


OmniStack 6200 running 1.7.0.18 code Quality of Service in advanced mode



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1 Introduction

This Technical Tip is intended to provide additional information on the QoS in advanced mode functionality on OmniStack 6200 series running 1.7.0.18 image. Results presented in this document may change in future releases. Please contact Technical Support Team for more details.

The audience for this user guide is network administrators and IT support personnel who need to configure and maintain QoS in advanced mode on OmniStack 6200 series switches. This guide is intended for experienced users, who want to optimize QoS configuration and understand limitations of this feature.

2 Example configuration with a service-policy

```
interface range ethernet e(1-2),g(1-2)
switchport mode trunk
exit
vlan database
vlan 100
exit
interface range ethernet e(1-2),g(1-2)
switchport trunk allowed vlan add 100
exit
qos advanced
mac access-list test
permit any any
exit
class-map test
match access-group test
exit
policy-map test
class test
trust cos-dscp
exit
exit
interface ethernet g1
service-policy input test
exit
interface ethernet g2
traffic-shape 1000
exit
```

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3 Rules which can be used to determine QoS behavior

3.1 General rules

- Frames/packets transmitted from Gigabit Ethernet to Gigabit Ethernet port are processed only by the Crossbar.
- Frames/packets transmitted from Gigabit Ethernet to Fast Ethernet port are processed by the Crossbar then by a Fast Ethernet Packet Processor.
- Frames/packets transmitted from Fast Ethernet to Gigabit Ethernet port are processed by a Fast Ethernet Packet Processor then by the Crossbar.
- Frames/packets transmitted from Fast Ethernet to Fast Ethernet port are processed by a Fast Ethernet Packet Processor then by the Crossbar then by a Fast Ethernet Packet Processor.
- DSCP field can be modified only once - in the Crossbar.
- 802.1p field can be modified up to 3 times - in the ingress Fast Ethernet Packet Processor, in the Crossbar and in the egress Fast Ethernet Packet Processor.
- Egress traffic is prioritized by DSCP field value (if available, see exception 4) and then by 802.1p field value (if available).
- In a stack configuration: shaping is enforced only on egress port (stacking port is not considered as an egress port)
- In a stack configuration: queue 4 is used for internal communication though it is not recommended to use it for user traffic between units

3.2 Rules applicable to specific scenarios

- 1 A packet is considered as untagged if it is forwarded to egress port which is in access or customer mode. Hence no 802.1p updates are done.
- 2 Fast Ethernet ports always work in trust cos-dscp. If an IP packet is processed by Fast Ethernet packet processor, the 802.1p field is mapped from DSCP field value (or from DSCP value in "set dscp" command). There is an exception described in (4).
- 3 802.1p field value is updated according to the "DSCP to 802.1p" matrix in the Crossbar for all frames and IP packets when "set dscp" service-policy is used. This feature was introduced in 1.7.0.14 image.

Fixed mapping matrix from DSCP to 802.1p (introduced in 1.7.0.18):

DCSP 0-15	→ 802.1p 0
DCSP 15-31	→ 802.1p 2
DCSP 32-47	→ 802.1p 4
DCSP 48-63	→ 802.1p 6

Please note that the default mapping in 1.7.0.14 image is different.

- 4 Fast Ethernet packet processors do not recognize double tagged IP packets. Therefore 802.1p field is not updated in Fast Ethernet Packet Processor (in the egress logic).

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- 5 By default all traffic received from Fast Ethernet Packet Processor is directed to queue 1. 802.1p field value is set to the lowest 802.1p value in the queue 1.

Default mapping 802.1p to queue mapping (can be changed using “wrr-queue” command, introduced in 1.7.0.18):

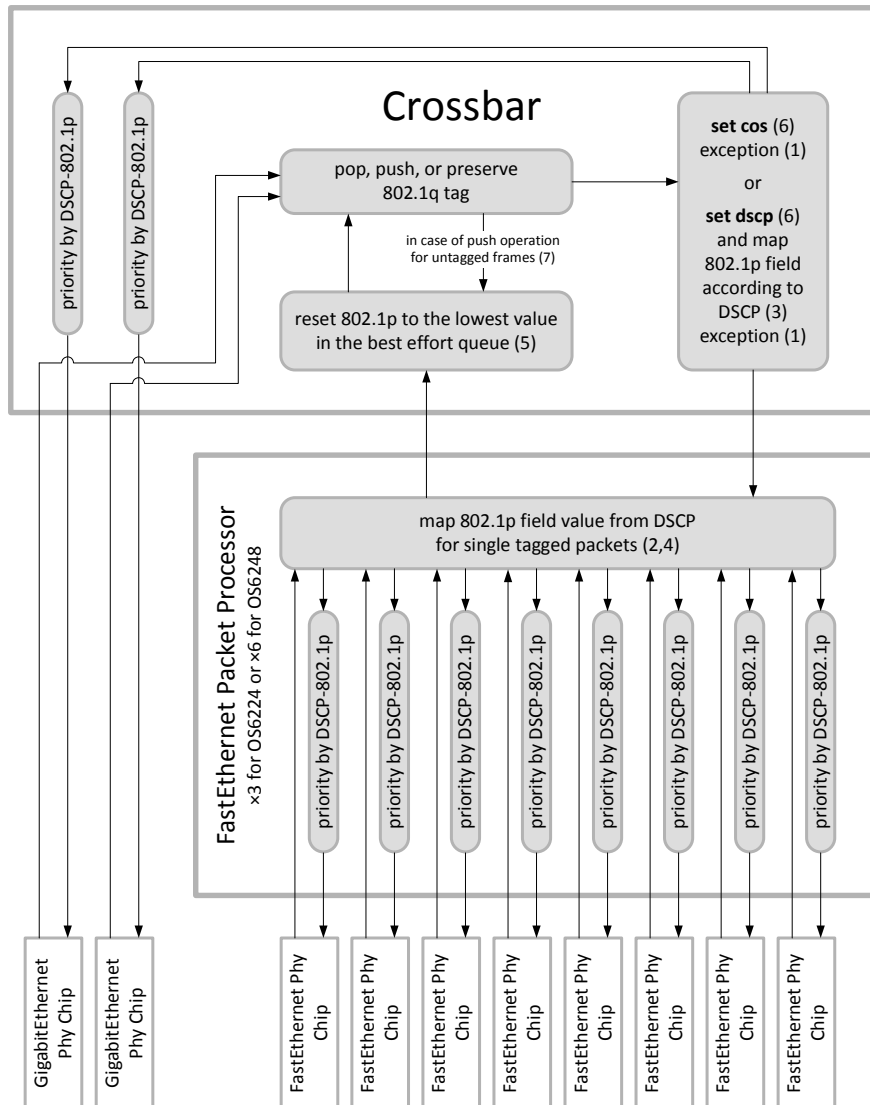
802.1p 0	→ queue 1
802.1p 1	→ queue 1
802.1p 2	→ queue 2
802.1p 3	→ queue 2
802.1p 4	→ queue 3
802.1p 5	→ queue 3
802.1p 6	→ queue 4
802.1p 7	→ queue 4

- 6 “set cos” and “set dscp” commands are applied to frames/packets processed by the Crossbar. Fast Ethernet Packet Processor doesn’t take these commands into account.
- 7 By default all untagged frames to which 802.1q tag is appended in the Crossbar are directed to queue 1. 802.1p field value is set to the lowest 802.1p value available in the queue 1.

