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# Configuration Commands

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## Generic Commands

### description

**Syntax** **description** *description-string*  
**no description**

**Context** config>qos>network *policy-id*

**Description** This command creates a text description stored in the configuration file for a configuration context.

The **description** command associates a text string with a configuration context to help identify the context in the configuration file.

The **no** form of this command removes any description string from the context.

**Default** No description is associated with the configuration context.

**Parameters** *description-string* — A text string describing the entity. Allowed values are any string up to 80 characters long composed of printable, 7-bit ASCII characters. If the string contains special characters (#, \$, spaces, etc.), the entire string must be enclosed within double quotes.

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## Operational Commands

### copy

**Syntax** `copy network src-pol dst-pol [overwrite]`

**Context** `config>qos`

**Description** This command copies existing QoS policy entries for a QoS policy-id to another QoS policy-id.

The **copy** command is used to create new policies using existing policies and also allows bulk modifications to an existing policy with the use of the **overwrite** keyword.

**Parameters** `network src-pol dst-pol` — Indicates that the source and destination policies are network policy IDs. Specify the source policy that the copy command will copy and specify the destination policy to which the command will duplicate the policy to a new or different policy ID.

**Values** 1 — 65535

**overwrite** — Specifies to replace the existing destination policy. Everything in the existing destination policy will be overwritten with the contents of the source policy. If **overwrite** is not specified, an error will occur if the destination policy ID exists.

```
SR>config>qos# copy network 1 427
MINOR: CLI Destination "427" exists use {overwrite}.
SR>config>qos# copy network 1 427 overwrite
```

### scope

**Syntax** `scope {exclusive | template}`  
`no scope`

**Context** `config>qos>network policy-id`

**Description** This command configures the network policy scope as exclusive or template. The policy's scope cannot be changed if the policy is applied to an interface.

The **no** form of this command sets the scope of the policy to the default of **template**.

**Default** `template`

**Parameters** **exclusive** — When the scope of a policy is defined as exclusive, the policy can only be applied to one interface. If a policy with an exclusive scope is assigned to a second interface an error message is generated. If the policy is removed from the exclusive interface, it will become available for assignment to another exclusive interface.  
The system default policies cannot be put into the exclusive scope. An error will be generated if scope exclusive is executed in any policies with a policy-id equal to 1.

**template** — When the scope of a policy is defined as template, the policy can be applied to multiple interfaces on the router.

Default QoS policies are configured with template scopes. An error is generated if you try to modify the template scope parameter to exclusive scope on default policies.

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## Multi-Link Frame Relay Commands

### mc-fr-profile-ingress

**Syntax** [no] mc-fr-profile-ingress *profile-id*

**Context** config>qos

**Description** This command creates a profile for the user to configure the ingress QoS parameters of a Multi-Link Frame Relay (MLFR) bundle. A maximum of 128 ingress QoS profiles may be created on the system.

The **no** form of this command deletes the profile.

**Default** none

**Parameters** *profile-id* — Specifies the profile number.

**Values** 1 — 65535

### class

**Syntax** class *class-id*

**Context** config>qos>mc-fr-profile-ingress  
config>qos>mc-fr-profile-egress

**Description** This command provides the Frame Relay scheduling class context for the user to configure the ingress or egress QoS parameters of an MLFR bundle or an FRF.12 UNI/NNI link for this profile.

**Default** none

**Parameters** *class-id* — Specifies the Frame Relay scheduling class number.

**Values** 0 — 3

### reassembly-timeout

**Syntax** reassembly-timeout *timeout-value*  
no reassembly-timeout

**Context** config>qos>mc-fr-profile-ingress>class

**Description** This command configures the value of the MLFR bundle ingress per-class reassembly timer for the profile.

**Default** Class 0=10 msec  
Class 1=10 msec  
Class 2=100 msec  
Class 3=1000 msec

**Parameters** *timeout-value* — Specifies the timeout value, in milliseconds.

**Values** 1 — 1000

## mc-fr-profile-egress

**Syntax** [no] **mc-fr-profile-egress** *profile-id*

**Context** config>qos

**Description** This command creates a profile for the user to configure the egress QoS parameters of an MLFR bundle or an FRF.12 UNI/NNI link. A maximum of 128 egress QoS egress profile may be created on the system.

The no form of this command deletes the profile.

**Default** none

**Parameters** *profile-id* — Specifies the profile number.

**Values** 1 — 65535

## max-queue-size

**Syntax** **max-queue-size** *queue-size*  
**no max-queue-size**

**Context** config>qos>mc-fr-profile-egress>class

**Description** This command configures the maximum size for each Frame Relay scheduling class queue for this profile.

**Default** Class 0=10  
Class 1=50  
Class 2=150  
Class 3=750

**Parameters** *queue-size* — Specifies the number, in milliseconds, of the available link or bundle rate.

**Values** 1 — 1000

## mir

**Syntax**    **mir** *mir*  
              **no mir**

**Context**    config>qos>mc-fr-profile-egress>class

**Description**    This command configures the minimum information rate scheduling parameter for each Frame Relay scheduling class queues for this profile.

**Default**     90% for all classes

**Parameters**    *mir* — Specifies the percentage of the available link or bundle rate.

**Values**     1 — 100

## weight

**Syntax**    **weight** *weight*  
              **no weight**

**Context**    config>qos>mc-fr-profile-egress>class

**Description**    This command configures the WRR weight scheduling parameter for each Frame Relay scheduling class queue for this profile.

**Default**     Class 0=N/A  
              Class 1=1 (not configurable)  
              Class 2=89  
              Class 3=10

**Parameters**    *weight* — Specifies the weight schedule.

**Values**     1 — 100

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# Network QoS Policy Commands

## network

**Syntax** `network network-policy-id [create]`  
`no network network-policy-id`

**Context** config>qos

**Description** This command creates or edits a QoS network policy. The network policy defines the treatment IP or MPLS packets receive as they ingress and egress the network port.

The QoS network policy consists of an ingress and egress component. The ingress component of the policy defines how DiffServ code points and MPLS EXP bits are mapped to internal forwarding class and profile state. The forwarding class and profile state define the Per Hop Behavior (PHB) or the QoS treatment through the router. The mapping on each network interface defaults to the mappings defined in the default network QoS policy until an explicit policy is defined for the network interface.

The egress component of the network QoS policy defines the queuing parameters associated with each forwarding class. Each of the forwarding classes defined within the system automatically creates a queue on each network interface. This queue gets all the parameters defined within the default network QoS policy 1 until an explicit policy is defined for the network interface access uplink port. If the egressing packet originated on an ingress SAP, or the remarking parameter is defined for the egress interface, the egress QoS policy also defines the IP DSCP or MPLS EXP bit marking based on the forwarding class and the profile state.

Network **policy-id 1** exists as the default policy that is applied to all network interfaces by default. The network **policy-id 1** cannot be modified or deleted. It defines the default DSCP-to-FC mapping and MPLS EXP-to-FC mapping and for the ingress. For the egress, it defines six forwarding classes which represent individual queues and the packet marking criteria.

