



Monitoring QoS Statistics

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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.

Prerequisites for Monitoring QoS Statistics

Monitoring QoS statistics has the following prerequisites:

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

Guidelines and Limitations for Monitoring QoS Statistics

Monitoring QoS statistics has the following guidelines and limitations:

- **show** commands with the **internal** keyword are not supported.
- In 64 bit architecture:
 - The queuing tabular output will retain same value of 15 seconds.
 - The tabular output after **clear statistics**, will hold zero statistics for maximum of 15 seconds.
- The **show queuing interface** command can display information about internal interfaces.

The command format for this information is specified as **ii** *x/y/z*. Where *x* is the module number, *y* is the value 1, and *z* is the internal interface number within the module.



Note The number of internal interfaces within a module varies based on the type of the line card.



Note Alternatively, you can display information about internal interfaces by providing the module number in the **show queuing** command. By including the module number, queuing information for both front-panel and internal interfaces of the module are displayed together.

Example:

```
switch# show queuing interface ii 4/1/2

slot 4
=====

Egress Queuing for ii4/1/2 [System]
-----
QoS-Group# Bandwidth% PrioLevel          Min          Shape          Units
                                     Max
-----
      3           -           1           -           -           -
      2           0           -           -           -           -
      1           0           -           -           -           -
      0          100           -           -           -           -
-----+-----
|                                     QOS GROUP 0                                     |
+-----+-----+-----+-----+-----+-----+
|                                     | Unicast | OOBFC Unicast | Multicast |
+-----+-----+-----+-----+-----+-----+
|           Tx Pkts |           0 |           0 |           235775 |
|           Tx Byts |           0 |           0 |           22634400 |
|   Dropped Pkts |           0 |           0 |           0 |
|   Dropped Byts |           0 |           0 |           0 |
|   Q Depth Byts |           0 |           0 |           0 |
+-----+-----+-----+-----+-----+-----+
|                                     QOS GROUP 1                                     |
+-----+-----+-----+-----+-----+-----+
|                                     | Unicast | OOBFC Unicast | Multicast |
+-----+-----+-----+-----+-----+-----+
|           Tx Pkts |           0 |           0 |           0 |
|           Tx Byts |           0 |           0 |           0 |
|   Dropped Pkts |           0 |           0 |           0 |
|   Dropped Byts |           0 |           0 |           0 |
|   Q Depth Byts |           0 |           0 |           0 |
+-----+-----+-----+-----+-----+-----+
|                                     QOS GROUP 2                                     |
+-----+-----+-----+-----+-----+-----+
|                                     | Unicast | OOBFC Unicast | Multicast |
+-----+-----+-----+-----+-----+-----+
|           Tx Pkts |           0 |           0 |           0 |
|           Tx Byts |           0 |           0 |           0 |
```

```

| Dropped Pkts |          0 |          0 |          0 |
| Dropped Byts |          0 |          0 |          0 |
| Q Depth Byts |          0 |          0 |          0 |
+-----+
|                               QOS GROUP 3                               |
+-----+
|                               | Unicast      | OOBFC Unicast | Multicast    |
+-----+
| Tx Pkts      |          0 |          0 |          0 |
| Tx Byts     |          0 |          0 |          0 |
| Dropped Pkts |          0 |          0 |          0 |
| Dropped Byts |          0 |          0 |          0 |
| Q Depth Byts |          0 |          0 |          0 |
+-----+
|                               CONTROL QOS GROUP                               |
+-----+
|                               | Unicast      | OOBFC Unicast | Multicast    |
+-----+
| Tx Pkts      |          0 |          0 |          0 |
| Tx Byts     |          0 |          0 |          0 |
| Dropped Pkts |          0 |          0 |          0 |
| Dropped Byts |          0 |          0 |          0 |
| Q Depth Byts |          0 |          0 |          0 |
+-----+
|                               SPAN QOS GROUP                               |
+-----+
|                               | Unicast      | OOBFC Unicast | Multicast    |
+-----+
| Tx Pkts      |          0 |          0 |          0 |
| Tx Byts     |          0 |          0 |          0 |
| Dropped Pkts |          0 |          0 |          0 |
| Dropped Byts |          0 |          0 |          0 |
| Q Depth Byts |          0 |          0 |          0 |
+-----+

```

Cannot get ingress statistics for if_index: 0x4a180001 Error 0xe

Port Egress Statistics

```
-----
WRED Drop Pkts                                0
```

