

Configuration of Ternary Content Addressable Memory (TCAM) Allocation on Sx500 Series Stackable Switches

Objectives

Ternary Content Addressable Memory (TCAM) is used by the switch to store memory and resources used by various applications such as Quality of Service (QoS), Access Control Lists (ACLs), and VLANs. TCAM for Sx500 can hold 512 rules. When an application is enabled, it can use up a small portion of the TCAM rules. Each rule entry for an application will use up 1 or 2 TCAM rules.

The objective of this document is to explain how to configure TCAM allocation on Sx500 Series Stackable Switches.

Applicable Devices

- Sx500 Series Stackable Switches

Software Version

- v1.2.7.76

View TCAM Utilization

Step 1. Log in to the Switch Configuration Utility to choose **Administration > TCAM Allocation Settings**. The *TCAM Allocation Settings* page opens:

TCAM Allocation Settings			
Reserved TCAM Size			
IP Entries:	584		
Non IP Entries:	1462		
Total:	2046		
Actual TCAM Allocation			
Used		Available	
IPv4 Static Routes:	0	IPv4 Static Routes:	128
IP Interfaces:	2	IP Interfaces:	126
IP Host:	0	IP Host:	200
Non IP Entries:	26	Non IP Entries:	1436

Part of the *TCAM Allocation Settings* page is displayed as information about the Reserved

TCAM Size and Actual TCAM Allocation. In the *Reserved TCAM Size* field, the following information is viewed:

- IP Entries — The total used number of TCAM entries reserved for the IPv4 static routes, IP interfaces, and IP hosts.
- Non IP Entries — The TCAM entries reserved for other applications, such as ACL rules, CoS policies, and VLAN rate limits.

In the Actual TCAM Allocation area, the following information is viewed: These fields are for both Used and Available TCAM resources.

- IPv4 Static Routes — This displays the number of IPv4 routes entries used and available.
- IPv4 Interfaces — This displays the number of used and available IP interfaces entries.
- IP Host — This displays the number of IP host entries used and available.
- Non IP Entries — This displays the entries reserved by applications such as ACL rules and VLAN rate limits.

New Settings

You must [save](#) your current configuration before changing the TCAM Allocation Settings.
The new TCAM Allocation Settings must follow the rules below.

1. For Max Number of IPv4 Static Routes: New value must be greater than or equal to the current used
2. For Max Number of IP Interfaces: New value must be greater than or equal to the current used
3. New Max Number of IPv4 Static Routes + 2*Max Number of IP Interfaces + Max Number of IP Host <=

⚙ Max Number of IPv4 Static Routes: (Range: 1 - 128, Default: 128)

⚙ Max Number of IP Interfaces: (Range: 2 - 128, Default: 128)

⚙ Max Number of IP Hosts: (Range: 2 - 200, Default: 200)

Available Non IP Entries After Apply: 1436

Note: Under New Settings, the rules for new TCAM allocation settings can be referred.

Step 3. Enter the desired maximum number of IPv4 static routes in the *Max Number of IPv4 Static Routes* field. The default is 128.

Step 4. Enter the desired maximum number of IP interfaces in the *Max Number of IP Interfaces* field. The default is 128.

Step 5. Enter the desired maximum number of IP hosts in the *Max Number of IP Hosts* field. The default is 200.

Step 6. Click **Apply** to save settings and reboot automatically using the new settings.