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4 Simplified OmniStack 6200 architecture for QoS advanced

This diagram presents a simplified architecture of the Quality of Service procedures on OmniStack 6200 series switches. The real architecture may be different.



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5 Service-policy action and priority by switchport mode

Ingress port	Tagging	IP packet	Egress port	Class definition	Outer 802.1p	Outer DSCP	Priority
GE access	untagged	yes	GE access	none	n/a	no change	dscp
GE access	untagged	yes	GE access	set cos <x>	n/a	no change	dscp
GE access	untagged	yes	GE access	set dscp <x>	n/a	<x>	dscp
GE access	untagged	yes	GE access	trust cos-dscp	n/a	no change	dscp
GE trunk	single	no	GE trunk	none	no change	n/a	802.1p
GE trunk	single	no	GE trunk	set cos <x>	<x>	n/a	802.1p
GE trunk	single	no	GE trunk	set dscp <x>	map from set dscp (3)	n/a	dscp
GE trunk	single	no	GE trunk	trust cos-dscp	no change	n/a	802.1p
GE trunk	single	yes	GE trunk	none	no change	no change	dscp
GE trunk	single	yes	GE trunk	set cos <x>	<x>	no change	dscp
GE trunk	single	yes	GE trunk	set dscp <x>	map from set dscp (3)	<x>	dscp
GE trunk	single	yes	GE trunk	trust cos-dscp	no change	no change	dscp
GE trunk	double	no	GE trunk	none	no change	n/a	802.1p
GE trunk	double	no	GE trunk	set cos <x>	<x>	n/a	802.1p
GE trunk	double	no	GE trunk	set dscp <x>	map from set dscp (3)	n/a	dscp
GE trunk	double	no	GE trunk	trust cos-dscp	no change	n/a	802.1p
GE trunk	double	yes	GE trunk	none	no change	no change	dscp
GE trunk	double	yes	GE trunk	set cos <x>	<x>	no change	dscp
GE trunk	double	yes	GE trunk	set dscp <x>	map from set dscp (3)	<x>	dscp
GE trunk	double	yes	GE trunk	trust cos-dscp	no change	no change	dscp
GE trunk	single	yes	GE access/customer	none	n/a	no change	dscp
GE trunk	single	yes	GE access/customer	set cos <x>	n/a	no change	dscp
GE trunk	single	yes	GE access/customer	set dscp <x>	n/a	<x>	dscp
GE trunk	single	yes	GE access/customer	trust cos-dscp	n/a	no change	dscp
GE trunk	double	no	GE customer	none	copy inter tag	n/a	802.1p
GE trunk	double	no	GE customer	set cos <x>	copy inter tag (1)	n/a	be
GE trunk	double	no	GE customer	set dscp <x>	copy inter tag	n/a	802.1p
GE trunk	double	no	GE customer	trust cos-dscp	copy inter tag	n/a	802.1p
GE trunk	double	yes	GE customer	none	copy inter tag	no change	dscp
GE trunk	double	yes	GE customer	set cos <x>	copy inter tag (1)	no change	dscp
GE trunk	double	yes	GE customer	set dscp <x>	copy inter tag	<x>	dscp
GE trunk	double	yes	GE customer	trust cos-dscp	copy inter tag	no change	dscp
GE access/customer	untagged	no	GE trunk	none	map from the be queue (7)	n/a	be
GE access/customer	untagged	no	GE trunk	set cos <x>	<x>	n/a	802.1p
GE access/customer	untagged	no	GE trunk	set dscp <x>	map from set dscp (3)	n/a	dscp
GE access/customer	untagged	no	GE trunk	trust cos-dscp	fixed 0	n/a	be
GE access/customer	untagged	yes	GE trunk	none	map from the be queue (7)	no change	dscp
GE access/customer	untagged	yes	GE trunk	set cos <x>	<x>	no change	dscp
GE access/customer	untagged	yes	GE trunk	set dscp <x>	map from set dscp (3)	<x>	dscp
GE access/customer	untagged	yes	GE trunk	trust cos-dscp	fixed 0	no change	dscp
GE customer	single	no	GE trunk	none	copy from inner tag	n/a	802.1p
GE customer	single	no	GE trunk	set cos <x>	<x>	n/a	802.1p
GE customer	single	no	GE trunk	set dscp <x>	map from set dscp (3)	n/a	dscp
GE customer	single	no	GE trunk	trust cos-dscp	copy from inner tag	n/a	802.1p
GE customer	single	yes	GE trunk	none	copy from inner tag	no change	dscp
GE customer	single	yes	GE trunk	set cos <x>	<x>	no change	dscp
GE customer	single	yes	GE trunk	set dscp <x>	map from set dscp (3)	<x>	dscp
GE customer	single	yes	GE trunk	trust cos-dscp	copy from inner tag	no change	dscp

