



CHAPTER 5

Managing Device Groups

Cisco Prime Network Change and Configuration Management supports user-defined device grouping. You can create a group with a specific set of devices, so all Configuration Management (CM) and Network Element Image Management (NEIM) operations can be performed for the devices collectively with ease.

You can perform the following activities:

- Create a new device group with the existing set of devices from the Prime Network database. See [Creating a Device Group, page 5-3](#) for more details. You can choose to create a group of one of the following types:
 - Static—Create a device group with a specific set of devices. If you wish to add new devices to the group at a later stage, you must add them manually.
 - Dynamic— Create a device group with certain membership rules or conditions such that all devices satisfying the specified conditions are automatically added to the group at any stage.
- You can also create a static device group from an existing static or dynamic group. You can choose to copy all or some of the devices belonging to the existing group to the new device group. See [Creating a Static Device Group from an Existing Static or Dynamic Group, page 5-6](#) for more details.
- Edit the device group details. See [Editing the Device Group Details, page 5-6](#) for more details.
- Delete a device group.

For information on the user access roles required to perform these activities, see [User Authentication and Authorization \(Access Roles and Device Scopes\), page 7-12](#).

Configuration management functions like backup and image management functions like image baseline, package addition, distribution, and activation use the device grouping feature. Prime Network extracts the devices from the respective groups while creating CM and image management jobs. The created job will not be updated automatically if there is a change in the group by addition or deletion of devices after job creation. You need to delete and recreate the job if there is any change in the device group after job creation. However, for configuration backup and image baseline operations, Prime Network updates the job accordingly such that, all the devices available in the group at the time of execution of the job are considered.



Note

To use this feature, devices must be available in the Prime Network database.

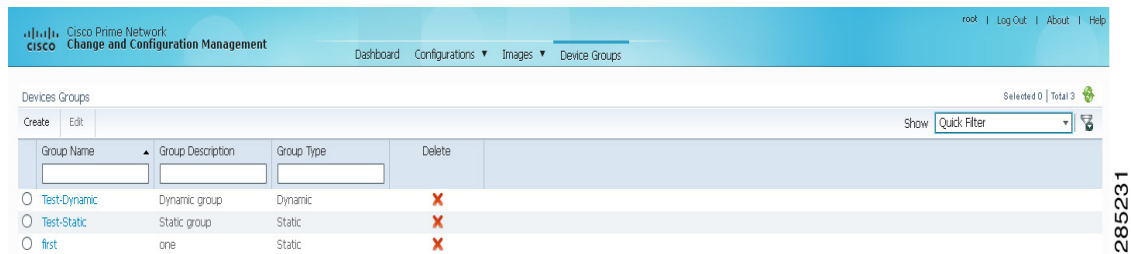
Managing User-Defined Device Groups

The Device groups page allows you to view the list of user-defined device groups existing in the Prime Network database.

To view the existing user-defined device groups:

- Step 1** Click the **Device Groups** tab. The Device Groups page appears as shown in [Figure 5-1](#).

Figure 5-1 Device Groups Page



The Device Groups page displays the following information about each device group.

Field	Description
Group Name	Name of the device group.
Group Description	Description of the device group, if available.
Group Type	Type of the device group, which could be one of the following: <ul style="list-style-type: none"> Static—Allows adding devices to the group manually. Dynamic—Allows adding devices to the group automatically based on specified membership rules.
Delete	Deletes the device group when user clicks the delete icon (red X). Only users with Configurator or Administrator privileges are allowed to delete a device group. See User Authentication and Authorization (Access Roles and Device Scopes) , page 7-12 for more details.

A robust filter allows you to find and display only the device groups which you are interested. You can filter the results by group name, group description, or group type. [Figure 5-1](#) shows the Device Group page with the filter group (highlighted with a red outline.)

- Step 2** Click the hyperlinked group name to view the devices mapped to the group in the Group Members page. You can view the following details.

Field	Description
Status	The status of the device represented by status icons. Indicates whether the device is in operational or non-operational state. See Table 5-1 for more information on the status icons. Click the device hyperlink and open the device properties popup to see details about the device.
Device	Device name. Click the device name hyperlink to open a popup that displays device properties. For Cisco IOS XR devices, the device properties also include current active packages on the device. For descriptions of the device properties, see the Cisco Prime Network 3.9 User Guide .
IP Address	The IP address used for managing the device.
Element Type	The device type with the name of the manufacturer, for example Cisco 7200.

You can filter the results by device name, IP address, or element type.

Step 3 Click **OK** to close the Group Members page and return to the Device Groups page.

Creating a Device Group

You can create a device group of one of the following types:

- **Static**—You can create a device group with a specific set of devices. If you wish to add new devices to the group at a later stage, you must add them manually.
- **Dynamic**—You can create a device group with certain membership rules or conditions. All devices satisfying the specified conditions are automatically added to the group at any stage.

To create a new device group:

Step 1 In the Device Groups page, click **Create**.

Step 2 In the Name field, enter a name for the device group. The group name entered must be unique.



Note You cannot use the reserved names **adminGroup** and **ROOT-DOMAIN** as device group names.

