



CHAPTER 3

Configuring QoS Marking Policies

This chapter describes how to configure QoS marking policies on Cisco Nexus 1000V to prioritize network traffic.

Information About Policy Maps

Policy maps prioritize network traffic by class. You create policy maps to define how to treat each class of traffic so that it is prioritized for the best quality of service.

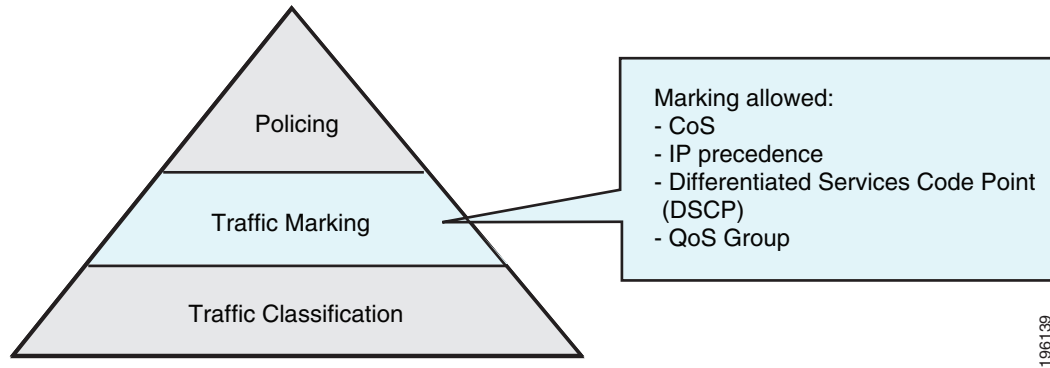
Marking is the process of marking packets, that is, changing one of the following in the packet for QoS purposes:

- Differentiated services code point (DSCP)
- Precedence
- CoS

You can map a traffic class to a DSCP, which is an indicator of the service level for a specified frame. The DSCP value ranges from 0 to 63, and the default is 0. A DSCP value of 46 is disallowed.

Service policies are specified using policy maps. Policy maps provide an ordered mapping of class maps to service levels. You can specify multiple class maps within a policy map, and map a class map to a high, medium, or low service level. The default priority is low. The policy map name is restricted to 63 alphanumeric characters.

The order of the class maps within a policy map is important to determine the order in which the frame is compared to class maps. The first matching class map has the corresponding priority marked in the frame.

Figure 3-1 Packet Fields Available for Marking

Marking is the setting of QoS information that is related to a packet. 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 such as policing.

Once your traffic classes are defined, you can reference them in the policy map where you also define how they should be marked. We recommend that you keep the policy simple by using no more than four classes.

The fields available for marking are listed in [Table 3-1](#).

Table 3-1 Fields That Can be Marked

Field	Description
DSCP	Layer 3 differentiated services code point (DSCP). Note If you mark DSCP, you cannot mark Discard Class.
IP precedence	Layer 3 IP precedence. Note IP precedence uses only the lower 3 bits of the type of service (ToS) field. The device overwrites the first 3 bits of the ToS field to 0.
CoS	Layer 2 class of service (CoS).
QoS group	Local QoS values that can be marked and matched as needed. The range is from 0 to 126.
Discard class	Local QoS values that can be matched and marked as needed. The range is from 0 to 63. Note If you mark Discard Class, you cannot mark DSCP.
Ingress and egress ports	The marking applies to incoming or outgoing packets.

For a single class, you can set operations on any two out of the following five fields: CoS, IP Precedence, DSCP, QoS Group, and Discard Class.

Unless noted as a restriction, you can mark both incoming and outgoing packets.

Prerequisites for QoS Marking Policies

Marking has the following prerequisites:

- You must have already classified your network traffic. For more information, see the [“Configuring QoS Classification” section on page 2-1](#).
- You are already logged in to the CLI in EXEC mode.

