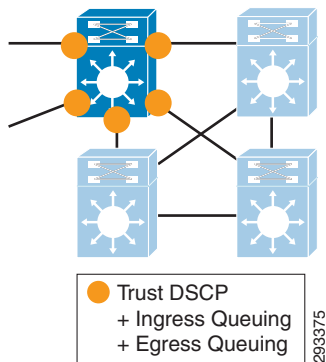


Role in Medianet Campus Network

The Cisco Catalyst 6500 series switches with Supervisor 2Ts are well-suited to the role of distribution- or core-layer switches in medianet 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 Medianet Campus Network



QoS Design Steps

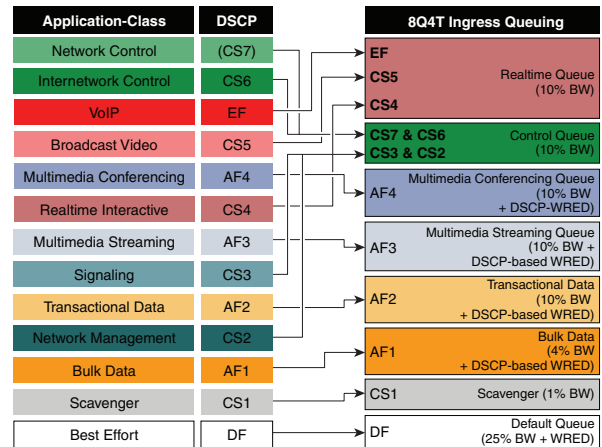
There are two main steps to configure QoS on Cisco Catalyst 6500 series switches with Supervisor 2T:

1. Configure Ingress Queuing
2. Configure Egress Queuing

Step 1: Configure Ingress Queuing

The medianet 8Q4T ingress queuing model for the Cisco Catalyst 6500 with Supervisor 2T is shown in Figure 2.

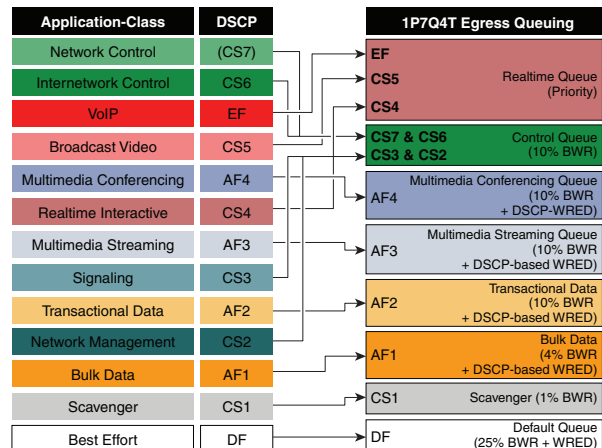
Figure 2 Catalyst 6500 Sup2T (8Q4T) Ingress Queuing Model



Step 2: Configure Egress Queuing

The medianet 1P7Q4T egress queuing model for the Cisco Catalyst 6500 with Supervisor 2T is shown in Figure 3.

Figure 3 Catalyst 6500 Sup2T (1P7Q4T) Egress Queuing Model



EtherChannel QoS

Ingress 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), while egress 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 medianet campus network is presented on the reverse.

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

```

class-map type lan-queuing REALTIME-QUEUE
  match dscp cs4 cs5 ef
class-map type lan-queuing CONTROL-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 BULK-DATA-QUEUE
  match dscp af11 af12 af13
class-map type lan-queuing SCAVENGER-QUEUE
  match dscp cs1

```

Step 1b: Configure 8Q4T Ingress Queuing Policy-Map and apply to Interface(s)

```

policy-map type lan-queuing INGRESS-8Q4T
  class REALTIME-QUEUE
    bandwidth percent 10
  class CONTROL-QUEUE
    bandwidth percent 10
  class MULTIMEDIA-CONFERENCING-QUEUE
    bandwidth percent 10
    random-detect dscp-based
  class MULTIMEDIA-STREAMING-QUEUE
    bandwidth percent 10
    random-detect dscp-based
  class TRANSACTIONAL-DATA-QUEUE
    bandwidth percent 10
    random-detect dscp-based
  class BULK-DATA-QUEUE
    bandwidth percent 4
    random-detect dscp-based
  class SCAVENGER-QUEUE
    bandwidth percent 1
  class class-default
    random-detect dscp-based

```

```

service-policy type lan-queuing input INGRESS-8Q4T

```

Step 2 Configure 1P7Q4T Egress Queuing Policy-Map and apply to Interface(s)

```

policy-map type lan-queuing EGRESS-1P7Q4T
  class REALTIME-QUEUE
    priority
  class CONTROL-QUEUE
    bandwidth remaining percent 10
  class MULTIMEDIA-CONFERENCING-QUEUE
    bandwidth remaining percent 10
    random-detect dscp-based
    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 10
    random-detect dscp-based
    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 4
    random-detect dscp-based
    random-detect dscp af11 percent 80 100
    random-detect dscp af12 percent 70 100
    random-detect dscp af13 percent 60 100
  class SCAVENGER-QUEUE
    bandwidth remaining percent 1
  class class-default
    random-detect dscp-based
    random-detect dscp default percent 80 100

```

```

service-policy type lan-queuing output EGRESS-1P7Q4T

```

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

For more details, see Medianet Campus QoS Design 4.0: http://www.cisco.com/en/US/docs/solutions/Enterprise/WAN_and_MAN/QoS_SRND_40/QoS_Campus_40.html.