



QoS: Packet Marking Statistics

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The QoS: Packet Marking Statistics feature allows you to display the number of packets that have:

- Modified headers
- Been classified into a category for local router processing

Finding Feature Information

Your software release may not support all the features documented in this module. For the latest feature information and caveats, see the release notes for your platform and software release. To find information about the features documented in this module, and to see a list of the releases in which each feature is supported, see the [“Feature Information for QoS: Packet Marking Statistics” section on page 8](#).

Use Cisco Feature Navigator to find information about platform support and Cisco software image support. To access Cisco Feature Navigator, go to <http://www.cisco.com/go/cfn>. An account on Cisco.com is not required.

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Prerequisites for QoS: Packet Marking Statistics

You cannot enable or disable the QoS: Packet Marking Statistics feature if a policy map is associated with any interface on the system.

Restrictions for QoS: Packet Marking Statistics

Enabling the QoS: Packet Marking Statistics feature may increase CPU utilization on a scaled configuration. Before enabling the QoS: Packet Marking Statistics feature, weigh the benefits of the statistics information against the increased CPU utilization for your system.

Information About QoS: Packet Marking Statistics

QoS: Packet Marking Statistics Feature Overview

The QoS: Packet Marking Statistics feature allows you to display the number of packets that have:

- Modified headers
- Been classified into a category for local router processing

Use the QoS: Packet Marking Statistics feature to display traffic types. Using this information you can do the following:

- Compare the amount of voice traffic to data traffic on a segment of your network
- Adjust bandwidth availability
- Accurately determine billing
- Troubleshoot service problems

The system collects packet marking statistics on a 10-second cycle. If there are many interfaces or sessions then the system collects statistics for about 8000 of them during each cycle. In a scaled configuration several 10-second cycles may be required to gather all statistics.

How to Use QoS: Packet Marking Statistics

Configuring QoS: Packet Marking Statistics

Prerequisites

Before enabling the QoS: Packet Marking Statistics feature, ensure no policy maps are associated with interfaces on the system. If there are, the system returns the following message:

```
Either a) A system RELOAD or
      b) Remove all service-policies, re-apply the change
         to the statistics, re-apply all service-policies
         is required before this command will be activated.
```

Restrictions

Enabling the QoS: Packet Marking Statistics feature may increase CPU utilization on a scaled configuration. Before enabling the QoS: Packet Marking Statistics feature, weigh the benefits of the statistics information against the increased CPU utilization for your system.

SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **platform qos marker-statistics**
4. **end**
5. **show policy-map interface-name** [vc [vpi/] vci] [dlsi dlci] [input | output]
or
show policy-map session
6. **configure terminal**
7. **no platform qos marker-statistics**
8. **end**

DETAILED STEPS

	Command or Action	Purpose
Step 1	enable Example: Router> enable	Enables privileged EXEC mode. <ul style="list-style-type: none"> • Enter your password if prompted.
Step 2	configure terminal Example: Router# configure terminal	Enters global configuration mode.
Step 3	platform qos marker-statistics Example: Router(config)# platform qos marker-statistics	Enables the QoS: Packet Marking Statistics feature.
Step 4	end Example: Router# end	Exits configuration mode.

	Command or Action	Purpose
Step 5	<p>show policy-map interface <i>interface-name</i> [<i>vc [vpi/] vci</i>] [<i>dlci dlci</i>] [<i>input output</i>]</p> <p>Example: Router# show policy-map interface serial4/0/0</p> <p>or</p> <p>show policy-map session</p> <p>Example: Router# show policy-map interface</p>	<p>Displays the packet statistics of all classes that are configured for all service policies either on the specified interface or subinterface or on a specific Permanent Virtual Circuit (PVC) on the interface.</p> <p>or</p> <p>Displays the quality of service (QoS) policy map in effect for a Point-to-Point Protocol over Ethernet (PPPoE) session.</p>
Step 6	<p>configure terminal</p> <p>Example: Router# configure terminal</p>	Enters global configuration mode.
Step 7	<p>no platform qos marker-statistics</p> <p>Example: Router(config)# no platform qos marker-statistics</p>	Disables the QoS: Packet Marking Statistics feature.
Step 8	<p>end</p> <p>Example: Router# end</p>	Exits configuration mode.

Examples

Use the **show policy-map interface** command to display the packet statistics of all classes that are configured for all service policies either on the specified interface or subinterface or on a specific PVC on the interface.

Router# **show policy-map interface**

```

ATM1/0/0.1: VC 1/110 -
  Service-policy output: m_asr1000_atm_out
    Class-map: m_asr1000_atm_out (match-all)
      6644555 packets, 784057490 bytes
      5 minute offered rate 9024000 bps, drop rate 0000 bps
      Match: precedence 4
      Match: qos-group 4
      QoS Set
        atm-clp
          Packets marked 6649123 <----- The interface transmitted 6644555 packets
          matching class-map m_asr1000_atm_out. Of these packets, 6649123 had the ATM CLP bit
          marked. These two numbers are often the same, but a time difference in when the statistics
          were gathered may cause the numbers to be different.
        precedence 3
          Packets marked 6649123 <----- The interface transmitted 6644555 packets
          matching class-map m_asr1000_atm_out. Of these packets, 6649123 had the IP Precedence
          field set to 3. These two numbers are often the same, but a time difference in when the
          statistics were gathered may cause the numbers to be different.
      Class-map: class-default (match-any)

