4 Mapping Layer-2/3 Nodes to Transport Nodes

After you define both the Layer-2/3 and Transport topologies, you need to specify the relationship between them. Specifically, you need to

1) Map Layer-2/3 nodes to Transport nodes

2) Map Layer-2/3 links to the Transport connections that support those links (this step is described in Mapping Layer-2/3 Links to Transport Connections on page TC-5-1)

Node mappings can be many-to-one: multiple Layer-2/3 nodes can be collocated with, or connected to, one transport node. SWIM supports two methods for mapping nodes. You can use the Map Nodes dialog box to specify the node mapping between the two layers. (You can also use this dialog box to create new Transport nodes and map them to Layer-2/3 nodes in one step.) For more information, see SWIM - Map Nodes Dialog Box on page TC-4-6.

Mapping Nodes: Procedure Descriptions

This section describes the supported operations for mapping Layer-2/3 nodes to Transport nodes:

- One-to-One Mapping (Existing Transport Node, Automatic) on page TC-4-2
- One-to-One Mapping (Existing Transport Node, Manual) on page TC-4-2
- Many-to-One Mapping (Existing Transport Node) on page TC-4-3
- One-to-One Mapping (New Transport Node) on page TC-4-3
- Many-to-One Mapping (New Transport Node) on page TC-4-4
- Unmapping Layer-2/3 Nodes on page TC-4-4
- Clearing All Node and Link Mappings on page TC-4-5
- Importing Node Mappings from an External File on page TC-4-5

One-to-One Mapping (Existing Transport Node, Automatic)

This operation causes every Layer-2/3 node to be mapped to the transport node with the same name (if one exists).

Procedure 4-1 Mapping Layer-2/3 Nodes to Transport Nodes (Automatic Mapping)

1. From the Project Editor in SP Guru Network Planner, choose SWIM > Node/Link Mapping > Map Nodes.

   ➥ The SWIM - Map Nodes Dialog Box appears.

2. Click the “Auto >>” button.

   ➥ All Layer-2/3 nodes (left treeview) are mapped to their corresponding Transport nodes, and appear as children of their Transport nodes in the right treeview.

   A Transport node “corresponds to” a Layer-2/3 node if the two nodes have the exact same name. A Layer-2/3 node will not be mapped if it has no corresponding Transport node.

End of Procedure 4-1

One-to-One Mapping (Existing Transport Node, Manual)

Procedure 4-2 describes how to map a Layer-2/3 node to an existing transport node.

Procedure 4-2 Mapping a Layer-2/3 Node to an Existing Transport Node

1. From the Project Editor in SP Guru Network Planner, choose SWIM > Node/Link Mapping > Map Nodes.

   ➥ The SWIM - Map Nodes Dialog Box appears.

2. In the Layer-2/3 Nodes treeview, select the node you want to map.

3. In the Transport Nodes treeview, select the corresponding node.

4. Click the “>>” button.

   ➥ In the Transport Nodes treeview, the Layer-2/3 node appears as a child of the Transport node to which it is mapped.

End of Procedure 4-2

Many-to-One Mapping (Existing Transport Node)

Procedure 4-3 describes how to map multiple Layer-2/3 nodes to one existing Transport node.

Procedure 4-3 Mapping Multiple Layer-2/3 Nodes to an Existing Transport Node

1. From the Project Editor of SP Guru Network Planner, choose SWIM > Node/Link Mapping > Map Nodes.

   ➥ The SWIM - Map Nodes Dialog Box appears.

2. In the Layer-2/3 Nodes treeview, select the nodes you want to map.

3. In the Transport Nodes treeview, select the corresponding node.

4. Click the “>>” button.

   ➥ In the Layer-2/3 Nodes treeview, the Layer-2/3 nodes appear as children of the Transport node to which it is mapped.

End of Procedure 4-3

One-to-One Mapping (New Transport Node)

Procedure 4-4 describes how to map an Layer-2/3 node to a new transport node.

Procedure 4-4 Mapping One Layer-2/3 Node to a new Transport Node

1. From the Project Editor of SP Guru Network Planner, choose SWIM > Node/Link Mapping > Map Nodes.

   ➥ The SWIM - Map Nodes Dialog Box appears.

2. In the Layer-2/3 Nodes treeview, select the node you want to map.

3. In the Transport Nodes treeview, select “New... 1 to 1”.

4. Click the “>>” button.

   ➥ The SWIM - Map to New Transport Node dialog box appears.

5. Specify the node type and name of the new transport node, then click OK.

   ➥ In the SP Guru Transport Planner scenario, the new node is created in the same geographic location as the mapped SP Guru Network Planner node.

   ➥ In the Transport Nodes treeview, the new transport node appears as a parent of the mapped Layer-2/3 node.

6 If desired, switch to SP Guru Transport Planner and move the new Transport node to another location.

End of Procedure 4-4

Many-to-One Mapping (New Transport Node)

Procedure 4-5 describes how to map multiple Layer-2/3 nodes to a new transport Guru node.

Procedure 4-5 Mapping multiple Layer-2/3 Nodes to a New Transport Node

1 From the Project Editor of SP Guru Network Planner, choose SWIM > Node/Link Mapping > Map Nodes.

➥ The SWIM - Map Nodes Dialog Box appears.

2 In the Layer-2/3 Nodes treeview, select the nodes you want to map.

3 In the Transport Nodes treeview, select “New... All to 1”.

4 Click the “>>” button.

➥ The SWIM - Map to New Transport Node dialog box appears.

