IPv6 Non-AVC QoS Support

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.

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.

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
Step 1	**configure terminal** **Example:** `Device# configure terminal`	Enters global configuration mode.
Step 2	**policy-map** *policy-map-name* **Example:** `Device(config)# policy-map testpolicy`	Creates a policy map.
Step 3	**class** *class-map-name* **Example:** `Device(config-pmap)#class testmap`	Creates a policy criteria.
Step 4	**set dscp** *<0-63>* **Example:** `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
Step 1	**configure terminal** **Example:** `Device# configure terminal`	Enters global configuration mode.
Step 2	**policy-map** *policy-map-name* **Example:** `Device(config)# policy-map drop_dscp`	Creates a policy map.
Step 3	**class** *class-map-name* **Example:** `Device(config-pmap)#class drop_dscp_class`	Creates a policy criteria.
Step 4	**police cir** *<8000 - 10000000000>* **Example:** `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
Step 5	**conform-action drop** **Example:** `Device(config-pmap-c-police)#conform action drop`	Configures the **conform-action drop** command, the action when the rate is less than the conform burst.
Step 6	**exceed-action drop** **Example:** `Device(config-pmap-c-police)#exceed-action drop`	Configures the **exceed-action drop** command, the action when the rate is within the conform and conform plus exceed burst.

Policing IPv6 Traffic

Procedure

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