



# Configuring Policing

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## About Policing

Policing is the monitoring of the data rates for a particular class of traffic. When the data rate exceeds user-configured values, marking or dropping of packets occurs immediately. Policing does not buffer the traffic; therefore, the transmission delay is not affected. When traffic exceeds the data rate, you instruct the system to either drop the packets or mark QoS fields in them.

You can define single-rate and dual-rate policers.

Single-rate policers monitor the committed information rate (CIR) of traffic. Dual-rate policers monitor both CIR and peak information rate (PIR) of traffic. In addition, the system monitors associated burst sizes. Three colors, or conditions, are determined by the policer for each packet depending on the data rate parameters supplied: conform (green), exceed (yellow), or violate (red).

You can configure only one action for each condition. For example, you might police for traffic in a class to conform to the data rate of 256000 bits per second, with up to 200 millisecond bursts. The system would apply the conform action to traffic that falls within this rate, and it would apply the violate action to traffic that exceeds this rate.

For more information about policers, see RFC 2697 and RFC 2698.

## Prerequisites for Policing

Policing has the following prerequisites:

- You must be familiar with using modular QoS CLI.
- You are logged on to the device.

# Guidelines and Limitations

Policing has the following configuration guidelines and limitations:

- Egress QoS policing is not supported on Cisco Nexus 9500 platform switches with the following line cards:
  - Cisco Nexus 9636C-R
  - Cisco Nexus 9636Q-R
  - Cisco Nexus 9636C-RX
  - Cisco Nexus 96136YC-R
- The egress RACL and egress QoS features are not supported on the Cisco Nexus 9508 switch (Cisco NX-OS Release 7.0(3)F3(3)).
- Egress QoS policy statistics for CPU generated traffic are not supported on the following:
  - Cisco Nexus 9200, 9300-EX, and 9300-FX platform switches
  - Cisco Nexus 9500 platform switches with the following line cards:
    - Cisco Nexus 9732C-EX
    - Cisco Nexus 9736C-EX
    - Cisco Nexus 97160YC-EX
    - Cisco Nexus 9736C-FX
- **show** commands with the **internal** keyword are not supported.
- Each module polices independently, which might affect QoS features that are applied to traffic that is distributed across multiple modules. The following are examples of these QoS features:
  - Policers applied to a port channel interface.
  - Policers applied to a VLAN.
- All policers in the ingress direction must use the same mode.
- Policing only supports violated and non-violated statistics when using either double width or single width TCAM with e-qos-lite.
- Using the optional keyword, no-stats disables statistics and ensures that applicable policies are shared.
- You can only use the **set qos-group** command in ingress policies.
- When egress RACL and egress QoS are applied together, you can only enable statistics for one or the other, not both.
- Does not support egress QoS policies on ALE uplink ports on top-of-rack (TOR) platforms.
- When using egress QoS, Cisco recommends using the appropriate match criteria to match data traffic. (Avoid match criteria such as **permit ip any any**.)

- Beginning with Cisco NX-OS Release 7.0(3)I6(1), the Cisco Nexus 93108TC-EX, 93180YC-EX, and 93180LC-EX switches, and Cisco Nexus 97160YC-EX, 9732C-EX, 9736C-EX line cards support the Layer 2 and Layer 3 egress policer.
- Total number of policers that can be successfully attached in Egress direction is only half the size of qos-lite TCAM region.
- Beginning with Cisco NX-OS Release 7.0(3)I6(1), the Cisco Nexus 93180YC-EX and 93108TC-EX switches; and the Cisco Nexus 9736C-EX, 97160YC-EX, and 9732C-EX line cards do not support remark action for violated packets in the egress direction. They only support the drop action for violate in the egress direction.
- VLAN Egress QoS and Egress Qos on L2PO are not supported on Cisco Nexus 97160YC-EX, 9732C-EX, 9736C-EX line cards.
- Egress QoS policies are not supported on sub interfaces.
- For Cisco Nexus 9504 platform switches, egress QoS policies are not supported on the following:
  - Sub-interfaces
  - Physical interfaces with configured sub-interfaces
- Egress QoS policies are not supported on Cisco Nexus 9200 platform switches (For 7.0(3)I3(1)).
- Cisco Nexus 9200 platform switches support a 1-rate 2-color policer. A 2-rate 3-color policer is not supported on Cisco Nexus 9200 platform switches (For Cisco NX-OS Release 7.0(3)I3(1)).
- QoS Ingress policies can be enabled on subinterfaces.
- Beginning with Cisco NX-OS Release 7.0(3)I6(1), the Cisco Nexus 93180YC-EX and 93108TC-EX switches; and the Cisco Nexus 9736C-EX, 97160YC-EX, and 9732C-EX line cards only support the 1R2C policing in the egress direction.
- Cisco Nexus 9200 platform Switches only support 1R2C policing in the ingress direction.

