This chapter describes the Cisco NX-OS Ethernet show commands available on Cisco Nexus 5000 Series switches.
show interface brief

To display a brief summary of the interface configuration information, use the `show interface brief` command.

```
show interface brief
```

**Syntax Description**

This command has no arguments or keywords.

**Command Default**

None

**Command Modes**

EXEC mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0(0)N1(1a)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**

This example shows how to display the summary configuration information of the specified interface:

```
switch# show interface brief
```

```
+-----------------+-----------+--------+----------+-------------+---------+-----+
| Ethernet Interface | VLAN | Type    | Mode    | Status | Reason     | Speed | Port Ch # |
|---------------------+------+---------+---------+--------+------------+-------+-----------|
| Eth1/1              | 1    | eth trunk | up      | none   |            | 10G(D) | 4000      |
| Eth1/2              | 1    | eth trunk | up      | none   |            | 10G(D) | 4000      |
| Eth1/3              | 1    | eth trunk | up      | none   |            | 10G(D) | 4000      |
| Eth1/7              | 1    | eth trunk | up      | none   |            | 10G(D) | 10        |
| Eth1/8              | 1    | eth trunk | up      | none   |            | 10G(D) | 10        |
| Eth1/10             | 1    | eth trunk | up      | none   |            | 10G(D) | 10        |
| Eth1/11             | 1    | eth access | down | SFP not inserted | | 10G(D) | --        |
| Eth1/12             | 1    | eth access | down | SFP not inserted | | 10G(D) | --        |
| Eth1/13             | 1    | eth access | down | SFP not inserted | | 10G(D) | --        |
| Eth1/14             | 1    | eth access | down | SFP not inserted | | 10G(D) | --        |
| Eth1/15             | 1    | eth access | down | SFP not inserted | | 10G(D) | --        |
| Eth1/16             | 1    | eth access | down | SFP not inserted | | 10G(D) | --        |
| Eth1/17             | 1    | eth access | down | SFP not inserted | | 10G(D) | --        |
| Eth1/18             | 1    | eth access | down | SFP not inserted | | 10G(D) | --        |
| Eth1/19             | 1    | eth access | down | SFP not inserted | | 10G(D) | --        |
| Eth1/20             | 1    | eth access | down | SFP not inserted | | 10G(D) | --        |
| Eth1/21             | 1    | eth access | down | SFP not inserted | | 10G(D) | --        |
| Eth1/22             | 1    | eth access | down | SFP not inserted | | 10G(D) | --        |
| Eth1/23             | 1    | eth access | down | Link not connected | | 10G(D) | --        |
| Eth1/24             | 1    | eth access | down | Link not connected | | 10G(D) | --        |
| Eth1/25             | 1    | eth access | down | SFP not inserted | | 10G(D) | --        |
| Eth1/26             | 1    | eth access | down | SFP not inserted | | 10G(D) | --        |
| Eth1/27             | 1    | eth access | down | SFP not inserted | | 10G(D) | --        |
```
show interface brief

Eth1/28 1 eth access down SFP not inserted 10G(D) --
Eth1/29 1 eth access down SFP not inserted 10G(D) --
Eth1/30 1 eth access down SFP not inserted 10G(D) --
Eth1/31 1 eth access down SFP not inserted 10G(D) --
Eth1/32 1 eth access down SFP not inserted 10G(D) --
Eth1/33 1 eth access down SFP not inserted 10G(D) --
Eth1/34 1 eth access down SFP not inserted 10G(D) --
Eth1/35 1 eth access down SFP not inserted 10G(D) --
Eth1/36 1 eth access down SFP not inserted 10G(D) --
Eth1/37 1 eth access down SFP not inserted 10G(D) --
Eth1/38 1 eth access down SFP not inserted 10G(D) --
Eth1/39 1 eth access down SFP not inserted 10G(D) --
Eth1/40 1 eth trunk up none 10G(D) --
Eth2/1 1 eth access down SFP not inserted 10G(D) --
Eth2/2 1 eth access up none 10G(D) --
Eth2/3 1 eth access down SFP not inserted 10G(D) --
Eth2/4 1 eth access up none 10G(D) --
Eth2/5 1 eth access up none 10G(D) --
Eth2/6 1 eth access down SFP not inserted 10G(D) --

Port-channel VLAN Type Mode Status Reason Speed Protocol
Interface
Po10 1 eth trunk up none a-10G(D) lacp
Po4000 1 eth trunk up none a-10G(D) lacp

Port VRF Status IP Address Speed MTU
Interface
mgmt0 -- up 192.168.10.37 100 1500

Interface Secondary VLAN(Type) Status Reason
Vlan1 -- down Administratively down

switch#

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>interface ethernet</td>
<td>Configures an Ethernet IEEE 802.3 interface.</td>
</tr>
</tbody>
</table>
show interface capabilities

To display detailed information about the capabilities of an interface, use the `show interface capabilities` command.

```
show interface ethernet slot/port capabilities
```

**Syntax Description**

```
ethernet slot/port
```

Specifies an Ethernet interface slot number and port number. The `slot` number is from 1 to 255, and the `port` number is from 1 to 128.

**Command Default**

None

**Command Modes**

EXEC mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0(0)N1(1a)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Usage Guidelines**

You can use the `show interface capabilities` command only for physical interfaces.

**Examples**

This example shows how to display the interface capabilities for a specific interface:

```
switch# show interface ethernet 1/1 capabilities
Ethernet1/1
  Model:                 N5K-C5020P-BF-XL-SU
  Type (SFP capable):    SFP-H10GB-CU1M
  Speed:                 1000,10000
  Duplex:                full
  Trunk encap. type:     802.1Q
  Channel:               yes
  Broadcast suppression: percentage(0-100)
  Flowcontrol:           rx-(off/on),tx-(off/on)
  Rate mode:             none
  QOS scheduling:        rx-(6qlt),tx-(1p6q0t)
  CoS rewrite:           no
  ToS rewrite:           no
  SPAN:                  yes
  UDLD:                  yes
  Link Debounce:         yes
  Link Debounce Time:    yes
  MDIX:                  no
  Pvlan Trunk capable:   yes
  TDR capable:           no
  Port mode:             Switched
  FEX Fabric:            yes

switch#
```
### Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>interface ethernet</td>
<td>Configures an Ethernet IEEE 802.3 interface.</td>
</tr>
</tbody>
</table>
**show interface debounce**

To display the debounce time information for all interfaces, use the `show interface debounce` command.

```
show interface debounce
```

**Syntax Description**

This command has no arguments or keywords.

**Command Default**

None

**Command Modes**

EXEC mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0(0)N1(1a)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**

