Transportation Configuration and Process Flow

Transportation Configuration

Terms used transportation module

There are various terms and terminologies associated with the transportation module with which one needs to be familiar

- Transportation Planning Point.
- Shipping Type.
- Route.
- Shipment Type.
- Shipping Type Procedure Group.
- Shipment Cost Type.
- Item Category Shipment Cost.
- Item Determination Procedure Group.
- Pricing Procedure for Shipment Cost.

Process Configuration Part-I

Step: 1 - Maintain Purchase Organization


Step: 2 - Create Purchasing Group

TCode: OME4

Step: 3 - Maintain Transportation Planning Point to Company Code.

TCode: OVXT
SPRO - Enterprise Structure - Definition - Logistics Execution - Maintain Transportation Planning Point

Step: 3A - Assign Transportation planning point to company code.

Step: 4 - Assign Purchasing Organizations to Company Code.

TCode: OX01

Step: 5 - Assign Purchasing Organizations to Plant.

TCode: OX17

Step: 6 Create Vendor Account Group

TCode: OMSG & Number Range OMSJ
SPRO - Financial Accounting - Accounts Receivables and Accounts Payables - Customer Accounts - Vendor Accounts - Master Data - Preparations for Creating Vendor Master Data - Define Account Group

Step: 8 Create Vendor

TCode: XK01
Step: 9 Define Modes of Transport

TCode: 0VTB
SPRO - Logistics Execution - Transportation - Basic Transportation Function - Routes - Define Routes - Define Modes of Transport

Step: 9A Define Shipping Types

TCode: 0VTA
SPRO - Logistics Execution - Transportation - Basic Transportation Function - Routes - Define Routes - Define Shipping Types
Select New Entries and Assign the Shipping Type (e.g. Road or Train) and Assign Mode of Transport (Mdtr) and Assign Shipping type Procedure group.

Step: 9B Define Transportation Connection Point

TCode: 0VTD
SPRO - Logistics Execution - Transportation - Basic Transportation Function - Routes - Define Routes - Define Transportation Connection Point.

Step: 9C Define Routes and Stages.

TCode: 0VTCS
SPRO - Logistics Execution - Transportation - Basic Transportation Function - Routes - Define Routes - Define Routes and Stages.
Select the New Entries and Enter the Details - Then Select the Routes stages and define

Step: 9D Maintain Stages for all Routes.

SPRO - Logistics Execution - Transportation - Basic Transportation Function - Routes - Define Routes - Maintain Stages for all Routes.

Step: 10 ROUTE DETERMINATION - Define Transportation Zone

SPRO - Logistics Execution - Transportation - Basic Transportation Function - Routes - Define Routes - Define Transportation Zone.

Step: 10A Maintain County and Transportation Zone for Shipping Point.

SPRO - Logistics Execution - Transportation - Basic Transportation Function - Routes - Define Routes - Maintain County and Transportation Zone for Shipping Point.

Step: 10B Define Transportation Groups

SPRO - Logistics Execution - Transportation - Basic Transportation Function - Routes - Define Routes - Define Transportation Groups

Step: 10D Maintain Route Determination

SPRO - Logistics Execution - Transportation - Basic Transportation Function - Routes - Define Routes - Maintain Route Determination.

SHIPMENTS

SPRO - Logistics Execution - Transportation - Basic Transportation Function - Shipments

Step: 11 Define Shipment Types

SPRO - Logistics Execution - Transportation - Basic Transportation Function - Shipments - Define Shipment Types.

Step: 12 In Customer master data.

In Address of General data. Enter the Transportation Zone id. And save you will get the route.

Process Configuration Part-II
1) Maintain transportation planning point through Menu as follows:
SPRO - Enterprise Structure - Definition - Logistic Execution - Maintain transportation planning point

2) Defining modes of transport:
SPRO - Logistics Execution - Transportation - Basic Transportation Function - Routes - Define routes - Execution Define modes of transport
Use the standard configuration like:

<table>
<thead>
<tr>
<th>Shipping type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Road</td>
</tr>
</tbody>
</table>

3) Define shipping types:
SPRO - Logistics Execution - Transportation - Basic Transportation Function - Routes - Shipping types

<table>
<thead>
<tr>
<th>PT</th>
<th>Description</th>
<th>Mtr</th>
<th>STPG</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Truck</td>
<td>01</td>
<td>0001</td>
</tr>
</tbody>
</table>

4) Define transportation connecting point:
SPRO - Logistics Execution - Transportation - Basic Transportation Function - Routes - Connection points
You can copy the standard point and make it FB01 as departure zone and FB02 as destination zone

5) Define routes and stages.
SPRO - Logistics Execution - Transportation - Basic Transportation Function - Routes - Transportation routes and stages
Use the standard route and copy it as FB0001 and enter the departure zone and destination as what we created.

