S Commands

This chapter describes the Cisco NX-OS quality of service (QoS) commands that begin with S.
service-policy

To attach a policy map to an interface, use the `service-policy` command. To remove a service-policy from an interface, use the `no` form of this command.

```
service-policy {input | type {qos input | queuing {input | output}}}} policy-map-name
no service-policy {input | type {qos input | queuing {input | output}}}} policy-map-name
```

**Syntax Description**
- **input**: Applies this policy map to packets coming into this interface.
- **type**: Specifies whether the policy map is of type qos or queuing.
- **qos**: Specifies a policy map of type qos.
- **queuing**: Specifies a policy map of type queuing.
- **output**: Applies this policy map to packets going out of this interface.
- **policy-map-name**: Name of the policy map to attach to this interface. Only one policy map can be attached to the input and one to the output of a given interface for each of the policy type qos and queuing. The policy map name can be a maximum of 40 alphanumeric characters.

**Command Default**
None

**Command Modes**
- Interface configuration mode
- Subinterface configuration mode
- Vlan configuration mode

**Command History**

```
Release          Modification
6.0(2)N1(1)      This command was introduced.
```

**Usage Guidelines**
You can attach one ingress and one egress type queuing policy map to an interface of type port, and port channel. Only one policy map can be attached to the input of a given interface for each of the policy type qos and queuing.

**Examples**
This example shows how to attach a queuing policy map to the ingress packets of a Layer 2 port interface:
```
switch# configure terminal
switch(config)# interface ethernet 2/1
switch(config-if)# service-policy type queuing input my_input_q_policy
switch(config-if)#
```

This example shows how to attach qos type policy maps to the incoming packets of a Layer 2 interface:
```
switch# configure terminal
switch(config)# system qos
```
switch(config-sys-qos)# service-policy type qos input my_policy1
switch(config-sys-qos)#

This example shows how to attach a qos type policy map named set-dscp to the incoming packets of a Layer 2 interface:

switch# configure terminal
switch(config)# policy-map type qos set-dscp
switch(config-pmap-qos)# class class-0
switch(config-pmap-c-qos)# set dscp ef
switch(config-pmap-c-qos)# exit
switch(config-pmap-qos)# class class-1-2
switch(config-pmap-c-qos)# set precedence 4
switch(config-pmap-c-qos)# exit
switch(config-pmap-qos)# exit
switch(config)# interface ethernet 2/1
switch(config-if)# service-policy type qos input set-dscp
switch(config-if)#

This example shows how to attach a queuing policy map to a Layer 3 interface:

switch# configure terminal
switch(config)# interface ethernet 1/5
switch(config-if)# no switchport
switch(config-if)# service-policy type queuing input my_input_q_policy
switch(config-if)#

### Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>no switchport</td>
<td>Configures an interface as a Layer 3 routed interface.</td>
</tr>
<tr>
<td>show policy-map</td>
<td>Displays all interfaces and VLANs with attached service policies in a brief format.</td>
</tr>
<tr>
<td>interface brief</td>
<td></td>
</tr>
<tr>
<td>system qos</td>
<td>Configures a system policy.</td>
</tr>
</tbody>
</table>
service-policy (control-plane)

To attach a policy map to a control plane for aggregate control plane services, use the `service-policy` command.

```
service-policy input policy-map-name
```

**Syntax Description**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>input</td>
<td>Applies the specified service policy to packets that are entering the control plane.</td>
</tr>
<tr>
<td>policy-map-name</td>
<td>Name of the control plane policy map to be attached. The name can be a maximum of 64 alphanumeric characters.</td>
</tr>
</tbody>
</table>

**Command Default**

None

**Command Modes**

Control-plane configuration mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Usage Guidelines**

After using the `control-plane` command, you should use the `service-policy` command to configure a quality of service (QoS) policy. This policy is attached to the control plane interface for aggregate control plane services, which can control the number or rate of packets that are going to the process level.

