C H A P T E R 4

Cisco SME Interface Configuration

This section describes how to configure and start Cisco SME interfaces using Fabric Manager and Device manager. For additional information on configuring and starting Cisco SME interfaces using the CLI, refer to the *Cisco MDS 9000 Family CLI Configuration Guide.*

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After completing the preliminary tasks described in Chapter 2, "Getting Started," you need to configure the Cisco SME interface on a Cisco MDS switch with an installed MSM-18/4 module or on a Cisco MDS 9222i switch.

This section contains the following topics:

- Configuring and Starting the Cisco SME Interface, page 4-1
- Saving Your Interface Configurations, page 4-4
- Adding Cisco SME Interfaces to a Cisco SME Configuration, page 4-4
- Viewing Cisco SME Interface Information Using the CLI, page 4-7
- Removing (Unbinding) Cisco SME Interfaces from a Cisco SME Cluster, page 4-8
- Deleting Switches From a Cisco SME Cluster, page 4-9

Configuring and Starting the Cisco SME Interface

Cisco SME interfaces are configured either by using the Device Manager or the CLI. For information about creating Cisco SME interfaces using the CLI, see Chapter 7, "Using the Command Line Interface to Configure SME."

This section describes the following:

- Configuring and Starting an Cisco SME Interface Using Device Manager, page 4-2
- Viewing Cisco SME Interfaces in Fabric Manager Web Client, page 4-3

Configuring and Starting an Cisco SME Interface Using Device Manager

To configure and create an Cisco SME interface using Device Manager, follow these steps:

Step 1   Open the Device Manager for the switch that needs to have the Cisco SME interface defined.

Step 2   From the Admin menu, select **Interface.**

Step 3   From the Interface menu, select **SME > Interfaces**. This opens SME Interfaces in a new window.

Figure 4-1   Selecting Cisco SME Interface in Device Manager
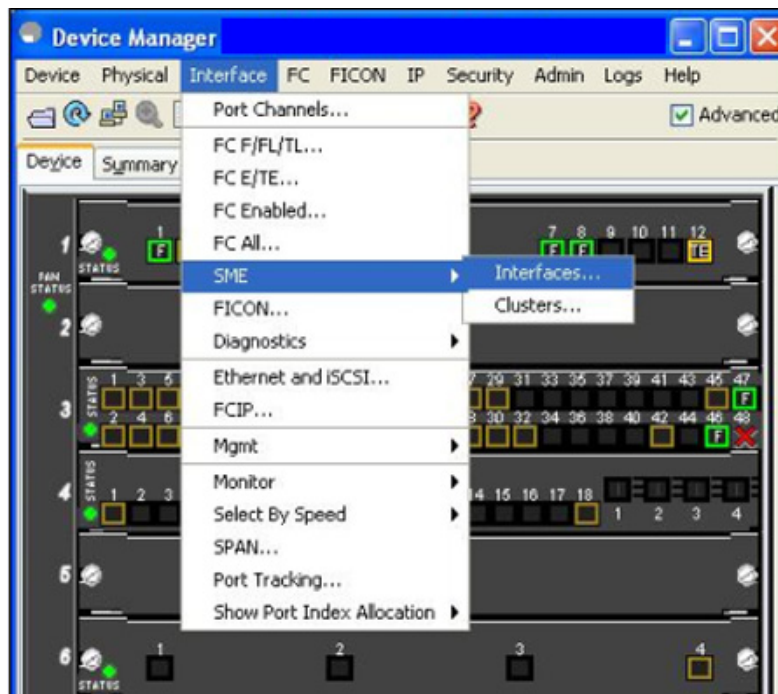
Step 4   Click **Create**. A new SME Interfaces window opens.

