data \[page 6\]](#)).
- Configure your roles (see [Roles \[page 9\]](#)).

### 2.1 User-Specific Customizing

#### SAP Event Management Setup

Ensure that you setup your user according to the *Assigning User to Web Transactions* details in the *Integration of SAP Event Management* guide. You can access the guide in SAP Solution Manager by choosing ► *Solutions/ Applications* ► *SAP Transportation Management* ► *Configuration Structures* ► *Basic Settings for SAP TM <release>* ► *Integration of SAP Event Management* ►.

#### Invoice Integration

Ensure that your user profile contains the parameter `TM_INVOICE_CLERK` (with an initial value).

### 2.2 Master Data and Organizational Data

The *Configuration Guide for Intermodal Rail Freight* provides all of the required master data and organizational data. For more information, see the following table:

Use the following master data in the process steps described in this document:

Master and Organizational Data	Value	Details
Company Code	3000	Only in SAP ERP
Sales Organization	3000	Only in SAP ERP
Purchasing Organization	3000	Only in SAP ERP

Master and Organizational Data	Value	Details
Business Partner	RF-CR-01	Joe's Trucking
	RF-CR-CN	Continental Rail
	RF-CR-BURL	Burlington Railway
	RF-CU-01	Star Line Canada Inc (Customer)
	RF-CU-02	Burlington Railway (Customer)
Means of Transport	RF-SHORT	Feeder Locomotive Production
	RF-SHORT-E	Feeder Locomotive Interline
	RF-TRAIN	Scheduled Train Production
	RF-TRAIN-E	Scheduled Train Interline
	RF-TRUCK	Truck MTr
	RF-TRUCK-S	Scheduled Truck MTr
	RF-RAILCAR	Railcar
Equipment Group (Vehicle)	A	Equipped box cars
	B	Unequipped box cars
	C	Covered hopper cars
	E	Equipped gondola
	F	Flatcar
	G	Unequipped gondola
	H	Unequipped Hopper
	J	Gondola car
	K	Equipped hopper cars
	L	Special type cars
	LOC	Locomotive
	M	M-O-W, Scale, Passenger, Caboose, and En
	P	Conventional intermodal cars

Master and Organizational Data	Value	Details
	Q	Lighter weight, Low-profile intermodal
	R	Refrigerator cars
	S	Stack car
	T	Tank cars
Equipment Type (Vehicle)	F077	Flat Car – COFC/TOFC
	S615	Double Stack Car (FC)
Resources	RF-TRUCK-01	Truck 01 (Multi Res.)
	ATSF-291000	Flat Car – COFC/TOFC /ATSF-291000
	ATSF-291001	Flat Car – COFC/TOFC /ATSF-291001
	ATSF-291002	Flat Car – COFC/TOFC /ATSF-291002
	ATSF-291003	Flat Car – COFC/TOFC /ATSF-291003
	ATSF-291004	Flat Car – COFC/TOFC /ATSF-291004
	ATSF-291005	Flat Car – COFC/TOFC /ATSF-291005
Company Organization	RF-COMP-CA	Railway Company Code CA
Sales Organization	RF-SORG-1	Railway Sales Organization CA
Purchasing Organization	RF-PORG-1	Railway Purchasing Organization CA
Execution Organization	RF_EORG_01	Railway Execution Organization CA
Locations	RF_12605	Halterm Halifax, NS
	RF_41978	Toronto Cargoflo, ON
	RF_55989	Chicago Heights Yard, IL
	RF_66001	Chicago IM EX, IL
	RF_626200	Oklahoma City, OK
	RF_35100	Houston, TX
	CURF-CU-01@Q63501	Customer Star Line Canada Inc
	CURF-CU-02@Q63501	Customer Hendricks Sealants Inc