**Examples**

This example shows how to attach a control-plane policy map to the control plane:

```
switch# configure terminal
switch(config)# ip access-list ipv4-acl-telnet
switch(config-acl)# permit tcp 10.23.0.0/16 10.176.0.0/16
switch(config-acl)# exit
switch(config)# class-map type control-plane telnet-class
switch(config-cmap)# match access-group name ipv4-acl-telnet
switch(config-cmap)# exit
switch(config)# policy-map type control-plane copp-system-policy
switch(config-pmap)# class telnet-class
switch(config-pmap-c)# police 1000
switch(config-pmap-c)# exit
switch(config-pmap-c)# exit
switch(config)# control-plane
switch(config-cp)# service-policy input copp-system-policy
switch(config-cp)# exit
switch(config)#
```
<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>control-plane</td>
<td>Enters control-plane configuration mode.</td>
</tr>
<tr>
<td>policy-map type control-plane</td>
<td>Creates or modifies a control plane policy map.</td>
</tr>
<tr>
<td>show policy-map control-plane</td>
<td>Displays the configuration of a class or all classes for the policy map of a control plane.</td>
</tr>
</tbody>
</table>
service-policy (system qos)

To attach a policy map to a system policy, use the `service-policy` command. To remove a service policy from a system policy, use the `no` form of this command.

```
service-policy { input | type { network-qos | qos input | queuing { input | output } } } policy-map-name
```

```
no service-policy { input | type { network-qos | qos input | queuing { input | output } } } policy-map-name
```

<table>
<thead>
<tr>
<th>Syntax Description</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>input</code></td>
<td>Applies this policy map to packets coming into this interface.</td>
</tr>
<tr>
<td><code>type</code></td>
<td>Specifies whether the policy map is of type network-qos, qos, or queuing.</td>
</tr>
<tr>
<td><code>network-qos</code></td>
<td>Specifies a policy map of type network-qos.</td>
</tr>
<tr>
<td><code>qos</code></td>
<td>Specifies a policy map of type qos.</td>
</tr>
<tr>
<td><code>queuing</code></td>
<td>Specifies a policy map of type queuing.</td>
</tr>
<tr>
<td><code>output</code></td>
<td>Applies this policy map to packets going out of this interface.</td>
</tr>
<tr>
<td><code>policy-map-name</code></td>
<td>Name of the policy map to attach to this interface. The policy map name can be a maximum of 40 alphanumeric characters.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Command Default</th>
<th>None</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Command Modes</th>
<th>System QoS configuration mode</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Command History</th>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Examples</th>
<th>This example shows how to attach a queuing policy map to the system policy:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>switch# configure terminal</td>
</tr>
<tr>
<td></td>
<td>switch(config)# system qos</td>
</tr>
<tr>
<td></td>
<td>switch(config-sys-qos)# service-policy type queuing input my_input_q_policy</td>
</tr>
<tr>
<td></td>
<td>switch(config-sys-qos)#</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Related Commands</th>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>show policy-map</td>
<td>Displays policy maps.</td>
</tr>
<tr>
<td></td>
<td>system qos</td>
<td>Configures a system policy.</td>
</tr>
</tbody>
</table>
**service-policy (virtual Ethernet interface)**

To attach a policy map to a virtual Ethernet interface, use the `service-policy` command. To remove a service policy from a virtual Ethernet interface, use the `no` form of this command.

```
service-policy {input | type {qos input | queuing {input | output}}}} policy-map-name

no service-policy {input | type {qos input | queuing {input | output}}}} policy-map-name
```