The following are guidelines and limitations for shared policers:

- When the shared policer is applied on interfaces or VLANs with member ports that are across different cores or instances, the rate becomes two times the configured **cir** rate. (Cisco NX-OS Release 7.0(3)F3(3) and later 7.0(3)F3(x) releases)

## Configuring Policing

You can configure a single or dual-rate policer.

## Configuring Ingress Policing

You can apply the policing instructions in a QoS policy map to ingress packets by attaching that QoS policy map to an interface. To select ingress, you specify the **input** keyword in the **service-policy** command. For more information on attaching and detaching a QoS policy action from an interface, see the "Using Modular QoS CLI" section.

## Configuring Egress Policing

You can apply the policing instructions in a QoS policy map to ingress or egress packets by attaching that QoS policy map to an interface. To select ingress or egress, you specify the **input** keyword or the **output** keyword in the **service-policy** command.

### Before you begin

- You must carve TCAM region for egress QoS before configuring policing.
- For more information about attaching and detaching a QoS policy action from an interface, see the "Using Modular QoS CLI" section.

### SUMMARY STEPS

1. **configure terminal**
2. **policy-map** [**type qos**] [**match-first**] [*policy-map-name*]
3. **class** [**type qos**] {*class-map-name* | **class-default**} [**insert-before** *before-class-name*]
4. **police** [**cir**] {*committed-rate* [*data-rate*] | **percent** *cir-link-percent*} [**bc** *committed-burst-rate*] [**conform** {**transmit** | **set-prec-transmit** | **set-dscp-transmit** | **set-cos-transmit** | **set-qos-transmit**} [ **exceed** { **drop** } ] [**violate** { **drop** | **set-cos-transmit** | **set-dscp-transmit** | **set-prec-transmit** | **set-qos-transmit** } ] ] }
5. **exit**
6. **exit**
7. **show policy-map** [**type qos**] [*policy-map-name* | **qos-dynamic**]
8. **copy running-config startup-config**

### DETAILED STEPS

	Command or Action	Purpose
<b>Step 1</b>	<b>configure terminal</b>  <b>Example:</b> switch# configure terminal switch(config)#	Enters global configuration mode.
<b>Step 2</b>	<b>policy-map</b> [ <b>type qos</b> ] [ <b>match-first</b> ] [ <i>policy-map-name</i> ]  <b>Example:</b> switch(config)# policy-map policy1 switch(config-pmap-qos)#	Creates or accesses the policy map named <i>policy-map-name</i> and then enters policy-map mode. The policy-map name can contain alphabetic, hyphen, or underscore characters, is case sensitive, and can be up to 40 characters.
<b>Step 3</b>	<b>class</b> [ <b>type qos</b> ] { <i>class-map-name</i>   <b>class-default</b> } [ <b>insert-before</b> <i>before-class-name</i> ]  <b>Example:</b> switch(config-pmap-qos)# class class-default switch(config-pmap-c-qos)#	Creates a reference to <i>class-map-name</i> and enters policy-map class configuration mode. The class is added to the end of the policy map unless <b>insert-before</b> is used to specify the class to insert before. Use the <b>class-default</b> keyword to select all traffic that is not currently matched by classes in the policy map.
<b>Step 4</b>	<b>police</b> [ <b>cir</b> ] { <i>committed-rate</i> [ <i>data-rate</i> ]   <b>percent</b> <i>cir-link-percent</i> } [ <b>bc</b> <i>committed-burst-rate</i> ] [ <b>conform</b> { <b>transmit</b>   <b>set-prec-transmit</b>   <b>set-dscp-transmit</b>	Polices <b>cir</b> in bits or as a percentage of the link rate. The <b>conform</b> action is taken if the data rate is $\leq$ cir. The actions are described in the Policer Actions for Exceed or Violate table and the Policer Actions for Conform table. The data