Network policy-id 1 exists as the default policy that is applied to all network ports by default. This default policy cannot be modified or deleted. It defined the default DSCP-to-FC mapping and default unicast meters for ingress IP traffic. For the egress, it defines the forwarding class to Dot1p and DSCP values and the packet marking criteria.

If a new network policy is created (for instance, policy-id 3), only the default action and egress forwarding class parameters are identical to the default policy. A new network policy does not contain the default DSCP-to-FC and MPLS-EXP-to-FC mapping for network QoS policy of type **ip-interface** or the DSCP-to-FC mapping (for network QoS policy of type **port**). The default network policy can be copied (use the copy command) to create a new network policy that includes the default ingress DSCP-to-FC and MPLS EXP-to-FC mapping (as appropriate). You can modify parameters or use the **no** modifier to remove an object from the configuration.

Any changes made to an existing policy, using any of the sub-commands, will be applied immediately to all network interfaces where this policy is applied. For this reason, when many changes are required on a policy, it is highly recommended that the policy be copied to a work area policy-id. That work-in-progress policy can be modified until complete and then written over the original policy-id. Use the `config qos copy` command to maintain policies in this manner.

The **no** form of this command deletes the network policy. A policy cannot be deleted until it is removed from all entities where it is applied. The default network **policy** *policy-id* 1 cannot be deleted.

**Default** System Default Network Policy 1

**Parameters** *network-policy-id* — The policy-id uniquely identifies the policy on the router.

**Default** none

**Values** 1— 65535

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## Network Ingress QoS Policy Commands

### ingress

**Syntax** `ingress`

**Context** `config>qos>network policy-id`

**Description** This command is used to enter the CLI node that creates or edits policy entries that specify the DiffServ code points to forwarding class mapping for all IP packets and define the MPLS EXP bits to forwarding class mapping for all labeled packets.

When pre-marked IP or MPLS packets ingress on a network port, they get a Per Hop Behavior (that is, the QoS treatment through the router-based on the mapping defined under the current node.

### default-action

**Syntax** `default-action fc fc-name profile {in | out}`

**Context** `config>qos>network>ingress`

**Description** This command defines or edits the default action to be taken for packets that have an undefined DSCP or MPLS EXP bits set. The **default-action** command specifies the forwarding class to which such packets are assigned.

Multiple default-action commands will overwrite each previous default-action command.

**Default** `default-action fc be profile out`

**Parameters** `fc fc-name` — Specify the forwarding class name. All packets with DSCP value or MPLS EXP or dot1p bits that is not defined will be placed in this forwarding class.

**Default** None, the fc name must be specified

**Values** be, l2, af, ll, h2, ef, h1, nc

**profile {in | out}** — All packets that are assigned to this forwarding class will be considered in or out of profile based on this command. In case of congestion, the in-profile packets are preferentially queued over the out-of-profile packets.

**Default** None

**Values** in, out

## dot1p

**Syntax** **dot1p** *dot1p-priority* **fc** *fc-name* **profile** {**in** | **out** | **use-de**}  
**no dot1p** *dot1p-priority*

**Context** config>qos>network>ingress

**Description** This command explicitly sets the forwarding class or enqueueing priority and profile of the packet when a packet is marked with a *dot1p-priority* specified. Adding a dot1p rule on the policy forces packets that match the *dot1p-priority* specified to override be assigned to the forwarding class and enqueueing priority and profile of the packet based on the parameters included in the Dot1p rule. When the forwarding class is not specified in the rule, a matching packet preserves (or inherits) the existing forwarding class derived from earlier matches in the classification hierarchy. When the enqueueing priority is not specified in the rule, a matching packet preserves (or inherits) the existing enqueueing priority derived from earlier matches in the classification hierarchy.

The *dot1p-priority* is derived from the most significant three bits in the IEEE 802.1Q or IEEE 802.1P header. The three dot1p bits define 8 Class-of-Service (CoS) values commonly used to map packets to per-hop Quality-of-Service (QoS) behavior.

The **no** form of this command removes the explicit dot1p classification rule from the policy. Removing the rule on the policy immediately removes the rule on all ingress SAPs using the policy.

**Parameters** *dot1p-priority* — This value is a required parameter that specifies the unique IEEE 802.1P value that will match the dot1p rule. If the command is executed multiple times with the same *dot1p-value*, the previous forwarding class and enqueueing priority is completely overridden by the new parameters or defined to be inherited when a forwarding class or enqueueing priority parameter is missing.

A maximum of eight dot1p rules are allowed on a single policy.

**Values** 0 — 7

**fc** *fc-name* — The value given for the *fc-name* parameter must be one of the predefined forwarding classes in the system. Specifying the *fc-name* is optional. When a packet matches the rule, the forwarding class is only overridden when the **fc** *fc-name* parameter is defined on the rule. If the packet matches and the forwarding class is not explicitly defined in the rule, the forwarding class is inherited based on previous rule matches.

**Values** be, 12, af, 11, h2, ef, h1, nc

**profile** {**in** | **out** | **use-de**} — All packets that are assigned to this forwarding class will be considered in or out of profile based on this command or to use the DE1 bit to determine the profile of the packets. In case of congestion, the in-profile packets are preferentially queued over the out-of-profile packets.

**Default** none, the profile name must be specified.

## dscp

**Syntax** **dscp** *dscp-name* **fc** *fc-name* **profile** {**in** | **out**}  
**no dscp** *dscp-name*

**Context** config>qos>network *policy-id*>ingress

**Description** This command creates a mapping between the DiffServ Code Point (DSCP) of the network ingress traffic and the forwarding class.

Ingress traffic that matches the specified DSCP will be assigned to the corresponding forwarding class. Multiple commands can be entered to define the association of some or all sixty-four DiffServ code points to the forwarding class. For undefined code points, packets are assigned to the forwarding class specified under the **default-action** command.

The **no** form of this command removes the DiffServ code point to forwarding class association. The **default-action** then applies to that code point value.

**Default** none

**Parameters** *dscp-name* — The name of the DiffServ code point to be associated with the forwarding class. DiffServ code point can only be specified by its name and only an existing DiffServ code point can be specified. The software provides names for the well known code points.

The system-defined names available are as follows. The system-defined names must be referenced as all lower case exactly as shown in the first column in [Table 25](#) and [Table 26](#) below.

Additional names to code point value associations can be added using the '**dscp-name** *dscp-name* *dscp-value*' command.

The actual mapping is being done on the *dscp-value*, not the *dscp-name* that references the *dscp-value*. If a second *dscp-name* that references the same *dscp-value* is mapped within the policy, an error will occur. The second name will not be accepted until the first name is removed.

