Configuring IOA Using Cisco DCNM-SAN

This chapter describes how to configure I/O Accelerator (IOA) using Cisco DCNM-SAN.

This chapter contains the following sections:

- IOA Manager , page 1
- Launching IOA Manager, page 3
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- Configuring Clusters, page 9
- Configuring Interfaces, page 14
- Configuring Flows, page 16

IOA Manager

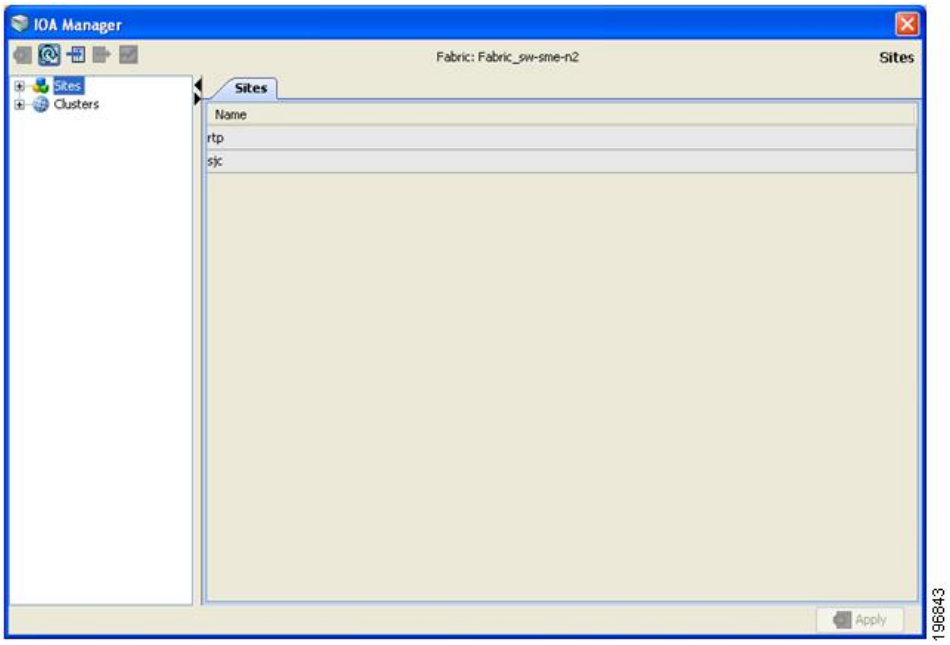
The IOA Manager is a graphical user interface (GUI) for configuring and managing IOA. The IOA Manager user interface consists of a navigation pane on the left that displays a hierarchy and an information pane on the right that displays the contents of the item that you click in the navigation pane. The hierarchy is a tree structure that contains elements that you can configure with IOA Manager. It also consists of a toolbar for quick access to the most commonly used options and a Fabric drop-down list box. The Fabric drop-down list box allows you to directly access the fabrics managed by Cisco DCNM-SAN. The Fabric drop-down list box will be available only if more than one fabric is open.

Note

- Cisco DCNM-SAN Client standalone supports IOA Manager from Release 5.0(1a).
- When you perform some of the time-consuming configuration activities using IOA Manager, the progress bar indicates that the configuration actions are in progress. You need to wait until the action is complete. You can click Stop to cancel the action. However, stopping the action may not roll back the transactions that were executed.

Figure 1: IOA Manager Main Window, on page 2 shows the IOA Manager interface.

Figure 1: IOA Manager Main Window



Toolbar

The IOA Manager main toolbar provides icons for accessing the most commonly used operations as shown in Table 1: I/O Accelerator Toolbar, on page 2.

Table 1: I/O Accelerator Toolbar

Icon	Description
	Applies the changes.
	Refreshes the window.
	Adds a cluster or interface.

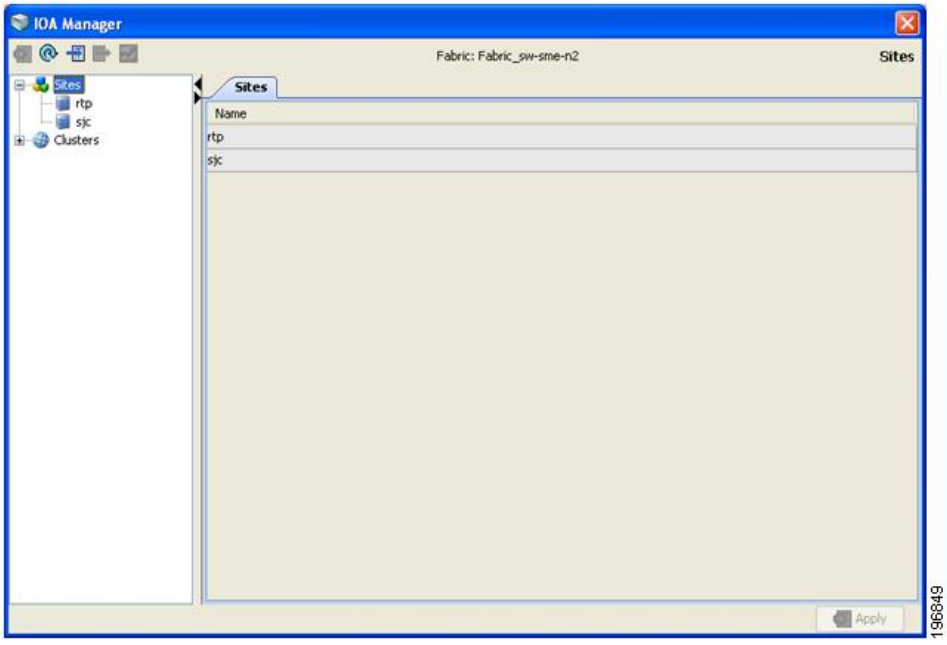
Icon	Description
	Deletes an existing entry.
	Displays a real-time chart of the selected switch.

Launching IOA Manager

To launch IOA Manager, follow the below step:

Choose **Tools** > **I/O Acceleration**.
You see the Cisco DCNM-SAN main window as shown in Figure 2: Cisco DCNM-SAN Window, on page 3.

