Chapter 8

Adding Objects to the Directory with SDX Admin

This chapter describes how to configure objects for CMTS devices with SDX Admin. You can also use the SRC CLI to configure objects on a C-series platform or a Solaris platform. See *Chapter 7, Adding Objects for CMTS Devices with the SRC CLI*.

This chapter contains the following topics:

Adding Objects for CMTS Devices to the Directory with SDX Admin

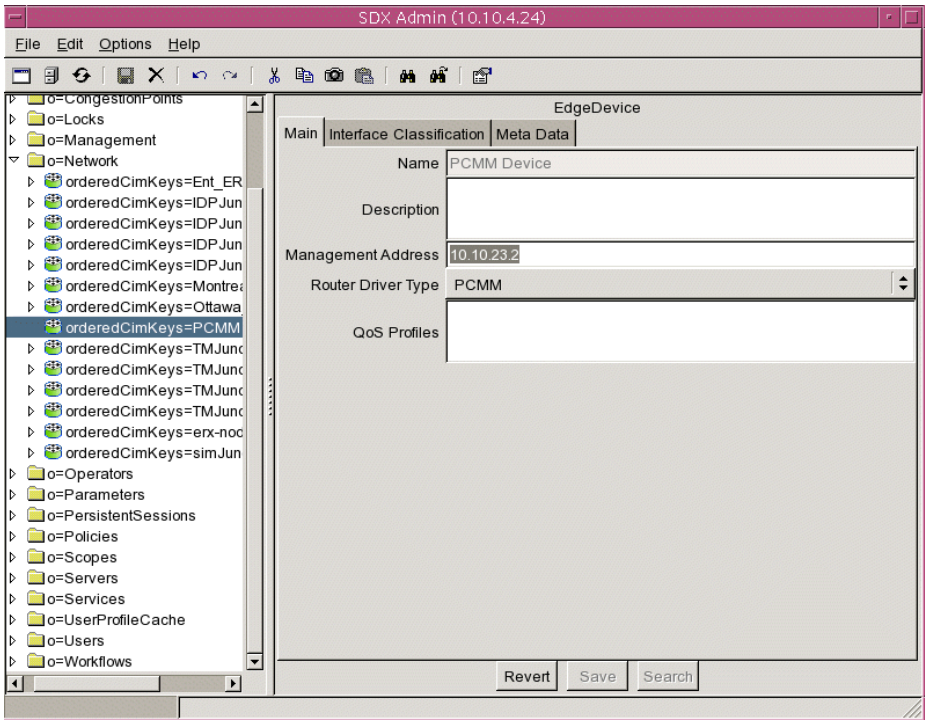
To manage CMTS devices, the SAE creates and manages pseudointerfaces that it associates with a virtual router object in the directory. Each CMTS device in the SRC network must appear in the directory as a router object, and it must be associated with a virtual router object called default. The router and virtual router are not actually configured on the CMTS device; the router and virtual router in the directory provide a way for the SAE to manage the CMTS device by using the SAE's embedded policy server.

To add a CMTS device to the directory with SDX Admin:

1. In the navigation pane, highlight *o = Network*, and right-click.
2. Select **New > EdgeDevice**.

   The New EdgeDevice dialog box appears.
3. In the New EdgeDevice dialog box, enter the name of the CMTS device, and click **OK**.

The name of the new device appears in the navigation pane, and information about the device appears in the EdgeDevice pane.



4. Set the parameters in the Main tab of the EdgeDevice pane.
5. Click **Save** in the EdgeDevice pane.
6. Create a virtual router for the CMTS device. See *Creating a Virtual Router for the CMTS Device with SDX Admin* on page 83.