Step 3 In the Description field, enter a description for the device group. See [Using Special Characters in the GUI Fields, page 1-15](#) for more information on valid characters for the device group name and description.

Step 4 In the Membership Update drop-down list box, choose one of the following options:

- **Static**—To create a device group with a specific set of devices.
- **Dynamic**—To create a device group with certain membership rules or conditions, such that devices satisfying the specified conditions are automatically added to the group.

Step 5 (For dynamic groups only) Set up a membership rule to indicate which devices must be added to the group. [Figure 5-2](#) shows an example of the Create Device Group page for creating a dynamic group.

Figure 5-2 Creating a Dynamic Device Group

You can set up membership rules with parameters such as device name, range of device IP addresses, and the device element type. You can choose to include any one or a combination of these parameters in the rule by using the And/Or operator. You can configure the membership rules as explained in the example below.

- a. Choose an operator (for example, **equals**) against Device Name and enter the device name in the text box. For example:

Device Name equals 1800

- b. Against the IP Address between field, enter the range of device IP addresses and choose **IPv4** or **IPv6** to indicate the address type. For example:

IP Address between 10.77.214.107 And 10.77.214.171 IPv4

- c. Choose an operator (for example, **equals**) against Element Type and enter the device element type in the text box. For example:

Element Type equals Cisco 1801



Note You can choose to include any one or a combination of these parameters in the rule by using the And/Or operator. Also, you can provide multiple values for the Device Name and Element Type parameters as a comma-separated list, if required.

For static device groups, in the Group Members section, under the Available Devices list, Prime Network lists all the devices that are available in the database. You can filter the results by device name, IP address, or element type. [Figure 5-3](#) shows an example of the Create Device Group page for creating a static group.

Figure 5-3 Creating a Static Device Group

Group Properties

Name: Description:

Membership Update:

Membership Rules:

Device Name: Equals

IP Address between: And IPv4 IPv6

Element Type: Equals

Group Members

Available Devices Selected 0 | Total 3

Status	Device Name	IP Address	Element Type
	ASR500	10.77.214.70	Cisco ASR 5000 M.
	GSRXR	10.76.92.188	Cisco 12406
<input checked="" type="checkbox"/>	Nexus7K	10.77.214.142	Cisco Nexus 7010..

Selected Devices Selected 0 | Total 1

Status	Device Name	IP Address	Element Type
<input checked="" type="checkbox"/>	ASR5500	10.86.66.35	Cisco ASR 5500

OK Cancel

The following symbols are used in the Group Members section.

Table 5-1 Status Icons

Symbol	Description
	Device is in operational state.
	Device is not in operational state. Most likely the device is in the Maintenance investigation state or the Unreachable communication state. Click the device hyperlink and open the device properties popup to see details about the device.

Step 6 (For static device groups only) Select the required devices from the Available devices list and click the **Add** icon to move the selected devices to the Selected Devices list.




Note To remove devices from the Selected Devices list, click the **Remove** icon. The removed devices will then appear in the Available Devices list.

Step 7 Click **OK** to save the device group details and return to the Device Groups page. Click the hyperlinked group name in the Device Groups page, to view the devices mapped to the selected group. See [Managing User-Defined Device Groups, page 5-2](#) for more details.


Step 8 Click **Cancel** to return to the Device Groups page without saving the details.

Creating a Static Device Group from an Existing Static or Dynamic Group

To create a static device group from an existing dynamic or static group:

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- Step 1** In the Device Groups page, click **Create**.
 - Step 2** In the Name field, enter a name for the new device group. The group name entered must be unique.
 - Step 3** In the Description field, enter a description for the device group.
 - Step 4** In the Group Members section, click **Show All Groups**. Prime Network lists all the static and dynamic device groups that are available in the database. You can filter the results by group name and description.
 - Step 5** Click the **Add**  icon. All devices belonging to the selected device group are displayed in the Selected Devices list.



Note To remove any devices from the Selected Devices list, click the **Remove**  icon.

- Step 6** Click **OK** to save the device group details and return to the Device Groups page.
 - Step 7** Click **Cancel** to return to the Device Groups page without saving the details.
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Editing the Device Group Details

You can perform the following to edit an existing device group:

- Modify the description of the device group.
- (For static groups only) Add a new device to the group or remove an existing device from the group.
- (For dynamic groups only) Modify the membership rules to update the devices mapped to the group.

Only users with Configurator or Administrator privileges can edit the device group details. See [User Authentication and Authorization \(Access Roles and Device Scopes\)](#), page 7-12, for more details.

To edit the details of a device group:

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- Step 1** In the Device Groups page, select a device group and click **Edit**.
The selected device group details are displayed in the Edit Group page. You cannot modify the name of the device group.
 - Step 2** Modify the description of the device group, if required.
 - Step 3** (For dynamic device groups only) Modify the membership rules, if required, to update the devices mapped to the group.
 - Step 4** (For static device groups only) You can select any new devices from the Available Devices list and add them to the Selected Devices list; or, you can remove any devices from the Selected Devices list.
 - Step 5** Click **OK** to save the device group details and return to the Device Groups page.
 - Step 6** Click **Cancel** to return to the Device Groups page without saving the details.
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