Figure 2: Cisco DCNM-SAN Window



Note When you select IOA Manager, it opens the tree for the fabric that is selected. If there is no active fabric, IOA Manager launches with the first fabric in the tree.

Configuring Sites

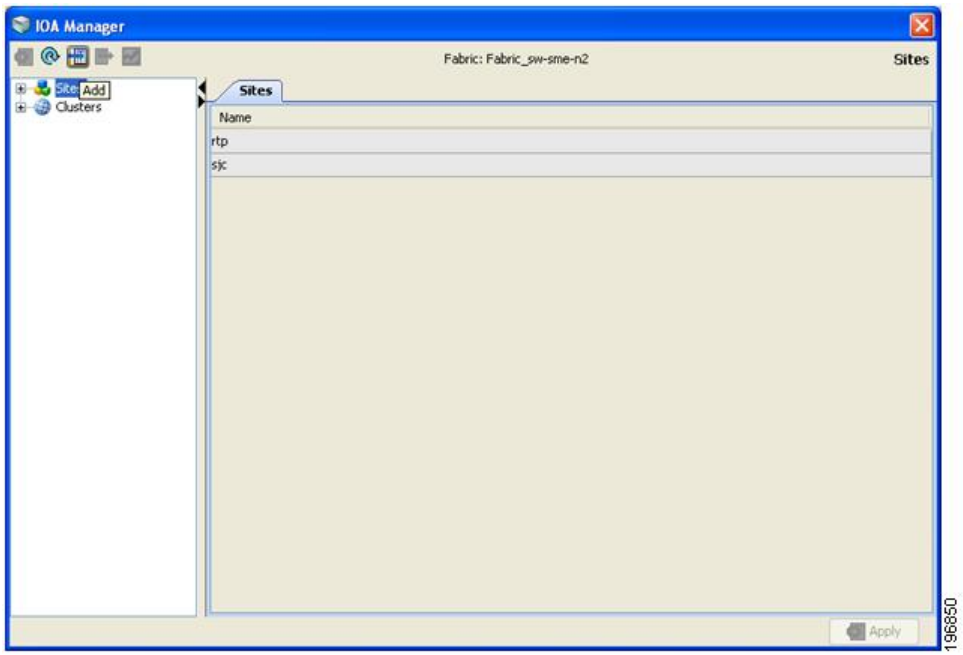
A site is described as a named set of switches. You can click the sites node to view the list of defined sites. There are two tables in the information pane: one for the assigned switches on the top and the another one for unassigned switches below the assigned switches table. You can click the name of the site to display the details in the information pane. Only active sites can be used for creating a clusters.

Adding a New Site

To create a new site using IOA Manager, follow these steps:

Step 1 Select Sites in the navigation pane.
You see the IOA Manager window as shown in Figure 3: IOA Manager, on page 4.

Figure 3: IOA Manager



Step 2 Click the Add icon on the toolbar.

You see the site name dialog box as shown in Figure 4: Site Name Dialog Box, on page 5.

Figure 4: Site Name Dialog Box

Step 3 Enter the site name and then click OK.
You see the select switch dialog box as shown in Figure 5: Select Switch Dialog Box, on page 5.

Figure 5: Select Switch Dialog Box

Step 4 Select a switch from the drop-down list box and then click OK.

Step 5 Click OK in the dialog box to confirm that you have successfuly created the site.

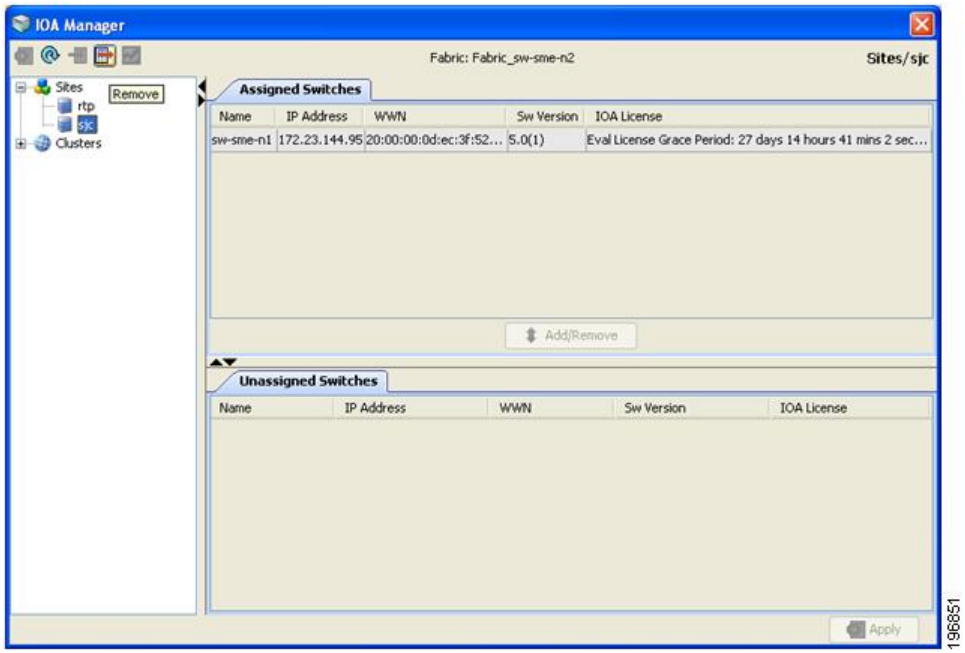
Removing a Site

To remove a site using IOA Manager, follow these steps:

Step 1 In the navigation pane, click the name of the site you want to delete.

You see the IOA Manager window as shown in Figure 6: IOA Manager Window, on page 6.

Figure 6: IOA Manager Window



Step 2 Click the **Remove** icon on the toolbar.
You see the confirmation dialog box in as shown in Figure 7: Delete Confirmation Dialog Box, on page 6.

Figure 7: Delete Confirmation Dialog Box

Step 3 Click **Yes** to confirm that you want to remove the site.