Master and Organizational Data	Value	Details
Schedules	RF_12605 > RF_41978	Scheduled train CN 100 from Halifax, NS to Toronto Cargoflo, ON
	RF_41978 > RF_55989	Scheduled train CN 120 from Toronto Cargoflo, ON to Chicago Heights Yard, IL
	RF_66001 > RF_35100	Scheduled train BN CHHO from Chicago IM EX, IL to Houston, TX
	RF_41978 > RF_626200	Scheduled train BN TOOC from Toronto Cargoflo, ON to Oklahoma City, OK
	RF_626200 > RF_35100	Scheduled train BN OCHO from Oklahoma City, OK to Houston, TX
	RF_55989 > RF_66001	Cross-town truck schedule in Chicago
Transportation Lane	RF_55989 > RF_66001	Chicago Heights Yard > Chicago IM EX
Service Product Catalog	RF_INTERMODAL_S001	Rail Intermodal services for Door-to-Door and Ramp-to-Ramp

## 2.3 Roles

You must assign the following roles to the users who are to test this scenario. The roles are required only if you work in SAP NetWeaver Business Client (NWBC); if you use the standard SAP GUI, the roles are not necessary.

### Roles in SAP Transportation Management

Business Role	Technical Name
Transportation Planner	/SCMTMS/PLANNER
Carrier Settlement Specialist	/SCMTMS/CARRIER_SETTLEMENT_SP
Process Administrator	/SCMTMS/PROCESS_ADMINISTRATOR
Transportation Manager	/SCMTMS/TRANSPORTATION_MANAGER
Carrier Internet User	/SCMTMS/SERVICE_PROVIDER

Business Role	Technical Name
Display	/SCMTMS/DISPLAY

## Roles in SAP Event Management

Business Role	Technical Name	Comment
SAP Event Management User	/SAPTRX/SAP_EM_USER	Required to access Web transactions in SAP Event Management

## Roles in SAP ERP

Business Role	Technical Name	Comment
Process Purchase Orders	SAP_MM_PUR_PURCHASEORDER	None
Online Invoice Verification	SAP_MM_IV_CLERK_ONLINE	Required to enter and verify carrier invoices
Automatic Settlements	SAP_MM_IV_CLERK_AUTO	Required to execute evaluated receipt settlements

### 3 Process Overview Table

The following table provides an overview of the processes involved in the *Intermodal Rail Freight* test case:

Process Step	Business Role	Transaction Code	Expected Results
Create Forwarding Order Entry	Customer Service Agent	NWBC	Forwarding order is created.
Define Actual Route – Transportation Proposals	Customer Service Agent	NWBC	Actual route is defined and stages are generated.
Check the Applied Charges	Customer Service Agent	NWBC	Charges are calculated based on the ordered route.
Assign Freight Unit to Railcar	Transportation Planner	NWBC (Planning Cockpit)	Freight units are assigned to railcars.
Create Freight Order from Schedule Departure	Transportation Planner	NWBC (Planning Cockpit)	Freight order is created with assigned voyage/trip.
Assign Railcar to Freight Order	Transportation Planner	NWBC (Planning Cockpit)	Railcars are assigned to freight order.
Create Freight Order for Road and Assign Freight Unit	Transportation Planner	NWBC (Planning Cockpit)	Road freight order is created and freight unit assigned.
Execute and Monitor Stages	Transportation Planner	NWBC	Freight orders are executed and monitored.
Generate and Send Invoice to Customer	Customer Service Agent	NWBC	Forwarding settlement document is created and transferred.  Billing document is created in SAP ERP.
TM: Settling Freight Orders	Transportation Planner	NWBC MIRO	Freight settlement document is created and transferred.  Service purchase order and entry sheet are created.

