

# Ejemplo de Configuración de QoS en los Puertos de Acceso Catalyst 6800ia

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## Introducción

Este documento describe cómo configurar, verificar y resolver problemas de calidad de servicio (QoS) en los puertos host Cisco Catalyst 6800ia. La QoS se soporta en los puertos host 6800ia en Cisco IOS<sup>®</sup> Software Release 152.1.SY y posterior en un Catalyst 6800 primario Virtual Switching System (VSS).

## Prerequisites

### Requirements

No hay requisitos específicos para este documento.

### Componentes Utilizados

La información que contiene este documento se basa en las siguientes versiones de software y hardware.

- Versión 152.1.SY del software Cisco IOS<sup>®</sup>
- VSS principal de Cisco Catalyst 6800

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

# Antecedentes

El modo de configuración en un Catalyst 6800ia está desactivado y todas las configuraciones de QoS para los puertos host 6800ia deben realizarse desde el primario. QoS para el puerto host 6800ia se configura con un policy-map. Cuando se aplica a las interfaces, este policy-map envía la configuración relevante internamente al 6800ia y luego programa las colas de hardware.

Los puertos host 6800ia tienen arquitectura 1p3q3t en la dirección de transmisión (TX). Todos los ejemplos de configuración en este documento se aplican solamente a las colas TX en un 6800ia.

Cuando no hay una configuración de QoS explícita presente en las interfaces 6800ia en el estado predeterminado, la interfaz de host 6800ia puede verse similar a este resultado de ejemplo:

```
6880-VSS#show run int gi101/1/0/1
```

```
interface GigabitEthernet101/1/0/1
  switchport
  switchport trunk allowed vlan 500
  switchport mode access
  switchport access vlan 500
  load-interval 30
end
```

```
6880-VSS#show queueing interface gi101/1/0/1
```

```
Interface GigabitEthernet101/1/0/1 queueing strategy:  Weighted Round-Robin
```

```
Port QoS is disabled globally
Queueing on Gi101/1/0/1: Tx Enabled Rx Disabled
```

```
Trust boundary disabled
```

```
Trust state: trust DSCP
Trust state in queueing: trust DSCP
Default COS is 0
Queueing Mode In Tx direction: mode-dscp
Transmit queues [type = 1p3q3t]:
Queue Id      Scheduling  Num of thresholds
```

```
-----
 1          Priority           3
 2          WRR                3
 3          WRR                3
 4          WRR                3
```

```
WRR bandwidth ratios:  100[queue 2] 100[queue 3] 100[queue 4]  0[queue 5]
queue-limit ratios:    15[Pri Queue] 25[queue 2] 40[queue 3] 20[queue 4]
```

```
queue thresh dscp-map
```

```
-----
 1      1      32 33 40 41 42 43 44 45 46 47
 1      2
 1      3
 2      1      16 17 18 19 20 21 22 23 26 27 28 29 30 31 34 35 36 37 38 39
 2      2      24
 2      3      48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63
 3      1      25
 3      2
 3      3      0 1 2 3 4 5 6 7
 4      1      8 9 11 13 15
```

4 2 10 12 14  
4 3

# Configurar

## Ejemplo de configuración 1: Ancho de banda de cola

Este ejemplo muestra cómo puede configurar los anchos de banda para las colas 6800ia TX:

### 1. Configure **class-maps** para clasificar el tráfico de interés:

```
class-map type lan-queuing match-any ltest
  match dscp 32
class-map type lan-queuing match-any ltest1
  match dscp 24
class-map type lan-queuing match-any ltest2
  match dscp default
```

### 2. Asignar prioridad y ancho de banda a las clases configuradas:

```
policy-map type lan-queuing ltest
  class type lan-queuing ltest
    priority
  class type lan-queuing ltest1
    bandwidth remaining percent 30
  class type lan-queuing ltest2
    bandwidth remaining percent 20
  class class-default
```

