

Configure Port Virtual Local Area Network (VLAN) Membership of an Interface 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.

A VLAN allows a group of hosts that are not connected to the same switch to communicate as if they were on the same broadcast domain. An interface that has VLAN traffic needs to have the VLANs assigned to that interface, or packets may be dropped. When Generic Attribute Registration Protocol (GARP) VLAN Registration Protocol (GVRP) is enabled for an interface, then VLANs can be dynamically assigned and it is not necessary to manually assign them.

This article provides instructions on how to assign a port to one or more VLANs in the switch.

Applicable Devices

- Sx250 Series
- Sx350 Series
- SG350X Series
- Sx550X Series

Software Version

- 2.2.5.68

Configure VLAN Membership of an Interface

Step 1. Log in to the web-based utility of your switch then choose **VLAN Management > Port VLAN Membership**.



Step 2. Choose the interface type (Port or LAG) and click **Go**. The following fields are displayed for all interfaces of the selected type:

Port VLAN Membership

F - Forbidden member T - Tagged member U - Untagged member I - Inactive VLAN
M - Multicast TV VLAN In - Internally used VLAN G - Guest VLAN Pp - Private VLAN

Port VLAN Membership Table

Filter: *Interface Type* equals to

	Interface	Mode	Administrative VLANs	Operational VLANs	LAG
<input type="radio"/>	GE1	Access	20U, 40M	20U, 40U	
<input type="radio"/>	GE2	Access	1M	1U	
<input type="radio"/>	GE3	Access	1U	1U	
<input type="radio"/>	GE4	Access	1U	1U	
<input type="radio"/>	GE5	Access	1U	1U	
<input type="radio"/>	GE6	Access	1U	1U	
<input type="radio"/>	GE7	Access	1U	1U	
<input type="radio"/>	GE8	Access	1U	1U	
<input type="radio"/>	GE9	Access	1U	1U	

- Interface — Port or LAG ID.
- Mode — Interface VLAN mode that was selected in the Interface Settings page.
- Administrative VLANs — Drop-down list that displays all VLANs of which the interface might be a member.
- Operational VLANs — Drop-down list that displays all VLANs of which the interface is currently a member.
- LAG — If the interface selected is Port, it will display the LAG in which it is a member.

Note: In this example, Port of Unit 2 is chosen.

Step 3. Click the radio button of a port that you want to configure.

<input type="radio"/>	GE28	Access	1U	1U
<input type="radio"/>	GE29	Access	1U	1U
<input checked="" type="radio"/>	GE30	Access	1U	1U
<input type="radio"/>	GE31	Access	1U	1U
<input type="radio"/>	GE32	Access	1U	1U
<input type="radio"/>	GE33	Access	1U	1U
<input type="radio"/>	GE34	Access	1U	1U

Note: In this example, GE30 is chosen.

Step 4. Scroll down to the bottom of the page then click the **Join VLAN** button.

<input type="radio"/>	GE28	Access	1U	1U
<input type="radio"/>	GE29	Access	1U	1U
<input checked="" type="radio"/>	GE30	Access	1U	1U
<input type="radio"/>	GE31	Access	1U	1U
<input type="radio"/>	GE32	Access	1U	1U
<input type="radio"/>	GE33	Access	1U	1U
<input type="radio"/>	GE34	Access	1U	1U
<input type="radio"/>	GE35	Access	1U	1U
<input type="radio"/>	GE36	Access	1U	1U
<input type="radio"/>	GE37	Access	1U	1U
<input type="radio"/>	GE38	Access	1U	1U
<input type="radio"/>	GE39	Access	1U	1U
<input type="radio"/>	GE40	Access	1U	1U
<input type="radio"/>	GE41	Access	1U	1U
<input type="radio"/>	GE42	Access	1U	1U
<input type="radio"/>	GE43	Access	1U	1U
<input type="radio"/>	GE44	Access	1U	1U
<input type="radio"/>	GE45	Access	1U	1U
<input type="radio"/>	GE46	Access	1U	1U
<input type="radio"/>	GE47	Access	1U	1U
<input type="radio"/>	GE48	Access	1U	1U
<input type="radio"/>	XG1	Trunk	1U, 2-19I, 20T, 21-29I, 30T, 31-39I, 40T, 41-4094I	1U, 20T, 30T, 40T
<input type="radio"/>	XG2	Access	1U	1U

Step 5. Make sure the correct Port or LAG is chosen in the Interface area.

Interface:

Unit 2 Port GE30 LAG 1

Current VLAN Mode:

Access

Note: The Current VLAN Mode displays the port VLAN mode that was chosen in the Interface Settings page. In this example, the mode is set to Access. To learn more about how to configure this feature, click [here](#) for instructions.

Step 6. Choose an access VLAN ID from the drop-down list. When the port is in Access mode, it will be a member of the Access VLAN. The default value is 1.

Access Mode Membership (Active)

These are the VLAN membershi the

Access VLAN ID:

None
1
✓ 20
30

Note: In this example, VLAN 20 is chosen.

Step 7. Choose a multicast TV VLAN from the drop-down list. When the port is in Access mode, it will be a member of the Multicast TV VLAN. The default value is None.

Access VLAN ID: 20

Multicast TV VLAN:

✓ None
1
20
30
40

The following settings are for the inactive interface VLAN modes. These effects will be saved, but will not take effect until the interface VLAN mode is changed in the VLAN Interface Settings page.

