C H A P T E R **10**

Configuring Device Groups

This chapter describes how to configure the Device Groups feature in Cisco Data Center Network Manager (DCNM).

This chapter includes the following sections:

Information About Device Groups

Device groups allow you to simplify the visualization of interconnections between groups of devices in the topology feature. You can categorize devices into device groups that you define, which allows you to focus on a limited number of devices when you view the topology. Device groups can help you manage a data center with Cisco DCNM more effectively.

For example, you could groups of devices based on any of the following criteria:

- Location—You could group devices based on their physical location, such as city or as specific as the data center rack designation.
- Administrator—You could group devices based on the Cisco DCNM users who administer them.
- Data center architecture—You could group devices based on the layers of network architecture in your data center, such as aggregation, access, and storage layers.
- Device type—You could group devices based on their type, such as Cisco Nexus 7000 Series switches versus Cisco Nexus 5000 Series switches.

A device can be a member of one group only.

The default device group contains any devices that you have not assigned to a custom device group. Any newly discovered device is placed in the default group.

Licensing Requirements for Device Groups

The following table shows the licensing requirements for this feature:

Product	License Requirement
Cisco DCNM	Device Groups requires no license. Any feature not included in a license package is bundled with the Cisco DCNM and is provided at no charge to you. For information about obtaining and installing a Cisco DCNM LAN Enterprise license, see the *Cisco DCNM Installation and Licensing Guide, Release 5.x*.

Prerequisites for Device Groups

The Device Groups feature has the following prerequisite:

- Devices must be discovered before you can assign them to device groups.

Guidelines and Limitations for Device Groups

The Device Groups feature has the following configuration guidelines and limitations:

- By default, all discovered devices belong to the default device group.
- A device can be a member of one group only.
- For physical devices that support virtual device contexts (VDCs), you can assign VDCs that exist on the same physical device to different device groups.
- Choose a method of categorizing devices into device groups that provides the best simplification of your network topology.

Configuring Device Groups

This section includes the following topics:

Creating a Device Group

You can create a device group and add one or more devices to it.

There is only one default group. All other groups are custom device groups.

DETAILED STEPS

Step 1   From the Feature Selector pane, choose **DCNM Server Administration > Device Groups**.

The Summary pane lists custom device groups, if any. The default group does not appear.

The Details pane shows the group name, description, and a list of devices in the group.

Step 2   From the menu bar, choose **Actions > Create Device Group**.

A blank row appears in the Summary table.

Step 3   In the blank row, under Device Group Name, enter a name for the group.

Step 4   (Optional) Under Description, enter a useful description of the group.

Step 5   In the Details pane, expand the Membership Details section, if necessary.

Step 6   To add devices to the group, do the following:

  a.   Right-click below the column names in the Membership Details section and choose **Add Device**.

      The Device Selection dialog box appears.

  b.   (Optional) Use the Select Search Criteria drop-down list to filter the devices shown in the Available Devices list. You can filter devices in one of the following ways:

      –   All devices—Shows every discovered device.

      –   Device type—Shows only discovered devices of the type that you choose, such as Cisco Nexus 7000 Series switches.

      –   Unsupported devices—Shows discovered devices that Cisco DCNM cannot manage and monitor.

      –   Connected devices—Shows discovered devices connected within the number of hops that you specify to the seed device that you specify by IP address.

      –   Subnet devices—Shows discovered devices whose IP addresses are within the subnet that you specify by the IP address of the subnet and the subnet mask.

  c.   Move one or more devices from the Available Devices List to the Selected Devices list.

      To move one device, click the device and then click **Add**.

      To move more than one device, press and hold **Ctrl**, click each device, and then click **Add**.

  d.   Click **OK**.

Step 7   From the menu bar, choose **File > Deploy** to save the device group configuration.

The new group is available in the topology map.

Each device that you added to the new device group is removed from its previous group. If a preexisting, nondefault device group became empty because you moved all its devices to the new device group, Cisco DCNM automatically deletes the empty device group.

Adding Devices to a Group

You can add devices to an existing device group.

All devices belong to one and only one group. Devices that are not members of a custom device group automatically belong to the default device group.

Adding a device to a group automatically removes the device from the group that previously contained the device.

BEFORE YOU BEGIN

Ensure that the device group that you want to add the devices to exists.

DETAILED STEPS

Step 1   From the Feature Selector pane, choose **DCNM Server Administration > Device Groups**.

The Summary pane lists custom device groups. The default group does not appear.

The Details pane shows the group name, description, and a list of devices in the group.

Step 2   Click the device group to which you want to add one or more devices.

Step 3   In the Details pane, expand the Membership Details section, if necessary.

Step 4   To add devices to the group, do the following:

a.   Right-click below the column names in the Membership Details section and choose **Add Device**.

The Device Selection dialog box appears.

b.   (Optional) Use the Select Search Criteria drop-down list to filter the devices shown in the Available Devices list. You can filter devices in one of the following ways:

–   All devices—Shows every discovered device.

