



# VLAN Configuration

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# description

To add a VLAN name or a description for the VLAN use the **description** command in the VLAN configuration mode.

**description** *string*

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<b>Syntax Description</b>	<i>string</i> Specifies a name or a description for the VLAN. The range is 1-32 characters.
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<b>Command Default</b>	None
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<b>Command Modes</b>	VLAN Configuration
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<b>Examples</b>	<pre>Device(config)# <b>vlan 11</b> Device(config-if-vlan)# <b>switchport ethernet 3</b> Device(config-if-vlan)# <b>description "vlan1"</b></pre>
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## ingress acceptable-frame

To configure the type of frames or VLAN packets that are acceptable on the port, use the `ingress acceptable-frame` command in the Interface configuration mode.

**ingress acceptable-frame** { **all** | **tagged** }

<b>Syntax Description</b>	<b>all</b> Allows the port to receive tagged and untagged VLAN
	<b>tagged</b> Allows the port to receive only tagged VLAN packets.

<b>Command Default</b>	None
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<b>Command Modes</b>	Interface configuration
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### Examples

This example shows how to configure the **ingress acceptable-frame** command:

```
Device(config)#interface ethernet 1/1
Device(config-if-ethernet-1/1)#ingress acceptable-frame tagged
Config acceptable-frame type successfully!
```

# ingress filtering

To enable the forwarding of VLAN packets at the ingress of an interface, use the **ingress filtering** command in the Interface configuration mode. To disable ingress filtering use the **no** form of the command.

**ingress filtering**  
**no ingress filtering**

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**Syntax Description**

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**ingress filtering** enables ingress filtering of VLAN packets.

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**Command Default**

Ingress filtering is enabled by default

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**Command Modes**

Interface configuration mode

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**Examples**

This example shows how to disable ingress filtering for a port:

```
Device(config)# interface ethernet 1/4  
Device(config-if-ethernet-1/4)# no ingress filtering
```

# interface ethernet

To enter interface configuration mode for an Ethernet IEEE 802.3 interface, use the `interface ethernet` command in the global configuration mode.

**interface ethernet** *port-number*

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<b>Syntax Description</b>	<i>port-number</i> Specifies the port number within a particular slot.
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<b>Command Default</b>	None
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<b>Command Modes</b>	Global configuration mode
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**Examples** The following example shows how to enter interface configuration mode.

```
Device(config)# interface ethernet1/4
```

# priority

To assign a priority value to a port use the **priority** command in the interface configuration mode. To restore the port priority to the default value use the **no** form of the command.

**priority** *port-priority*

**no priority**

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<b>Syntax Description</b>	<i>port-priority</i> Assigns a priority value to the port. The value can range from 0-7.
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<b>Command Default</b>	None
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<b>Command Modes</b>	Interface configuration mode
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## Examples

The following example shows how to configure the priority value of a port.

```
Device(config)# interface ethernet1/4  
Device(config-if-ethernet-1/4)# priority 2
```

# show ingress interface

To display the status of filtering on the ingress port use the **show ingress interface** command in the privileged EXEC mode or global configuration mode.

**show ingress interface** { **ethernet** *port-number* | **gpon** *port-number* }

Syntax Description	
<b>ethernet</b>	Displays information about ethernet port.
<b>gpon</b>	Displays information about gpon port

**Command Modes**  
Privileged EXEC  
Global configuration (config)

## Examples

The following is sample output for the `show ingress interface` command.

```
Device(config)#show ingress interface ethernet 1/4
Port      Filtering  Acceptable-frame
e1/4     enable    all
Total entries: 1
```

# show interface brief ethernet

To display the configurations of a port in brief use the **show interface brief ethernet** command in the privileged EXEC mode.

**show interface brief ethernet** *port-number*

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<b>Syntax Description</b>	<i>port-number</i> Specifies the port for which the configurations will be displayed.
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<b>Command Default</b>	None
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<b>Command Modes</b>	Privileged EXEC
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## Examples

This example shows the sample output for the **show interface brief ethernet** command:

```
Device# show interface brief ethernet 1/4
Port   Desc   Link shutdn Speed      Pri PVID Mode TagVlan  UtVlan
e1/4   down  false  auto      2    1   acc    1
Total entries: 1 .
```



# show interface ethernet

To display the configurations of a port in detail use the **show interface ethernet** command in the privileged EXEC mode.

**show interface ethernet** *port-number*

<b>Syntax Description</b>	<i>port-number</i> Specifies the port for which the configurations will be displayed.
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<b>Command Default</b>	None
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<b>Command Modes</b>	Privileged EXEC
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## Examples

The following examples displays the output of the **show interface ethernet** command for the port ethernet 1 / 4 :

```
Device# show interface ethernet 1/4
Gigabit Ethernet e1/4 current state: enabled, port link is down
Hardware address is 00:0a:5a:9b:18:15
SetSpeed is auto, ActualSpeed is unknown, Duplex mode is unknown
Current port type: 1000BASE-T
Priority is 2
Flow control is disabled
Broadcast storm control target rate is 49984pps
PVID is 1
Port mode: access
Untagged VLAN ID: 1
Input  : 0 packets, 0 bytes
         0 broadcasts, 0 multicasts, 0 unicasts
Output : 0 packets, 0 bytes
         0 broadcasts, 0 multicasts, 0 unicasts
```

## switchport default vlan

To configure a VLAN as the default VLAN use the **switchport default vlan** command in the interface configuration mode. To restore the default vlan to port 1 use the **no** form of the command.