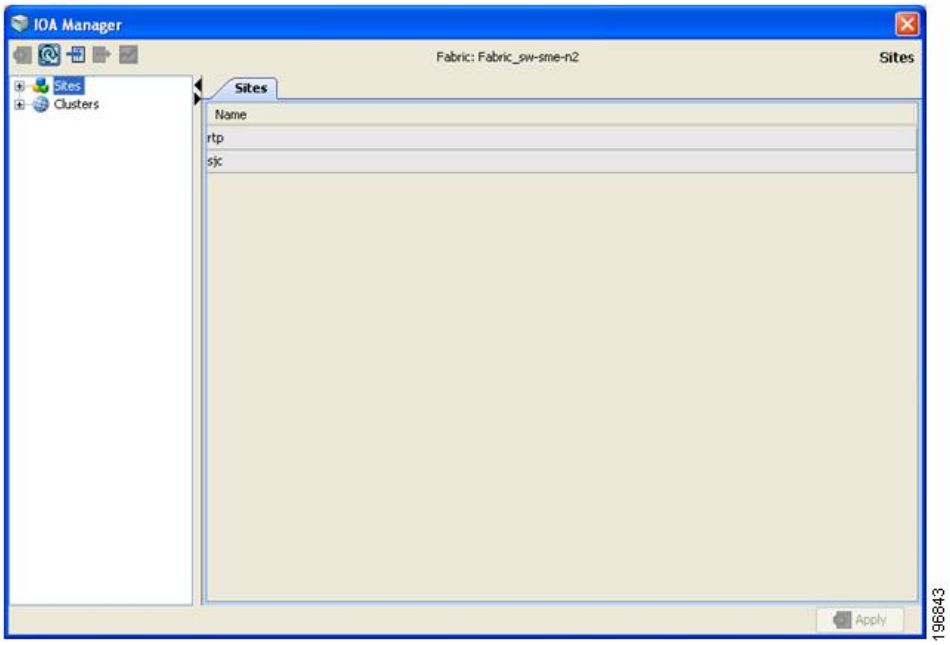
Viewing a Site

To view a site using IOA Manager, follow these steps:

Step 1 In the navigation pane, click Sites.

You see the IOA Manager window as shown in Figure 8: Viewing Sites Using IOA Manager, on page 7.

Figure 8: Viewing Sites Using IOA Manager

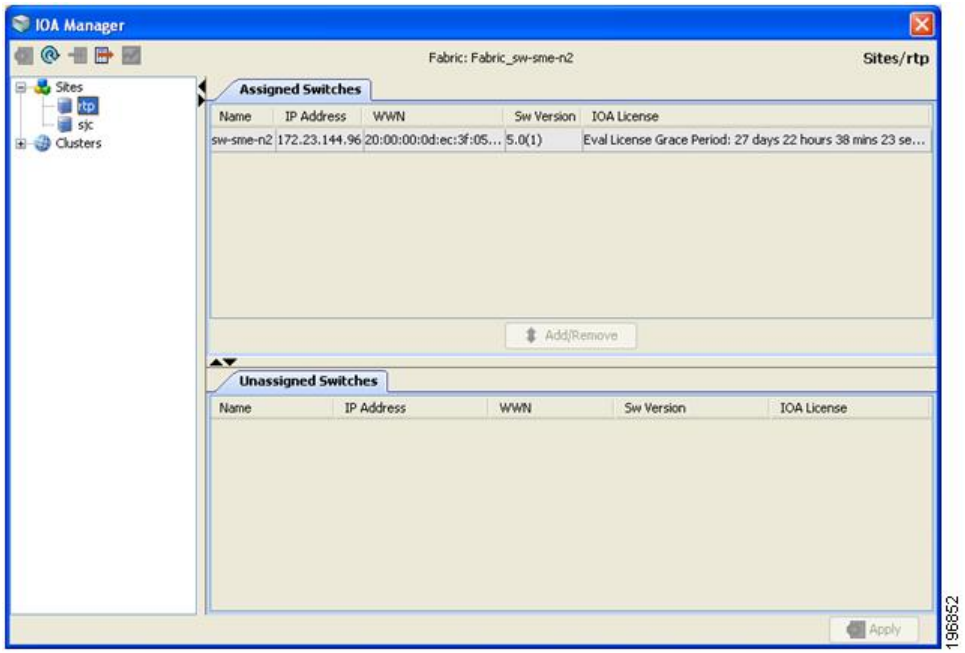


Step 2 Expand the sites in the hierarchy.

Step 3 Click the name of the site to view the details in the information pane.

You see the site details as shown in Figure 9: Viewing Site Details Using IOA Manager, on page 8.

Figure 9: Viewing Site Details Using IOA Manager



Adding Switches to a Site

To add a switch to a site, follow these steps:

Step 1 In the navigation pane, click **Sites**.

Step 2 Select the switches that you want to add from the Unassigned Switches table.

Step 3 Click **Add**, and then click **Apply**.

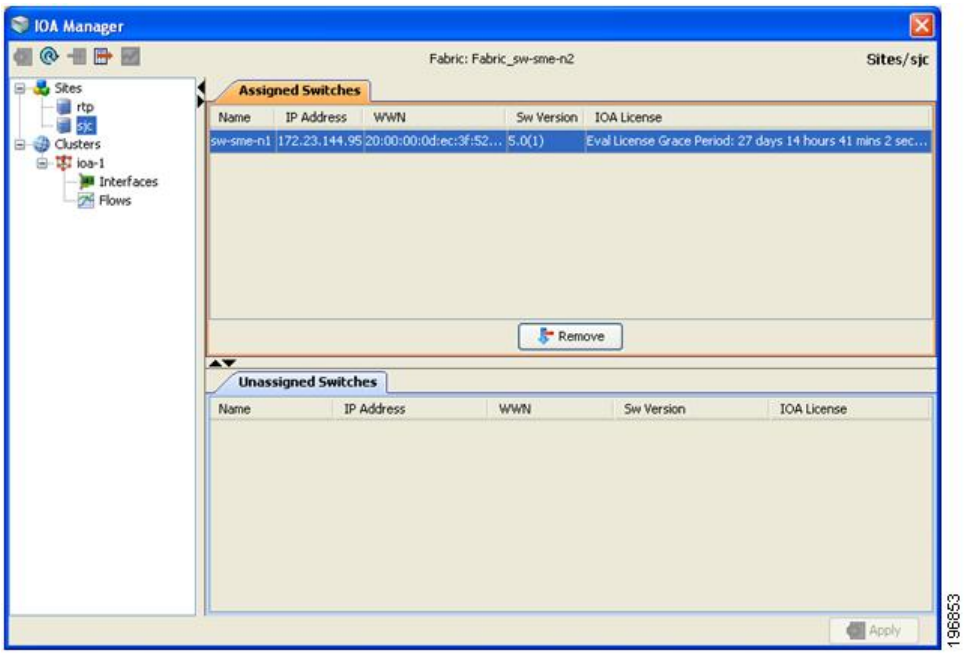
Removing Switches from a Site

To remove a switch from a site, follow these steps:

Step 1 In the navigation pane, click Sites.