### 3. Aplique **policy-map** a la interfaz 6800ia en cuestión: **Nota:** Cuando se aplica un mapa de política de cola de LAN a un puerto en una pila 6800ia, se propagan los cambios a todos los puertos en la pila.

```
6880-VSS#conf t
```

```
6880-VSS(config)#int gi101/1/0/1
```

```
6880-VSS(config-if)#service-policy type lan-queuing output ltest
```

```
Propagating [attach] lan queueing policy "ltest" to Gi101/1/0/1 Gi101/1/0/2 Gi101/1/0/3
Gi101/1/0/4 Gi101/1/0/5 Gi101/1/0/6 Gi101/1/0/7 Gi101/1/0/8 Gi101/1/0/9 Gi101/1/0/10
Gi101/1/0/12 Gi101/1/0/13 Gi101/1/0/14 Gi101/1/0/15 Gi101/1/0/16 Gi101/1/0/17
Gi101/1/0/18 Gi101/1/0/19 Gi101/1/0/20 Gi101/1/0/21 Gi101/1/0/22 Gi101/1/0/23
Gi101/1/0/24 Gi101/1/0/25 Gi101/1/0/26 Gi101/1/0/27 Gi101/1/0/28 Gi101/1/0/29
Gi101/1/0/30 Gi101/1/0/31 Gi101/1/0/32 Gi101/1/0/33 Gi101/1/0/34 Gi101/1/0/35
Gi101/1/0/36 Gi101/1/0/37 Gi101/1/0/38 Gi101/1/0/39 Gi101/1/0/40 Gi101/1/0/41
Gi101/1/0/42 Gi101/1/0/43 Gi101/1/0/44 Gi101/1/0/45 Gi101/1/0/46 Gi101/1/0/47 Gi101/1/0/48
```

```
Propagating [attach] lan queueing policy "ltest" to Gi101/2/0/1 Gi101/2/0/2
Gi101/2/0/3 Gi101/2/0/4 Gi101/2/0/5 Gi101/2/0/6 Gi101/2/0/7 Gi101/2/0/8
Gi101/2/0/9 Gi101/2/0/10 Gi101/2/0/11 Gi101/2/0/12 Gi101/2/0/13 Gi101/2/0/14
Gi101/2/0/15 Gi101/2/0/16 Gi101/2/0/17 Gi101/2/0/18 Gi101/2/0/19 Gi101/2/0/20
Gi101/2/0/21 Gi101/2/0/22 Gi101/2/0/23 Gi101/2/0/24 Gi101/2/0/25 Gi101/2/0/26
Gi101/2/0/27 Gi101/2/0/28 Gi101/2/0/29 Gi101/2/0/30 Gi101/2/0/31 Gi101/2/0/32
Gi101/2/0/33 Gi101/2/0/34 Gi101/2/0/35 Gi101/2/0/36 Gi101/2/0/37 Gi101/2/0/38
Gi101/2/0/39 Gi101/2/0/40 Gi101/2/0/41 Gi101/2/0/42 Gi101/2/0/43 Gi101/2/0/44
Gi101/2/0/45 Gi101/2/0/46 Gi101/2/0/47 Gi101/2/0/48
```

```
Propagating [attach] lan queueing policy "ltest" to Gi101/3/0/1 Gi101/3/0/2
Gi101/3/0/3 Gi101/3/0/4 Gi101/3/0/5 Gi101/3/0/6 Gi101/3/0/7 Gi101/3/0/8
Gi101/3/0/9 Gi101/3/0/10 Gi101/3/0/11 Gi101/3/0/12 Gi101/3/0/13 Gi101/3/0/14
Gi101/3/0/15 Gi101/3/0/16 Gi101/3/0/17 Gi101/3/0/18 Gi101/3/0/19 Gi101/3/0/20
Gi101/3/0/21 Gi101/3/0/22 Gi101/3/0/23 Gi101/3/0/24 Gi101/3/0/25 Gi101/3/0/26
Gi101/3/0/27 Gi101/3/0/28 Gi101/3/0/29 Gi101/3/0/30 Gi101/3/0/31 Gi101/3/0/32
Gi101/3/0/33 Gi101/3/0/34 Gi101/3/0/35 Gi101/3/0/36 Gi101/3/0/37 Gi101/3/0/38
Gi101/3/0/39 Gi101/3/0/40 Gi101/3/0/41 Gi101/3/0/42 Gi101/3/0/43 Gi101/3/0/44
```