Process Step	Business Role	Transaction Code	Expected Results
Verifying Logistics Invoices Online	Carrier Settlement Specialist	MIRO	Invoice document for the service purchase order is created.
		MRBR	
		MR8M	

# 4 Process Steps

The test case for *Intermodal Rail Freight* requires the following processes:

- [Manage Forwarding Orders \[page 13\]](#)
- [Plan Rail Freight \[page 17\]](#)
- [Execute Rail Freight \[page 21\]](#)
- [Forwarding Settlement \[page 24\]](#)
- [Manage Freight Settlement \[page 27\]](#)

## 4.1 Manage Forwarding Orders

- [Creating Forwarding Order \[page 13\]](#)
- [Defining Actual Route and Transportation Proposals \[page 16\]](#)
- [Checking Applied Charges \[page 17\]](#)

### 4.1.1 Creating Forwarding Order

#### Context

Continental Rail receives an order from Star Line for the transport of one container of dangerous goods from Halifax, NS to Houston, TX.

The customer service agent checks the order to make sure that it is complete. Based on the available customer agreements, an appropriate service can be chosen where required.

Once the order has been saved, it is sent to Burlington for validation and confirmation.

#### Procedure

1. As a customer service agent in SAP NetWeaver Business Client (NWBC), choose ► *Forwarding Order Management* ► *Forwarding Order* ► *Create Forwarding Order* ►.
2. Enter forwarding order type **RF01**.
3. Deselect the *Template* checkbox.

- Choose *Continue*.
- On the *General Data* tab page, enter the following data at header level:

Field	Value
<i>Sales Organization</i>	<b>RF-SORG-1</b>
<i>Transportation Mode</i>	<b>02</b> (Rail)
<i>Traffic Direction</i>	<b>1</b> (Export)
<i>Shipping Type</i>	<b>30</b> (Intermodal Rail)
<i>Movement Type</i>	<b>RR</b> (Rail Ramp to Ramp)
<i>Forwarding Agreement</i>	<b>RF_STARLN_001</b>
<i>Item</i>	<b>200</b>
<i>Service Product</i>	<b>IRR_S001</b>

- In the *Items* table, choose the **Insert > Container** pushbutton combination and enter the following data in the table:

Field	Value
<i>Item Type</i>	<b>CN</b>
<i>Container</i>	<b>MSKU6011672</b>
<i>Equipment Group</i>	<b>CN</b>
<i>Equipment Type</i>	<b>20G0</b>
<i>Quantity</i>	<b>1 PC</b>
<i>Gross Weight</i>	<b>2,570 KG</b>

- Select the row containing your container and enter the following data on the *Commodity Codes* tab page of the item details.

Commodity Code Type	Commodity Code
<b>ST</b>	<b>2819604 (ALUMINUM PHOSPHIDE)</b>

- In the items table, choose the **Insert > Package** pushbutton combination and enter the following data:



Field	Value
Item Type	PKG
Pieces	4 PAL
Gross Weight	8,000 KG

9. In the items table, choose the **Insert > Product** pushbutton combination and enter the following data:

Field	Value
Product	2819604 (ALUMINUM PHOSPHIDE)
Pieces	40 CAN
Gross Weight	8,000 KG

10. Press **ENTER**.
11. In the item details for the package, select the *Dangerous Goods* tab page.
12. Check that the dangerous goods checkbox has been selected for the package and if not, select it.
13. Save any changes you have made.
14. On the *Business Partner* tab page, enter the following data:

Field	Value
Ordering Party	RF-CU-01
Shipper	RF-CU-01
Consignee	RF-CU-02

15. On the *Location and Dates/Times* tab page, enter the following data at header level:

Field	Value
Source Location	RF-12605
Pick-Up Date	<Today> + 1 day
Destination Location	RF_35100
Delivery Date	<Pick-up date> + 3 days

16. On the *Charges* tab page, enter the document currency **CAD**.
17. Save your entries.

## 4.1.2 Defining Actual Route and Transportation Proposals

### Context

The commercial route as defined by the default route or as ordered by the customer may not always be the exact route taken by the cargo. The system can propose an operational route based on the capacity of scheduled and unscheduled vehicles, as well as constraints with regard to transportation, equipment, and locations. The selected stages form the basis for operational planning.