```

```

    10 packets, 1080 bytes
    5 minute offered rate 0000 bps, drop rate 0000 bps
    Match: any
POS2/0/1.1
  Service-policy input: m_asr1000_policy
  Class-map: m_asr1000_class (match-all)
    6644560 packets, 757479840 bytes
    5 minute offered rate 8720000 bps, drop rate 0000 bps
    Match: precedence 5
    QoS Set
      precedence 4
      Packets marked 6644560 <----- The interface received 6644560 packets matching
class-map m_asr1000_class. Of these packets, 6644560 had the IP Precedence set to 4.
    mpls experimental imposition 4
      Packets marked 6644560 <----- The interface received 6644560 packets matching
class-map m_asr1000_class. Of these packets, 6644560 had the MPLS Experimental Imposition
set to 4.
    qos-group 4
      Packets marked 6644560 <----- The interface received 6644560 packets matching
class-map m_asr1000_class. Of these packets, 6644560 had the QoS-group set to 4.
    Class-map: class-default (match-any)
      18 packets, 1612 bytes
      5 minute offered rate 0000 bps, drop rate 0000 bps
      Match: any
Virtual-Template2
  Service-policy input: m_pppoe_policy
  Service policy content is displayed for cloned interfaces only such as vaccess and
sessions
Router# show policy-map interface Virtual-Access 2.1

Virtual-Access2.1
  SSS session identifier 10 -
  Service-policy input: m_pppoe_policy
  Class-map: m_pppoe_class (match-all)
    4563 packets, 538434 bytes
    30 second offered rate 0000 bps, drop rate 0000 bps
    Match: precedence 5
    QoS Set
      precedence 6
      Packets marked 4563 <----- The virtual interface received 4563 packets
matching class-map m_pppoe_class. Of these packets, 4563 had the IP Precedence set to 6.
    Class-map: class-default (match-any)
      4 packets, 152 bytes
      30 second offered rate 0000 bps, drop rate 0000 bps
      Match: any

```

Use the **show policy-map session** command to display the QoS policy map in effect for a PPPoE session.

```
Router# show policy-map session uid 10
```

```

SSS session identifier 10 -
  Service-policy input: m_pppoe_policy
  Class-map: m_pppoe_class (match-all)
    4563 packets, 538434 bytes
    30 second offered rate 0000 bps, drop rate 0000 bps
    Match: precedence 5
    QoS Set
      precedence 6
      Packets marked 4563 <----- The virtual interface received 4563 packets
matching class-map m_pppoe_class. Of these packets, 4563 had the IP Precedence set to 6.
    Class-map: class-default (match-any)
      53 packets, 2014 bytes
      30 second offered rate 0000 bps, drop rate 0000 bps

```

Match: any

Troubleshooting Tips

To confirm that the QoS: Packet Marking Statistics feature is enabled, use the **show platform hardware qfp active feature qos config global** command.

Configuration Examples for QoS: Packet Marking Statistics

Example: Configuring a Policy on an Ingress Interface

This example shows how to do the following:

- Enable the QoS: Packet Marking Statistics feature
- Configure an input service policy on an ingress interface
- Classify traffic to a configured class
- Configure marking in the class to set the IP precedence to 1
- Display the **show policy-map interface** command output

```
Router# platform qos marker-statistics

class-map test_class
  match access-group 101
  policy-map test_policy
    class test_class
      set ip precedence 1
Interface POS2/0/1
  service-policy input test_policy
Router# show policy-map interface
POS2/0/1
Service-policy input: test_policy
Class-map: test_class (match-all)
  6644560 packets, 757479840 bytes
  5 minute offered rate 8720000 bps, drop rate 0000 bps
Match: precedence 5
QoS Set
  precedence 1
  Packets marked 6644560
Class-map: class-default (match-any)
  18 packets, 1612 bytes
  5 minute offered rate 0000 bps, drop rate 0000 bps
Match: any
```

Additional References

Related Documents

Related Topic	Document Title
Cisco IOS commands	Cisco IOS Master Commands List, All Releases
Quality of service commands	Cisco IOS Quality of Service Command Reference

Standards

Standard	Title
No new or modified standards are supported, and support for existing standards has not been modified.	—

MIBs

MIB	MIBs Link
CISCO-CLASS-BASED-QOS-MIB	To locate and download MIBs for selected platforms, Cisco software releases, and feature sets, use Cisco MIB Locator found at the following URL: http://www.cisco.com/go/mibs

RFCs

RFC	Title
No new or modified RFCs are supported, and support for existing RFCs has not been modified.	—

Technical Assistance

Description	Link
The Cisco Support and Documentation website provides online resources to download documentation, software, and tools. Use these resources to install and configure the software and to troubleshoot and resolve technical issues with Cisco products and technologies. Access to most tools on the Cisco Support and Documentation website requires a Cisco.com user ID and password.	http://www.cisco.com/cisco/web/support/index.html

Feature Information for QoS: Packet Marking Statistics

Table 1 lists the features in this module and provides links to specific configuration information.

Use Cisco Feature Navigator to find information about platform support and software image support. Cisco Feature Navigator enables you to determine which software images support a specific software release, feature set, or platform. To access Cisco Feature Navigator, go to <http://www.cisco.com/go/cfn>. An account on Cisco.com is not required.



Note

Table 1 lists only the software release that introduced support for a given feature in a given software release train. Unless noted otherwise, subsequent releases of that software release train also support that feature.

Table 1 Feature Information for QoS: Packet Marking Statistics

Feature Name	Releases	Feature Information
QoS: Packet Marking Statistics	Cisco IOS XE Release 3.3S	<p>The QoS: Packet Marking Statistics feature allows you to display the number of packets that have:</p> <ul style="list-style-type: none"> Modified headers Been classified into a category for local router processing <p>The following sections provide information about this feature:</p> <ul style="list-style-type: none"> Information About QoS: Packet Marking Statistics, page 2 How to Use QoS: Packet Marking Statistics, page 2 <p>The following commands were introduced or modified: platform qos marker-statistics, no platform qos marker-statistics, and show platform hardware qfp active feature qos config global.</p>

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