

Tracing Spanning-Tree Operations

You can enable global routing protocol tracing options at the [edit routing-options] Hierarchy Level. For general information about tracing and global tracing options, see the statement summary for the global traceoptions statement in the *Junos Routing Protocols Configuration Guide*.

In addition, you can enable STP-specific trace options at the following hierarchy levels:

- [edit logical-systems *logical-system-name* protocols (mstp | rstp | vstp)]
- [edit logical-systems *logical-system-name* routing-instances *routing-instance-name* protocols (mstp | rstp | vstp)]
- [edit protocols (mstp | rstp | vstp)]
- [edit routing-instances *routing-instance-name* protocols (mstp | rstp | vstp)]

The routing instance type can be either virtual-switch or layer2-control.

To enable tracing of spanning-tree protocol operations:

1. Enable configuration of the spanning-tree protocol whose operations are to be traced:

```
[edit]
user@host# edit ... protocols (mstp | rstp | vstp)
```

2. Enable configuration of spanning-tree protocol-specific trace options:

```
[edit ... protocols (mstp | rstp | vstp)]
user@host# edit traceoptions
```

3. Configure the files that contain trace logging information:

```
[edit ... protocols (mstp | rstp | vstp)]
user@host# set file filename <files number> <size bytes>
<world-readable | no-world-readable>
```

4. Configure spanning-tree protocol-specific options.

- a. To enable a spanning-tree protocol-specific option, include the `flag` statement:

```
[edit ... protocols (mstp | rstp | vstp)]
user@host# set flag flag <flag-modifier> <disable>
```

You can specify the following spanning-tree protocol-specific *flag* options:

- `all`—Trace all operations.
- `all-failures`—Trace all failure conditions.
- `bpdu`—Trace BPDU reception and transmission.
- `bridge-detection-state-machine`—Trace the bridge detection state machine.
- `events`—Trace events of the protocol state machine.
- `port-information-state-machine`—Trace the port information state machine.
- `port-migration-state-machine`—Trace the port migration state machine.
- `port-receive-state-machine`—Trace the port receive state machine.
- `port-role-transit-state-machine`—Trace the port role transit state machine.
- `port-role-select-state-machine`—Trace the port role selection state machine.
- `port-transmit-state-machine`—Trace the port transmit state machine.
- `port-state-transit-state-machine`—Trace the port state transit state machine.
- `ppmd`—Trace the state and events for the `ppmd` process.
- `state-machine-variables`—Trace when the state machine variables change.
- `timers`—Trace protocol timers.
- `topology-change-state-machine`—Trace the topology change state machine.



NOTE: Use the trace flag `all` with caution. This flag may cause the CPU to become very busy.

- b. To disable an individual spanning-tree protocol-specific option, include the `disable` option with the `flag` statement.

5. Verify the spanning-tree protocol-specific trace options.

```
[edit]
...
routing-options {
  traceoptions {
    ...global-trace-options-configuration...
  }
}
```

```
    }
  }
  protocols {
    (mstp | rstp | vstp) {
      traceoptions { # Spanning-tree protocol-specific.
        file filename <files number> <size bytes>
          <world-readable | no-world-readable>;
        flag flag <flag-modifier> <disable>;
      }
    }
  }
  ...
}
```

- Related Topics**
- Spanning-Tree Protocols Supported on MX Series Routers
 - Example: Tracing Spanning-Tree Protocol Operations

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