### Procedure

1. As a customer service agent in SAP NetWeaver Business Client (NWBC), choose ► [Forwarding Order Management](#) ► [Worklist](#) ► [Overview Forwarding Order](#) ►.
2. Select the forwarding order you created and switch to edit mode.
3. On the *Stages* tab page, choose the ► [Actual Route](#) ► [Define Route](#) ► pushbutton combination to start the transportation proposal
4. On the transportation proposal screen, choose the first result via Chicago.
5. Choose the [Accept Routing](#) pushbutton.

The following stages are added:

Stage	Stage Type	Transportation	Source	Source
		Mode	Location	Location
1	03 (Main Carriage)	02 (Rail)	RF_12605	RF_41978
2	03 (Main Carriage)	02 (Rail)	RF_41978	RF_55989
3	03 (Main Carriage)	01 (Road)	RF_55989	RF_66001
4	03 (Main Carriage)	02 (Rail)	RF_66001	RF_35100

6. Save your entries

## 4.1.3 Checking Applied Charges

### Context

When a forwarding order is saved in this scenario, the system automatically calculates the transportation charges based on the ordered route. If this does not occur, check that the agreement party roles have been defined on the [Stages](#) tab page of the actual route. If the roles are missing, enter the applicable role (ordering party) for each stage.

In the step, you verify the charges that have been calculated along with the logical references and the parties that are required to settle the charges.

### Procedure

1. As a customer service agent in SAP NetWeaver Business Client (NWBC), choose [Forwarding Order Management](#) [Worklist](#) [Overview Forwarding Order](#).
2. Select your forwarding order and switch to edit mode.
3. On the [Charges](#) tab page, check the amount, assigned carrier, and payer on the charge items overview.
4. Select the charge items in turn and choose the [Show/Hide Details](#) pushbutton.
5. On the [Overview](#) tab page, verify the determination from the agreement.
6. Select the charge items in turn and choose the [Show/Hide Details](#) pushbutton.
7. On the [Calculation Rules](#) tab page, for example, check the rate hit from the determined rate table.

## 4.2 Plan Rail Freight

- [Assigning Freight Unit to Railcar \[page 18\]](#)
- [Creating Rail Freight Orders from Schedule \[page 19\]](#)
- [Assigning Railcar to Rail Freight Order \[page 20\]](#)
- [Creating Road Freight Order \[page 21\]](#)

## 4.2.1 Assigning Freight Unit to Railcar

### Prerequisites

You have created forwarding orders (see [Creating Forwarding Order \[page 13\]](#)).

### Context

In this procedure, you assign the container represented by the “freight unit” planning object to the “railcar” equipment. If you know the railcar ID, you can assign it at this point in time. If not, you can enter the railcar ID when the container is loaded.

### Procedure

1. As a transportation planner in SAP NetWeaver Business Client (NWBC), choose **► Planning ► Planning ► Transportation Cockpit**.
2. On the *Transportation Cockpit: Profile and Layout Sets* screen, choose **► View ► Selection Criteria**.
3. In the *Search Criteria* screen area of the *Transportation Cockpit: Selection* screen, enter the following values (use the plus icon [+] where necessary to display additional fields):

Screen Area	Field	Operator	Value
<i>Freight Unit Stages</i>	<i>Source Location</i>	<i>contains</i>	<b>RF_*</b>
	<i>Destination Location</i>	<i>contains</i>	<b>RF_*</b>
	<i>Pick-Up in Days (Past)</i>	<i>is</i>	<b>5</b>
<i>Transportation Units</i>	<i>Source Location</i>	<i>contains</i>	<b>RF_*</b>
	<i>Destination Location</i>	<i>contains</i>	<b>RF_*</b>
<i>Freight Orders</i>	<i>Source Location</i>	<i>contains</i>	<b>RF_*</b>
	<i>Destination Location</i>	<i>contains</i>	<b>RF_*</b>
<i>Resources</i>	<i>Means of Transport</i>	<i>contains</i>	<b>RF_*</b>

