



## CHAPTER 8

# Monitoring QoS Statistics

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This chapter describes how to enable, display, and clear QoS statistics on the device.

This chapter includes the following sections:

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## Information about QoS Statistics

You can display various QoS statistics for the device. Statistics are enabled by default, but you can disable this feature. (See the [“Example Display” section on page 8-3](#) for the statistics displayed.)

## Licensing Requirements for Monitoring QoS Statistics

The following table shows the licensing requirements for this feature:

Product	License Requirement
NX-OS	QoS requires no license. Any feature not included in a license package is bundled with the Cisco NX-OS system images and is provided at no extra charge to you. For a complete explanation of the NX-OS licensing scheme, see the <i>Cisco Nexus 7000 Series NX-OS Licensing Guide, Release 4.0</i> .

However, using VDCs requires an Advanced Services license.

## Prerequisites for Monitoring QoS Statistics

Monitoring QoS statistics has the following prerequisites:

- You must be familiar with [Chapter 2, “Using Modular QoS CLI.”](#)
- You are logged on to the switch.

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- You are in the correct virtual device context (VDC). A VDC is a logical representation of a set of system resources. You can use the **switchto vdc** command with a VDC number.

## Enabling Statistics

You can enable or disable QoS statistics for all interfaces on the device. By default, QoS statistics are enabled.

### SUMMARY STEPS

- config t**
- qos statistics**  
**no qos statistics**
- show policy-map interface**  
*or*  
**show policy-map vlan**
- copy running-config startup-config**

### DETAILED STEPS

	Command	Purpose
Step 1	<b>config t</b>  <b>Example:</b> switch# config t switch(config)#	Enters configuration mode.
Step 2	<b>qos statistics</b>  <b>Example:</b> switch(config)# qos statistics	Enables QoS statistics on all interfaces.
	<b>no qos statistics</b>  <b>Example:</b> switch(config)# no qos statistics	Disables QoS statistics on all interfaces.
Step 3	<b>show policy-map interface</b>  <b>Example:</b> switch(config)# show policy-map interface	(Optional) Displays the statistics status and the configured policy maps on all interfaces.
	<b>show policy-map vlan</b>  <b>Example:</b> switch(config)# show policy-map vlan	(Optional) Displays the statistics status and the configured policy maps on all VLANs.
Step 4	<b>copy running-config startup-config</b>  <b>Example:</b> switch(config)# copy running-config startup-config	(Optional) Saves the running configuration to the startup configuration.

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## Displaying Statistics

You can display QoS statistics for all interfaces or a selected interface, data direction, or QoS type.

### SUMMARY STEPS

1. `show policy-map [policy-map-name] [interface] [vlan] [input | output] [type {qos | queuing}]`

### DETAILED STEPS

	Command	Purpose
Step 1	<pre>show policy-map [policy-map-name] [interface] [vlan] [input   output] [type {qos   queuing}] [{class [type {qos   queuing}]}</pre> <p><b>Example:</b> switch# show policy-map interface ethernet 2/1</p>	Displays statistics and the configured policy maps on all interfaces or the specified interface, all VLANs or specified VLANs, data direction, and QoS type.

## Clearing Statistics

You can clear QoS statistics for all interfaces or a selected interface, data direction, or QoS type.

### SUMMARY STEPS

1. `clear qos statistics [interface] [vlan] [input | output] [type {qos | queuing}]`

### DETAILED STEPS

	Command	Purpose
Step 1	<pre>clear qos statistics [interface] [vlan] [input   output] [type {qos   queuing}]</pre> <p><b>Example:</b> switch# clear qos statistics type qos</p>	Displays statistics and the configured policy maps on all interfaces or the specified interface, all VLANs or the specified VLANs, data direction, or QoS type.

## Example Display

The following is an example of a display of the QoS statistics:

```
switch(config)# show policy-map interface ethernet 8/1

Global statistics status: enabled
Ethernet8/1
Service-policy (qos) input: pmap
policy statistics status: enabled
Class-map (qos): map (match-all)
```

## Example Display

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```

0 packets, 0 bytes
5 minute offered rate 0 bps, drop rate 0 bps
Match: cos 0
police cir 10 mbps bc 200 ms
conformed 0 bytes, 0 bps action: transmit
violated 0 bytes, 0 bps action: drop

Class-map (qos): map1 (match-all)
0 packets, 0 bytes
5 minute offered rate 0 bps, drop rate 0 bps
Match: dscp 0
police cir 10 mbps bc 200 ms
conformed 0 bytes, 0 bps action: transmit
violated 0 bytes, 0 bps action: drop

Class-map (qos): map2 (match-all)
0 packets, 0 bytes
5 minute offered rate 0 bps, drop rate 0 bps
Match: precedence 5
police cir 20 mbps bc 200 ms
conformed 0 bytes, 0 bps action: transmit
violated 0 bytes, 0 bps action: drop

Class-map (qos): map3 (match-all)
0 packets, 0 bytes
5 minute offered rate 0 bps, drop rate 0 bps
Match: cos 3
police cir 30 mbps bc 200 ms
conformed 0 bytes, 0 bps action: transmit
violated 0 bytes, 0 bps action: drop

Class-map (qos): map4 (match-all)
0 packets, 0 bytes
5 minute offered rate 0 bps, drop rate 0 bps
Match: packet length 100
police cir 40 mbps bc 200 ms
conformed 0 bytes, 0 bps action: transmit
violated 0 bytes, 0 bps action: drop

Class-map (qos): map5 (match-all)
0 packets, 0 bytes
5 minute offered rate 0 bps, drop rate 0 bps
Match: access-group foo
police cir 50 mbps bc 200 ms
conformed 0 bytes, 0 bps action: transmit
violated 0 bytes, 0 bps action: drop

Class-map (qos): class-default (match-any)
0 packets, 0 bytes
5 minute offered rate 0 bps, drop rate 0 bps
police cir 60 mbps bc 200 ms
conformed 0 bytes, 0 bps action: transmit
violated 0 bytes, 0 bps action: drop

```

See the *Cisco NX-OS Quality of Service Command Reference* for complete information on the **show policy-map** command.