VMI QoS

The VMI QoS feature supports full modular quality of service (QoS) CLI (MQC) configurations on virtual multipoint interfaces. QoS configurations include remarking, shaping, and policing.

The VMI provides services that map outgoing packets to the appropriate PPP over Ethernet (PPPoE) sessions based on the next-hop forwarding address for that packet.

- Finding Feature Information, page 1
- Restrictions for VMI QoS, page 1
- Information About VMI QoS, page 2
- Configuration Examples for VMI QoS, page 2
- Additional References, page 3
- Feature Information for VMI QoS, page 4

Finding Feature Information

Your software release may not support all the features documented in this module. For the latest caveats and feature information, see Bug Search Tool and 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 table.

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

Restrictions for VMI QoS

You can apply the quality of service (QoS) policy to only one outgoing interface that the PPP over Ethernet (PPPoE) session is traversing.
VMI QoS

Virtual multipoint interfaces (VMIs) support full modular quality of service (QoS) CLI (MQC) configurations, which includes remarking, shaping, and policing. For details, see the QoS Modular QoS Command-Line Interface Configuration Guide publication that is part of the Quality of Service Solutions Configuration Guide Library.

Configuration Examples for VMI QoS

Examples: QoS Configuration for VMI

The following example shows a configuration for quality of service (QoS) features:

```plaintext
class-map match-any chat
    match dscp af11
    class-map match-any voice
    match dscp ef
    class-map match-any af23
    match dscp af23
    class-map match-any af31
    match dscp af31
    class-map match-any af33
    match dscp af33
    class-map match-any af42
    match dscp af42
policy-map multiple_sessions
    class chat
    bandwidth 50
    class voice
    bandwidth 100
    class af23
    bandwidth 150
    class af31
    bandwidth 200
    class af33
    bandwidth 250
    class af42
    bandwidth 300
    interface virtual-template 1
    service-policy output multiple_sessions
```

The following example shows a configuration for shaping:

```plaintext
class-map match-any chat
    match dscp af11
    class-map match-any voice
    match dscp ef
    policy-map shape_child
    class chat
    bandwidth 200
    class voice
    priority 100
    policy-map shape_parent
    class class-default
    shape average 400000
    service-policy shape_child
```
The following example shows a configuration for assigning a policy to a virtual multipoint interface (VMI):

```conf
interface vmi1
service-policy output shape_parent
```

The following example shows a configuration for policing actions:

```conf
class-map match-any af12
match dscp af12
class-map match-any af41
match dscp af41
policy-map police
class af12
police 1000000 conform-action set-dscp-transmit af31 exceed-action set-dscp-transmit af23
violate-action set-dscp-transmit af23
class af41
police 1000000 conform-action transmit exceed-action drop violate-action drop
```

The following example shows a configuration for assigning a policy to a virtual template interface:

```conf
interface virtual-template 1
service-policy output police
```

### Additional References

#### Related Documents

<table>
<thead>
<tr>
<th>Related Topic</th>
<th>Document Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cisco IOS commands</td>
<td>Cisco IOS Master Command List, All Releases</td>
</tr>
<tr>
<td>Quality of service (QoS) commands</td>
<td>Cisco IOS Quality of Service Solutions Command Reference</td>
</tr>
<tr>
<td>Modular QoS CLI (MQC) configuration</td>
<td>QoS Modular QoS Command-Line Interface Configuration Guide (part of the Quality of Service Solutions Configuration Guide Library)</td>
</tr>
</tbody>
</table>

#### Technical Assistance

<table>
<thead>
<tr>
<th>Description</th>
<th>Link</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Cisco Support and Documentation website provides online resources to</td>
<td><a href="http://www.cisco.com/cisco/web/support/index.html">http://www.cisco.com/cisco/web/support/index.html</a></td>
</tr>
<tr>
<td>download documentation, software, and tools. Use these resources to install</td>
<td></td>
</tr>
<tr>
<td>and configure the software and to troubleshoot and resolve technical issues</td>
<td></td>
</tr>
<tr>
<td>with Cisco products and technologies. Access to most tools on the Cisco</td>
<td></td>
</tr>
<tr>
<td>Support and Documentation website requires a Cisco.com user ID and password.</td>
<td></td>
</tr>
</tbody>
</table>
Feature Information for VMI QoS

The following table provides release information about the feature or features described in this module. This table 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.

Use Cisco Feature Navigator to find information about platform support and Cisco software image support. To access Cisco Feature Navigator, go to . An account on Cisco.com is not required.

Table 1: Feature Information for VMI QoS

<table>
<thead>
<tr>
<th>Feature Name</th>
<th>Releases</th>
<th>Feature Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>VMI QoS</td>
<td>15..2(1)T</td>
<td>The virtual multipoint interface (VMI) supports full modular quality of service (QoS) CLI (MQC) configurations, which includes remarking, shaping, and policing. No commands were introduced or modified.</td>
</tr>
</tbody>
</table>