



APPLICATION NOTE

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Product Family: Networking Hardware

Number: AN-NH-009

Subject: RSTP Configuration

Date Issued: Dec 14, 2011

Revision: Original

Synopsis:

A common application for managed switches involves configuring redundancy. The two most common ways to do this are with Rapid Spanning Tree Protocol (RSTP) or the proprietary Real-Time-Ring (RTR). This document covers the frequently asked questions regarding these two protocols and the steps required to configure their basic functionality.

1. Frequently Asked Questions
2. RSTP Configuration

Frequently Asked Questions

Q: Which managed switches support RSTP?

A: All Stride managed switches fully support RSTP. By default RSTP is enabled.

Q: How many switches can I connect in an RSTP network?

A: You can have a maximum of 40 hops in an RSTP network. Hops are the number of connections between two points on the network. In practical networks, this means you cannot have more than 40 switches between any two points.

Q: Can RTR and RSTP be enabled on the same switch?

A: Yes, however, a particular port may only be used for one protocol or the other. For example, if a port is part of a Real-Time-Ring, that port cannot also participate in a spanning tree.

RSTP Configuration

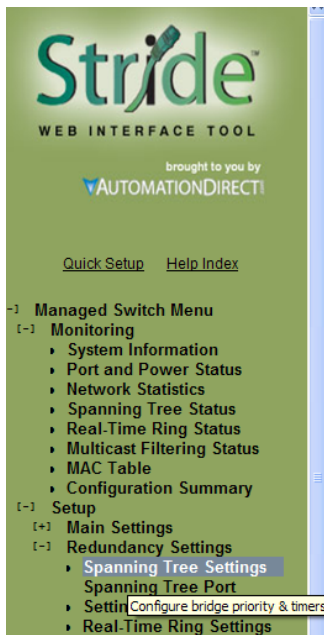


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Web Interface

1. Log into the switch from your Web browser. The default username and password are admin/admin.
2. From the Managed Switch menu, click on Setup to see the options, and then click on Redundancy Settings.
3. Click Spanning Tree Settings.



SPANNING TREE SETTINGS

Ensure the reliability of your network by enabling network redundancy.

| | |
|--------------------------------------|------------------------------|
| Redundancy protocol | Rapid Spanning Tree Protocol |
| Bridge priority (0-61440) | 32768 |
| Maximum age (6-40 seconds) | 20 |
| Hello time (1-10 seconds) | 2 |
| Forward delay (4-30 seconds) | 15 |
| Transmission limit (1-10) | 6 |
| Region Name (MSTP) | |
| Configuration Revision (MSTP) | 0 |
| Max Hops (MSTP) | 20 |

| MST Instance | MSTID (1-4094) | Bridge priority (0-61440) | Delete |
|--------------|----------------|---------------------------|--------|
|--------------|----------------|---------------------------|--------|

Add MSTI

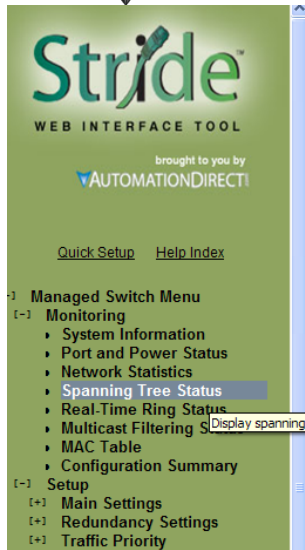
Commit Changes

4. In the Spanning Tree Settings page, click on the **Redundancy Protocol** drop-down list and select **Rapid Spanning Tree protocol**.
5. All other values are normally provided by the network administrator should they need to be changed from the defaults. Click **Commit Changes** to activate RSTP.
6. To confirm that RSTP is active and to monitor its status, from the Managed Switch menu choose Monitoring>Spanning Tree Status.



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SPANNING TREE STATUS

Monitor the status of Rapid Spanning Tree Protocol or Spanning Tree Protocol, if enabled.

| | |
|----------------------------|--|
| Redundancy protocol | RSTP |
| Designated root | 32,768 / 00:a0:1d:51:8a:db (this switch) |
| Topology changes | 4 |
| Time since last chg | 00 days, 00:00:03 |

| Port | Name | Status | State | Cost |
|------|---------|----------|------------|---------|
| 1 | port_1 | Included | Forwarding | 200,000 |
| 2 | port_2 | Included | Unlinked | 200,000 |
| 3 | port_3 | Included | Forwarding | 200,000 |
| 4 | port_4 | Included | Unlinked | 200,000 |
| 5 | port_5 | Included | Forwarding | 200,000 |
| 6 | port_6 | Included | Unlinked | 200,000 |
| 7 | port_7 | Included | Unlinked | 200,000 |
| 8 | port_8 | Included | Unlinked | 20,000 |
| 9 | port_9 | Included | Unlinked | 20,000 |
| 10 | port_10 | Included | Unlinked | 20,000 |

The Spanning Tree Status page displays the status of each port, the active Redundancy Protocol, the Designated Root and the number of Topology Changes (network changes) since the switch was powered on.

CLI Interface

1. Log into the switch via console or telnet. The default username and password are cli/admin.
2. Type **rstp protocol rstp** and press Enter.
3. Type **commit** and press Enter to activate the setting.
4. Type **rstp protocol** and press Enter. The interface should report back that the current protocol setting is rstp, which confirms that RSTP is active.

Technical

Assistance: If you have questions regarding this Application Note, please contact us at 770-844-4200 for further assistance.