

Configuring Spanning-Tree Protocols (J-Web Procedure)

EX-series switches provide Layer 2 loop prevention through Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP), and VLAN Spanning Tree Protocol (VSTP). You can configure STP, RSTP, and MSTP using the J-Web interface. You can configure bridge protocol data unit (BPDU) protection on interfaces to prevent them from receiving BPDUs that could result in STP misconfigurations, which could lead to network outages.

To configure STP, MSTP, or RSTP using the J-Web interface:

1. From the **Configure** menu, select **Switching > Spanning Tree**.

The Spanning Tree Configuration page displays the spanning-tree protocol configuration parameters and a list of interfaces configured for each spanning-tree protocol configuration.

2. Click one:
 - **Add**—Creates a spanning-tree protocol configuration.
 - a. Select a protocol name.
 - b. Enter information as described in Table 1.
 - c. Click **OK** to apply changes to the configuration or click **Cancel** to cancel without saving changes.
 - **Edit**—Modifies a selected spanning-tree protocol configuration.
 - a. Enter information as described in Table 1.
 - b. Click **OK** to apply changes to the configuration or click **Cancel** to cancel without saving changes.
 - **Delete**—Deletes a selected spanning-tree protocol configuration.

Table 1: Spanning-Tree Protocol Configuration Parameters

Field	Function	Your Action
General		
Protocol Name	Specifies the spanning-tree protocol type: STP, MSTP, or RSTP.	None.
Disable	Disables spanning-tree protocol on the interface.	To enable this option, select the check box.
BPDU Protect	Specifies BPDU protection on all edge interfaces on the switch.	To enable this option, select the check box.

Table 1: Spanning-Tree Protocol Configuration Parameters (continued)

Field	Function	Your Action
Bridge Priority	Specifies the bridge priority. The bridge priority determines which bridge is elected as the root bridge. If two bridges have the same path cost to the root bridge, the bridge priority determines which bridge becomes the designated bridge for a LAN segment.	Select a value from the list.
Forward Delay	Specifies the number of seconds an interface waits before changing from spanning-tree learning and listening states to the forwarding state.	Type a value.
Hello Time	Specifies the time interval in seconds at which the root bridge transmits configuration BPDUs.	Type a value.
Max Age	Specifies the maximum-aging time in seconds for all MST instances. The maximum aging time is the number of seconds a switch waits without receiving spanning-tree configuration messages before attempting a reconfiguration.	Type a value.
Max Hops	(MSTP only) Specifies the number of hops in a region before the BPDU is discarded.	Type a value.
Configuration Name	(MSTP only) Specifies the MSTP region name carried in the MSTP BPDUs.	Type a name.
Revision Level	(MSTP only) Specifies the revision number of the MSTP configuration.	Type a value.
Ports		
Interface Name	Specifies an interface for the spanning-tree protocol.	<ol style="list-style-type: none"> 1. Click the Ports tab. 2. Choose one: <ul style="list-style-type: none"> ■ Click Add and select an interface from the list. ■ Select an interface in the Port/State table and click Edit. ■ To delete an interface from the configuration, select it in the Port/State table and click Remove.
Cost	Specifies the link cost to determine which bridge is the designated bridge and which interface is the designated interface.	Type a value.
Priority	Specifies the interface priority to determine which interface is elected as the root port.	Select a value from the list.
Disable Port	Disables the spanning-tree protocol on the interface.	To enable the option, select the check box.
Edge	Configures the interface as an edge interface. Edge interfaces immediately transition to a forwarding state.	To enable the option, select the check box.

Table 1: Spanning-Tree Protocol Configuration Parameters (continued)

Field	Function	Your Action
No Root Port	Specifies an interface as a spanning-tree designated port. If the bridge receives superior STP BPDUs on a root-protected interface, that interface transitions to a root-prevented STP state (inconsistency state) and the interface is blocked. This blocking prevents a bridge that should not be the root bridge from being elected the root bridge. When the bridge stops receiving superior STP BPDUs on the root-protected interface, interface traffic is no longer blocked.	To enable the option, select the check box.
Interface Mode	Specifies the link mode.	<ol style="list-style-type: none"> To enable the option, select the check box. Select one: <ul style="list-style-type: none"> Point to Point—For a full-duplex link, the default link mode is point-to-point. Shared—For a half-duplex link, the default link mode is shared.
BPDU Timeout Action	Specifies the BPDU timeout action for the interface.	Select one: <ul style="list-style-type: none"> Alarm Block
MSTI		
(MSTP only)		
MSTI Name	Specifies a name (an MSTI ID) for the MST instance.	<ol style="list-style-type: none"> Click the MSTI tab. Choose one: <ul style="list-style-type: none"> Click Add. Select an MSTI ID and click Edit. To delete an MSTI from the configuration, select the MSTI ID and click Remove.
Bridge Priority	Specifies the bridge priority. The bridge priority determines which bridge is elected as the root bridge. If two bridges have the same path cost to the root bridge, the bridge priority determines which bridge becomes the designated bridge for a LAN segment.	Select a value from the list.
VLAN ID	Specifies the VLAN for the MST instance.	In the VLAN box, choose one: <ul style="list-style-type: none"> Click Add, select a VLAN from the list and click OK. To remove a VLAN association, select the VLAN ID, click Remove, and click OK.

Table 1: Spanning-Tree Protocol Configuration Parameters (continued)

Field	Function	Your Action
Interfaces	Specifies an interface for the MST instance.	<ol style="list-style-type: none">1. In the Interfaces box, click Add and select an interface from the list, or select an interface from the list and click Edit.2. Specify the link cost to determine which bridge is the designated bridge and which interface is the designated interface.3. Specify the interface priority to determine which interface is elected as the root port.4. If you want to disable the interface, select the check box.5. Click OK. <p>To delete an interface configuration, select the interface, click Remove, and click OK.</p>

- Related Topics**
- Configuring STP (CLI Procedure)
 - Monitoring Spanning-Tree Protocols
 - Unblocking an Interface That Receives BPDUs in Error (CLI Procedure)
 - Example: Configuring BPDU Protection on STP Interfaces to Prevent STP Miscalculations on EX-series Switches
 - Example: Configuring Network Regions for VLANs with MSTP on EX-series Switches
 - Example: Configuring Faster Convergence and Improving Network Stability with RSTP on EX-series Switches