Screen Area	Field	Operator	Value
Schedules	Schedules	is	<Schedule you created earlier>
	Schedules	is	<Schedule you created earlier>
	Schedules	is	<Schedule you created earlier>
Settings	Planning Profile	is	RF_AUTO_PLAN
	Transportation Cockpit Layout	is	RF_RAIL_STEP_1_CAR

4. In the *Save Search As:* field at the bottom of the screen, enter a name of your choice.
5. Choose *Continue*.
6. Select the freight unit for the first stage.
7. Use drag and drop to assign your freight unit to a railcar resource.
8. On the *Transportation Unit – Trailer Hierarchy* tab page, check that the freight unit has been coupled to a railcar and that a railcar document has been created.
9. Save your entries.

## 4.2.2 Creating Rail Freight Orders from Schedule

### Context

In this procedure, you create freight orders for each of the scheduled train departures that make up the route from Halifax, NS to Houston, TX.

#### **i** Note

Make sure that the *Template* checkbox is selected in the Customizing activity *Define Schedule Types*. Otherwise, the freight orders are actively linked to the schedules and it will not be possible to assign railcar units subsequently.

### Procedure

1. As a transportation planner in SAP NetWeaver Business Client (NWBC), choose **► Planning ► Planning ► Transportation Cockpit ►**

2. On the *Transportation Cockpit: Profile and Layout Sets* screen, choose ► *View* ► *Selection Criteria* ⌵.
3. In the *Saved Searches:* dropdown box, choose the search that you defined earlier (see [Assigning Freight Unit to Railcar \[page 18\]](#)).
4. Check that your selection criteria appear correctly.
5. Choose the *Continue* pushbutton.
6. In the screen area that contains the capacities, select the *Schedules* tab page.
7. Expand the node for the schedule for which you want to create a freight order.
8. From the list of departure times, select a departure and choose the *Create Freight Document* pushbutton.
9. As the document type, choose *RFIN* for your own rail freight orders (carrier *CN*) or *RFSC* for interline railroad carriers.
10. If required, you can select a vehicle such as a locomotive.
11. Choose *OK*.
12. Save your entries.

## 4.2.3 Assigning Railcar to Rail Freight Order

### Prerequisites

You have created freight orders (see [Creating Rail Freight Orders from Schedule \[page 19\]](#)).

### Context

In this procedure, you assign the railcar and its cargo to the train departures represented by the freight orders.

### Procedure

1. As a transportation planner in SAP NetWeaver Business Client (NWBC), choose ► *Planning* ► *Planning* ► *Transportation Cockpit* ⌵.
2. On the *Transportation Cockpit: Profile and Layout Sets* screen, choose ► *View* ► *Selection Criteria* ⌵.
3. From the *Saved Searches:* dropdown box, select the search that you defined earlier.
4. Choose the *Continue* pushbutton.
5. Select the railcar document that you create earlier.
6. Use drag and drop to assign the railcar document to a freight order.
7. On the *Overview* tab page, check that the railcar has been coupled to a freight order.



8. Save your entries.

## 4.2.4 Creating Road Freight Order

### Context

In this procedure, you create a road freight order and assign a freight unit to it.

### Procedure

1. As a transportation planner in SAP NetWeaver Business Client (NWBC), choose ► [Planning](#) ► [Planning](#) ► [Transportation Cockpit](#) ►.
2. On the [Transportation Cockpit: Profile and Layout Sets](#) screen, choose ► [View](#) ► [Selection Criteria](#) ►.
3. In the [Saved Searches](#): dropdown box, choose the search that you defined earlier.
4. Check that your selection criteria appear correctly.
5. Choose the [Continue](#) pushbutton.
6. In the screen area that contains the capacities, select the [Vehicles](#) tab page.
7. Expand the node for the schedule for which you want to create a freight order.
8. Assign freight unit stage 30 to vehicle `RF_TRUCK` using drag and drop.
9. Choose OK.
10. Save your entries.
11. Check that the freight order has been created.

