Policy Groups

- Policy Groups, on page 1
- Information About Policy Groups, on page 1
- Restrictions for Policy Groups, on page 2
- Group of Interest - Policy, on page 2
- Add Policy Group, on page 8

Policy Groups

Table 1: Feature History

Feature Name	Release Information	Description
Policy Groups	Cisco IOS XE 17.13.1a	This feature provides a simple, reusable, and structured approach to configuring policies for SD-Routing devices .

Information About Policy Groups

Policy groups simplify the experience of configuring and deploying various policies on SD-Routing devices. Policy groups are a collection of different policies that you can configure through workflows and associate with and deploy on different SD-Routing devices.

Overview of Policy Groups

Policy Groups provide a simple, reusable, and structured approach for configuring policies and policy objects in SD-Routing devices.

Policy groups are a collection of various policies and policy parameters that you can configure quickly through a simplified workflow. Policy groups allows you to configure the basic and necessary policies with defaults to get your systems up and running. The more advanced user can switch to the **Advanced** layout to take complete control and configure detailed policy parameters such as service-level agreement (SLA) class, Quality of Service (QoS) Maps, and Match-Action parameters pertaining to the traffic policy. After creating a policy group, you can associate it with one or more sites or a single device at the site in the network and deploy it on devices managed by configuration groups.

After you've configured a policy group, you can deploy it by using the Overview of Policy Group Workflows.

Overview of Policy Group Workflows

The policy group workflow guides you in creating a policy group for one or more sites or a single device at the site in the network that is managed by configuration groups in SD-Routing devices. The workflow provides you with an improved configuration and troubleshooting experience. The workflow has the following features:

- You can review the various configuration values on a single page within the workflow.
- You can easily identify and fix incorrect values that appear highlighted in red. In addition, an asterisk that is adjacent to a field name helps you identify the mandatory values within the workflow.

Deploy Policy Group Workflow

You can access the workflow by choosing **Workflows** > **Deploy Policy Group** menu in Cisco SD-WAN Manager.

The **Deploy Policy Group** workflow enables you to associate devices with a previously created policy group and deploy the policy group to the selected devices. You can review device configurations to further add Site IDs and other variables that must be provided as part of a policy group before deploying the policy group.

Benefits of Policy Groups

- Simplified user experience through an intuitive UI that allows you to quickly configure the basic policies that are required to get your deployments up and running.
- Option to edit policy groups based on the changing needs of your network and save the configuration. You can choose to deploy these changes only when needed - during maintenance windows or in off-production hours.
- A **Preview CLI** option to preview the difference in configuration for relevant devices such as Cisco SD-WAN device and SD-Routing device in one location.
- Workflows to deploy policy groups.

Restrictions for Policy Groups

- You cannot deploy policy groups to devices that are not already managed by a configurations group.

Group of Interest - Policy

Group of interest provides a list of related policy objects that you can configure and call in the match or action components of a policy. Click **Group of Interest** to create new objects for the policy group as described in the following sections:

Application

1. Click **Application**.

2. Click **Add Application** .
3. From the **Application/Application family list** drop-down, choose the required applications or application families.
4. Click **Save**.

A few application lists are preconfigured. You cannot edit or delete these lists.

Microsoft_Apps: Includes Microsoft applications, such as Excel, Skype, and Xbox. To display a full list of Microsoft applications, click the list in the **Entries** column.

Google_Apps: Includes Google applications, such as Gmail, Google Maps, and YouTube. To display a full list of Google applications, click the list in the **Entries** column.

Color

1. Click **Color**.
2. Click **New Color List** and specify the following:

Field	Description
Color List Name	Enter a name for the list.
Select Color	Choose one or more color lists types from the drop-down list.

3. Click **Add**.

To configure multiple colors in a single list, you can choose multiple colors from the drop-down list.

Community List

A community list is used to create groups of communities to use in a match clause of a route map. A community list can be used to control which routes are accepted, preferred, distributed, or advertised. You can also use a community list to set, append, or modify the communities of a route.

1. Click **Community List**.
2. Click **Add Community List** and specify the following:

Field	Description
Community List Name	Enter a name of the community list.

Field	Description
Add Community	Enter one or more communities separated by commas. • *aa*:*nn*: Autonomous System (AS) number and network number. Each number is a 2-byte value with a range from 1 to 65535. For example, 65526. • **internet**: Routes in this community are advertised to the internet community. This community comprises all BGP-speaking networking devices. • **local-as**: Routes in this community are not advertised outside the local AS number. • **no-advertise**: Attaches the NO_ADVERTISE community to routes. Routes in this community are not advertised to other BGP peers. • **no-export**: Attaches the NO_EXPORT community to routes. Routes in this community are not advertised outside the local AS or outside a BGP confederation boundary. To configure multiple BGP communities in a single list, include multiple **community** options, specifying one community in each option.

3. Click **Save**.

Data Prefix

1. Click **Data Prefix**.
2. Click **Add Data Prefix**.
3. In the **Data Prefix list** dialog box, specify the following:

Field	Description
Data Prefix List Name	Enter a name for the data prefix list.
Add Data Prefix	Enter one or more data prefixes separated by commas.