This example shows how to display the debounce status of all interfaces:

```
switch# show interface debounce
```

```
+-----------------+-----------------+--------+
<table>
<thead>
<tr>
<th>Port</th>
<th>Debounce time</th>
<th>Value(ms)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eth1/1</td>
<td>enable</td>
<td>100</td>
</tr>
<tr>
<td>Eth1/2</td>
<td>enable</td>
<td>100</td>
</tr>
<tr>
<td>Eth1/3</td>
<td>enable</td>
<td>100</td>
</tr>
<tr>
<td>Eth1/4</td>
<td>enable</td>
<td>100</td>
</tr>
<tr>
<td>Eth1/5</td>
<td>enable</td>
<td>100</td>
</tr>
<tr>
<td>Eth1/6</td>
<td>enable</td>
<td>100</td>
</tr>
<tr>
<td>Eth1/7</td>
<td>enable</td>
<td>100</td>
</tr>
<tr>
<td>Eth1/8</td>
<td>enable</td>
<td>100</td>
</tr>
<tr>
<td>Eth1/9</td>
<td>enable</td>
<td>100</td>
</tr>
<tr>
<td>Eth1/10</td>
<td>enable</td>
<td>100</td>
</tr>
<tr>
<td>Eth1/11</td>
<td>enable</td>
<td>100</td>
</tr>
<tr>
<td>Eth1/12</td>
<td>enable</td>
<td>100</td>
</tr>
<tr>
<td>Eth1/13</td>
<td>enable</td>
<td>100</td>
</tr>
<tr>
<td>Eth1/14</td>
<td>enable</td>
<td>100</td>
</tr>
<tr>
<td>Eth1/15</td>
<td>enable</td>
<td>100</td>
</tr>
<tr>
<td>Eth1/16</td>
<td>enable</td>
<td>100</td>
</tr>
<tr>
<td>Eth1/17</td>
<td>enable</td>
<td>100</td>
</tr>
<tr>
<td>Eth1/18</td>
<td>enable</td>
<td>100</td>
</tr>
<tr>
<td>Eth1/19</td>
<td>enable</td>
<td>100</td>
</tr>
<tr>
<td>Eth1/20</td>
<td>enable</td>
<td>100</td>
</tr>
<tr>
<td>Eth1/21</td>
<td>enable</td>
<td>100</td>
</tr>
<tr>
<td>Eth1/22</td>
<td>enable</td>
<td>100</td>
</tr>
<tr>
<td>Eth1/23</td>
<td>enable</td>
<td>100</td>
</tr>
<tr>
<td>Eth1/24</td>
<td>enable</td>
<td>100</td>
</tr>
<tr>
<td>Eth1/25</td>
<td>enable</td>
<td>100</td>
</tr>
<tr>
<td>Eth1/26</td>
<td>enable</td>
<td>100</td>
</tr>
<tr>
<td>Eth1/27</td>
<td>enable</td>
<td>100</td>
</tr>
<tr>
<td>Eth1/28</td>
<td>enable</td>
<td>100</td>
</tr>
<tr>
<td>Eth1/29</td>
<td>enable</td>
<td>100</td>
</tr>
</tbody>
</table>
```
show interface debounce


table

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>link debounce</td>
<td>Enables the debounce timer on an interface.</td>
</tr>
</tbody>
</table>

Eth1/30 enable 100
Eth1/31 enable 100
Eth1/32 enable 100

--More--
switch#
show interface ethernet

To display information about the interface configuration, use the `show interface ethernet` command.

```
show interface ethernet slot/port [counters | description | status]
```

**Syntax Description**

- **slot/port**
  - Ethernet interface slot number and port number. The slot number is from 1 to 255, and the port number is from 1 to 128.
- **counters**
  - (Optional) Displays information about the counters configured on an interface.
- **description**
  - (Optional) Displays the description of an interface configuration.
- **status**
  - (Optional) Displays the operational state of the interface.

**Command Default**

Displays all information for the interface.

**Command Modes**

EXEC mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0(0)N1(1a)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**

This example shows how to display the detailed configuration of the specified interface:

```
switch# show interface ethernet 1/1
Ethernet1/1 is up
    Hardware: 1000/10000 Ethernet, address: 000d.ece7.df48 (bia 000d.ece7.df48)
    MTU 1500 bytes, BW 10000000 Kbit, DLY 10 usec, reliability 255/255, txload 1/255, rxload 1/255
    Encapsulation ARPA
    Port mode is fex-fabric
    full-duplex, 10 Gb/s, media type is 1/10g
    Beacon is turned off
    Input flow-control is off, output flow-control is off
    Rate mode is dedicated
    Switchport monitor is off
    Last link flapped 09:03:57
    Last clearing of "show interface" counters never
    30 seconds input rate 2376 bits/sec, 0 packets/sec
    30 seconds output rate 1584 bits/sec, 0 packets/sec
    Load-Interval #2: 5 minute (300 seconds)
    input rate 1.58 Kbps, 0 pps; output rate 792 bps, 0 pps
    RX
    0 unicast packets 10440 multicast packets 0 broadcast packets
    10440 input packets 11108120 bytes
    0 jumbo packets 0 storm suppression packets
    0 runts 0 giants 0 CRC 0 no buffer
    0 input error 0 short frame 0 overrun 0 underrun 0 ignored
    0 watchdog 0 bad etype drop 0 bad proto drop 0 if down drop
    0 input with dribble 0 input discard
    0 Rx pause
```
This example shows how to display the counters configured on a specified interface:

```bash
switch# show interface ethernet 1/1 counters
```

<table>
<thead>
<tr>
<th>Port</th>
<th>InOctets</th>
<th>InUcastPkts</th>
<th>InMcastPkts</th>
<th>InBcastPkts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eth1/1</td>
<td>17193136</td>
<td>0</td>
<td>16159</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Port</th>
<th>OutOctets</th>
<th>OutUcastPkts</th>
<th>OutMcastPkts</th>
<th>OutBcastPkts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eth1/1</td>
<td>11576758</td>
<td>0</td>
<td>28326</td>
<td>106</td>
</tr>
</tbody>
</table>

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>interface ethernet</td>
<td>Configures an Ethernet IEEE 802.3 interface.</td>
</tr>
</tbody>
</table>
show interface port-channel

To display the information about an EtherChannel interface configuration, use the `show interface port-channel` command.

```
      show interface port-channel number[.subinterface-number] [brief | counters | description | status]
```

**Syntax Description**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>number</code></td>
<td>EtherChannel number. The range is from 1 to 4096.</td>
</tr>
<tr>
<td><code>.subinterface-number</code></td>
<td>(Optional) Port-channel subinterface configuration. Use the EtherChannel number followed by a dot (.) indicator and the subinterface number. The format is <code>portchannel-number.subinterface-number</code>.</td>
</tr>
<tr>
<td><code>counters</code></td>
<td>(Optional) Displays information about the counters configured on the EtherChannel interface.</td>
</tr>
<tr>
<td><code>description</code></td>
<td>(Optional) Displays the description of the EtherChannel interface configuration.</td>
</tr>
<tr>
<td><code>status</code></td>
<td>(Optional) Displays the operational state of the EtherChannel interface.</td>
</tr>
</tbody>
</table>

**Command Default**

None

**Command Modes**

EXEC mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0(0)N1(1a)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**

This example shows how to display the configuration information of a specified EtherChannel interface:

```
switch# show interface port-channel 21
port-channel21 is up
    Hardware: Port-Channel, address: 000d.ece7.df72 (bia 000d.ece7.df72)
    MTU 1500 bytes, BW 10000000 Kbit, DLY 10 usec,
    reliability 255/255, txload 1/255, rxload 1/255
    Encapsulation ARPA
    Port mode is trunk
    full-duplex, 10 Gb/s
    Beacon is turned off
    Input flow-control is on, output flow-control is on
    Switchport monitor is off
    Members in this channel: Eth2/3
    Last clearing of "show interface" counters never
    30 seconds input rate 0 bits/sec, 0 packets/sec
    30 seconds output rate 352 bits/sec, 0 packets/sec
    Load-Interval #2: 5 minute (300 seconds)
        input rate 0 bps, 0pps; output rate 368 bps, 0 pps
    RX
        0 unicast packets  0 multicast packets  0 broadcast packets
        0 input packets  0 bytes
```
show interface port-channel

0 jumbo packets 0 storm suppression packets
0 runts 0 giants 0 CRC 0 no buffer
0 input error 0 short frame 0 overrun 0 underrun 0 ignored
0 watchdog 0 bad eth type drop 0 bad proto drop 0 if down drop
0 input with dribble 0 input discard
0 Rx pause
TX
0 unicast packets 15813 multicast packets 9 broadcast packets
15822 output packets 1615917 bytes
0 jumbo packets
0 output errors 0 collision 0 deferred 0 late collision
0 lost carrier 0 no carrier 0 babble
0 Tx pause
1 interface resets

switch#

<table>
<thead>
<tr>
<th>Related Commands</th>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>interface port-channel</td>
<td>Configures an EtherChannel interface.</td>
</tr>
</tbody>
</table>
To display the information about the MAC address, use the `show interface mac-address` command.

```
show interface [type slot/port | portchannel-no] mac-address
```

**Syntax Description**
- **type** *(Optional)* Interface for which MAC addresses should be displayed. The *type* can be either Ethernet or EtherChannel.
- **slot/port** Ethernet interface port number and slot number. The slot number is from 1 to 255, and the port number is from 1 to 128.
- **portchannel-no** EtherChannel number. The EtherChannel number is from 1 to 4096.