## 4.3 Execute Rail Freight

- [Executing Freight Orders \[page 22\]](#)
- [Monitoring and Executing Freight from SAP Event Management \[page 23\]](#)

## 4.3.1 Executing Freight Orders

### Use

Based on the planned freight order data, the system creates expected milestones for loading the container at the CN ramp, each of the junctions, and the final destination in Houston. These milestones enable you to monitor and track the transportation.

The system generates the necessary tracking events to track the cargo. These events include items such as:

- Loading and unloading
- Departure and arrival at destination

The forwarder receives execution information through various communication channels and updates the events in SAP Event Management to track the transportation status. In this way, containers and railcars are tracked end-to-end from the origin ramp in Halifax to the destination ramp in Houston.

### Procedure

1. As a customer service agent in SAP NetWeaver Business Client (NWBC), choose **► Forwarding Order Management ► Forwarding Order ► Edit Forwarding Order ►**.
2. Enter your forwarding order.
3. On the *Document Flow* tab page, select the number of the freight order that you created for the first stage and open it by clicking the link.
4. On the *General Data* tab page, check that the departure date and the arrival date have been entered. If not, enter them manually.
5. Check that the *Purchasing Organization* (RF\_PORG\_01) and the *Planning and Execution Organization* (RF\_EORG\_01) have been entered. If not, enter them manually.
6. On the *Equipment* tab page, select the railcar and enter resource **CN\_7208** if this has not already been done.

#### i Note

You can also change the status at this point by choosing **► Set Status ► Set to Ready for Transportation Execution ►**.

7. Save and switch to edit mode.
8. On the *Execution Information* tab page, choose *Insert Event*.
9. Enter the following data:

Field	Value
<i>Event</i>	<b>Departure</b>
<i>Actual Event Date</i>	<b>&lt;Planned pick-up date&gt;</b>

Field	Value
<i>Location</i>	RF_12605

- Choose *Report Event*.
- Choose *Insert Event* and enter the following data:

Field	Value
<i>Event</i>	Arrival at Destination
<i>Actual Event Date</i>	<Planned pick-up date>
<i>Location</i>	RF_41978

- Choose *Report Event*.
- Save and close.
- On the *Stages* tab page of the forwarding order, check that the status for stage 1 has changed to *Arrived*.

#### Check

- As a customer service agent, choose the following menu path in SAP NetWeaver Business Client: **Freight Order Management** > **Freight Order** > **Edit Freight Order**.
- Select the freight order for the first stage.
- Check the *Charges* tab page.  
A basic rate should be displayed.
- If no charges have been calculated, check the *General Data* tab page to see whether the purchasing organization has been entered. If not, enter the corresponding forwarding house (the export station in either Tokyo or Nagoya).
- Choose *Calculate Charges*.

Repeat these steps for all your routed stages in the relevant freight orders until the freight units arrive in Houston.

## 4.3.2 Monitoring and Executing Freight from SAP Event Management

### Context

When the container is delivered to the BNSF yard, the BNSF customer sends proof-of-delivery using the Web front end of SAP Event Management. This completes the transportation process.

## Procedure

1. As a customer service agent in SAP Event Management, choose ► [Event Management](#) ► [Web Interface](#) ► [Search](#) ►.
2. Select the tracking scenario *Shipper – Freight Unit Visibility Process*.
3. Select your forwarding order and post the proof of delivery.
4. As a customer service agent in SAP Event Management, choose ► [Event Management](#) ► [Web Interface](#) ► [Search](#) ►.
5. Select the tracking scenario *Resource Tracking -Visib. Process*.
6. Select your equipment and check the expected dates and times.

## 4.4 Forwarding Settlement

### Use

The transportation division has negotiated a freight agreement with the in-house customers, including the sales division that triggered the transportation of the container. This freight agreement provides a framework for the costs used by the transportation division to provide a service to the other divisions in the enterprise. The transportation division is responsible for managing any market fluctuations that affect pricing, and acts as an in-house division to improve consolidation within the enterprise. Service levels are based on fixed changes that are incurred by the sales or purchasing organizations in the company. This enables sales and procurement processes to be carried out based on budgets and reliable costs for the in-house divisions.

