



## CHAPTER 11

# Monitoring QoS Statistics

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This chapter describes how to enable, display, and clear QoS statistics on the Cisco NX-OS device. This chapter includes the following sections:

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## Information About QoS Statistics

You can display various QoS statistics for the device. By default, statistics are enabled, but you can disable this feature. For more information, see the [“Configuration Examples For Monitoring QoS Statistics” section on page 11-4](#).

## Licensing Requirements for Monitoring QoS Statistics

The following table shows the licensing requirements for this feature:

Product	License Requirement
Cisco NX-OS	The QoS feature does not require a 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 Cisco NX-OS licensing scheme, see the <i>Cisco NX-OS Licensing Guide</i> .

However, using virtual device contexts (VDCs) requires an Advanced Services license.

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# Prerequisites for Monitoring QoS Statistics

Monitoring QoS statistics has the following prerequisites:

- You must be familiar with [Chapter 3, “Using Modular QoS CLI.”](#)
- You must log in to the switch.
- You are in the correct 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. **configure terminal**
2. **qos statistics**  
**no qos statistics**
3. (Optional) **show policy-map interface**  
or  
**show policy-map vlan**
4. (Optional) **copy running-config startup-config**

### DETAILED STEPS

	Command	Purpose
Step 1	<b>configure terminal</b>  <b>Example:</b> switch# configure terminal switch(config)#	Enters configuration mode.

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	Command	Purpose
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.

## Monitoring the Statistics

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

### SUMMARY STEPS

1. **show policy-map** [*policy-map-name*] [**interface**] [**vlan**] [**input** | **output**] [**type** {**control-plane** | **network-qos** | **qos** | **queuing**}]

### DETAILED STEPS

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

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## 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	<b>clear qos statistics</b> [ <b>interface</b> ] [ <b>vlan</b> ] [ <b>input   output</b> ] [ <b>type {control-plane   network-qos   qos   queuing}</b> ]  <b>Example:</b> switch# clear qos statistics type qos	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.

## Configuration Examples For Monitoring QoS Statistics

The following example shows how to display 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)
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
```

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```

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

```

For complete information on the **show policy-map** command, see the *Cisco Nexus 7000 Series NX-OS Quality of Service Command Reference, Release 5.x*.

## Feature History for Statistics

Table 11-1 lists the release history for this feature.

**Table 11-1**      **Feature History for Statistics**

Feature Name	Releases	Feature Information
No changes from Release 4.1(2)	5.1(1)	—

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