

Using Configuration Groups

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Use the Configuration Group Workflows

Before You Begin

Ensure that the IP address of the Cisco SD-WAN Validator is specified.

1. From the Cisco SD-WAN Manager menu, choose **Administration** > **Settings** > **Validator**.
2. Enter the IP address of the Cisco SD-WAN Validator.

Ensure that you specify the granular RBAC for each feature profile. With the set permissions to the usergroup, ensure that you are able to access the required feature profiles.

From Cisco Catalyst SD-WAN Manager Release 20.12.1, choose **Configuration** > **Configuration Groups** in the Cisco SD-WAN Manager menu.

In Cisco vManage Release 20.11.1 and earlier, choose **Configuration** > **Templates** > **Configuration Groups**.

1. From the Cisco SD-WAN Manager menu, choose **Administration** > **Manage Users** > **User Groups**.
2. Click **Add User Group**.
3. Enter **User Group Name**.
4. Select the **Read** or **Write** check box against feature that you want to assign to a user group.
5. Click **Save**.

Note To create Service, System and Tranport feature profiles using configuration groups, you need to provide read and write permissions on the following features to access each configuration group.

- **Feature Profile** > **System**
- **Feature Profile** > **System** > **AAA**
- **Feature Profile** > **System** > **BFD**
- **Feature Profile** > **System** > **Banner**
- **Feature Profile** > **System** > **Basic**
- **Feature Profile** > **System** > **Logging**
- **Feature Profile** > **System** > **NTP**
- **Feature Profile** > **System** > **OMP**
- **Feature Profile** > **System** > **SNMP**
- **Feature Profile** > **Service**
- **Feature Profile** > **Service** > **BFD**
- **Feature Profile** > **Service** > **LAN/VPN**
- **Feature Profile** > **Service** > **LAN/VPN/Interface/Ethernet**
- **Feature Profile** > **Service** > **Routing/BGP**
- **Feature Profile** > **Service** > **Routing/OSPF**
- **Feature Profile** > **Service** > **Routing/DHCP**
- **Feature Profile** > **Service** > **Routing/Multicast**
- **Feature Profile** > **Transport**
- **Feature Profile** > **Transport** > **Routing/BGP**
- **Feature Profile** > **Transport** > **WAN/VPN**
- **Feature Profile** > **Transport** > **WAN/VPN/Interface/Ethernet**

For more details on adding user groups, see Create User Groups.

Run the Create Configuration Group Workflow

Minimum releases: Cisco IOS XE Catalyst SD-WAN Release 17.9.1a, Cisco vManage Release 20.9.1

From the Cisco SD-WAN Manager menu, choose **Workflows** > **Create Configuration Group**. Alternatively, do the following:

1. From the Cisco SD-WAN Manager menu, choose **Workflows** > **Workflow Library**.
2. On the **Workflow Library** page, in the **Library** section, click **Create Configuration Group**.

Alternatively, from Cisco IOS XE Catalyst SD-WAN Release 17.12.1a, choose **Configuration** > **Configuration Groups** in the Cisco SD-WAN Manager menu, and click **Add Configuration Group**.

In Cisco IOS XE Catalyst SD-WAN Release 17.11.1a and earlier, choose **Configuration** > **Templates** > **Configuration Groups**.

The workflow creates a configuration group, which includes various feature profiles.

Run the Rapid Site Configuration Group Workflow



Note This workflow is available only in Cisco vManage Release 20.8.x.

1. From the Cisco SD-WAN Manager menu, choose **Workflows** > **Workflow Library**.
2. On the **Workflow Library** page, start a new workflow or resume an existing workflow:
   a. Start a new workflow: In the **Library** section, click **Create Configuration Group**. Alternatively, From Cisco IOS XE Catalyst SD-WAN Release 17.12.1a, choose **Configuration** > **Configuration Groups** in the Cisco SD-WAN Manager menu, and click **Add Configuration Group**.