Gi101/3/0/45 Gi101/3/0/46 Gi101/3/0/47 Gi101/3/0/48

```
Propagating [attach] lan queueing policy "ltest" to Gi101/4/0/1 Gi101/4/0/2
Gi101/4/0/3 Gi101/4/0/4 Gi101/4/0/5 Gi101/4/0/6 Gi101/4/0/7 Gi101/4/0/8
Gi101/4/0/9 Gi101/4/0/10 Gi101/4/0/11 Gi101/4/0/12 Gi101/4/0/13 Gi101/4/0/14
Gi101/4/0/15 Gi101/4/0/16 Gi101/4/0/17 Gi101/4/0/18 Gi101/4/0/19 Gi101/4/0/20
Gi101/4/0/21 Gi101/4/0/22 Gi101/4/0/23 Gi101/4/0/24 Gi101/4/0/25 Gi101/4/0/26
Gi101/4/0/27 Gi101/4/0/28 Gi101/4/0/29 Gi101/4/0/30 Gi101/4/0/31 Gi101/4/0/32
Gi101/4/0/33 Gi101/4/0/34 Gi101/4/0/35 Gi101/4/0/36 Gi101/4/0/37 Gi101/4/0/38
Gi101/4/0/39 Gi101/4/0/40 Gi101/4/0/41 Gi101/4/0/42 Gi101/4/0/43 Gi101/4/0/44
Gi101/4/0/45 Gi101/4/0/46 Gi101/4/0/47 Gi101/4/0/48
6880-VSS(config-if)#
6880-VSS(config-if)#end
```

#### 4. Verifique que policy-map se aplique:

```
6880-VSS#show run int gi101/1/0/1
```

```
interface GigabitEthernet101/1/0/1
  switchport
  switchport trunk allowed vlan 500
  switchport mode access
  switchport access vlan 500
  load-interval 30
  service-policy type lan-queueing output ltest
end
```

#### 5. Verifique el mapa de clase para la asignación de cola, las asignaciones de ancho de banda y búfer, y la cola para la asignación de punto de código de servicios diferenciados (DSCP):

```
6880-VSS#show queueing int gi101/1/0/1
```

```
Interface GigabitEthernet101/1/0/1 queueing strategy: Weighted Round-Robin
```

```
Port QoS is disabled globally
Queueing on Gi101/1/0/1: Tx Enabled Rx Disabled
```

```
Trust boundary disabled
```

```
Trust state: trust DSCP
Trust state in queueing: trust DSCP
Default COS is 0
Class-map to Queue in Tx direction
Class-map          Queue Id
-----
ltest              1
ltest1            4
ltest2            3
class-default    2
```

```
Queueing Mode In Tx direction: mode-dscp
```

```
Transmit queues [type = 1p3q3t]:
```

```
Queue Id    Scheduling  Num of thresholds
-----
```

```
  1          Priority      3
  2          WRR           3
  3          WRR           3
  4          WRR           3
```

```
WRR bandwidth ratios: 50[queue 2] 20[queue 3] 30[queue 4]
```

```
queue-limit ratios: 15[Pri Queue] 100[queue 2] 100[queue 3] 100[queue 4]
```

```
queue thresh dscp-map
```

```
-----
  1    1    32
  1    2
  1    3
  2    1    1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
```

```

23 25 26 27 28 29 30 31 33 34 35 36 37 38 39 40 41 42 43
44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63
  2      2
  2      3
  3      1      0
  3      2
  3      3
  4      1      24
  4      2
  4      3