Guidelines and Limitations

QoS policies have the following guidelines and limitations:

- The **set cos** command is applicable only to 802.1Q interfaces. So, although you can use the **set cos** command on an ingress interface, the setting is only applied if a packet eventually egresses an 802.1Q compliant interface.
- For a single class, you can set operations on any two out of the following five fields: CoS, IP Precedence, DSCP, QoS Group, and Discard Class.
- You can only use the **set qos-group** command in ingress policies.
- You can only use the **set discard-class** command in ingress policies.
- When designing your QoS and access control list (ACL) policies, note that ACLs referenced within a QoS policy are processed as follows as part of the QoS policy:
 - QoS ingress processing follows ACL processing.
 - QoS egress processing precedes ACL egress processing.

Creating QoS Marking Policies

This section describes how to create QoS policies for the Cisco Nexus 1000V:

- [Creating a DSCP Policy, page 3-3](#)
- [Creating an IP Precedence Policy, page 3-5](#)
- [Creating a Class of Service Policy, page 3-6](#)
- [Creating a QoS Group Policy, page 3-8](#)
- [Creating a Discard Class Policy, page 3-9](#)
- [Creating Ingress and Egress Policies, page 3-11](#)
- [Marking the Port DSCP, page 3-13](#)

Creating a DSCP Policy

You can create a policy that marks the DSCP value in the IP header packet to prioritize traffic in a particular class.

BEFORE YOU BEGIN

Before beginning this procedure, you must know or do the following:

- DSCP is described in [RFC 2475](#).
- You are logged in to the CLI in EXEC mode.
- If you use DSCP marking, you cannot use Discard Class marking (see the “[Creating a Discard Class Policy](#)” section on page 3-9).
- You can mark the DSCP field as a numeric value between 0 and 63 or as one of the commonly used values listed in the “[DSCP and Precedence Values](#)” section on page 7-1.

SUMMARY STEPS

1. `config t`
2. `policy-map [type qos] [match-first] policy-map-name`
3. `class [type qos] {class_map_name | class-default}`
4. `set dscp value`
5. `show policy-map policy-map-name`
6. `copy running-config startup-config`

DETAILED STEPS

	Command	Purpose
Step 1	<pre>config t</pre> <p>Example: n1000v# config t n1000v(config)#</p>	Places you into global configuration mode.
Step 2	<pre>policy-map [type qos] [match-first] policy-map-name</pre> <p>Example: n1000v(config)# policy-map policy1 n1000v(config-pmap-qos)#</p>	<p>Places you into policy map QoS configuration mode for the specified policy map and configures the map name in the running configuration.</p> <p>The <i>policy_map_name</i> argument is an alphabetic string that can be up to 40 case-insensitive characters long, including hyphen (-) and underscore (_) characters.</p>
Step 3	<pre>class [type qos] {class_map_name class-default}</pre> <p>Example: n1000v(config-pmap)# class class1</p>	<p>Creates a reference to <i>class-map-name</i> and enters policy-map class QoS configuration mode for the specified class map. By default, the class is added to the end of the policy map. Changes are saved in the running configuration.</p> <p>Use the class-default keyword to select all traffic that is not currently matched by classes in the policy map.</p>

	Command	Purpose
Step 4	set dscp <i>value</i> Example: n1000v(config-pmap-c-qos)# set dscp af31	Defines the DSCP value that should be used in all IP headers for the specified class and saves it in the running configuration. You can use a numeric value from 1 to 60 or one of the standard values from the “DSCP and Precedence Values” section on page 7-1. In this example, the standard value of af31 is used.
Step 5	show policy-map <i>policy_map_name</i> Example: n1000v(config-pmap-c-qos)# show policy-map policy1	Displays the policy map configuration for the specified map name.
Step 6	copy running-config startup-config Example: n1000v(config-pmap-c-qos)# copy running-config startup-config	(Optional) Saves the running configuration persistently through reboots and restarts by copying it to the startup configuration.

Creating an IP Precedence Policy

You can mark IP Precedence to give priority to all packets in a particular traffic class.

