



# Ethernet Configuration Commands

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- [interface](#), on page 2
- [description](#), on page 3
- [duplex](#), on page 4
- [flowcontrol receive](#), on page 5
- [mdix](#), on page 6
- [negotiation](#), on page 7
- [shutdown](#), on page 8
- [speed](#), on page 9
- [switchport access vlan](#), on page 10
- [switchport community](#), on page 11
- [switchport dot1q-tunnel vlan](#), on page 12
- [switchport mode](#), on page 13
- [switchport protected-port](#), on page 14
- [switchport trunk allowed vlan](#), on page 15
- [switchport trunk allowed vlan vlan-range](#), on page 16
- [switchport trunk native vlan](#), on page 17
- [switch clear counters](#), on page 18
- [show switch interface configuration](#), on page 19
- [show switch interface counters](#), on page 20
- [show switch interface protected](#), on page 22
- [show switch interface rmon](#), on page 23
- [show switch interface status](#) , on page 28
- [show switch interface switchPort](#), on page 30
- [show switch interface inline-status](#), on page 34

# interface

To enter the interface configuration mode to configure a Gigabit Ethernet or port channel interface, use the **interface** command in switch configuration mode.

**interface** { **gigabitEthernet** { *interface-id* | *interface-range* } | **port-channel** { *portchannel-id* | **range** *portchannel-range* } }

<b>Syntax Description</b>	<b>gigabitEthernet</b>	Specifies Gigabit Ethernet as the interface type.
	<i>interface-id</i>	Specifies an interface ID.
	<i>interface-range</i>	Specifies a range for the Gigabit Ethernet interfaces. Enter the range in the following format: 1/1-3.
	<b>port-channel</b>	Specifies port channel as the interface type.
	<i>portchannel-id</i>	Specifies a port channel.
	<b>range</b> <i>portchannel-range</i>	Specifies a range for port channels. Enter the range in the following format: 1-3
<b>Command Default</b>	None	
<b>Command Modes</b>	Switch configuration (config-switch)	
<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	3.6.1	The port-channel and range parameters are added.
	3.5.1	This command was introduced.

## Example

Use the following example to enter the configuration mode for the interfaces 1/0 and 1/1.

```
nfvis(config-switch)# interface gigabitEthernet 1/0-1
nfvis(config-switch-if)#
```

## Example

Use the following example to enter the configuration mode for port channels 1 and 2.

```
nfvis(config-switch)# interface port-channel range 1-2
nfvis(config-switch-if)#
```

# description

To add a description to an interface, use the **description** command in interface switch configuration mode. To remove the description, use the **no** form of the command.

**description** *string*  
**no description**

<b>Syntax Description</b>	<i>string</i> Specifies a comment or a description of the port to assist the user. Length: 1–64 characters				
<b>Command Default</b>	The interface does not have a description.				
<b>Command Modes</b>	Interface (Gigabit Ethernet, Port Channel) switch configuration (config-switch-if)				
<b>Command History</b>	<table><thead><tr><th>Release</th><th>Modification</th></tr></thead><tbody><tr><td>3.5.1</td><td>This command was introduced.</td></tr></tbody></table>	Release	Modification	3.5.1	This command was introduced.
Release	Modification				
3.5.1	This command was introduced.				

## Example

The following example adds a description for the Gigabit Ethernet 1/1 interface:

```
nfvis(config-switch)# interface gigabitEthernet 1/1
nfvis(config-switch-if)# description SW#1
nfvis(config-switch-if)# commit
nfvis(config-switch-if)# end
```

# duplex

To configure the full duplex operation on a Gigabit Ethernet interface when not using auto-negotiation, use the **duplex** command in interface switch configuration mode. To restore the default configuration, use the **no** form of this command.

**duplex full**  
**no duplex**

<b>Syntax Description</b>	<b>full</b> Forces full-duplex operation.				
<b>Command Default</b>	The interface operates in the full duplex mode.				
<b>Command Modes</b>	Interface (Gigabit Ethernet) switch configuration (config-switch-if)				
<b>Command History</b>	<table border="1"> <thead> <tr> <th>Release</th> <th>Modification</th> </tr> </thead> <tbody> <tr> <td>3.5.1</td> <td>This command was introduced.</td> </tr> </tbody> </table>	Release	Modification	3.5.1	This command was introduced.
Release	Modification				
3.5.1	This command was introduced.				

## Example

The following example configures the Gigabit Ethernet interface 1/1 to operate in a full duplex mode.

```
nfvis(config-switch)# interface gigabitEthernet 1/1
nfvis(config-switch-if)# duplex full
nfvis(config-switch-if)# commit
nfvis(config-switch-if)# end
```

# flowcontrol receive

To configure flow control on an interface, use the **flowcontrol receive** command in interface switch configuration mode. To disable flow control, use the **no** form of this command.

```
flowcontrol receive {on | off}  
no flowcontrol receive
```

---

**Syntax Description**

---

**on** Enables flow control.

---

**off** Disables flow control.

---

---

**Command Default**

Flow control is disabled.

---

**Command Modes**

Interface (Gigabit Ethernet, Port Channel) switch configuration (config-switch-if)

---

**Command History**

---

**Release Modification**

---

3.5.1 This command was introduced.

---

**Example**

The following example enables flow control on port channel 1:

```
nfvis(config-switch)# interface port-channel 1  
nfvis(config-switch-if)# flowcontrol receive on  
nfvis(config-switch-if)# commit  
nfvis(config-switch-if)# end
```

# mdix

To enable cable crossover on a Gigabit Ethernet interface, use the **mdix** command in the interface switch configuration mode. To disable cable crossover, use the **no** form of this command.

```
mdix {auto | on}
no mdix
```

---

## Syntax Description

**on** Enables manual MDIX.

**auto** Enables automatic MDI/MDIX.

---



---

## Command Default

The default is Auto.

