



CHAPTER 8

Monitoring QoS Statistics

This chapter describes how to enable, display, and clear QoS statistics on the Cisco Nexus 7000 Series NX-OS device.

This chapter includes the following sections:

- [Licensing Requirements for Monitoring QoS Statistics, page 8-1](#)
- [Prerequisites for Monitoring QoS Statistics, page 8-1](#)
- [Enabling Statistics, page 8-2](#)
- [Displaying Statistics, page 8-3](#)
- [Clearing Statistics, page 8-3](#)
- [Feature History for Statistics, page 8-5](#)

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 4.2</i> .

However, using VDCs requires an Advanced Services license.

Prerequisites for Monitoring QoS Statistics

Monitoring QoS statistics has the following prerequisites:

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

1. `config t`
2. `qos statistics`
`no qos statistics`
3. `show policy-map interface`
or
`show policy-map vlan`
4. `copy running-config startup-config`

DETAILED STEPS

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

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Feature History for Statistics

Table 8-1 lists the release history for this feature.

Table 8-1 *Feature History for Statistics*

Feature Name	Releases	Feature Information
No change.	4.1(2)	-
No change	4.2(1)	-

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