**Command Default** None

**Command Modes** EXEC mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0(0)N1(1a)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Usage Guidelines**

If you do not specify an interface, the system displays all the MAC addresses.

**Examples**

This example shows how to display the information on MAC addresses for the entire switch:

```
switch# show interface mac-address
```

```
+-----------------------------+--------------------------+-----------------------------+
| Interface                  | Mac-Address              | Burn-in Mac-Address         |
|-----------------------------+--------------------------+-----------------------------|
| Ethernet1/1                 | 0005.9b78.6e7c           | 0005.9b78.6e48              |
| Ethernet1/2                 | 0005.9b78.6e7c           | 0005.9b78.6e49              |
| Ethernet1/3                 | 0005.9b78.6e7c           | 0005.9b78.6e4a              |
| Ethernet1/4                 | 0005.9b78.6e7c           | 0005.9b78.6e4b              |
| Ethernet1/5                 | 0005.9b78.6e7c           | 0005.9b78.6e4c              |
| Ethernet1/6                 | 0005.9b78.6e7c           | 0005.9b78.6e4d              |
| Ethernet1/7                 | 0005.9b78.6e7c           | 0005.9b78.6e4e              |
| Ethernet1/8                 | 0005.9b78.6e7c           | 0005.9b78.6e4f              |
| Ethernet1/9                 | 0005.9b78.6e7c           | 0005.9b78.6e50              |
| Ethernet1/10                | 0005.9b78.6e7c           | 0005.9b78.6e51              |
| Ethernet1/11                | 0005.9b78.6e7c           | 0005.9b78.6e52              |
| Ethernet1/12                | 0005.9b78.6e7c           | 0005.9b78.6e53              |
| Ethernet1/13                | 0005.9b78.6e7c           | 0005.9b78.6e54              |
| Ethernet1/14                | 0005.9b78.6e7c           | 0005.9b78.6e55              |
| Ethernet1/15                | 0005.9b78.6e7c           | 0005.9b78.6e56              |
| Ethernet1/16                | 0005.9b78.6e7c           | 0005.9b78.6e57              |
| Ethernet1/17                | 0005.9b78.6e7c           | 0005.9b78.6e58              |
| Ethernet1/18                | 0005.9b78.6e7c           | 0005.9b78.6e59              |
| Ethernet1/19                | 0005.9b78.6e7c           | 0005.9b78.6e5a              |
```
This example shows how to display the MAC address information for a specific port channel:

```
switch# show interface port-channel 5 mac-address
```

<table>
<thead>
<tr>
<th>Interface</th>
<th>Mac-Address</th>
<th>Burn-in Mac-Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>port-channel5</td>
<td>0005.9b78.6e7c</td>
<td>0005.9b78.6e7c</td>
</tr>
</tbody>
</table>

Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>mac address-table static</td>
<td>Adds static entries to the MAC address table or configures a static MAC address with IGMP snooping disabled for that address.</td>
</tr>
<tr>
<td>show mac address-table</td>
<td>Displays information on the MAC address table.</td>
</tr>
</tbody>
</table>
show interface private-vlan mapping

To display information about private VLAN mapping for primary VLAN interfaces, use the `show interface private-vlan mapping` command.

```
switch# show interface private-vlan mapping
```

**Syntax Description**
This command has no arguments or keywords.

**Command Default**
None

**Command Modes**
EXEC mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0(0)N1(1a)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Usage Guidelines**
Before you can configure private VLANs, you must enable them by using the `feature private-vlan` command. The commands for configuring private VLANs are not visible until you enable private VLANs.

This command displays the mapping information between the primary and secondary VLANs that allows both VLANs to share the VLAN interface of the primary VLAN.

**Examples**
This example shows how to display information about primary and secondary private VLAN mapping:
```
switch# show interface private-vlan mapping
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>feature private-vlan</code></td>
<td>Enables private VLANs.</td>
</tr>
<tr>
<td><code>show interface switchport</code></td>
<td>Displays information about the ports, including those in private VLANs.</td>
</tr>
<tr>
<td><code>show vlan</code></td>
<td>Displays summary information for all VLANs.</td>
</tr>
<tr>
<td><code>show vlan private-vlan</code></td>
<td>Displays information for all private VLANs on the device.</td>
</tr>
</tbody>
</table>
show interface status err-disabled

To display the error disabled state of interfaces, use the show interface status err-disabled command.

show interface status err-disabled

Syntax Description
This command has no arguments or keywords.

Command Default
None

Command Modes
EXEC mode

Command History
Release                     Modification
4.2(1)N1(1)                This command was introduced.

Examples
This example shows how to display the error disabled state of interfaces:

switch# show interface status err-disabled

-----------------------------------------------------------------------
Port         Name               Status   Reason
-----------------------------------------------------------------------
Eth114/1/27  --                 down     BPDUGuard errDisable
Eth114/1/28  --                 down     BPDUGuard errDisable
Eth114/1/29  --                 down     BPDUGuard errDisable
Eth114/1/30  --                 down     BPDUGuard errDisable
Eth114/1/31  --                 down     BPDUGuard errDisable
Eth114/1/32  --                 down     BPDUGuard errDisable
Eth114/1/33  --                 down     BPDUGuard errDisable
Eth114/1/34  --                 down     BPDUGuard errDisable
Eth114/1/35  --                 down     BPDUGuard errDisable
Eth114/1/36  --                 down     BPDUGuard errDisable
Eth114/1/39  --                 down     BPDUGuard errDisable
Eth114/1/40  --                 down     BPDUGuard errDisable
Eth114/1/41  --                 down     BPDUGuard errDisable
Eth114/1/42  --                 down     BPDUGuard errDisable
Eth114/1/43  --                 down     BPDUGuard errDisable
Eth114/1/44  --                 down     BPDUGuard errDisable
Eth114/1/45  --                 down     BPDUGuard errDisable
Eth114/1/46  --                 down     BPDUGuard errDisable
Eth114/1/47  --                 down     BPDUGuard errDisable
--More--
switch#
### Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>errdisable detect cause</code></td>
<td>Enables the error disabled (err-disabled) detection.</td>
</tr>
<tr>
<td><code>errdisable recovery cause</code></td>
<td>Enables error disabled recovery on an interface.</td>
</tr>
</tbody>
</table>
**show interface switchport**

To display information about all the switch port interfaces, use the `show interface switchport` command.