*Figure 4-2   Cisco SME Interfaces Window in Device Manager*
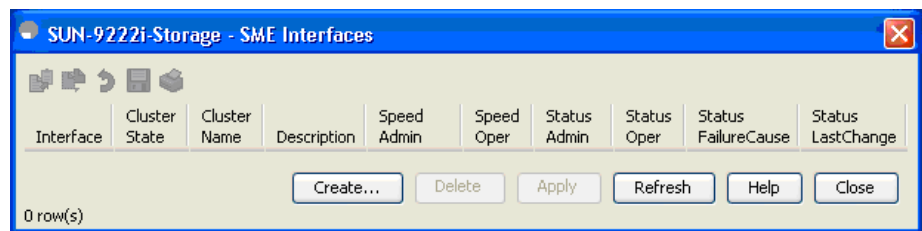
Note   You can only create a Cisco SME interface if there is a license on the switch available for an MSM-18/4 module. One license per MSM-18/4 module and per Cisco MDS 9222i slot 1 is required for the Cisco SME feature.

Step 5   Click the **up** radio button and click **Create**.

*Figure 4-3*   *Cisco SME Interfaces Window in Device Manager*
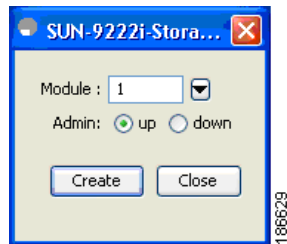
Step 6   Open the Fabric Manager Web Client window to view the configured Cisco SME interfaces.

Viewing Cisco SME Interfaces in Fabric Manager Web Client

To view the newly created Cisco SME interfaces, follow these steps:

Step 1   In the Physical Attributes pane of the Fabric Manager Web Client, select **Interfaces > FC Logical.**

Figure 4-4   *Viewing Cisco SME Interfaces*
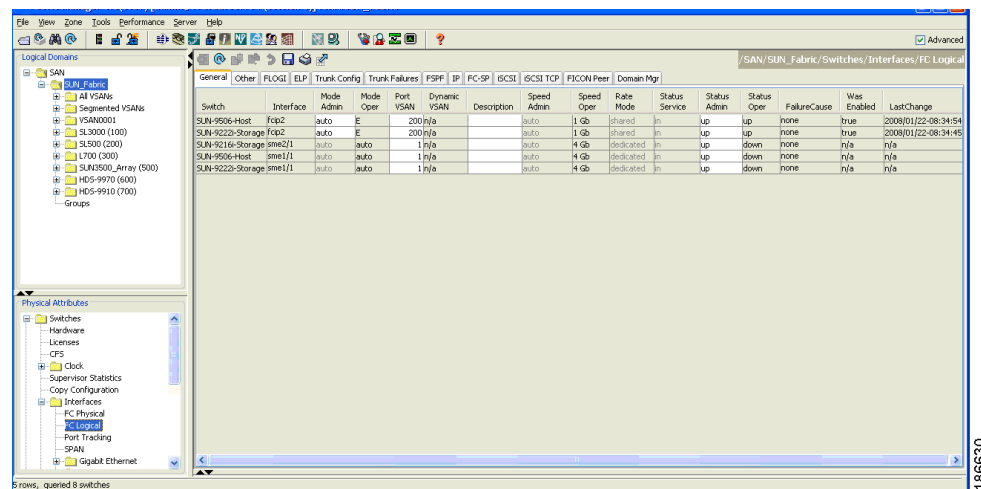
Step 2   Select the General tab to view the interfaces and their status information.

✎

Note   After creating the interfaces, you must first configure a Cisco SME cluster and then add the Cisco SME interfaces to the cluster. For details on configuring clusters, see Chapter 3, "Cisco SME Cluster Management."

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Saving Your Interface Configurations

When an SME interface is deleted on one switch in a cluster and then added back, even if the saved SME configurations were the same, the SME interface will not be added back to the cluster.

When the switch is reloaded, the SME interfaces will not be added back to the cluster due to a certificate mismatch (because the SME interface was removed and then added back). You would then need to delete the SME interface and add it back and then enter the **copy running-config startup-config** CLI command.

⚠
Caution   You must enter the **copy running-config startup-config** CLI command after adding or deleting interfaces or switches as described by the following scenario.