**Table 25: Default DSCP Names to DSCP Value Mapping Table**

<b>DSCP Name</b>	<b>DSCP Value Decimal</b>	<b>DSCP Value Hexadecimal</b>	<b>DSCP Value Binary</b>
nc1	48	0x30	0b110000
nc2	56	0x38	0b111000
ef	46	0x2e	0b101110
af41	34	0x22	0b100010
af42	36	0x24	0b100100
af43	38	0x26	0b100110
af31	26	0x1a	0b011010
af32	28	0x1c	0b011100
af33	30	0x1d	0b011110
af21	18	0x12	0b010010
af22	20	0x14	0b010100
af23	22	0x16	0b010110
af11	10	0x0a	0b001010
af12	12	0x0c	0b001100
af13	14	0x0e	0b001110
default	0	0x00	0b000000

**Table 26: Default Class Selector Code Points to DSCP Value Mapping Table**

<b>DSCP Name</b>	<b>DSCP Value Decimal</b>	<b>DSCP Value Hexadecimal</b>	<b>DSCP Value Binary</b>
cs7	56	0x38	0b111000
cs6	48	0x30	0b110000
cs5	40	0x28	0b101000
cs4	32	0x20	0b100000

**Table 26: Default Class Selector Code Points to DSCP Value Mapping Table (Continued)**

DSCP Name	DSCP Value Decimal	DSCP Value Hexadecimal	DSCP Value Binary
cs3	24	0x18	0b011000
cs2	16	0x10	0b010000
cs1	08	0x8	0b001000

**fc *fc-name*** — Enter this required parameter to specify the *fc-name* with which the code point will be associated.

**Default** none, for every DSCP value defined, the forwarding class must be indicated.

**Values** be, l2, af, l1, h2, ef, h1, nc

**profile {in | out}** — Enter this required parameter to indicate whether the DiffServ code point value is the in-profile or out-of-profile value.

NOTE 1: DSCP values mapping to forwarding classes Expedited (ef), High-1 (h1) and Network-Control (nc) can only be set to in-profile.

NOTE 2: DSCP values mapping to forwarding class ‘be’ can only be set to out-of-profile.

**Default** None, for every DSCP value defined, the profile must be indicated. If a DSCP value is not mapped, the default-action forwarding class and profile state will be used for that value.

**Values** in, out

## fp-redirect-group

**Syntax** **fp-redirect-group policer** *policer-id*  
**no fp-redirect-group policer**

**Context** config>qos>network>ingress>fc

**Description** This command is used to redirect the FC of a packet of a PW or network IP interface to an ingress forwarding plane queue-group.

It defines the mapping of a FC to a policer-id and redirects the lookup of the policer of the same ID in some ingress forwarding plane queue-group instance. However, the queue-group name and instance are explicitly provided only at the time the network QoS policy is applied to the ingress context of a spoke-sdp or a network IP interface.

The **no** version of this command removes the redirection of the FC.

**Parameters** **policer** *policer-id* — The specified *policer-id* must exist within the queue-group template applied to the ingress context of the forwarding plane.

**Values** 1—8

## fp-redirect-group

**Syntax** **fp-redirect-group multicast-policer** *policer-id*  
**no fp-redirect-group multicast-policer**

**Context** config>qos>network>ingress>fc

**Description** This command is used to redirect the FC of a multicast packet of a PW or network IP interface to an ingress forwarding plane queue-group.

It defines the mapping of a FC to a policer-id and redirects the lookup of the policer of the same ID in some ingress forwarding plane queue-group instance. However, the queue-group name and instance are explicitly provided only at the time the network QoS policy is applied to the ingress context of a spoke-sdp or a network IP interface.

The **no** version of this command removes the redirection of the FC.

**Parameters** **multicast** *policer-id* — The specified *policer-id* must exist within the queue-group template applied to the ingress context of the forwarding plane.

**Values** 1—32

## ler-use-dscp

**Syntax** [**no**] **ler-use-dscp**

**Context** config>qos>network>ingress

**Description** This command is used to enable tunnel QoS mapping on all ingress network IP interfaces the network-qos-policy-id is associated with. The command may be defined at anytime after the network QoS policy has been created. Any network IP interfaces currently associated with the policy will immediately start to use the internal IP ToS field of any tunnel terminated IP routed packet received on the interface, ignoring any QoS markings in the tunnel portion of the packet.

This attribute provides the ability to ignore the network ingress QoS mapping of a terminated tunnel containing an IP packet that is to be routed to a base router or VPRN destination. This is advantageous when the mapping for the tunnel QoS marking does not accurately or completely reflect the required QoS handling for the IP routed packet. When the mechanism is enabled on an ingress network IP interface, the IP interface will ignore the tunnel's QoS mapping and derive the internal forwarding class and profile based on the precedence or DiffServe Code Point (DSCP) values within the routed IP header ToS field compared to the Network QoS policy defined on the IP interface.

The default state is not to enforce tunnel termination IP routed QoS override within the network QoS policy.

The **no** form of the command removes tunnel termination IP routed QoS override from the network QoS policy and all ingress network IP interfaces associated with the policy.

**Default** no ler-use-dscp

## lsp-exp

**Syntax** **lsp-exp** *lsp-exp-value* **fc** *fc-name* **profile** {**in** | **out**}  
**no lsp-exp** *lsp-exp-value*

**Context** config>qos>network *policy-id*>ingress

**Description** This command creates a mapping between the LSP EXP bits of the network ingress traffic and the forwarding class.

Ingress traffic that matches the specified LSP EXP bits will be assigned to the corresponding forwarding class. Multiple commands can be entered to define the association of some or all eight LSP EXP bit values to the forwarding class. For undefined values, packets are assigned to the forwarding class specified under the **default-action** command.

The **no** form of this command removes the association of the LSP EXP bit value to the forwarding class. The **default-action** then applies to that LSP EXP bit pattern.

**Default** none

**Parameters** *lsp-exp-value* — Specify the LSP EXP values to be associated with the forwarding class.

**Default** None, the lsp-exp command must define a value.

**Values** 0 to 8 (Decimal representation of three EXP bit field)

**fc** *fc-name* — Enter this required parameter to specify the fc-name that the EXP bit pattern will be associated with.

**Default** None, the lsp-exp command must define a fc-name.

**Values** be, l2, af, l1, h2, ef, h1, nc

**profile** {**in** | **out**} — Enter this required parameter to indicate whether the LSP EXP value is the in-profile or out-of-profile value.

**Default** None, the lsp-exp command must define a profile state.

**Values** in, out

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## Network Egress QoS Policy Commands

### egress

**Syntax** `egress`

**Context** `config>qos>network policy-id`

**Description** This command is used to enter the CLI node that creates or edits egress policy entries that specify the forwarding class queues to be instantiated when this policy is applied to the network port.

The forwarding class and profile state mapping to in and out-of-profile DiffServ code points and MPLS EXP bits mapping for all labeled packets are also defined in this context.

All service packets are aggregated into DiffServ based egress queues on the network interface. The service packets are transported either with IP GRE encapsulation or over a MPLS LSP. The exception is with the IES service. In this case, the actual customer IP header has the DSCP field mapped.

All out-of-profile service packets are marked with the corresponding out-of-profile DSCP or the EXP bit value at network egress. All the in-profile service ingress packets are marked with the corresponding in-profile DSCP or EXP bit value based on the forwarding class they belong.