	Command or Action	Purpose
	<p><b>set-cos-transmit   set-qos-transmit</b> [ exceed { drop } [ violate { drop   set-cos-transmit   set-dscp-transmit   set-prec-transmit   set-qos-transmit } ] ] }</p> <p><b>Example:</b></p> <pre>switch(config-pmap-qos)# policy-map type qos egressqos switch(config-pmap-qos)# class class-default switch(config-pmap-c-qos)# police [ cir] {committed-rate [data-rate]   percent cir-link-percent} [ bc committed-burst-rate][ conform { transmit   set-prec-transmit   set-dscp-transmit   set-cos-transmit   set-qos-transmit} ] [ violate { drop}]] switch(config-pmap-c-qos)# exit switch(config-pmap-qos)# exit switch(config)#</pre>	<p>rates and link speeds are described in the Data Rates for the police Command table and the Burst Sizes for the police Command table. See <a href="#">Configuring 1-Rate and 2-Rate, 2-Color and 3-Color Policing</a> for more information.</p> <p>The following information describes the <b>drop</b> option for <b>violate</b>:</p> <ul style="list-style-type: none"> <li>• set-cos-transmit—Set dscp and send it.</li> <li>• set-prec-transmit—Set precedence and send it.</li> <li>• set-qos-transmit—Set qos-group and send it.</li> </ul> <p><b>Note</b> For <b>cir</b> pps, the packet size is 64 bytes. So the pps to bps conversion is 64*8.</p>
<b>Step 5</b>	<p><b>exit</b></p> <p><b>Example:</b></p> <pre>switch(config-pmap-c-qos)# exit switch(config-pmap-qos)#</pre>	Exits policy-map class configuration mode and enters policy-map mode.
<b>Step 6</b>	<p><b>exit</b></p> <p><b>Example:</b></p> <pre>switch(config-pmap-qos)# exit switch(config)#</pre>	Exits policy-map mode and enters global configuration mode.
<b>Step 7</b>	<p><b>show policy-map [type qos] [policy-map-name   qos-dynamic]</b></p> <p><b>Example:</b></p> <pre>switch(config)# show policy-map type qos egressqos</pre> <p><b>Example:</b></p> <pre>switch(config)# policy-map type qos egressqos class class-default police cir 10 mbs bc 200 ms conform transmit violate drop</pre>	(Optional) Displays information about the configured policy map of type qos.
<b>Step 8</b>	<p><b>copy running-config startup-config</b></p> <p><b>Example:</b></p> <pre>switch(config)# copy running-config startup-config</pre>	(Optional) Saves the running configuration to the startup configuration.

## Configuring 1-Rate and 2-Rate, 2-Color and 3-Color Policing

The type of policer created by the device is based on a combination of the **police** command arguments described in the following Arguments to the police Command table.



**Note** You must specify the identical value for **pir** and **cir** to configure 1-rate 3-color policing.



**Note** A 1-rate 2-color policer with the violate markdown action is not supported.



**Note** Cisco Nexus 9200 Series switches only support 1-rate 2-color policing.

**Table 1: Arguments to the police Command**

Argument	Description
<b>cir</b>	Committed information rate, or desired bandwidth, specified as a bit rate or a percentage of the link rate. Although a value for cir is required, the argument itself is optional. The range of values is from 1 to 80000000000. The range of policing values is from 8000 to 80 Gbps.
<b>percent</b>	Rate as a percentage of the interface rate. The range of values is from 1 to 100 percent.
<b>bc</b>	Indication of how much the cir can be exceeded, either as a bit rate or an amount of time at cir. The default is 200 milliseconds of traffic at the configured rate. The default data rate units are bytes.
<b>pir</b>	Peak information rate, specified as a PIR bit rate or a percentage of the link rate. There is no default. The range of values is from 1 to 80000000000; the range of policing values is from 8000 bps to 480 Gbps. The range of percentage values is from 1 to 100 percent.
<b>be</b>	Indication of how much the pir can be exceeded, either as a bit rate or an amount of time at pir. When the bc value is not specified, the default is 200 milliseconds of traffic at the configured rate. The default data rate units are bytes. <b>Note</b> You must specify a value for pir before the device displays this argument.
<b>conform</b>	Single action to take if the traffic data rate is within bounds. The basic actions are transmit or one of the set commands listed in the following Policer Actions for Conform table. The default is transmit.
<b>exceed</b>	Single action to take if the traffic data rate is exceeded. The basic actions are drop or markdown. The default is drop.
<b>violate</b>	Single action to take if the traffic data rate violates the configured rate values. The basic actions are drop or markdown. The default is drop.

