

Chapter 4

MPLS Configuration Statements

To configure MPLS, you can include the following statements in the configuration:

```
protocols {
  mpls {
    admin-groups {
      group-name group-value;
    }
    advertise-hold-time seconds;
    bandwidth bandwidth;
    class-of-service cos-value;
    disable;
    explicit-null;
    hop-limit number;
    interface (interface-name | all) {
      disable;
      admin-group {
        group-name;
      }
      label-map in-label {
        (next-hop (address | interface-name | address/interface-name) | (reject | discard);
        (pop | (swap <out-label>);
        class-of-service value;
        preference preference;
        type type;
      }
      link-protection;
    }
    label-switched-path lsp-path-name {
      disable;
      to address;
      from address;
      adaptive;
      admin-group {
        exclude group-names;
        include group-names;
      }
      auto-bandwidth {
        adjust-interval seconds;
        adjust-threshold percent;
        maximum-bandwidth bps;
        minimum-bandwidth bps;
        monitor-bandwidth;
      }
      bandwidth bps;
      class-of-service cos-value;
```

```

fast-reroute {
    bandwidth bps;
    (exclude group-names | no-exclude);
    hop-limit number;
    (include group-names | no-include);
}
hop-limit number;
install {
    destination-prefix/prefix-length <active>;
}
ldp-tunneling;
metric number;
no-cspf;
no-decrement-ttl;
optimize-timer seconds;
preference preference;
priority setup-priority hold-priority;
(random | least-fill | most-fill);
(record | no-record);
retry-limit number;
retry-timer seconds;
standby;
primary path-name {
    adaptive;
    admin-group {
        exclude group-names;
        include group-names;
    }
    bandwidth bps;
    class-of-service cos-value;
    hop-limit number;
    no-cspf;
    no-decrement-ttl;
    optimize-timer seconds;
    preference preference;
    priority setup-priority hold-priority;
    (record | no-record);
    retry-limit;
    retry-timer;
    standby;
}
secondary path-name {
    adaptive;
    admin-group {
        exclude group-names;
        include group-names;
    }
    bandwidth bps;
    class-of-service cos-value;
    hop-limit number;
    no-cspf;
    no-decrement-ttl;
    optimize-timer seconds;
    preference preference;
    priority setup-priority hold-priority;
    (record | no-record);
    retry-limit;
    retry-timer;
    standby;
}
}
}

```

```

log-updown {
    (syslog | no-syslog);
    (trap | no-trap);
}
no-cspf;
no-decrement-ttl;
no-propagate-ttl;
no-record;
optimize-aggressive;
optimize-timer;
path path-name {
    address <strict | loose>;
}
preference preference;
priority setup-priority hold-priority;
record;
rsvp-error-hold-time seconds;
standby;
static-path inet {
    prefix {
        next-hop (address | interface-name | address/interface-name);
        push out-label;
        class-of-service value;
        preference preference;
    }
}
statistics {
    auto-bandwidth;
    file filename size size files number <no-stamp>;
    interval seconds;
}
traceoptions {
    file filename <replace> <size size> <files number> <no-stamp>
    <(world-readable | no-world-readable)>;
    flag flag <flag-modifier> <disable>;
}
traffic-engineering (bgp | bgp-igp | bgp-igp-both-ribs);
}
}

```

Minimum MPLS Configuration

To enable MPLS on the router, you must include at least the following statements. All other MPLS configuration statements are optional. Note that this configuration does nothing more than enable MPLS on the router and on the specified interface.

```
[edit]
interfaces {
  interface-name {                               # Required to enable MPLS on the interface
    logical-unit-number {
      family mpls;
    }
  }
}
protocols {
  mpls {
    interface (interface-name | all);           # Required to enable MPLS on the interface
  }
  rsvp {                                         # Required for RSVP signaled MPLS only
    interface interface-name;
  }
}
```

For every interface you enable, two special routes are installed automatically in the MPLS forwarding table. One route has a label value of 0, and the second has a label value of 1. (For information about these labels, see “Special Labels” on page 20.)