

Configure Access Port Multicast TV Virtual Local Area Network (VLAN) Membership on a Switch

Objective

A Virtual Local Area Network (VLAN) allows you to logically segment a Local Area Network (LAN) into different broadcast domains. In scenarios where sensitive data may be broadcast on a network, VLANs can be created to enhance security by designating a broadcast to a specific VLAN. Only users that belong to a VLAN are able to access and manipulate the data on that VLAN. VLANs can also be used to enhance performance by reducing the need to send broadcasts and multicasts to unnecessary destinations.

Multicast TV VLANs enable multicast transmissions to subscribers who are not on the same data VLAN without replicating the multicast transmission frames for each subscriber VLAN. Subscribers who are not on the same data VLAN and are connected to the device with different VLAN ID membership can share the same multicast stream by joining the ports to the same Multicast VLAN ID.

The network port which is connected to the multicast server is statically configured as a member in the Multicast VLAN ID. By sending Internet Group Management Protocol (IGMP) messages, the network ports communicate with the Multicast server through subscribers and receive the Multicast streams from the Multicast server, while including the Multicast TV VLAN in the multicast packet header.

This article provides instructions on how to configure access ports to become a member of a Multicast VLAN on a switch.

Applicable Devices

- Sx350 Series
- SG350X Series
- Sx500 Series
- Sx550X Series

Software Version

- 1.4.7.05 – Sx500 Series
- 2.2.5.68 – Sx350 Series, SG350X Series, Sx550X Series

Configure Access Port Multicast VLAN Membership on the Switch

Map an Access Port to a Multicast VLAN

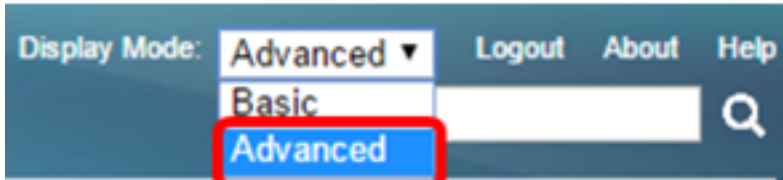
One or more IP Multicast address groups can be associated with the same Multicast TV VLAN. Any VLAN can be configured as a Multicast-TV VLAN. A Multicast VLAN has the

following features:

- A port assigned to a Multicast-TV VLAN automatically joins the Multicast-TV VLAN.
- Packets passing through egress ports in the Multicast TV VLAN are untagged.
- The Frame Type parameter of the port is set to Admit All which allows untagged packets.

Follow the steps below to map a Multicast TV Group to a VLAN:

Step 1. Log in to the web-based utility and choose **Advanced** from the Display Mode drop-down list.

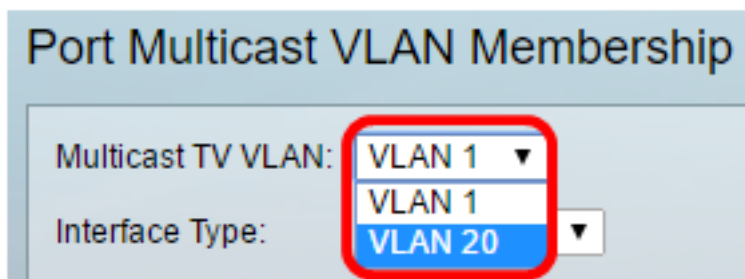


Note: If you have an Sx500 Series switch, skip to [Step 2](#).

[Step 2](#). Choose **VLAN Management > Access Port Multicast TV VLAN > Port Multicast VLAN Membership**.

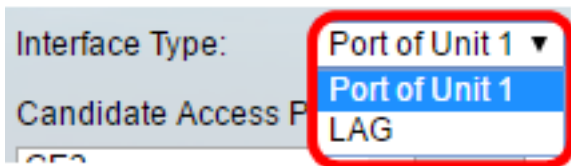


Step 3. Choose a VLAN ID from the Multicast TV VLAN drop-down list.



Note: In this example, VLAN 20 is chosen. To learn how to configure a VLAN on a switch, click [here](#) for instructions.

Step 4. Choose an interface type from the Interface Type drop-down list.

