



# MQC Policy Map on Configured VC Range ATM

**Last Updated: May 22, 2012**

The Modular Quality of Service Command Line Interface (MQC) Policy Map support on Configured VC Range ATM feature extends the functionality for policy maps on a single ATM VC to the ATM VC range.

- [Finding Feature Information, page 1](#)
- [Information About MQC Policy Map on Configured VC Range ATM, page 1](#)
- [How to Configure MQC Policy Map on Configured VC Range ATM, page 2](#)
- [Configuration Examples for MQC Policy Map on Configured VC Range ATM, page 6](#)
- [Additional References, page 6](#)
- [Feature Information for MQC Policy Map on Configured VC Range ATM, page 8](#)

## 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 Table at the end of this document.

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](http://www.cisco.com/go/cfn). An account on Cisco.com is not required.

## Information About MQC Policy Map on Configured VC Range ATM

The MQC Policy Map Support on Configured VC Range feature simplifies the configuration of ATM VC ranges by allowing you to attach policy maps on a range of ATM VCs or on a specific VC within a range of VCs.



---

**Americas Headquarters:**  
Cisco Systems, Inc., 170 West Tasman Drive, San Jose, CA 95134-1706 USA

# How to Configure MQC Policy Map on Configured VC Range ATM

- [Attaching QoS Policies to an ATM PVC Range, page 2](#)
- [Attaching QoS Policies to an Individual PVC Within an ATM PVC Range, page 3](#)

## Attaching QoS Policies to an ATM PVC Range

Use the following configuration steps to attach a QoS policy to a range of ATM PVCs.

### SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **interface atm slot/subslot/port[.subinterface] [multipoint | point-to-point]**
4. **range [range-name] pvc start-vpi/start-vci end-vpi/end-vci**
5. **service-policy input output *policy-map-name***
6. **end**

### DETAILED STEPS

	Command or Action	Purpose
<b>Step 1</b>	<b>enable</b>  <b>Example:</b> Router> enable	Enables privileged EXEC mode. <ul style="list-style-type: none"> <li>• Enter your password if prompted.</li> </ul>
<b>Step 2</b>	<b>configure terminal</b>  <b>Example:</b> Router# configure terminal	Enters global configuration mode.
<b>Step 3</b>	<b>interface atm slot/subslot/ port[.subinterface] [multipoint   point- to-point]</b>  <b>Example:</b> Router(config)# interface atm 1/0.1	Specifies the ATM interface and enters interface configuration mode.

Command or Action	Purpose
<p><b>Step 4</b> range [range-name] pvc start-vpi/start-vci end-vpi/end-vci</p> <p><b>Example:</b></p> <pre>Router(config-if)# range pvc 101/304 200/400</pre>	<p>Defines a range of ATM permanent virtual circuits (PVCs) and enters ATM range configuration mode.</p> <ul style="list-style-type: none"> <li>(Optional) range-name is the name of the range. The range-name can be a maximum of 15 characters.</li> <li>start-vpi/ specifies the beginning value for a range of virtual path identifiers (VPIs). The slash is required. If you do not provide a VPI value or the slash, the default value of 0 is used. Valid values for VPI are from 0 to 255.</li> <li>start-vci specifies the beginning value for a range of virtual channel identifiers (VCIs). Valid values are from 32 to 65535.</li> <li>end-vpi/ specifies the end value for a range of virtual path identifiers (VPIs). The slash is required. If you do not provide a VPI value or the slash, the start-vpi value is used by default. Valid values for VPI are from 0 to 255.</li> <li>end-vci specifies the end value for a range of virtual channel identifiers (VCIs). Valid values are from 32 to 65535.</li> </ul>
<p><b>Step 5</b> service-policy input output <i>policy-map-name</i></p> <p><b>Example:</b></p> <pre>Router(config-if-atm-range)# service-policy output Downstream_Traffic</pre>	<p>Attaches the service policy you specify to the specified ATM PVC range and enters ATM PVC range configuration mode.</p> <ul style="list-style-type: none"> <li><b>input</b> indicates to apply the service policy to the inbound traffic on the interface.</li> <li><b>output</b> indicates to apply the service policy to the outbound traffic on the interface.</li> </ul> <p><b>Note</b> For QoS policies containing the bandwidth, priority, random-detect, queue-limit, and shape commands, you must specify the output keyword. The router ignores these commands when you use them with the input keyword.</p> <ul style="list-style-type: none"> <li>policy-map-name is the name of the policy map you want to attach to the subinterface.</li> </ul> <p><b>Note</b> The router applies the service policy to only the PVCs within the PVC range.</p>
<p><b>Step 6</b> end</p> <p><b>Example:</b></p> <pre>Router(config-if-atm-range)# end</pre>	<p>Exits ATM PVC range configuration mode and returns to privileged EXEC mode.</p>

## Attaching QoS Policies to an Individual PVC Within an ATM PVC Range

Use the following configuration task to attach a QoS policy to an individual PVC within a range of ATM PVCs.

