

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	n% PrioLeve	el J	Min	Sł N	nape Max		Units	
3 2 1 0	1(_ 0 0 00	1 - - -		- - - -		- - - -	- - - -	+
1			QOS (GROUP 0					
+		Unicast		OOBFC	Unicast	:	Multi	cast	
T2 T2 Dropped Dropped Q Depth	A Pkts A Byts A Pkts A Byts A Byts		0 0 0 0 0			0 0 0 0 0		2357 226344	75 00 0 0
+			QOS (GROUP 1					
+		Unicast		OOBFC	Unicast	:	Multi	cast	++
T2 T2 Dropped Dropped Q Depth	x Pkts x Byts d Pkts d Byts n Byts		0 0 0 0 0			0 0 0 0 0			0 0 0 0 0
			QOS	GROUP 2					
		Unicast		OOBFC	Unicast	=	Multi	cast	
T> T>	<pre> Pkts Byts </pre>		0 0			0			0 0

Dropped PktsDropped BytsQ Depth Byts	I 0 I 0 I 0	0 0 0	0 0 0	
QOS GROUP 3				
+	Unicast	OOBFC Unicast Multicast	+	
Tx Pkts	0	0	0	
	0	0	0	
Dropped Pkts	0	0	0	
Dropped Byts	0	0	0	
Q Depth Byts	0	0	01	
 	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	I 0	01	01	
Tx Byts	0	0	0	
Dropped Pkts	0	0	0	
Dropped Byts	0	0	0	
Q Depth Byts	0	0	0	
Cannot get ingres Port Egress Stati	s statistics for stics	if_index: 0x4a180001 Error 0xe	+	
WRED Drop Pkts		0		
PFC Statistics				
TxPPP:	0, RxPPF	· 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	
/ –	- Inactive	U Inactive	0	

• On the Cisco Nexus N9364E-SG2-Q switches, per-interface statistics are not available when the same QoS policy is applied to multiple interfaces. The label is shared, even with the stats option enabled. Statistics are aggregated across interfaces with the same policy. This change improves scalability. However, note that individual interface statistics are no longer provided.

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. copy running-config startup-config

DETAILED STEPS

Procedure

	Command or Action	Purpose			
Step 1	configure terminal	Enters global configuration mode.			
	Example:				
	<pre>switch# configure terminal switch(config)#</pre>				
Step 2	Enable or disable QoS statistics:	Enable QoS statistics:			
	Enable QoS statistics:	Enables QoS statistics on all interfaces.			
	qos statistics	Disable QoS statistics:			
	• Disable QoS statistics:	Disables QoS statistics on all interfaces.			
	no qos statistics				
	Example:				
	• Enable QoS statistics:				
	switch(config) # qos statistics				
	• Disable QoS statistics:				
	switch(config)# no qos statistics				
Step 3	show policy-map interface	(Optional) Displays the statistics status and the configured			
	Example:	poncy maps on an interfaces.			
	<pre>switch(config)# show policy-map interface</pre>				

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	Command or Action	Purpose			
Step 4 copy running-config startup-config (0)		(Optional) Saves the running configuration to the startur			
	Example:	configuration.			
	switch(config)# copy running-config startup-config				

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

Procedure

	Command or Action	Purpose		
Step 1 show policy-map [policy-map-name] [interface [input output]] [type {control-plane network-qos qos queuing}]		Displays statistics and the configured policy maps on all interfaces, the specified interface, or on a specified data direction or QoS type.		
	Example: switch# show policy-map interface ethernet 2/1	Starting with Cisco NX-OS Release 10.6(1)F, the show queuing command works independently of the qos statis configuration. Previously, the show queuing output wa only available if qos statistics was enabled.		

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

Procedure

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

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 M	Sh Sh	ape ax	Units	
3 2 1 0	- 0 0 100	1 - - -	- - -	- - -	- - -	
+		QOS G	ROUP 0			
T:	x Pkts	0	Dropped Pkt	s	()
 +		QOS G	ROUP 1			
T:	x Pkts	0	Dropped Pkt	s	(ר כ
		QOS G	ROUP 2			

1							1
Tx Pk	cts		0	Dropped	Pkts	I	0
			QOS GR	OUP 3			
Tx Pk	ts		0	Dropped	Pkts		0
		CONTROL	QOS GRO	OUP 4			
Tx P}	ts		58	Dropped	Pkts	I	0
		SPAN	QOS GR	OUP 5			
Tx P}	ts		0	Dropped	Pkts		948
							+