```
switch# show interface switchport
Name: Ethernet1/1
Switchport: Enabled
Switchport Monitor: Not enabled
Operational Mode: fex-fabric
Access Mode VLAN: 1 (default)
Trunking Native Mode VLAN: 1 (default)
Trunking VLANs Enabled: 1-3967,4048-4093
Administrative private-vlan primary host-association: none
Administrative private-vlan secondary host-association: none
Administrative private-vlan primary mapping: none
Administrative private-vlan secondary mapping: none
Administrative private-vlan trunk native VLAN: none
Administrative private-vlan trunk encapsulation: dot1q
Administrative private-vlan trunk normal VLANs: none
Administrative private-vlan trunk private VLANs:
Operational private-vlan: none
Unknown unicast blocked: disabled
Unknown multicast blocked: disabled
Name: Ethernet1/2
Switchport: Enabled
Switchport Monitor: Not enabled
Operational Mode: fex-fabric
Access Mode VLAN: 1 (default)
Trunking Native Mode VLAN: 1 (default)
Trunking VLANs Enabled: 1-3967,4048-4093
Administrative private-vlan primary host-association: none
Administrative private-vlan secondary host-association: none
Administrative private-vlan primary mapping: none
Administrative private-vlan secondary mapping: none
Administrative private-vlan trunk native VLAN: none
Administrative private-vlan trunk encapsulation: dot1q
Administrative private-vlan trunk normal VLANs: none
Administrative private-vlan trunk private VLANs:
Operational private-vlan: none
Unknown unicast blocked: disabled
Unknown multicast blocked: disabled
```

This example shows how to display information for all Ethernet interfaces:

```
switch# show interface switchport
Name: Ethernet1/1
Switchport: Enabled
Switchport Monitor: Not enabled
Operational Mode: fex-fabric
Access Mode VLAN: 1 (default)
Trunking Native Mode VLAN: 1 (default)
Trunking VLANs Enabled: 1-3967,4048-4093
Administrative private-vlan primary host-association: none
Administrative private-vlan secondary host-association: none
Administrative private-vlan primary mapping: none
Administrative private-vlan secondary mapping: none
Administrative private-vlan trunk native VLAN: none
Administrative private-vlan trunk encapsulation: dot1q
Administrative private-vlan trunk normal VLANs: none
Administrative private-vlan trunk private VLANs:
Operational private-vlan: none
Unknown unicast blocked: disabled
Unknown multicast blocked: disabled
Name: Ethernet1/2
Switchport: Enabled
Switchport Monitor: Not enabled
Operational Mode: fex-fabric
Access Mode VLAN: 1 (default)
Trunking Native Mode VLAN: 1 (default)
Trunking VLANs Enabled: 1-3967,4048-4093
Administrative private-vlan primary host-association: none
Administrative private-vlan secondary host-association: none
Administrative private-vlan primary mapping: none
Administrative private-vlan secondary mapping: none
Administrative private-vlan trunk native VLAN: none
Administrative private-vlan trunk encapsulation: dot1q
Administrative private-vlan trunk normal VLANs: none
Administrative private-vlan trunk private VLANs:
Operational private-vlan: none
Unknown unicast blocked: disabled
Unknown multicast blocked: disabled
```

**Syntax Description**

This command has no arguments or keywords.

**Command Default**

None

**Command Modes**

EXEC mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0(0)N1(1a)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**

This example shows how to display information for all Ethernet interfaces:
### Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>switchport access vlan</code></td>
<td>Sets the access VLAN when the interface is in access mode.</td>
</tr>
</tbody>
</table>
### show interface transceiver

To display the information about the transceivers connected to a specific interface, use the `show interface transceiver` command.

#### Syntax Description

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>ethernet slot/port transceiver [details]</code></td>
<td>Displays information about an Ethernet interface slot number and port number. The <code>slot</code> number is from 1 to 255, and the <code>port</code> number is from 1 to 128.</td>
</tr>
</tbody>
</table>

#### Command Default

None

#### Command Modes

EXEC mode

#### Command History

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0(0)N1(1a)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

#### Usage Guidelines

You can use the `show interface transceiver` command only for physical interfaces.

#### Examples

This example shows how to display the transceivers connected to a specified Ethernet interface:

```
switch# show interface ethernet 1/1 transceiver
Ethernet1/1
  transceiver is present
  type is SFP-H10GB-CU1M
  name is CISCO-MOLEX
  part number is 74752-9044
  revision is 07
  serial number is MOC14081360
  nominal bitrate is 10300 MBit/sec
  Link length supported for copper is 1 m
  cisco id is --
  cisco extended id number is 4
switch#
```
### Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>interface ethernet</code></td>
<td>Configures an Ethernet IEEE 802.3 interface.</td>
</tr>
<tr>
<td><code>show interface capabilities</code></td>
<td>Displays detailed information about the capabilities of an interface.</td>
</tr>
</tbody>
</table>
show interface vlan

To display brief descriptive information about specified VLANs, use the `show interface vlan` command.

```
show interface vlan vlan-id [brief | private-vlan mapping]
```

**Syntax Description**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>vlan-id</code></td>
<td>Number of the VLAN. The range is from 1 to 4094.</td>
</tr>
<tr>
<td><code>brief</code></td>
<td>(Optional) Displays a summary information for the specified VLAN.</td>
</tr>
<tr>
<td><code>private-vlan mapping</code></td>
<td>(Optional) Displays the private VLAN mapping information, if any, for the specified VLAN.</td>
</tr>
</tbody>
</table>

**Command Default**

None

**Command Modes**

EXEC mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0(0)N1(1a)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Usage Guidelines**

You must enable interface VLANs by using the `feature interface-vlan` or the `svi enable` command. The commands for configuring interface VLANs are not visible until you enable this feature.

This command displays descriptive information for the specified VLAN, including private VLANs. The switch displays output for the `show interface vlan vlan-id private-vlan mapping` command only when you specify a primary private VLAN. If you specify a secondary private VLAN, the output is blank.

**Examples**

This example shows how to display information about the specified VLAN:

```
switch# show interface vlan 10
Vlan10 is up, line protocol is up
  Hardware is EtherSVI, address is 0005.9b78.6e7c
  MTU 1500 bytes, BW 1000000 Kbit, DLY 10 usec,
switch#
```

This example shows how to display a brief description for the specified VLAN:

```
switch# show interface vlan 10 brief

+-----------------+-----------------+-----------------+-----------------+
<table>
<thead>
<tr>
<th>Interface</th>
<th>Secondary VLAN</th>
<th>Status</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vlan10</td>
<td>--</td>
<td>up</td>
<td>--</td>
</tr>
</tbody>
</table>
switch#
```
This example shows how to display the private VLAN mapping information, if any, for the VLAN:

```bash
switch# show interface vlan 10 private-vlan mapping
```

When you specify a primary VLAN, the switch displays all secondary VLANs mapped to that primary VLAN.

<table>
<thead>
<tr>
<th>Related Commands</th>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><code>show interface</code></td>
<td>Displays information about the ports, including those in private VLANs.</td>
</tr>
<tr>
<td></td>
<td><code>switchport</code></td>
<td></td>
</tr>
<tr>
<td></td>
<td><code>show vlan</code></td>
<td>Displays summary information for all VLANs.</td>
</tr>
<tr>
<td></td>
<td><code>show vlan private-vlan</code></td>
<td>Displays summary information for all private VLANs.</td>
</tr>
</tbody>
</table>
show ip igmp snooping

To display the Internet Group Management Protocol (IGMP) snooping configuration of the switch, use the `show ip igmp snooping` command.