**SUMMARY STEPS**

1. **enable**
2. **configure terminal**
3. **interface atm slot/subslot/port[.subinterface] [multipoint | point-to-point]**
4. **range [range-name] pvc start-vpi/start-vci end-vpi/end-vci**
5. **pvc-in-range [pvc-name] vpi/vci**
6. **service-policy input output *policy-map-name***
7. **end**

**DETAILED STEPS**

	<b>Command or Action</b>	<b>Purpose</b>
<b>Step 1</b>	<b>enable</b>  <b>Example:</b>  Router> enable	Enables privileged EXEC mode. <ul style="list-style-type: none"> <li>• Enter your password if prompted.</li> </ul>
<b>Step 2</b>	<b>configure terminal</b>  <b>Example:</b>  Router# configure terminal	Enters global configuration mode.
<b>Step 3</b>	<b>interface atm slot/subslot/ port[.subinterface] [multipoint   point-to-point]</b>  <b>Example:</b>  Router(config)# interface atm 1/0	Specifies the ATM interface and enters interface configuration mode.

Command or Action	Purpose
<p><b>Step 4</b> range [range-name] pvc start-vpi/ start-vci end-vpi/end-vci</p> <p><b>Example:</b></p> <pre>Router(config-if)# range pvc 101/304 200/400</pre>	<p>Defines a range of ATM permanent virtual circuits (PVCs) and enters ATM range configuration mode.</p> <ul style="list-style-type: none"> <li>(Optional) range-name is the name of the range. The range-name can be a maximum of 15 characters.</li> <li>start-vpi/ specifies the beginning value for a range of virtual path identifiers (VPIs). The slash is required. If you do not provide a VPI value or the slash, the default value of 0 is used. Valid values for VPI are from 0 to 255.</li> <li>start-vci specifies the beginning value for a range of virtual channel identifiers (VCIs). Valid values are from 32 to 65535.</li> <li>end-vpi/ specifies the end value for a range of virtual path identifiers (VPIs). The slash is required. If you do not provide a VPI value or the slash, the start-vpi value is used by default. Valid values for VPI are from 0 to 255.</li> <li>end-vci specifies the end value for a range of virtual channel identifiers (VCIs). Valid values are from 32 to 65535.</li> </ul>
<p><b>Step 5</b> pvc-in-range [pvc-name] vpi/vci</p> <p><b>Example:</b></p> <pre>Router(config-if-atm-range)# pvc-in-range pvc 105/350</pre>	<p>Configures an individual PVC within a PVC range and enters ATM PVC range configuration mode.</p> <ul style="list-style-type: none"> <li>(Optional) pvc-name is the name given to the PVC. The PVC name can have a maximum of 15 characters.</li> <li>vpi/ is the virtual path identifier (VPI) for this PVC. The slash is required. If you do not specify a VPI value or the slash, the default value of 0 is used. Valid VPI values are from 0 to 255.</li> <li>vci is the virtual circuit identifier (VCI) for this PVC. Valid values are from 32 to 2047.</li> </ul>
<p><b>Step 6</b> service-policy input output <i>policy-map-name</i></p> <p><b>Example:</b></p> <pre>Router(cfg-if-atm-range-pvc)# service-policy output Downstream_Rate</pre>	<p>Attaches the service policy you specify to the specified PVC within the ATM PVC range.</p> <ul style="list-style-type: none"> <li><b>input</b> indicates to apply the service policy to the inbound traffic on the interface.</li> <li><b>output</b> indicates to apply the service policy to the outbound traffic on the interface.</li> </ul> <p><b>Note</b> For QoS policies containing the bandwidth, priority, random-detect, queue-limit, and shape commands, you must specify the output keyword. The router ignores these commands when you use them with the input keyword.</p> <ul style="list-style-type: none"> <li>policy-map-name is the name of the policy map you want to attach to the subinterface.</li> </ul> <p><b>Note</b> The router applies the service policy to only the individual ATM PVC within the PVC range.</p>

Command or Action	Purpose
<b>Step 7</b> end  <b>Example:</b>  <pre>Router(cfg-if-atm-range-pvc)# end</pre>	Exits ATM PVC range configuration mode and enters privileged EXEC mode.