You see the IOA Manager window as shown in Figure 10: Removing Switches from a Site Using IOA Manager, on page 9.

Figure 10: Removing Switches from a Site Using IOA Manager



Step 2 Click to select the switches you want to remove from Assigned Switches table.

Step 3 Click Remove, and then click Apply.

Configuring Clusters

You can select a cluster to see the details in the information pane. The upper table in the information pane displays the members of a named cluster, and the table below displays the statistical information about the cluster's active IOA interfaces.

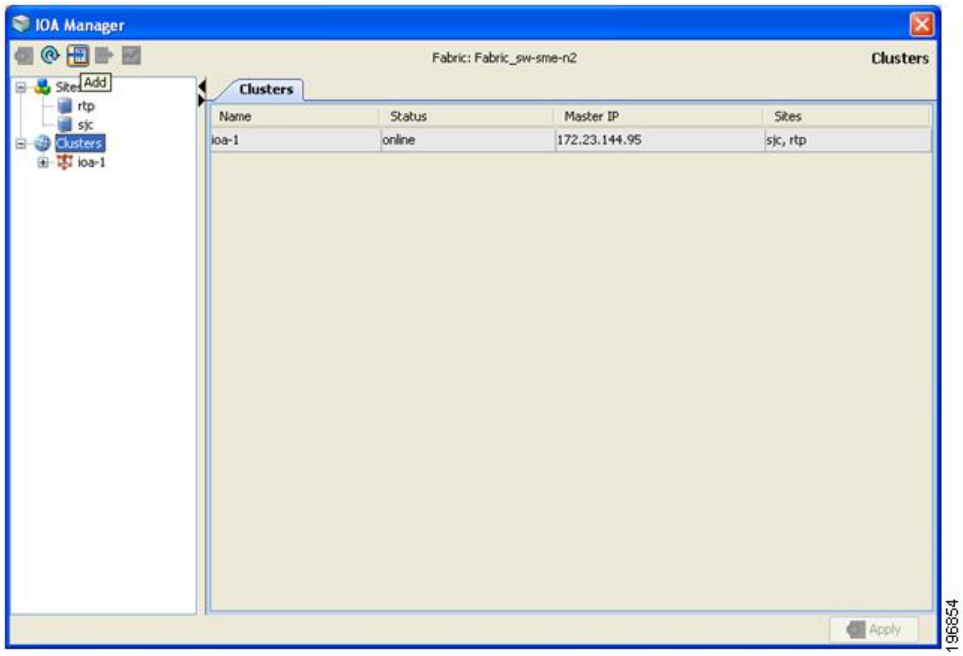
Adding a New Cluster

To create a new cluster using IOA Manager, follow these steps:

Step 1 Select Cluster in the navigation pane and then click the **Add** icon on the toolbar.

You see the IOA Manager window as shown in Figure 11: IOA Manager - Add Clusters, on page 10.

Figure 11: IOA Manager - Add Clusters

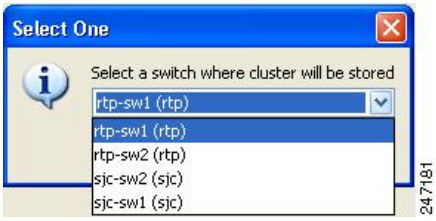


Step 2 Enter the Cluster name, and then click **OK**.
You see the add Cluster name dialog box as shown in Figure 12: Add Cluster Name Dialog box, on page 10.

Figure 12: Add Cluster Name Dialog box

Step 3 Enter the Cluster name and then click OK.
You see the select switch dialog box as shown in Figure 13: Select Switch Dialog Box, on page 10.

Figure 13: Select Switch Dialog Box



Step 4 Select a switch from the drop-down list, and then click **OK**.

Note You need to select a switch that you would like it to be the master switch as the seed switch when you create the IOA cluster. If you have multiple switches in a site, you may add all the switches in a site that you would like to manage from to the cluster before adding the switches from the remote site.

You see a message box upon successfully creating a cluster as shown in Figure 14: Message Box, on page 11.

Figure 14: Message Box

Step 5 Click **OK**.

Note If the master switch that you selected is not a member of the site, you may either need to add the switch to an existing site or to create a new site.

Removing a Cluster

To remove a site using IOA Manager, follow these steps:

SUMMARY STEPS

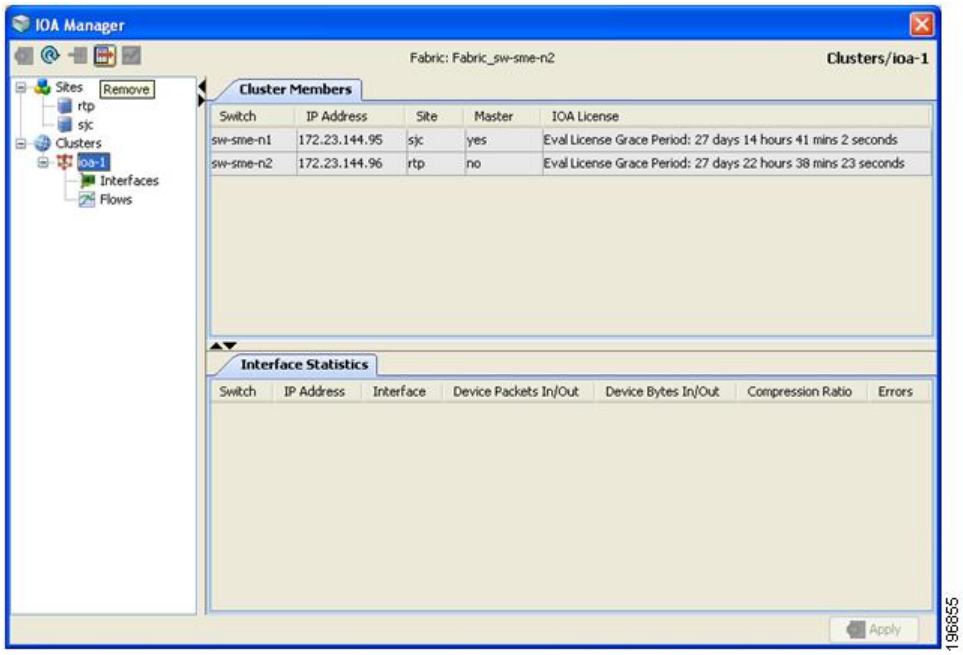
1. In the navigation pane, click the name of the cluster that you want to delete.
2. Click the **Remove** icon on the toolbar.
3. Click **Yes** to remove the cluster.

DETAILED STEPS

Step 1 In the navigation pane, click the name of the cluster that you want to delete.

You see the IOA Manager window as shown in Figure 15: Removing a Cluster Using IOA Manager, on page 12.

Figure 15: Removing a Cluster Using IOA Manager



Step 2 Click the **Remove** icon on the toolbar.
You see the Delete confirmation dialog box as shown in Figure 16: Remove Confirmation Dialog Box, on page 12.

Figure 16: Remove Confirmation Dialog Box

Step 3 Click **Yes** to remove the cluster.

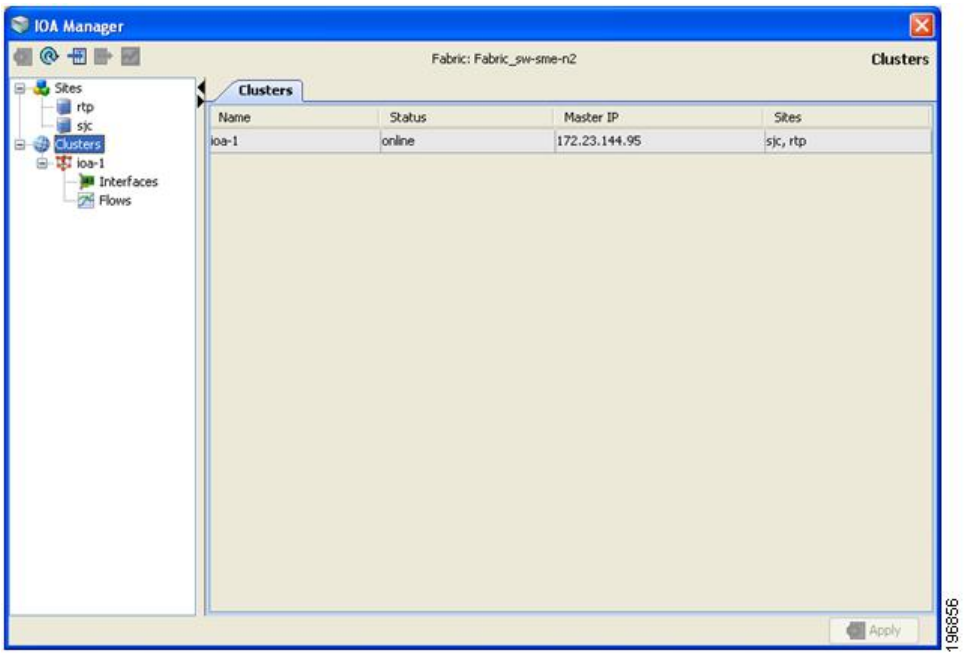
Viewing Clusters

To view a cluster using IOA Manager, follow these steps:

Step 1 Click clusters in the navigation pane.

You see the IOA Manager window with clusters selected as shown in Figure 17: Viewing Clusters Using IOA Manager, on page 13.

Figure 17: Viewing Clusters Using IOA Manager

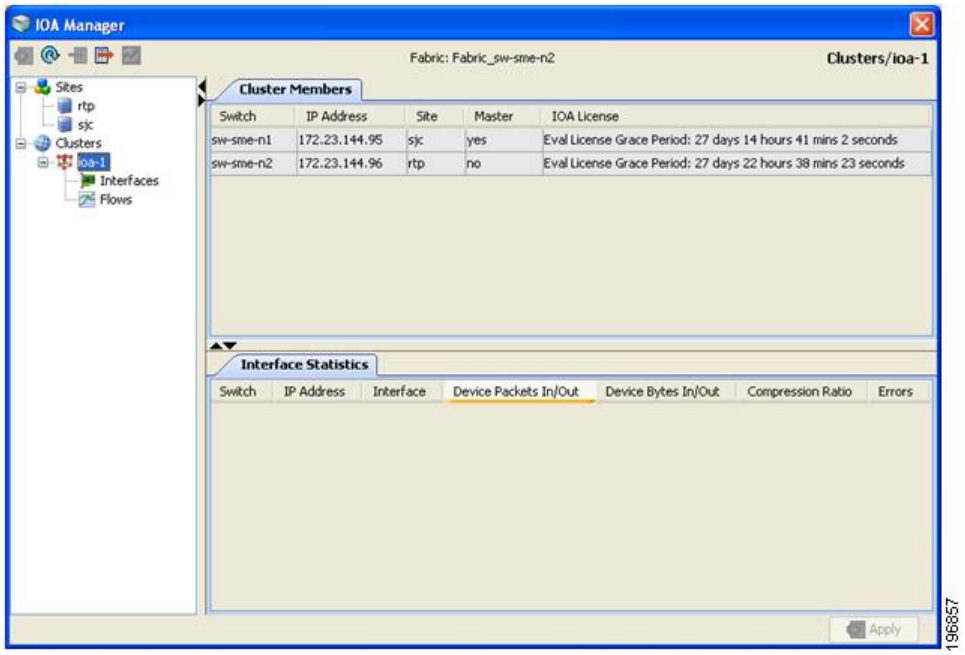


Step 2 Expand the cluster in the hierarchy.

