Configure a VLAN Protocol-Based Group on a Switch

Objective

A Virtual Local Area Network (VLAN) is mainly used to form groups among the hosts regardless of where the hosts are physically located. Thus, a VLAN improves security with the help of group formation among the hosts. One of the most common reasons to set up a VLAN is to set up a VLAN for voice, and a separate VLAN for data. This directs the packets for both types of data despite using the same network.

This article defines various protocol groups and also helps to add a new protocol-based group. With these settings, protocol-based groups can be defined and bound to a port; therefore, every packet originating from the protocol groups is assigned to the configured VLAN on the page.

Applicable Devices

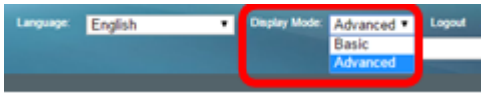
- Sx200 Series
- Sx300 Series
- Sx250 Series
- Sx350 Series
- SG350X Series
- Sx500 Series
- Sx550X Series

Software Version

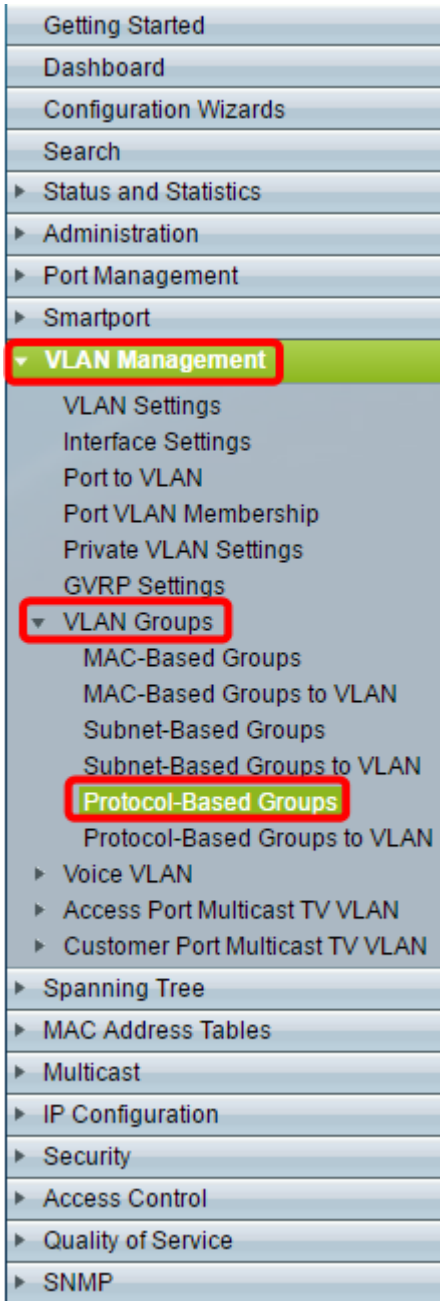
- 1.4.5.02 - Sx200 Series, Sx300 Series, and Sx500 Series
- 2.2.0.66 - Sx250 Series, Sx350 Series, SG350X Series, and Sx550X Series

Create a VLAN

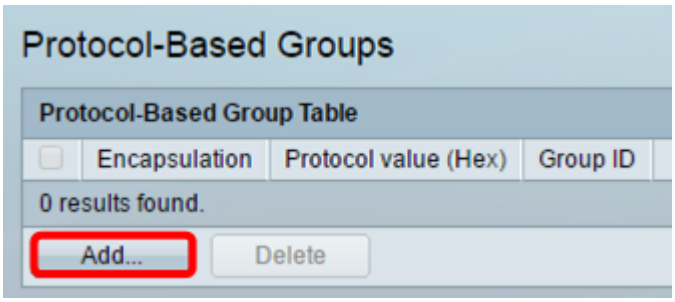
Step 1. Log in to the web-based utility of the switch and choose **Advanced** from the Display Mode drop-down menu at the upper right corner.



Step 2. Choose **VLAN Management > VLAN Groups > Protocol-Based Groups**.