## Configuration Examples for MQC Policy Map on Configured VC Range ATM

- [Attaching QoS Service Policies to an ATM PVC Range Example, page 6](#)
- [Attaching QoS Service Policies to an Individual PVC Within an ATM PVC Range Example, page 6](#)

### Attaching QoS Service Policies to an ATM PVC Range Example

The following example configuration shows how to attach policy maps to a range of ATM PVCs. In the example, the service policy named voice is attached to the range of ATM PVCs 1/32 to 1/34. The router applies the service policy to all of the PVCs within the PVC range.

```
Router(config)# interface atm 2/0/0
Router(config-if)# range pvc 1/32 1/34
Router(config-if-atm-range)# service-policy input voice
```

### Attaching QoS Service Policies to an Individual PVC Within an ATM PVC Range Example

The following example configuration shows how to attach policy maps to a specific PVC within a PVC range. In the example, the service policy named data is attached to PVC 1/33 within the PVC range 1/32 to 1/34. The router applies the service policy to only PVC 1/33.

```
Router(config)# interface atm 2/0/0
Router(config-if)# range pvc 1/32 1/34
Router(config-if-atm-range)# service-policy input voice
Router(config-if-atm-range)# pvc-in-range 1/33
Router(config-if-atm-range-vc)# service-policy input data
```

## Additional References

The following sections provide references related to MQC Policy Map Support on Configured VC Range.

**Related Documents**

<b>Related Topic</b>	<b>Document Title</b>
Cisco IOS commands	<a href="#">Cisco IOS Master Commands List, All Releases</a>
ATM Commands	<i>Cisco IOS Asynchronous Transfer Mode Command Reference</i>
ATM PVC configuration	<i>Cisco IOS Asynchronous Transfer Mode Configuration Guide</i>
MQC policy maps	Modular Quality of Service Command-Line Interface feature
QOS Commands	<i>Cisco IOS Quality of Service Solutions Command Reference</i>
QOS Features	<i>Cisco IOS Quality of Service Solutions Configuration Guide</i>

**MIBs**

<b>MIB</b>	<b>MIBs Link</b>
No new or modified MIBs are supported by this feature, and support for existing MIBs has not been modified by this feature	To locate and download MIBs for selected platforms, Cisco IOS releases, and feature sets, use Cisco MIB Locator found at the following URL: <a href="http://www.cisco.com/go/mibs">http://www.cisco.com/go/mibs</a>

**Technical Assistance**

<b>Description</b>	<b>Link</b>
<p>The Cisco Support website provides extensive online resources, including documentation and tools for troubleshooting and resolving technical issues with Cisco products and technologies.</p> <p>To receive security and technical information about your products, you can subscribe to various services, such as the Product Alert Tool (accessed from Field Notices), the Cisco Technical Services Newsletter, and Really Simple Syndication (RSS) Feeds.</p> <p>Access to most tools on the Cisco Support website requires a Cisco.com user ID and password.</p>	<a href="http://www.cisco.com/cisco/web/support/index.html">http://www.cisco.com/cisco/web/support/index.html</a>

## Feature Information for MQC Policy Map on Configured VC Range ATM

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 [www.cisco.com/go/cfn](http://www.cisco.com/go/cfn). An account on Cisco.com is not required.

**Table 1** Feature Information for MQC Policy Map Support on Configured VC Range

Feature Name	Releases	Feature Information
MQC Policy Map Support on Configured VC Range ATM	12.2(28)SB 12.4(2)T 12.2(33)SRE	The Modular Quality of Service Command Line Interface (MQC) Policy Map support on configured VC range feature extends the functionality for policy maps on a single ATM VC to the ATM VC range.  The following command was introduced or modified: <b>service-policy</b>

Cisco and the Cisco logo are trademarks or registered trademarks of Cisco and/or its affiliates in the U.S. and other countries. To view a list of Cisco trademarks, go to this URL: [www.cisco.com/go/trademarks](http://www.cisco.com/go/trademarks). Third-party trademarks mentioned are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (1110R)

Any Internet Protocol (IP) addresses and phone numbers used in this document are not intended to be actual addresses and phone numbers. Any examples, command display output, network topology diagrams, and other figures included in the document are shown for illustrative purposes only. Any use of actual IP addresses or phone numbers in illustrative content is unintentional and coincidental.

© 2012 Cisco Systems, Inc. All rights reserved.