Step 3 Click the name of the cluster to view the details in the information pane.

You see the IOA Manager window with the cluster details as shown in Figure 18: Viewing Cluster Details, on page 14.

Figure 18: Viewing Cluster Details



Note DCNM does not support configuration of multiple clusters with the same name in a fabric. This action is supported through CLI only.

Configuring Interfaces

You can select the interfaces in a named cluster to see the details in the information pane. The upper table in the information pane displays information about active and configured IOA interface pairs associated with the cluster. The lower table in the information pane displays information about IOA interface candidates that are ready for use in the cluster.

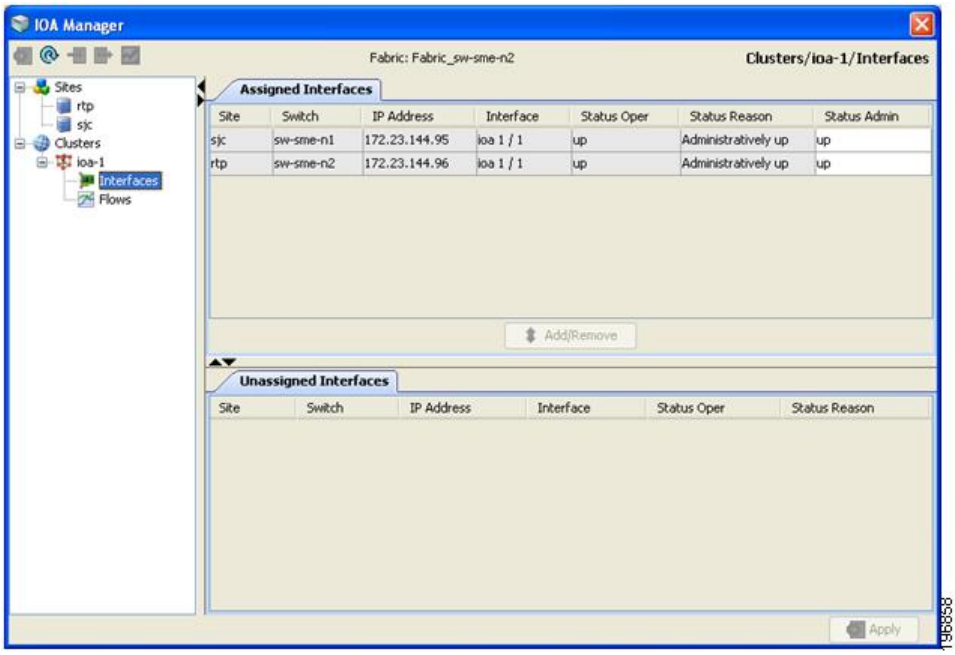
Assigning Interfaces to a Cluster

To add a new interface to a cluster using IOA Manager, follow these steps:

Step 1 Expand the cluster node in the navigation pane and click **Interfaces**.

You see the IOA Manager window as shown in Figure 19: Adding Interfaces Using IOA Manager, on page 15.

Figure 19: Adding Interfaces Using IOA Manager



The information pane displays the Assigned Interfaces and Unassigned Interfaces tabs.

Step 2 Select one or more interfaces from the Unassigned Interfaces table in the information pane and then click **Add**.

Step 3 Click **Apply** to apply changes.

Note
- You can change the administrative status of an assigned interface by selecting up or down from the admin status drop-down list box and then click **Apply**.
- Cisco DCNM-SAN denotes all the candidate service engines that are not currently provisioned for any service as unconfigured in the unassigned interfaces table. When you select these interfaces, it will automatically provision these service engines for IOA, and configure them as a part of this IOA cluster.

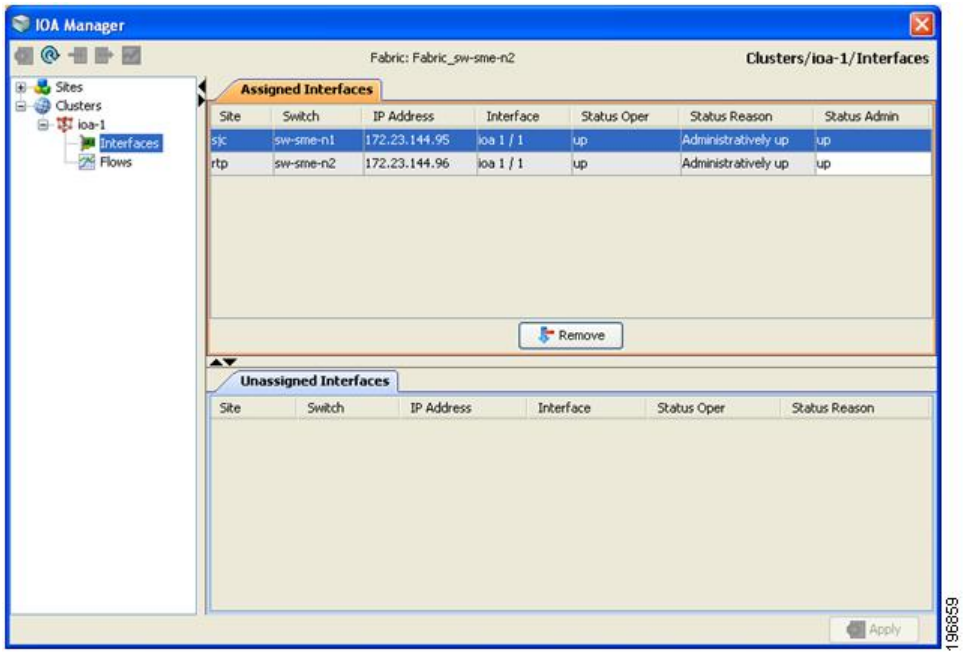
Removing Interfaces from a Cluster

To remove an interface from a cluster, follow these steps:

Step 1 Expand the cluster node in the navigation pane and click **Interfaces**.