### fc

**Syntax** `[no] fc fc-name`

**Context** `config>qos>network>egress`

**Description** This command specifies the forwarding class name. The forwarding class name represents an egress queue. The `fc fc-name` represents a CLI parent node that contains sub-commands or parameters describing the egress characteristics of the queue and the marking criteria of packets flowing through it. The `fc` command overrides the default parameters for that forwarding class to the values defined in the network default policy.

The `no` form of this command removes the forwarding class name associated with this queue, as appropriate. The forwarding class reverts to the defined parameters in the default network policy. If the `fc-name` is removed from the network policy that forwarding class reverts to the factory defaults.

**Default** Undefined forwarding classes default to the configured parameters in the default network policy `policy-id 1`.

**Parameters** *fc-name* — The case-sensitive, system-defined forwarding class name for which policy entries will be created.

**Default** none

**Values** be, l2, af, l1, h2, ef, h1, nc

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# Network Egress QoS Policy Forwarding Class Commands

## de-mark

**Syntax** **de-mark** [*force de-value*]  
**no de-mark**

**Context** config>qos>network>egress>fc

**Description** This command is used to explicitly define the marking of the DE bit for fc fc-name according to the in and out of profile status of the packet (fc-name may be used to identify the dot1p-value).

If no de-value is present, the default values are used for the marking of the DE bit: i.e. 0 for in-profile packets, 1 for out-of-profile ones – see 802.1ad-2005 standard.

In the PBB case, for a Network Port (B-SDP), the following rules must be used:

- the outer VID follows the rules for regular SDP
- for packets originated from a local I-VPLS, this command dictates the marking of the DE bit for both the outer (link level) VID and ITAG; if the command is not used the DE bit will be set to zero.
- for transit packets (B-SAP/B-SDP to B-SDP) the related ITAG bits will be preserved, same for BVID.

If the de-value is specifically mentioned in the command line it means this value is to be used for all the packets of this forwarding class regardless of their in/out of profile status.

**Values** 0 or 1

## dot1p

**Syntax** **dot1p** *dot1p-priority*  
**no dot1p**

**Context** config>qos>network>egress>fc

**Description** This command will be used whenever the dot1p bits are set to a common value regardless of the internal in | out-profile of the packets. Although it is not mandatory, it is expected that this command is used in combination with the de-mark command to enable the marking of the DE bit according to the internal profile of the packet.

This command acts as a shortcut version of configuring the two existing commands with the same dot1p-priority.

To minimize the required changes the dot1p x command should be saved in the configuration as dot1p-in-profile x and dot1p-out-profile x.

## dot1p-in-profile

**Syntax** **dot1p-in-profile** *dot1p-priority*  
**no dot1p-in-profile**

**Context** config>qos>network>egress>fc *fc-name*

**Description** This command specifies dot1p in-profile mappings.

The **no** form of the command reverts to the default in-profile *dot1p-priority* setting for policy-id 1.

**Parameters** *dot1p-priority* — This value is a required parameter that specifies the unique IEEE 802.1P value that will match the Dot1p rule. If the command is executed multiple times with the same *dot1p-value*, the previous forwarding class and enqueueing priority is completely overridden by the new parameters or defined to be inherited when a forwarding class or enqueueing priority parameter is missing.

A maximum of eight dot1p rules are allowed on a single policy.

**Values** 0 — 7

## dot1p-out-profile

**Syntax** **dot1p-out-profile** *dot1p-priority*  
**no dot1p-out-profile**

**Context** config>qos>network>egress>fc *fc-name*

**Description** This command specifies dot1p out-profile mappings.

The **no** form of the command reverts to the default out-profile *dot1p-priority* setting for policy-id 1.

**Parameters** *dot1p-priority* — This value is a required parameter that specifies the unique IEEE 802.1P value that will match the dot1p rule. If the command is executed multiple times with the same *dot1p-value*, the previous forwarding class and enqueueing priority is completely overridden by the new parameters or defined to be inherited when a forwarding class or enqueueing priority parameter is missing.

A maximum of eight dot1p rules are allowed on a single policy.

**Values** 0 — 7

## dscp-in-profile

**Syntax** **dscp-in-profile** *dscp-name*  
**no dscp-in-profile**

**Context** config>qos>network *policy-id*>egress>fc *fc-name*

**Description** This command specifies the in-profile DSCP name for the forwarding class. The corresponding DSCP value will be used for all IP packets requiring marking the egress on this forwarding class queue that are in profile.

When multiple DSCP names are associated with the forwarding class at network egress, the last name entered will overwrite the previous value.

The **no** form of this command reverts to the factory default in-profile dscp-name setting for policy-id 1.

**Default** Policy-id 1: Factory setting  
Policy-id 2 — 65535: Policy-id 1 setting

**Parameters** *dscp-name* — System- or user-defined, case-sensitive *dscp-name*.

**Default** none

**Values** Any defined system- or user-defined *dscp-name*

## dscp-out-profile

**Syntax** **dscp-out-profile** *dscp-name*  
**no dscp-out-profile**

**Context** config>qos>network *policy-id*>egress>fc *fc-name*

**Description** This command specifies the out-of-profile DSCP name for the forwarding class. The corresponding DSCP value will be used for all IP packets requiring marking the egress on this forwarding class queue that are out-of-profile.

When multiple DSCP names are associated with the forwarding class at network egress, the last name entered will overwrite the previous value.

The **no** form of this command reverts to the factory default out-of-profile dscp-name setting for policy-id 1.

**Default** Policy-id 1: Factory setting  
Policy-id 2 — 65535: Policy-id 1 setting

**Parameters** *dscp-name* — System- or user-defined, case-sensitive *dscp-name*.  
**Default** none  
**Values** Any defined system- or user-defined *dscp-name*

## lsp-exp-in-profile

**Syntax** **lsp-exp-in-profile** *lsp-exp-value*  
**no lsp-exp-in-profile**

**Context** config>qos>network *policy-id*>egress>fc *fc-name*

**Description** This command specifies the in-profile LSP EXP value for the forwarding class. The EXP value will be used for all LSP labeled packets requiring marking the egress on this forwarding class queue that are in-profile.

When multiple EXP values are associated with the forwarding class at network egress, the last name entered will overwrite the previous value.

The **no** form of this command reverts to the factory default in-profile EXP setting.

**Default** Policy-id 1: Factory setting  
Policy-id 2 — 65535: Policy-id setting

**Parameters** *lsp-exp-value* — The 3-bit LSP EXP bit value, expressed as a decimal integer.  
**Default** none  
**Values** 0 — 7

## lsp-exp-out-profile

**Syntax** **lsp-exp-out-profile** *lsp-exp-value*  
**no lsp-exp-out-profile**

**Context** config>qos>network *policy-id*>egress>fc *fc-name*

**Description** This command specifies the out-of-profile LSP EXP value for the forwarding class. The EXP value will be used for all LSP labeled packets requiring marking the egress on this forwarding class queue that are out-of-profile.

When multiple EXP values are associated with the forwarding class at network egress, the last name entered will overwrite the previous value.

The **no** form of this command reverts to the factory default out-of-profile EXP setting.