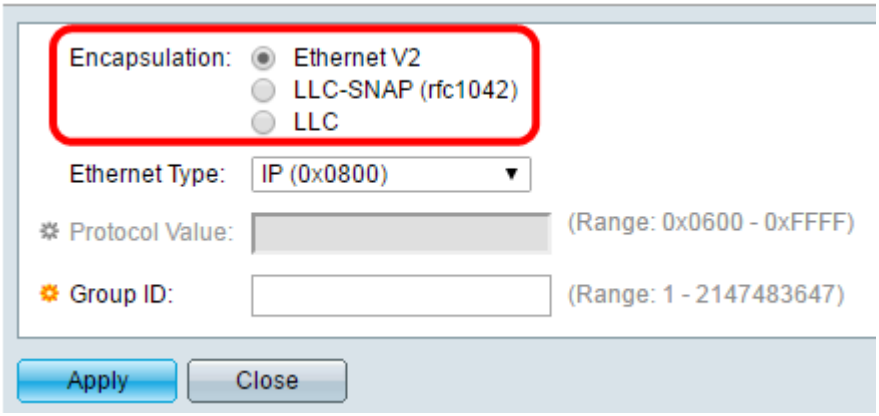
Step 3. Click **Add** in the Protocol-Based Group Table to create a protocol-based group.



Step 4. Choose a radio button in the Encapsulation area for the protocol type you want to use.

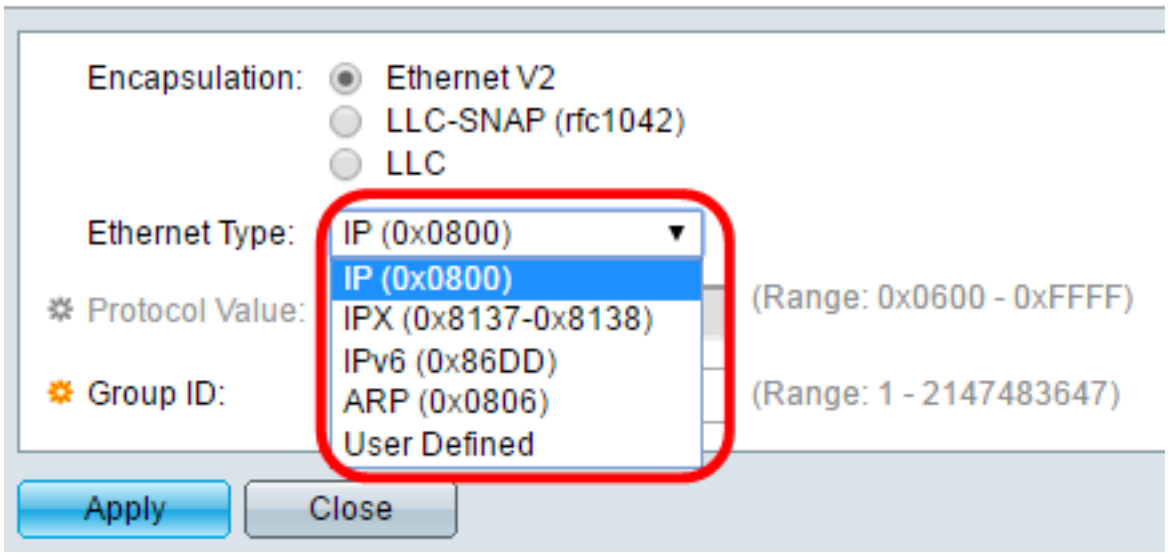
- Ethernet V2 — This parameter refers to the data packet on an Ethernet link.
- LLC-SNAP (rfc1042) — This parameter refers to Logical Link Control with Sub-Network Access Protocol (LLC-SNAP). These protocols work in combination to assure that data is transmitted effectively inside the network.
- LLC — This parameter refers to Logical Link Control (LLC). It is the sublayer of the data link

layer, which acts as an interface between the media access control sublayer and the network layer.