---

## Command Modes

Interface (Gigabit Ethernet) switch configuration (config-switch-if)

---

## Command History

### Release Modification

3.5.1 This command was introduced.

---

## Example

The following example enables automatic crossover on Gigabit Ethernet interface 1/1:

```
nfvis(config-switch)# interface gigabitEthernet 1/1
nfvis(config-switch-if)# mdix auto
nfvis(config-switch-if)# commit
nfvis(config-switch-if)# end
```

# negotiation

To enable auto-negotiation operation for the speed and duplex parameters of an interface, use the **negotiation** command in interface switch configuration mode. To disable auto-negotiation, use the **no** form of this command.

**negotiation auto**  
**no negotiation**

<b>Syntax Description</b>	<b>auto</b> Specifies the auto negotiation of the speed and duplex mode.				
<b>Command Default</b>	Enabled by default.				
<b>Command Modes</b>	Interface (Gigabit Ethernet, Port Channel) switch configuration (config-switch-if)				
<b>Command History</b>	<table><thead><tr><th>Release</th><th>Modification</th></tr></thead><tbody><tr><td>3.5.1</td><td>This command was introduced.</td></tr></tbody></table>	Release	Modification	3.5.1	This command was introduced.
Release	Modification				
3.5.1	This command was introduced.				

## Example

The following example enables auto-negotiation on the Gigabit Ethernet interface 1/1:

```
nfvis(config-switch)# interface gigabitEthernet 1/1
nfvis(config-switch-if)# negotiation auto
nfvis(config-switch-if)# commit
nfvis(config-switch-if)# end
```

# shutdown

To disable an interface, use the **shutdown** command in the interface switch configuration mode. To restart a disabled interface, use the **no** form of this command.

**shutdown**  
**no shutdown**

---

## Syntax Description

This command has no arguments.

---



---

## Command Default

The interface is enabled.

---

## Command Modes

Interface (Gigabit Ethernet, Port Channel, VLAN) switch configuration (config-switch-if)

---

## Command History

### Release Modification

3.5.1 This command was introduced.

---



---

## Usage Guidelines

The **shutdown** command sets the value of **ifAdminStatus** (see RFC 2863) to **DOWN**. When **ifAdminStatus** is changed to **DOWN**, **ifOperStatus** is also be changed to **DOWN**.

The **DOWN** state of **ifOperStatus** implies that the interface does not transmit to or receive messages from higher levels. For example, if you shut down a VLAN on which an IP interface is configured, bridging into the VLAN continues but the switch cannot transmit and receive IP traffic on the VLAN.

### Example 1

The following example disables the Gigabit Ethernet interface 1/1:

```
nfvis(config-switch)# interface gigabitEthernet 1/1
nfvis(config-switch-if)# shutdown
nfvis(config-switch-if)# commit
nfvis(config-switch-if)# end
```

### Example 2

The following example restarts the disabled interface:

```
nfvis(config-switch)# interface gigabitEthernet 1/1
nfvis(config-switch-if)# no shutdown
nfvis(config-switch-if)# commit
nfvis(config-switch-if)# end
```



# speed

To configure the speed of a given Ethernet interface when not using auto-negotiation, use the **speed** command in interface switch configuration mode. To restore the default configuration, use the **no** form of this command.

```
speed {10 | 100 | 1000}
no speed
```

<b>Syntax Description</b>	<i>10</i>	Forces 10 Mbps operation.
	<i>100</i>	Forces 100 Mbps operation.
	<i>1000</i>	Forces 1000 Mbps operation.
<b>Command Default</b>	The port operates at its maximum speed capability.	
<b>Command Modes</b>	Interface (Gigabit Ethernet, Port Channel) switch configuration (config-switch-if)	
<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	3.5.1	This command was introduced.
<b>Usage Guidelines</b>	The <b>no speed</b> command in a port-channel mode returns each port in the port channel to its maximum capability.	

## Example

The following example configures the speed of Gigabit Ethernet interface 1/1 to 100 Mbps operation:

```
nfvis(config-switch)# interface gigabitEthernet 1/1
nfvis(config-switch-if)# speed 100
nfvis(config-switch-if)# commit
nfvis(config-switch-if)# end
```

## switchport access vlan

A port in access mode can be an untagged member of a single VLAN. To reassign an interface to a different VLAN than it currently belongs to, use the **switchport access vlan** command in interface switch configuration mode. Use the **no** form of the command to restore the default configuration.

**switchport access vlan** *vlan-id*  
**no switchport access vlan**

<b>Syntax Description</b>	<b>vlan</b> <i>vlan-id</i> Specifies the VLAN ID. Valid range is: <ul style="list-style-type: none"> <li>• 1 to 2349</li> <li>• 2450 to 4093</li> </ul>				
<b>Command Default</b>	None				
<b>Command Modes</b>	Interface (Gigabit Ethernet, Port Channel) switch configuration (config-switch-if)				
<b>Command History</b>	<table border="1"> <thead> <tr> <th>Release</th> <th>Modification</th> </tr> </thead> <tbody> <tr> <td>3.5.1</td> <td>This command was introduced.</td> </tr> </tbody> </table>	Release	Modification	3.5.1	This command was introduced.
Release	Modification				
3.5.1	This command was introduced.				
<b>Usage Guidelines</b>	When the port is assigned to a different VLAN, it is automatically removed from its previous VLAN and added to the new VLAN. A non-existing VLAN can be assigned as an access VLAN.				