**Default** Policy-id 1: Factory setting  
Policy-id 2 — 65535: Policy-id setting

**Parameters** *mpls-exp-value* — The 3-bit MPLS EXP bit value, expressed as a decimal integer.  
**Default** none  
**Values** 0 — 7

## policer

**Syntax** **policer** *policer-id*  
**no policer**

**Context** *config>qos>queue-group-templates>ingress>queue-group*  
*config>qos>queue-group-templates>egress>queue-group*

**Description** This command is used in ingress and egress queue-group templates to create, modify, or delete a policer.

Policers are created and used in a similar manner to queues. The policer ID space is separate from the queue ID space, allowing both a queue and a policer to share the same ID. The ingress queue-group template have up to 32 policers (numbered 1 through 32) and can be defined while the egress queue-group template supports a maximum of 8 (numbered 1 through 8). While a policer can be defined in a queue-group template, it is not actually created until the queue-group template is instantiated on ingress context of a forwarding plane or on the egress context of a port.

Once a policer is created, the policer's metering rate and profiling rates can be defined as well as the policer's maximum and committed burst sizes (MBS and CBS respectively). Unlike queues which have dedicated counters, policers allow various stat-mode settings that define the counters that will be associated with the policer. Another supported feature—packet-byte-offset—provides a policer with the ability to modify the size of each packet based on a defined number of bytes.

Once a policer is created, it cannot be deleted from the queue-group template unless any forwarding classes that are redirected to the policer are first removed.

The **no** version of this command deletes the policer.

**Parameters** *policer-id* — The policer-id must be specified when executing the policer command. If the specified ID already exists, the system enters that policer's context to allow the policer's parameters to be modified. If the ID does not exist and is within the allowed range for the QoS policy type, a context for the policer ID will be created (depending on the system's current create keyword requirements which may require the create keyword to actually add the new policer ID to the QoS policy) and the system will enter that new policer's context for possible parameter modification..

**Values** 1—32 ingress

**Values** 1—8 egress

## port-redirect-group

<b>Syntax</b>	<b>port-redirect-group</b> { <b>queue</b> <i>queue-id</i>   <b>policer</b> <i>policer-id</i> [ <b>queue</b> <i>queue-id</i> ]} <b>no port-redirect-group</b>
<b>Context</b>	config>qos>network>egress>fc
<b>Description</b>	<p>This command is used to redirect the FC of a packet of a PW or network IP interface to an egress port queue-group.</p> <p>It defines the mapping of a FC to a queue-id or a policer-id and a queue-id, and redirects the lookup of the queue or policer of the same ID in some egress port queue-group instance. However, the queue-group name and instance are explicitly provided only at the time the network QoS policy is applied to egress context of a spoke-sdp or a network IP interface.</p> <p>The <b>no</b> version of this command removes the redirection of the FC.</p>
<b>Parameters</b>	<p><i>queue-id</i> — This parameter must be specified when executing the <b>port-redirect-group</b> command. The specified <i>queue-id</i> must exist within the egress port queue group on each IP interface where the network QoS policy is applied.</p> <p><b>Values</b> 1 — 8</p> <p><i>policer id</i> — The specified policer-id must exist within the queue-group template applied to the ingress context of the forwarding plane.</p> <p><b>Values</b> 1 — 8</p>

## dscp

<b>Syntax</b>	<b>dscp</b> <i>dscp-name</i> [ <b>fc</b> <i>fc-name</i> ] [ <b>profile</b> { <b>in</b>   <b>out</b> }] <b>no dscp</b> <i>dscp-name</i>
<b>Context</b>	configure>qos>network>egress
<b>Description</b>	<p>This command defines a specific IP Differentiated Services Code Point (DSCP) value that must be matched to perform the associated reclassification actions. If an egress packet on the spoke-sdp the network QoS policy is applied to matches the specified IP DSCP value, the forwarding class and profile may be overridden.</p> <p>By default, the forwarding class and profile of the packet is derived from ingress classification and profiling functions. Matching a DHCP based reclassification rule will override all IP precedence based reclassification rule actions.</p> <p>The IP DSCP bits used to match against dscp reclassification rules come from the Type of Service (ToS) field within the IPv4 header or the Traffic Class field from the IPv6 header. If the packet does not have an IP header, dscp based matching is not performed.</p>

Note that the IP precedence and DSCP based re-classification are only supported on a PW used in an IES or VPRN spoke-interface. The CLI will block the application of a network QoS policy with the egress re-classification commands to a network IP interface or to a spoke-sdp part of L2 service.

Conversely, the CLI will not allow the user to add the egress re-classification commands to a network QoS policy if it is being used by a network IP interface or a L2 spoke-sdp.

Also, the egress re-classification commands will only take effect if the redirection of the spoke-sdp to use an egress port queue-group succeeds, i.e., the following CLI command succeeds:

```
config>service>vprn>interface>spoke-sdp>egress>qos network-policy-id port-redirect-group queue-group-name instance instance-id
```

```
config>service>ies>interface>spoke-sdp>egress>qos network-policy-id port-redirect-group queue-group-name instance instance-id
```

Reclassification will however occur regardless of whether the queue group instance exists or not on a given egress network port.

When the redirection command fails in CLI, the PW will use the network QoS policy assigned to the network IP interface. Since the network QoS policy applied to a network IP interface does not support re-classification, the PW packets will not undergo re-classification.

The **no** version of this command removes the egress re-classification rule.

**Parameters**

*dscp-name* — be|ef|cp1|cp2|cp3|cp4|cp5|cp6|cp7|cp9|cs1|cs2|cs3|cs4|cs5|nc1|nc2|af11|af12|af13|af21|af22|af23|af31|af32|af33|af41|af42|af43|cp11|cp13|cp15|cp17|cp19|cp21|cp23|cp25|cp27|cp29|cp31|cp33|cp35|cp37|cp39|cp41|cp42|cp43|cp44|cp45|cp47|cp49|cp50|cp51|cp52|cp53|cp54|cp55|cp57|cp58|cp59|cp60|cp61|cp62|cp63

*fc fc-name* — be|l2|af|l1|h2|ef|h1|nc

**profile {in|out}** — keywords - specify type of marking to be done.

## prec

**Syntax** **prec** *ip-prec-value* [**fc** *fc-name*] [**profile** {in | out}]  
**no prec** *ip-prec-value*

**Context** configure>qos>network>egress

**Description** This command defines a specific IP Precedence value that must be matched to perform the associated reclassification actions. If an egress packet on the spoke-sdp the network QoS policy is

applied to matches the specified IP Precedence value, the forwarding class and profile may be overridden.

By default, the forwarding class and profile of the packet is derived from ingress classification and profiling functions.

The IP Precedence bits used to match against the reclassification rules come from the Type of Service (ToS) field within the IPv4 header or the Traffic Class field from the IPv6 header. If the packet does not have an IP header, IP precedence based matching is not performed.

Note that the IP precedence and DSCP based re-classification are only supported on a PW used in an IES or VPRN spoke-interface. The CLI will block the application of a network QoS policy with the egress re-classification commands to a network IP interface or to a spoke-sdp part of L2 service.