      In Cisco IOS XE Catalyst SD-WAN Release 17.11.1a and earlier, choose **Configuration** > **Templates** > **Configuration Groups**.

   b. Resume an in-progress workflow: In the **In-progress** section, click **Rapid Site Configuration Group**.

The workflow generates the following components:

- A configuration group
- Four feature profiles: System profile, transport and management profile, service profile, and CLI profile (optional)

Run the Custom Configuration Group Workflow



Note This workflow is available only in Cisco vManage Release 20.8.x.

1. From the Cisco SD-WAN Manager menu, choose **Workflows** > **Workflow Library**.
2. On the **Workflow Library** page, start a new workflow or resume an existing workflow:
   a. Start a new workflow: In the **Library** section, click **Create Configuration Group**. Alternatively, From Cisco IOS XE Catalyst SD-WAN Release 17.12.1a, choose **Configuration** > **Configuration Groups** in the Cisco SD-WAN Manager menu, and click **Add Configuration Group**.

      In Cisco IOS XE Catalyst SD-WAN Release 17.11.1a and earlier, choose **Configuration** > **Templates** > **Configuration Groups**.

   b. Resume an in-progress workflow: In the **In-progress** section, click **Custom Configuration Group**.

The workflow generates the following components:

- A configuration group
- Three feature profiles: System profile, transport and management profile, and service profile

Add Devices to a Configuration Group

After creating a configuration group, you can add devices to the group in one of the following ways:

- Add the devices manually.
- Use rules to automatically add devices to the group.

Add Devices to a Configuration Group Manually

1. From the Cisco SD-WAN Manager menu, choose **Configuration** > **Configuration Groups**.

   In Cisco vManage Release 20.11.x and earlier, choose **Configuration** > **Templates** > **Configuration Groups**.
2. Click **…** adjacent to the configuration group name and choose **Edit**.
3. Click **Associated Devices**, and then click **Add Devices**.

   The **Add Devices to Configuration** workflow starts.
4. Follow the instructions provided in the workflow.

   The selected devices are listed in the **Devices** table.

Add Devices to a Configuration Group Using Rules

Before You Begin

Ensure that you have added tags to devices. For more information about tagging, see Device Tagging.

Add Devices to a Configuration Group Using Rules

1. From the Cisco SD-WAN Manager menu, choose **Configuration** > **Configuration Groups**.

   In Cisco vManage Release 20.11.x and earlier, choose **Configuration** > **Templates** > **Configuration Groups**.
2. Click **…** adjacent to the configuration group name and choose **Edit**.
3. Click **Associated Devices**, and then click **Add and Edit Rules**.

   The **Automated Rules** sidebar is displayed.
4. In the **Rules** section, choose values for the following options:
   - (Minimum supported release: Cisco Catalyst SD-WAN Manager Release 20.12.1)

     Rule Conditions: Choose one of the following conditions: **Match All** or **Match Any**.

- **Device Attribute**: Choose **Tags**.
- **Condition**: Choose one of the following operators: **Equal**, **Contains**, **Not contain**, **Not equal**, **Starts with**, **Ends with**. For more information about these operators, see Examples of Applying Rules Using Tags.
- **Select Value**: Select a tag from the list of available tags.

Note If a device matches a tag rule, the device is added to the configuration group. If you edit the tag rule by changing any of the specified values, the device is removed from the group.

5. Click **Apply**.

   A list displays the devices that will be added to the configuration group or removed from the group based on the rule.

6. Click **Confirm** to apply the changes.

Note

- You cannot create a new rule if it conflicts with an existing rule.
- You cannot add a tag to a device if it is already attached to a device template.
- If you have attached a template to a device, and the task is in progress, you can add a tag to the device. However, you cannot apply a rule to add this device to a configuration group using the same tag. To do this, you must either detach the device from the template or use a different tag.

Check Task Details

To check the status of all the active and completed tasks, do the following:

1. Click the + icon to view the details of a task.

   Cisco SD-WAN Manager displays the status of the task and details of the device on which the task was performed.