–   Device type—Shows only discovered devices of the type that you choose, such as Cisco Nexus 7000 Series switches.

–   Unsupported devices—Shows discovered devices that Cisco DCNM cannot manage and monitor.

–   Connected devices—Shows discovered devices connected within the number of hops that you specify to the seed device that you specify by IP address.

–   Subnet devices—Shows discovered devices whose IP addresses are within the subnet that you specify by the IP address of the subnet and the subnet mask.

c.   Move one or more devices from the Available Devices List to the Selected Devices list.

To move one device, click the device and then click **Add**.

To move more than one device, press and hold **Ctrl**, click each device, and then click **Add**.

d.   Click **OK**.

Step 5   From the menu bar, choose **File > Deploy** to save the device group configuration.

On the topology map, the device group will include the devices that you added to it.

Each device that you added to the device group is removed from its previous group. If a preexisting, nondefault device group became empty because you moved all its devices to the new device group, Cisco DCNM automatically deletes the empty device group.

Removing Devices from a Group

You can remove devices from a custom device group. All devices that you remove from a custom group are added to the default device group.

Tip   If you want to move devices from one group to another, add them to the other group. Cisco DCNM automatically removes devices from one group when you add them to another group.

DETAILED STEPS

Step 1   From the Feature Selector pane, choose **DCNM Server Administration > Device Groups**.

The Summary pane lists custom device groups. The default group does not appear.

The Details pane shows the group name, description, and a list of devices in the group.

Step 2   Click the device group from which you want to remove one or more devices.

Step 3   In the Details pane, expand the Membership Details section, if necessary.

Step 4   In the Membership Details section, select the devices that you want to delete.

To select a single device, click the device.

To select more than one device, press and hold **Ctrl**, and then click each device.

Step 5   Right-click on one of the selected devices and choose **Delete**.

Cisco DCNM removes the selected devices from the device group.

Step 6   From the menu bar, choose **File > Deploy** to save the device group configuration.

On the topology map, the default device group will include the devices that you deleted from the custom device group.

Each device that you deleted from the custom device group is added to the default device group. If the custom device group became empty because you removed all its devices, Cisco DCNM automatically deletes the empty device group.

Deleting a Device Group

You can delete a custom device group.

Devices that belong to a custom device group that you delete automatically become members of the default device group.

Tip   If you add all the devices of a custom device group to another custom device group, Cisco DCNM automatically deletes the empty device group.

DETAILED STEPS

Step 1   From the Feature Selector pane, choose **DCNM Server Administration > Device Groups**.

The Summary pane lists custom device groups. The default group does not appear.

The Details pane shows the group name, description, and a list of devices in the group.

Step 2   Click the device group that you want to delete.

Step 3   From the menu bar, choose **Actions > Delete Device Group**.

Cisco DCNM removes the device group from the Summary pane. The devices that were in the deleted device group are now members of the default device group.

Step 4   From the menu bar, choose **File > Deploy** to save the device group configuration.

On the topology map, the default device group will include the devices that were in the deleted device group.

Where to Go Next

For more information about using device groups in the topology feature, see Chapter 8, "Working with Topology."

Field Descriptions for Device Groups

This section includes the following field descriptions for the Device Groups feature:

- Summary Pane, page 10-6
- Device Group: Details: Global Settings Section, page 10-7
- Device Group: Details: Membership Details Section, page 10-7

Summary Pane

Table 10-1   Device Groups Summary Pane

Field	Description
Device Group Name	*Display only.* Name that you assigned to the device group. After you create a device group, the name is not editable. Device group names must start with a letter and can be up to 30 alphanumeric characters.
Description	Text describing the device group. A description can be up to 80 characters.

Device Group: Details: Global Settings Section

Table 10-2   Device Group: Details: Global Settings Section

Field	Description
Device Group Name	*Display only.* Name that you assigned to the device group.
Description	Text describing the device group. A description can be up to 80 characters.

Device Group: Details: Membership Details Section

Table 10-3   Device Group: Details: Membership Details Section

Field	Description
Switch Name	*Display only.* Name of a device assigned to the device group.
Platform	*Display only.* Name of the physical or virtual device type, such as "Cisco Nexus 1000V Series" or "Cisco Nexus 7000 Series."

Additional References

For additional information related to administering Device Groups, see the following sections:

- Related Documents, page 10-7
- Standards, page 10-7

Related Documents

Related Topic	Document Title
Topology	*Chapter 8, "Working with Topology"*
Device discovery	*Chapter 5, "Administering Device Discovery"*

Standards

Standards	Title
No new or modified standards are supported by this feature, and support for existing standards has not been modified by this feature.	—

Feature History for Device Groups

Table 10-4 lists the release history for this feature.

Table 10-4   Feature History for Device Groups

Feature Name	Releases	Feature Information
Device Groups	5.0(2)	Support was added.