Conversely, the CLI will not allow the user to add the egress re-classification commands to a network QoS policy if it is being used by a network IP interface or a L2 spoke-sdp.

Also, the egress re-classification commands will only take effect if the redirection of the spoke-sdp to use an egress port queue-group succeeds, i.e., the following CLI command succeeds:

```
config>service>vprn>interface>spoke-sdp>egress>qos network-policy-id port-redirect-group  
queue-group-name instance instance-id
```

```
config>service>ies>interface>spoke-sdp>egress>qos network-policy-id port-redirect-group  
queue-group-name instance instance-id
```

Reclassification will however occur regardless of whether the queue group instance exists or not on a given egress network port.

When the redirection command fails in CLI, the PW will use the network QoS policy assigned to the network IP interface. Since the network QoS policy applied to a network IP interface does not support re-classification, the PW packets will not undergo re-classification.

The **no** version of this command removes the egress re-classification rule.

#### Parameters

*ip-prec-value* — [0..7]

**fc** *fc-name* — be|l2|af|l1|h2|ef|h1|nc

**profile** {**in**|**out**} — keywords - specify type of marking to be done.

## remarking

**Syntax** [no] remarking [force]

**Context** config>qos>network *policy-id*>egress

**Description** This command remarks both customer traffic and egress network IP interface traffic; VPRN customer traffic is not remarked. The remarking is based on the forwarding class to DSCP and LSP EXP bit mapping defined under the egress node of the network QoS policy.

Normally, packets that ingress on network ports have either DSCP or, in case of MPLS packets, LSP EXP bit set by an upstream router. The packets are placed in the appropriate forwarding class based on the DSCP to forwarding class mapping or the LSP EXP to forwarding class mapping. The DSCP or LSP EXP bits of such packets are not altered as the packets egress this router, unless **remarking** is enabled.

Remarking can be required if this router is connected to a different DiffServ domain where the DSCP to forwarding class mapping is different.

Normally no remarking is necessary when all router devices are in the same DiffServ domain.

The network QoS policy supports an egress flag that forces remarking of packets that were received on trusted IES and network IP interfaces. This provides the capability of remarking without regard to the ingress state of the IP interface on which a packet was received. The effect of the setting of the egress network remark trusted state on each type of ingress IP interface and trust state is shown in the following table.

The remark trusted state has no effect on packets received on an ingress VPRN IP interface.

Ingress IP Interface Type and Trust State	Egress Network IP Interface Trust Remark Disabled (Default)	Egress Network IP Interface Trust Remark Enabled
IES Non-Trusted (Default)	Egress Remarked	Egress Remarked
IES Trusted	Egress Not Remarked	Egress Remarked
VPRN Non-Trusted	Egress Remarked	Egress Remarked
VPRN Trusted (Default)	Egress Not Remarked	Egress Not Remarked
Network Non-Trusted	Egress Remarked	Egress Remarked
Network Trusted (Default)	Egress Not Remarked	Egress Remarked

The **no** form of this command reverts to the default behavior.

**Default**    **no remarking** — Remarkings disabled in the Network QoS policy.

**Parameters**    **force** — Specifies that all IP routed traffic egressing the associated network interface will have its EXP, DSCP, P-bit and DE bit setting remarked as defined in the associated QoS policy. Only bit fields configured in the QoS policy will be remarked; all others will be left untouched or set based on the default if the fields were not present at ingress.

---

## Self-Generated Traffic Commands

### sgt-qos

**Syntax** **sgt-qos**

**Context** config>router

**Description** This command enables the context to configure DSCP/Dot1p re-marking for self-generated traffic.

### application

**Syntax** **application** *dscp-app-name* **dscp** {*dscp-value* | *dscp-name*}  
**application** *dot1p-app-name* **dot1p** *dot1p-priority*  
**no application** {*dscp-app-name* | *dot1p-app-name*}

**Context** config>router>sgt-qos

**Description** This command configures DSCP/Dot1p re-marking for self-generated application traffic. When an application is configured using this command, then the specified DSCP name/value is used for all packets generated by this application within the router instance it is configured. The instances can be base router, vprn or management.

Using the value configured in this command:

- Sets the DSCP bits in the IP packet.
- Maps to the FC. This value will be signaled from the CPM to the egress forwarding complex.
- Based on this signaled FC the egress forwarding complex QoS policy sets the IEEE802.1 dot1P and LSP EXP bits.
- The Dot1P and the LSP EXP bits are set by the egress complex for all packets based on the signaled FC. This includes ARP, PPPoE and IS-IS packets that, due to their nature, do not carry DSCP bits.
- The DSCP value in the egress IP header will be as configured in this command. The egress QoS policy will not overwrite this value.

Only one DSCP name/value can be configured per application, if multiple entries are configured then the subsequent entry overrides the previous configured entry.

The **no** form of this command reverts back to the default value.

**Parameters** *dscp-app-name* — Specifies the DSCP application name.

**Values** ldp, rsvp, bgp, rip, msdp, pim, ospf, igmp, mld, telnet, tftp, ftp, ssh, snmp, snmp-notification, syslog, icmp, traceroute, tacplus, dns, ntp, radius, cflowd, dhcp, ndis, vrrp, srrp

*dscp-value* — Specifies a value when this packet egresses the respective egress policy should provide the mapping for the DSCP value to either LSP-EXP bits or IEEE 802.1p (Dot1P) bits as appropriate otherwise the default mapping applies.

**Values** 0 — 63

*dscp-name* — Specifies the DSCP name.

**Values** none, be, ef, cp1, cp2, cp3, cp4, cp5, cp6, cp7, cp9, cs1, cs2, cs3, cs4, cs5, nc1, nc2, af11, af12, af13, af21, af22, af23, af31, af32, af33, af41, af42, af43, cp11, cp13, cp15, cp17, cp19, cp21, cp23, cp25, cp27, cp29, cp31, cp33, cp35, cp37, cp39, cp41, cp42, cp43, cp44, cp45, cp47, cp49, cp50, cp51, cp52, cp53, cp54, cp55, cp57, cp58, cp59, cp60, cp61, cp62, cp63

*dot1p-priority* — Specifies the Dot1P priority.

**Values** 0 — 7

*dot1p-app-name* — Specifies the Dot1P application name.

**Values** arp, isis, pppoe

## dscp

**Syntax** **dscp** *dscp-name* **fc** *fc-name*  
**no dscp** *dscp-name*

**Context** config>router>sgt-qos

**Description** This command creates a mapping between the DiffServ Code Point (DSCP) of the self generated traffic and the forwarding class.

Self generated traffic that matches the specified DSCP will be assigned to the corresponding forwarding class. Multiple commands can be entered to define the association of some or all sixty-four DiffServ code points to the forwarding class.

All dscp name that defines a dscp value must be explicitly defined

The **no** form of this command removes the DiffServ code point to forwarding class association.

**Default** none

**Parameters** *dscp-name* — The name of the DiffServ code point to be associated with the forwarding class. DiffServ code point can only be specified by its name and only an existing DiffServ code point can be specified. The software provides names for the well known code points.