### Example

The following example shows how to assign a VLAN to an interface:

```
nfvis(config-switch)# interface gigabitEthernet 1/0
nfvis(config-switch-if)# switchport mode access
nfvis(config-switch-if)# switchport access vlan 2
nfvis(config-switch-if)# commit
nfvis(config-switch-if)# end
```

# switchport community

To associate a protected port with a community, use the **switchport community** command in interface switch configuration mode. Use the **no** form of this command to return to the default.

```
switchport community number  
no switchport community
```

---

**Syntax Description**

**community** *number* Specifies the community number. Valid range is from 1 to 29.

---

**Command Default**

None

**Command Modes**

Interface (Gigabit Ethernet, Port Channel) switch configuration (config-switch-if)

**Command History**

---

**Release Modification**

3.5.1 This command was introduced.

---

**Usage Guidelines**

The command is relevant only when the port is defined as a protected port. Use the **switchport protected-port** command in interface switch configuration mode to define a port as a protected port.

**Example**

The following example shows how to associate a protected port with a community:

```
nfvis(config-switch)# interface gigabitEthernet 1/0  
nfvis(config-switch-if)# switchport community 1  
nfvis(config-switch-if)# commit  
nfvis(config-switch-if)# end
```

## switchport dot1q-tunnel vlan

To set a port's VLAN when the port is in dot1q-tunnel mode (set by the **switchport mode** command), use the **switchport dot1q-tunnel vlan** command in interface configuration mode. Use the **no** form of this command to restore the default configuration.

**switchport dot1q-tunnel vlan** *vlan-id*

---

### Syntax Description

*vlan-id* Specifies a VLAN ID.

---

### Command Default

No VLAN is configured as dot1q-tunnel.

### Command Modes

Interface (Gigabit Ethernet, Port Channel) switch configuration (config-switch-if)

---

### Command History

#### Release Modification

3.6.1 This command was introduced.

---

### Usage Guidelines

When a port is in dot1q-tunnel mode, it is in QinQ mode. This mode allows you to use your own VLAN arrangements (PVID) across a provider network. The switch is in QinQ mode when it has one or more dot1q-tunnel ports.

### Example

The following example defines the Gigabit Ethernet interface 1/0 as a member of dot1q-tunnel VLAN 5.

```

nfvis(config)# switch
nfvis(config-switch)# interface gigabitEthernet 1/0
nfvis(config-switch-if)# switchport dot1q-tunnel vlan 5
nfvis(config-switch-if)# commit
nfvis(config-switch-if)# end

```

# switchport mode

To configure the VLAN membership mode, use the **switchport mode** command in interface switch configuration mode. Use the **no** form of this command to restore the default configuration.

```
switchport mode { access | dot1q-tunnel | private-vlan | trunk }
no switchport mode
```

## Syntax Description

<b>access</b>	Specifies an untagged layer 2 VLAN port.
<b>dot1q-tunnel</b>	Specifies the Layer 2 port as a tunnel port.
<b>private-vlan</b>	Specifies a private VLAN port.
<b>trunk</b>	Specifies a trunking layer 2 VLAN port.

## Command Default

Access mode is configured.

## Command Modes

Interface (Gigabit Ethernet, Port Channel) switch configuration (config-switch-if)

## Command History

### Release Modification

3.5.1 This command was introduced.

## Usage Guidelines

When the port's mode is changed, it receives the configuration corresponding to the mode. If the port mode is changed to access, and the access VLAN does not exist, then the port does not belong to any VLAN.

## Example

The following example shows how to configure the Gigabit Ethernet interface 1/0 as an access port (untagged layer 2 VLAN port).

```
nfvis(config-switch)# interface gigabitEthernet 1/0
nfvis(config-switch-if)# switchport mode access
nfvis(config-switch-if)# commit
nfvis(config-switch-if)# end
```

# switchport protected-port

To isolate unicast, multicast, and broadcast traffic at Layer 2 from other protected ports on the same switch, use the **switchport protected-port** command in interface switch configuration mode. Use the **no** form of this command to disable protection on the port.

**switchport protected-port**  
**no switchport protected-port**

---

## Syntax Description

This command has no arguments.

---



---

## Command Default

Protection is disabled by default.

---

## Command Modes

Interface (Gigabit Ethernet, Port Channel) switch configuration (config-switch-if)

---

## Command History

---

### Release Modification

3.5.1 This command was introduced.

---



---

## Usage Guidelines

Use this command to isolate Unicast, Multicast, and Broadcast traffic at Layer 2 from other protected ports (not associated with the same community as the ingress interface) on the same switch. Packets are subject to all filtering rules and Filtering Database (FDB) decisions.

## Example

```

nfvis(config-switch)# interface gigabitEthernet 1/1
nfvis(config-switch-if)# switchport protected-port
nfvis(config-switch-if)# commit
nfvis(config-switch-if)# end

```

# switchport trunk allowed vlan

To tag a single VLAN or multiple VLANs to a trunk port, use the **switchport trunk allowed vlan** command in interface switch configuration mode. Use the **no** form of the command to return to the default.

**switchport trunk allowed vlan** *vlan-id*  
**no switchport trunk allowed vlan**

---

**Syntax Description**

---

**allowed vlan** Tags a VLAN to the trunk port.

---

*vlan-id* Specifies the VLAN ID. Valid range is from:

- 1 to 2349
- 2450 to 4093

---

---

**Command Default**

By default, a trunk port belongs to all created VLANs.

---

**Command Modes**

Interface (Gigabit Ethernet, Port Channel) switch configuration (config-switch-if)

---

**Command History**

---

**Release Modification**

---

3.5.1 This command was introduced.

---

---

**Usage Guidelines**

Use the **switchport trunk allowed vlan** command to specify the VLANs to which a port belongs when its mode is configured as trunk. When a non-existing VLAN is created, the port is automatically added to it. You can also configure forbidden VLANs.

**Example**

The following example shows how to tag a VLAN to a trunk port:

```
nfvis(config-switch)# interface gigabitEthernet 1/0
nfvis(config-switch-if)# switchport mode trunk
nfvis(config-switch-if)# switchport trunk allowed vlan 1
nfvis(config-switch-if)# commit
nfvis(config-switch-if)# end
```

# switchport trunk allowed vlan vlan-range

This command performs the same action as in **switch trunk allowed vlan** command. It is also used to tag a single VLAN or multiple VLANs to a trunk port, use the **switchport trunk allowed vlan vlan-range** command in interface switch configuration mode. Use the no form of the command to return to the default.

