

Enabling Passive Monitoring on SONET/SDH Interfaces

The Monitoring Services I and Monitoring Services II PICs are designed to enable IP services. If you have a Monitoring Services PIC and a SONET/SDH PIC installed in an M160, M40e, or T-series routing platform, you can monitor IPv4 traffic from another routing platform.

On SONET/SDH interfaces, you enable packet flow monitoring by including the `passive-monitor-mode` statement:

```
passive-monitor-mode;
```

You can include this statement at the following hierarchy levels:

- [edit interfaces *so-fpc/pic/port* unit *logical-unit-number*]
- [edit logical-systems *logical-system-name* interfaces *so-fpc/pic/port* unit *logical-unit-number*]

If you include the `passive-monitor-mode` statement in the configuration, the SONET/SDH interface does not send keepalives or alarms, and does not participate actively on the network.

On monitoring services interfaces, you enable packet flow monitoring by including the `family` statement at the [edit interfaces *mo-fpc/pic/port* unit *logical-unit-number*] hierarchy level, specifying the `inet` option:

```
[edit interfaces mo-fpc/pic/port unit logical-unit-number]  
family inet;
```

For conformity with cflowd record structure, you must include the `receive-options-packets` and `receive-ttl-exceeded` statements at the [edit interfaces *mo-fpc/pic/port* unit *logical-unit-number* family `inet`] hierarchy level:

```
[edit interfaces mo-fpc/pic/port unit logical-unit-number family inet]  
receive-options-packets;  
receive-ttl-exceeded;
```

For the monitoring services interface, you can configure multiservice physical interface properties. For more information, see *Configuring Multiservice Physical Interface Properties* and the *JUNOS Services Interfaces Configuration Guide*.

Removing MPLS Labels from Incoming Packets

The JUNOS software can forward only IPv4 packets to a Monitoring Services PIC. IPv4 packets with MPLS labels cannot be forwarded to a Monitoring Services PIC. By default, if packets with MPLS labels are forwarded to the Monitoring Services PIC, they are discarded. To monitor packets with MPLS labels, you must remove the MPLS labels as the packets arrive on the interface.

You can remove up to two MPLS labels from an incoming packet by including the **pop-all-labels** statement at the [edit interfaces *interface-name* sonet-options mpls] hierarchy level:

```
[edit interfaces interface-name sonet-options mpls]
pop-all-labels {
    required-depth number;
}
```

By default, the **pop-all-labels** statement takes effect for incoming packets with one or two labels. You can specify the number of MPLS labels an incoming packet must have for the **pop-all-labels** statement to take effect by including the **required-depth** statement at the [edit interfaces *interface-name* atm-options mpls pop-all-labels] hierarchy level:

```
[edit interfaces interface-name atm-options mpls pop-all-labels]
required-depth number;
```

The required depth can be 1, 2, or [1 2]. If you include the **required-depth 1** statement, the **pop-all-labels** statement takes effect for incoming packets with one label only. If you include the **required-depth 2** statement, the **pop-all-labels** statement takes effect for incoming packets with two labels only. If you include the **required-depth [1 2]** statement, the **pop-all-labels** statement takes effect for incoming packets with one or two labels. A required depth of [1 2] is equivalent to the default behavior of the **pop-all-labels** statement.

When you remove MPLS labels from incoming packets, note the following:

- The **pop-all-labels** statement has no effect on IP packets with three or more MPLS labels.
- When you enable MPLS label removal, you must configure all ports on a PIC with the same label popping mode and required depth.
- You use the **pop-all-labels** statement to enable passive monitoring applications, not active monitoring.
- You cannot apply MPLS filters or accounting to the MPLS labels because the labels are removed as soon as the packet arrives on the interface.