**switchport default vlan***vlan-id*

**no switchport default vlan**

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<b>Syntax Description</b>	<i>vlan-id</i> Specifies the VLAN id that will be used as the default VLAN.
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<b>Command Default</b>	None
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<b>Command Modes</b>	Interface configuration mode
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**Examples** This example shows how to configure a default vlan:

```
Device(config)# interface ethernet 1/1  
Device(config-if-ethernet-1/1)# switchport mode access  
Device(config-if-ethernet-1/1)# switchport default vlan 100
```

## switchport ethernet

To add an VLAN interface to a designated port or to all ports use the **switchport ethernet** command in the VLAN configuration mode.

```
switchport {ethernet port-number | all}
```

<b>Syntax Description</b>	<b>all</b>	Specifies that all the ports will be added to the VLAN interface.
	<i>port-number</i>	Specifies the port numbers that will be added to the VLAN interface.

<b>Command Default</b>	None
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<b>Command Modes</b>	VLAN configuration
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### Examples

This example shows how to add a VLAN to an ethernet port:

```
Device(config-if-vlan)# switchport ethernet 1/4
```

## switchport hybrid

To allow the packets from specified VLANs to pass through the hybrid port, use the **switchport hybrid** command in the interface configuration mode. To prevent the packets from specified VLANs passing through the hybrid port use the **no** form of the command.

```
switchport hybrid { tagged | untagged } vlan { vlan-list | all }
```

```
no switchport hybrid { tagged | untagged } vlan { vlan-list | all }
```

### Syntax Description

<b>tagged</b>	Specifies the VLAN packets as tagged.
<b>untagged</b>	Specifies the VLAN packets as untagged.
<b>vlan</b>	Specifies the VLANs whose packets will be allowed to pass through the hybrid port.
<i>vlan-list</i>	Specifies a list of VLANs whose packets will be allowed to pass through the hybrid port.
<b>all</b>	Specifies that packets from all VLANs will be allowed to pass through the hybrid port.

### Command Default

None

### Command Modes

Interface configuration mode

### Examples

This example shows how to allow the packets from the specified VLANs to pass through the hybrid port:

```
Device(config-if-ethernet-1/4)# switchport mode hybrid
Device(config-if-ethernet-1/4)# switchport hybrid tagged 2-4
```

## switchport mode

To configure the VLAN mode for the interface use the **switchport mode** command in the interface configuration mode. You can set the VLAN mode to access, hybrid or trunk. The mode is set to hybrid by default.

**switchport mode** { **access** | **hybrid** | **trunk** }

<b>Syntax Description</b>	<b>access</b> Specifies that the interface is in access mode.
	<b>hybrid</b> Specifies that the interface is in hybrid mode.
	<b>trunk</b> Specifies that the interface is in trunk mode.

<b>Command Default</b>	None
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<b>Command Modes</b>	Interface configuration
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<b>Examples</b>	This example shows how to configure the VLAN mode to trunk on an interface:
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```
Device(config)# interface ethernet1/4  
Device(config-if-ethernet-1/4)# switchport mode trunk
```

## switchport trunk

To allow the packets from specified VLANs to pass through the trunk port, use the **switchport trunk** command in the interface configuration mode. To prevent the packets from specified VLANs passing through the hybrid port use the **no** form of the command.

**switchport trunk allowed vlan** { *vlan-list* | **all** }

**no switchport trunk allowed vlan** { *vlan-list* | **all** }

### Syntax Description

**allowed** Configures the VLANs whose packets will be allowed to pass through the trunk port.

**vlan** Specifies the VLANs whose packets will be allowed to pass through the trunk port.

*vlan-list* Specifies VLAN IDs of the allowed VLANs when the interface is in trunking mode.

**all** Specifies all VLANs to be added to the current list.

### Command Default

None

### Command Modes

Interface configuration

### Examples

This example shows how to allow the packets from the specified VLANs to pass through a trunk port:

```
Device(config-if-ethernet-1/4)# switchport mode trunk
Device(config-if-ethernet-1/4)# switchport trunk tagged 2-4
```

# vlan

To add a VLAN and to enter the VLAN configuration mode, use the **vlan** command in global configuration mode. To delete the VLAN, use the **no** form of this command.

**vlan** *vlan list*

**no vlan** *vlan list*

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<b>Syntax Description</b>	<i>vlan list</i> List of VLAN to be added and configured. The range is 1 to 4094. You can enter a single VLAN ID, a series of VLAN IDs separated by commas, or a range of VLAN IDs separated by hyphens.
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<b>Command Default</b>	None
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<b>Command Modes</b>	Global Configuration
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## Examples

This example shows how to create a VLAN and enter the VLAN configuration mode:

```
Device(config)# vlan 1
```