Description

- Information about this device; keywords that the SDX Admin find utility uses.
- Value—Text string
- Default—No value

Management Address

- IP address of the CMTS device. The SAE uses this address to establish a COPS connection with the CMTS device.
- Value—IP address
- Default—No value

Router Driver Type

- Type of device that this directory object will be used to manage.
- Value
  - JUNOSe—JUNOSe router
  - JUNOS—JUNOS routing platform
  - PCMM—PCMM-compliant CMTS device

  If you do not fill in this field, the device driver ignores this router driver.
- Default—No value

QoS Profiles

- For JUNOSe routers only, QoS profiles that are configured on the router.
- Value—List of QoS profiles on separate lines
- Example—atm-default
- Default—No value

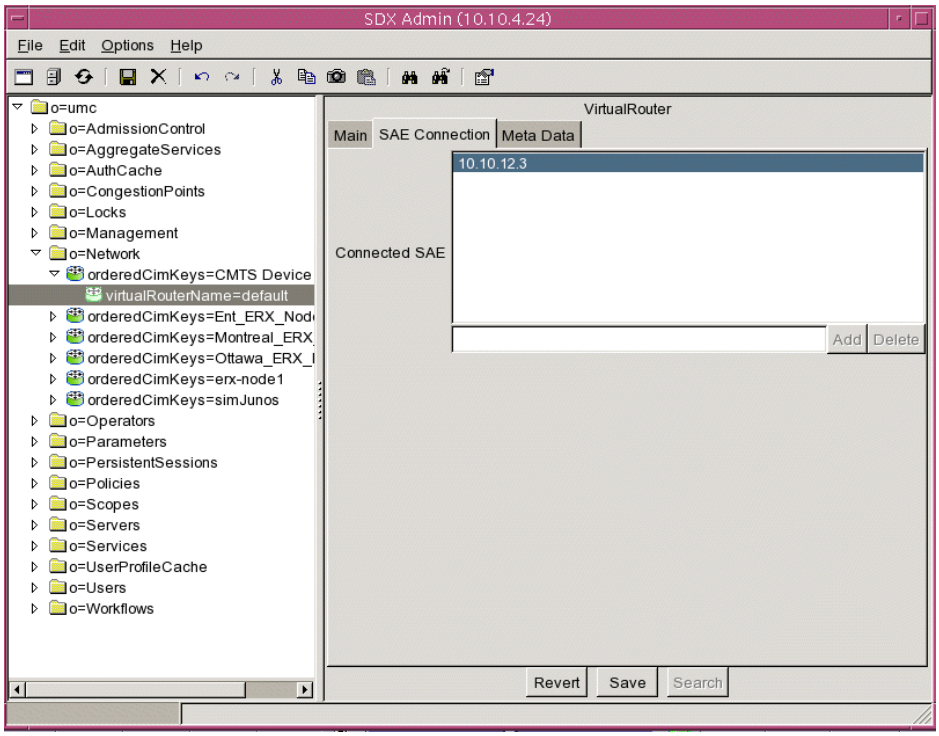
Creating a Virtual Router for the CMTS Device with SDX Admin

You need to add a virtual router object called default to the CMTS device. To add a virtual router with SDX Admin:

1. In the navigation pane, right-click on the CMTS device.
2. Select **New > VirtualRouter**.

   The New EdgeDevice dialog box appears.
3. In the New VirtualRouter dialog box, enter the name default, and click **OK**.

The default virtual router appears in the navigation pane, and information about the virtual router appears in the VirtualRouter pane.



4. Configure virtual router parameters in the Main Tab. See *Configuration Parameters for Virtual Routers* on page 84.

5. Select the SAE Connection tab of the VirtualRouter pane, and add SAEs that are connected to the CMTS device. This list becomes the community of SAEs.

   To add an SAE:

   a. Type the IP address of the SAE in the field below the Connected SAE box.

   b. Click **Add**.

6. Click **Save** in the VirtualRouter pane.

Configuration Parameters for Virtual Routers

Use the fields in this section to define virtual router objects. If you are using assigned IP subscribers along with the NIC, you need to configure either a local or static address pool so that the NIC can resolve the IP-to-SAE mapping.

SNMP Read Community

- SNMP community name associated with SNMP read-only operations for this VR.
- Value—Text string
- Example—admin

SNMP Write Community

- SNMP community name associated with SNMP write operations for this VR.
- Value—Text string
- Example—public

Scope

- Service scopes assigned to this VR—See *Configuring Service Scopes* in *SRC-PE Services and Policies Guide, Chapter 2, Managing Services on a Solaris Platform*.
- Value—Text string
- Example—POP-Westford

Local Address Pools

- List of IP address pools that the VR currently manages and stores. You must configure either a local address pool or a static address pool so that the NIC can resolve the IP-to-SAE mapping.
- Value—List of IP address pools. You can specify an unlimited number of IP address pools. You can specify either the first and last addresses in a range, or you can specify a subnet address, a subnet mask, and a list of addresses to exclude from the subnet.