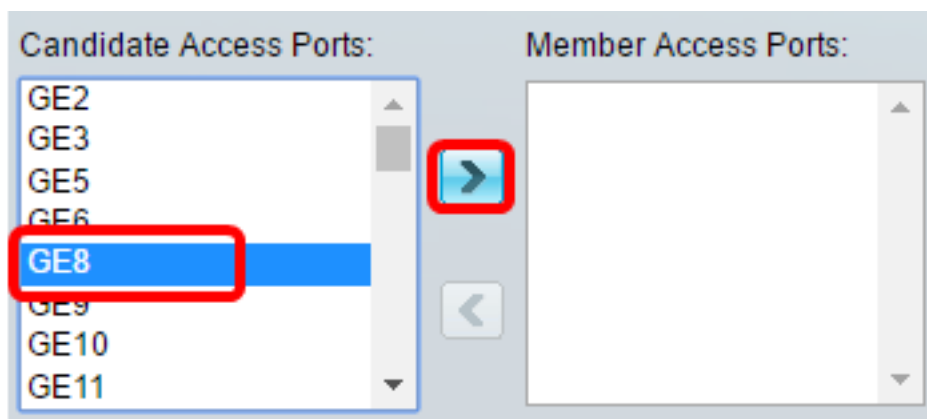


The options are:

- Unit — The unit ID of unit (master, slaves, or backup) in the stack and number of ports available in it will be displayed in the Candidate Access Ports area.
- LAG — The several ports of the switch are combined to form a single group called a Link Aggregation Group (LAG). If this option is chosen, the available LAGs will be displayed in the Candidate Access Ports area.

Note: In this example, Port of Unit 1 is chosen.

Step 5. The Candidate Access Ports list contains all access ports configured on the device. Choose an interface then click the > button to move the ports to the Member Access Ports area.



Note: In this example, GE8 is chosen.

Step 6. Click **Apply** to save the configured settings in the running configuration file.

Multicast TV VLAN:

Interface Type:

Candidate Access Ports:

Member Access Ports:

Step 7. (Optional) Click **Save** to save settings to the startup configuration file.

Save cisco

Port Gigabit PoE Stackable Managed Switch

Port Multicast VLAN Membership

Success. To permanently save the configuration, go to the

Multicast TV VLAN:

Interface Type:

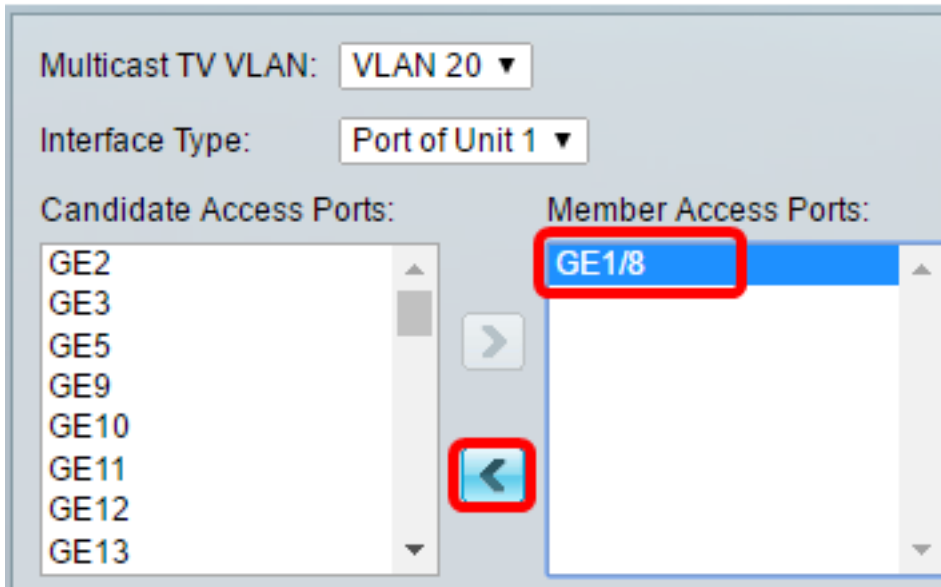
Candidate Access Ports:

Member Access Ports:

You should now have configured a port Multicast TV Group to VLAN.