You see the IOA Manager window as shown in Figure 20: Removing Interfaces Using IOA Manager, on page 16.

Figure 20: Removing Interfaces Using IOA Manager



Step 2 Select the switches from the Assigned Interfaces table that you want to remove.

Step 3 Click **Remove** to move the switches to Unassigned Interfaces table.

Step 4 Click **Apply**.

Configuring Flows

You can select the flows in a named cluster to see the details in the information pane. The upper table in the information pane displays information on active IOA flows. The lower table in the information pane displays information on candidate IOA flows.

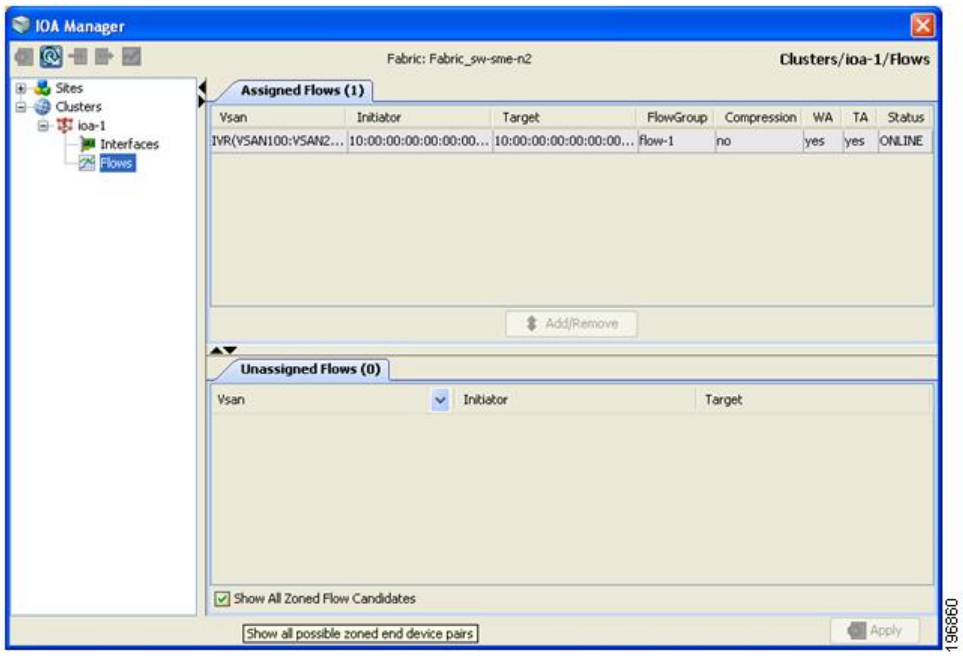
Adding a Flow

To add a flow in the cluster using IOA Manager, follow these steps:

Step 1 Expand the Cluster node in the navigation pane and then click **Flows**.

You see the IOA Manager window displaying the Assigned Flows and Unassigned Flows as shown in Figure 21: Adding Flows Using IOA Manager, on page 17.

Figure 21: Adding Flows Using IOA Manager

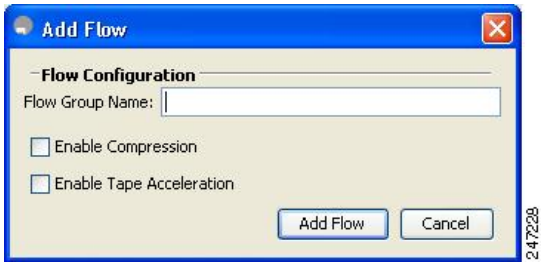


Note If IVR zoneset is activated, Cisco DCNM-SAN will automatically consider the IVR zoneset and list the candidate IVR flows in the Unassigned flows section.

Step 2 Check the **Click Show All Zoned Flow Candidates** check box to display all the zoned members.

Step 3 Select one or more switches from the Unassigned Flows in the information pane and then click Add.
You see the Add Flows dialog box as shown in Figure 22: Flow Configuration Dialog Box, on page 17.

Figure 22: Flow Configuration Dialog Box



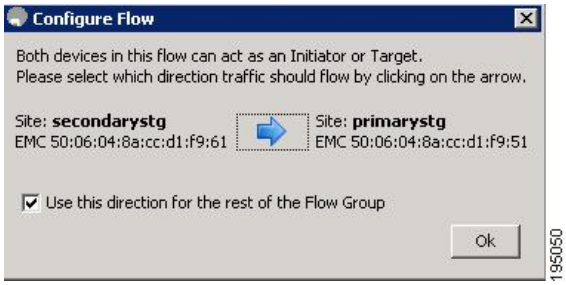
Step 4 Enter a flow group name.

Step 5 Check the **Enable Compression** check box to enable compression.

Step 6 Check the **Enable Tape Acceleration** check box to enable tape acceleration.

Note Write accleration is enabled by default.

Figure 23: Configure Flow Dialog Box



Step 7 Click the arrow icon to configure the flow in this direction.

Step 8 (Optional) Check the **Use this directon for the rest of the Flow group** check box to apply the same direction to rest of the flow group.

Note You may use this step only if some of the N ports are registered as both initiators and targets, especially in cases of remote replication flow.

Step 9 Click **Add** and then click **Apply**.

