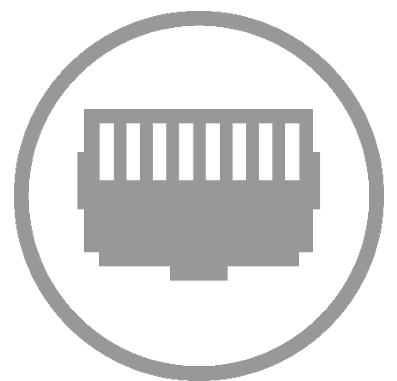




# S3 Series

Knowledge Base Article



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# Creating VLANs on an S3 Series Switch

This document will show you how to configure VLANs on the S3 Series switch.

## Setting Up VLANs

First navigate to **Configure > L2 Switching > 802.1Q VLAN**

**VLAN ID List** - Type in the VLAN number that you would like to use, then click the **Add**. Multiple VLANs can be added at once using dash "-" for ranges and comma "," for non-sequential entries.

**VLAN ID** - This section will allow you to search for your VLANs if you have multiple VLANs. Type in the VLAN and then hit the magnifying glass.

The following screenshot shows VLAN 2 through 7 Being added to the list.

The screenshot displays the configuration interface for an S3L-24P switch. The breadcrumb navigation is **CONFIGURE > L2 Switching > VLAN > 802.1Q VLAN**. The main configuration area is titled **802.1Q VLAN** and includes several sections:

- VLAN ID List**: A text input field containing "2-7" and an **Add** button.
- VLAN ID (1-4094)**: A text input field containing "1,5,8-10" and a magnifying glass icon.
- Total Entries: 1**: A summary of the current configuration.
- Table**: A table with columns for VLAN ID, VLAN NAME, TAGGED MEMBER PORTS, UNTAGGED MEMBER PORTS, SYNTAX MEMBER PORTS, and VLAN TYPE. It contains one entry: 

VLAN ID	VLAN NAME	TAGGED MEMBER PORTS	UNTAGGED MEMBER PORTS	SYNTAX MEMBER PORTS	VLAN TYPE
1	default	--	eth1/1-1/6,eth1/8-1/28	--	--
- Buttons**: **Change**, **Delete**, and **Delete All** buttons are located to the right of the table.
- Navigation**: A pagination control at the bottom shows "1/1" entries, with navigation arrows and a **Go To** button.

# Tagging Ports with VLANs

Next you want to tag your different ports for the VLANs that you want.

Setting up Hybrid Ports:

- First navigate to **Configure > L2 Switching > Port-Based VLANs**

Individual ports may be configured by selecting **Edit** to the right, or a range of ports can be configured to the same settings by selecting **Edit Multiple Ports** at the top right of the page. The **Detail** option next to each port will give a full overview of that ports current VLAN configuration. This is useful to see which VLANs have been set to Tagged or Untagged on a port.