Remove an Access Port from a Multicast VLAN

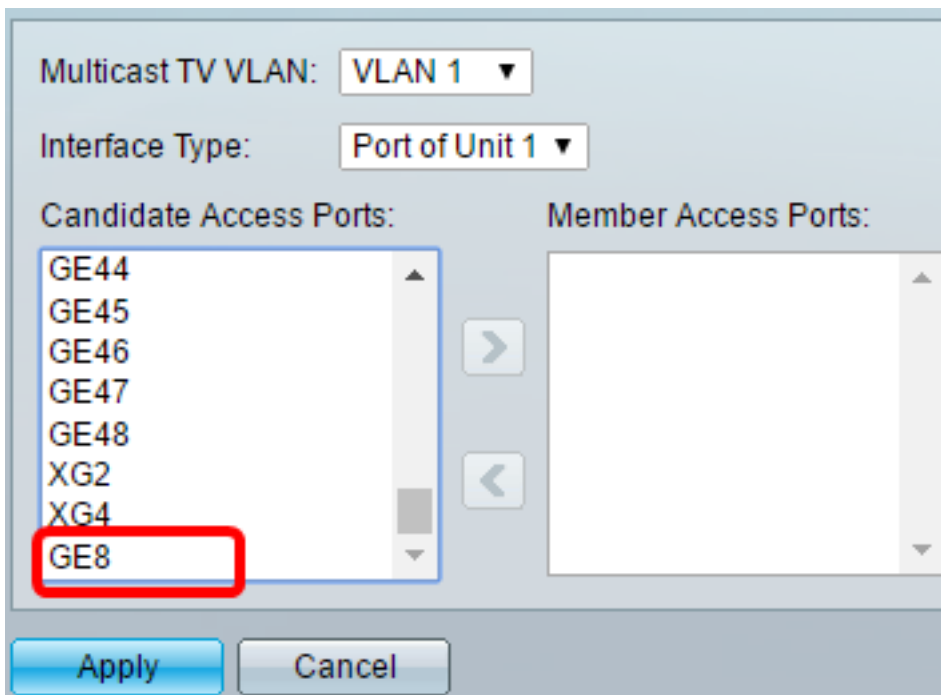
Step 1. In Member Access Ports area, choose an interface then click the < button to move the ports back to the Candidate Access Ports area.



The screenshot shows a configuration window for a Multicast TV VLAN. At the top, 'Multicast TV VLAN:' is set to 'VLAN 20' and 'Interface Type:' is 'Port of Unit 1'. Below are two lists: 'Candidate Access Ports' and 'Member Access Ports'. The 'Candidate Access Ports' list contains GE2, GE3, GE5, GE9, GE10, GE11, GE12, and GE13. The 'Member Access Ports' list contains GE1/8. A red box highlights the 'Member Access Ports' list, and another red box highlights the left-pointing arrow button between the two lists.

Note: In this example, GE1/8 is chosen.

Step 2. Scroll down to the bottom of the Candidate Access Ports list to confirm the movement of the port.



The screenshot shows the same configuration window as in Step 1, but with 'Multicast TV VLAN:' set to 'VLAN 1'. The 'Candidate Access Ports' list now contains GE44, GE45, GE46, GE47, GE48, XG2, XG4, and GE8. The 'Member Access Ports' list is empty. A red box highlights the 'Candidate Access Ports' list, and another red box highlights the left-pointing arrow button between the two lists. At the bottom, there are 'Apply' and 'Cancel' buttons.

Step 3. Click **Apply** to save the settings to the running configuration file.

Step 4. (Optional) Click **Save** to save settings to the startup configuration file.

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Port Multicast VLAN Membership

Success. To permanently save the configuration, go to the

Multicast TV VLAN:

Interface Type:

Candidate Access Ports: Member Access Ports:

GE2	>	
GE3		
GE5		
GE6		
GE8		
GE9		
GE10		
GE11		

You should now have configured an access port to a Multicast TV VLAN on your switch. To learn how to configure Customer Port Multicast VLAN Membership on a switch, click [here](#).