  The IP pool syntax has the following format:

  ([< ipAddressStart > < ipAddressEnd >] |
  { < ipBaseAddress > /(< mask > | < digitNumber >)(, < ipAddressExclude >)* })

  where:

  - < ipAddressStart > —First IP address (version 4 or 6) in a range
  - < ipAddressEnd > —Last IP address (version 4 or 6) in a range
  - < ipBaseAddress > —Network base address
  - < mask > —Subnet mask
  - < digitNumber > —Integer specifying the length of the subnet mask
  - < ipAddressExclude > —List of IP addresses to be excluded from the subnet
  - |—Choice of expression; choose either the expression to the left or the expression to the right of this symbol
  - *—Zero or more instances of the preceding group

  You can use spaces in the syntax only to separate the first and last explicit IP addresses in a range.
- Default—No value
- Example—([10.10.10.5 10.10.10.250] {10.20.20.0/24})

Static Address Pools

- List of IP address pools that the VR manages but does not store. You can configure these address pools only in the SRC software. You must configure either a local address pool or a static address pool so that the NIC can resolve the IP-to-SAE mapping.
- Value—See the field Local Address Pools.
- Default—No value
- Example—([10.10.10.5 10.10.10.250] {10.20.20.0/24})

Managing SAE IOR

- Common Object Request Broker Architecture (CORBA) reference for the SAE managing this VR.
- Value—One of the following items:
  - The actual CORBA reference for the SAE
  - The absolute path to the interoperable object reference (IOR) file
  - A corbaloc URL in the form corbaloc:: < host > :8801/SAE
    - < host > is the name or IP address of the SAE host
- Guidelines—The **PoolPublisher** and **IorPublisher** router initialization scripts provide this information when the router connects to the SAE. For information about configuring router initialization scripts, see *SRC-PE Network Guide, Chapter 6, Using JUNOSe Routers in the SRC Network with a Solaris Platform* or *SRC-PE Network Guide, Chapter 8, Using JUNOS Routing Platforms in the SRC Network with a Solaris Platform*. If you do not select one of these router initialization scripts, enter a value in this field.
- Default—No value
- Example—One of the following items:
  - Absolute path— */opt/UMC/sae/var/run/sae.ior*
  - corbaloc URL—boston:8801/sae
  - Actual IOR—IOR:000000000000002438444C3A736D67742E6A756E697...

Tracking Plug-in

- Plug-in instances that track interfaces that the SAE manages on this VR. The SAE calls these plug-ins after an interface comes up, when new policies are installed on the interface, and when the interface goes down.
- Value—Comma-separated list of plug-in instances
- Guidelines—Enter plug-in instances and NIC SAE plug-in agents that are specific to this VR. For information about configuring tracking plug-ins, see *SRC-PE Subscribers and Subscriptions Guide, Chapter 5, Configuring Authorization and Accounting Plug-Ins for Solaris Platforms*.
- Default—No value
- Example—nicsae, flexRadius

Configuring SAE Communities

You define SAE communities by entering the SAEs in a community in the connected SAE field of the virtual router object.

When you modify a community, wait for passive session stores on the new community members to be updated before you shut down the current active SAE. Otherwise, if you add a new member to a community, and then a failover from the current active SAE to the new member is triggered immediately, the new member's session store may not have received all data from the active SAE's session store.

To define a community, select the SAE Connection tab of the VirtualRouter pane, and add the addresses of SAEs that can manage this CMTS device.

To add an SAE:

1. Type the IP address of the SAE in the field below the Connected SAE box.
2. Click **Add**.

To modify an SAE address:

1. Double-click the IP address of the SAE in the Connected SAE box.
2. Modify the IP address in the field below the Connected SAE box.
3. Click **Modify**.

To delete an SAE address:

1. Double-click the IP address of the SAE in the Connected SAE box.
2. Remove the IP address from the field below the Connected SAE box.
3. Click **Delete**.

Connected SAE

- SAEs that are connected to the CMTS device.
- Value—IP addresses
- Default—No value