2. From the Cisco SD-WAN Manager toolbar, click the **Task-list** icon.

   Cisco SD-WAN Manager displays a list of all the running tasks along with the total number of successes and failures.

Examples of Applying Rules Using Tags

Scenario: There are five devices in the network, and you want to add the devices to configuration groups based on tagging.

1. Tag each device. For information about tagging devices, see Add Tags to Devices Using Cisco SD-WAN Manager.

   In the following example, tags have been added to five Cisco Catalyst 8000V devices.

Table 1: Example of Device Tagging

Device UUID	Tags
C8K-0001	CA1, CA2
C8K-0002	CA1, CA2, CA3
C8K-0003	CA1, CA4, CA5
C8K-0004	CA3, CA4
C8K-0005	CA3, CA5

2. (Minimum supported release: Cisco Catalyst SD-WAN Manager Release 20.12.1)

   Choose any one of the following rule conditions:

   - **Match All**
   - **Match Any**

3. Use rules to add the devices to specific configuration groups based on the tags that you have added to each device.

   When applying a rule, you can use the following operators:

   - Equal: This operator checks for matching data.
   - Not equal: This operator checks for nonmatching data.
   - Contain: This operator finds a value anywhere in your data.
   - Not contain: This operator filters data that does not contain any of the specified values.
   - (Minimum supported release: Cisco Catalyst SD-WAN Manager Release 20.12.1)

     Starts with: This operator filters data that starts with any specified values.
   - (Minimum supported release: Cisco Catalyst SD-WAN Manager Release 20.12.1)

     Ends with: This operator filters data that ends with any specified values.

   For information about using rules to add devices to configuration groups, see Add Devices to a Configuration Group Using Rules.

The following examples show the effects of using different operators when applying a rule, based on how devices are tagged.

Rule Example 1

Condition: Match Any

Operator: EQUAL

Specified tags: CA1, CA2

Effect: Matches any device containing these two tags.

Configuration group: A

Result: Devices C8K-0001 and C8K-0002 are added to configuration group A.

Rule Example 2

Condition: Match Any

Operator: NOT EQUAL

Specified tags: CA1, CA2

Effect: Matches any device that does not contain both of these tags.

Configuration group: B

Result: Devices C8K-0003, C8K-0004, and C8K-0005 are added to configuration group B.

Rule Example 3

Condition: Match Any

Operator: CONTAIN

Specified tags: CA1, CA2

Effect: Matches any device that contains any one of these tags.

Configuration group: C

Result: Devices C8K-0001, C8K-0002, and C8K-0003 are added to configuration group C.

Rule Example 4

Condition: Match Any

Operator: NOT CONTAIN

Specified tags: CA1, CA2

Effect: Matches any device that does not contain any one of these tags.

Configuration group: D

Result: Devices C8K-0004 and C8K-0005 are added to configuration group D.

Rule Example 5

Condition: Match Any

Operator: STARTS WITH

Specified tags: CA

Effect: Matches any device that has a tag that starts with the specified value.

Configuration group: E

Result: Devices C8K-0001, C8K-0002, C8K-0003, C8K-0004, and C8K-0005 are added to configuration group E.

Rule Example 6

Condition: Match All

Operator: ENDS WITH

Specified tags: 1

Effect: Matches all devices that have a tag that ends with the specified value.

Configuration group: F

Result: Devices C8K-0001, C8K-0002, and C8K-0003 are added to configuration group F.

Deploy Devices

Any field in a feature can be marked as device-specific which is referred as device variable. You can provide device variable values while adding devices for deploying them for any features.

Deploy Devices Manually

1. From Cisco IOS XE Catalyst SD-WAN Release 17.12.1a, choose **Configuration** > **Configuration Groups** in the Cisco SD-WAN Manager menu.

   In Cisco IOS XE Catalyst SD-WAN Release 17.11.1a and earlier, choose **Configuration** > **Templates** > **Configuration Groups**.