Although all the arguments in the above Arguments to the police Command table are optional, you must specify a value for **cir**. In this section, **cir** indicates its value but not necessarily the keyword itself. The combination of these arguments and the resulting policer types and actions are shown in the following Policer Types and Actions from Police Arguments Present table.

**Table 2: Policer Types and Actions from Police Arguments Present**

Police Arguments Present	Policer Type	Policer Action
<b>cir</b> , but not <b>pir</b> , <b>be</b> , or <b>violate</b>	1-rate, 2-color	<= <b>cir</b> , <b>conform</b> ; else <b>violate</b>
<b>cir</b> and <b>pir</b>	2-rate, 3-color	<= <b>cir</b> , <b>conform</b> ; <= <b>pir</b> , <b>exceed</b> ; else <b>violate</b>

The policer actions that you can specify are described in the following Policer Actions for Exceed or Violate table and the following Policer Actions for Conform table.



**Note** Only **drop** and **transmit** actions are supported on the Cisco Nexus 9508 switch (NX-OS 7.0(3)F3(3) and later).

**Table 3: Policer Actions for Exceed or Violate**

Action	Description
<b>drop</b>	Drops the packet. This action is available only when the packet exceeds or violates the parameters.
<b>set-cos-transmit</b>	Sets CoS and transmits the packet.
<b>set-dscp-transmit</b>	Sets DSCP and transmits the packet.
<b>set-prec-transmit</b>	Sets precedence and transmits the packet.
<b>set-qos-transmit</b>	Sets qos-group and transmits the packet.

**Table 4: Policer Actions for Conform**

Action	Description
<b>transmit</b>	Transmits the packet. This action is available only when the packet conforms to the parameters.
<b>set-prec-transmit</b>	Sets the IP precedence field to a specified value and transmits the packet. This action is available only when the packet conforms to the parameters.
<b>set-dscp-transmit</b>	Sets the differentiated service code point (DSCP) field to a specified value and transmits the packet. This action is available only when the packet conforms to the parameters.
<b>set-cos-transmit</b>	Sets the class of service (CoS) field to a specified value and transmits the packet. This action is available only when the packet conforms to the parameters.
<b>set-qos-transmit</b>	Sets the QoS group internal label to a specified value and transmits the packet. This action can be used only in input policies and is available only when the packet conforms to the parameters.



**Note** The policer can only drop or mark down packets that exceed or violate the specified parameters. For information on marking down packets, see the [Configuring Marking](#) section.

The data rates used in the **police** command are described in the following Data Rates for the police Command table.

**Table 5: Data Rates for the police Command**

Rate	Description
bps	Bits per second (default)
kbps	1,000 bits per seconds
mbps	1,000,000 bits per second
gbps	1,000,000,000 bits per second

Burst sizes used in the **police** command are described in the following Burst Sizes for the police Command table.

**Table 6: Burst Sizes for the police Command**

Speed	Description
bytes	bytes
kbytes	1,000 bytes
mbytes	1,000,000 bytes
ms	milliseconds
us	microseconds

## SUMMARY STEPS

1. **configure terminal**
2. **policy-map** [**type qos**] [**match-first**] [*policy-map-name*]
3. **class** [**type qos**] {*class-map-name* | **class-default**} [**insert-before** *before-class-name*]
4. **police** [**cir**] {*committed-rate [data-rate]* | **percent** *cir-link-percent*} [**bc** *committed-burst-rate [link-speed]*][**pir**] {*peak-rate [data-rate]* | **percent** *cir-link-percent*} [**be** *peak-burst-rate [link-speed]*][**conform** {**transmit** | **set-prec-transmit** | **set-dscp-transmit** | **set-cos-transmit** | **set-qos-transmit**} | **exceed** {**drop**} | **violate** {**drop** | **set-cos-transmit** | **set-dscp-transmit** | **set-prec-transmit** | **set-qos-transmit**}]}
5. [**violate** {**drop** | **set-cos-transmit** | **set-dscp-transmit** | **set-prec-transmit** | **set-qos-transmit**}]
6. **exit**
7. **exit**

8. `show policy-map [type qos] [policy-map-name | qos-dynamic]`
9. `copy running-config startup-config`