BEFORE YOU BEGIN

Before beginning this procedure, you must know or do the following:

- You are logged in to the CLI in EXEC mode.
- [Table 3-2](#) lists the [RFC 791](#) precedence values from least to most important.

Table 3-2 Precedence Values

Value	Description
000 (0)	Routine or Best Effort
001 (1)	Priority
010 (2)	Immediate
011 (3)	Flash (mainly used for voice signaling or for video)
100 (4)	Flash Override
101 (5)	Critical (mainly used for voice RTP)
110 (6)	Internet
111 (7)	Network

SUMMARY STEPS

1. **config t**
2. **policy-map** [**type qos**] [**match-first**] *policy-map-name*
3. **class** [**type qos**] {*class_map_name* | **class-default**}

4. **set precedence** *value*
5. **show policy-map** *policy-map-name*
6. **copy running-config startup-config**

DETAILED STEPS

	Command	Purpose
Step 1	config t Example: n1000v# config t n1000v(config)#	Places you into global configuration mode.
Step 2	policy-map [<i>type qos</i>] [<i>match-first</i>] <i>policy-map-name</i> Example: n1000v(config)# policy-map policy1 n1000v(config-pmap-qos)#	Places you into policy map QoS configuration mode for the specified policy map and configures the map name in the running configuration. The <i>policy_map_name</i> argument is an alphabetic string that can be up to 40 case-insensitive characters long, including hyphen (-) and underscore (_) characters.
Step 3	class [<i>type qos</i>] { <i>class_map_name</i> class-default } Example: n1000v(config-pmap-qos)# class class1	Creates a reference to <i>class-map-name</i> and enters policy-map class QoS configuration mode for the specified class map. By default, the class is added to the end of the policy map. Changes are saved in the running configuration. Use the class-default keyword to select all traffic that is not currently matched by classes in the policy map.
Step 4	set precedence <i>value</i> Example: n1000v(config-pmap-c-qos)# set precedence 3	Adds the precedence value that should be used in all packets for the specified traffic class. The change is saved in the running configuration. You can use a numeric value from 0 to 7, as show in Table 3-2 .
Step 5	show policy-map <i>policy_map_name</i> Example: n1000v(config-pmap-c-qos)# show policy-map policy1	Displays the policy map configuration for the specified map name.
Step 6	copy running-config startup-config Example: n1000v(config-pmap-c-qos)# copy running-config startup-config	(Optional) Saves the running configuration persistently through reboots and restarts by copying it to the startup configuration.

Creating a Class of Service Policy

You can mark the CoS field in the IEEE 802.1Q header for all traffic in a specific class. If you mark this field in an ingress or egress policy, it will only be set when a packet egresses an IEEE 802.1Q-capable interface.

BEFORE YOU BEGIN

Before beginning this procedure, you must know or do the following:

- You are logged in to the CLI in EXEC mode.
- You can set CoS in ingress and egress policies.

SUMMARY STEPS

1. `config t`
2. `policy-map [type qos] [match-first] policy-map-name`
3. `class [type qos] {class_map_name | class-default}`
4. `set cos cos-value`
5. `show policy-map policy-map-name`
6. `copy running-config startup-config`

DETAILED STEPS

	Command	Purpose
Step 1	<code>config t</code> Example: n1000v# config t n1000v(config)#	Places you into global configuration mode.
Step 2	<code>policy-map [type qos] [match-first] policy-map-name</code> Example: n1000v(config)# policy-map policy1 n1000v(config-pmap-qos)#	Places you into policy map QoS configuration mode for the specified policy map and configures the map name in the running configuration. The <i>policy_map_name</i> argument is an alphabetic string that can be up to 40 case-insensitive characters long, including hyphen (-) and underscore (_) characters.
Step 3	<code>class [type qos] {class_map_name class-default}</code> Example: n1000v(config-pmap-qos)# class class1	Creates a reference to <i>class-map-name</i> and enters policy-map class QoS configuration mode for the specified class map. By default, the class is added to the end of the policy map. Changes are saved in the running configuration. Use the class-default keyword to select all traffic that is not currently matched by classes in the policy map.
Step 4	<code>set cos cos-value</code> Example: n1000v(config-pmap-c-qos)# set cos 3	Sets the CoS value to <i>cos-value</i> . The value can range from 0 to 7. You can use this command only in egress policies.
Step 5	<code>show policy-map policy_map_name</code> Example: n1000v(config-pmap-c-qos)# show policy-map policy1	Displays the policy map configuration for the specified map name.

