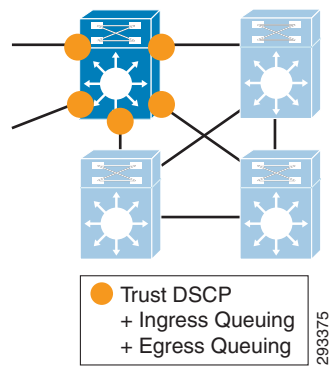


Role in Campus Network

The Cisco Catalyst 6500 series switches with Supervisor 2Ts are well-suited to the role of distribution- or core-layer switches in campus networks. As such, these switches typically connect directly to other switches or routers, as shown in Figure 1.

Figure 1 Cisco Catalyst 6500 Supervisor 2T Switches in a Campus Network



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QoS Design Steps

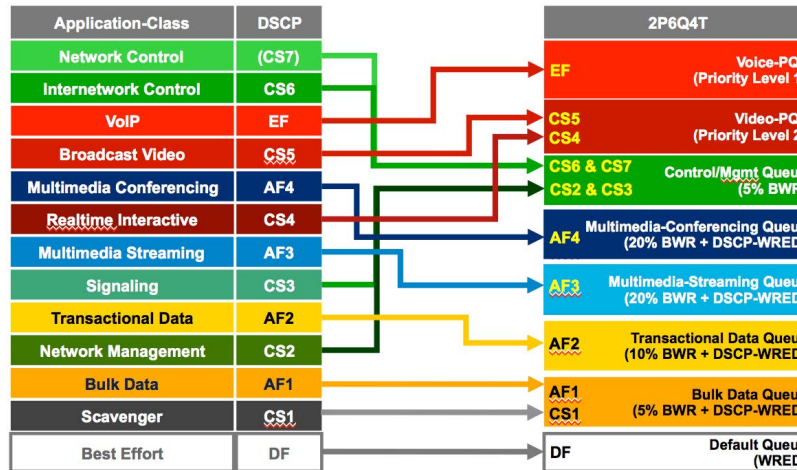
There are two main steps to configure QoS on Cisco Catalyst 6500 series switches with Supervisor 2T:

1. Configure Ingress Queuing
2. Configure Egress Queuing

Steps 1 & 2: Configure Ingress & Egress Queuing:

The 2P6Q4T queuing model for both ingress and egress queuing for the Cisco Catalyst 6500 with Supervisor 2T is shown in Figure 2.

Figure 2 Catalyst 6500 Sup2T (2P6Q4T) Ingress and Egress Queuing Model



EtherChannel QoS

Ingress classification & marking QoS policies on the Cisco Catalyst 6500 are configured on the logical Port-Channel interface (typically these are simply to enable DSCP trust, which is enabled by default on the Sup2T). Ingress and egress queuing QoS policies are configured on the physical port-member interfaces.

Cisco Validated Design (CVD)

The Cisco Validated Design for Cisco Catalyst 6500 series switches with Supervisor 2T in the role of a distribution- or core-layer switch in a campus network is presented below.

Step 1: Configure (Common) Class-Maps to be used for both Ingress & Egress Queuing Policies

```

class-map type lan-queuing VOICE-PQ1
  match dscp ef
class-map type lan-queuing VIDEO-PQ2
  match dscp cs4 cs5
class-map type lan-queuing CONTROL-MGMT-QUEUE
  match dscp cs2 cs3 cs6 cs7
class-map type lan-queuing MULTIMEDIA-CONFERENCING-QUEUE
  match dscp af41 af42 af43
class-map type lan-queuing MULTIMEDIA-STREAMING-QUEUE
  match dscp af31 af32 af33
class-map type lan-queuing TRANSACTIONAL-DATA-QUEUE
  match dscp af21 af22 af23
class-map type lan-queuing SCAVENGER-BULK-DATA-QUEUE
  match dscp cs1 af11 af12 af13

```

Step 2 Configure 2P6Q4T Ingress & Egress Queuing Policy-Map and apply to Interface(s)

```

policy-map type lan-queuing 2P6Q4T
  class VOICE-PQ1
    priority level 1
  class VIDEO-PQ2
    priority level 2
  class CONTROL-MGMT-QUEUE
    bandwidth remaining percent 5
  class MULTIMEDIA-CONFERENCING-QUEUE
    bandwidth remaining percent 20
    random-detect dscp af41 percent 80 100
    random-detect dscp af42 percent 70 100
    random-detect dscp af43 percent 60 100
  class MULTIMEDIA-STREAMING-QUEUE
    bandwidth remaining percent 20
    random-detect dscp af31 percent 80 100
    random-detect dscp af32 percent 70 100
    random-detect dscp af33 percent 60 100
  class TRANSACTIONAL-DATA-QUEUE
    bandwidth remaining percent 10
    random-detect dscp-based
    random-detect dscp af21 percent 80 100
    random-detect dscp af22 percent 70 100
    random-detect dscp af23 percent 60 100
  class BULK-DATA-QUEUE
    bandwidth remaining percent 5
    random-detect dscp-based
    random-detect dscp af11 percent 80 100
    random-detect dscp af12 percent 70 100
    random-detect dscp cs1 percent 50 100
  class class-default
    random-detect dscp-based
    random-detect dscp default percent 80 100

```

```
service-policy type lan-queuing input 2P6Q4T
```

```
service-policy type lan-queuing output 2P6Q4T
```

Note: Highlighted commands are interface specific; otherwise these are global

For more details, see Campus QoS Design 4.0:

http://www.cisco.com/en/US/docs/solutions/Enterprise/WAN_and_MAN/QoS_SRND_40/QoS_Campus_40.html

