

## Understanding MSTP for EX-series Switches

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Although RSTP provides faster convergence time than STP, it still does not solve a problem inherent in STP: All VLANs within a LAN must share the same spanning tree. To solve this problem, EX-series switches use Multiple Spanning Tree Protocol (MSTP) to create a loop-free topology in networks with multiple spanning-tree regions.

An MSTP region allows a group of bridges to be modeled as a single bridge. An MSTP region contains multiple spanning tree instances (MSTIs). MSTIs provide different paths for different VLANs. This functionality facilitates better load sharing across redundant links.

MSTP region can support up to 64 MSTIs and each instance can support anywhere from 1 through 4094 vlans.

MSTP was originally defined in the IEEE 802.1s draft specification and later incorporated into the IEEE 802.1Q-2003 specification.

- Related Topics**
- Example: Configuring Network Regions for VLANs with MSTP on EX-series Switches
  - Understanding STP for EX-series Switches
  - Understanding RSTP for EX-series Switches