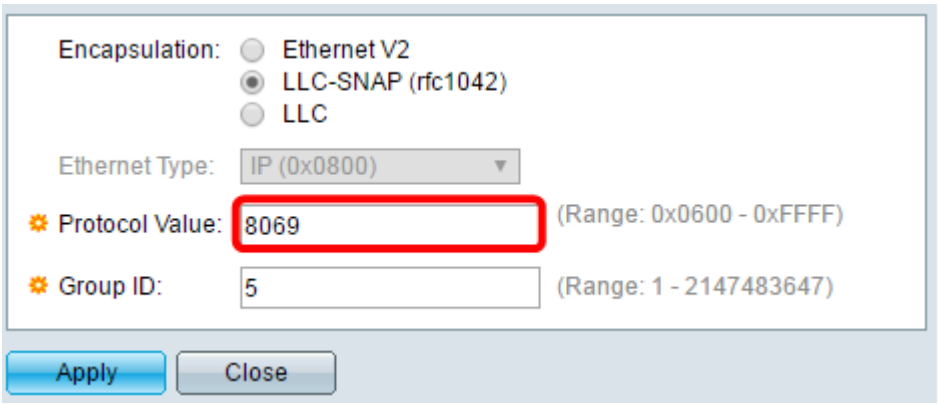
Step 5. If you have chosen Ethernet V2, continue with this step. If not, proceed to Step 6. From the Ethernet Type drop-down list, choose an ethernet type to indicate which protocol will be encapsulated in the payload of an Ethernet Frame. The options are:

- IP (0x0800) — An ethernet V2 frame that has an IPv4 packet.
- IPX (0x8137-0x8138) — An ethernet V2 frame with Internetwork Packet Exchange (IPX).
- IPv6 (0x86DD) — An ethernet V2 frame that has an IPv6 packet.
- ARP (0x0806) — An ethernet V2 frame with Address Resolution Protocol (ARP) packet.
- User Defined — An administrator can enter a Protocol Value and Group ID in the respective fields.

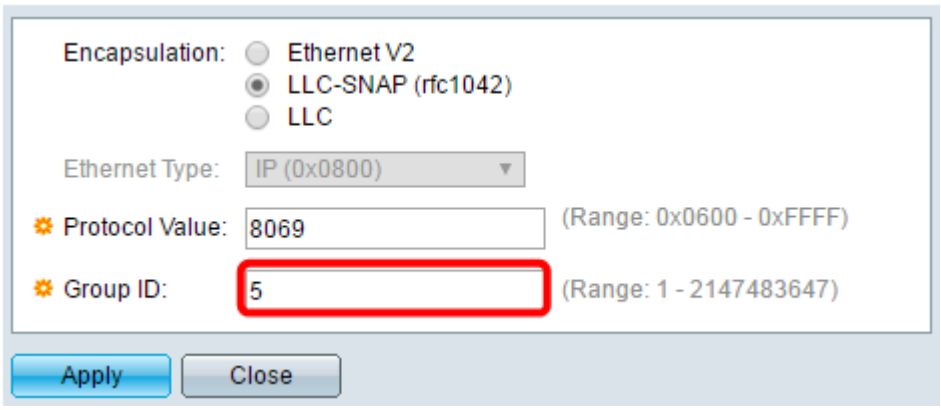


Note: For this example, IP was chosen.

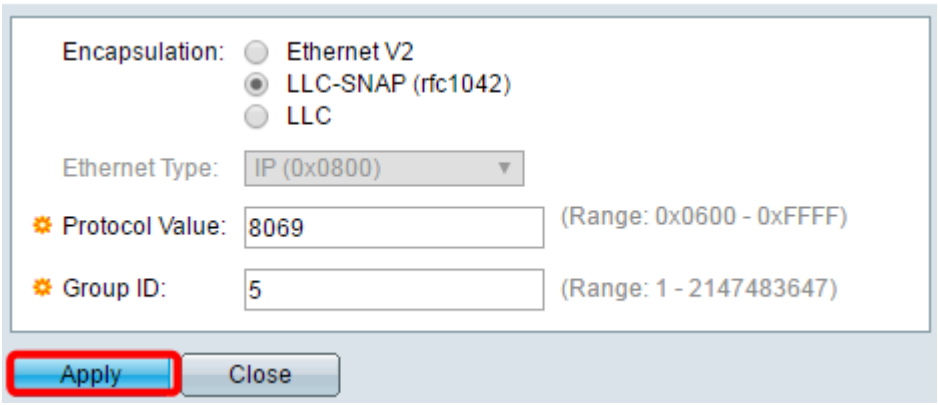
Step 6. If you have chosen LLC-SNAP (rfc1042) or LLC in Step 4, proceed with this step. In the *Protocol Value* Field, enter the protocol value. The range is 0x0600-0xFFFF.



Step 7. In the *Group ID* field, enter the group ID of the protocol. You may assign a number between 1-2147483647.



Step 8. Click **Apply**.



You have now successfully configured a Protocol-Based Group VLAN.