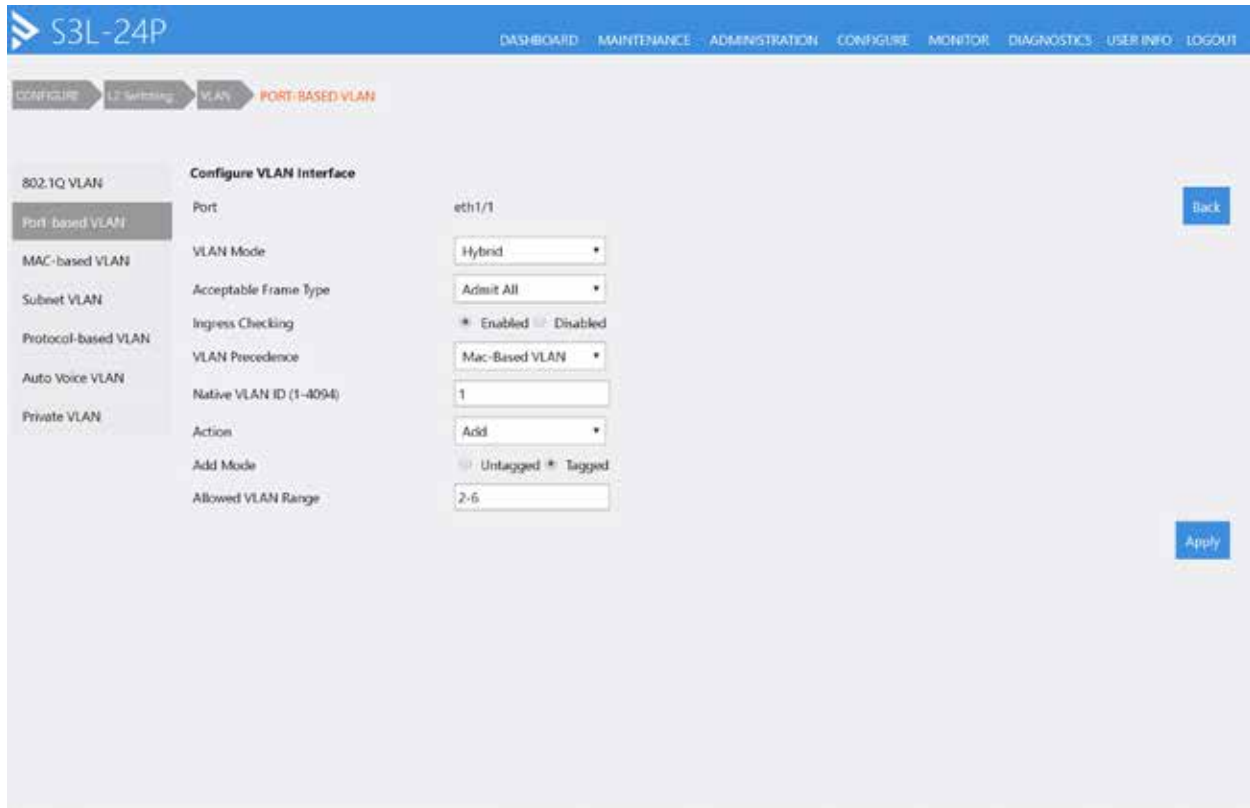
Port-based VLAN	PORT	VLAN MODE	BROADCAST CHECKING	ACCEPTABLE FRAME TYPE	
MAC-based VLAN	eth1/1	Hybrid	Enabled	Admit All	<a href="#">Detail</a> / <a href="#">Edit</a>
Subnet VLAN	eth1/2	Hybrid	Enabled	Admit All	<a href="#">Detail</a> / <a href="#">Edit</a>
Protocol-based VLAN	eth1/3	Hybrid	Enabled	Admit All	<a href="#">Detail</a> / <a href="#">Edit</a>
Auto Voice VLAN	eth1/4	Hybrid	Enabled	Admit All	<a href="#">Detail</a> / <a href="#">Edit</a>
Private VLAN	eth1/5	Hybrid	Enabled	Admit All	<a href="#">Detail</a> / <a href="#">Edit</a>
	eth1/6	Hybrid	Enabled	Admit All	<a href="#">Detail</a> / <a href="#">Edit</a>
	eth1/7	Hybrid	Enabled	Admit All	<a href="#">Detail</a> / <a href="#">Edit</a>
	eth1/8	Hybrid	Enabled	Admit All	<a href="#">Detail</a> / <a href="#">Edit</a>
	eth1/9	Hybrid	Enabled	Admit All	<a href="#">Detail</a> / <a href="#">Edit</a>
	eth1/10	Hybrid	Enabled	Admit All	<a href="#">Detail</a> / <a href="#">Edit</a>
	eth1/11	Hybrid	Enabled	Admit All	<a href="#">Detail</a> / <a href="#">Edit</a>
	eth1/12	Hybrid	Enabled	Admit All	<a href="#">Detail</a> / <a href="#">Edit</a>
	eth1/13	Hybrid	Enabled	Admit All	<a href="#">Detail</a> / <a href="#">Edit</a>
	eth1/14	Hybrid	Enabled	Admit All	<a href="#">Detail</a> / <a href="#">Edit</a>
	eth1/15	Hybrid	Enabled	Admit All	<a href="#">Detail</a> / <a href="#">Edit</a>
	eth1/16	Hybrid	Enabled	Admit All	<a href="#">Detail</a> / <a href="#">Edit</a>
	eth1/17	Hybrid	Enabled	Admit All	<a href="#">Detail</a> / <a href="#">Edit</a>
	eth1/18	Hybrid	Enabled	Admit All	<a href="#">Detail</a> / <a href="#">Edit</a>
	eth1/19	Hybrid	Enabled	Admit All	<a href="#">Detail</a> / <a href="#">Edit</a>

## Hybrid Port

A hybrid port should be used on any device that is VLAN aware. Meaning it would require access one or more Tagged VLANs, as well as one Untagged VLAN. This would include, routers, switches and access points that are plugged into your S3 switch.

- Click the **Edit** button next to the port your want to edit.
  - **VLAN Mode** - set this to Hybrid
  - **Acceptable Frame Type** - Admit All
  - **Ingress Checking** - This can be left Enabled
  - **VLAN Precedence** - Select MAC based VLAN
  - **Native VLAN ID** - Select VLAN 1 (this is the default VLAN which any Untagged incoming traffic will be tagged with)
  - **Action** - Use Add to assign new VLANs to the port. Remove would be used later to take specific VLANs out of a port assignment.
  - **Add Mode** - Change this to Tagged
  - **Allowed VLAN Range** - This should be all of your VLANs accept VLAN 1. In this example we are using 2 through 6 as the range.
  - Click **Apply** at the bottom right.