**Values** be, ef, cp1, cp2, cp3, cp4, cp5, cp6, cp7, cp9, cs1, cs2, cs3, cs4, cs5, nc1, nc2, af11, af12, af13, af21, af22, af23, af31, af32, af33, af41, af42, af43, cp11, cp13, cp15, cp17, cp19, cp21, cp23, cp25, cp27, cp29, cp31, cp33, cp35, cp37, cp39, cp41, cp42, cp43, cp44,

cp45, cp47, cp49, cp50, cp51, cp52, cp53, cp54, cp55, cp57, cp58, cp59, cp60, cp61,  
cp62, cp63

**fc *fc-name*** — Specify the forwarding class name. All packets with DSCP value or MPLS EXP bits that is not defined will be placed in this forwarding class.

**Default** None, the fc name must be specified

**Values** be, l2, af, ll, h2, ef, h1, nc

---

# Show Commands

## dscp-table

**Syntax** `dscp-table [value dscp-value]`

**Context** `show>qos`

**Description** Displays the DSCP name to DSCP value mappings.

**Parameters** `value dscp-value` — The specific DSCP value for which to display information.

**Default** Show all values

**Values** 0 — 63

**Table 27: Show QoS Network Table Output Fields**

Label	Description
DSCP Name	Displays the name of the DiffServ code point to be associated with the forwarding class.
DSCP Value	Displays the DSCP values range between 0 and 63.
TOS (bin)	Displays the type of service in Binary format.
TOS (hex)	Displays the type of service in Hex format.

### Sample Output

```
A:ALA-48# show qos dscp-table
=====
DSCP Mapping
=====
DSCP Name      DSCP Value    TOS (bin)     TOS (hex)
-----
be             0              0000 0000     00
cp1            1              0000 0100     04
cp2            2              0000 1000     08
cp3            3              0000 1100     0C
cp4            4              0001 0000     10
cp5            5              0001 0100     14
cp6            6              0001 1000     18
cp7            7              0001 1100     1C
cs1            8              0010 0000     20
cp9            9              0010 0100     24
af11           10             0010 1000     28
cp11           11             0010 1100     2C
```

af12	12	0011 0000	30
cp13	13	0011 0100	34
af13	14	0011 1000	38
cp15	15	0011 1100	3C
cs2	16	0100 0000	40
cp17	17	0100 0100	44
af21	18	0100 1000	48
cp19	19	0100 1100	4C
af22	20	0101 0000	50
cp21	21	0101 0100	54
af23	22	0101 1000	58
cp23	23	0101 1100	5C
cs3	24	0110 0000	60
cp25	25	0110 0100	64
af31	26	0110 1000	68
cp27	27	0110 1100	6C
af32	28	0111 0000	70
cp29	29	0111 0100	74
af33	30	0111 1000	78
cp31	31	0111 1100	7C
cs4	32	1000 0000	80
cp33	33	1000 0100	84
af41	34	1000 1000	88
cp35	35	1000 1100	8C
af42	36	1001 0000	90
cp37	37	1001 0100	94
af43	38	1001 1000	98
cp39	39	1001 1100	9C
cs5	40	1010 0000	A0
cp41	41	1010 0100	A4
cp42	42	1010 1000	A8
cp43	43	1010 1100	AC
cp44	44	1011 0000	B0
cp45	45	1011 0100	B4
ef	46	1011 1000	B8
cp47	47	1011 1100	BC
nc1	48	1100 0000	C0
cp49	49	1100 0100	C4
cp50	50	1100 1000	C8
cp51	51	1100 1100	CC
cp52	52	1101 0000	D0
cp53	53	1101 0100	D4
cp54	54	1101 1000	D8
cp55	55	1101 1100	DC
nc2	56	1110 0000	E0
cp57	57	1110 0100	E4
cp58	58	1110 1000	E8
cp59	59	1110 1100	EC
cp60	60	1111 0000	F0
cp61	61	1111 0100	F4
cp62	62	1111 1000	F8
cp63	63	1111 1100	FC

=====  
A:ALA-48#

A:ALA-48# show qos dscp-table value 46

=====  
DSCP Mapping

```

=====
DSCP Name      DSCP Value    TOS (bin)     TOS (hex)
-----
ef             46            1011 1000     B8
=====
A:ALA-48#

```

## mc-fr-profile-ingress

**Syntax** `mc-fr-profile-ingress [detail]`

**Context** `show>qos`

**Description** This command displays MLFR ingress profile details.

### Sample Output

```

*A:Cpm-A# show qos mc-fr-profile-ingress
=====
Multi-class Frame-Relay Ingress Profiles
=====
Profile-Id  Description
-----
1           Default ingress multi-class frame-relay profile.
=====
*A:Cpm-A#
*A:Cpm-A# show qos mc-fr-profile-ingress 1 detail
=====
Multi-class FR Ingress Profile (1)
=====
Profile-id : 1
Description: Default ingress multi-class frame-relay profile.
-----
FR Class    Reassembly Timeout
-----
0           10
1           10
2           100
3           1000
=====
Associations
-----
No Matching Entries

```

## mc-fr-profile-egress

**Syntax** `mc-fr-profile-egress [detail]`

**Context** `show>qos`

**Description** This command displays MLFR egress profile details.

## Sample Output

```
*A:Cpm-A# show qos mc-fr-profile-egress 1
=====
Multi-class FR Egress Profile (1)
=====
Profile-id : 1
Description: Default egress multi-class frame-relay profile.
=====
*A:Cpm-A#
*A:Cpm-A# show qos mc-fr-profile-egress 1 detail
=====
Multi-class FR Egress Profile (1)
=====
Profile-id : 1
Description: Default egress multi-class frame-relay profile.
=====
MCFR      Mir      Weight   Max Size
Class
-----
0          100      0         25
1          85       0          5
2          0        66        200
3          0        33        1000
=====
Associations
-----
No Matching Entries
=====
*A:Cpm-A#
```

## network

**Syntax** `network [policy-id] [detail]`

**Context** `show>qos`

**Description** This command displays network policy information.

**Parameters** *policy-id* — Displays information for the specific policy ID.

**Default** all network policies

**Values** 1 — 65535

**detail** — Includes information about ingress and egress DSCP and LSP EXP bit mappings and network policy interface associations.

**Network QoS Policy Output Fields** — The following table describes network QoS Policy output fields.

**Table 28: Show QoS Network Output Fields**

<b>Label</b>	<b>Description</b>
Policy-Id	The ID that uniquely identifies the policy.
Remark	<p>True – Remarking is enabled for all packets that egress this router where the network policy is applied. The remarking is based on the forwarding class to DSCP and LSP EXP bit mapping defined under the egress node of the network QoS policy.</p> <p>False – Remarking is disabled.</p>
Description	A text string that helps identify the policy’s context in the configuration file.
Forward Class/ FC Name	Specifies the forwarding class name.
Profile	<p>Out – Specifies that IP packets requiring marking the egress on this forwarding class queue that are out of profile.</p> <p>In – Specifies that IP packets requiring marking the egress on this forwarding class queue that are in profile.</p>
Accounting	<p>Packet-based – Specifies that the meters associated with this policy do not account for packet framing overheads (such as Ethernet the Inter Frame Gap (IFG) and the preamble), while accounting for the bandwidth to be used by this flow.</p> <p>Frame-based – Specifies that the meters associated with this policy account for the packet framing overheads (such as for Ethernet the IFG and preamble), while accounting the bandwidth to be used by the flow.</p>
<b>DSCP Mapping:</b>	
Out-of-Profile	Displays the DSCP used for out-of-profile traffic.
In-Profile	Displays the DSCP used for in-profile traffic.
<b>LSP EXP Bit Mapping:</b>	
Out-of-Profile	Displays the LSP EXP value used for out-of-profile traffic.
In-Profile	Displays the LSP EXP value used for in-profile traffic.
Interface	Displays the interface name.