PFC Statistics

```
-----
TxPPP:                                0, RxPPP:                                0
```

```
-----
COS QOS Group      PG  TxPause  TxCount      RxPause      RxCount
0      -          -  Inactive    0      Inactive    0
1      -          -  Inactive    0      Inactive    0
2      -          -  Inactive    0      Inactive    0
3      -          -  Inactive    0      Inactive    0
4      -          -  Inactive    0      Inactive    0
5      -          -  Inactive    0      Inactive    0
6      -          -  Inactive    0      Inactive    0
7      -          -  Inactive    0      Inactive    0
-----
```

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. Enable or disable QoS statistics:
 - Enable QoS statistics:
qos statistics
 - Disable QoS statistics:
no qos statistics
3. **show policy-map interface**
4. (Optional) **show policy-map interface brief**
5. **copy running-config startup-config**

DETAILED STEPS

	Command or Action	Purpose
Step 1	configure terminal Example: <pre>switch# configure terminal switch(config)#</pre>	Enters global configuration mode.
Step 2	Enable or disable QoS statistics: <ul style="list-style-type: none"> • Enable QoS statistics: qos statistics • Disable QoS statistics: no qos statistics Example: <ul style="list-style-type: none"> • Enable QoS statistics: <pre>switch(config)# qos statistics</pre> • Disable QoS statistics: <pre>switch(config)# no qos statistics</pre> 	<ul style="list-style-type: none"> • Enable QoS statistics: Enables QoS statistics on all interfaces. • Disable QoS statistics: Disables QoS statistics on all interfaces.
Step 3	show policy-map interface Example: <pre>switch(config)# show policy-map interface</pre>	(Optional) Displays the statistics status and the configured policy maps on all interfaces.
Step 4	(Optional) show policy-map interface brief Example: <pre>switch(config)# show policy-map interface brief</pre>	Displays brief output of all policies and policy-name only in brief output displays maximum of 25 character length for easy understandability.
Step 5	copy running-config startup-config Example:	(Optional) Saves the running configuration to the startup configuration.

	Command or Action	Purpose
	<code>switch(config)# copy running-config startup-config</code>	

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** **input** | **output**]] [**type** {**control-plane** | **network-qos** | **qos** | **queuing**}]

DETAILED STEPS

	Command or Action	Purpose
Step 1	<p><code>show policy-map</code> [<i>policy-map-name</i>] [interface input output]] [type {control-plane network-qos qos queuing}]</p> <p>Example:</p> <pre>switch# show policy-map interface ethernet 2/1</pre>	Displays statistics and the configured policy maps on all interfaces, the specified interface, or on a specified data direction or 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** **input** | **output**]] [**type** {**qos** | **queuing**}]

DETAILED STEPS

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

Configuration Examples For Monitoring QoS Statistics

The following example shows how to display the QoS statistics:

```
Global statistics status : enabled
```

```

Ethernet6/1
  Service-policy (queuing) output:  default-out-policy

  Class-map (queuing):  c-out-q3 (match-any)
    priority level 1

  Class-map (queuing):  c-out-q2 (match-any)
    bandwidth remaining percent 0

  Class-map (queuing):  c-out-q1 (match-any)
    bandwidth remaining percent 0

  Class-map (queuing):  c-out-q-default (match-any)
    bandwidth remaining percent 100

```

The following example shows how to obtain information about queuing and PFC related counters:

```
switch(config-vlan-config)# show queuing interface ethernet 2/1
```

```

Egress Queuing for Ethernet2/1 [System]
-----
QoS-Group#  Bandwidth%  PrioLevel          Min          Shape          Units
                                     Min          Max
-----
      3           -           1           -           -           -
      2           0           -           -           -           -
      1           0           -           -           -           -
      0          100           -           -           -           -
-----+-----+
|                                     QOS GROUP 0                                     |
-----+-----+
|      Tx Pkts |                                     0|   Dropped Pkts |                                     0|
-----+-----+
|                                     QOS GROUP 1                                     |
-----+-----+
|      Tx Pkts |                                     0|   Dropped Pkts |                                     0|
-----+-----+
|                                     QOS GROUP 2                                     |
-----+-----+
|      Tx Pkts |                                     0|   Dropped Pkts |                                     0|
-----+-----+
|                                     QOS GROUP 3                                     |
-----+-----+
|      Tx Pkts |                                     0|   Dropped Pkts |                                     0|
-----+-----+
|                                     CONTROL QOS GROUP 4                                     |
-----+-----+
|      Tx Pkts |                                     58|   Dropped Pkts |                                     0|
-----+-----+
|                                     SPAN QOS GROUP 5                                     |
-----+-----+
|      Tx Pkts |                                     0|   Dropped Pkts |                                     948|
-----+-----+

```