The below screenshot shows a Hybrid configuration on Port 1.



## Explaining Adding allowed VLANs to a Hybrid port

The **Action** option provides four different options when configuring which VLANs will be allowed on a port.

### Action Options

**Add:** Selecting Add will then give you the option to select Untagged or Tagged, then provide one or more VLAN IDs. When performing this action, the VLANs input will be Added in addition to any current VLANs set on that port. If a VLAN was set to Untagged and was then specified as Tagged (or visa versa) the newly added setting will override the previous setting.

**Remove:** Any VLAN specified when selecting Remove will be taken off of either the Untagged or Tagged allowed VLAN list.

**Tagged:** Selecting this option will override all current VLAN settings and specify only the input VLANs as allowed and Tagged. Any VLANs which were previously allowed Untagged will be removed.

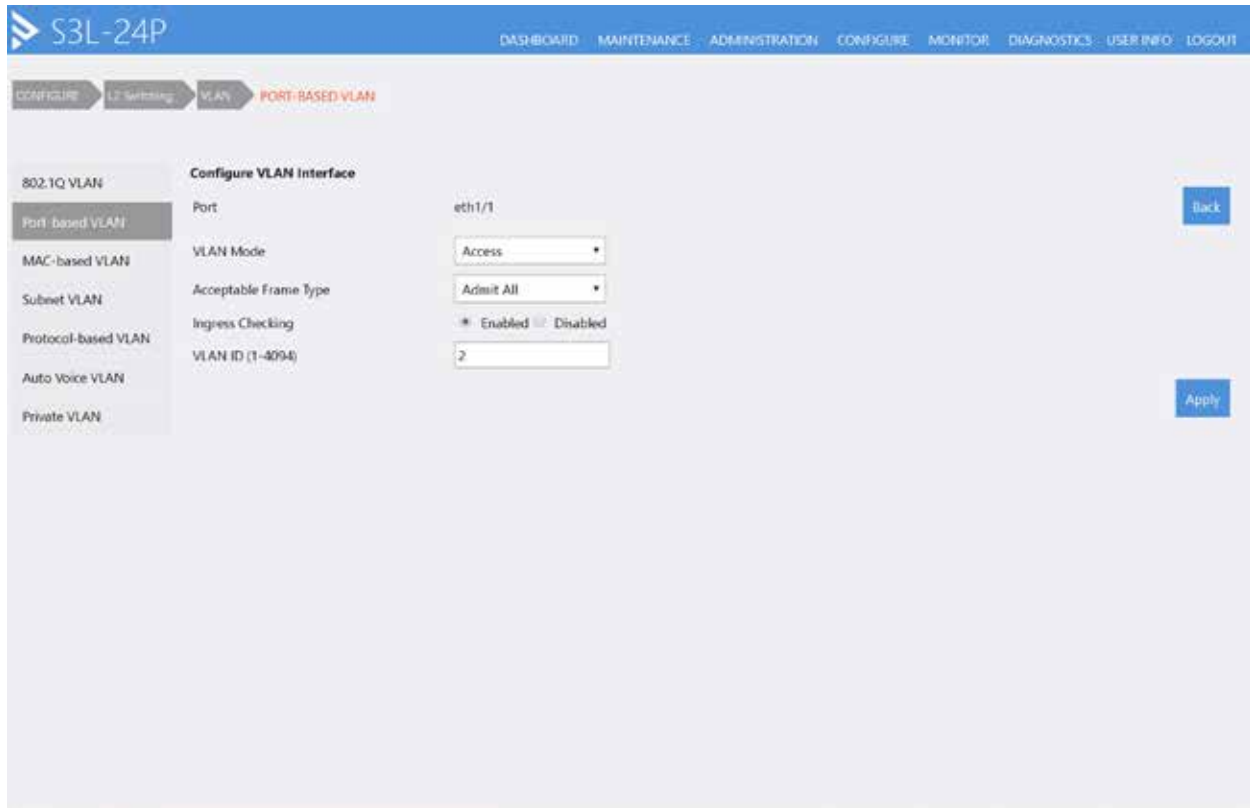
**Untagged:** Selecting this option will override all current VLAN settings and specify only the input VLANs as allowed and Untagged. Any VLANs which were previously allowed Tagged will be removed.

## Access Port

The Access Mode setting provides port access to a single VLAN for any non-VLAN aware device connected to the port.

- Click the **edit** button next to the port you want to edit.
  - **VLAN Mode** - set this to Access
  - **Acceptable Frame Type** - Admit All
  - **Ingress Checking** - This should be Enabled
  - **VLAN ID** - Type in the VLAN that you would like the port to have access to

The below screenshot shows Port 1 as a VLAN 2 port.