5 Specify the node type and name of the new transport node, then click OK.

➥ In the SP Guru Transport Planner scenario, the new node is created. The node location is based on the geographic location one of the mapped Layer-2/3 nodes.

➥ In the Transport Nodes treeview, the new transport node appears as a parent of the mapped Layer-2/3 node.

6 If desired, switch to SP Guru Transport Planner and move the new transport node to another location.

End of Procedure 4-5

Unmapping Layer-2/3 Nodes

Procedure 4-6 describes how to unmap Layer-2/3 nodes.

Note—You cannot unmap a Layer-2/3 node if it has attached links that are mapped to transport connections.

Procedure 4-6 Unmapping Layer-2/3 Nodes

1. From the Project Editor of SP Guru Network Planner, choose SWIM > Node/Link Mapping > Map Nodes.

   ➥ The SWIM - Map Nodes Dialog Box appears.

2. In the Transport Nodes treeview, select the Layer-2/3 nodes you want to unmap.

3. Click the << button. The selected Layer-2/3 nodes are no longer mapped to transport nodes.

End of Procedure 4-6

Clearing All Node and Link Mappings

To clear all existing node and link mappings, choose SWIM > Node/Link Mapping > Clear Node and Link Mapping.

Importing Node Mappings from an External File

You can import node mappings defined in an external SWIM XML file. This option is useful if you have an existing SWIM file that contains the node mapping you want to apply to the current scenario.

Procedure 4-7 Importing Layer-2/3<—>Transport Node Mappings from an External File

1. From the Project Editor of SP Guru Network Planner, choose SWIM > Node/Link Mapping > Map Nodes.

   ➥ The SWIM - Map Nodes Dialog Box appears.

2. Click Import.

   ➥ The SWIM - Import Node Mapping dialog box appears.

3. Select the SWIM (*.wdmnt.xml) or XML file that specifies the node mapping you want to import, then click Open.

   ➥ SWIM imports the node mappings specified in the file, and ignores all other information.

   ➥ A log message appears and shows all mapping data that was imported.

End of Procedure 4-7

SWIM - Map Nodes Dialog Box

To open this dialog box, choose SWIM > Node/Link Mapping > Node Mapping in the Project Editor of SP Guru Network Planner. For procedure descriptions, see Mapping Nodes: Procedure Descriptions on page TC-4-1.

Figure 4-1 Map Nodes Dialog Box

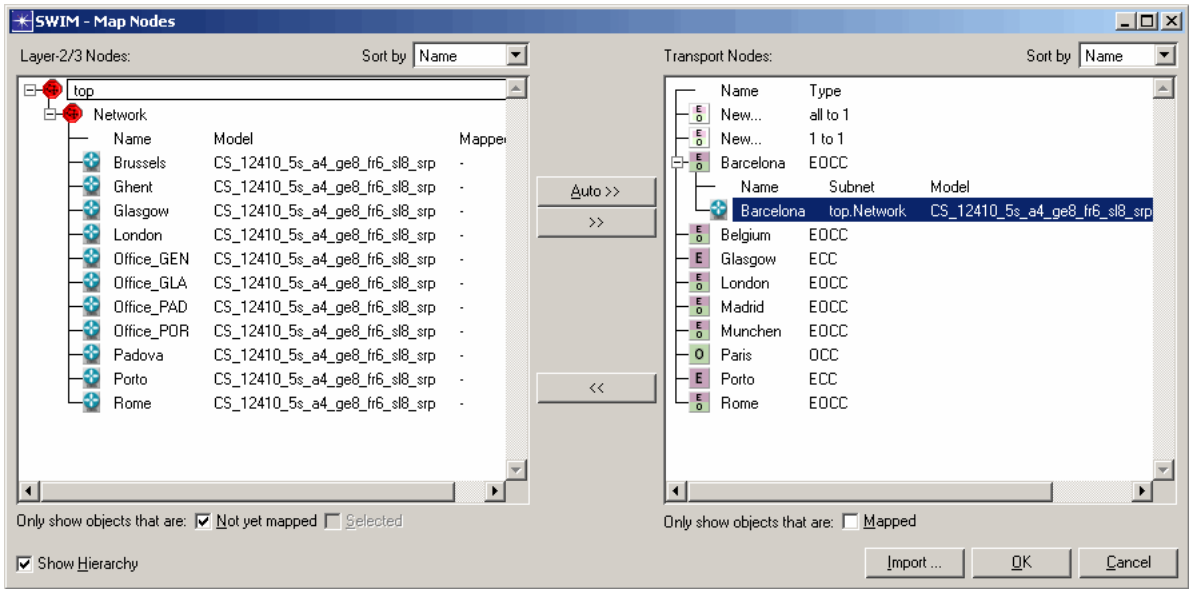

Table 4-1 SWIM - Map Nodes Dialog Box

Control	Description
Auto >>	Map all Layer-2/3 nodes to their corresponding transport nodes. A Layer-2/3 node corresponds to a transport node if the two node have the exact same name.
>>	Maps node(s) selected in the Layer-2/3 Node treeview to the one transport node selected in the Transport Nodes treeview
<<	Unmaps Layer-2/3 node(s) selected in the Transport Nodes treeview
Import	Import node mappings from a SWIM (*.wdmnt.xml) or XML data file
OK	Apply the specified mapping to the SP Guru Network Planner and the SP Guru Transport Planner scenarios
Cancel	Cancels mapping operations and leaves the SP Guru Network Planner and the SP Guru Transport Planner networks unchanged
End of Table 4-1	