6) Defining Transportation Zone:
SPRO - Logistics Execution - Transportation - Basic Transportation Function - Routes - Router determination
Use the standard transportation zone depending on the route so as for the example use 0000000003 - Southern Region

7) Maintain country or transportation zone for shipping points
SPRO - Logistics Execution - Transportation - Basic Transportation Function - Transportation zone for shipping point
Assign Shipping point & route to the desired country

8) Maintain route determination:
SPRO - Logistics Execution - Transportation - Basic Transportation Function - Routes Determination

<table>
<thead>
<tr>
<th>Country of departure</th>
<th>Departure Zone</th>
<th>Country of destination</th>
<th>Destination Zone</th>
</tr>
</thead>
</table>

And enter the data’s needed like shipping condition 01, etc.
Maintain Transportation relevance for
- shipping point
- sales document type
- delivery types.

9) Now create shipping types
SPRO - Logistics Execution - Transportation - Shipments - Shipment
10) Define and assign traffic zones through menu as follows:

TCode: T_76
SPRO - Logistics Execution - Transportation - Shipment - Shipments cost - Functions Tariff Zones
Copy the standard to create TARIFF ZONE of own.
Then assign already created transportation planning point to the tariff zone

11) Define and assign pricing procedures

SPRO - Logistics Execution - Transportation - Shipment - Shipments cost procedures

- Pricing
- Price control
- assign pricing

12) Assign purchasing data:

SPRO - Logistics Execution - Transportation - Shipment - Shipments cost - Settlement

13) Assignment

Assign Transportation planning point to combination of

- shipping condition
- purchase organization
- purchasing group
- plants

14) Define Automatic G/L account determination:

TCode: OMWB
SPRO - Logistics Execution - Transportation - Shipment - Shipment Costs - Settlement ()
Assign a GL account

15) Automatic determination of CO assignments:

TCode: OKB9
SPRO - Logistics Execution - Transportation - Shipment - Shipment Costs - Settlement - Determination of CO Assignments

16) Maintain shipping point address.

SPRO - Enterprise Structure - Logistics Execution - Definition - Define, copy, Delete, check shipping - Definition point
Maintain the address

17) Creating G/L account centrally.

TCode: FS00
SAP Easy Access - Financial - General Ledger - Master Records - Accounting - Accounting Individual - Processing Centrally

18) Enter the G/L account for your company code

19) Create transportation condition records:

TCode: TK11
Logistics - Master data - Transportation - Shipment cost - Price

Transportation Process Flow:

1. The system determines the pricing procedure for the shipment cost item-using
Step 1. Create Delivery Document

TCode: VL01N
With reference the sales order create a delivery using TCode - VL01N and pick the goods.

Step 2. Create Shipment Document

TCode: VT01N
After the status of the delivery is open for transportation planning, it is possible to create a shipment document to schedule the transportation. Now create a shipment using TCode - VT01N (SAP Easy Access - Logistics - Logistic Execution - Transportation - Transportation Planning - Create - Single document) and assign the delivery to the shipment document. Make sure to enter the carrier and other details before performing the transportation planning and execution.

After the deliveries are scheduled by shipment and the shipment is executed, now it is time to maintain and close the shipment document in order to record all relative information and ready for the shipment cost settlement.

So, save the shipment document and PGI for the delivery would be done automatically.

A shipment represents a physical goods movement between two or more locations.

For the system to create a shipment, shipping-relevant deliveries must exist.

You use Transportation Planning to group pending deliveries into shipments and then to perform the shipments.

The outbound delivery documents contain routes that the system calculates in route determination, and a transportation planning date for the delivery.

Dynamic transportation planning is responsible for grouping together outbound deliveries into shipments that have at least the same route, visit plan type and the same transportation planning date.

The following restrictions can be taken into account for a shipment in Dynamic Transportation Planning:

- Weight
- Volume
- Variable capacity
- Number of stops
- Maximum duration
- Loading units

Step 3. Creating Shipment Cost Document & Cost Settlement

TCode: VI01 (SAP Easy Access - Logistics - Logistic Execution - Transportation - Shipmen cost - Create - Single document)
After creation of shipment cost doc. The document is ready settling the Shipment cost.

Step 3.1. Use TCode VI02, enter shipment cost no. and press enter.
Step 3.2. Then go to Overview screen Freight cost items. Select the line item and double click it.
Step 3.3. Go as main menu: Item - Acc. assignment, you enter G/L acc. and cost center to which the transportation cost will be posted. On the Standard change, details - Freight cost items screen, then check the check box "Transfer", which means you will transfer the relative transportation cost to FI/CO, in this case, the system should determined which Purchase Order will used to settle the cost, so after you check the "Transfer" check box. Press save button on the current screen.

Effects of Shipment cost settlement and related documents

After the shipment cost settled in shipment cost document, it has the following affects:

- It creates a service entry sheet that refers to the purchase order determined.
- It posts acceptance of services performed.
- It creates an accounting document for the accruals.
- Further subsequent documents are created in FI.

Generally process is
1) VL01N
2) VT01
3) VL02N - PGI
4) VI01
5) ML81N - Service Entry Sheet
6) MIRO - Invoice Verification
Diagrammatic Representation of SD Transportation Process Flow

**Shipping docs (VT01) are created before PGI**

You cannot carry out transportation planning or creation of shipment after the goods issue has been executed. Once goods issue is done it means that the material has left your premises so there is no need for a transportation planning after it.

In case you need carry out the shipment documents at the end of the day you could just create the delivery documents during the day and at end of the day create the shipment documents and the goods issue.