Adding Cisco SME Interfaces to a Cisco SME Configuration

Cisco SME includes an Add Interface Wizard to simplify the process of adding interfaces to an existing cluster. You can add additional interfaces when you add additional MSM-18/4 modules and Cisco MDS 9222i switches.

⚠
Caution   After adding a Cisco SME interface on a switch that is not already part of the cluster, you should wait for the switch to join the cluster before attempting to add another Cisco SME interface. Adding a new switch to a cluster affects the quorum calculation of the cluster (see Cluster Quorum and Master Switch Election Overview, page 3-30). Adding more than one switch that is not online can shut down the Cisco SME application due to a lost quorum.

✎
Note   In the existing MDS 9000 Family platform, a module can be replaced with another module and there is no change in configuration. In Cisco SME, due to security reasons, when an MSM-18/4 module is configured as part of a cluster, it cannot be replaced with another MSM-18/4 module, otherwise, the Cisco SME interface will come up in an inactive state. The correct procedure is:

- Remove the Cisco SME interface from the cluster.
- Replace the module.
- Re-add the interface back into the cluster.

This procedure should be followed to bring a new MSM-18/4 module into the cluster.
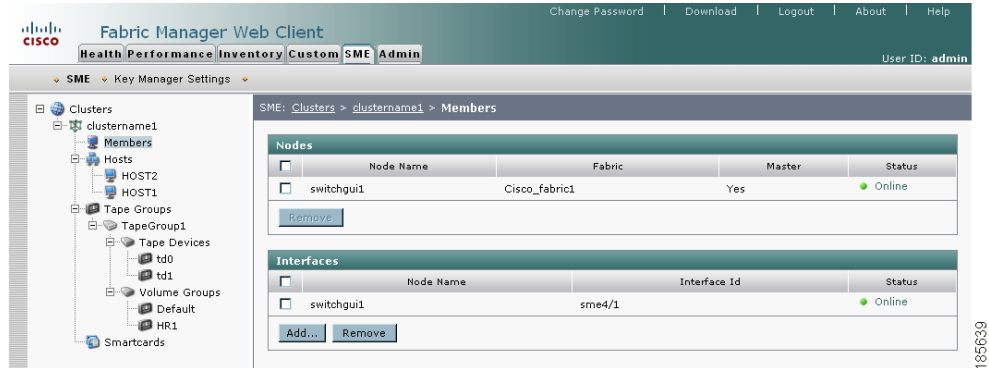
⚠
Caution   You must enter the **copy running-config startup-config** CLI command after adding or deleting interfaces or switches from a cluster.

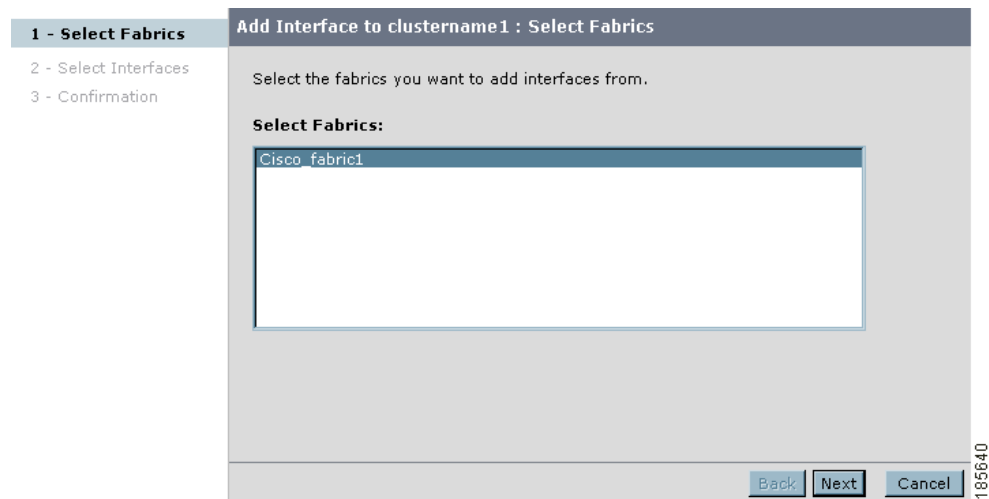To add Cisco SME interfaces to an existing Cisco SME configuration, follow these steps:

Step 1 From the SME navigation pane, click **Members** to display the switches and interfaces already configured in the cluster.