**switchport trunk allowed vlan** *vlan-range* *vlan-id*  
**no switchport trunk allowed vlan**

<b>Syntax Description</b>	<b>allowed vlan vlan-range</b> Tags a VLAN to the trunk port.				
	<i>vlan-id</i> Specifies the VLAN ID. Valid range is from: <ul style="list-style-type: none"> <li>• 1 to 2349</li> <li>• 2450 to 4093</li> </ul>				
<b>Command Default</b>	By default, a trunk port belongs to all created VLANs.				
<b>Command Modes</b>	Interface (Gigabit Ethernet, Port Channel) switch configuration (config-switch-if)				
<b>Command History</b>	<table border="1"> <thead> <tr> <th>Release</th> <th>Modification</th> </tr> </thead> <tbody> <tr> <td>3.12.1</td> <td>This command was introduced.</td> </tr> </tbody> </table>	Release	Modification	3.12.1	This command was introduced.
Release	Modification				
3.12.1	This command was introduced.				

**Usage Guidelines** Use the **switchport trunk allowed vlan vlan-range** command to specify the VLANs to which a port belongs when its mode is configured as trunk. This command overwrites the existing vlan configuration. For example, if the current configuration is **switchport trunk allowed vlan vlan-range 1-10**, then the command **switchport trunk allowed vlan vlan-range 5-20** overwrites the **switchport trunk allowed vlan vlan-range 1-10**. The configuration contains vlans 5-20 only.

The **switchport trunk allowed vlan** command uses list type and **switchport trunk allowed vlan vlan-range** command uses string type. When using RESTAPI or NETCONF API, **switchport trunk allowed vlan** you need to specify one entry per VLAN in XML notation and **switchport trunk allowed vlan vlan-range** you can specify a VLAN range in XML notation. This improves the performance when using RESTAPI or NETCONF API with vlan-range notation.

The default is to use the **switchport trunk allowed vlan** command. If you want to move to the **switchport trunk allowed vlan vlan-range** command, you should first use **no switchport trunk allowed vlan** before switching over to **switchport trunk allowed vlan vlan-range** command.

## Example

The following example shows how to tag a VLAN to a trunk port:

```
nfviz(config-switch)# interface gigabitEthernet 1/0
nfviz(config-switch-if)# switchport mode trunk
nfviz(config-switch-if)# switchport trunk allowed vlan vlan-range 1-2349,2450-4093
nfviz(config-switch-if)# commit
nfviz(config-switch-if)# end
```



# switchport trunk native vlan

To define the native VLAN for a trunk interface, use the **switchport trunk native vlan** command in interface switch configuration mode. Use the **no** form of the command to restore the default native VLAN.

```
switchport trunk native vlan vlan-id
no switchport trunk native vlan
```

## Syntax Description

<b>native vlan</b>	Defines a native VLAN for a trunk interface.
<i>vlan-id</i>	Specifies the VLAN ID. Valid range is from: <ul style="list-style-type: none"> <li>• 1 to 2349</li> <li>• 2450 to 4093</li> </ul>

## Command Default

The default native VLAN is configured.

## Command Modes

Interface (Gigabit Ethernet, Port Channel) switch configuration (config-switch-if)

## Command History

Release	Modification
3.5.1	This command was introduced.

## Usage Guidelines

If an untagged packet arrives on a trunk port, it is directed to the native VLAN of the port. The value of the PVID interface is set to this VLAN ID. When the interface belongs to the native VLAN, the interface is set as VLAN untagged egress interface.

## Example

The following example shows how to configure a native VLAN:

```
nfvis(config-switch)# interface gigabitEthernet 1/0
nfvis(config-switch-if)# switchport mode trunk
nfvis(config-switch-if)# switchport trunk native vlan 2
nfvis(config-switch-if)# commit
nfvis(config-switch-if)# end
```

# switch clear counters

To clear counters on all interfaces or on a specific interface, use the **switch clear counters** command in privileged EXEC mode.

```
switch clear counters [gigabitEthernet interface-id]
```

---

<b>Syntax Description</b>	<i>interface-id</i> (Optional) Specifies an interface ID.
---------------------------	---

---

---

<b>Command Default</b>	All counters are cleared.
------------------------	---------------------------

---

---

<b>Command Modes</b>	Privileged EXEC (#)
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---

---

<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	3.5.1	This command was introduced.

---

## Example

The following example clears the statistics counters for the Gigabit Ethernet interface 1/1:

```
nfvis# switch clear counters gigabitEthernet 1/1
```

# show switch interface configuration

To display the configuration of all interfaces or a specific interface, use the **show switch interface configuration** command in privileged EXEC mode.

```
show switch interface configuration [ {gigabitEthernet | port-channel} interface-id]
```

## Syntax Description

**gigabitEthernet** Specifies gigabitEthernet as the interface type.

**port-channel** Specifies port channel as the interface type.

*interface-id* Specifies the interface ID.

## Command Default

Displays the configuration of all interfaces.

## Command Modes

Privileged EXEC (#)

## Command History

### Release Modification

3.5.1 This command was introduced.

## Usage Guidelines

None

## Example

The following is a sample output of the **show switch interface configuration** command that displays the configuration of all interfaces:

```
nfvvis# show switch interface configuration
  PORT  TYPE           DUPLEX  SPEED  NEG      CTRL  STATE  MODE
-----
1/0    1G-Copper      full    1000   Enabled  off   Up     auto
1/1    1G-Copper      full    1000   Enabled  off   Up     auto
1/2    1G-Copper      full    1000   Enabled  off   Up     auto
1/3    1G-Copper      full    1000   Enabled  off   Up     auto
1/4    1G-Copper      full    1000   Enabled  off   Up     auto
1/5    1G-Copper      full    1000   Enabled  off   Up     auto
1/6    1G-Copper      full    1000   Enabled  off   Up     auto
1/7    1G-Copper      full    1000   Enabled  off   Up     auto

      FLOW  ADMIN
      CTRL STATE
-----
1     1G-Copper  1000   Enabled  off  Up
2     1G-Copper   0     Enabled  off  Up
3     1G-Copper   0     Enabled  off  Up
4     1G-Copper   0     Enabled  off  Up
```

# show switch interface counters

To display traffic for all physical interfaces or a specific interface, use the **show switch interface counters** command in privileged EXEC mode.

