

## Chapter 17

# Configuring CoS for MPLS

When IP traffic enters a label-switched path (LSP) tunnel, the ingress router marks all packets with a class-of-service (CoS) value, which is used to place the traffic into a transmission priority queue. On the router, each interface has up to eight transmit queues. The CoS value is encoded as part of the Multiprotocol Label Switching (MPLS) header and remains in the packets until the MPLS header is removed when the packets exit from the egress router. The routers within the LSP utilize the CoS value set at the ingress router. The CoS value is encoded by means of the CoS bits (also known as the EXP or experimental bits).

MPLS class of service works in conjunction with the router's general CoS functionality. If you do not configure any CoS features, the default general CoS settings are used. For MPLS class of service, you might want to prioritize how the transmit queues are serviced by configuring weighted round-robin, and to configure congestion avoidance using random early detection (RED).

To configure CoS for MPLS, you can include the following statements at the [edit class-of-service] hierarchy level of the configuration:

If you do not specify a CoS value, the IP precedence bits from the packet's IP header are used as the packet's CoS value.

To specify a CoS value for packets in an LSP, include the `class-of-service` statement:

```
class-of-service cos-value;
```

You can include the `class-of-service` statement at the following hierarchy levels:

- [edit logical-routers *logical-router-name* protocols rsvp interface *interface-name* link-protection]
- [edit logical-routers *logical-router-name* protocols rsvp interface *interface-name* link-protection bypass *destination*]
- [edit logical-routers *logical-router-name* protocols mpls]
- [edit logical-routers *logical-router-name* protocols mpls label-switched-path *path-name*]
- [edit logical-routers *logical-router-name* protocols mpls label-switched-path *path-name* primary *path-name*]
- [edit logical-routers *logical-router-name* protocols mpls label-switched-path *path-name* secondary *path-name*]

- [edit logical-routers *logical-router-name* protocols mpls static-path *prefix*]
- [edit logical-routers *logical-router-name* protocols mpls interface *interface-name* label-map *label-value*]
- [edit protocols mpls]
- [edit protocols mpls interface *interface-name* label-map *label-value*]
- [edit protocols mpls label-switched-path *path-name*]
- [edit protocols mpls label-switched-path *path-name* primary *path-name*]
- [edit protocols mpls label-switched-path *path-name* secondary *path-name*]
- [edit protocols mpls static-path *prefix*]
- [edit protocols rsvp interface *interface-name* link-protection]
- [edit protocols rsvp interface *interface-name* link-protection bypass *destination*]

For more information, see the *JUNOS MPLS Applications Configuration Guide*.