Penalties may be agreed in the event that commitments are not met during the transportation process. The transportation charges calculated in the request therefore originate from the freight agreement, and can contain additional charge elements (for example, services such as fumigation or repacking), which are not part of the freight agreement between the transportation division and the shipping sales department.

Once transportation has been completed, the system creates a forwarding settlement document and transfers it to SAP ERP.

Costs for outsourcing have to be transferred from SAP TM to SAP ERP on the basis of freight settlement documents. MM-PUR verifies the invoice based on incoming documents and posts costs based on the information on the service entry sheet for the service purchase orders of the carriers.

### Activities

- [Managing Forwarding Settlement \[page 25\]](#)
- [Transferring Forwarding Settlement Document to SAP ERP \[page 25\]](#)

## 4.4.1 Managing Forwarding Settlement

### Context

This procedure is optional. You can use it to create an invoice (forwarding settlement document) for the entire shipment, which is then posted in SAP ERP and sent to the customer.

### Procedure

1. As a customer service agent in SAP NetWeaver Business Client (NWBC), choose ► *Forwarding Order Management* ► *Forwarding Order* ► *Edit Forwarding Order* ⌵.
2. Enter the number of the forwarding order that you created earlier and choose the *Continue* pushbutton.
3. Check that the agreement party role has been entered on the *Stages* tab page for all stages.
4. On the *Charges* tab page, choose the ► *Calculate Charges* ► *Calculate Charges* ⌵ pushbutton combination.
5. Save your changes and switch back to edit mode.
6. Choose ► *Follow Up* ► *Create Forwarding Settlement Document* ⌵.
7. Select the radio button for ordering party RF-CU-01 and choose *Select All* for the settlement group.
8. Choose OK and save your forwarding settlement document.

### Results

On the *Charges* tab page, the invoicing status has changed to *04 – Completely Invoiced*.

## 4.4.2 Transferring Forwarding Settlement Document to SAP ERP

### Context

This procedure is optional.

In SAP Transportation Management, you generate forwarding settlement documents that are “pre-invoices” containing all of the data that is relevant for invoicing.

You trigger the creation of the final customer invoices and final customer credit and debit notes from the SAP TM system. The forwarding settlement document in SAP TM is sent through XI to the SAP ERP system and converted into regular invoices, credit notes, or debit notes in SAP ERP in accordance with the SAP TM add-on logic. The customer invoices are then available in the SAP ERP system.

After you have created the credit or debit note in SAP ERP, the financial document is created automatically. The FI document is the basis for further processing of the billing document in accounting and controlling. Depending on the system settings, you can also create documents for the general ledger, profit center, profitability analysis, and cost accounting.

## Procedure

1. In SAP NetWeaver Business Client, choose ► *Forwarding Settlement* ► *Worklist* ► *Overview Forwarding Settlement Documents* ▾.
2. Select the forwarding settlement document created for customer RF-CU-01 from the input help (F4) and choose *Continue*.
3. Choose *Save* and *Transfer*.
4. Check the status of the forwarding settlement document.

If the consistency status of the forwarding settlement document is *Consistent*, it should change from *Ready for Invoicing* to *Transferred for Invoicing*.

5. Go to the *Document Flow* tab page.

Make a note of the updated SD billing document number.

6. Check the status of forwarding settlement document.

Once the billing document number has been updated, the status should change from *Transferred for Invoicing* to *Invoiced*.