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GE access	untagged	yes	FE access	none	n/a	no change	dscp
GE access	untagged	yes	FE access	set cos <x>	n/a	no change	dscp
GE access	untagged	yes	FE access	set dscp <x>	n/a	<x>	dscp
GE access	untagged	yes	FE access	trust cos-dscp	n/a	no change	dscp
GE trunk	single	no	FE trunk	none	no change	n/a	802.1p
GE trunk	single	no	FE trunk	set cos <x>	<x>	n/a	802.1p
GE trunk	single	no	FE trunk	set dscp <x>	map from set dscp (3)	n/a	dscp
GE trunk	single	no	FE trunk	trust cos-dscp	no change	n/a	802.1p
GE trunk	single	yes	FE trunk	none	map from ingress dscp (2)	no change	dscp
GE trunk	single	yes	FE trunk	set cos <x>	map from ingress dscp (2)	no change	dscp
GE trunk	single	yes	FE trunk	set dscp <x>	map from set dscp (2)	<x>	dscp
GE trunk	single	yes	FE trunk	trust cos-dscp	map from ingress dscp (2)	no change	dscp
GE trunk	double	no	FE trunk	none	no change	n/a	802.1p
GE trunk	double	no	FE trunk	set cos <x>	<x>	n/a	802.1p
GE trunk	double	no	FE trunk	set dscp <x>	map from set dscp (3)	n/a	dscp
GE trunk	double	no	FE trunk	trust cos-dscp	no change	n/a	802.1p
GE trunk	double	yes	FE trunk	none	no change	no change	802.1p
GE trunk	double	yes	FE trunk	set cos <x>	<x>	no change	802.1p
GE trunk	double	yes	FE trunk	set dscp <x>	map from set dscp (3)	<x>	dscp
GE trunk	double	yes	FE trunk	trust cos-dscp	no change	no change	802.1p
GE trunk	single	yes	FE access/customer	none	n/a	no change	dscp
GE trunk	single	yes	FE access/customer	set cos <x>	n/a	no change	dscp
GE trunk	single	yes	FE access/customer	set dscp <x>	n/a	<x>	dscp
GE trunk	single	yes	FE access/customer	trust cos-dscp	n/a	no change	dscp
GE trunk	double	no	FE customer	none	copy inter tag	n/a	802.1p
GE trunk	double	no	FE customer	set cos <x>	copy inter tag (1)	n/a	be
GE trunk	double	no	FE customer	set dscp <x>	copy inter tag	n/a	802.1p
GE trunk	double	no	FE customer	trust cos-dscp	copy inter tag	n/a	802.1p
GE trunk	double	yes	FE customer	none	copy inter tag	no change	dscp
GE trunk	double	yes	FE customer	set cos <x>	copy inter tag (1)	no change	dscp
GE trunk	double	yes	FE customer	set dscp <x>	copy inter tag	<x>	dscp
GE trunk	double	yes	FE customer	trust cos-dscp	copy inter tag	no change	dscp
GE access/customer	untagged	no	FE trunk	none	map from the be queue (7)	n/a	be
GE access/customer	untagged	no	FE trunk	set cos <x>	<x>	n/a	802.1p
GE access/customer	untagged	no	FE trunk	set dscp <x>	map from set dscp (3)	n/a	dscp
GE access/customer	untagged	no	FE trunk	trust cos-dscp	fixed 0	n/a	be
GE access/customer	untagged	yes	FE trunk	none	map from ingress dscp (2)	no change	dscp
GE access/customer	untagged	yes	FE trunk	set cos <x>	map from ingress dscp (2)	no change	dscp
GE access/customer	untagged	yes	FE trunk	set dscp <x>	map from set dscp (2)	<x>	dscp
GE access/customer	untagged	yes	FE trunk	trust cos-dscp	map from ingress dscp (2)	no change	dscp
GE customer	single	no	FE trunk	none	copy from inner tag	n/a	802.1p
GE customer	single	no	FE trunk	set cos <x>	<x>	n/a	802.1p
GE customer	single	no	FE trunk	set dscp <x>	map from set dscp (3)	n/a	dscp
GE customer	single	no	FE trunk	trust cos-dscp	copy from inner tag	n/a	802.1p
GE customer	single	yes	FE trunk	none	copy from inner tag (3,4)	no change	802.1p
GE customer	single	yes	FE trunk	set cos <x>	<x> (3,4)	no change	802.1p
GE customer	single	yes	FE trunk	set dscp <x>	map from set dscp (3)	<x>	dscp
GE customer	single	yes	FE trunk	trust cos-dscp	copy from inner tag (3,4)	no change	802.1p

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FE access	untagged	yes	GE access	none	n/a	no change	dscp
FE access	untagged	yes	GE access	set cos <x>	n/a	no change	dscp
FE access	untagged	yes	GE access	set dscp <x>	n/a	<x>	dscp
FE access	untagged	yes	GE access	trust cos-dscp	n/a	no change	dscp
FE trunk	single	no	GE trunk	none	no change	n/a	802.1p
FE trunk	single	no	GE trunk	set cos <x>	<x>	n/a	802.1p
FE trunk	single	no	GE trunk	set dscp <x>	map from set dscp (3)	n/a	dscp
FE trunk	single	no	GE trunk	trust cos-dscp	no change	n/a	802.1p
FE trunk	single	yes	GE trunk	none	map from ingress dscp (2)	no change	dscp
FE trunk	single	yes	GE trunk	set cos <x>	<x> (2,6)	no change	dscp
FE trunk	single	yes	GE trunk	set dscp <x>	map from set dscp (3)	<x>	dscp
FE trunk	single	yes	GE trunk	trust cos-dscp	map from ingress dscp (2)	no change	dscp
FE trunk	double	no	GE trunk	none	no change	n/a	802.1p
FE trunk	double	no	GE trunk	set cos <x>	<x>	n/a	802.1p
FE trunk	double	no	GE trunk	set dscp <x>	map from set dscp (3)	n/a	dscp
FE trunk	double	no	GE trunk	trust cos-dscp	no change	n/a	802.1p
FE trunk	double	yes	GE trunk	none	no change	no change	dscp
FE trunk	double	yes	GE trunk	set cos <x>	<x>	no change	dscp
FE trunk	double	yes	GE trunk	set dscp <x>	map from set dscp (3)	<x>	dscp
FE trunk	double	yes	GE trunk	trust cos-dscp	no change	no change	dscp
FE trunk	single	yes	GE access/customer	none	n/a	no change	dscp
FE trunk	single	yes	GE access/customer	set cos <x>	n/a	no change	dscp
FE trunk	single	yes	GE access/customer	set dscp <x>	n/a	<x>	dscp
FE trunk	single	yes	GE access/customer	trust cos-dscp	n/a	no change	dscp
FE trunk	double	no	GE customer	none	copy inter tag	n/a	802.1p
FE trunk	double	no	GE customer	set cos <x>	copy inter tag (1)	n/a	be
FE trunk	double	no	GE customer	set dscp <x>	copy inter tag	n/a	802.1p
FE trunk	double	no	GE customer	trust cos-dscp	copy inter tag	n/a	802.1p
FE trunk	double	yes	GE customer	none	copy inter tag	no change	dscp
FE trunk	double	yes	GE customer	set cos <x>	copy inter tag (1)	no change	dscp
FE trunk	double	yes	GE customer	set dscp <x>	copy inter tag	<x>	dscp
FE trunk	double	yes	GE customer	trust cos-dscp	copy inter tag	no change	dscp
FE access/customer	untagged	no	GE trunk	none	fixed 0	n/a	be
FE access/customer	untagged	no	GE trunk	set cos <x>	<x>	n/a	802.1p
FE access/customer	untagged	no	GE trunk	set dscp <x>	map from set dscp (3)	n/a	dscp
FE access/customer	untagged	no	GE trunk	trust cos-dscp	fixed 0	n/a	be
FE access/customer	untagged	yes	GE trunk	none	map from ingress dscp (2)	no change	dscp
FE access/customer	untagged	yes	GE trunk	set cos <x>	<x> (2,6)	no change	dscp
FE access/customer	untagged	yes	GE trunk	set dscp <x>	map from set dscp (3)	<x>	dscp
FE access/customer	untagged	yes	GE trunk	trust cos-dscp	map from ingress dscp (2)	no change	dscp
FE customer	single	no	GE trunk	none	copy from inner tag	n/a	802.1p
FE customer	single	no	GE trunk	set cos <x>	<x>	n/a	802.1p
FE customer	single	no	GE trunk	set dscp <x>	map from set dscp (3)	n/a	dscp
FE customer	single	no	GE trunk	trust cos-dscp	copy from inner tag	n/a	be
FE customer	single	yes	GE trunk	none	map from ingress dscp (2)	no change	dscp
FE customer	single	yes	GE trunk	set cos <x>	<x> (2,6)	no change	dscp
FE customer	single	yes	GE trunk	set dscp <x>	map from set dscp (3)	<x>	dscp
FE customer	single	yes	GE trunk	trust cos-dscp	map from ingress dscp (2)	no change	dscp

