



# IPv6 Non-AVC QoS Support

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## Information About IPv6 Non-AVC QoS Support

From Cisco IOS XE Amsterdam 17.2.1, the IPv6 Non-AVC QoS feature is supported on Fabric and FlexConnect local switching, where QoS is performed at the AP, on par with the IPv4 functionality.



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**Note** This feature is not supported on Cisco Aironet 1700 Series Access Points, Cisco Aironet 2700 Series Access Points, and Cisco Aironet 3700 Series Access Points.

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The following actions are supported for IPv6 Non-AVC QoS:

- Marking the DSCP value for IPv6 packets
- Dropping IPv6 packets based on the DSCP value
- Policing IPv6 traffic

## Configuring IPv6 Non-AVC QoS

The following sections contain information about the various configurations that comprise the configuration of IPv6 Non-AVC QoS:

## Marking DSCP Values for an IPv6 Packet

### Procedure

	Command or Action	Purpose
<b>Step 1</b>	<b>configure terminal</b> <b>Example:</b> Device# configure terminal	Enters global configuration mode.
<b>Step 2</b>	<b>policy-map <i>policy-map-name</i></b> <b>Example:</b> Device(config)# policy-map testpolicy	Creates a policy map.
<b>Step 3</b>	<b>class <i>class-map-name</i></b> <b>Example:</b> Device(config-pmap)#class testmap	Creates a policy criteria.
<b>Step 4</b>	<b>set dscp &lt;0-63&gt;</b> <b>Example:</b> Device(config-pmap-c)#set dscp 34	Sets the DSCP value in an IPv6 packet between 0 and 63.

## Dropping an IPv6 Packet with DSCP Values

### Procedure

	Command or Action	Purpose
<b>Step 1</b>	<b>configure terminal</b> <b>Example:</b> Device# configure terminal	Enters global configuration mode.
<b>Step 2</b>	<b>policy-map <i>policy-map-name</i></b> <b>Example:</b> Device(config)# policy-map drop_dscp	Creates a policy map.
<b>Step 3</b>	<b>class <i>class-map-name</i></b> <b>Example:</b> Device(config-pmap)#class drop_dscp_class	Creates a policy criteria.
<b>Step 4</b>	<b>police cir &lt;8000 - 10000000000&gt;</b> <b>Example:</b> Device(config-pmap-c)#police cir 8000	Polices the committed information rate between 8000 and 10000000000. Target bit rate (Bits per second).

	Command or Action	Purpose
<b>Step 5</b>	<b>conform-action drop</b> <b>Example:</b> Device(config-pmap-c-police)#conform action drop	Configures the <b>conform-action drop</b> command, the action when the rate is less than the conform burst.
<b>Step 6</b>	<b>exceed-action drop</b> <b>Example:</b> Device(config-pmap-c-police)#exceed-action drop	Configures the <b>exceed-action drop</b> command, the action when the rate is within the conform and conform plus exceed burst.

## Policing IPv6 Traffic

### Procedure

	Command or Action	Purpose
<b>Step 1</b>	<b>configure terminal</b> <b>Example:</b> Device# configure terminal	Enters global configuration mode.
<b>Step 2</b>	<b>policy-map <i>policy-map-name</i></b> <b>Example:</b> Device(config)# policy-map drop_dscp	Creates a policy map.
<b>Step 3</b>	<b>class <i>class-map-name</i></b> <b>Example:</b> Device(config-pmap)#class drop_dscp_class	Creates a policy criteria.
<b>Step 4</b>	<b>police cir &lt;8000 - 10000000000&gt;</b> <b>Example:</b> Device(config-pmap-c)#police cir 8000	Polices the committed information rate between 8000 and 10000000000. Target bit rate (Bits per second).
<b>Step 5</b>	<b>conform-action transmit</b> <b>Example:</b> Device(config-pmap-c-police)#conform-action transmit	Configures the <b>conform-action transmit</b> command, for transmitting packets.
<b>Step 6</b>	<b>exceed-action drop</b> <b>Example:</b> Device(config-pmap-c-police)#exceed-action drop	Configures the <b>exceed-action drop</b> command, the action when the rate is within conform and conform plus exceed burst.

## Verifying IPv6 Non-AVC QoS

- To verify the DSCP values for IPv6 packets, IPv6 packets that are dropped, and the policing of IPv6 traffic, use the **show policy-map** command:

The following is a sample output of the **show** command that verifies the DSCP value for an IPv6 packet:

```
Device# show policy-map
1 policymaps
Policy Map Set-dscp type:qos client:default
  Class Set-dscp1_ADV_UI_CLASS
    set dscp af41 (34)
  Class class-default
    no actions
```

- The following is a sample output of the **show** command that verifies the IPv6 packets that are dropped:

```
Device# show policy-map
1 policymaps
Policy Map Drop-dscp type:qos client:default
  Class Drop-dscp1_ADV_UI_CLASS
    drop

  Class class-default
    no actions
```

- The following is a sample output of the **show** command that verifies the policing of IPv6 traffic:

```
Device# show policy-map
1 policymaps
Policy Map Drop-traffic type:qos client:default
  Class Drop-traffic1_ADV_UI_CLASS
    police rate 2000000 bps (250000Bytes/s)
    conform-action
    exceed-action

  Class class-default
    no actions
```