7. Check the billing document in SAP ERP using transaction VF03.
8. Open the SD billing document from the document flow of the forwarding settlement document.
9. Go to the document header and check the following:
  - The quantities in the billing document are the same as the quantities in the forwarding settlement document.
  - The net value (amount) in the billing document is the same as the net amount in the forwarding settlement document.
  - The date in the billing document is the same as the date in the forwarding settlement document.
  - The line items in the billing document are the same as the line items in the forwarding settlement document.
  - The payment terms in the billing document are the same as the payment terms in the forwarding settlement document (if the payment terms are not sent from SAP TM to SAP ERP, the payment terms in the billing document are the default payment terms from the customer or vendor master).
  - The bill to parties in the billing document are the same as the bill to parties in the forwarding settlement document.



## Results

The forwarding settlement document for consignee RF-CU-01 is transferred to SAP ERP and a corresponding SD billing document is created. This, in turn, updates the forwarding settlement document in SAP TM. You can also check the billing document SAP ERP using transaction VF03.

## 4.5 Manage Freight Settlement

### Use

You can use this business activity to evaluate, calculate, and distribute the transportation charges for the business partners involved in the supply (that is, the suppliers). The transportation charge calculation is based on the outgoing freight document (freight order or freight booking). The business partners involved are supplying parties, such as the logistics service providers and carriers.

This business process enables the financial transactions for supplier invoicing. The outgoing freight documents are rated according to charges that the transportation division and the subcontracted common carriers have contractually agreed.

Once transportation is complete, the system creates a freight settlement document and transfers it to SAP ERP. Based on this document, you post accruals in SAP ERP for expected supplier invoices in SAP MM.

You can verify your supplier's invoices against the accrued amounts or send the supplier a credit memo created by a self-billing procedure (Evaluated Receipt Settlement – ERS).

In this scenario, all costs are settled directly from the carriers to the customer.

### Activities

[Billing \[page 27\]](#)

### 4.5.1 Billing

#### Use

##### i Note

This procedure is optional.

In this procedure, transportation charges are transferred from SAP TM to SAP ERP using freight settlement documents. In SAP ERP, the charges can be used to verify actual charges from the supplier's invoices.

## Procedure

1. As a customer service agent in SAP NetWeaver Business Client (NWBC), choose ► *Forwarding Order Management* ► *Forwarding Order* ► *Edit Forwarding Order* ⌵.
2. Enter the number of the forwarding order that you created and choose the *Continue* pushbutton.
3. Go to the *Stages* tab page.
4. Complete the steps below for all of your forwarding orders.

### Update and Recalculate Charges

1. Select the number of your first stage freight order.
2. On the *Charges* tab page, check that charges have already been calculated. If not, choose *Calculate Charges*.

### Create Freight Settlement Document

1. Check that the invoicing status is *Not Invoiced* and that the charge calculation status is *Calculated*.
2. Save any changes you have made.
3. Switch to edit mode.
4. Choose ► *Follow Up* ► *Create Freight Settlement Document* ⌵.

### Transfer Freight Settlement Document to SAP ERP

1. In the new window, choose *Save and Transfer*.
2. Note the freight settlement document number: \_\_\_\_\_.
3. Choose *Close*.

## Result



The *Invoicing* status of your freight orders has changed to *Completely Invoiced*.

# 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.

© 2018 SAP SE or an SAP affiliate company. All rights reserved.

No part of this publication may be reproduced or transmitted in any form or for any purpose without the express permission of SAP SE or an SAP affiliate company. The information contained herein may be changed without prior notice.

Some software products marketed by SAP SE and its distributors contain proprietary software components of other software vendors. National product specifications may vary.

These materials are provided by SAP SE or an SAP affiliate company for informational purposes only, without representation or warranty of any kind, and SAP or its affiliated companies shall not be liable for errors or omissions with respect to the materials. The only warranties for SAP or SAP affiliate company products and services are those that are set forth in the express warranty statements accompanying such products and services, if any. Nothing herein should be construed as constituting an additional warranty.

SAP and other SAP products and services mentioned herein as well as their respective logos are trademarks or registered trademarks of SAP SE (or an SAP affiliate company) in Germany and other countries. All other product and service names mentioned are the trademarks of their respective companies.

Please see <https://www.sap.com/about/legal/trademark.html> for additional trademark information and notices.