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Ingress port	Tagging	IP packet	Egress port	Class definition	Outer 802.1p	Outer DSCP	Priority
FE access	untagged	yes	FE access	none	n/a	no change	dscp
FE access	untagged	yes	FE access	set cos <x>	n/a	no change	dscp
FE access	untagged	yes	FE access	set dscp <x>	n/a	<x>	dscp
FE access	untagged	yes	FE access	trust cos-dscp	n/a	no change	dscp
FE trunk	single	no	FE trunk	none	no change	n/a	802.1p
FE trunk	single	no	FE trunk	set cos <x>	<x>	n/a	802.1p
FE trunk	single	no	FE trunk	set dscp <x>	map from set dscp (3)	n/a	dscp
FE trunk	single	no	FE trunk	trust cos-dscp	no change	n/a	802.1p
FE trunk	single	yes	FE trunk	none	map from ingress dscp (2)	no change	dscp
FE trunk	single	yes	FE trunk	set cos <x>	map from ingress dscp (2)	no change	dscp
FE trunk	single	yes	FE trunk	set dscp <x>	map from set dscp (2)	<x>	dscp
FE trunk	single	yes	FE trunk	trust cos-dscp	map from ingress dscp (2)	no change	dscp
FE trunk	double	no	FE trunk	none	no change	n/a	802.1p
FE trunk	double	no	FE trunk	set cos <x>	<x>	n/a	802.1p
FE trunk	double	no	FE trunk	set dscp <x>	map from set dscp (3)	n/a	dscp
FE trunk	double	no	FE trunk	trust cos-dscp	no change	n/a	802.1p
FE trunk	double	yes	FE trunk	none	no change	no change	802.1p
FE trunk	double	yes	FE trunk	set cos <x>	<x>	no change	802.1p
FE trunk	double	yes	FE trunk	set dscp <x>	map from set dscp (3)	<x>	dscp
FE trunk	double	yes	FE trunk	trust cos-dscp	no change	no change	802.1p
FE trunk	single	yes	FE access/customer	none	n/a	no change	dscp
FE trunk	single	yes	FE access/customer	set cos <x>	n/a	no change	dscp
FE trunk	single	yes	FE access/customer	set dscp <x>	n/a	<x>	dscp
FE trunk	single	yes	FE access/customer	trust cos-dscp	n/a	no change	dscp
FE trunk	double	no	FE customer	none	copy inter tag	n/a	802.1p
FE trunk	double	no	FE customer	set cos <x>	copy inter tag (1)	n/a	be
FE trunk	double	no	FE customer	set dscp <x>	copy inter tag	n/a	802.1p
FE trunk	double	no	FE customer	trust cos-dscp	copy inter tag	n/a	802.1p
FE trunk	double	yes	FE customer	none	copy inter tag	no change	dscp
FE trunk	double	yes	FE customer	set cos <x>	copy inter tag (1)	no change	dscp
FE trunk	double	yes	FE customer	set dscp <x>	copy inter tag	<x>	dscp
FE trunk	double	yes	FE customer	trust cos-dscp	copy inter tag	no change	dscp
FE access/customer	untagged	no	FE trunk	none	map from the be queue (5)	n/a	be
FE access/customer	untagged	no	FE trunk	set cos <x>	<x>	n/a	802.1p
FE access/customer	untagged	no	FE trunk	set dscp <x>	map from set dscp (3)	n/a	dscp
FE access/customer	untagged	no	FE trunk	trust cos-dscp	fixed 0	n/a	be
FE access/customer	untagged	yes	FE trunk	none	map from ingress dscp (2)	no change	dscp
FE access/customer	untagged	yes	FE trunk	set cos <x>	map from ingress dscp (2)	no change	dscp
FE access/customer	untagged	yes	FE trunk	set dscp <x>	map from set dscp (2)	<x>	dscp
FE access/customer	untagged	yes	FE trunk	trust cos-dscp	map from ingress dscp (2)	no change	dscp
FE customer	single	no	FE trunk	none	copy from inner tag	n/a	802.1p
FE customer	single	no	FE trunk	set cos <x>	<x>	n/a	802.1p
FE customer	single	no	FE trunk	set dscp <x>	map from set dscp (3)	n/a	dscp
FE customer	single	no	FE trunk	trust cos-dscp	copy from inner tag	n/a	802.1p
FE customer	single	yes	FE trunk	none	map from ingress dscp (2,4)	no change	dscp
FE customer	single	yes	FE trunk	set cos <x>	<x> (2,4,6)	no change	802.1p
FE customer	single	yes	FE trunk	set dscp <x>	map from set dscp (3)	<x>	dscp
FE customer	single	yes	FE trunk	trust cos-dscp	map from ingress dscp (2,4)	no change	dscp

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6 Service-policy action and priority by class definition

