Understanding MPLS and Path Protection on EX-series Switches

JUNOS MPLS for EX-series switches provides path protection to protect your MPLS network from label switched path (LSP) failures.

By default, an LSP routes itself hop-by-hop from the ingress provider edge switch through the provider switches toward the egress provider edge switch. The LSP generally follows the shortest path as dictated by the local routing table, usually taking the same path as destination-based, best-effort traffic. These paths are "soft" in nature because they automatically reroute themselves whenever a change occurs in a routing table or in the status of a node or link.

Typically, when an LSP fails, the switch immediately upstream from the failure signals the outage to the ingress provider edge switch. The ingress provider edge switch calculates a new path to the egress provider edge switch, establishes the new LSP, and then directs traffic from the failed path to the new path. This rerouting process can be time-consuming and prone to failure. For example, the outage signals to the ingress switch might get lost or the new path might take too long to come up, resulting in significant packet drops.

You can configure path protection by configuring primary and secondary paths on the ingress switch. If the primary path fails, the ingress switch immediately reroutes traffic from the failed path to the standby path, eliminating the need for the ingress switch to calculate a new route and signal a new path. For information about configuring standby LSPs, see Configuring Path Protection in an MPLS Network (CLI Procedure).

Related Topics

- JUNOS MPLS for EX-series Switches Overview
- Understanding JUNOS MPLS Components for EX-series Switches
- Example: Configuring MPLS on EX-series Switches
- Configuring MPLS on Provider Edge Switches (CLI Procedure)
- *JUNOS Software MPLS Applications Configuration Guide* at http://www.juniper.net/techpubs/software/junos/junos95/index.html