**show switch interface counters** [{**gigabitEthernet** | **port-channel**} *interface-id*]

Syntax Description	
<b>gigabitEthernet</b>	Specifies Gigabit Ethernet as the interface type.
<b>port-channel</b>	Specifies port channel as the interface type.
<i>interface-id</i>	Specifies the interface ID.

**Command Default** Displays traffic seen by all physical interfaces.

**Command Modes** Privileged EXEC (#)

**Command History** **Release** **Modification**

3.5.1 This command was introduced.

**Usage Guidelines** For verification and the command output display, use the **show switch interface counters** command. For debugging, use the **switch show interface counters command**.

## Example

The following is a sample output of the **show switch interface counters** command that displays traffic for all physical interfaces:

```

nfvis# show switch interface counters
      IN      IN      IN      OUT      OUT      OUT
      UCAST  MCAST  BCAST  IN       UCAST  MCAST  BCAST  OUT
PORT  PKTS    PKTS    PKTS   OCTETS   PKTS   PKTS   PKTS   OCTETS
-----
1/0   0       10294   0       4549003  8991   781378  385601  99211858
1/1   0       27730   107369  10101659 8991   782425  278232  94933385
1/2   0       18486   0       1275504  8979   791617  385589  103748317
1/3   0       0       0       0         0       0       0       0
1/4   0       0       0       0         0       0       0       0
1/5   0       18503   22324   17477800 8970   782386  363263  89621499
1/6   0       0       0       0         0       0       0       0
1/7  12888   744128  255908  74922054 0       47279   129693  29593513

      IN      IN      IN      OUT      OUT      OUT
      UCAST  MCAST  BCAST  IN       UCAST  MCAST  BCAST  OUT
PORT  PKTS    PKTS    PKTS   OCTETS   PKTS   PKTS   PKTS   OCTETS
-----
1     0       0       0       0         0       0       0       0
2     0       0       0       0         0       0       0       0
3     0       0       0       0         0       0       0       0
4     0       0       0       0         0       0       0       0

```

The following table describes the significant fields shown in the command output.

**Table 1: show switch interface counters Field Description**

<b>Field</b>	<b>Description</b>
PORT	Port number
IN and OUT UCAST PKTS	Number of received and transmitted unicast packets.
IN and OUT MCAST PKTS	Number of received and transmitted multicast packets.
IN and OUT BCAST PKTS	Number of received and transmitted broadcast packets.
IN and OUT OCTETS	Number of received and transmitted octets.

# show switch interface protected

To display the configuration of all protected interfaces or a specific interface, use the **show switch interface protected** command in privileged EXEC mode.

```
show switch interface protected [gigabitEthernet interface-id]
```

<b>Syntax Description</b>	<b>gigabitEthernet</b> <i>interface-id</i> Specifies the Gigabit Ethernet interface ID.				
<b>Command Default</b>	Displays the configuration of all protected interfaces.				
<b>Command Modes</b>	Privileged EXEC (#)				
<b>Command History</b>	<table border="1"> <thead> <tr> <th>Release</th> <th>Modification</th> </tr> </thead> <tbody> <tr> <td>3.5.1</td> <td>This command was introduced.</td> </tr> </tbody> </table>	Release	Modification	3.5.1	This command was introduced.
Release	Modification				
3.5.1	This command was introduced.				
<b>Usage Guidelines</b>	None				

## Example

The following is a sample output of the **show switch interface protected** command that displays the configuration of all protected interfaces:

```
nfvis# show switch interface protected
PORT  STATE      COMMUNITY
-----
1/0   Unprotected Isolated
1/1   Unprotected Isolated
1/2   Unprotected Isolated
1/3   Unprotected Isolated
1/4   Unprotected Isolated
1/5   Unprotected Isolated
1/6   Unprotected Isolated
1/7   Unprotected Isolated
```

## show switch interface rmon

To display the RMON statistics for all interfaces or a specific interface, use the **show switch interface rmon** command in privileged EXEC mode.

```
show switch interface rmon [{gigabitEthernet | port-channel} interface-id]
```

Syntax Description	
<b>gigabitEthernet</b>	Specifies Gigabit Ethernet as the interface type.
<b>port-channel</b>	Specifies port channel as the interface type.
<i>interface-id</i>	Specifies the interface ID.

**Command Default** Displays the RMON statistics for all interfaces.

**Command Modes** Privileged EXEC (#)

Command History	Release	Modification
	3.5.1	This command was introduced.

**Usage Guidelines** For verification and the command output display, use the **show switch interface rmon** command. For debugging, use the **switch show interface rmon** command.