Ingress port	Tagging	IP packet	Egress port	Class definition	Outer 802.1p	Outer DSCP	Priority
GE access	untagged	yes	GE access	none	n/a	no change	dscp
GE trunk	single	no	GE trunk	none	no change	n/a	802.1p
GE trunk	single	yes	GE trunk	none	no change	no change	dscp
GE trunk	double	no	GE trunk	none	no change	n/a	802.1p
GE trunk	double	yes	GE trunk	none	no change	no change	dscp
GE trunk	single	yes	GE access/customer	none	n/a	no change	dscp
GE trunk	double	no	GE customer	none	copy inter tag	n/a	802.1p
GE trunk	double	yes	GE customer	none	copy inter tag	no change	dscp
GE access/customer	untagged	no	GE trunk	none	map from the be queue (7)	n/a	be
GE access/customer	untagged	yes	GE trunk	none	map from the be queue (7)	no change	dscp
GE customer	single	no	GE trunk	none	copy from inner tag	n/a	802.1p
GE customer	single	yes	GE trunk	none	copy from inner tag	no change	dscp
GE access	untagged	yes	GE access	set cos <x>	n/a	no change	dscp
GE trunk	single	no	GE trunk	set cos <x>	<x>	n/a	802.1p
GE trunk	single	yes	GE trunk	set cos <x>	<x>	no change	dscp
GE trunk	double	no	GE trunk	set cos <x>	<x>	n/a	802.1p
GE trunk	double	yes	GE trunk	set cos <x>	<x>	no change	dscp
GE trunk	single	yes	GE access/customer	set cos <x>	n/a	no change	dscp
GE trunk	double	no	GE customer	set cos <x>	copy inter tag (1)	n/a	be
GE trunk	double	yes	GE customer	set cos <x>	copy inter tag (1)	no change	dscp
GE access/customer	untagged	no	GE trunk	set cos <x>	<x>	n/a	802.1p
GE access/customer	untagged	yes	GE trunk	set cos <x>	<x>	no change	dscp
GE customer	single	no	GE trunk	set cos <x>	<x>	n/a	802.1p
GE customer	single	yes	GE trunk	set cos <x>	<x>	no change	dscp
GE access	untagged	yes	GE access	set dscp <x>	n/a	<x>	dscp
GE trunk	single	no	GE trunk	set dscp <x>	map from set dscp (3)	n/a	dscp
GE trunk	single	yes	GE trunk	set dscp <x>	map from set dscp (3)	<x>	dscp
GE trunk	double	no	GE trunk	set dscp <x>	map from set dscp (3)	n/a	dscp
GE trunk	double	yes	GE trunk	set dscp <x>	map from set dscp (3)	<x>	dscp
GE trunk	single	yes	GE access/customer	set dscp <x>	n/a	<x>	dscp
GE trunk	double	no	GE customer	set dscp <x>	copy inter tag	n/a	802.1p
GE trunk	double	yes	GE customer	set dscp <x>	copy inter tag	<x>	dscp
GE access/customer	untagged	no	GE trunk	set dscp <x>	map from set dscp (3)	n/a	dscp
GE access/customer	untagged	yes	GE trunk	set dscp <x>	map from set dscp (3)	<x>	dscp
GE customer	single	no	GE trunk	set dscp <x>	map from set dscp (3)	n/a	dscp
GE customer	single	yes	GE trunk	set dscp <x>	map from set dscp (3)	<x>	dscp
GE access	untagged	yes	GE access	trust cos-dscp	n/a	no change	dscp
GE trunk	single	no	GE trunk	trust cos-dscp	no change	n/a	802.1p
GE trunk	single	yes	GE trunk	trust cos-dscp	no change	no change	dscp
GE trunk	double	no	GE trunk	trust cos-dscp	no change	n/a	802.1p
GE trunk	double	yes	GE trunk	trust cos-dscp	no change	no change	dscp
GE trunk	single	yes	GE access/customer	trust cos-dscp	n/a	no change	dscp
GE trunk	double	no	GE customer	trust cos-dscp	copy inter tag	n/a	802.1p
GE trunk	double	yes	GE customer	trust cos-dscp	copy inter tag	no change	dscp
GE access/customer	untagged	no	GE trunk	trust cos-dscp	fixed 0	n/a	be
GE access/customer	untagged	yes	GE trunk	trust cos-dscp	fixed 0	no change	dscp
GE customer	single	no	GE trunk	trust cos-dscp	copy from inner tag	n/a	802.1p
GE customer	single	yes	GE trunk	trust cos-dscp	copy from inner tag	no change	dscp

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Ingress port	Tagging	IP packet	Egress port	Class definition	Outer 802.1p	Outer DSCP	Priority
GE access	untagged	yes	FE access	none	n/a	no change	dscp
GE trunk	single	no	FE trunk	none	no change	n/a	802.1p
GE trunk	single	yes	FE trunk	none	map from ingress dscp (2)	no change	dscp
GE trunk	double	no	FE trunk	none	no change	n/a	802.1p
GE trunk	double	yes	FE trunk	none	no change	no change	802.1p
GE trunk	single	yes	FE access/customer	none	n/a	no change	dscp
GE trunk	double	no	FE customer	none	copy inter tag	n/a	802.1p
GE trunk	double	yes	FE customer	none	copy inter tag	no change	dscp
GE access/customer	untagged	no	FE trunk	none	map from the be queue (7)	n/a	be
GE access/customer	untagged	yes	FE trunk	none	map from ingress dscp (2)	no change	dscp
GE customer	single	no	FE trunk	none	copy from inner tag	n/a	802.1p
GE customer	single	yes	FE trunk	none	copy from inner tag (3,4)	no change	802.1p
GE access	untagged	yes	FE access	set cos <x>	n/a	no change	dscp
GE trunk	single	no	FE trunk	set cos <x>	<x>	n/a	802.1p
GE trunk	single	yes	FE trunk	set cos <x>	map from ingress dscp (2)	no change	dscp
GE trunk	double	no	FE trunk	set cos <x>	<x>	n/a	802.1p
GE trunk	double	yes	FE trunk	set cos <x>	<x>	no change	802.1p
GE trunk	single	yes	FE access/customer	set cos <x>	n/a	no change	dscp
GE trunk	double	no	FE customer	set cos <x>	copy inter tag (1)	n/a	be
GE trunk	double	yes	FE customer	set cos <x>	copy inter tag (1)	no change	dscp
GE access/customer	untagged	no	FE trunk	set cos <x>	<x>	n/a	802.1p
GE access/customer	untagged	yes	FE trunk	set cos <x>	map from ingress dscp (2)	no change	dscp
GE customer	single	no	FE trunk	set cos <x>	<x>	n/a	802.1p
GE customer	single	yes	FE trunk	set cos <x>	<x> (3,4)	no change	802.1p
GE access	untagged	yes	FE access	set dscp <x>	n/a	<x>	dscp
GE trunk	single	no	FE trunk	set dscp <x>	map from set dscp (3)	n/a	dscp
GE trunk	single	yes	FE trunk	set dscp <x>	map from set dscp (2)	<x>	dscp
GE trunk	double	no	FE trunk	set dscp <x>	map from set dscp (3)	n/a	dscp
GE trunk	double	yes	FE trunk	set dscp <x>	map from set dscp (3)	<x>	dscp
GE trunk	single	yes	FE access/customer	set dscp <x>	n/a	<x>	dscp
GE trunk	double	no	FE customer	set dscp <x>	copy inter tag	n/a	802.1p
GE trunk	double	yes	FE customer	set dscp <x>	copy inter tag	<x>	dscp
GE access/customer	untagged	no	FE trunk	set dscp <x>	map from set dscp (3)	n/a	dscp
GE access/customer	untagged	yes	FE trunk	set dscp <x>	map from set dscp (2)	<x>	dscp
GE customer	single	no	FE trunk	set dscp <x>	map from set dscp (3)	n/a	dscp
GE customer	single	yes	FE trunk	set dscp <x>	map from set dscp (3)	<x>	dscp
GE access	untagged	yes	FE access	trust cos-dscp	n/a	no change	dscp
GE trunk	single	no	FE trunk	trust cos-dscp	no change	n/a	802.1p
GE trunk	single	yes	FE trunk	trust cos-dscp	map from ingress dscp (2)	no change	dscp
GE trunk	double	no	FE trunk	trust cos-dscp	no change	n/a	802.1p
GE trunk	double	yes	FE trunk	trust cos-dscp	no change	no change	802.1p
GE trunk	single	yes	FE access/customer	trust cos-dscp	n/a	no change	dscp
GE trunk	double	no	FE customer	trust cos-dscp	copy inter tag	n/a	802.1p
GE trunk	double	yes	FE customer	trust cos-dscp	copy inter tag	no change	dscp
GE access/customer	untagged	no	FE trunk	trust cos-dscp	fixed 0	n/a	be
GE access/customer	untagged	yes	FE trunk	trust cos-dscp	map from ingress dscp (2)	no change	dscp
GE customer	single	no	FE trunk	trust cos-dscp	copy from inner tag	n/a	802.1p
GE customer	single	yes	FE trunk	trust cos-dscp	copy from inner tag (3,4)	no change	802.1p