	Command	Purpose
Step 6	copy running-config startup-config Example: n1000v(config-pmap-c-qos)# copy running-config startup-config	(Optional) Saves the running configuration persistently through reboots and restarts by copying it to the startup configuration.

EXAMPLES

This example shows how to create a class of service policy.

```
n1000v# config t
n1000v(config)# policy-map policy1
n1000v(config-pmap-qos)# class class1
n1000v(config-pmap-c-qos)# set cos 3
n1000v(config-pmap-c-qos)# show policy-map policy1

Type qos policy-maps
=====

policy-map type qos policy1
  class class1
    set dscp 26
    set cos 3
  class class2
    set dscp 14
  class class-default
    set dscp 20
  police cir 256000 bps bc 300 ms pir 256000 bps be 300 ms conform transmit exceed set
  dscp dscp table cir-mar
  kdown-map violate drop
n1000v(config-pmap-c-qos)#
```

Creating a QoS Group Policy

You can mark the locally defined QoS group value.

BEFORE YOU BEGIN

Before beginning this procedure, you must know or do the following:

- You can mark the QoS group value only in ingress policies.
- You are logged in to the CLI in EXEC mode.

SUMMARY STEPS

1. **config t**
2. **policy-map [type qos] [match-first] policy-map-name**
3. **class [type qos] {class_map_name | class-default}**
4. **set qos-group qos-group-value**
5. **show policy-map policy-map-name**
6. **copy running-config startup-config**

DETAILED STEPS

	Command	Purpose
Step 1	<code>config t</code> Example: n1000v# config t n1000v(config)#	Places you into global configuration mode.
Step 2	<code>policy-map [type qos] [match-first] policy-map-name</code> Example: n1000v(config)# policy-map policy1 n1000v(config-pmap-qos)#	Places you into policy map QoS configuration mode for the specified policy map and configures the map name in the running configuration. The <i>policy_map_name</i> argument is an alphabetic string that can be up to 40 case-insensitive characters long, including hyphen (-) and underscore (_) characters.
Step 3	<code>class [type qos] {class-map-name class-default}</code> Example: n1000v(config-pmap-qos)# class class1 n1000v(config-pmap-c-qos)#	Creates a reference to <i>class-map-name</i> and enters policy-map class QoS configuration mode for the specified class map. By default, the class is added to the end of the policy map. Changes are saved in the running configuration. Use the class-default keyword to select all traffic that is not currently matched by classes in the policy map.
Step 4	<code>set qos-group qos-group-value</code> Example: n1000v(config-pmap-c-qos)# set qos-group 100	Sets the QoS group value to <i>qos-group-value</i> . The value can range from 0 to 126.
Step 5	<code>show policy-map policy_map_name</code> Example: n1000v(config-pmap-c-qos)# show policy-map policy1	Displays the policy map configuration for the specified map name.
Step 6	<code>copy running-config startup-config</code> Example: n1000v(config-pmap-c-qos)# copy running-config startup-config	(Optional) Saves the running configuration persistently through reboots and restarts by copying it to the startup configuration.

Creating a Discard Class Policy

You can set a local internal label discard class policy.

BEFORE YOU BEGIN

Before beginning this procedure, you must know or do the following:

- If you configure a local internal label discard class policy, you cannot create a DSCP policy. For more information about DSCP policies, see the [“Creating a DSCP Policy” procedure on page 3-3](#).
- You can set a discard class only in ingress policies.
- To reference the local discard class in a policy or in traffic classification, use the **match discard-class** command.