### Example

The following is a sample output of the **show switch interface rmon** command that displays the RMON statistics for all interfaces:

```
nfvis# show switch interface rmon

interface rmon gigabitEthernet 1/0
DropEventCnt          0
RxPktByteCnt          4600717
RxPktCnt              10411
RxMPktCnt             10411
RxBPktCnt             0
CRCErrCnt             0
UnderSizePktCnt       0
OverSizePktCnt        0
FragmentCnt           0
JabberCnt             0
CollisionCnt          0
FrameOf64BytesCnt     517534
FrameOf65To127BytesCnt 553976
FrameOf128To255BytesCnt 84394
FrameOf256To511BytesCnt 21145
FrameOf512To1023BytesCnt 22588
FrameOf1024To1518BytesCnt 0

interface rmon gigabitEthernet 1/1
DropEventCnt          0
```

## show switch interface rmon

```

RxPktByteCnt      10215853
RxPktCnt          136624
RxMPktCnt        28048
RxBPktCnt        108576
CRCErrCnt        0
UnderSizePktCnt  0
OverSizePktCnt   0
FragmentCnt      0
JabberCnt        0
CollisionCnt     0
FrameOf64BytesCnt 517539
FrameOf65To127BytesCnt 572669
FrameOf128To255BytesCnt 84394
FrameOf256To511BytesCnt 21142
FrameOf512To1023BytesCnt 22588
FrameOf1024To1518BytesCnt 0

```

```

interface rmon gigabitEthernet 1/2
DropEventCnt      0
RxPktByteCnt      1290132
RxPktCnt          18698
RxMPktCnt        18698
RxBPktCnt        0
CRCErrCnt        0
UnderSizePktCnt  0
OverSizePktCnt   0
FragmentCnt      0
JabberCnt        0
CollisionCnt     0
FrameOf64BytesCnt 517524
FrameOf65To127BytesCnt 572648
FrameOf128To255BytesCnt 84385
FrameOf256To511BytesCnt 21128
FrameOf512To1023BytesCnt 22588
FrameOf1024To1518BytesCnt 0

```

```

interface rmon gigabitEthernet 1/3
DropEventCnt      0
RxPktByteCnt      0
RxPktCnt          0
RxMPktCnt        0
RxBPktCnt        0
CRCErrCnt        0
UnderSizePktCnt  0
OverSizePktCnt   0
FragmentCnt      0
JabberCnt        0
CollisionCnt     0
FrameOf64BytesCnt 0
FrameOf65To127BytesCnt 0
FrameOf128To255BytesCnt 0
FrameOf256To511BytesCnt 0
FrameOf512To1023BytesCnt 0
FrameOf1024To1518BytesCnt 0

```

```

interface rmon gigabitEthernet 1/4
DropEventCnt      0
RxPktByteCnt      0
RxPktCnt          0
RxMPktCnt        0
RxBPktCnt        0

```



```
CRCErrCnt          0
UnderSizePktCnt    0
OverSizePktCnt     0
FragmentCnt        0
JabberCnt          0
CollisionCnt       0
FrameOf64BytesCnt  0
FrameOf65To127BytesCnt 0
FrameOf128To255BytesCnt 0
FrameOf256To511BytesCnt 0
FrameOf512To1023BytesCnt 0
FrameOf1024To1518BytesCnt 0

interface rmon gigabitEthernet 1/5
DropEventCnt      0
RxPktByteCnt      17682398
RxPktCnt          41305
RxMPktCnt         18720
RxBPktCnt         22585
CRCErrCnt         0
UnderSizePktCnt   0
OverSizePktCnt    0
FragmentCnt       0
JabberCnt         0
CollisionCnt      0
FrameOf64BytesCnt 517608
FrameOf65To127BytesCnt 554083
FrameOf128To255BytesCnt 84408
FrameOf256To511BytesCnt 30492
FrameOf512To1023BytesCnt 22593
FrameOf1024To1518BytesCnt 0

interface rmon gigabitEthernet 1/6
DropEventCnt      0
RxPktByteCnt      0
RxPktCnt          0
RxMPktCnt         0
RxBPktCnt         0
CRCErrCnt         0
UnderSizePktCnt   0
OverSizePktCnt    0
FragmentCnt       0
JabberCnt         0
CollisionCnt      0
FrameOf64BytesCnt 0
FrameOf65To127BytesCnt 0
FrameOf128To255BytesCnt 0
FrameOf256To511BytesCnt 0
FrameOf512To1023BytesCnt 0
FrameOf1024To1518BytesCnt 0

interface rmon gigabitEthernet 1/7
DropEventCnt      0
RxPktByteCnt      75773941
RxPktCnt          1024494
RxMPktCnt         752808
RxBPktCnt         258687
CRCErrCnt         0
UnderSizePktCnt   0
OverSizePktCnt    0
FragmentCnt       0
```

## show switch interface rmon

```

JabberCnt          0
CollisionCnt       0
FrameOf64BytesCnt 519383
FrameOf65To127BytesCnt 555242
FrameOf128To255BytesCnt 84785
FrameOf256To511BytesCnt 21148
FrameOf512To1023BytesCnt 22609
FrameOf1024To1518BytesCnt 353

```

```

interface rmon port-channel 1
DropEventCnt      0
RxPktByteCnt     0
RxPktCnt         0
RxMPktCnt        0
RxBPktCnt        0
CRCErrCnt        0
UnderSizePktCnt  0
OverSizePktCnt   0
FragmentCnt       0
JabberCnt         0
CollisionCnt      0
FrameOf64BytesCnt 0
FrameOf65To127BytesCnt 0
FrameOf128To255BytesCnt 0
FrameOf256To511BytesCnt 0
FrameOf512To1023BytesCnt 0
FrameOf1024To1518BytesCnt 0

```

```

interface rmon port-channel 2
DropEventCnt      0
RxPktByteCnt     0
RxPktCnt         0
RxMPktCnt        0
RxBPktCnt        0
CRCErrCnt        0
UnderSizePktCnt  0
OverSizePktCnt   0
FragmentCnt       0
JabberCnt         0
CollisionCnt      0
FrameOf64BytesCnt 0
FrameOf65To127BytesCnt 0
FrameOf128To255BytesCnt 0
FrameOf256To511BytesCnt 0
FrameOf512To1023BytesCnt 0
FrameOf1024To1518BytesCnt 0

