Rapid Spanning Tree Protocol (RSTP) Configuration on the 200/300 Series Managed Switches

Objectives

Loops in a network occur when alternate routes exist between hosts. Loops in an extended network can cause Layer 2 switches to forward traffic indefinitely, which results in increased traffic and reduced network efficiency. Spanning Tree Protocol (STP) provides a single path between any two end stations in order to prevent loops. Rapid Spanning Tree Protocol (RSTP) detects network topologies to provide faster convergence and create a network without loops. This is most effective when the network topology is naturally tree structured.

This article explains how to configure RSTP per port on the 200/300 Series Managed Switches.

Applicable Devices

- SF/SG 200 and SF/SG 300 Series

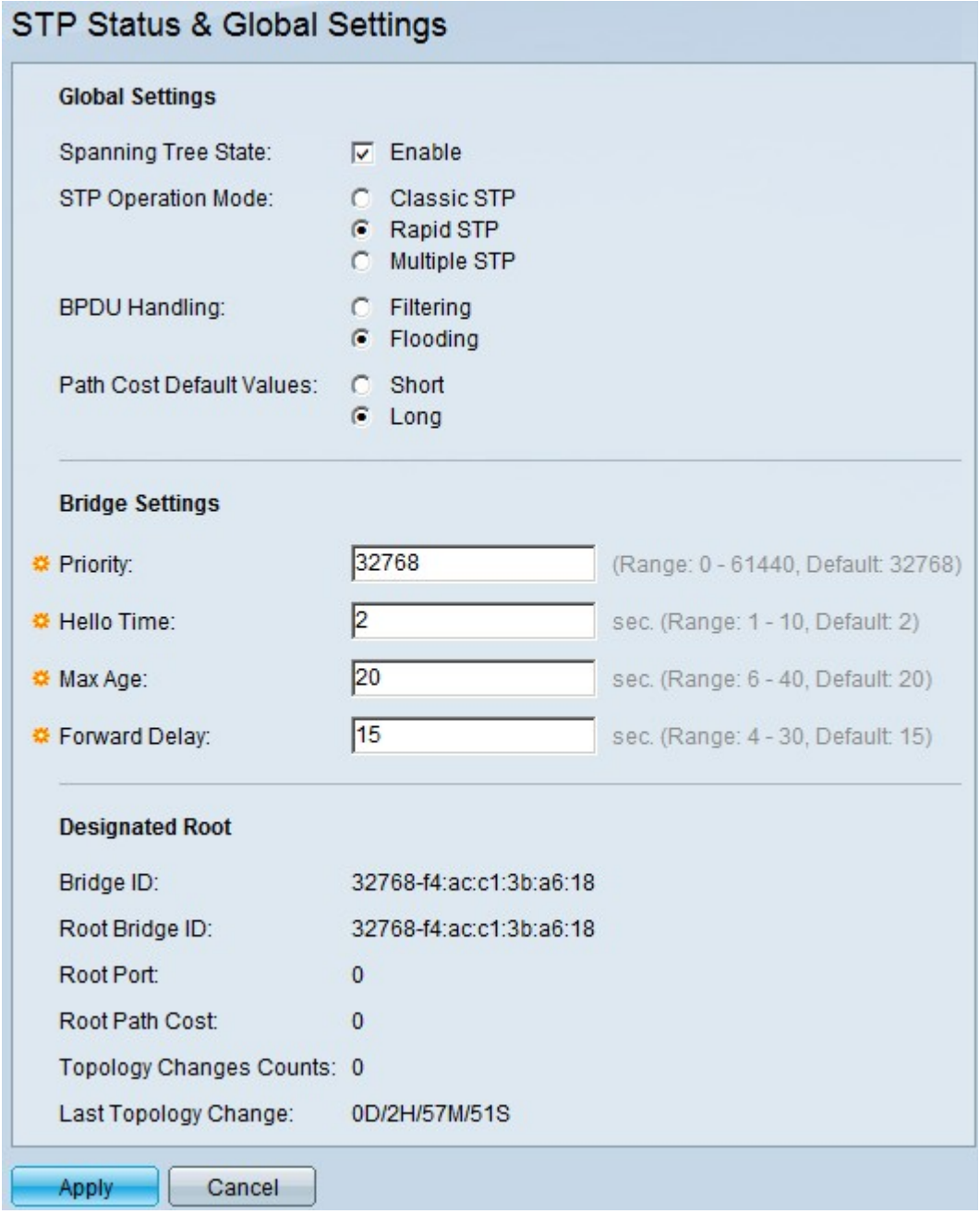
Software Version

- 1.3.0.62

Spanning Tree Global Setup

First, you need to make sure the parameters for RSTP are enabled in the switch.