```

6. Doble verificación de las asignaciones de búfer y ancho de banda del 6800ia:**Nota:** Si no especifica el peso del búfer para una clase determinada, de forma predeterminada se necesita un 100%. Cola 1:  $15 / [15+100+100+100] = 4$  Cola 2:  $100 / [15+100+100+100] \sim 31$  También se derivan pesos para otras colas.

```
6880-VSS#remote command fex 101 show mls qos int gi1/0/1 buffer
```

```
GigabitEthernet1/0/1
The port is mapped to qset : 1
The allocations between the queues are : 4 31 31 34
```

```
6880-VSS#remote command fex 101 show mls qos int gi1/0/1 queueing
```

```
GigabitEthernet1/0/1
Egress Priority Queue : enabled
Shaped queue weights (absolute) : 0 0 0 0
Shared queue weights : 0 127 51 76
The port bandwidth limit : 100 (Operational Bandwidth:100.0)
The port is mapped to qset : 1
```

7. Verifique si el tráfico interesado está en cola en la cola respectiva y si hay caídas:

```
6880-VSS#remote command fex 101 show mls qos int gi1/0/1 statistic
```

```
GigabitEthernet1/0/1 (All statistics are in packets)
```

```

dscp: incoming
-----

0 - 4 :          0          0          0          0          0
5 - 9 :          0          0          0          0          0
10 - 14 :        0          0          0          0          0
15 - 19 :        0          0          0          0          0
20 - 24 :        0          0          0          0          0
25 - 29 :        0          0          0          0          0
30 - 34 :        0          0          0          0          0
35 - 39 :        0          0          0          0          0
40 - 44 :        0          0          0          0          0
45 - 49 :        0          0          0          13         0
50 - 54 :        0          0          0          0          0
55 - 59 :        0          0          0          0          0
60 - 64 :        0          0          0          0          0

dscp: outgoing
-----

0 - 4 :          0          0          0          0          0
5 - 9 :          0          0          0          0          0
10 - 14 :        0          0          0          0          0
15 - 19 :        0          0          0          0          0
20 - 24 :        0          0          0          0          9118500
25 - 29 :        0          0          0          0          0
30 - 34 :        0          0          516236        0          0
35 - 39 :        0          0          0          0          0
40 - 44 :        0          0          0          0          0

```

```

45 - 49 :          0          0          0          20          0
50 - 54 :          0          0          0          0          0
55 - 59 :          0          0          0          0          0
60 - 64 :          0          0          0          0          0
cos: incoming
-----

0 - 4 :          106          0          0          0          0
5 - 7 :           0          0          0          0          0
cos: outgoing
-----

0 - 4 :           41          0          0          9118505        516236
5 - 7 :           0          0          0          0          0
output queues enqueued:
queue:  threshold1  threshold2  threshold3
-----
queue 0:    516255          35          5
queue 1:         12          0          0
queue 2:           0          0          0
queue 3:    9118520          0          0

output queues dropped:
queue:  threshold1  threshold2  threshold3
-----
queue 0:         0          0          0
queue 1:         0          0          0
queue 2:         0          0          0
queue 3:    49823          0          0

Policer: Inprofile:          0 OutofProfile:          0

```

## Ejemplo de configuración 2: Ancho de banda y búfer

Este ejemplo muestra cómo puede configurar los anchos de banda y los búferes para las colas 6800ia TX:

1. En el policy-map creado en el ejemplo 1, puede especificar asignaciones de búfer de cola como muestra este ejemplo:**Nota:** Si no especifica el peso del búfer para una clase determinada, de forma predeterminada se necesita un 100%.

```

policy-map type lan-queuing ltest
  class type lan-queuing ltest
    priority
    queue-buffers ratio 15
  class type lan-queuing ltest1
    bandwidth remaining percent 30
    queue-buffers ratio 30
  class type lan-queuing ltest2
    bandwidth remaining percent 20
    queue-buffers ratio 40
  class class-default
    queue-buffer ratio 15