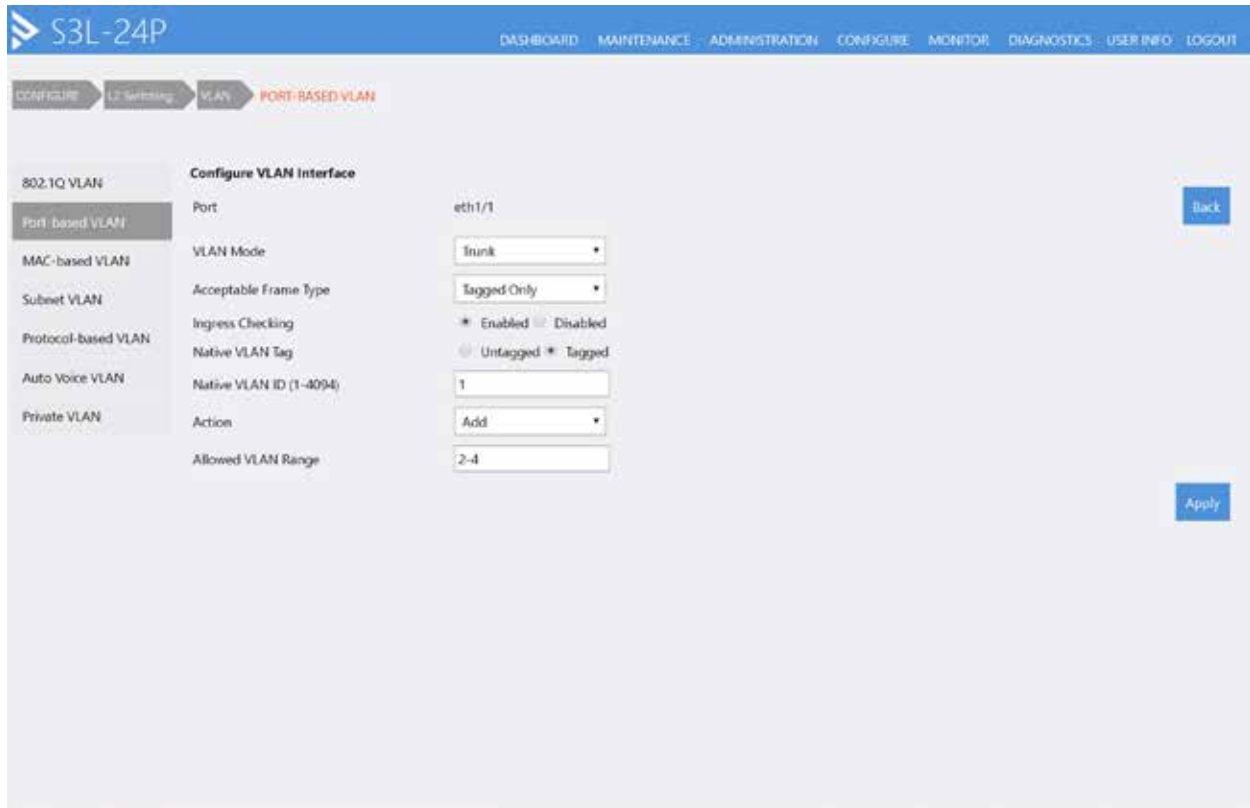


## Trunk Port

The Trunk setting allows for all tagged traffic between two devices like two switches.

- Click the **edit** button next to the port your want to edit.
  - **VLAN Mode** - set this to **Trunk**
  - **Acceptable Frame Type** - For security this can be changed to **Tagged Only**
  - **Ingress Checking** - This should be **Enabled**
  - **Native VLAN Tag** - To create a true Trunk this should be set to **Tagged**
  - **Native VLAN ID** - This is the primary VLAN ID allowed on the port.
  - **Action** - Select **Add** to specify certain VLANs to allow on the Trunk port. Or select **All** to allow any VLAN created on the switch to be allowed across the port.
  - **VLAN ID** - Type in the VLANs that you would like the port to have access to

The below screenshot shows Port 1 set as a Trunk for VLANs 1 through 4.



## Explaining Adding allowed VLANs to a Trunk port

The **Action** option provides four different options when configuring which VLANs will be allowed on a port.

### Action Options

**All:** This option will allow All VLANs created on the switch to be accepted by this Trunk port.

**Add:** Selecting Add will give you the option to enter the VLAN IDs you wish to allow on this port.

**Remove:** Any VLAN specified when selecting Remove will be taken off.



**Except:** All VLANs created on the switch will be allowed, except for any VLANs entered with this option.

**Replace:** This will override any previous VLANs set on the port in place of the new values entered in with this option.

Be sure to save your configuration under **Maintenance>Save** after finishing your settings changes so they are kept after reboot.



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