

DSCP Marking

Differentiated Services Code Point (DSCP) marking allows network devices to prioritize different types of traffic based on their DSCP value. AMF supports updating the IP headers with configured DSCP information on outgoing packets on N2/SCTP interface, N26/GTPC interface, and SBI interface.

Feature History

Table 1: Feature History

Feature Name	Release Information	Description
DSCP Marking	2025.03.0	AMF applies DSCP marking to outgoing packets on the N2/SCTP and N26/GTPC interfaces, ensuring that traffic is handled appropriately. Command introduced: • **config { instance instance-id** *instance_id* **{ endpoint sctp { dscp** *dscp_value* **} } }**— Used to configure the DSCP value for N2-SCTP interface. • **config { instance instance-id** *instance_id* **{ endpoint gtp { dscp** *dscp_value* **} } }**— Used to configure the DSCP value for N26-GTPC interface. **Default Setting**: Disabled – Configuration Required

Feature Name	Release Information	Description
DSCP marking for SBI interface	2026.02.0	AMF applies DSCP marking to outgoing packets on the SBI interfaces, ensuring that traffic is handled appropriately. Command introduced: **config { instance instance-id** *instance_id* **{ endpoint sbi { dscp** *dscp_value* **} } }**— Used to configure the DSCP value for SBI interface. **Default Setting**: Disabled – Configuration Required

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Usage Guidelines for DSCP Marking

To configure DSCP marking:

- Use CLI commands to set DSCP values for N2/SCTP, N26/GTPC, and SBI interfaces.
- DSCP values can be configured as hexadecimal (e.g., `0x0-0x3F`) or decimal (range: `0-63`).
- If DSCP value is not specified in the configuration then the default DSCP value is set to 0.
- Configured values apply to all outgoing requests and responses on the specified interface.
- DSCP marking is configured per interface, not per peer or session.
- Supports runtime changes to DSCP values.

Configure DSCP for N2/SCTP Interface

Procedure

Step 1 Enter the instance configuration mode.

instance instance-id *instance_id*

Step 2 Configure the endpoint for the instance.

endpoint *endpoint_name*

Specify sctp as the endpoint type for the instance.

Step 3 Configure the DSCP value for the SCTP endpoint.

dscp *dscp_value*

DSCP value is either in hexadecimal string (range 0x0-0x3F) eg:0x3F or decimal value (range 0-63) eg:12.

Following is an example of the sample CLI output for the DSCP marking.

```
[amf] amf# show running-config instance instance-id 1 endpoint sctp
instance instance-id 1
 endpoint sctp
  replicas     2
  nodes        1
  internal-vip 29.29.29.29
  dscp         10
  service sctp-1
   interface sctp
    internal-port metrics 9705 admin 9703 ipc 9701 pprof 9707 keepalived 29001
    internal-vip 29.29.29.29
    vip-ip 29.29.29.29 vip-port 1000
   exit
  exit
  service sctp-2
   interface sctp
    internal-port metrics 9715 admin 9713 ipc 9711 pprof 9717 keepalived 29011
    internal-vip 29.29.29.29
    vip-ip 29.29.29.29 vip-port 1001
   exit
  exit
 exit
exit
```

Step 4 Save and commit the configuration.

Configure DSCP for N26/GTPC Interface

Procedure

Step 1 Enter the instance configuration mode.

instance instance-id *instance_id*

Step 2 Configure the endpoint for the instance.

endpoint *endpoint_name*

Specify gtp as the endpoint type for the instance.

Step 3 Configure the DSCP value for the GTPC endpoint.

dscp *dscp_value*

DSCP value is either in hexadecimal string (range 0x0-0x3F) eg:0x3F or decimal value (range 0-63) eg:12.

Following is an example of the sample CLI output for the DSCP marking.

```
[amf] amf# show running-config instance instance-id 1 endpoint gtp
instance instance-id 1
 endpoint gtp
  nodes        2
  retransmission timeout 4 max-retry 5
  internal-vip 27.27.27.27
  dscp         46
  vip-ip 27.27.27.27
  interface n26
   vip-ip 27.27.27.27
  exit
 exit
exit
```

Step 4 Save and commit the configuration.

Configure DSCP for SBI Interface

Procedure

Step 1 Enter the instance configuration mode.

instance instance-id *instance_id*

Step 2 Configure the endpoint for the instance.

endpoint *endpoint_name*

Specify sbi as the endpoint type for the instance.

Step 3 Configure the DSCP value for the SBI endpoint.

dscp *dscp_value*

DSCP value is either in hexadecimal string (range 0x0-0x3F) eg:0x3F or decimal value (range 0-63) eg:12.

Following is an example of the sample CLI output for the DSCP marking.

```
[amf] amf# show running-config instance instance-id 1 endpoint sbi
instance instance-id 1
 endpoint sbi
  replicas     1
  nodes        2
  loopbackPort 8091
  instancetype IPv6
  dscp 33
  fqdn cisco-amf.3gppnetwork.org
  vip-ipv6 2001:172:16:186::4 vip-ipv6-port 8070
```