Figure 4-5   Cisco SME Switch and Interface Information Window

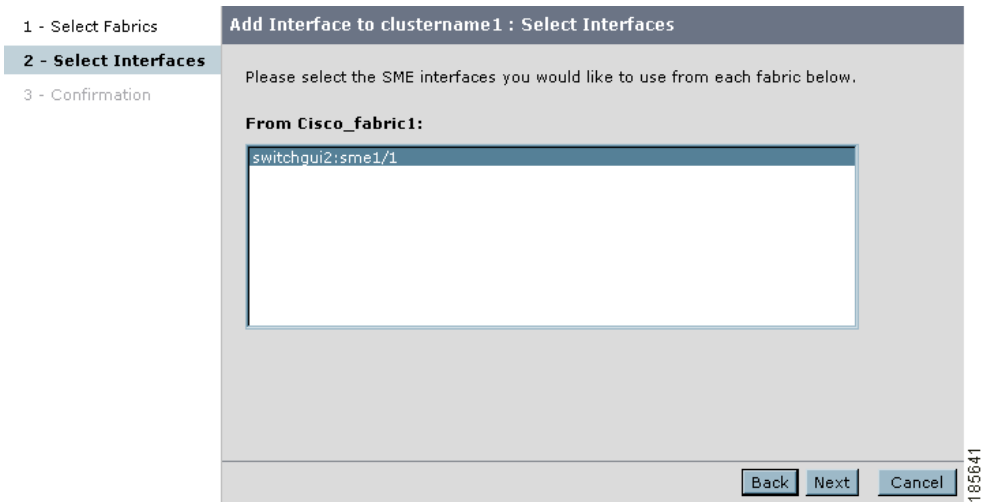**Step 2** Click **Add** to display the Add Interface Wizard.
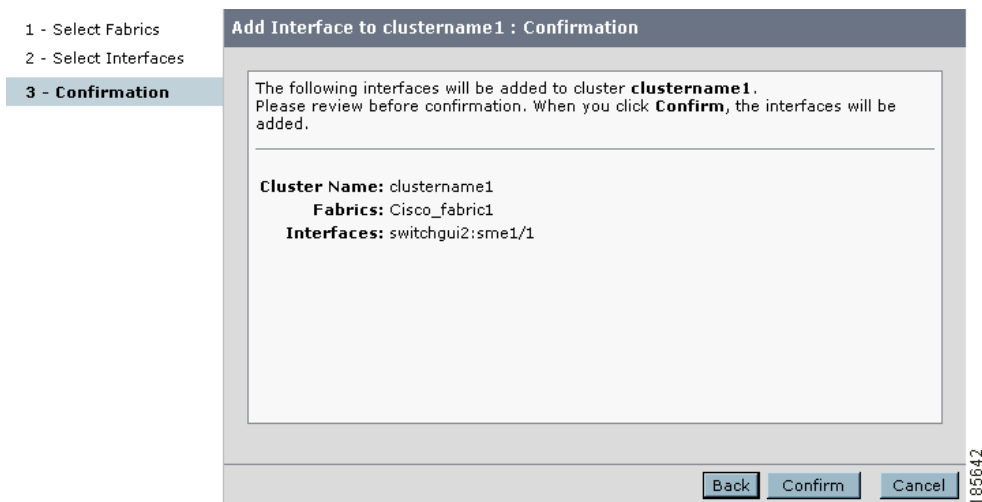
Figure 4-6   Select Fabrics

Step 3   Select the fabrics you want to add interfaces from. Click **Next**.