2. Click **…** adjacent to the configuration group name and choose **Edit**.
3. Click **Associated Devices**.
4. Choose one or more devices, and then click **Deploy**.

Deploy Devices Using the Deploy Configuration Group Workflow

Before You Begin

Ensure that one or more configuration groups are created so that you can choose a group from the list to deploy the associated devices.

Note In Cisco vManage Release 20.8.x, the Deploy Configuration Group workflow is called the Provision WAN Sites and Devices workflow.

Deploy Devices

1. From the Cisco SD-WAN Manager menu, choose **Workflows** > **Workflow Library**.
2. Start the **Deploy Configuration Group** workflow.
3. Follow the instructions provided in the workflow.

Configure Device Values

Minimum releases: Cisco IOS XE Catalyst SD-WAN Release 17.11.1a and Cisco vManage Release 20.11.1

The **Change Device Values** workflow enables you to provide device variable values without deploying a configuration group to the devices. If you do not have RBAC permission for deploying, you can use **Change Device Values** workflow to modify device variable values.

You can associate devices of different models to the same configuration group. Not all of the associated devices necessarily support each feature configured in the configuration group. For example, Cisco Catalyst 8000v devices do not support the ThousandEyes feature. When you deploy a configuration group to devices, for each device, Cisco SD-WAN Manager applies only the features that the device supports.

Before You Begin

Role-Based Access Control (**Administration** > **Manage Users** > **User Group**) permissions determine which variables you can view and update.

Configure Device Values

1. From Cisco IOS XE Catalyst SD-WAN Release 17.12.1a, choose **Configuration** > **Configuration Groups** in the Cisco SD-WAN Manager menu.

   In Cisco IOS XE Catalyst SD-WAN Release 17.11.1a and earlier, choose **Configuration** > **Templates** > **Configuration Groups**.
2. Click **…** adjacent to the configuration group name and choose **Edit**.
3. Click **Associated Devices**.
4. Choose one or more devices, and click **Change Device Values**.

   The **Change Device Values** workflow starts.



Note Starting from Cisco IOS XE Catalyst SD-WAN Release 17.12.1a and Cisco Catalyst SD-WAN Control Components Release 20.12.1, the variable name can contain dots (.), forward slashes (/) and square brackets ([]).



Note Starting from Cisco Catalyst SD-WAN Manager Release 20.15.1, only the **Cellular Gateway** in the configuration groups supports rollback timer.

5. Follow the instructions provided in the workflow.

   The **Devices** table lists the selected devices.
6. Click **Next**.

   The **Select Devices to Change Values** page is displayed.
7. Select the devices.
8. Click **Next**.

The **Add and Review Device Configuration** page is displayed.

9. Follow the instructions and update the **Device Configuration** details.

   Modify the configurations as needed or edit the table to add system IPs and site IDs.

10. Click **Save**.

Remove Devices from a Configuration Group

1. From Cisco IOS XE Catalyst SD-WAN Release 17.12.1a, choose **Configuration** > **Configuration Groups** in the Cisco SD-WAN Manager menu.

   In Cisco IOS XE Catalyst SD-WAN Release 17.11.1a and earlier, choose **Configuration** > **Templates** > **Configuration Groups**.

2. Click **…** adjacent to the configuration group name and choose **Edit**.
3. Click **Associated Devices**.
4. In the **Devices** table, choose the devices that you want to remove from the configuration group.
5. Click **Remove Devices**.

Note

- If a device is automatically added to a configuration group based on a tag rule, you cannot remove the device from the group using the above method. To do this, you must edit the tag rule or delete the rule. For complete information on adding or editing a tag rule, see Add Devices to a Configuration Group Using Rules.
- Remove a Cisco Catalyst 8000V device from a configuration group only after deploying the device. Manually issue the command **request platform software sdwan** *is-vmanaged disable* in the device CLI to completely dissociate the Cisco Catalyst 8000V device from a configuration group.