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Ingress port	Tagging	IP packet	Egress port	Class definition	Outer 802.1p	Outer DSCP	Priority
FE access	untagged	yes	GE access	none	n/a	no change	dscp
FE trunk	single	no	GE trunk	none	no change	n/a	802.1p
FE trunk	single	yes	GE trunk	none	map from ingress dscp (2)	no change	dscp
FE trunk	double	no	GE trunk	none	no change	n/a	802.1p
FE trunk	double	yes	GE trunk	none	no change	no change	dscp
FE trunk	single	yes	GE access/customer	none	n/a	no change	dscp
FE trunk	double	no	GE customer	none	copy inter tag	n/a	802.1p
FE trunk	double	yes	GE customer	none	copy inter tag	no change	dscp
FE access/customer	untagged	no	GE trunk	none	fixed 0	n/a	be
FE access/customer	untagged	yes	GE trunk	none	map from ingress dscp (2)	no change	dscp
FE customer	single	no	GE trunk	none	copy from inner tag	n/a	802.1p
FE customer	single	yes	GE trunk	none	map from ingress dscp (2)	no change	dscp
FE access	untagged	yes	GE access	set cos <x>	n/a	no change	dscp
FE trunk	single	no	GE trunk	set cos <x>	<x>	n/a	802.1p
FE trunk	single	yes	GE trunk	set cos <x>	<x> (2,6)	no change	dscp
FE trunk	double	no	GE trunk	set cos <x>	<x>	n/a	802.1p
FE trunk	double	yes	GE trunk	set cos <x>	<x>	no change	dscp
FE trunk	single	yes	GE access/customer	set cos <x>	n/a	no change	dscp
FE trunk	double	no	GE customer	set cos <x>	copy inter tag (1)	n/a	be
FE trunk	double	yes	GE customer	set cos <x>	copy inter tag (1)	no change	dscp
FE access/customer	untagged	no	GE trunk	set cos <x>	<x>	n/a	802.1p
FE access/customer	untagged	yes	GE trunk	set cos <x>	<x> (2,6)	no change	dscp
FE customer	single	no	GE trunk	set cos <x>	<x>	n/a	802.1p
FE customer	single	yes	GE trunk	set cos <x>	<x> (2,6)	no change	dscp
FE access	untagged	yes	GE access	set dscp <x>	n/a	<x>	dscp
FE trunk	single	no	GE trunk	set dscp <x>	map from set dscp (3)	n/a	dscp
FE trunk	single	yes	GE trunk	set dscp <x>	map from set dscp (3)	<x>	dscp
FE trunk	double	no	GE trunk	set dscp <x>	map from set dscp (3)	n/a	dscp
FE trunk	double	yes	GE trunk	set dscp <x>	map from set dscp (3)	<x>	dscp
FE trunk	single	yes	GE access/customer	set dscp <x>	n/a	<x>	dscp
FE trunk	double	no	GE customer	set dscp <x>	copy inter tag	n/a	802.1p
FE trunk	double	yes	GE customer	set dscp <x>	copy inter tag	<x>	dscp
FE access/customer	untagged	no	GE trunk	set dscp <x>	map from set dscp (3)	n/a	dscp
FE access/customer	untagged	yes	GE trunk	set dscp <x>	map from set dscp (3)	<x>	dscp
FE customer	single	no	GE trunk	set dscp <x>	map from set dscp (3)	n/a	dscp
FE customer	single	yes	GE trunk	set dscp <x>	map from set dscp (3)	<x>	dscp
FE access	untagged	yes	GE access	trust cos-dscp	n/a	no change	dscp
FE trunk	single	no	GE trunk	trust cos-dscp	no change	n/a	802.1p
FE trunk	single	yes	GE trunk	trust cos-dscp	map from ingress dscp (2)	no change	dscp
FE trunk	double	no	GE trunk	trust cos-dscp	no change	n/a	802.1p
FE trunk	double	yes	GE trunk	trust cos-dscp	no change	no change	dscp
FE trunk	single	yes	GE access/customer	trust cos-dscp	n/a	no change	dscp
FE trunk	double	no	GE customer	trust cos-dscp	copy inter tag	n/a	802.1p
FE trunk	double	yes	GE customer	trust cos-dscp	copy inter tag	no change	dscp
FE access/customer	untagged	no	GE trunk	trust cos-dscp	fixed 0	n/a	be
FE access/customer	untagged	yes	GE trunk	trust cos-dscp	map from ingress dscp (2)	no change	dscp
FE customer	single	no	GE trunk	trust cos-dscp	copy from inner tag	n/a	be
FE customer	single	yes	GE trunk	trust cos-dscp	map from ingress dscp (2)	no change	dscp

