

APPLICATION NOTE

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Product Family: Networking Hardware

Number: AN-NH-009

Date Issued: Dec 14, 2011

Subject: RSTP Configuration

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 that 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.

Stride		SPANNING TREE SETTINGS									
WEB INTERFACE TOOL		Ensure the reliability of your network by enabling network redundancy.									
brought to you by		Redundancy protocol Rapid Spanning Tree Protocol	1								
VAUTOMATIONDIRECTI		Bridge priority (0-61440) 32768									
Quick Setup Help Index		Maximum are /6-40 seconds) 20									
-] Managed Switch Menu											
⁽⁻⁾ Monitoring		Forward delay (4-30 seconds) 15									
System Information Port and Power Status		Transmission limit (1-10) 6									
Network Statistics		Region Name (MSTP)	1								
Spanning Tree Status Real-Time Ring Status		Configuration Revision (MSTP)	1								
Multicast Filtering Status											
MAC Table Configuration Summary	=	Max Hops (MSTP) 20									
[-] Setup											
[+] Main Settings		MST Instance MSTID Bridge priority Delete									
[-] Redundancy Settings		(1-4094) (0-61440)									
Spanning Tree Port											
 Settin Configure bridge priority & tir 	ners	Add MSTI Commit Changes									
Real-Time Ring Settings											

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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Stride			SPANN	ING TR	REE STAT	rus			
WEB INTEREACE TOOL	Monitor the	status of Rapid	Spanning	Tree Pro	tocol or Spa	Inning Tree	e Protocol, if ena	abled.	
WEB INTERPACE FOOL		Redundancy	protocol	RSTP					
brought to you by	Designated root 32,768 / 00:a0:1d:51:8a:db (this switch)								
AUTOMATIONDIRECTI		Topology	changes	4					
		Time since	last chg	00 days,	00:00:03				
Quick Cotup									
Quick Setup Help Index		Port	Name	Status	State	Cost			
Managed Switch Menu		1	port_1	Included	Forwarding	200,000			
[-] Monitoring		2	port_2	Included	Unlinked	200,000			
System Information Dest and Desues Status		3	port 3	Included	Forwarding	200,000			
Network Statistics		4	port 4	Included	Unlinked	200,000			
Spanning Tree Status		5	port 5	Included	Forwarding	200.000			
Real-Time Ring Status	e root port status	6	port_6	Included	Unlinked	200,000			
Multicast Filtering Schaper spanning of the second se	ceroot, por catalda	7	port_0	Included	Unlinkod	200,000			
Configuration Summary		1	port_/	Included	Unlinked	200,000			
^[-] Setup		8	port_8	included	Uniinked	20,000			
[+] Main Settings		9	port_9	included	Unlinked	20,000			
[+] Redundancy Settings [+] Traffic Priority		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.