```
show ip igmp snooping [explicit-tracking vlan vlan-id | groups [detail | vlan vlan-id]] | mrouter [vlan vlan-id] | querier [vlan vlan-id] | vlan vlan-id]
```

**Syntax Description**

- `explicit-tracking` (Optional) Displays information about the explicit host-tracking status for IGMPv3 hosts. If you provide this keyword, you must specify a VLAN.
- `vlan vlan-id` (Optional) Specifies a VLAN. The VLAN ID range is from 1 to 4094.
- `groups` (Optional) Displays information for the IGMP group address.
- `detail` (Optional) Displays detailed information for the group.
- `mrouter` (Optional) Displays information about dynamically detected multicast routers.
- `querier` (Optional) Displays information about the snooping querier if defined.

**Command Default**

None

**Command Modes**

EXEC mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0(0)N1(1a)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**

This example shows how to display the IGMP snooping configuration of the switch:

```
switch# show ip igmp snooping
Global IGMP Snooping Information:
  IGMP Snooping enabled
  IGMPv1/v2 Report Suppression enabled
  IGMPv3 Report Suppression disabled
  Link Local Groups Suppression enabled

IGMP Snooping information for vlan 1
  IGMP snooping enabled
  IGMP querier none
  Switch-querier disabled
  IGMPv3 Explicit tracking enabled
  IGMPv2 Fast leave disabled
  IGMPv1/v2 Report suppression enabled
  IGMPv3 Report suppression disabled
  Link Local Groups suppression enabled
  Router port detection using PIM Hellos, IGMP Queries
  Number of router-ports: 1
  Number of groups: 0
  VLAN vPC function enabled
  Active ports:
```
show ip igmp snooping

Po19  Po400  Eth170/1/17  Eth171/1/7
Eth171/1/8  Eth198/1/11  Eth199/1/13
IGMP Snooping information for vlan 300
IGMP snooping enabled
IGMP querier none
Switch-querier disabled
IGMPv3 Explicit tracking enabled
--More--
switch#

<table>
<thead>
<tr>
<th>Related Commands</th>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ip igmp snooping</td>
<td>Globally enables IGMP snooping. IGMP snooping must be globally enabled in order to be enabled on a VLAN.</td>
</tr>
<tr>
<td>(EXEC)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>ip igmp snooping</td>
<td>Enables IGMP snooping on the VLAN interface.</td>
</tr>
<tr>
<td>(VLAN)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
To display Link Aggregation Control Protocol (LACP) information, use the `show lacp` command.

```
show lacp { counters | interface ethernet slot/port | neighbor [interface port-channel number] | port-channel [interface port-channel number] | system-identifier }
```

**Syntax Description**

- **counters**: Displays information about the LACP traffic statistics.
- **interface ethernet slot/port**: Displays LACP information for a specific Ethernet interface. The `slot` number is from 1 to 255, and the `port` number is from 1 to 128.
- **neighbor**: Displays information about the LACP neighbor.
- **port-channel**: Displays information about all EtherChannels.
- **interface port-channel number**: (Optional) Displays information about a specific EtherChannel. The EtherChannel number is from 1 to 4096.
- **system-identifier**: Displays the LACP system identification. It is a combination of the port priority and the MAC address of the device.

**Command Default**

None

**Command Modes**

EXEC mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0(0)N1(1a)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Usage Guidelines**

Use the `show lacp` command to troubleshoot problems related to LACP in a network.

**Examples**

This example shows how to display the LACP system identification:

```
switch# show lacp system-identifier
32768.0-5-9b-78-6e-7c
switch#
```

This example shows how to display the LACP information for a specific interface:

```
switch# show lacp interface ethernet 1/1
Interface Ethernet1/1 is up
    Channel group is 1 port channel is Po1
    PDUs sent: 1684
    PDUs rcvd: 1651
    Markers sent: 0
    Markers rcvd: 0
    Marker response sent: 0
    Marker response rcvd: 0
    Unknown packets rcvd: 0
    Illegal packets rcvd: 0
```
show lACP

Lag Id: [{(8000, 0-5-9b-78-6e-7c, 0, 8000, 101), (8000, 0-d-ec-c9-c8-3c, 0, 8000, 101)}]  
Operational as aggregated link since Wed Apr 21 00:37:27 2010

Local Port: Eth1/1   MAC Address= 0-5-9b-78-6e-7c   
                  System Identifier=0x8000,0-5-9b-78-6e-7c   
                  Port Identifier=0x8000,0x101   
                  Operational key=0   
                  LACP_Activity=active   
                  LACP_Timeout=Long Timeout (30s)   
                  Synchronization=IN_SYNC   
                  Collecting=true   
                  Distributing=true   
                  Partner information refresh timeout=Long Timeout (90s)   
Actor Admin State=(Ac-1:To-1:Ag-1:Sy-0:Co-0:Di-0:De-0:Ex-0)   
Actor Oper State=(Ac-1:To-0:Ag-1:Sy-1:Co-1:Di-1:De-0:Ex-0)   
Neighbor: 1/1   
                  MAC Address= 0-d-ec-c9-c8-3c   
                  System Identifier=0x8000,0-d-ec-c9-c8-3c   
                  Port Identifier=0x8000,0x101   
                  Operational key=0   
                  LACP_Activity=active   
                  LACP_Timeout=Long Timeout (30s)   
                  Synchronization=IN_SYNC   
                  Collecting=true   
                  Distributing=true   
Partner Admin State=(Ac-0:To-1:Ag-0:Sy-0:Co-0:Di-0:De-0:Ex-0)   
Partner Oper State=(Ac-1:To-0:Ag-1:Sy-1:Co-1:Di-1:De-0:Ex-0)   
switch#

<table>
<thead>
<tr>
<th>Related Commands</th>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><code>lacp port-priority</code></td>
<td>Sets the priority for the physical interfaces for the LACP.</td>
</tr>
<tr>
<td></td>
<td><code>lacp system-priority</code></td>
<td>Sets the system priority of the switch for the LACP.</td>
</tr>
</tbody>
</table>
show mac address-table aging-time

To display information about the time-out values for the MAC address table, use the `show mac address-table aging-time` command.

```
show mac address-table aging-time [vlan vlan-id]
```

**Syntax Description**

<table>
<thead>
<tr>
<th>Command Default</th>
<th>None</th>
</tr>
</thead>
</table>

**Command Modes**

EXEC mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0(0)N1(1a)</td>
<td>This command was introduced.</td>
</tr>
<tr>
<td>4.2(1)N1(1)</td>
<td>The command syntax is changed to <code>show mac address-table aging-time</code>.</td>
</tr>
</tbody>
</table>

**Examples**

This example shows how to display MAC address aging times:

```
switch# show mac address-table aging-time
Vlan  Aging Time
----- ----------
2023  300
2022  300
2021  300
2020  300
2019  300
2018  300
2017  300
2016  300
2015  300
2014  300
2013  300
2012  300
2011  300
2010  300
2009  300
2008  300
2007  300
2006  300
2005  300
2004  300
2003  300
--More--
switch#
```
### Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>mac address-table aging-time</code></td>
<td>Configures the aging time for entries in the MAC address table.</td>
</tr>
<tr>
<td><code>show mac address-table</code></td>
<td>Displays information about the MAC address table.</td>
</tr>
</tbody>
</table>
show mac address-table count

To display the number of entries currently in the MAC address table, use the show mac address-table count command.

```
show mac address-table count [address EEEE.EEEE.EEEE] [dynamic | static] [interface {ethernet slot/port | port-channel number}] [vlan vlan-id]
```

**Syntax Description**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>address</td>
<td>(Optional) Displays a count of the MAC address table entries for a specific address.</td>
</tr>
<tr>
<td>EEEE.EEEE.EEEE</td>
<td></td>
</tr>
<tr>
<td>dynamic</td>
<td>(Optional) Displays a count of the dynamic MAC addresses.</td>
</tr>
<tr>
<td>static</td>
<td>(Optional) Displays a count of the static MAC addresses.</td>
</tr>
<tr>
<td>interface</td>
<td>(Optional) Specifies the interface. The interface can be Ethernet or EtherChannel.</td>
</tr>
<tr>
<td>ethernet</td>
<td>(Optional) Specifies the Ethernet interface slot number and port number. The slot number is from 1 to 255, and the port number is from 1 to 128.</td>
</tr>
<tr>
<td>slot/port</td>
<td></td>
</tr>
<tr>
<td>port-channel</td>
<td>(Optional) Specifies the EtherChannel interface. The EtherChannel number is from 1 to 4096.</td>
</tr>
<tr>
<td>number</td>
<td></td>
</tr>
<tr>
<td>vlan</td>
<td>(Optional) Displays information for a specific VLAN. The range is from 1 to 4094.</td>
</tr>
<tr>
<td>vlan-id</td>
<td></td>
</tr>
</tbody>
</table>

**Command Default**

None

**Command Modes**

EXEC mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0(0)N1(1a)</td>
<td>This command was introduced.</td>
</tr>
<tr>
<td>4.2(1)N1(1)</td>
<td>The command syntax is changed to show mac address-table count.</td>
</tr>
</tbody>
</table>

**Examples**

This example shows how to display the number of dynamic entries currently in the MAC address table:

```
switch# show mac address-table count dynamic
MAC Entries for all vlans:
Total MAC Addresses in Use: 7
switch#
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show mac address-table</td>
<td>Displays information about the MAC address table.</td>
</tr>
</tbody>
</table>
show mac address-table notification

To display notifications about the MAC address table, use the `show mac address-table notification` command.

```
show mac address-table notification {mac-move | threshold}
```

<table>
<thead>
<tr>
<th>Syntax Description</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>mac-move</td>
<td>Displays notification messages about MAC addresses that were moved.</td>
</tr>
<tr>
<td>threshold</td>
<td>Displays notification messages sent when the MAC address table threshold was exceeded.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Command Default</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>Command Modes</td>
<td>EXEC mode</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Command History</th>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4.0(0)N1(1a)</td>
<td>This command was introduced.</td>
</tr>
<tr>
<td></td>
<td>4.2(1)N1(1)</td>
<td>The command syntax is changed to <code>show mac address-table notification</code>.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Examples</th>
<th>This example shows how to display MAC address move notifications:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><code>switch# show mac address-table notification mac-move</code></td>
</tr>
<tr>
<td></td>
<td>MAC Move Notify : disabled</td>
</tr>
<tr>
<td></td>
<td><code>switch#</code></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Related Commands</th>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>show mac address-table</td>
<td>Displays information about the MAC address table.</td>
</tr>
</tbody>
</table>
show mac address-table

To display the information about the MAC address table, use the `show mac address-table` command.

```
show mac address-table [address mac-address] [dynamic | multicast | static] [interface
{ethernet slot/port | port-channel number}] [vlan vlan-id]
```

**Syntax Description**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>address mac-address</code></td>
<td>(Optional) Displays information about a specific MAC address.</td>
</tr>
<tr>
<td><code>dynamic</code></td>
<td>(Optional) Displays information about the dynamic MAC address table entries only.</td>
</tr>
<tr>
<td><code>interface</code></td>
<td>(Optional) Specifies the interface. The interface can be either Ethernet or EtherChannel.</td>
</tr>
<tr>
<td><code>ethernet slot/port</code></td>
<td>(Optional) Specifies the Ethernet interface slot number and port number. The slot number is from 1 to 255, and the port number is from 1 to 128.</td>
</tr>
<tr>
<td><code>port-channel number</code></td>
<td>(Optional) Specifies the EtherChannel interface. The EtherChannel number is from 1 to 4096.</td>
</tr>
<tr>
<td><code>multicast</code></td>
<td>(Optional) Displays information about the multicast MAC address table entries only.</td>
</tr>
<tr>
<td><code>static</code></td>
<td>(Optional) Displays information about the static MAC address table entries only.</td>
</tr>
<tr>
<td><code>vlan vlan-id</code></td>
<td>(Optional) Displays information for a specific VLAN. The VLAN ID range is from 1 to 4094.</td>
</tr>
</tbody>
</table>

**Command Default**

None

**Command Modes**

EXEC mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0(0)N1(1a)</td>
<td>This command was introduced.</td>
</tr>
<tr>
<td>4.2(1)N1(1)</td>
<td>The command syntax is changed to <code>show mac address-table</code>.</td>
</tr>
</tbody>
</table>

**Usage Guidelines**

The switch maintains static MAC address entries that are saved in its startup configuration across reboots and flushes the dynamic entries.

**Examples**

This example shows how to display information about the entries for the MAC address table:

```
switch# show mac address-table
Legend:
* - primary entry, G - Gateway MAC, (R) - Routed MAC, O - Overlay MAC
age - seconds since last seen,* - primary entry using vPC Peer-Link
VLAN    MAC Address       Type age Secure NTPY Ports
--------------------------------------------------------------------------
```
This example shows how to display information about the entries for the MAC address table for a specific MAC address:

```
switch# show mac address-table address 0018.bad8.3fbd
```

This example shows how to display information about the dynamic entries for the MAC address table:

```
switch# show mac address-table dynamic
```

### Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>mac address-table static</td>
<td>Adds static entries to the MAC address table or configures a static MAC</td>
</tr>
<tr>
<td></td>
<td>address with IGMP snooping disabled for that address.</td>
</tr>
<tr>
<td>show mac address-table aging-time</td>
<td>Displays information about the time-out values for the MAC address table.</td>
</tr>
<tr>
<td>show mac address-table count</td>
<td>Displays the number of entries currently in the MAC address table.</td>
</tr>
<tr>
<td>show mac address-table</td>
<td>Displays information about notifications for the MAC address table.</td>
</tr>
<tr>
<td>notifications</td>
<td></td>
</tr>
</tbody>
</table>
show monitor session

To display information about the Switched Port Analyzer (SPAN) sessions, use the `show monitor session` command.

```
show monitor session [session | all [brief] | range range [brief] | status]
```

### Syntax Description

- **session**: (Optional) Number of the session. The range is from 1 to 18.
- **all**: (Optional) Displays all sessions.
- **brief**: (Optional) Displays a brief summary of the information.
- **range range**: (Optional) Displays a range of sessions. The range is from 1 to 18.
- **status**: (Optional) Displays the operational state of all sessions.

### Command Default

None

### Command Modes

EXEC mode

### Command History

- **Release**: 4.0(0)N1(1a)
- **Modification**: This command was introduced.

### Examples

This example shows how to display information about SPAN session 1:

```
switch# show monitor session 1
```

This example shows how to display a range of SPAN sessions:

```
switch# show monitor session range 1-4
```

### Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>monitor session</td>
<td>Displays the contents of the startup configuration file.</td>
</tr>
</tbody>
</table>
show port-channel capacity

To display the total number of EtherChannel interfaces and the number of free or used EtherChannel interfaces, use the `show port-channel capacity` command.

`show port-channel capacity`

**Syntax Description**

This command has no arguments or keywords.

**Command Default**

None

**Command Modes**

EXEC mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0(0)N1(1a)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**

This example shows how to display the EtherChannel capacity:

```
switch# show port-channel capacity
Port-channel resources
   768 total  29 used  739 free  3% used
switch#
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>port-channel</td>
<td>Configures the load-balancing algorithm for EtherChannels.</td>
</tr>
<tr>
<td>load-balance ethernet</td>
<td></td>
</tr>
<tr>
<td>show tech-support</td>
<td>Displays Cisco Technical Support information about EtherChannels.</td>
</tr>
<tr>
<td>port-channel</td>
<td></td>
</tr>
</tbody>
</table>
show port-channel compatibility-parameters

To display the parameters that must be the same among the member ports in order to join an EtherChannel interface, use the `show port-channel compatibility-parameters` command.

show port-channel compatibility-parameters

**Syntax Description**

This command has no arguments or keywords.

**Command Default**

None

**Command Modes**

EXEC mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0(0)N1(1a)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**

This example shows how to display the EtherChannel interface parameters:

```
switch# show port-channel compatibility-parameters
* port mode
  Members must have the same port mode configured.

  * port mode
  Members must have the same port mode configured, either E, F or AUTO. If they are configured in AUTO port mode, they have to negotiate E or F mode when they come up. If a member negotiates a different mode, it will be suspended.

  * speed
  Members must have the same speed configured. If they are configured in AUTO speed, they have to negotiate the same speed when they come up. If a member negotiates a different speed, it will be suspended.

  * MTU
  Members have to have the same MTU configured. This only applies to ethernet port-channel.