For more information, see the “Configuring Discard Class Classification” procedure on page 2-7.

SUMMARY STEPS

1. **config t**
2. **policy-map [type qos] [match-first] policy-map-name**
3. **class [type qos] {class_map_name | class-default}**
4. **set discard-class discard-class-value**
5. **show policy-map policy-map-name**
6. **copy running-config startup-config**

DETAILED STEPS

	Command	Purpose
Step 1	config t Example: n1000v# config t n1000v(config)#	Places you into global configuration mode.
Step 2	policy-map [type qos] [match-first] policy-map-name Example: n1000v(config)# policy-map policy1 n1000v(config-pmap-qos)#	Places you into policy map QoS configuration mode for the specified policy map and configures the map name in the running configuration. The <i>policy_map_name</i> argument is an alphabetic string that can be up to 40 case-insensitive characters long, including hyphen (-) and underscore (_) characters.
Step 3	class [type qos] {class_map_name class-default} Example: n1000v(config-pmap-qos)# class class1	Creates a reference to <i>class-map-name</i> and enters policy-map class QoS configuration mode for the specified class map. By default, the class is added to the end of the policy map. Changes are saved in the running configuration. Use the class-default keyword to select all traffic that is not currently matched by classes in the policy map.
Step 4	set discard-class discard-class-value Example: n1000v(config-pmap-c-qos)# set discard-class 40	Sets the discard class value to <i>discard-class-value</i> . The value can range from 0 to 63.
Step 5	show policy-map policy_map_name Example: n1000v(config-pmap-c-qos)# show policy-map policy1	Displays the policy map configuration for the specified map name.
Step 6	copy running-config startup-config Example: n1000v(config-pmap-c-qos)# copy running-config startup-config	(Optional) Saves the running configuration persistently through reboots and restarts by copying it to the startup configuration.

Creating Ingress and Egress Policies

You can attach a policy map to an interface or a port profile so that the marking instructions are applied to the ingress or egress packets.

BEFORE YOU BEGIN

Before beginning this procedure, you must know or do the following:

- The interface or port profile have been created.
- The policy map that you want to use has been defined.

**Note**

You can attach only one input policy and one output policy to an interface or port profile.

SUMMARY STEPS

1. **config t**
2. Enter one of the following commands:
 - **interface** *type number*
 - **port-profile** *name*
3. **service-policy** [**type qos**] {**input** | **output**} *policy-map-name* [**no-stats**]
4. **show policy-map** *policy_map_name*
5. **copy running-config startup-config**

DETAILED STEPS

	Command	Purpose
Step 1	config t Example: n1000v# config t n1000v(config)#	Places you into global configuration mode.
Step 2	Enter one of the following commands: <ul style="list-style-type: none"> • interface <i>type number</i> • port-profile <i>name</i> Example: n1000v(config)# interface ethernet 1/1 n1000v(config-if)#	Places you into Configuration mode for the specified Ethernet or vEthernet interface or port profile.
Step 3	service-policy [type qos] { input output } <i>policy-map-name</i> [no-stats] Example: n1000v(config-if)# service-policy input policy1	(Optional) Attaches a policy map name that will be added to the input or output packets of the interface or port profile. Note You can attach only one input policy and one output policy to an interface or port profile.
Step 4	show policy-map <i>policy_map_name</i> Example: n1000v(config-if)# show policy-map policy1	Displays the policy map configuration for the specified map name.
Step 5	copy running-config startup-config Example: n1000v(config-if)# copy running-config startup-config	(Optional) Saves the running configuration persistently through reboots and restarts by copying it to the startup configuration.