**Table 28: Show QoS Network Output Fields (Continued)**

Label	Description
IP Addr	Displays the interface IP address.
Port-Id	Specifies the physical port identifier that associates the interface.

```
A:ALA-12# show qos network
=====
Network Policies
=====
Policy-Id      Remark      Description
-----
1              True Default network QoS policy.
=====
A:ALA-12#
```

```
A:ALA-12# show qos network 1
=====
QoS Network Policy
=====
Network Policy (1)
-----
Policy-id      : 1              Remark           : True
Forward Class  : be              Profile          : Out-profile
Description    : Default network QoS policy.
=====
A:ALA-12#
```

```
A:ALA-12# show qos network 1 detail
=====
QoS Network Policy
=====
Network Policy (1)
-----
Policy-id      : 1              Remark           : True
Forward Class  : be              Profile          : Out-profile
Description    : Default network QoS policy.
=====
```

```
-----
DSCP           Fowarding Class      Profile
-----
ef             ef                   In
nc1           h1                   In
nc2           nc                   In
af11          af                   In
af12          af                   Out
af13          af                   Out
af21          l1                   In
af22          l1                   Out
af23          l1                   Out
af31          l1                   In
af32          l1                   Out
af33          l1                   Out
-----
```

af41	h2	In
af42	h2	Out
af43	h2	Out

LSP EXP Bit Map	Fowarding Class	Profile
0	be	Out
1	l2	In
2	af	Out
3	af	In
4	h2	In
5	ef	In
6	h1	In
7	nc	In

Egress Forwarding Class Queuing

FC Name	: af		
- DSCP Mapping			
Out-of-Profile	: af12	In-Profile	: af11
- LSP EXP Bit Mapping			
Out-of-Profile	: 2	In-Profile	: 3
FC Name	: be		
- DSCP Mapping			
Out-of-Profile	: default	In-Profile	: default
- LSP EXP Bit Mapping			
Out-of-Profile	: 0	In-Profile	: 0
FC Name	: ef		
- DSCP Mapping			
Out-of-Profile	: ef	In-Profile	: ef
- LSP EXP Bit Mapping			
Out-of-Profile	: 5	In-Profile	: 5
FC Name	: h1		
- DSCP Mapping			
Out-of-Profile	: nc1	In-Profile	: nc1
- LSP EXP Bit Mapping			
Out-of-Profile	: 6	In-Profile	: 6
FC Name	: h2		
- DSCP Mapping			
Out-of-Profile	: af42	In-Profile	: af41
- LSP EXP Bit Mapping			
Out-of-Profile	: 4	In-Profile	: 4
FC Name	: l1		
- DSCP Mapping			
Out-of-Profile	: af22	In-Profile	: af21
- LSP EXP Bit Mapping			
Out-of-Profile	: 2	In-Profile	: 3
FC Name	: l2		
- DSCP Mapping			
Out-of-Profile	: cs1	In-Profile	: cs1
- LSP EXP Bit Mapping			

```

Out-of-Profile : 1                               In-Profile   : 1

FC Name       : nc
- DSCP Mapping
Out-of-Profile : nc2                             In-Profile   : nc2
- LSP EXP Bit Mapping
Out-of-Profile : 7                               In-Profile   : 7
-----
Interface Association
-----
Interface     : system
IP Addr.     : 10.10.0.3/32                       Port Id      : vport-1
Interface     : to-ser1
IP Addr.     : 10.10.13.3/24                      Port Id      : 1/1/2
=====
A:ALA-12#

```

```

config>qos# show qos network 2 detail
=====
QoS Network Policy
-----
Network Policy (2)
-----
Policy-id      : 2                               Remark       : True
Forward Class  : be                               Profile      : Out
LER Use DSCP   : False
-----
DSCP           Forwarding Class   Profile
-----
No Matching Entries
-----
LSP EXP Bit Map Forwarding Class   Profile
-----
No Matching Entries
-----
Dot1p Bit Map           Forwarding Class           Profile
-----
3                       ef                       n
4                       af                       Out
5                       nc                       Use-DE
-----
Egress Forwarding Class Queuing
-----
FC Value      : 0                               FC Name      : be
- DSCP Mapping
Out-of-Profile : be                             In-Profile   : be

- Dot1p Mapping
Out-of-Profile : 7                               In-Profile   : 7

- LSP EXP Bit Mapping
Out-of-Profile : 0                               In-Profile   : 0

- DE Mark      : Force 1

FC Value      : 1                               FC Name      : 12
- DSCP Mapping
Out-of-Profile : cs1                             In-Profile   : cs1

```

```

- Dot1p Mapping
Out-of-Profile : 1                               In-Profile   : 1

- LSP EXP Bit Mapping
Out-of-Profile : 1                               In-Profile   : 1

- DE Mark      : None
-----
config>qos#

```

## sgt-qos

**Syntax** **sgt-qos**

**Context** show>router

**Description** This command displays self-generated traffic QoS related information.

## application

**Syntax** **application** [*app-name*] [**dscp**|**dot1p**]

**Context** show>router>sgt-qos

**Description** This command displays application QoS settings.

**Parameters** *app-name* — The specific application.

**Values** arp, bgp, cflowd, dhcp, dns, ftp, icmp, igmp, isis, ldp, mld, msdp, ndis, ntp, ospf, pimradius, rip, rsvpsnmp, snmp-notification, srrp, ssh, syslog, tacplus, telnet, tftp, traceroute, vrrp, pppoe

## dscp-map

**Syntax** **dscp-map** [*dscp-name*]

**Context** show>router>sgt-qos

**Description** This command displays DSCP to FC mappings.

**Parameters** *dscp-name* — The specific DSCP name.

be, ef, cp1, cp2, cp3, cp4, cp5, cp6, cp7, cp9, cs1, cs2, cs3, cs4, cs5, nc1, nc2, af11, af12, af13, af21, af22, af23, af31, af32, af33, af41, af42, af43, cp11, cp13, cp15, cp17, cp19, cp21, cp23, cp25, cp27, cp29, cp31, cp33, cp35, cp37, cp39, cp41, cp42, cp43, cp44, cp45, cp47, cp49, cp50, cp51, cp52, cp53, cp54, cp55, cp57, cp58, cp59, cp60, cp61, cp62, cp63