```

2. Verifique el mapa de clase para la asignación de cola, las asignaciones de ancho de banda y búfer y la asignación de cola a DSCP:

```

6880-VSS#sh queueing int gi101/1/0/1
Interface GigabitEthernet101/1/0/1 queueing strategy:  Weighted Round-Robin

Port QoS is disabled globally
Queueing on Gi101/1/0/1: Tx Enabled Rx Disabled

```

Trust boundary disabled

Trust state: trust DSCP

Trust state in queueing: trust DSCP

Default COS is 0

Class-map to Queue in Tx direction

Class-map Queue Id

```
-----  
ltest 1  
ltest1 4  
ltest2 3  
class-default 2
```

Queueing Mode In Tx direction: mode-dscp

Transmit queues [type = lp3q3t]:

Queue Id Scheduling Num of thresholds

```
-----  
1 Priority 3  
2 WRR 3  
3 WRR 3  
4 WRR 3
```

WRR bandwidth ratios: 50[queue 2] 20[queue 3] 30[queue 4]

queue-limit ratios: 15[Pri Queue] 15[queue 2] 40[queue 3] 30[queue 4]

queue thresh dscp-map

```
-----  
1 1 32  
1 2  
1 3  
2 1 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21  
22 23 25 26 27 28 29 30 31 33 34 35 36 37 38 39 40 41  
42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63  
2 2  
2 3  
3 1 0  
3 2  
3 3  
4 1 24  
4 2  
4 3
```

### 3. Doble verificación de las asignaciones de búfer y ancho de banda del 6800ia:

6880-VSS#remote command fex 101 sh mls qos int gi1/0/1 queueing

GigabitEthernet1/0/1

Egress Priority Queue : enabled

Shaped queue weights (absolute) : 0 0 0 0

Shared queue weights : 0 127 51 76

The port bandwidth limit : 100 (Operational Bandwidth:100.0)

The port is mapped to qset : 1

6880-VSS#remote command fex 101 sh mls qos int gi1/0/1 buffers

GigabitEthernet1/0/1

The port is mapped to qset : 1

The allocations between the queues are : 15 15 40 30

### 4. Verifique si el tráfico interesado está en cola en la cola respectiva y si hay caídas:

6880-VSS#remote command fex 101 sh mls qos int gi1/0/1 statistic

GigabitEthernet1/0/1 (All statistics are in packets)

dscp: incoming

```

-----
0 - 4 :          0          0          0          0          0
5 - 9 :          0          0          0          0          0
10 - 14 :        0          0          0          0          0
15 - 19 :        0          0          0          0          0
20 - 24 :        0          0          0          0          0
25 - 29 :        0          0          0          0          0
30 - 34 :        0          0          0          0          0
35 - 39 :        0          0          0          0          0
40 - 44 :        0          0          0          0          0
45 - 49 :        0          0          0          491         0
50 - 54 :        0          0          0          0          0
55 - 59 :        0          0          0          0          0
60 - 64 :        0          0          0          0          0
dscp: outgoing

```

```

-----
0 - 4 :          0          0          0          0          0
5 - 9 :          0          0          0          0          0
10 - 14 :        0          0          0          0          0
15 - 19 :        0          0          0          0          0
20 - 24 :        0          0          0          0          57864687
25 - 29 :        0          0          0          0          0
30 - 34 :        0          0          29364400         0          0
35 - 39 :        0          0          0          0          0
40 - 44 :        0          0          0          0          0
45 - 49 :        0          0          0          775         0
50 - 54 :        0          0          0          0          0
55 - 59 :        0          0          0          0          0
60 - 64 :        0          0          0          0          0
cos: incoming