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Ingress port	Tagging	IP packet	Egress port	Class definition	Outer 802.1p	Outer DSCP	Priority
FE access	untagged	yes	FE access	none	n/a	no change	dscp
FE trunk	single	no	FE trunk	none	no change	n/a	802.1p
FE trunk	single	yes	FE trunk	none	map from ingress dscp (2)	no change	dscp
FE trunk	double	no	FE trunk	none	no change	n/a	802.1p
FE trunk	double	yes	FE trunk	none	no change	no change	802.1p
FE trunk	single	yes	FE access/customer	none	n/a	no change	dscp
FE trunk	double	no	FE customer	none	copy inter tag	n/a	802.1p
FE trunk	double	yes	FE customer	none	copy inter tag	no change	dscp
FE access/customer	untagged	no	FE trunk	none	map from the be queue (5)	n/a	be
FE access/customer	untagged	yes	FE trunk	none	map from ingress dscp (2)	no change	dscp
FE customer	single	no	FE trunk	none	copy from inner tag	n/a	802.1p
FE customer	single	yes	FE trunk	none	map from ingress dscp (2,4)	no change	dscp
FE access	untagged	yes	FE access	set cos <x>	n/a	no change	dscp
FE trunk	single	no	FE trunk	set cos <x>	<x>	n/a	802.1p
FE trunk	single	yes	FE trunk	set cos <x>	map from ingress dscp (2)	no change	dscp
FE trunk	double	no	FE trunk	set cos <x>	<x>	n/a	802.1p
FE trunk	double	yes	FE trunk	set cos <x>	<x>	no change	802.1p
FE trunk	single	yes	FE access/customer	set cos <x>	n/a	no change	dscp
FE trunk	double	no	FE customer	set cos <x>	copy inter tag (1)	n/a	be
FE trunk	double	yes	FE customer	set cos <x>	copy inter tag (1)	no change	dscp
FE access/customer	untagged	no	FE trunk	set cos <x>	<x>	n/a	802.1p
FE access/customer	untagged	yes	FE trunk	set cos <x>	map from ingress dscp (2)	no change	dscp
FE customer	single	no	FE trunk	set cos <x>	<x>	n/a	802.1p
FE customer	single	yes	FE trunk	set cos <x>	<x> (2,4,6)	no change	802.1p
FE access	untagged	yes	FE access	set dscp <x>	n/a	<x>	dscp
FE trunk	single	no	FE trunk	set dscp <x>	map from set dscp (3)	n/a	dscp
FE trunk	single	yes	FE trunk	set dscp <x>	map from set dscp (2)	<x>	dscp
FE trunk	double	no	FE trunk	set dscp <x>	map from set dscp (3)	n/a	dscp
FE trunk	double	yes	FE trunk	set dscp <x>	map from set dscp (3)	<x>	dscp
FE trunk	single	yes	FE access/customer	set dscp <x>	n/a	<x>	dscp
FE trunk	double	no	FE customer	set dscp <x>	copy inter tag	n/a	802.1p
FE trunk	double	yes	FE customer	set dscp <x>	copy inter tag	<x>	dscp
FE access/customer	untagged	no	FE trunk	set dscp <x>	map from set dscp (3)	n/a	dscp
FE access/customer	untagged	yes	FE trunk	set dscp <x>	map from set dscp (2)	<x>	dscp
FE customer	single	no	FE trunk	set dscp <x>	map from set dscp (3)	n/a	dscp
FE customer	single	yes	FE trunk	set dscp <x>	map from set dscp (3)	<x>	dscp
FE access	untagged	yes	FE access	trust cos-dscp	n/a	no change	dscp
FE trunk	single	no	FE trunk	trust cos-dscp	no change	n/a	802.1p
FE trunk	single	yes	FE trunk	trust cos-dscp	map from ingress dscp (2)	no change	dscp
FE trunk	double	no	FE trunk	trust cos-dscp	no change	n/a	802.1p
FE trunk	double	yes	FE trunk	trust cos-dscp	no change	no change	802.1p
FE trunk	single	yes	FE access/customer	trust cos-dscp	n/a	no change	dscp
FE trunk	double	no	FE customer	trust cos-dscp	copy inter tag	n/a	802.1p
FE trunk	double	yes	FE customer	trust cos-dscp	copy inter tag	no change	dscp
FE access/customer	untagged	no	FE trunk	trust cos-dscp	fixed 0	n/a	be
FE access/customer	untagged	yes	FE trunk	trust cos-dscp	map from ingress dscp (2)	no change	dscp
FE customer	single	no	FE trunk	trust cos-dscp	copy from inner tag	n/a	802.1p
FE customer	single	yes	FE trunk	trust cos-dscp	map from ingress dscp (2,4)	no change	dscp

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7 Service-policy action and priority by class definition (only IP)

Ingress port	Tagging	IP packet	Egress port	Class definition	Outer 802.1p	Outer DSCP	Priority
GE access	untagged	yes	GE access	none	n/a	no change	dscp
GE trunk	single	yes	GE trunk	none	no change	no change	dscp
GE trunk	double	yes	GE trunk	none	no change	no change	dscp
GE trunk	single	yes	GE access/customer	none	n/a	no change	dscp
GE trunk	double	yes	GE customer	none	copy inter tag	no change	dscp
GE access/customer	untagged	yes	GE trunk	none	map from the be queue (7)	no change	dscp
GE customer	single	yes	GE trunk	none	copy from inner tag	no change	dscp
FE access	untagged	yes	GE access	none	n/a	no change	dscp
FE trunk	single	yes	GE trunk	none	map from ingress dscp (2)	no change	dscp
FE trunk	double	yes	GE trunk	none	no change	no change	dscp
FE trunk	single	yes	GE access/customer	none	n/a	no change	dscp
FE trunk	double	yes	GE customer	none	copy inter tag	no change	dscp
FE access/customer	untagged	yes	GE trunk	none	map from ingress dscp (2)	no change	dscp
FE customer	single	yes	GE trunk	none	map from ingress dscp (2)	no change	dscp
GE access	untagged	yes	GE access	set cos <x>	n/a	no change	dscp
GE trunk	single	yes	GE trunk	set cos <x>	<x>	no change	dscp
GE trunk	double	yes	GE trunk	set cos <x>	<x>	no change	dscp
GE trunk	single	yes	GE access/customer	set cos <x>	n/a	no change	dscp
GE trunk	double	yes	GE customer	set cos <x>	copy inter tag (1)	no change	dscp
GE access/customer	untagged	yes	GE trunk	set cos <x>	<x>	no change	dscp
GE customer	single	yes	GE trunk	set cos <x>	<x>	no change	dscp
FE access	untagged	yes	GE access	set cos <x>	n/a	no change	dscp
FE trunk	single	yes	GE trunk	set cos <x>	<x> (2,6)	no change	dscp
FE trunk	double	yes	GE trunk	set cos <x>	<x>	no change	dscp
FE trunk	single	yes	GE access/customer	set cos <x>	n/a	no change	dscp
FE trunk	double	yes	GE customer	set cos <x>	copy inter tag (1)	no change	dscp
FE access/customer	untagged	yes	GE trunk	set cos <x>	<x> (2,6)	no change	dscp
FE customer	single	yes	GE trunk	set cos <x>	<x> (2,6)	no change	dscp
GE access	untagged	yes	GE access	set dscp <x>	n/a	<x>	dscp
GE trunk	single	yes	GE trunk	set dscp <x>	map from set dscp (3)	<x>	dscp
GE trunk	double	yes	GE trunk	set dscp <x>	map from set dscp (3)	<x>	dscp
GE trunk	single	yes	GE access/customer	set dscp <x>	n/a	<x>	dscp
GE trunk	double	yes	GE customer	set dscp <x>	copy inter tag	<x>	dscp
GE access/customer	untagged	yes	GE trunk	set dscp <x>	map from set dscp (3)	<x>	dscp
GE customer	single	yes	GE trunk	set dscp <x>	map from set dscp (3)	<x>	dscp
FE access	untagged	yes	GE access	set dscp <x>	n/a	<x>	dscp
FE trunk	single	yes	GE trunk	set dscp <x>	map from set dscp (3)	<x>	dscp
FE trunk	double	yes	GE trunk	set dscp <x>	map from set dscp (3)	<x>	dscp
FE trunk	single	yes	GE access/customer	set dscp <x>	n/a	<x>	dscp
FE trunk	double	yes	GE customer	set dscp <x>	copy inter tag	<x>	dscp
FE access/customer	untagged	yes	GE trunk	set dscp <x>	map from set dscp (3)	<x>	dscp
FE customer	single	yes	GE trunk	set dscp <x>	map from set dscp (3)	<x>	dscp
GE access	untagged	yes	GE access	trust cos-dscp	n/a	no change	dscp
GE trunk	single	yes	GE trunk	trust cos-dscp	no change	no change	dscp
GE trunk	double	yes	GE trunk	trust cos-dscp	no change	no change	dscp
GE trunk	single	yes	GE access/customer	trust cos-dscp	n/a	no change	dscp
GE trunk	double	yes	GE customer	trust cos-dscp	copy inter tag	no change	dscp
GE access/customer	untagged	yes	GE trunk	trust cos-dscp	fixed 0	no change	dscp
GE customer	single	yes	GE trunk	trust cos-dscp	copy from inner tag	no change	dscp
FE access	untagged	yes	GE access	trust cos-dscp	n/a	no change	dscp
FE trunk	single	yes	GE trunk	trust cos-dscp	map from ingress dscp (2)	no change	dscp
FE trunk	double	yes	GE trunk	trust cos-dscp	no change	no change	dscp
FE trunk	single	yes	GE access/customer	trust cos-dscp	n/a	no change	dscp
FE trunk	double	yes	GE customer	trust cos-dscp	copy inter tag	no change	dscp
FE access/customer	untagged	yes	GE trunk	trust cos-dscp	map from ingress dscp (2)	no change	dscp
FE customer	single	yes	GE trunk	trust cos-dscp	map from ingress dscp (2)	no change	dscp