4. Click **Save**.

Data Prefix IPv6

1. Click **Data Prefix IPv6**.
2. Click **Add Data Prefix IPv6**.
3. In the **Data Prefix List** dialog box, specify the following:

Field	Description
Data Prefix List Name	Enter a name for the IPv6 data prefix list.
Add Data Prefix	Enter one or more IPv6 data prefixes separated by commas.

4. Click **Save**.

Expanded Community List

1. Click **Expanded Community List**.
2. Click **Add Expanded Community List** and specify the fiollowing:

Field	Description
Community List Name	Enter a name for the community list.
Add Community	Specify details of the expanded community list that is used to filter communities using a regular expression.

Forwarding Class

1. Click **Add Forwarding Class** and specify the following:

Field	Description
Forwarding Class	Enter a name for the forwarding class.
Queue	Choose a value for the queue from the drop-down list.

2. Click **Save**.

Policer

1. Click **Policer**.
2. Click **Add Policer** and specify the following:

Field	Description
Policer List Name	Enter a name for the policer list.
Burst (bytes)	Enter the maximum traffic burst size. The range is from 15,000 to 10,000,000 bytes.
Exceed	Choose the action to take when the burst size or traffic rate is exceeded. The options are: • Drop: sets the packet loss priority (PLP) to low • Remark: sets the packet loss priority (PLP) to high
Rate	Enter the maximum traffic rate, a value from 8 through 10^11 bits per second (bps).

3. Click **Save**.

Preferred Color Group

1. Click **Add Preferred Color Group**.
2. In the **Preferred Color Group Name** field, enter a name for the preferred color group.
3. Choose the color preference and path prefernce for the primary, secondary, and tertiary colors from the **Color Preference** and the **Path Preference** drop-down lists.

Field	Description
Preferred Color Group Name	Enter a name for the preferred color group.
Color Preference	Choose the color preference from the drop-down list. You can choose multiple colors.
Path Preference	Choose the path preference from the drop-down list. The options are: • Direct Path • Multi Hop Path • All Paths

4. Click **Save**.

Prefix List

1. Click **Prefix List**.
2. Click **Add Prefix List** and specify the following:

Field	Description
Prefix List Name	Enter a name for the IPv4 prefix list.
Add Prefix	Enter one or more IPv4 prefixes separated by commas.

3. Click **Save**.

Prefix List IPv6

1. Click **Prefix List IPv6**.
2. Click **Add Prefix List** and specify the following:

Field	Description
Prefix List Name	Enter a name for the IPv6 prefix list.
Add Prefix	Enter one or more IPv6 prefixes separated by commas.

3. Click **Save**.

SLA Class

1. Click **SLA Class**.
2. Click **Add SLA Class** and specify the following:

Field	Description
SLA Class List Name	Enter a name of the SLA class list.
Loss (%)	Enter the maximum packet loss on the connection, a value from 0 through 100.
Latency	Enter the maximum packet latency on the connection, a value from 1 through 1,000 milliseconds.
Jitter	Enter the maximum jitter on the connection, a value from 1 through 1,000 milliseconds.
App Probe Class	Choose the app probe class from the drop-down list or click **Create New** to create one.
Fallback Best Tunnel	Choose this option to enable the best tunnel criteria.

3. Click **Save**.

TLOC List

1. Click **TLOC List**.
2. Click **Add TLOC List** and specify the following:

Field	Description
List Name	Enter a name for the TLOC list.
TLOC IP	Specify the IP address for TLOC.
Color	Choose the color from the drop-down list.
Encapsulation	Choose the value from the drop-down list. The options are: • IPSec • GRE
Preference	Choose a preference to associate with the TLOC. The range is 0 to 4294967295.

3. Click **Save**.

Add Policy Group

To create a new policy group, click **Add Policy Group** and configure the values in the following table. If you have already created a policy group, click the policy group from the list of available policy groups to edit.

Table 2: Policy group parameters

Field	Description
Policy Group Name	Specify the name of the policy group. This field is mandatory and can contain only uppercase and lowercase letters, the digits 0 through 9, hyphens (–), and underscores (_). It cannot contain spaces or any other characters.
Description	Provide a description for the policy group. It can contain up to 2048 characters including spaces.
Policy	
Application Priority & SLA	Choose an application priority for the policy group from the drop-down list. Click **Create New** to create a new application priority.
Embedded Security	Choose an embedded security policy from the drop-down list. Click **Create New** to create a new embedded security policy by selecting a configuration group, creating firewall policies, and other configuration settings.
Secure Internet Gateway	Configure the Secure Internet Gateway (SIG) tunnels before you apply a data policy for redirecting application traffic to an SIG. Select a Secure Internet Gateway (SIG) policy from the drop-down list. Click **Create New** to create a new SIG policy.
DNS Security	Select a DNS Security policy from the drop-down list. Click **Create New** to create a new DNS Security policy.

1. Click **Save** to save your configuration.
2. Click the pencil icon to select or unselect devices to associate or dissociate with the policy group.
3. Click **Deploy** to select sites and deploy the policy group.

To delete a policy group, select the ellipsis icon (**...**) to the right of the policy group and click **Delete**.