Figure 4-7   Add a New Interface

Step 4   Select the SME interfaces that you would like to use. Click **Next**.
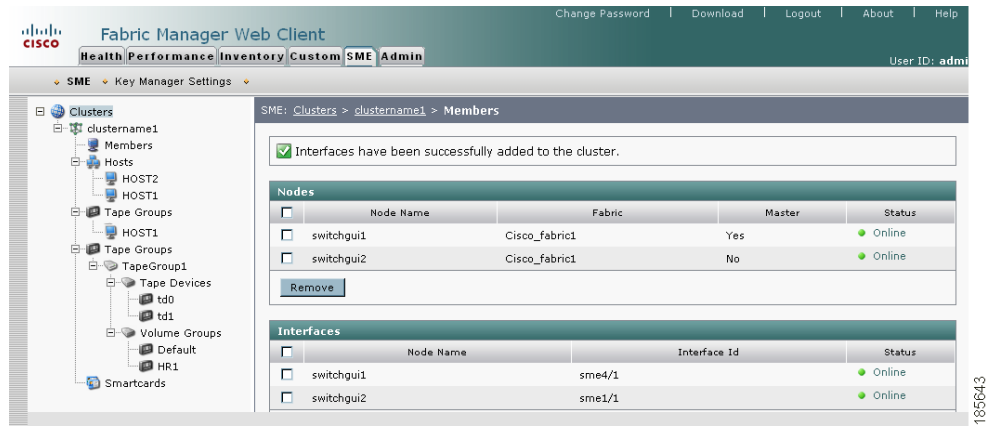
Figure 4-8   Add Interface Confirmation Window

Step 5   View the interface information. Click **Confirm** to view the newly added interface.

Figure 4-9   Viewing a Newly Added Interface

Viewing Cisco SME Interface Information Using the CLI

Use the **show sme interface** CLI command to obtain information about the SME interface configuration and statistics.

```
switch# show interface sme 8/1
sme8/1 is up
    In fabric Cisco_fabric1
    Member of cluster clustername1
    5 minutes input rate 70854912 bits/sec, 8856864 bytes/sec, 8.45 MB/sec
    5 minutes output rate 70573536 bits/sec, 8821692 bytes/sec, 8.41 MB/sec
    SME statistics
      input 2894158584 bytes, 5 second rate 15348531 bytes/sec, 14.64 MB/sec
        clear 12824 bytes, encrypt 2894141440 bytes, decrypt 4320 bytes
        compress 384566272 bytes, decompress 0 bytes
      output 2883095956 bytes, 5 second rate 15359772 bytes/sec, 14.65 MB/sec
        clear 12824 bytes, encrypt 2883081084 bytes, decrypt 2048 bytes
        compress 371380460 bytes, decompress 0 bytes
          compression ratio 1:1
    I/Os 44169 encrypt, 30 clear
    clear luns 1, encrypted luns 1
    error statistics
        0 CTH, 0 authentication
        0 key generation, 0 incorrect read
        38294 incompressible, 6 bad target responses
          last error at Fri Oct 26 15:04:52 2007
```

Removing (Unbinding) Cisco SME Interfaces from a Cisco SME Cluster

Removing a Cisco SME interface from a cluster means that the interface is still up but it is not bound to a cluster.

In the existing MDS 9000 Family platform, a module can be replaced with another module and there is no change in configuration. In Cisco SME, due to security reasons, when an MSM-18/4 module is configured as part of a cluster, it cannot be replaced with another MSM-18/4 module otherwise the Cisco SME interface will come up in an inactive state. The correct procedure is to remove the Cisco SME interface from the cluster and re-add the interface back into the cluster. This procedure should be followed to bring a new MSM-18/4 module into the cluster.

⚠
Caution   You must enter the **copy running-config startup-config** CLI command after adding or deleting interfaces or switches from a cluster.