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Ingress port	Tagging	IP packet	Egress port	Class definition	Outer 802.1p	Outer DSCP	Priority
GE access	untagged	yes	FE access	none	n/a	no change	dscp
GE trunk	single	yes	FE trunk	none	map from ingress dscp (2)	no change	dscp
GE trunk	double	yes	FE trunk	none	no change	no change	802.1p
GE trunk	single	yes	FE access/customer	none	n/a	no change	dscp
GE trunk	double	yes	FE customer	none	copy inter tag	no change	dscp
GE access/customer	untagged	yes	FE trunk	none	map from ingress dscp (2)	no change	dscp
GE customer	single	yes	FE trunk	none	copy from inner tag (3,4)	no change	802.1p
FE access	untagged	yes	FE access	none	n/a	no change	dscp
FE trunk	single	yes	FE trunk	none	map from ingress dscp (2)	no change	dscp
FE trunk	double	yes	FE trunk	none	no change	no change	802.1p
FE trunk	single	yes	FE access/customer	none	n/a	no change	dscp
FE trunk	double	yes	FE customer	none	copy inter tag	no change	dscp
FE access/customer	untagged	yes	FE trunk	none	map from ingress dscp (2)	no change	dscp
FE customer	single	yes	FE trunk	none	map from ingress dscp (2,4)	no change	dscp
GE access	untagged	yes	FE access	set cos <x>	n/a	no change	dscp
GE trunk	single	yes	FE trunk	set cos <x>	map from ingress dscp (2)	no change	dscp
GE trunk	double	yes	FE trunk	set cos <x>	<x>	no change	802.1p
GE trunk	single	yes	FE access/customer	set cos <x>	n/a	no change	dscp
GE trunk	double	yes	FE customer	set cos <x>	copy inter tag (1)	no change	dscp
GE access/customer	untagged	yes	FE trunk	set cos <x>	map from ingress dscp (2)	no change	dscp
GE customer	single	yes	FE trunk	set cos <x>	<x> (3,4)	no change	802.1p
FE access	untagged	yes	FE access	set cos <x>	n/a	no change	dscp
FE trunk	single	yes	FE trunk	set cos <x>	map from ingress dscp (2)	no change	dscp
FE trunk	double	yes	FE trunk	set cos <x>	<x>	no change	802.1p
FE trunk	single	yes	FE access/customer	set cos <x>	n/a	no change	dscp
FE trunk	double	yes	FE customer	set cos <x>	copy inter tag (1)	no change	dscp
FE access/customer	untagged	yes	FE trunk	set cos <x>	map from ingress dscp (2)	no change	dscp
FE customer	single	yes	FE trunk	set cos <x>	<x> (2,4,6)	no change	802.1p
GE access	untagged	yes	FE access	set dscp <x>	n/a	<x>	dscp
GE trunk	single	yes	FE trunk	set dscp <x>	map from set dscp (2)	<x>	dscp
GE trunk	double	yes	FE trunk	set dscp <x>	map from set dscp (3)	<x>	dscp
GE trunk	single	yes	FE access/customer	set dscp <x>	n/a	<x>	dscp
GE trunk	double	yes	FE customer	set dscp <x>	copy inter tag	<x>	dscp
GE access/customer	untagged	yes	FE trunk	set dscp <x>	map from set dscp (2)	<x>	dscp
GE customer	single	yes	FE trunk	set dscp <x>	map from set dscp (3)	<x>	dscp
FE access	untagged	yes	FE access	set dscp <x>	n/a	<x>	dscp
FE trunk	single	yes	FE trunk	set dscp <x>	map from set dscp (2)	<x>	dscp
FE trunk	double	yes	FE trunk	set dscp <x>	map from set dscp (3)	<x>	dscp
FE trunk	single	yes	FE access/customer	set dscp <x>	n/a	<x>	dscp
FE trunk	double	yes	FE customer	set dscp <x>	copy inter tag	<x>	dscp
FE access/customer	untagged	yes	FE trunk	set dscp <x>	map from set dscp (2)	<x>	dscp
FE customer	single	yes	FE trunk	set dscp <x>	map from set dscp (3)	<x>	dscp
GE access	untagged	yes	FE access	trust cos-dscp	n/a	no change	dscp
GE trunk	single	yes	FE trunk	trust cos-dscp	map from ingress dscp (2)	no change	dscp
GE trunk	double	yes	FE trunk	trust cos-dscp	no change	no change	802.1p
GE trunk	single	yes	FE access/customer	trust cos-dscp	n/a	no change	dscp
GE trunk	double	yes	FE customer	trust cos-dscp	copy inter tag	no change	dscp
GE access/customer	untagged	yes	FE trunk	trust cos-dscp	map from ingress dscp (2)	no change	dscp
GE customer	single	yes	FE trunk	trust cos-dscp	copy from inner tag (3,4)	no change	802.1p
FE access	untagged	yes	FE access	trust cos-dscp	n/a	no change	dscp
FE trunk	single	yes	FE trunk	trust cos-dscp	map from ingress dscp (2)	no change	dscp
FE trunk	double	yes	FE trunk	trust cos-dscp	no change	no change	802.1p
FE trunk	single	yes	FE access/customer	trust cos-dscp	n/a	no change	dscp
FE trunk	double	yes	FE customer	trust cos-dscp	copy inter tag	no change	dscp
FE access/customer	untagged	yes	FE trunk	trust cos-dscp	map from ingress dscp (2)	no change	dscp
FE customer	single	yes	FE trunk	trust cos-dscp	map from ingress dscp (2,4)	no change	dscp