



Subtending Configurations

Overview

The subtending feature provides a mechanism to link a number of chassis (Cisco DSLAM shelves) into one network trunk port. You can link up to thirteen 6260, 6160, 6130 NI-2 DSLAM chassis through their WAN interfaces.

In a subtended configuration, each chassis is connected by its WAN interface to the STM module of the chassis above it, in the subtending hierarchy, or, if it is at the top of the hierarchy, to the network trunk.



Note

For more information about the Cisco NI-2 DSLAM Equipment Module subtending feature, refer to the appropriate Cisco documentation.

Activator supports the creation of multiple ATM cross connections across subtended systems for Services created by various Service Applications. However, before Services can be created across subtended systems, you must create links from one chassis to its subtended chassis.

The upload function will only upload port information from each chassis. Links from one chassis to another must be created manually to form the appropriate subtended topology. You must create links with the following endpoints:

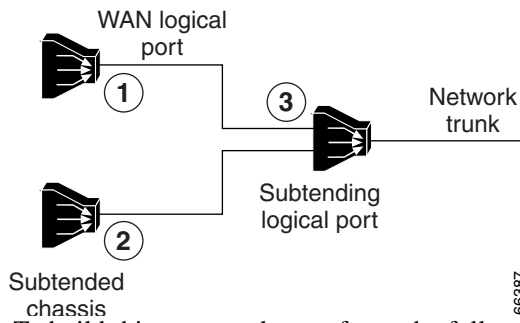
- subtending logical port (on the parent chassis),
- WAN logical port (on the subtended chassis).

Subtending configurations of DSLAMs are considered to be a transparent network by Cisco Provisioning Center.

Topology

There are two subtending topologies that you can create with the Cisco NI-2 DSLAM system: tree and daisy-chain. The tree topology connects the top chassis to two subtended chassis. A tree topology can only be configured on a DS-3 interface. Currently, the tree topology cannot be implemented using an OC3 interface because the OC3 variant of the NI-2 card has only one subtending port.

Figure 3-1 shows the tree topology.

Figure 3-1 Tree Topology for DS-3 Interfaces

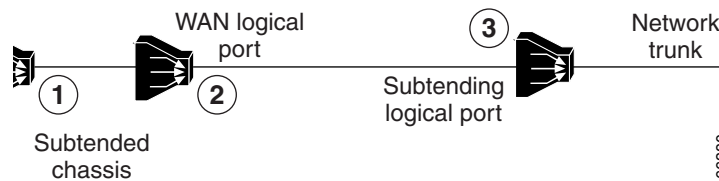
To build this tree topology refer to the following procedure:

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- Step 1** Create a network containing the three nodes. Refer to “Creating Networks” on page 1-6
 - Step 2** Upload fabric and services for each node. Refer to “Node Upload” on page 2-3
 - Step 3** Create Internetworking links from the Cisco NI-2 DSLAM Equipment Module (1) to Cisco NI-1 DSLAM Equipment Module that is one level up in the tree (3). See “Adding Inter-Network Links (Topology) Information” on page 2-4.
 - Step 4** Create a second link from Cisco NI-2 DSLAM Equipment Module (2) to DSLAM (3).
 - Step 5** Create additional links as required for your topology. You can connect up to 13 DSLAMS.
 - Step 6** Create an Intranetworking link from the top of the subtending tree to the ATM backbone. Refer to the *CPC User’s Guide*.
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When you are building the subtending configuration, remember:

- one logical port per STM physical port (up to two per system).
- Cisco Provisioning Center will create one Agent Transit Subscriber per STM port in the corresponding MIB table.
- you must create links (typically NNI) between subtended and subtending equipment.
- routing through the subtending DSLAM configuration will be provided by the Threader

The other configuration is the daisy chain topology, where only one chassis is connected to the parent chassis at a time. [Figure 3-2](#) shows a daisy chain subtending topology.

Figure 3-2 Daisy Chain Topology for OC3 Interfaces

To build this daisy chain topology refer to the following procedure:

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- Step 1** Create a network containing the three nodes. Refer to “Creating Networks” on page 1-6
 - Step 2** Upload fabric and services for each node. Refer to “Node Upload” on page 2-3
 - Step 3** Create Internetworking links from the Cisco NI-2 DSLAM Equipment Module (1) to Cisco NI-2 DSLAM Equipment Module that is one level up in the tree (2). See “Adding Inter-Network Links (Topology) Information” on page 2-4.
 - Step 4** Create an Intranetworking link from the top of the subtending tree to the ATM backbone. Refer to the *CPC User’s Guide*.
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