Step 1. Log in to the web configuration utility and choose **Spanning Tree > STP Status & Global Settings**. The *STP Status & Global Settings* page opens:



Step 2. Check the **Enable** check box in the Spanning Tree field to enable STP.

Step 3. Click the **Rapid STP** radio button in the STP Operation Mode field to use RSTP as the operation mode of STP.

Step 4. Click on of the available options in the BPDU Handling field to handle Bridge Protocol Data Unit (BPDU) packets when STP is disabled:

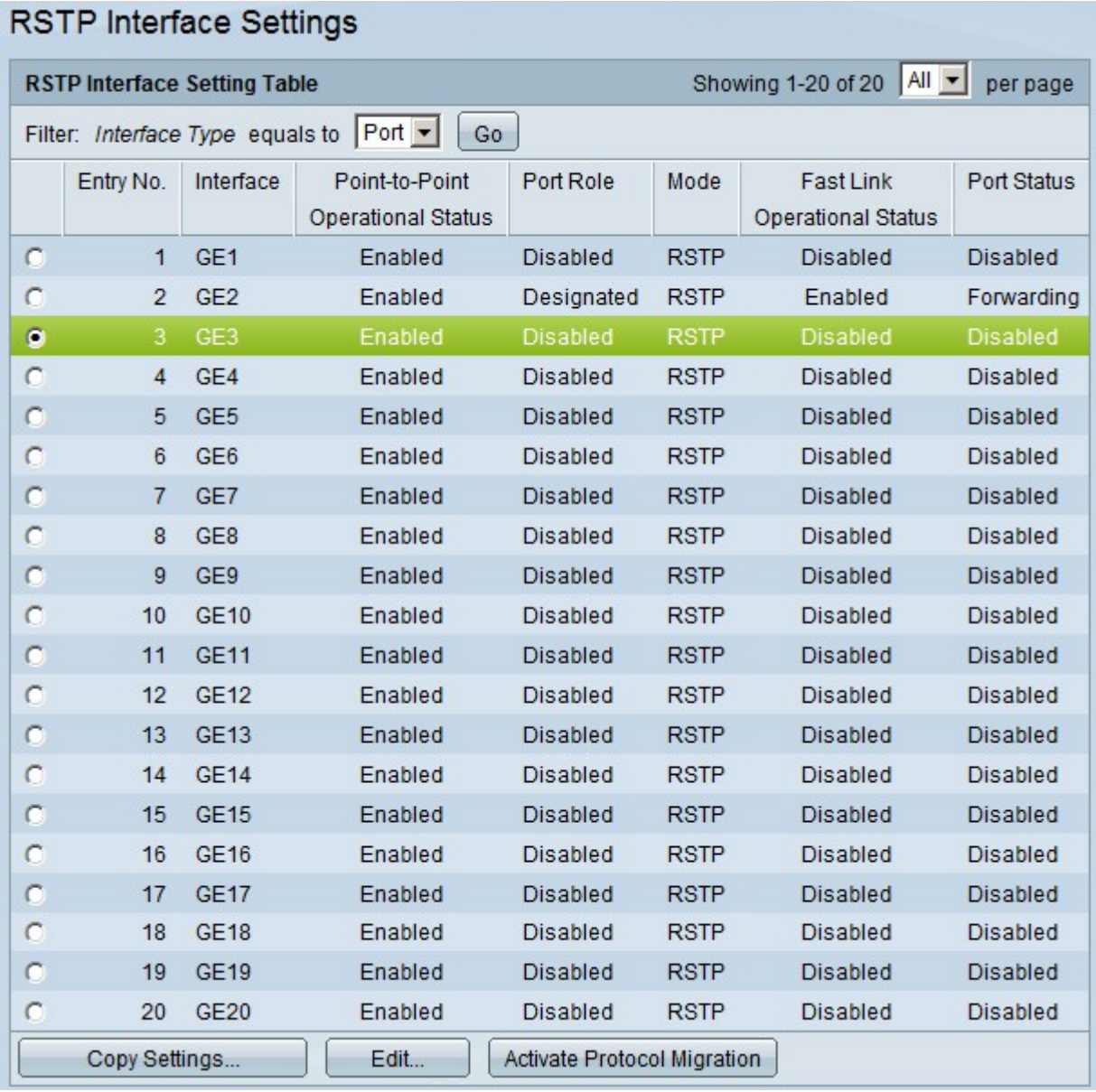
Step 5. Click on one of the available options in the Path Cost Default Values field to assign default path costs:

- Filtering — This option filters BPDU packets.
- Flooding — This option floods BPDU packets.
- Short — This option uses a range from 1 to 65,535 for port path costs.
- Long — This option uses a range from 1 to 200,000,000 for port path costs.

Step 6. Click **Apply** to save your settings.

Enable Rapid Spanning Tree on a Port

Step 1. Log in to the web configuration utility and choose **Spanning Tree > RSTP Interface Settings**. The *RSTP Interface Settings* page opens:



	Entry No.	Interface	Point-to-Point Operational Status	Port Role	Mode	Fast Link Operational Status	Port Status
○	1	GE1	Enabled	Disabled	RSTP	Disabled	Disabled
○	2	GE2	Enabled	Designated	RSTP	Enabled	Forwarding
◉	3	GE3	Enabled	Disabled	RSTP	Disabled	Disabled
○	4	GE4	Enabled	Disabled	RSTP	Disabled	Disabled
○	5	GE5	Enabled	Disabled	RSTP	Disabled	Disabled
○	6	GE6	Enabled	Disabled	RSTP	Disabled	Disabled
○	7	GE7	Enabled	Disabled	RSTP	Disabled	Disabled
○	8	GE8	Enabled	Disabled	RSTP	Disabled	Disabled
○	9	GE9	Enabled	Disabled	RSTP	Disabled	Disabled
○	10	GE10	Enabled	Disabled	RSTP	Disabled	Disabled
○	11	GE11	Enabled	Disabled	RSTP	Disabled	Disabled
○	12	GE12	Enabled	Disabled	RSTP	Disabled	Disabled
○	13	GE13	Enabled	Disabled	RSTP	Disabled	Disabled
○	14	GE14	Enabled	Disabled	RSTP	Disabled	Disabled
○	15	GE15	Enabled	Disabled	RSTP	Disabled	Disabled
○	16	GE16	Enabled	Disabled	RSTP	Disabled	Disabled
○	17	GE17	Enabled	Disabled	RSTP	Disabled	Disabled
○	18	GE18	Enabled	Disabled	RSTP	Disabled	Disabled
○	19	GE19	Enabled	Disabled	RSTP	Disabled	Disabled
○	20	GE20	Enabled	Disabled	RSTP	Disabled	Disabled

Step 2. If a connected device is discovered via STP, choose the interface that is connected to the device and click **Activate Protocol Migration**. This performs a test on the connected device to see the type of STP. The switch then communicates with the connected device through the use of the respective STP type of the connected device

Step 3. In the Filter drop-down list, choose whether to configure a port or a LAG (Link Aggregation Group).

Step 4. Click the radio button of the port /LAG you want to enable RSTP.

Step 5. Click **Edit**. The *Edit RSTP Interface Settings* window appears.

Step 6. In the Point to Point Administrative Status field, click one of the available options:

Note: Ports defined as Full Duplex are considered Point-to-Point port links.

The following information about the port/LAG is displayed:

- Enable — Enabling this feature will make this port as a RSTP edge port and brings it to forwarding mode quicker than normal STP.
- Disable — The port will not be considered as point-to-point for RSTP purposes, STP will work on regular speed.
- Auto — Determines switch status automatically by using RSTP BPDUs.
- Point to Point Operational Status — Displays enabled if point-to-point administrative distance is set to auto.
- Role — The role of the port as assigned by STP to provide STP path.
- Mode — The current spanning tree mode.
- Fast Link Operational Status — The status of the fast link.
- Port Status — RSTP status on the port.

Step 7. Click **Apply** to save your changes.