



# QoS Configuration Examples

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## QoS Example 1

This example shows how to configure traffic in the entire system matching an access control list to have the frame CoS fields rewritten to the value 5.

### Procedure

	Command or Action	Purpose
<b>Step 1</b>	Set up the ingress classification policy (the access control list was defined previously).	<pre>(config)# class-map type qos cmap-qos-acl (config-cmap-qos)# match access-group ACL-CoS (config-cmap-qos)# exit (config)# policy-map type qos pmap-qos-acl (config-pmap-qos)# class cmap-qos-acl (config-pmap-c-qos)# set qos-group 4 (config-pmap-c-qos)# exit (config-pmap-qos)# exit</pre>
<b>Step 2</b>	Attach the classification policy to the system.	<pre>(config)# system qos (config-sys-qos)# service-policy type qos input pmap-qos-acl (config-sys-qos)# exit</pre>
<b>Step 3</b>	Set up the system class allocation and rewrite policy. Allocate the system class for qos-group 4 and define the rewrite action.	<pre>(config)# class-map type network-qos cmap-nq-acl (config-cmap-nq)# match qos-group 4</pre>

	Command or Action	Purpose
		<pre>(config-cmap-nq) # exit (config) # policy-map type network-qos pmap-nq-acl (config-pmap-nq) # class type network-qos cmap-nq-acl (config-pmap-c-nq) # set cos 5 (config-pmap-c-nq) # exit (config-pmap-nq) # exit</pre>
<b>Step 4</b>	Attach the allocation and rewrite policy to the system.	<pre>(config) # system qos (config-sys-qos) # service-policy type network-qos pmap-nq-acl (config-sys-qos) # exit</pre>

## QoS Example 2

This example shows how to use an access control list to apply 50% bandwidth to traffic on Ethernet interface 1/3 that matches traffic on Ethernet interface 1/1.

### Procedure

	Command or Action	Purpose
<b>Step 1</b>	Set up the ingress classification policy.	<pre>(config) # class-map type qos cmap-qos-bandwidth (config-cmap-qos) # match access-group ACL-bandwidth (config-cmap-qos) # exit (config) # policy-map type qos pmap-qos-eth1-1 (config-pmap-qos) # class cmap-qos-bandwidth (config-pmap-c-qos) # set qos-group 2 (config-pmap-c-qos) # exit (config-pmap-qos) # exit</pre>
<b>Step 2</b>	Attach the classification policy to the interface Ethernet 1/1.	<pre>(config) # interface ethernet 1/1 (config-if) # service-policy type qos input pmap-qos-eth1-1 (config-if) # exit</pre>

	Command or Action	Purpose
<b>Step 3</b>	Set up the system-wide definition of the qos-group first.	<pre>(config)# class-map type queuing cmap-que-bandwidth  (config-cmap-que)# match qos-group 2  (config-cmap-que)# exit</pre>
<b>Step 4</b>	Set up the egress bandwidth policy.	<p><b>Note</b> Before you can successfully allocate bandwidth to the user-defined class cmap-que-bandwidth, you must first reduce the default bandwidth configuration on class-default and class-fcoe.</p> <pre>(config)# policy-map type queuing pmap-que-eth1-2  (config-pmap-que)# class type queuing class-default  (config-pmap-c-que)# bandwidth percent 10  (config-pmap-c-que)# exit  (config-pmap-que)# class type queuing class-fcoe  (config-pmap-c-que)# bandwidth percent 40  (config-pmap-c-que)# exit  (config-pmap-que)# class type queuing cmap-que-bandwidth  (config-pmap-c-que)# bandwidth percent 50  (config-pmap-c-que)# exit  (config-pmap-que)# exit</pre>
<b>Step 5</b>	Attach the bandwidth policy to the egress interface.	<pre>(config)# interface ethernet 1/3  (config-if)# service-policy type queuing output pmap-que-eth1-2  (config-if)# exit</pre>
<b>Step 6</b>	Allocate the system class for qos-group 2.	<pre>(config)# class-map type network-qos cmap-nq-bandwidth  (config-cmap-nq)# match qos-group 2  (config-cmap-nq)# exit</pre>
<b>Step 7</b>	Set up the network-qos policy.	<pre>(config)# policy-map type network-qos pmap-nq-bandwidth</pre>

	Command or Action	Purpose
		<pre>(config-pmap-nq) # class type network-qos cmap-nq-bandwidth (config-pmap-c-nq) # exit (config-pmap-nq) # exit</pre>
<b>Step 8</b>	Attach the network-qos policy to the system.	<pre>(config) # system qos (config-sys-qos) # service-policy type network-qos pmap-nq-bandwidth (config-sys-qos) # exit</pre>

## QoS Example 3

This example shows how to attach a 802.1p tag with a CoS value of 3 to incoming untagged packets, and force priority-flow-control negotiation on Ethernet interface 1/15.

### Procedure

	Command or Action	Purpose
<b>Step 1</b>	Set up the ingress classification policy (the access control list was defined previously).	<pre>(config) # interface Ethernet 1/15 (config-if) # untagged cos 3 (config-if) # priority-flow-control mode on (config-if) # exit</pre>