

Denial of Service (DoS) Martian Address Configuration on Sx500 Series Stackable Switches

Objective

A Denial of Service (DoS) attack is an attempt by an attacker to not allow a legitimate user to use the resources or services on the network. DoS attacks can result in significant loss of time and money. DoS attack prevention is configured to increase security on the network and to not allow packets with a certain IP address range to enter the network.

Martian addresses are IP addresses that are to be rejected by the switch. Martian addresses are useful for an added layer of security. If a packet is received from a martian address it is discarded. Currently martian addresses are only supported in the IPv4 format.

This article explains how to configure martian addresses on the Sx500 Series Stackable Switches.

Applicable Devices

- Sx500 Series Stackable Switches

Software Version

- v1.2.7.76

Martian Addresses

Step 1. Log in to the web configuration utility and choose **Security > Denial of Service Prevention > Martian Addresses**. The *Martian Addresses* page opens:



Martian Addresses

Reserved Martian Addresses: ☒ Include

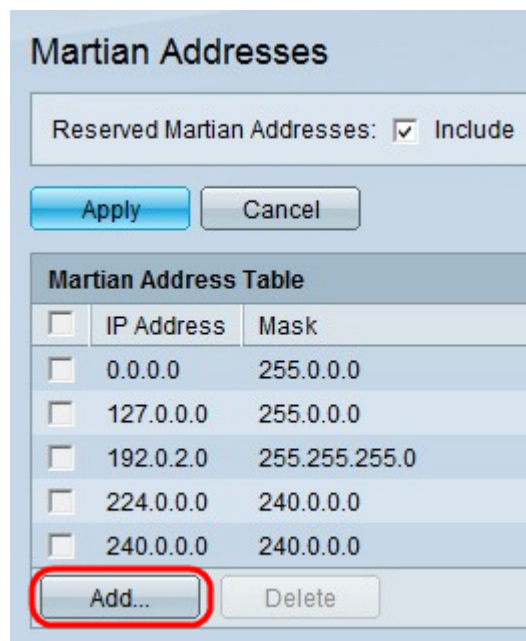
Martian Address Table

<input type="checkbox"/>	IP Address	Mask
0 results found.		

Step 2. (Optional) To add all the reserved Martial addresses to the Martian Address Table, check **Include** in the Reserved Martian Addresses field, and then click **Apply** to display the reserved addresses in the Martian Address Table. These IP addresses are illegal from the point of view of the protocol because they are already in use for important functions.

Note: DoS Prevention must be enabled on the *Security Suite Settings* page for this option to work. Please refer to the article, *Configuration of Denial of Service Prevention Techniques (Security Suite) on Sx500 Series Stackable Switches* for this configuration.

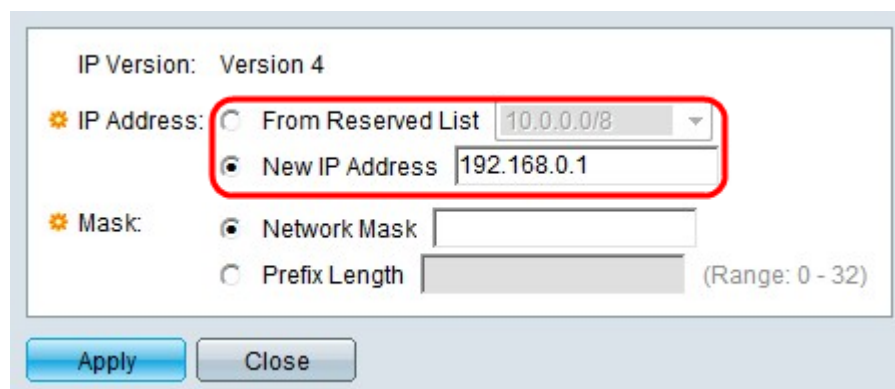
- 0.0.0.0/8 — Refers to source hosts on this network.
- 127.0.0.0/8 — Used as the Internet host loopback address.
- 192.0.2.0/24 — Used as the TEST-NET in documentation and example codes.
- 224.0.0.0/4 — Used in IPv4 Multicast address assignments. It was formerly known as Class D Address Space.
- 240.0.0.0/4 — Reserved address range. It was formerly known as Class E Address Space.



The image shows the 'Martian Addresses' configuration window. At the top, there is a section 'Reserved Martian Addresses:' with a checked 'Include' checkbox. Below this are 'Apply' and 'Cancel' buttons. A table titled 'Martian Address Table' lists several IP addresses and their masks, each with an unchecked checkbox in the first column. The table has columns for 'IP Address' and 'Mask'. The entries are: 0.0.0.0/255.0.0.0, 127.0.0.0/255.0.0.0, 192.0.2.0/255.255.255.0, 224.0.0.0/240.0.0.0, and 240.0.0.0/240.0.0.0. At the bottom of the table are 'Add...' and 'Delete' buttons. The 'Add...' button is highlighted with a red rectangle.

<input type="checkbox"/>	IP Address	Mask
<input type="checkbox"/>	0.0.0.0	255.0.0.0
<input type="checkbox"/>	127.0.0.0	255.0.0.0
<input type="checkbox"/>	192.0.2.0	255.255.255.0
<input type="checkbox"/>	224.0.0.0	240.0.0.0
<input type="checkbox"/>	240.0.0.0	240.0.0.0

Step 3. Click **Add** to add a new martian address. The *Add Martian Address* window appears.



The image shows the 'Add Martian Address' configuration window. It has a section 'IP Version: Version 4'. Below this, there are two radio buttons for 'IP Address:'. The first is 'From Reserved List' with a dropdown menu showing '10.0.0.0/8'. The second is 'New IP Address' with a text field containing '192.168.0.1'. The 'New IP Address' option is selected and highlighted with a red rectangle. Below this, there are two radio buttons for 'Mask:'. The first is 'Network Mask' with a text field. The second is 'Prefix Length' with a text field and a note '(Range: 0 - 32)'. At the bottom are 'Apply' and 'Close' buttons.

Step 4. Click the radio button that corresponds with the desired IP address to reject in the IP Address field.

- From Reserved List — Choose a reserved IP address from the drop-down list.
- New IP Address — Enter a new IP address that is to be rejected.

IP Version: Version 4

⚙ IP Address: ☐ From Reserved List 10.0.0.0/8
☒ New IP Address 192.168.0.1

⚙ Mask: ☒ Network Mask 255.255.255.0
☐ Prefix Length (Range: 0 - 32)

Apply Close

Step 5. If you clicked New IP Address in Step 3, click the radio button that corresponds with the desired mask of the martian IP address. This mask defines the range of IP addresses that are rejected.

- Network Mask — Enter the network mask in the Network mask field. This defines the subnet mask for the martian IP address.
- Prefix Length — Enter the prefix length (integer in the range of 0 to 32) in the Prefix length field. This defines the subnet mask by prefix length for the martian IP address.

Step 6. Click **Apply**.