Note: This option is not available on Sx250 switches.

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Step 8. Choose a native VLAN ID from the drop-down list. When the port is in Trunk mode, it will be a member of the Native VLAN. The default value is 1.

Trunk Mode Membership

Native VLAN ID:

1

Step 9. When the port is in Trunk mode, it will be a member of the Tagged VLANs. Choose from the following options:

- All VLANs — When the port is in Trunk mode, it will be a member of all VLANs.

- User Defined — When the port is in Trunk mode, it will be a member of the VLANs that are entered in this field.

Trunk Mode Membership

Native VLAN ID:

Tagged VLANs:

All VLANs
 User Defined 30-40

Note: In this example, User Defined is chosen and VLANs 30-40 are used.

Step 10. Enter the VLAN ID in the *Untagged VLANs* field. When the port is in General mode, it will be an untagged member of this VLAN.

General Mode Membership

Untagged VLANs:

 (VLAN Range; Example: 1,3,5-10)

Note: In this example, VLAN 1 is used.

Step 11. Enter the VLAN ID in the *Tagged VLANs* field. When the port is in General mode, it will be a tagged member of this VLAN.

Tagged VLANs:

Note: In this example, VLAN 30 is used.

Step 12. Enter the VLAN ID in the *Forbidden VLANs* field. When the port is in General mode, the interface is not allowed to join the VLAN even from GVRP registration. When a port is not a member of any other VLAN, enabling this option on the port makes the port part of internal VLAN 4095 which is a reserved VLAN ID (VID).

General Mode Membership

Untagged VLANs:

 (VLAN Range; Example: 1,3,5-10)

Tagged VLANs:

 (VLAN Range; Example: 1,3,5-10)

Forbidden VLANs:

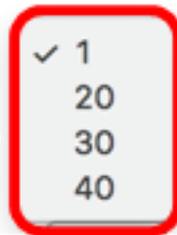
 (VLAN Range; Example: 1,3,5-10)

Note: In this example, VLAN 40 is used.

Step 13. Choose a VLAN ID from the General PVID drop-down list. When the port is in General mode, it will be a member of these VLANs. The default value is 1.

General PVID:

Customer Mode Membership



✓ 1
20
30
40

Step 14. (Optional) Choose a VLAN ID from the Customer VLAN ID drop-down list. When the port is in Customer mode, it will be a member of this VLAN.

Customer Mode Membership

Customer VLAN ID:

Customer Multicast VLANs:



✓ None
1
20
30

Note: In this example, VLAN 20 is chosen.

Step 15. (Optional) Enter the VLAN ID in the *Customer Multicast VLANs* field. When the port is in Customer mode, it will be a member of this Multicast TV VLAN.

Note: This option is not available on Sx250 switches.

Interface: Unit Port LAG

Unit: Port: LAG:

Current VLAN Mode: Access

Access Mode Membership (Active)

These are the VLAN membership settings for the current active VLAN interface mode.

Access VLAN ID:

Multicast TV VLAN:

The following settings are for the inactive interface VLAN modes. these effects will be : not take effect until the interface VLAN mode is changed in the [VLAN Interface Setting](#)

Trunk Mode Membership

Native VLAN ID:

Tagged VLANs: All VLANs User Defined (VLAN

General Mode Membership

Untagged VLANs: (VLAN Range; Example: 1

Tagged VLANs: (VLAN Range; Example: 1

Forbidden VLANs: (VLAN Range; Example: 1

General PVID:

Customer Mode Membership

Customer VLAN ID:

Customer Multicast VLANs: (VLAN Range; Example: 1

Note: In this example, no VLAN ID is entered.

Step 16. Click **Apply** then click **Close**.

Step 17. (Optional) Click **Save** to save settings to the startup configuration file.

Save

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48-Port Gigabit PoE Stackable Managed Switch

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<input type="radio"/>	GE9	Access	1U	1U	
<input type="radio"/>	GE10	Access	1U	1U	
<input type="radio"/>	GE11	Access	1U	1U	
<input type="radio"/>	GE12	Access	1U	1U	
<input type="radio"/>	GE13	Access	1U	1U	
<input type="radio"/>	GE14	Access	1U	1U	
<input type="radio"/>	GE15	Access	1U	1U	
<input type="radio"/>	GE16	Access	1U	1U	
<input type="radio"/>	GE17	Access	1U	1U	
<input type="radio"/>	GE18	Access	1U	1U	
<input type="radio"/>	GE19	Access	1U	1U	
<input type="radio"/>	GE20	Access	1U	1U	
<input type="radio"/>	GE21	Access	1U	1U	
<input type="radio"/>	GE22	Access	1U	1U	
<input type="radio"/>	GE23	Access	1U	1U	
<input type="radio"/>	GE24	Access	1U	1U	
<input type="radio"/>	GE25	Access	1U	1U	
<input type="radio"/>	GE26	Access	1U	1U	
<input type="radio"/>	GE27	Access	1U	1U	
<input type="radio"/>	GE28	Access	1U	1U	
<input type="radio"/>	GE29	Access	1U	1U	
<input type="radio"/>	GE30	Access	20U	20U	
<input type="radio"/>	GE31	Access	1U	1U	
<input type="radio"/>	GE32	Access	1U	1U	

You should now have successfully assigned a port to one or more VLANs in the switch.