**Syntax Description**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>input</td>
<td>Applies this policy map to packets coming into this virtual interface.</td>
</tr>
<tr>
<td>type</td>
<td>Specifies the policy map of type qos.</td>
</tr>
<tr>
<td>qos</td>
<td>Specifies a policy map of type qos.</td>
</tr>
<tr>
<td>queuing</td>
<td>Specifies a policy map of type queuing.</td>
</tr>
<tr>
<td>input</td>
<td>Applies the policy map to packets coming into this interface.</td>
</tr>
<tr>
<td>output</td>
<td>Applies the policy map to packets going out of this interface.</td>
</tr>
<tr>
<td>policy-map-name</td>
<td>Name of the policy map to attach to this interface. Only one policy map can be attached to the input of a given interface for the policy type qos. The policy map name can be a maximum of 40 alphanumeric characters.</td>
</tr>
</tbody>
</table>

**Command Default**

None

**Command Modes**

Virtual Ethernet interface configuration mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Usage Guidelines**

You can attach one ingress and one egress type queuing policy map to an interface of type port and port channel. Only one policy map can be attached to the input of a given interface for each of the policy type qos and queuing.

**Note**

For more information on using service policies, see the Quality of Service Guide for your platform.

**Examples**

This example shows how to attach a qos policy map to the ingress packets of a virtual Ethernet interface:

```
switch# configure terminal
switch(config)# interface vethernet 12
switch(config-if)# service-policy type qos input my_veth_policy

switch(config-if)#
```

This example shows how to attach a queuing policy that is configured for traffic shaping to the incoming packets of a virtual Ethernet interface:
switch(config)# policy-map type queuing p2
switch(config-pmap-que)# class type queuing class-default
switch(config-pmap-c-que)# shape 30 kbps 3000
switch(config-pmap-c-que)# exit
switch(config-pmap-que)# exit
switch(config)# interface vethernet 1
switch(config-if)# service-policy type queuing input p2
switch(config-if)#

<table>
<thead>
<tr>
<th>Related Commands</th>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>interface vethernet</td>
<td>Configures a virtual Ethernet interface.</td>
</tr>
<tr>
<td></td>
<td>policy-map type queuing</td>
<td>Configures a queuing policy map.</td>
</tr>
<tr>
<td></td>
<td>show policy-map interface brief</td>
<td>Displays all interfaces and VLANs with attached service policies in a brief format.</td>
</tr>
<tr>
<td></td>
<td>system qos</td>
<td>Configures a system policy.</td>
</tr>
</tbody>
</table>
set cos (policy map type network-qos)

To assign a class of service (CoS) value for a class of traffic in a type network-qos policy map, use the `set` command. To remove the assigned value from the class, use the `no` form of this command.

```
set cos cos-value

no set cos cos-value
```

**Syntax Description**

| cos-value | CoS value to assign for this class of traffic. The range is from 0 to 7. |

**Command Default**

None

**Command Modes**

Policy map type network-qos class configuration

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Usage Guidelines**

You can use this command only on type network-qos policies that are attached to egress ports. Layer 3 topologies you must configure each qos-group in the network-qos policy with a unique cos value.

**Examples**

This example shows how to assign a CoS value for a class of traffic in a type network-qos policy map:

```
switch(config)# policy-map type network-qos my_policy1
switch(config-pmap-nq)# class type network-qos traffic_class2
switch(config-pmap-nq-c)# set cos 3
```

This example shows how to remove the assignment of CoS for a class of traffic in a type network-qos policy map:

```
switch(config)# policy-map type network-qos my_policy1
switch(config-pmap-nq)# class type network-qos traffic_class2
switch(config-pmap-nq-c)# no set cos 3
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show policy-map</td>
<td>Displays policy maps.</td>
</tr>
</tbody>
</table>
To assign a Differentiated Services Code Point (DSCP) value for a traffic class in a type qos policy map on a Cisco Nexus 5548 switch, use the `set dscp` command. To remove a previously set DSCP value, use the `no` form of this command.

