

Configure Virtual Router Redundancy Protocol (VRRP) on SG500X Series Stackable Switches

Objective

VRRP is an Internet protocol that lets you have one or more standby routers when using a statically configured router on a LAN. This creates redundancy, eliminating single points of failure while increasing the availability and reliability of routing paths in a network. The default gateway of a participating host is assigned to a virtual router instead of a physical router. The physical router that forwards packets at any given time is called an active router. If you are unfamiliar with the terms used, check out [Cisco Business: Glossary of New Terms](#).

The objective of this article is to explain how to configure Virtual Router Redundancy Protocol (VRRP) on SG500X Series Stackable Switches.

Applicable Devices

- SG500X Series Stackable Switches

Software Version

- 1.3.0.62

VRRP Configuration

Step 1. Log in to the web configuration utility and choose **IP Configuration > IPv4 VRRP Virtual Routers**. The *IPv4 VRRP Virtual Routers* page opens:



Step 2. Click **Add** to add parameters of a new VRRP router. The *IPv4 VRRP Virtual Router Table* window appears.

Note that only interfaces to which an IPv4 address is assigned are available for selection.

Interface: Port LAG VLAN

* Virtual Router Identifier: (Range: 1 - 255)

Description: (15/160 Characters Used)

Status: Enable

Version: VRRP v2
 VRRP v3
 VRRP v2 and VRRP v3

IP Address Owner: Yes

Available IP Address: Owner IP Address:

No

* Virtual Router IP Addresses: (Example: 1.1.1.1, 2.2.2.2, ...)

Source IP Address: Use default
 User defined

* Priority: (Range: 1 - 254, Default: 100)

Preempt Mode: True
 False

Step 3. Click **VLAN** as the interface in the *Interface* field and choose the desired VLAN from the *VLAN* drop-down list.

Step 4. Enter a value in the *Virtual Router Identifier (VRID)* field. VRRP uses a virtual router identification number to group the gateway routers. Each VRID group has its own unique VRID number. The valid range is 1-255.

Step 5. Enter a user defined description in the *Description* field, briefly describing the virtual router within 160 characters.

Step 6. Check the *Status* check box to **Enable** VRRP on the device. While enabled, a standby virtual router is elected to become the virtual active router whenever the previous active router fails.

Step 7. Choose the VRRP version to use in the *Version* field based on your requirement. The options are as follows:

- VRRP v2 — Only supports IPv4 addresses. This is chosen by default.
- VRRP v3 — Supports both IPv4 and IPv6 addresses.
- VRRP v2 and VRRP v3 — This is used when one device has an IPv4 address and another one has an IPv6..

Step 8. Choose an *IP Address Owner* radio button to select an IP address for the virtual router. The IP address owner is also the active router, and chooses what the collective IP addresses of the virtual router will be.

- Yes — Indicates that the IP address of the device is the virtual router IP address. Choose

the IP addresses available from the *Available IP Address* field and then click > to make that address the IP address of the owner.

Note that only interfaces to which an IPv4 address is assigned are available for selection.

Interface: Port LAG VLAN

Virtual Router Identifier: (Range: 1 - 255)

Description: (15/160 Characters Used)

Status: Enable

Version: VRRP v2
 VRRP v3
 VRRP v2 and VRRP v3

IP Address Owner: Yes

Available IP Address:

Owner IP Address:

No

Virtual Router IP Addresses: (Example: 1.1.1.1, 2.2.2.2, ...)

Source IP Address: Use default
 User defined

Priority: (Range: 1 - 254, Default: 100)

Preempt Mode: True
 False

- No — Indicated that the device IP is not the IP address of the virtual router. Enter the virtual router IP address in the *Virtual IP Addresses* field. You can assign 2 IP addresses at a time, separated with a comma (,).

Note that only interfaces to which an IPv4 address is assigned are available for selection.

Interface: Port LAG VLAN

* Virtual Router Identifier: (Range: 1 - 255)

Description: (15/160 Characters Used)

Status: Enable

Version: VRRP v2
 VRRP v3
 VRRP v2 and VRRP v3

IP Address Owner: Yes

Available IP Address: Owner IP Address:

No

* Virtual Router IP Addresses: (Example)

Source IP Address: Use default
 User defined

* Priority: (Range: 1 - 254, Default: 100)

Preempt Mode: True
 False

* Advertisement Interval: mS (Range: 50 - 40950, Default: 1000)
In VRRP version 3, the operational advertise interval is rounded down
In VRRP version 2, the operational advertise interval is rounded down

Step 9. Choose an IP address which is used in VRRP messages in the *Source IP Address* field. The options are:

- Use default — Uses the IP address of the connected interface.
- User defined — Used to choose from the available IP address on the devices. Choose the IP address from the User defined drop-down list.

Step 10. If you chose **No** for the IP Address Owner, enter the device's priority in the *Priority* field.

Note: The *Priority* field specifies the priority of the virtual routers. This way routers can differ as the active router and standby router. A higher value equals higher priority. This field depends on the options of the IP Address owner. Enter the priority value in the *Priority* field if your device IP address is not the virtual router IP address (If you chose IP Address Owner as **NO**). It has a range from 1-254. If device IP address is the virtual router IP address then priority automatically set to its highest value 255.

Step 11. Choose a *Preempt Mode* radio button. This is used to make the router the active router when the priorities are changed.

- Enable — It replaces the current active router with the another router whose priority is

higher than the router priority of the current active router.

- **Disable** — Current active router will be active even in the presence of a router with higher priority. The router with the higher priority acts as a standby router so that when the current active router fails then the highest priority becomes the new active router.

Step 12. Enter the advertisement interval (In milliseconds) value in the *Advertisement Interval* field with a range from 50 to 40950. The active router advertises periodically to all the standby routers about the active statuses and priorities.

Step 13. Click **Apply** to save the configuration.