EXAMPLES

This example shows how to configure an ingress policy on an Ethernet interface:

```
n1000v# config t
n1000v(config)# interface ethernet 1/1
n1000v(config-if)# service-policy input policy1
n1000v(config-if)# show policy-map policy1

Type qos policy-maps
=====

policy-map type qos policy1
n1000v(config-if)# copy running-config startup-config
```

This example shows how to configure an ingress policy on a port profile:

```
n1000v# config t
n1000v(config)# port-profile accessprofile
n1000v(config-port-prof)# service-policy input policy1
n1000v(config-port-prof)# show policy-map policy1

Type qos policy-maps
```

```
=====  
policy-map type qos policy1  
n1000v(config-port-prof)# copy running-config startup-config
```

Marking the Port DSCP

You can mark the DSCP port for each class of traffic that is defined in a specified ingress or egress policy map.

BEFORE YOU BEGIN

Before beginning this procedure, you must know or do the following:

- The default behavior is to preserve the DSCP value, or to trust DSCP. To make the port untrusted, change the DSCP value.
- Unless you configure a QoS policy and attach that policy to specified interfaces, the DSCP value is preserved.
- The class map that you want to use has been defined. See [Chapter 2, “Configuring QoS Classification.”](#)



Note

You can attach only one input policy and one output policy to an interface or port profile.

SUMMARY STEPS

1. **config t**
2. **policy-map** [**type qos**] [**match-first**] *policy-map-name*
3. **class** [**type qos**] { *class_map_name* | **class-default** }
4. **set dscp-value**
5. Repeat steps 3. and 4. for each class map that you want to create.
6. **exit**
7. **exit**
8. Enter one of the following commands:
 - **interface** *type number*
 - **port-profile** *name*
9. **service-policy** [**type qos**] { **input** | **output** } *policy-map-name* [**no-stats**]
10. **show policy-map** *policy_map_name*
11. **copy running-config startup-config**

DETAILED STEPS

	Command	Purpose
Step 1	config t Example: n1000v# config t n1000v(config)#	Places you into global configuration mode.
Step 2	policy-map [type qos] [match-first] <i>policy-map-name</i> Example: n1000v(config)# policy-map policy1 n1000v(config-pmap-qos)#	Places you into policy map QoS configuration mode for the specified policy map and configures the map name in the running configuration. The <i>policy_map_name</i> argument is an alphabetic string that can be up to 40 case-insensitive characters long, including hyphen (-) and underscore (_) characters.
Step 3a	class [type qos] {class-map-name class-default} Example: n1000v(config-pmap)# class class1 n1000v(config-pmap-c-qos)#	Creates a reference to <i>class-map-name</i> and enters policy-map class QoS configuration mode for the specified class map. By default, the class is added to the end of the policy map. Changes are saved in the running configuration. Use the class-default keyword to select all traffic that is not currently matched by classes in the policy map.
Step 4b	set dscp value Example: n1000v(config-pmap-c-qos)# set dscp af31	Sets a DSCP value. Valid values are shown in the “DSCP and Precedence Values” section on page 7-1.
Step 5	Repeat Step 3 and Step 4 for each class map that you want to create.	
Step 6	exit Example: n1000v(config-pmap-c-qos)# exit n1000v(config-pmap-qos)#	Returns you to policy map configuration mode.
Step 7	exit Example: n1000v(config-pmap-qos)# exit n1000v(config)#	Returns you to global configuration mode.

	Command	Purpose
Step 8	Enter one of the following commands: <ul style="list-style-type: none"> <code>interface type number</code> <code>port-profile name</code> Example: n1000v(config)# interface ethernet 1/1 n1000v(config-if)#	Places you into the configuration mode for the specified Ethernet or vEthernet interface or port profile.
Step 9	service-policy [type qos] {input output} policy-map-name [no-stats] Example: n1000v(config-if)# service-policy input policy1	(Optional) Attaches a policy map name that will be added to the input or output packets of the interface or port profile. Note You can attach only one input policy and one output policy to an interface or port profile.
Step 10	show policy-map policy_map_name Example: n1000v(config-if)# show policy-map policy1	Displays the policy map configuration for the specified map name.
Step 11	copy running-config startup-config Example: n1000v(config-if)# copy running-config startup-config	(Optional) Saves the running configuration persistently through reboots and restarts by copying it to the startup configuration.