```

```

-----
0 - 4 :          5323          0          0          0          0
5 - 7 :           0          0          0          0          0
cos: outgoing

```

```

-----
0 - 4 :          1718          0          0          57864691          29364400
5 - 7 :           0          0          0

```

```

output queues enqueued:
queue:   threshold1  threshold2  threshold3

```

```

-----
queue 0:   29365402          1883          5
queue 1:           793          98          0
queue 2:           0          0          0
queue 3:   530554174          0          0

```

```

output queues dropped:
queue:   threshold1  threshold2  threshold3

```

```

-----
queue 0:    0          10          0
queue 1:     1          24093          0
queue 2:     0          0          0
queue 3:   2309351          0          0

```

```

Policer: Inprofile:          0 OutofProfile:          0

```

## Verificación



Actualmente, no hay un procedimiento de verificación disponible para esta configuración.

## Troubleshoot

En esta sección encontrará información que puede utilizar para solucionar problemas de configuración.

La herramienta de interpretación de información de salida (disponible para clientes registrados únicamente) admite ciertos comandos show. Utilice la herramienta para ver un análisis de información de salida del comando show.

**Nota:** Consulte Información Importante sobre Comandos de Debug antes de usar un comando debug.

1. Habilite **debug** para qos-manager desde la CLI 6800ia. Asegúrese de que los registros se redirigen al búfer y que el búfer de registro se establezca en un número alto:

```
6880-VSS#attach fex 101
Attach FEX:101 ip:192.168.1.101
Trying 192.168.1.101 ... Open
???????FEX-101>en
Password: cisco
FEX-101#
FEX-101#debug platform qos-manager all
QM verbose debugging is on
QM cops debugging is on
QM events debugging is on
QM Statistics debugging is on
FEX-101#exit
[Connection to 192.168.1.101 closed by foreign host]
```

2. Configure el **policy-map** para activar las depuraciones:

```
6880-VSS#conf t
6880-VSS(config)#int gi101/1/0/1
6880-VSS(config-if)# service-policy type lan-queuing output ltest
Propagating [attach] lan queueing policy "ltest" to Gi101/1/0/1
Gi101/1/0/2 Gi101/1/0/3 Gi101/1/0/4 Gi101/1/0/5 Gi101/1/0/6 Gi101/1/0/7 Gi101/1/0/8
Gi101/1/0/9 Gi101/1/0/10 Gi101/1/0/12 Gi101/1/0/13 Gi101/1/0/14 Gi101/1/0/15 Gi101/1/0/16
<snip>
6880-VSS(config-if)#end
```

3. Verifique los registros en Fabric Extender (FEX) para verificar las depuraciones:

```
6880-VSS#remote command fex 101 show log
<snip>
May 20 06:43:18.208: HQM: hulc_fex_qos_priority_handler: hulc_fex_qos_priority_handler:
****Setting Priority Queue (FEX-101)

May 20 06:43:18.208: HQM: hulc_fex_qos_priority_handler: hulc_fex_qos_priority_handler:
subopcode=2 startport=0 endport=0 size=4 (FEX-101)
May 20 06:43:18.208: HQM: hulc_f
_fex_qos_priority_handler:QueueNum=1 PriorityQueue=1 queuetype=2 thresholdsnum=3 (FEX-101)
May 20 06:43:18.212: HQM: hulc_fex_qos_priority_handler: hulc_fex_qos_priority_handler:
idb=GigabitEthernet1/0/1 (FEX-101)
May 20 06:43:18.212: HQM: hulc_fex_qos_priority_handler: hulc_fex_qos_priority_handler:
idb=GigabitEthernet1/0/2 (FEX-101)
May 20 06:43:18.212: HQM: hulc_fex_qos_priority_handler: hulc_fex_qos_priority_handler:
idb=GigabitEthernet1/0/3 (FEX-101)
```