```

```

interface rmon port-channel 3
DropEventCnt      0
RxPktByteCnt     0
RxPktCnt         0
RxMPktCnt        0
RxBPktCnt        0
CRCErrCnt        0
UnderSizePktCnt  0
OverSizePktCnt   0
FragmentCnt       0
JabberCnt         0
CollisionCnt      0
FrameOf64BytesCnt 0
FrameOf65To127BytesCnt 0

```

```
FrameOf128To255BytesCnt 0
FrameOf256To511BytesCnt 0
FrameOf512To1023BytesCnt 0
FrameOf1024To1518BytesCnt 0
```

```
interface rmon port-channel 4
DropEventCnt 0
RxPktByteCnt 0
RxPktCnt 0
RxMPktCnt 0
RxBPktCnt 0
CRCErrCnt 0
UnderSizePktCnt 0
OverSizePktCnt 0
FragmentCnt 0
JabberCnt 0
CollisionCnt 0
FrameOf64BytesCnt 0
FrameOf65To127BytesCnt 0
FrameOf128To255BytesCnt 0
FrameOf256To511BytesCnt 0
FrameOf512To1023BytesCnt 0
FrameOf1024To1518BytesCnt 0
```

# show switch interface status

To display the status of all interfaces or a specific interface, use the **show switch interface status** command in privileged EXEC mode.

```
show switch interface status [{gigabitEthernet | port-channel} interface-id]
```

Syntax Description	
<b>gigabitEthernet</b>	Specifies Gigabit Ethernet as the interface type.
<b>port-channel</b>	Specifies port channel as the interface type.
<i>interface-id</i>	Specifies the interface ID.

**Command Default** Displays the status of all interfaces.

**Command Modes** Privileged EXEC (#)

**Command History**

Release	Modification
3.5.1	This command was introduced.

**Usage Guidelines** For verification and the command output display, use the **show switch interface status** command. For debugging, use the **switch show interface status** command.

## Example

The following is a sample output of the **show switch interface status** command that displays the status of all interfaces:

```
nfvis# show switch interface status
          MEDIA
PORT  TYPE      LINK  SPEED  TYPE  MACADDR      MTU
-----
1/0   1G-Copper  up    1000   RJ45  00:a6:ca:d6:31:35  9216
1/1   1G-Copper  up    1000   RJ45  00:a6:ca:d6:31:36  9216
1/2   1G-Copper  up    1000   RJ45  00:a6:ca:d6:31:37  9216
1/3   1G-Copper  down  1000   RJ45  00:a6:ca:d6:31:38  9216
1/4   1G-Copper  down  1000   RJ45  00:a6:ca:d6:31:39  9216
1/5   1G-Copper  up    1000   RJ45  00:a6:ca:d6:31:3a  9216
1/6   1G-Copper  down  1000   RJ45  00:a6:ca:d6:31:3b  9216
1/7   1G-Copper  up    1000   RJ45  00:a6:ca:d6:31:3c  9216

PORT  TYPE      SPEED  LINK
-----
1     Port-Channel  0      Not Presence
2     Port-Channel  0      Not Presence
3     Port-Channel  0      Not Presence
4     Port-Channel  0      Not Presence
```

The following table describes the significant fields shown in the command display.

*Table 2: show switch interface status Field Description*

<b>Field</b>	<b>Description</b>
PORT	Port number
TYPE	Interface type
LINK	Link status (up or down)
SPEED	Interface speed in Mbps
MEDIA TYPE	Number of received and transmitted octets.
MACADDR	MAC address
MTU	Maximum transmission unit

# show switch interface switchPort

To display the switchport information of all interfaces or a specific interface, use the **show switch interface switchPort** command in privileged EXEC mode.

```
show switch interface switchPort [{gigabitEthernet | port-channel} interface-id]
```

<b>Syntax Description</b>	<p><b>gigabitEthernet</b> Specifies Gigabit Ethernet as the interface type.</p> <p><b>port-channel</b> Specifies port channel as the interface type.</p> <p><i>interface-id</i> Specifies the interface ID.</p>				
<b>Command Default</b>	Displays switchport information of all interfaces.				
<b>Command Modes</b>	Privileged EXEC (#)				
<b>Command History</b>	<table border="1"> <thead> <tr> <th>Release</th> <th>Modification</th> </tr> </thead> <tbody> <tr> <td>3.5.1</td> <td>This command was introduced.</td> </tr> </tbody> </table>	Release	Modification	3.5.1	This command was introduced.
Release	Modification				
3.5.1	This command was introduced.				
<b>Usage Guidelines</b>	For verification and the command output display, use the <b>show switch interface switchPort</b> command. For debugging, use the <b>switch show interface switchPort</b> command.				