EXAMPLES

This example shows how to mark the DSCP port for each class of traffic defined in an ingress policy map on an Ethernet interface.

```
n1000v# config t
n1000v(config)# policy-map policy1
n1000v(config-pmap)# class class1
n1000v(config-pmap-c-qos)# set dscp af31
n1000v(config-pmap-c-qos)# exit
n1000v(config-pmap-qos)# class class2
n1000v(config-pmap-c-qos)# set dscp af13
n1000v(config-pmap-c-qos)# exit
n1000v(config-pmap-qos)# class class-default
n1000v(config-pmap-c-qos)# set dscp af22
n1000v(config-pmap-c-qos)# exit
n1000v(config-pmap-qos)# exit
n1000v(config)# interface ethernet 1/1
n1000v(config-if)# service-policy input policy1
n1000v(config-if)# show policy-map policy1

Type qos policy-maps
=====

policy-map type qos policy1
  class class1
    set dscp af31
  class class2
    set dscp af13
  class class-default
    set dscp af22
n1000v(config-if)# copy running-config startup-config
```

This example shows how to mark the DSCP port for each class of traffic defined in an ingress policy map on a port profile.

```
n1000v# config t
n1000v(config)# policy-map policy1
n1000v(config-pmap-qos)# class class1
n1000v(config-pmap-c-qos)# set dscp af31
n1000v(config-pmap-c-qos)# exit
n1000v(config-pmap-qos)# class class2
n1000v(config-pmap-c-qos)# set dscp af13
n1000v(config-pmap-c-qos)# exit
n1000v(config-pmap-qos)# class class-default
n1000v(config-pmap-c-qos)# set dscp af22
n1000v(config-pmap-c-qos)# exit
n1000v(config-pmap-qos)# exit
n1000v(config)# port-profile accessprofile
n1000v(config-port-prof)# service-policy input policy1
n1000v(config-port-prof)# show policy-map policy1

Type qos policy-maps
=====

policy-map type qos policy1
  class class1
    set dscp af31
  class class2
    set dscp af13
  class class-default
    set dscp af22
n1000v(config-port-prof)# copy running-config startup-config
```

Verifying the QoS Policy Configuration

To verify the QoS policy configuration, perform one of the following tasks:

Command	Description
show policy-map [type qos] [name <i>policy_map_name</i>]	Displays the policy map configuration.
show table-map <i>name</i>	Displays the table map configuration.

Configuration Example for QoS Marking Policies

This example shows how to display a specific policy-map policy:

```
n1000v(config)# show policy-map policy-ipacl
Type qos policy-maps
=====
policy-map type qos policy-ipacl
  class class-ipacl
    set dscp 10
```

This example shows how to display policy maps for all interfaces:


```
n1000v# show policy-map interface brief

Interface/VLAN [Status]:INP QOS      OUT QOS      INP QUE      OUT QUE
=====
Vethernet1     [Active]:           media
Vethernet10    [Active]:           media
Vethernet13    [Active]:web_policer
Vethernet15    [Active]:iperf
Vethernet16    [Active]:           iperf_policer
Vethernet17    [Active]:ixia_in    ixia_out
Vethernet18    [Active]:           media
Vethernet19    [Active]:iperf
Vethernet20    [Active]:           iperf_policer
Vethernet21    [Active]:netperf_polic

=====
```

Feature History for QoS Marking Policies

This section provides the QoS marking policies release history.

Feature Name	Releases	Feature Information
QoS Marking Policies	4.0	This feature was introduced.
QoS Marking Policies	4.0(4)SV1(2)	DSCP and Discard Class are no longer mutually exclusive. For a single class, you can set operations on any two out of the following five fields: CoS, IP Precedence, DSCP, QoS Group, and Discard Class.

