

QoS SNR

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Quality of Service (QoS) - . :

- 3- Class of Service (CoS) Ethernet;
- 6- Differentiated Services Code Point (DSCP) IP.

(Internal Priority), . QoS: CoS - IntP, DSCP - IntP, Exp - IntP IntP - Queue.

:

- Strict Priority (SP) - . , , .
- Weighted Round Robin (WRR) -
- Weighted Deficit Round Robin (WDRR) - , , . .

WRR/WDRR SP, , .

Service policy

(ACL, CoS, VLAN ID, IPv4 Precedence, DSCP, IPv6 FL) , , . service-policy :

:

```
class {class_name}
```

, :

```
match {...}
```

:

```
policy-map {map_name}
```

.

:

```
set {...}
```

:

```
policy {bits_per_second} burst-group {burst-group-id}
```

:

```
[no] drop  
[no] transmit
```

service-policy :

```
service-policy {input | output} {name}
```

VLAN :

```
service-policy {input | output} {name} vlan {vid}
```

Multicast policy

CoS multicast- . CoS / :

```
ip multicast policy {source_ip/mask} {group_ip/mask} cos {0-7}
```

QoS

SNR S2995G, S3850G, S2990X, S300X, S300G S4550 QoS. :

QoS :

```
mls qos queue statistics enable
```

. , eth1/0/1:

```
show mls qos queue statistics interface ethernet 1/0/1
```

, QoS , , dropped , :

Port:Ethernet1/0/1

```
-----
Queue Passed(packet) Dropped(packet)
0          2827022          2236755
1              0              0
2              0              0
3              0              0
4              0              0
5              0              0
6              0              0
7              0              0
```

SNMP, OID: 1.3.6.1.4.1.40418.7.100.11.2.17.1.4.a.b, :

a- ;

b- .

QoS SNR

SNR-S2962, SNR-S2965, SNR-S2982G, SNR-S2985G

SNR-S2962(5) SNR-S2982(5)G oS, . . :

```
[no] mls qos trust {cos | dscp}
```



CoS DSCP - DSCP.

CoS :

```
mls qos cos {0-7}
```



CoS 802.1p (s-vid) QinQ 'no mls qos trust cos' CoS 802.1p 'mls qos cos', (c-vid) CoS 802.1p policy-map.

8 QoS-. CoS :

Ingress COS-T0-Internal-Priority map:

COS: 0 1 2 3 4 5 6 7

INTP: 0 1 2 3 4 6 6 7

Ingress DSCP-T0-Internal-Priority map:

d1:d2 0 1 2 3 4 5 6 7 8 9

0: 0 0 0 0 0 0 0 0 1 1

1: 1 1 1 1 1 1 2 2 2 2

2: 2 2 2 2 3 3 3 3 3 3

3: 3 3 4 4 4 4 4 4 4 4

4: 5 5 5 5 5 5 5 5 6 6

5: 6 6 6 6 6 6 7 7 7 7

6: 7 7 7 7

:

```
mls qos map dscp-intp {cos-dp | cos-intp | dscp-dp | dscp-dscp | dscp-intp}
```

WRR. :

```
mls qos queue algorithm {sp | wdrp | wrr}
```

```
mls qos queue {wrr | wdrp} weight {weight0-weight7}
```



- CoS DSCP . . .
- service-policy , . . .
- service-policy VLAN VLAN.

:

, 1/0/5, CoS 5, 1/0/6 DSCP. CoS 5 6. 1/0/25 WDRR, 6 Strict Priority.

CoS 1/0/5:

```
Switch(config)#interface ethernet 1/0/5  
Switch(config-if-ethernet1/0/5)#mls qos cos 5
```

DSCP 1/0/6:

```
Switch(config)#interface ethernet 1/0/6  
Switch(config-if-ethernet1/0/6)#no mls qos trust qos  
Switch(config-if-ethernet1/0/6)#mls qos trust dscp
```

QoS- CoS:

```
Switch(config)#mls qos map cos-intp 0 1 2 3 4 6 6 7
```

6 1/0/25:

```
Switch(config)#interface ethernet 1/0/25
Switch(config-if-ethernet1/0/25)#mls qos queue algorithm wdr
Switch(config-if-ethernet1/0/25)#mls qos queue wdr weight 1 2 4 8 16 0 32 64
```

10.168.1.0/24 10Mbps CBS 100KB 1/0/1.

:

```
Switch(config)#class-map maxrate
```

:

```
Switch(config)#access-list 1 permit 10.168.1.0 0.0.0.255
Switch(config)#class-map maxrate
Switch(config-classmap-maxrate)#match access-group 1
```

burst:

```
Switch(config)#policy burst 1 100
```

:

```
Switch(config)#policy-map maxrate
Switch(config-policymap-maxrate)#class maxrate
```

:

```
Switch(config-policymap-maxrate-class-maxrate)#policy 10000 burst-group 1
```

:

```
Switch(config-if-ethernet1/0/1)#service-policy input maxrate
```

VLAN ID 100 1/0/28 CoS 3, .

:

```
Switch(config)#class-map vid100
```

:

```
Switch(config-classmap-vid100)#match vlan 100
```

:

```
Switch(config)#policy-map vid100
Switch(config-policymap-vid100)#class vid100
```

CoS Internal Priority:

```
Switch(config-policymap-vid100-class-vid100)#set cos 3
Switch(config-policymap-vid100-class-vid100)#set internal-priority 3
```

:

```
Switch(config)#interface ethernet 1/0/28
Switch(config-if-ethernet1/0/28)#service-policy input vid100
```

SNR-S2995G, SNR-S3850G

SNR-S2995G SNR-S3850G . :

```
[no] mls qos trust {cos | dscp | exp}
```



!

CoS DSCP - DSCP. EXP, .

CoS :

```
mls qos cos {0-7}
```

, :

```
mls qos internal-priority {0-119}
```

, IntP , CoS/DSCP/Exp (IntP) pass-through:

```
pass-through-cos
pass-through-dscp-exp
```

8 QoS-:

Ingress COS-T0-Internal-Priority map:

COS: 0 1 2 3 4 5 6 7

INTP: 0 8 16 24 32 40 48 56

Ingress DSCP-T0-Internal-Priority map:

d1 : d2 0 1 2 3 4 5 6 7 8 9

0: 0 1 2 3 4 5 6 7 8 9

1: 10 11 12 13 14 15 16 17 18 19

2: 20 21 22 23 24 25 26 27 28 29

3: 30 31 32 33 34 35 36 37 38 39

4: 40 41 42 43 44 45 46 47 48 49

5: 50 51 52 53 54 55 56 57 58 59

6: 60 61 62 63

:

```
mls qos map dscp-intp {cos-cos | cos-dscp | cos-intp | dscp-cos | dscp-dscp | dscp-intp | exp-intp | intp-cos |
intp-dp | intp-dscp | intp-exp | intp-intp | intp-queue}
```

QoS-, , ingress.

WDRR. :

```
mls qos queue weight {weight0-weight7}
```



!

- (SP) - , . , . ;
- service-policy VLAN VLAN;
- service-policy , .

(, S2962, S2965, S2982G S2985G):

1/0/28 IntP 64, CoS .

```
Switch(config)#interface ethernet 1/0/28
Switch(config-if-ethernet1/0/28)#pass-through-cos
Switch(config-if-ethernet1/0/28)#mls qos internal-priority 64
```