## Example

The following is a sample output of the **show switch interface switchPort** command that displays switchport information of all interfaces:

```
nfvis# show switch interface switchPort

interface switchPort gigabitEthernet 1/0
  switchport-mode enable
  administrative-mode access
  operational-mode Up
  access-mode-vlan 1
  trunk-native-mode-vlan 1
  trunking-vlans 1-2349,2450-4093
  Privatevlan-promiscuous-association-primary-VLAN none
  Privatevlan-promiscuous-association-secondary-VLAN none
  Privatevlan-host-association-primary-VLAN none
  Privatevlan-host-association-secondary-VLAN none

interface switchPort gigabitEthernet 1/1
  switchport-mode enable
  administrative-mode access
  operational-mode Up
  access-mode-vlan 1
  trunk-native-mode-vlan 1
  trunking-vlans 1-2349,2450-4093
  Privatevlan-promiscuous-association-primary-VLAN none
  Privatevlan-promiscuous-association-secondary-VLAN none
```

```

Privatevlan-host-association-primary-VLAN      none
Privatevlan-host-association-secondary-VLAN    none

interface switchPort gigabitEthernet 1/2
switchport-mode                               enable
administrative-mode                           access
operational-mode                              Up
access-mode-vlan                              1
trunk-native-mode-vlan                        1
trunking-vlans                                1-2349,2450-4093
Privatevlan-promiscuous-association-primary-VLAN none
Privatevlan-promiscuous-association-secondary-VLAN none
Privatevlan-host-association-primary-VLAN     none
Privatevlan-host-association-secondary-VLAN   none

interface switchPort gigabitEthernet 1/3
switchport-mode                               enable
administrative-mode                           access
operational-mode                              Down
access-mode-vlan                              1
trunk-native-mode-vlan                        1
trunking-vlans                                1-2349,2450-4093
Privatevlan-promiscuous-association-primary-VLAN none
Privatevlan-promiscuous-association-secondary-VLAN none
Privatevlan-host-association-primary-VLAN     none
Privatevlan-host-association-secondary-VLAN   none

interface switchPort gigabitEthernet 1/4
switchport-mode                               enable
administrative-mode                           access
operational-mode                              Down
access-mode-vlan                              1
trunk-native-mode-vlan                        1
trunking-vlans                                1-2349,2450-4093
Privatevlan-promiscuous-association-primary-VLAN none
Privatevlan-promiscuous-association-secondary-VLAN none
Privatevlan-host-association-primary-VLAN     none
Privatevlan-host-association-secondary-VLAN   none

interface switchPort gigabitEthernet 1/5
switchport-mode                               enable
administrative-mode                           access
operational-mode                              Up
access-mode-vlan                              1
trunk-native-mode-vlan                        1
trunking-vlans                                1-2349,2450-4093
Privatevlan-promiscuous-association-primary-VLAN none
Privatevlan-promiscuous-association-secondary-VLAN none
Privatevlan-host-association-primary-VLAN     none
Privatevlan-host-association-secondary-VLAN   none

interface switchPort gigabitEthernet 1/6
switchport-mode                               enable
administrative-mode                           access
operational-mode                              Down
access-mode-vlan                              1
trunk-native-mode-vlan                        1
trunking-vlans                                1-2349,2450-4093
Privatevlan-promiscuous-association-primary-VLAN none

```

## show switch interface switchPort

```

Privatevlan-promiscuous-association-secondary-VLAN none
Privatevlan-host-association-primary-VLAN none
Privatevlan-host-association-secondary-VLAN none

interface switchPort gigabitEthernet 1/7
switchport-mode enable
administrative-mode access
operational-mode Up
access-mode-vlan 1
trunk-native-mode-vlan 1
trunking-vlans 1-2349,2450-4093
Privatevlan-promiscuous-association-primary-VLAN none
Privatevlan-promiscuous-association-secondary-VLAN none
Privatevlan-host-association-primary-VLAN none
Privatevlan-host-association-secondary-VLAN none

interface switchPort port-channel 1
switchport-mode enable
administrative-mode access
operational-mode "Not Presence"
access-mode-vlan 1
trunk-native-mode-vlan 1
trunking-vlans 1
Privatevlan-promiscuous-association-primary-VLAN none
Privatevlan-promiscuous-association-secondary-VLAN none
Privatevlan-host-association-primary-VLAN none
Privatevlan-host-association-secondary-VLAN none

interface switchPort port-channel 2
switchport-mode enable
administrative-mode access
operational-mode "Not Presence"
access-mode-vlan 1
trunk-native-mode-vlan 1
trunking-vlans 1
Privatevlan-promiscuous-association-primary-VLAN none
Privatevlan-promiscuous-association-secondary-VLAN none
Privatevlan-host-association-primary-VLAN none
Privatevlan-host-association-secondary-VLAN none

interface switchPort port-channel 3
switchport-mode enable
administrative-mode access
operational-mode "Not Presence"
access-mode-vlan 1
trunk-native-mode-vlan 1
trunking-vlans 1
Privatevlan-promiscuous-association-primary-VLAN none
Privatevlan-promiscuous-association-secondary-VLAN none
Privatevlan-host-association-primary-VLAN none
Privatevlan-host-association-secondary-VLAN none

interface switchPort port-channel 4
switchport-mode enable
administrative-mode access
operational-mode "Not Presence"
access-mode-vlan 1
trunk-native-mode-vlan 1
trunking-vlans 1

```



```
Privatevlan-promiscuous-association-primary-VLAN none
Privatevlan-promiscuous-association-secondary-VLAN none
Privatevlan-host-association-primary-VLAN none
Privatevlan-host-association-secondary-VLAN none
```

# show switch interface inline-status

To display the inline power status of all interfaces or a specific interface, use the **show switch interface inline-status** command in privileged EXEC mode.

```
show switch interface inline-status [{gigabitEthernet interface-id}]
```

<b>Syntax Description</b>	<b>gigabitEthernet interface-id</b> Specifies the Gigabit Ethernet interface ID.				
<b>Command Default</b>	Displays the inline power status of all interfaces.				
<b>Command Modes</b>	Privileged EXEC (#)				
<b>Command History</b>	<table border="1"> <thead> <tr> <th>Release</th> <th>Modification</th> </tr> </thead> <tbody> <tr> <td>3.5.1</td> <td>This command was introduced.</td> </tr> </tbody> </table>	Release	Modification	3.5.1	This command was introduced.
Release	Modification				
3.5.1	This command was introduced.				
<b>Usage Guidelines</b>	For verification and the command output display, use the <b>show switch interface inline-status</b> command. For debugging, use the <b>switch show interface inline-status</b> command.				

## Example

The following command output displays the inline power status of all interfaces:

```
nfvis# show switch interface inline-status
PORT  ADMIN  OPER      POWER  CLASS  DEVICE  PRIORITY
-----
1/0   auto   Searching  0.0    0      None    low
1/1   auto   Searching  0.0    0      None    low
1/2   auto   Searching  0.0    0      None    low
1/3   auto   Searching  0.0    0      None    low
1/4   auto   Searching  0.0    0      None    low
1/5   auto   On         6.5    4      None    low
1/6   auto   Searching  0.0    0      None    low
1/7   auto   Searching  0.0    0      None    low
```