## DETAILED STEPS

	Command or Action	Purpose
Step 1	<p><b>configure terminal</b></p> <p><b>Example:</b></p> <pre>switch# configure terminal switch(config)#</pre>	Enters global configuration mode.
Step 2	<p><b>policy-map [type qos] [match-first] [policy-map-name]</b></p> <p><b>Example:</b></p> <pre>switch(config)# policy-map policy1 switch(config-pmap-qos)#</pre>	Creates or accesses the policy map named <i>policy-map-name</i> and then enters policy-map mode. The policy-map name can contain alphabetic, hyphen, or underscore characters, is case sensitive, and can be up to 40 characters.
Step 3	<p><b>class [type qos] {class-map-name   class-default} [insert-before before-class-name]</b></p> <p><b>Example:</b></p> <pre>switch(config-pmap-qos)# class class-default switch(config-pmap-c-qos)#</pre>	Creates a reference to <i>class-map-name</i> and enters policy-map class configuration mode. The class is added to the end of the policy map unless <b>insert-before</b> is used to specify the class to insert before. Use the <b>class-default</b> keyword to select all traffic that is not currently matched by classes in the policy map.
Step 4	<p><b>police [cir] {committed-rate [data-rate]   percent cir-link-percent} [bc committed-burst-rate [link-speed]][pir] {peak-rate [data-rate]   percent cir-link-percent} [be peak-burst-rate [link-speed]] [conform {transmit   set-prec-transmit   set-dscp-transmit   set-cos-transmit   set-qos-transmit} [exceed {drop} [violate {drop   set-cos-transmit   set-dscp-transmit   set-prec-transmit   set-qos-transmit}]]]</b></p>	Polices <b>cir</b> in bits or as a percentage of the link rate. The <b>conform</b> action is taken if the data rate is <= cir. If <b>be</b> and <b>pir</b> are not specified, all other traffic takes the <b>violate</b> action. If <b>be</b> or <b>violate</b> are specified, the <b>exceed</b> action is taken if the data rate <= <b>pir</b> , and the <b>violate</b> action is taken otherwise. The actions are described in the Policer Actions for Exceed or Violate table and the Policer Actions for Conform table. The data rates and link speeds are described in the Data Rates for the police Command table and the Burst Sizes for the police Command table.
Step 5	<p>[ violate {drop   set-cos-transmit   set-dscp-transmit   set-prec-transmit   set-qos-transmit}]</p>	<p><b>set-cos-transmit</b>—Set cos and send it.</p> <p><b>set-dscp-transmit</b>—Set dscp and send it.</p> <p><b>set-prec-transmit</b>—Set precedence and send it.</p> <p><b>set-qos-transmit</b>—Set qos-group and send it.</p>
Step 6	<p><b>exit</b></p> <p><b>Example:</b></p> <pre>switch(config-pmap-c-qos)# exit switch(config-pmap-qos)#</pre>	Exits policy-map class configuration mode and enters policy-map mode.
Step 7	<p><b>exit</b></p> <p><b>Example:</b></p> <pre>switch(config-pmap-qos)# exit switch(config)#</pre>	Exits policy-map mode and enters global configuration mode.

	Command or Action	Purpose
<b>Step 8</b>	<b>show policy-map [type qos] [policy-map-name   qos-dynamic]</b>  <b>Example:</b> <pre>switch(config)# show policy-map</pre>	(Optional) Displays information about all configured policy maps or a selected policy map of type qos.
<b>Step 9</b>	<b>copy running-config startup-config</b>  <b>Example:</b> <pre>switch(config)# copy running-config startup-config</pre>	(Optional) Saves the running configuration to the startup configuration.

**Example**

This example shows how to display the policy1 policy-map configuration:

```
switch# show policy-map policy1
```

## Configuring Markdown Policing

Markdown policing is the setting of a QoS field in a packet when traffic exceeds or violates the policed data rates. You can configure markdown policing by using the set commands for policing action described in the Policer Actions for Exceed or Violate table and the Policer Actions for Conform table.



**Note** You must specify the identical value for **pir** and **cir** to configure 1-rate 3-color policing.

### SUMMARY STEPS

1. **configure terminal**
2. **policy-map [type qos] [match-first] [policy-map-name]**
3. **class [type qos] {class-name | class-default} [insert-before before-class-name]**
4. **police [cir] {committed-rate [data-rate] | percent cir-link-percent} [[bc | burst] burst-rate [link-speed]] [[be | peak-burst] peak-burst-rate [link-speed]] [conform conform-action [exceed [violate drop set dscp table pir-markdown-map]]]**
5. **exit**
6. **exit**
7. **show policy-map [type qos] [policy-map-name]**
8. **copy running-config startup-config**

### DETAILED STEPS

	Command or Action	Purpose
<b>Step 1</b>	<b>configure terminal</b>  <b>Example:</b>	Enters global configuration mode.