```
set dscp dscp-value
no set dscp dscp-value
```

**Syntax Description**

- `dscp-value`
  - DSCP value or parameter to assign for this class of traffic. Valid values are from 0 to 63.
  - For a list of standard DSCP values, see Table 1.

**Command Default**
None

**Command Modes**
Policy map type qos configuration

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Usage Guidelines**

Marking is a method that you use to modify the QoS fields of the incoming and outgoing packets. You can set the value of standard QoS fields IP precedence, DSCP, and Class of Service (CoS), and internal labels that can be used in subsequent actions. Marking is used to identify the traffic type for use in policing, queuing, and scheduling traffic (only CoS is used in scheduling). Use this command to classify the traffic based on the DSCP packet header field (either IPv4 or IPv6). When you set the DSCP value for a packet, make sure that you use a traffic class other than the class-default system class. For example, qos-group x, where x is any value from 1 to 5.

You cannot set the DSCP packet header field (either IPv4 or IPv6) if the traffic is in the class-default system class (qos-group 0).

You can set the DSCP value in the six most significant bits of the DiffServ field of the IP header to a specified value. You can enter numeric values from 0 to 63, as well as the standard DSCP values shown in Table 1.

If you set the values for more than two IP header fields (either IPv4 or IPv6), an error similar to the following appears:

```
ERROR: Only 2 sets out of qos-group/cos/dscp/precedence/discard-class are allowed. Please remove other set action before applying this one.
```
You can set DSCP or IP precedence but you cannot set both values because they modify the same field in the IP packet.

After you set the DSCP value, for the QoS policy map to work correct and create the specified QoS groups, make sure that you attach the QoS policy map to a system policy, then define a network-qos policy map and attach it to the system policy. Make sure that the QoS group of the QoS policy map matches that of the network-qos policy.

**Examples**

This example shows how to set the DSCP value for a QoS policy:

```bash
switch(config)# policy-map type qos my_policy
switch(config-pmap-qos)# class type qos my_class
switch(config-pmap-c-qos)# set dscp cs6
switch(config-pmap-c-qos)# set qos-group 2
switch(config-pmap-c-qos)# exit
switch(config-pmap-qos)# exit
switch(config)# system qos
switch(config-sys-qos)# service-policy type qos input my_policy
switch(config-sys-qos)# exit
switch(config)# class-map type network-qos nqos_class
switch(config-cmap-nq)# match qos-group 2
switch(config-cmap-nq)# exit
switch(config)# policy-map type network-qos nqos_policy
switch(config-pmap-nq-c)# class type network-qos nqos_class
switch(config-pmap-nq-c)# exit
switch(config-pmap-nq-c)# exit
switch(config)# system qos
switch(config-sys-qos)# service-policy type network-qos nqos_policy
switch(config-sys-qos)# exit
switch(config)#
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>copy running-config</td>
<td>Copies the running configuration to the startup configuration file.</td>
</tr>
<tr>
<td>startup-config</td>
<td></td>
</tr>
<tr>
<td>show policy-map type</td>
<td>Displays the QoS policy maps.</td>
</tr>
<tr>
<td>qos</td>
<td></td>
</tr>
<tr>
<td>show running-config</td>
<td>Displays the QoS running configuration.</td>
</tr>
<tr>
<td>ipqos</td>
<td></td>
</tr>
</tbody>
</table>
set precedence

To set the precedence value in an IP header (either IPv4 or IPv6) for a class of traffic in a type qos policy map on a Cisco Nexus 5548 switch, use the `set precedence` command. To leave the precedence value unchanged for the class, use the `no` form of this command.

```
set precedence precedence-value

no set precedence precedence-value
```

### Syntax Description

| `precedence-value` | IP precedence value to assign for this class of traffic. Valid values are from 0 to 7.
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------|

For a list of standard precedence values, see Table 2.

### Command Default

None

### Command Modes

Policy map type qos configuration

### Command History

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

### Usage Guidelines

Marking is a method that you use to modify the QoS fields of the incoming and outgoing packets.

You can set the value of standard QoS fields IP precedence, DSCP, and Class of Service (CoS), and internal labels that can be used in subsequent actions. Marking is used to identify the traffic type for use in policing, queuing, and scheduling traffic (only CoS is used in scheduling).