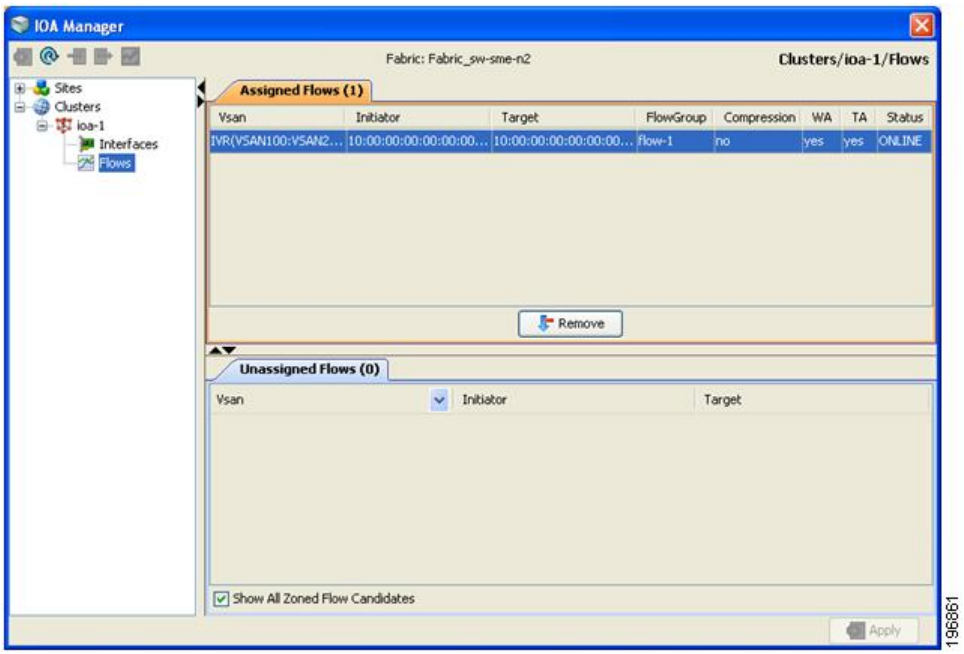
Removing a Flow

To add a flow in the cluster using IOA Manager, follow these steps:

Step 1 Expand the Cluster node in the navigation pane and then click **Flows**.

You see the IOA Manager window displaying the Assigned Flows and Unassigned Flows as shown in Figure 24: Removing Flows Using IOA Manager, on page 19.

Figure 24: Removing Flows Using IOA Manager



Step 2 Select one or more switches from the Assigned Flows in the information pane and then click **Remove**.

Step 3 Click **Apply**.

Viewing Interface Statistics

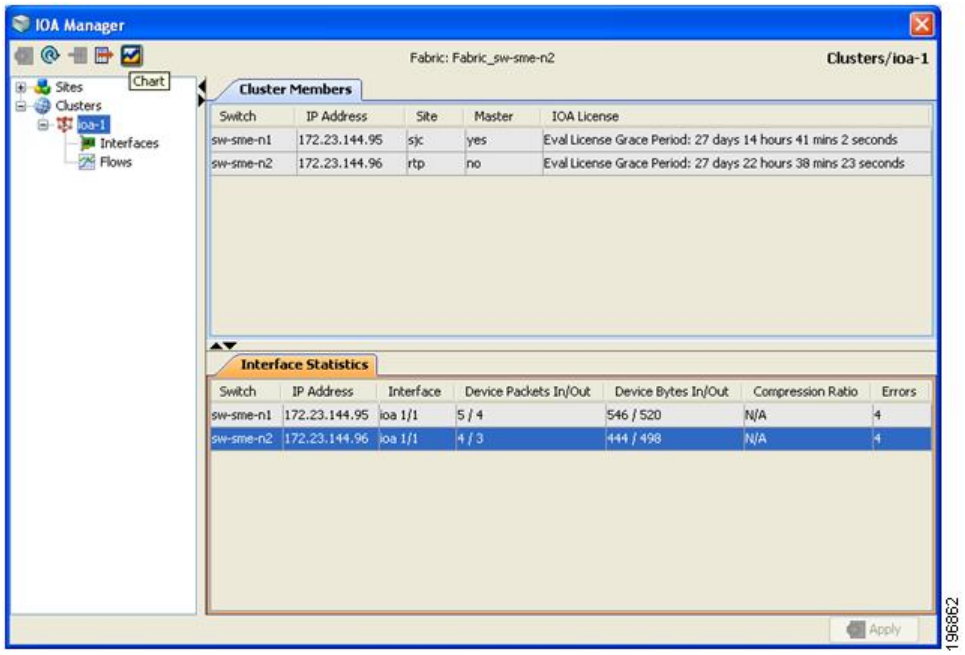
To view real-time charts using IOA Manager, follow these steps:

Step 1 Expand the Cluster node in the navigation pane and click the name of the cluster.

Step 2 Select a switch from the Interfaces Statistics table in the information pane.

You will see the IOA Manager window as shown in Figure 25: Select IOA Manager Real-time Chart, on page 20.

Figure 25: Select IOA Manager Real-time Chart



Step 3 Click the chart icon on the toolbar to monitor real-time charts.
You see the chart as shown in Figure 26: IOA Manager Real-time Chart, on page 20.

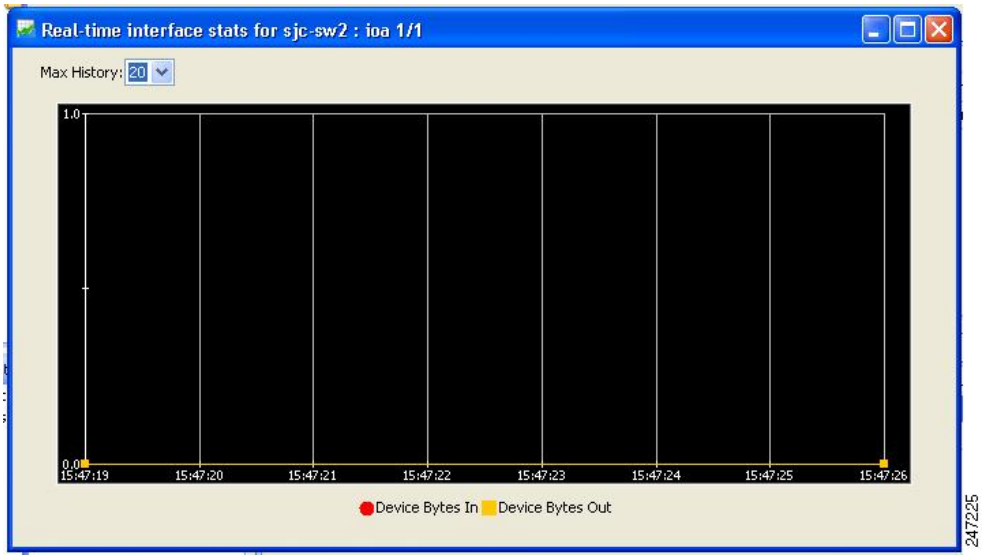



Figure 26: IOA Manager Real-time Chart