To remove (unbind) a Cisco SME interface from an existing Cisco SME configuration, follow these steps:

Step 1   From the SME navigation pane, click **Members** to display the switches and interfaces already configured in the cluster.

Step 2   Select a Cisco SME interface and click **Remove**.

Figure 4-10   Cisco SME Switch and Interface Information Window

Step 3   Click **OK** to delete (unbind) the interface.

Figure 4-11   Removing an Interface
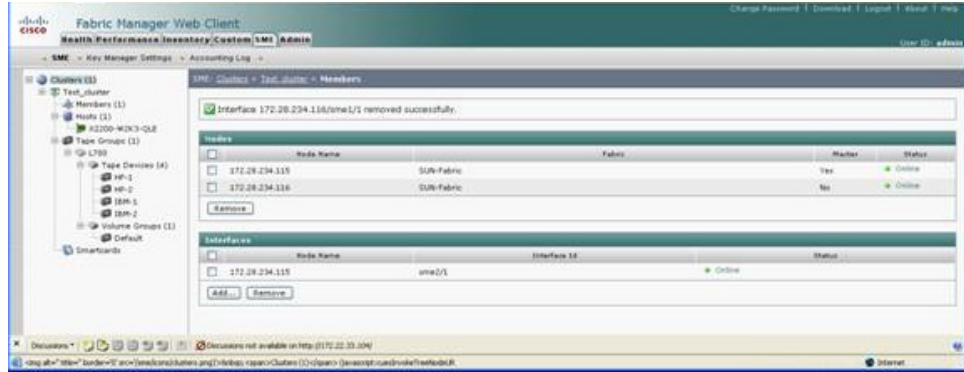
Step 4   View the notification that the interface was removed.

Figure 4-12   Cisco SME Interface Removed

> ✎
> **Note**   The interface is removed while the node remains defined.

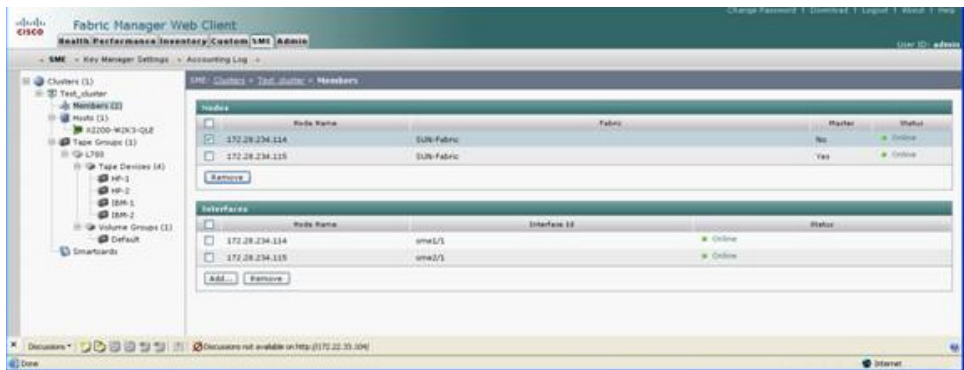# Deleting Switches From a Cisco SME Cluster

> ✎
> **Note**   If the cluster includes more than one switch, you must delete all non-master switches first. It is not possible to delete the master switch from a cluster without first deleting all non-master switches.

To delete a switch from a cluster, follow these steps:

Step 1   Click **Members** to display the switches that are part of the cluster.

Step 2   Select the switch and click **Remove**.

Figure 4-13   Cisco SME Switch and Interface Information Window

Step 3   Click **OK** to delete the switch.

Figure 4-14   Deleting Switches From a Cisco SME Cluster

Microsoft Internet Explorer

? Are you sure you wish to do this? This action cannot be undone.

OK   Cancel

Step 4   View the notification that the switch was deleted.

Figure 4-15   Cisco SME Switch and Interface Information Window

Fabric Manager Web Client

SME: Clusters > Test_cluster > Members

Switch 172.28.234.114 removed successfully.

Note   The interface and the node is both removed.