Use this command to classify the traffic based on the IP precedence packet header field. When you set the IP precedence value for a packet, make sure that you use a traffic class other than the class-default system class. For example, qos-group `x`, where `x` is any value from 1 to 5.

- **Note**: You cannot set the IP precedence packet header field if the traffic is in the class-default system class (qos-group 0).

If you set the values for more than two IP header fields, you see the following error message:

```
ERROR: Only 2 sets out of qos-group/cos/dscp/precedence/discard-class are allowed. Please remove other set action before applying this one.
```

- **Note**: You can set DSCP or IP precedence but you cannot set both values because they modify the same field in the IP packet.
After you set the IP precedence value, for the QoS policy map to work correct and create the specified QoS groups, make sure that you attach the QoS policy map to a system policy, then define a network-qos policy map and attach it to the system policy. Make sure that the QoS group of the QoS policy map matches that of the network-qos policy.

**Examples**

This example shows how to set the IP precedence value for a QoS policy:

```bash
switch(config)# policy-map type qos my_policy
switch(config-pmap-qos)# class type qos my_class
switch(config-pmap-c-qos)# set precedence 5
switch(config-pmap-c-qos)# set qos-group 2
switch(config-pmap-c-qos)# exit
switch(config-pmap-qos)# exit
switch(config)# system qos
switch(config-sys-qos)# service-policy type qos input my_policy
switch(config-sys-qos)# exit
switch(config)# class-map type network-qos nqos_class
switch(config-cmap-nq)# match qos-group 2
switch(config-cmap-nq)# exit
switch(config)# policy-map type network-qos nqos_policy
switch(config-pmap-nq-c)# exit
switch(config-pmap-nq)# system qos
switch(config-sys-qos)# service-policy type network-qos nqos_policy
switch(config-sys-qos)# exit
switch(config)#
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>copy running-config</td>
<td>Copies the running configuration to the startup configuration file.</td>
</tr>
<tr>
<td>startup-config</td>
<td></td>
</tr>
<tr>
<td>show policy-map type qos</td>
<td>Displays the QoS policy maps.</td>
</tr>
<tr>
<td>show running-config</td>
<td>Displays the QoS running configuration.</td>
</tr>
<tr>
<td>ipqos</td>
<td></td>
</tr>
<tr>
<td>show startup-config</td>
<td>Displays the QoS configuration stored in the startup file.</td>
</tr>
<tr>
<td>ipqos</td>
<td></td>
</tr>
</tbody>
</table>
set qos-group

To assign the QoS group identifier for a class of traffic in a type qos policy map, use the **set qos-group** command. To remove the assigned value from the class, use the **no** form of this command.

```
set qos-group qos-group-value

no set qos-group qos-group-value
```

**Syntax Description**

| qos-group-value | QoS group value to assign for this class of traffic. The range is from 1 to 5 for a Cisco Nexus device. On a Cisco Nexus device, the default is 1. |

**Command Default**

1 on a Cisco Nexus 5548 switch.

**Command Modes**

Policy map type qos class configuration

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Usage Guidelines**

You can set the QoS group identifier value only in ingress policies. You can set a maximum of 5 QoS groups in ingress policies.

If you set the values for more than two IP header fields in a policy map class, an error message similar to the following appears:

```
ERROR: Only 2 sets out of qos-group/cos/dscp/precedence/discard-class are allowed. Please remove other set action before applying this one.
```

**Examples**

This example shows how to assign a QoS group identifier for a class of traffic in a type qos policy map:

```
switch(config)# policy-map my_policy
switch(config-pmap-qos)# class my_class
switch(config-pmap-c-qos)# set qos-group 3
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>copy running-config startup-config</td>
<td>Copies the running configuration to the startup configuration file.</td>
</tr>
<tr>
<td>show policy-map type qos</td>
<td>Displays the QoS policy maps.</td>
</tr>
<tr>
<td>Command</td>
<td>Description</td>
</tr>
<tr>
<td>------------------------</td>
<td>----------------------------------------------------------------</td>
</tr>
<tr>
<td>show running-config ipqos</td>
<td>Displays the QoS running configuration.</td>
</tr>
<tr>
<td>show startup-config ipqos</td>
<td>Displays the QoS configuration stored in the startup file.</td>
</tr>
</tbody>
</table>
shape (virtual Ethernet interface)

To configure shaping on an egress queue to impose a maximum rate on it, use the `shape` command. To remove a shaping configuration, use the `no` form of this command.

```
shape target-rate {kbps | mbps | gbps} burst-size

no shape target-rate {kbps | mbps | gbps} burst-size
```

**Syntax Description**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>target-rate</code></td>
<td>Traffic rate. The range is from 1 to 10,000,000,000.</td>
</tr>
<tr>
<td><code>kbps</code></td>
<td>Specifies the units of 1000 bits per second.</td>
</tr>
<tr>
<td><code>mbps</code></td>
<td>Specifies the units of megabits per second.</td>
</tr>
<tr>
<td><code>gbps</code></td>
<td>Specifies the units of gigabits per second.</td>
</tr>
<tr>
<td><code>burst-size</code></td>
<td>Burst size in bytes. The range is from 1500 to 65535.</td>
</tr>
</tbody>
</table>

**Command Default**

None

**Command Modes**

Policy map type queuing class configuration mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Usage Guidelines**

Traffic shaping is supported only on virtual Ethernet interfaces.

Shaping rate limits the traffic with a specified rate. You can configure shaping only in the ingress direction. All traffic on the virtual Ethernet interface is rate limited to the given shaping rate.

**Note**

If you configure shaping, you cannot configure `priority` in the same policy map.

This command does not require a license.

**Examples**

This example shows how to configure shaping on a queuing policy map and apply the policy to a virtual Ethernet interface:

```bash
switch# configure terminal
switch(config)# policy-map type queuing p2
switch(config-pmap-que)# class type queuing class-default
switch(config-pmap-c-que)# shape 30 kbps 3000
switch(config-pmap-c-que)# exit
switch(config-pmap-que)# exit
switch(config)# interface vethernet 1
switch(config-if)# service-policy type queuing input p2
switch(config-if)#
```
<table>
<thead>
<tr>
<th>Related Commands</th>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>service-policy (virtual</td>
<td>Applies a policy map to a virtual Ethernet interface.</td>
</tr>
<tr>
<td></td>
<td>Ethernet interface)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>show policy-map</td>
<td>Displays the policy map information.</td>
</tr>
</tbody>
</table>
system jumbomtu

To define the upper bound of any maximum transmission unit (MTU) in the system, use the `system jumbomtu` command.

```
  system jumbomtu [value]
```

<table>
<thead>
<tr>
<th>Syntax Description</th>
<th>value</th>
<th>Jumbomtu value. The range is from 2158 to 9216.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Command Default</th>
<th>9216 bytes</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Command Modes</th>
<th>Global configuration mode</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Command History</th>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Examples</th>
<th>This example shows how to define the upper bound of any MTU in the system:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>switch(config)# system jumbomtu 9216</td>
</tr>
<tr>
<td></td>
<td>switch(config)#</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Related Commands</th>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>show interface</td>
<td>Displays the jumbo MTU frames sent and received on the specified interface.</td>
</tr>
</tbody>
</table>
system qos

To configure a system policy, use the **system qos** command.

```
system qos
```

**Syntax Description**
This command has no arguments or keywords.

**Command Default**
None

**Command Modes**
Global configuration mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**
This example shows how to configure a system qos to apply a queuing policy to all interfaces in the system:

```
switch(config)# system qos
switch(config-sys-qos)#
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>service-policy</td>
<td>Associates the system class policy-map to the service policy for the system.</td>
</tr>
</tbody>
</table>