	Command or Action	Purpose
	<pre>switch# configure terminal switch(config)#</pre>	
<b>Step 2</b>	<p><b>policy-map</b> [<b>type qos</b>] [<b>match-first</b>] [<i>policy-map-name</i>]</p> <p><b>Example:</b></p> <pre>switch(config)# policy-map policy1 switch(config-pmap-qos)#</pre>	Creates or accesses the policy map named <i>policy-map-name</i> and then enters policy-map mode. The policy-map name can contain alphabetic, hyphen, or underscore characters, is case sensitive, and can be up to 40 characters.
<b>Step 3</b>	<p><b>class</b> [<b>type qos</b>] {<i>class-name</i>   <b>class-default</b>} [<b>insert-before</b> <i>before-class-name</i>]</p> <p><b>Example:</b></p> <pre>switch(config-pmap-qos)# class class-default switch(config-pmap-c-qos)#</pre>	Creates a reference to <i>class-name</i> and enters policy-map class configuration mode. The class is added to the end of the policy map unless <b>insert-before</b> is used to specify the class to insert before. Use the <b>class-default</b> keyword to select all traffic that is not currently matched by classes in the policy map.
<b>Step 4</b>	<p><b>police</b> [<b>cir</b>] {<i>committed-rate</i> [<i>data-rate</i>]   <b>percent</b> <i>cir-link-percent</i>} [[<b>bc</b>   <b>burst</b>] <i>burst-rate</i> [<i>link-speed</i>]] [[<b>be</b>   <b>peak-burst</b>] <i>peak-burst-rate</i> [<i>link-speed</i>]] [<b>conform</b> <i>conform-action</i>] [<b>exceed</b> [<b>violate drop set dscp dscp table</b> <i>pir-markdown-map</i>]]}</p>	Polices <b>cir</b> in bits or as a percentage of the link rate. The <b>conform</b> action is taken if the data rate is <= cir. If <b>be</b> and <b>pir</b> are not specified, all other traffic takes the <b>violate</b> action. If <b>be</b> or <b>violate</b> are specified, the <b>exceed</b> action is taken if the data rate <= <b>pir</b> , and the <b>violate</b> action is taken otherwise. The actions are described in the Policer Actions for Exceed or Violate table and the Policer Actions for Conform table. The data rates and link speeds are described in the Data Rates for the police Command table and the Burst Sizes for the police Command table.
<b>Step 5</b>	<p><b>exit</b></p> <p><b>Example:</b></p> <pre>switch(config-pmap-c-qos)# exit switch(config-pmap-qos)#</pre>	Exits policy-map class configuration mode and enters policy-map mode.
<b>Step 6</b>	<p><b>exit</b></p> <p><b>Example:</b></p> <pre>switch(config-pmap-qos)# exit switch(config)#</pre>	Exits policy-map mode and enters global configuration mode.
<b>Step 7</b>	<p><b>show policy-map</b> [<b>type qos</b>] [<i>policy-map-name</i>]</p> <p><b>Example:</b></p> <pre>switch(config)# show policy-map</pre>	(Optional) Displays information about all configured policy maps or a selected policy map of type qos.
<b>Step 8</b>	<p><b>copy running-config startup-config</b></p> <p><b>Example:</b></p> <pre>switch(config)# copy running-config startup-config</pre>	(Optional) Saves the running configuration to the startup configuration.

## Verifying the Policing Configuration

To display the policing configuration information, perform one of the following tasks:

Command	Purpose
<code>show policy-map</code>	Displays information about policy maps and policing.

## Configuration Examples for Policing

The following example shows how to configure policing for a 1-rate, 2-color policer:

```
configure terminal
  policy-map policy1
    class one_rate_2_color_policer
      police cir 256000 conform transmit violate drop
```

The following example shows how to configure policing for a 1-rate, 2-color policer with DSCP markdown:

```
configure terminal
  policy-map policy2
    class one_rate_2_color_policer_with_dscp_markdown
      police cir 256000 conform transmit violate drop
```