Rapid Spanning Tree Protocol (RSTP) Configuration on RV215W

Objective

Spanning Tree Protocol (STP) is a network protocol is used on a LAN. The purpose of STP is to ensure a loop-free topology for a LAN. STP removes loops through an algorithm that guarantees that there is only one active path between two network devices. STP ensures that traffic takes the shortest path possible within the network. STP can also automatically re-enable redundant paths as back up paths if an active path fails. Rapid Spanning Tree Protocol (RSTP) is an enhancement of STP. RSTP provides a faster spanning tree convergence after a topology change. STP can take 30 to 50 seconds to respond to a topology change while RSTP responds within 3 times the configured hello time. RSTP is backwards compatible with STP.

This article explains how to configure RSTP on the RV215W.
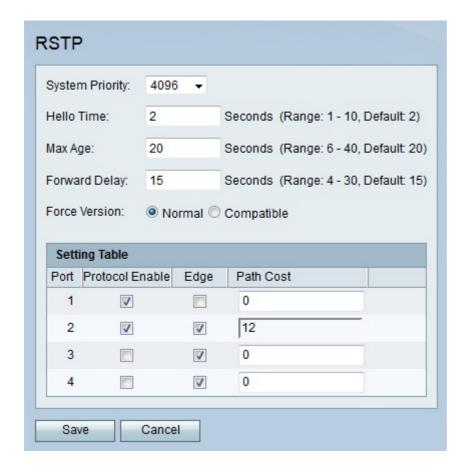
Applicable Devices

• RV215W

Software Version

• 1.1.0.5

RSTP Configuration

Step 1. Log in to the web configuration utility and choose **Networking > LAN > RSTP**. The *RSTP* page opens:

RSTP

System Priority:	4096 ▾
Hello Time:	2	Seconds (Range: 1 - 10, Default: 2)
Max Age:	20	Seconds (Range: 6 - 40, Default: 20)
Forward Delay:	15	Seconds (Range: 4 - 30, Default: 15)
Force Version:	⦿ Normal ○ Compatible

Setting Table

Port	Protocol Enable	Edge	Path Cost	
1	☑	☐	0	
2	☑	☑	12	
3	☐	☑	0	
4	☐	☑	0	

Save	Cancel

Step 2. From the System Priority drop-down list choose a priority value for the RV215W. The lower the system priority value, the more likely the RV215W is to become the root in the spanning tree. The root of the spanning tree is the device on which all path calculations are based on.

Step 3. Enter a value in the Hello Time field. The hello time is the time period that the root of the spanning tree waits to send hello messages. Hello messages are sent by the root device to the spanning tree for neighbor discovery. They are also used to indicate if a spanning tree client is still operating and network-ready.

Note: This configured time is only used if the RV215W is the root of the spanning tree.

Step 4. Enter the max age in the Max Age field. The max age is the amount of time that the router waits to receive a hello message. If the max age is reached the router tries to change the spanning tree.

Step 5. Enter a time in the Forward Delay field. The forward delay is the interval after which an interface changes from a blocking to forwarding state. An interface in the blocking state discards traffic received from the attached network segment. An interface in the forwarding state forwards traffic received from the attached network segment.

Step 6. Click the radio button that corresponds to the desired STP version in the Forced Version field.

• Normal — The RV215W uses RSTP.

• Compatible — The RV215W uses STP. This option is used if some devices on the network are not compatible with RSTP.

Step 7. Check **Protocol Enable** for the corresponding port to enable RSTP on that port.

Step 8. Check **Edge** for the corresponding port to designate the port as an edge port. An edge port is a port that is an end station of a spanning tree. If unchecked, the port is considered a link port. A link port connects multiple devices that use STP.

Step 9. Enter a path cost for the corresponding port. Enter the value zero to have the RV215W automatically determine the path cost.

Step 10. Click **Save**.