Features and Subfeatures

The following procedures relate to adding, editing, and removing features and subfeatures from a feature profile within a configuration group.

Add a Feature to a Feature Profile

Before You Begin

Adding a feature to a feature profile requires a configuration group. For information about creating a configuration group, see Run the Create Configuration Group Workflow, on page 2.

Add a Feature to a Feature Profile

1. From Cisco IOS XE Catalyst SD-WAN Release 17.12.1a, choose **Configuration** > **Configuration Groups** in the Cisco SD-WAN Manager menu.

   In Cisco IOS XE Catalyst SD-WAN Release 17.11.1a and earlier, choose **Configuration** > **Templates** > **Configuration Groups**.

2. Click **…** adjacent to a configuration group name and choose **Edit**.
3. Click a feature profile to open it.
4. Click **Add Feature**.
5. From the feature drop-down list, choose a feature.



Note Features that have already been added are grayed out.

6. In the **Name** field, enter a name for the feature.

   The name can be up to 128 characters and can contain only alphanumeric characters.

7. In the **Description** field, enter a description of the feature.

   The description can be up to 2048 characters and can contain only alphanumeric characters and spaces.

8. Configure the options as needed.

   Some parameter have a scope drop-down list that enables you to choose **Global**, **Device Specific**, or **Default** for the parameter value. Choose one of the following options, as described in the table below:

Parameter Scope	Scope Description
Global (indicated by a globe icon)	Enter a value for the parameter to apply the value to all devices. Examples of parameters that you might apply globally to a group of devices are DNS server, syslog server, and interface MTUs.
Device Specific (indicated by a host icon)	Use a device-specific value for the parameter. Choose **Device Specific** to provide a value for the key in the field. The key is a unique string that helps identify the parameter. To change the default key, enter a new string in the field. Examples of device-specific parameters are system IP address, host name, GPS location, and site ID.
Default (indicated by a check mark)	The default value is shown for parameters that have a default setting.

9. Click **Save**.

Add a Subfeature

Before You Begin

Some features include subfeature options.

Add a Subfeature

1. From Cisco IOS XE Catalyst SD-WAN Release 17.12.1a, choose **Configuration** > **Configuration Groups** in the Cisco SD-WAN Manager menu.

   In Cisco IOS XE Catalyst SD-WAN Release 17.11.1a and earlier, choose **Configuration** > **Templates** > **Configuration Groups**.
2. Click **…** adjacent to a configuration group name and choose **Edit**.
3. Click a feature profile to open it.
4. Click **…** adjacent to a feature and choose **Add Sub-Feature**.
5. From the drop-down list, choose a subfeature.
6. In the **Name** field, enter a name for the feature.
7. In the **Description** field, enter a description of the feature.
8. Configure the options as needed.
9. Click **Save**.

Edit a Feature

1. From Cisco IOS XE Catalyst SD-WAN Release 17.12.1a, choose **Configuration** > **Configuration Groups** in the Cisco SD-WAN Manager menu.

   In Cisco IOS XE Catalyst SD-WAN Release 17.11.1a and earlier, choose **Configuration** > **Templates** > **Configuration Groups**.
2. Click **…** adjacent to the configuration group name and choose **Edit**.
3. Click a feature profile to open it.
4. Click **…** adjacent to a feature and choose **Edit Feature**.
5. Configure the options as needed.
6. Click **Save**.

Delete a Feature

1. From Cisco IOS XE Catalyst SD-WAN Release 17.12.1a, choose **Configuration** > **Configuration Groups** in the Cisco SD-WAN Manager menu.

   In Cisco IOS XE Catalyst SD-WAN Release 17.11.1a and earlier, choose **Configuration** > **Templates** > **Configuration Groups**.

2. Click **…** adjacent to the configuration group name and choose **Edit**.
3. Click the desired feature profile.
4. Click **…** adjacent to the feature and choose **Delete Feature**.