<snip>

**hulc\_fex\_qos\_srr\_weight\_setting:\*\*\*\*Setting weight for queues\*\*\*\* (FEX-101)**

May 20 06:43:18.232: HQM: hulc\_fex\_qos\_srr\_weight\_setting: hulc\_fex\_qos\_srr\_weight\_setting: subopcode=2 startport=0 endport=0 size=4 (FEX-101)  
May 20 06:43:18.232: HQM: hulc\_fex\_qos\_srr\_weight\_setting: hulc\_fex\_qos\_srr\_weight\_setting: QueueNum=1 RRType=0 WeightRelative=0 WeightAbsolute=0 (FEX-101)  
20 06:43:18.232: HQM: hulc\_fex\_qos\_srr\_weight\_setting: hulc\_fex\_qos\_srr\_weight\_setting: ratio is 0 for queue 1 (FEX-101)  
May 20 06:43:18.232: HQM: hulc\_fex\_qos\_srr\_weight\_setting: hulc\_fex\_qos\_srr\_weight\_setting: QueueNum=2 RRType=0 WeightRelative=33 WeightAbsolute=0 (FEX-101)  
<snip>

**20 06:43:19.110: HQM: hulc\_fex\_qos\_buffer\_conf: \*\*Setting buffer for output queues\*\* (FEX-101)**

May 20 06:43:19.110: HQM: hulc\_fex\_qos\_buffer\_conf: hulc\_fex\_qos\_buffer\_conf: subopcode=2 startport=0 endport=0 size=4 (FEX-101)  
May 20 06:43:19.110: HQM: hulc\_fex\_qos\_buffer\_conf: hulc\_fex\_qos\_buffer\_conf: queueenum=1 size=15 (FEX-101)  
May 20 06:43:19.110: HQM: hulc\_fex\_qos\_buffer\_conf: hulc\_fex\_qos\_buffer\_conf: queueenum=2 size=25 (FEX-101)  
May 20 06:43:19.110: HQM: hulc\_fex\_qos\_buffer\_conf: hulc\_fex\_qos\_buffer\_conf: queueenum=3 size=40 (FEX-101)  
May 20 06:43:19.110: HQM: hulc\_fex\_qos\_buffer\_conf: hulc\_fex\_qos\_buffer\_conf: queueenum=4 size=20 (FEX-101)  
May 20 06:43:19.110: HQM: hqm  
20 06:43:19.113: HQM: s88g\_qd\_get\_queue\_threshold: s88g\_qd\_get\_queue\_threshold: max\_limit = 3200, set to 350. (FEX-101)  
May 20 06:43:19.113: HQM: s88g\_qd\_get\_queue\_threshold: s88g\_qd\_get\_queue\_threshold: max\_limit = 3200, set to 350. (FEX-101)  
<snip>

**hulc\_fex\_qos\_qthresh\_map:\*\*\*\*Setting dscp to output queue map\*\*\*\* (FEX-101)**

May 20 06:43:19.169: HQM: hulc\_fex\_qos\_qthresh\_map: hulc\_fex\_qos\_qthresh\_map: subopcode=2 startport=0 endport=0 size=1 (FEX-101)  
May 20 06:43:19.169: HQM: hulc\_fex\_qos\_qthresh\_map: hulc\_fex\_qos\_qthresh\_map: DscpBma  
20 06:43:19.169: HQM: hulc\_fex\_qos\_qthresh\_map: hulc\_fex\_qos\_qthresh\_map: dscp=32 iterator=0 (FEX-101)  
May 20 06:43:19.169: HQM: hulc\_fex\_qos\_qthresh\_map: hulc\_fex\_qos\_qthresh\_map: dscp=33 iterator=1 (FEX-101)  
May 20 06:43:19.169: HQM: hulc\_fex\_qos\_qthresh\_map: hulc\_fex\_qos\_qthresh\_map: dscp=40 iterator=2 (FEX-101)  
<snip>