

## Configuring MPLS on Provider Switches (CLI Procedure)

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JUNOS MPLS for EX-series switches supports Layer 2 protocols and Layer 2 virtual private networks (VPNs). You can configure MPLS on your switches to increase transport efficiency in your network. MPLS services can be used to connect various sites to a backbone network or to ensure better performance for low-latency applications such as VoIP and other business-critical functions.

To implement MPLS on EX-series switches, you must configure at least one provider switch as a transit switch for the MPLS packets.

To configure the provider switch, complete the following tasks:

1. Enabling the OSPF Routing Protocol on the Loopback and Core Interfaces on page 1
2. Enabling Traffic Engineering for the Routing Protocol on page 1
3. Enabling MPLS and Applying MPLS to the Core Interfaces on page 2
4. Enabling RSVP and Applying It to the Loopback and Core Interfaces on page 2
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6. Enabling Family MPLS on the Core Interfaces on page 3

### Enabling the OSPF Routing Protocol on the Loopback and Core Interfaces

Enable OSPF on the loopback address and on the core interface addresses.



**NOTE:** You can use the switch address as an alternative to the loopback address.

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1. Configure OSPF on the loopback and core interfaces:

```
[edit protocols]
user@switch# set ospf area 0.0.0.0 interface lo0.0
user@switch# set ospf area 0.0.0.0 interface ge-0/0/5.0
user@switch# set ospf area 0.0.0.0 interface ge-0/0/6.0
user@switch# set ospf area 0.0.0.0 interface ae0
```

### Enabling Traffic Engineering for the Routing Protocol

Enable traffic engineering for the routing protocol (OSPF) on the loopback address and on the core interface addresses.

1. Enable traffic engineering for the routing protocol:

```
[edit protocols]
user@switch# set ospf traffic-engineering
```

## ***Enabling MPLS and Applying MPLS to the Core Interfaces***

Enable MPLS within the protocols stanza and apply it to the core interfaces.

1. Configure MPLS on the core interface addresses:

```
[edit protocols]
user@switch# set mpls interface ge-0/0/5.0
user@switch# set mpls interface ge-0/0/6.0
user@switch# set mpls interface ae0
```

## ***Enabling RSVP and Applying It to the Loopback and Core Interfaces***

Enable RSVP and apply it to the loopback and the core interfaces.

1. Configure RSVP on the loopback address and the core interface addresses:

```
[edit protocols]
user@switch# set rsvp interface lo0.0
user@switch# set rsvp interface ge-0/0/5.0
user@switch# set rsvp interface ge-0/0/6.0
user@switch# set rsvp interface ae0
```

## ***Configuring IP Addresses for the Loopback and Core Interfaces***

Configure IP addresses for the loopback and core interfaces.

1. Configure an IP address for the loopback interface and for the core interfaces:

```
[edit]
user@switch# set interfaces lo0 unit 0 family inet address 127.1.1.1/32
user@switch# set interfaces ge-0/0/5 unit 0 family inet address 10.1.5.1/24
user@switch# set interfaces ge-0/0/6 unit 0 family inet address 10.1.6.1/24
user@switch# set interfaces ae0 unit 0 family inet address 10.1.9.2/24
```

## Enabling Family MPLS on the Core Interfaces

On the logical unit of the core interface addresses, configure these interfaces to belong to **family mpls**. This configuration identifies the interfaces used for forwarding MPLS packets.

1. Configure **family mpls** on the logical units of the core interfaces:

```
[edit]
user@switch# set interfaces ge-0/0/5 unit 0 family mpls
user@switch# set interfaces ge-0/0/6 unit 0 family mpls
user@switch# set interfaces ae0 unit 0 family mpls
```



**NOTE:** You can enable **family mpls** on either individual interfaces or aggregated Ethernet interfaces. You cannot enable it on tagged VLAN interfaces.

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- Related Topics**
- Example: Configuring MPLS on EX Series Switches
  - Configuring MPLS on Provider Edge Switches (CLI Procedure)
  - Configuring an OSPF Network (J-Web Procedure)
  - Verifying That MPLS Is Working Correctly
  - Understanding JUNOS MPLS Components for EX Series Switches
  - For information on the interface statement for OSPF, see the *JUNOS Software Routing Protocols Configuration Guide* at <http://www.juniper.net/techpubs/software/junos/junos95/index.html>.

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