  * shut lan
  Members have to have the same shut lan configured. This only applies to ethernet port-channel.

  * MEDIUM
  Members have to have the same medium type configured. This only applies to ethernet port-channel.
```
show port-channel compatibility-parameters

* Span mode

Members must have the same span mode.

* load interval

Member must have same load interval configured.

--More--

<---output truncated--->
switch#
show port-channel database

To display the aggregation state for one or more EtherChannel interfaces, use the `show port-channel database` command.

```
show port-channel database [interface port-channel number.[subinterface-number]]
```

**Syntax Description**

- **interface** (Optional) Displays information for an EtherChannel interface.
- **port-channel number** (Optional) Displays aggregation information for a specific EtherChannel interface. The `number` range is from 1 to 4096.
- **.subinterface-number** (Optional) Subinterface number. Use the EtherChannel number followed by a dot (.) indicator and the subinterface number. The format is `portchannel-number.subinterface-number`.

**Command Default**

None

**Command Modes**

EXEC mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0(0)N1(1a)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**

This example shows how to display the aggregation state of all EtherChannel interfaces:

```
switch# show port-channel database

port-channel19
  Last membership update is successful
  4 ports in total, 4 ports up
  First operational port is Ethernet199/1/24
  Age of the port-channel is 0d:09h:11m:30s
  Time since last bundle is 0d:09h:12m:20s
  Last bundled member is
  Ports:    Ethernet199/1/24 [active ] [up] *
             Ethernet199/1/28 [active ] [up]
             Ethernet199/1/30 [active ] [up]
             Ethernet199/1/31 [active ] [up]

port-channel21
  Last membership update is successful
  1 ports in total, 1 ports up
  First operational port is Ethernet2/3
  Age of the port-channel is 0d:09h:11m:30s
  Time since last bundle is 0d:09h:12m:20s
  Last bundled member is
  Ports:    Ethernet2/3   [on] [up] *

port-channel50
  Last membership update is successful
--More--
<---output truncated--->
```
This example shows how to display the aggregation state for a specific EtherChannel interface:

```
switch# show port-channel database interface port-channel 21
port-channel21
   Last membership update is successful
   1 ports in total, 1 ports up
   First operational port is Ethernet2/3
   Age of the port-channel is 0d:09h:13m:14s
   Time since last bundle is 0d:09h:14m:04s
   Last bundled member is
   Ports:   Ethernet2/3     [on] [up] *
```

```
switch#
```

<table>
<thead>
<tr>
<th>Related Commands</th>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>port-channel</td>
<td>Configures the load-balancing algorithm for EtherChannels.</td>
</tr>
<tr>
<td></td>
<td>load-balance</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ethernet</td>
<td></td>
</tr>
<tr>
<td></td>
<td>show tech-support</td>
<td>Displays Cisco Technical Support information about EtherChannels.</td>
</tr>
<tr>
<td></td>
<td>port-channel</td>
<td></td>
</tr>
</tbody>
</table>
show port-channel load-balance

To display information about EtherChannel load balancing, use the `show port-channel load-balance` command.

```
show port-channel load-balance [forwarding-path interface port-channel number { . | vlan vlan_ID} [dst-ip ipv4-addr] [dst-ipv6 ipv6-addr] [dst-mac dst-mac-addr] [l4-dst-port dst-port] [l4-srcc-port src-port] [src-ip ipv4-addr] [src-ipv6 ipv6-addr] [src-mac src-mac-addr]]
```

**Syntax Description**

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>forwarding-path</td>
<td>(Optional) Identifies the port in the EtherChannel interface that forwards</td>
</tr>
<tr>
<td></td>
<td>the packet.</td>
</tr>
<tr>
<td>interface port-channel</td>
<td>EtherChannel number for the load-balancing forwarding path that you want</td>
</tr>
<tr>
<td></td>
<td>to display. The range is from 1 to 4096.</td>
</tr>
<tr>
<td>number</td>
<td>(Optional) Subinterface number separator. Use the EtherChannel number</td>
</tr>
<tr>
<td></td>
<td>followed by a dot (.) indicator and the subinterface number. The format is</td>
</tr>
<tr>
<td>.</td>
<td>portchannel-number.subinterface-number.</td>
</tr>
<tr>
<td>vlan</td>
<td>(Optional) Identifies the VLAN for hardware hashing.</td>
</tr>
<tr>
<td>vlan_ID</td>
<td>VLAN ID. The range is from 1 to 3967 and 4048 to 4093.</td>
</tr>
<tr>
<td>dst-ip</td>
<td>(Optional) Displays the load distribution on the destination IP address.</td>
</tr>
<tr>
<td>ipv4-addr</td>
<td>IPv4 address to specify a source or destination IP address. The format is</td>
</tr>
<tr>
<td></td>
<td>A.B.C.D.</td>
</tr>
<tr>
<td>dst-ipv6</td>
<td>(Optional) Displays the load distribution on the destination IPv6 address.</td>
</tr>
<tr>
<td>ipv6-addr</td>
<td>IPv6 address to specify a source or destination IP address. The format is</td>
</tr>
<tr>
<td></td>
<td>A::B::C::D.</td>
</tr>
<tr>
<td>dst-mac</td>
<td>(Optional) Displays the load distribution on the destination MAC address.</td>
</tr>
<tr>
<td>dst-mac-addr</td>
<td>Destination MAC address. The format is AAAAA:BBBB::CCCCC.</td>
</tr>
<tr>
<td>l4-dst-port</td>
<td>(Optional) Displays the load distribution on the destination port.</td>
</tr>
<tr>
<td>dst-port</td>
<td>Destination port number. The range is from 0 to 65535.</td>
</tr>
<tr>
<td>l4-srcc-port</td>
<td>(Optional) Displays the load distribution on the source port.</td>
</tr>
<tr>
<td>src-port</td>
<td>Source port number. The range is from 0 to 65535.</td>
</tr>
<tr>
<td>src-ip</td>
<td>(Optional) Displays the load distribution on the source IP address.</td>
</tr>
<tr>
<td>src-ipv6</td>
<td>(Optional) Displays the load distribution on the source IPv6 address.</td>
</tr>
<tr>
<td>src-mac</td>
<td>(Optional) Displays the load distribution on the source MAC address.</td>
</tr>
<tr>
<td>src-mac-addr</td>
<td>source MAC address. The format is AA:BB:CC:DD:EE:FF.</td>
</tr>
</tbody>
</table>

**Command Default**

None

**Command Modes**

EXEC mode
**Usage Guidelines**

You must use the `vlan` keyword to determine the use of hardware hashing.

When you do not use hardware hashing, the output displays all parameters used to determine the outgoing port ID. Missing parameters are shown as zero values in the output.

If you do not use hardware hashing, the outgoing port ID is determined by using control-plane selection. Hardware hashing is not used in the following scenarios:

- The specified VLAN contains an unknown unicast destination MAC address.
- The specified VLAN contains a known or an unknown multicast destination MAC or destination IP address.
- The specified VLAN contains a broadcast MAC address.
- The EtherChannel has only one active member.
- The destination MAC address is unknown when the load distribution is configured on the source IP address (src-ip), source port (l4-src-port), or source MAC address (src-mac).
- If multichassis EtherChannel trunk (MCT) is enabled and the traffic flows from a virtual port channel (vPC) peer link, the output displays “Outgoing port id (vPC peer-link traffic)".

To get accurate results, you must do the following:

- (For unicast frames) Provide the destination MAC address (dst-mac) and the VLAN for hardware hashing (vlan). When the destination MAC address is not provided, hardware hashing is assumed.
- (For multicast frames) For IP multicast, provide either the destination IP address (dst-ip) or destination MAC address (dst-mac) with the VLAN for hardware hashing (vlan). For non-ip multicast, provide the destination MAC address with the VLAN for hardware hashing.
- (For broadcast frames) Provide the destination MAC address (dst-mac) and the VLAN for hardware hashing (vlan).

**Examples**

This example shows how to display the port channel load balance information:

```
switch# show port-channel load-balance
Port Channel Load-Balancing Configuration:
System: source-dest-ip

Port Channel Load-Balancing Addresses Used Per-Protocol:
Non-IP: source-dest-mac
IP: source-dest-ip source-dest-mac

switch#
```

Table 3-1 describes the fields shown in the display:
This example shows how to display the port channel load balance information when hardware hashing is not used:

```
switch# show port-channel load-balance forwarding-path interface port-channel 5 vlan 3 dst-ip 192.168.2.37
Missing params will be substituted by 0's.
Load-balance Algorithm on FEX: source-dest-ip
crc8_hash: Not Used     Outgoing port id: Ethernet133/1/3
Param(s) used to calculate load-balance (Unknown unicast, multicast and broadcast packets):
    dst-mac: 0000.0000.0000
    vlan id: 3
switch#
```

This example shows how to display the port channel load balance information when hardware hashing is not used to determine the outgoing port ID:

```
switch# show port-channel load-balance forwarding-path interface port-channel 10 vlan 1 dst-ip 192.168.2.25 src-ip 192.168.2.10 dst-mac ffff.ffff.ffff src-mac aa:bb:cc:dd:ee:ff 14-src-port 0 14-dst-port 1
Missing params will be substituted by 0's.
Load-balance Algorithm on switch: source-dest-port
crc8_hash: Not Used     Outgoing port id: Ethernet1/1
Param(s) used to calculate load-balance (Unknown unicast, multicast and broadcast packets):
    dst-mac: ffff.ffff.ffff
    vlan id: 1
switch#
```

This example shows how to display the port channel load balance information when MCT is enabled and traffic flows from a vPC peer link:

```
switch# show port-channel load-balance forwarding-path interface port-channel 10 vlan 1 dst-ip 192.168.2.25 src-ip 192.168.2.10 dst-mac ffff.ffff.ffff src-mac aa:bb:cc:dd:ee:ff 14-src-port 0 14-dst-port 1
Missing params will be substituted by 0's.
Load-balance Algorithm on switch: source-dest-port
crc8_hash: Not Used     Outgoing port id (non vPC peer-link traffic): ethernet1/2
crc8_hash: Not Used     Outgoing port id (vPC peer-link traffic): Ethernet1/1
Param(s) used to calculate load-balance (Unknown unicast, multicast and broadcast packets):
    dst-mac: ffff.ffff.ffff
    vlan id: 1
switch#
```

This example shows how to display the port channel load balance information when hardware hashing is used to determine the outgoing port ID:

```
Table 3-1 show port-channel load-balance Field Descriptions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>System</td>
<td>The load-balancing method configured on the switch.</td>
</tr>
<tr>
<td>Non-IP</td>
<td>The field that will be used to calculate the hash value for non-IP traffic.</td>
</tr>
<tr>
<td>IP</td>
<td>The fields used for IPv4 and IPv6 traffic.</td>
</tr>
</tbody>
</table>
```
show port-channel load-balance

switch# show port-channel load-balance forwarding-path interface port-channel 10 vlan 1 dst-ip 192.168.2.25 src-ip 192.168.2.10 src-mac aa:bb:cc:dd:ee:ff l4-src-port 0 l4-dst-port 1
Missing params will be substituted by 0's.
Load-balance Algorithm on switch: source-dest-port
crc8_hash: 204 Outgoing port id: Ethernet1/1
Param(s) used to calculate load-balance:
dst-port: 1
src-port: 0
dst-ip: 192.168.2.25
src-ip: 192.168.2.10
dst-mac: 0000.0000.0000
src-mac: aabb.ccdd.eeff

Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>port-channel</td>
<td>Configures the load-balancing method among the interfaces in the channel-group bundle.</td>
</tr>
<tr>
<td>load-balance ethernet</td>
<td></td>
</tr>
</tbody>
</table>
show port-channel summary

To display summary information about EtherChannels, use the `show port-channel summary` command.

```
show port-channel summary
```

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

- Global configuration mode
- EXEC mode

Command History

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0(0)N1(1a)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

Usage Guidelines

Before you use this command, you must configure an EtherChannel group using the `interface port-channel` command.

Examples

This example shows how to display summary information about EtherChannels:

```
switch# show port-channel summary
Flags:  D - Down        P - Up in port-channel (members)
        I - Individual  H - Hot-standby (LACP only)
        s - Suspended  r - Module-removed
        S - Switched  R - Routed
        U - Up (port-channel)

Group  Port-Channel  Type  Protocol Member Ports
-----------------------------------------------
1       Po1(SU)      Eth   LACP     Eth1/1(P) Eth1/2(P) Eth1/3(P)
        Eth1/4(P) Eth1/21(P) Eth1/22(P)
        Eth1/23(P) Eth1/24(P) Eth1/25(P)
        Eth1/26(P) Eth1/27(P) Eth1/28(P)
        Eth1/29(P) Eth1/30(P) Eth1/31(P)
        Eth1/32(P)
3       Po3(SU)      Eth   NONE     Eth1/9(P) Eth1/10(P) Eth1/13(P)
        Eth1/14(P) Eth1/40(P)
5       Po5(SU)      Eth   NONE     Eth3/5(P) Eth3/6(P)
6       Po6(SU)      Eth   NONE     Eth1/5(P) Eth1/6(P) Eth1/7(P)
        Eth1/8(P)
12      Po12(SU)     Eth   NONE     Eth3/3(P) Eth3/4(P)
15      Po15(SD)     Eth   NONE     --             
20      Po20(SU)     Eth   NONE     Eth1/17(P) Eth1/18(P) Eth1/19(D)
        Eth1/20(P)
24      Po24(SU)     Eth   LACP     Eth105/1/27(P) Eth105/1/28(P) Eth105/1/29(P)
```

Cisco Nexus 5000 Series NX-OS Command Reference
show port-channel summary

<table>
<thead>
<tr>
<th></th>
<th>Port</th>
<th>Type</th>
<th>Mode</th>
<th>Members</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>Po25(SU)</td>
<td>Eth</td>
<td>LACP</td>
<td>Eth105/1/30(P)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Eth105/1/31(P)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Eth105/1/32(P)</td>
</tr>
<tr>
<td>33</td>
<td>Po33(SD)</td>
<td>Eth</td>
<td>NONE</td>
<td>--</td>
</tr>
<tr>
<td>41</td>
<td>Po41(SD)</td>
<td>Eth</td>
<td>NONE</td>
<td>--</td>
</tr>
<tr>
<td>44</td>
<td>Po44(SD)</td>
<td>Eth</td>
<td>NONE</td>
<td>--</td>
</tr>
<tr>
<td>48</td>
<td>Po48(SD)</td>
<td>Eth</td>
<td>NONE</td>
<td>--</td>
</tr>
<tr>
<td>100</td>
<td>Po100(SD)</td>
<td>Eth</td>
<td>NONE</td>
<td>--</td>
</tr>
<tr>
<td>101</td>
<td>Po101(SD)</td>
<td>Eth</td>
<td>NONE</td>
<td>--</td>
</tr>
<tr>
<td>102</td>
<td>Po102(SU)</td>
<td>Eth</td>
<td>LACP</td>
<td>Eth102/1/2(P)</td>
</tr>
<tr>
<td>103</td>
<td>Po103(SU)</td>
<td>Eth</td>
<td>LACP</td>
<td>Eth102/1/3(P)</td>
</tr>
<tr>
<td>104</td>
<td>Po104(SU)</td>
<td>Eth</td>
<td>LACP</td>
<td>Eth102/1/4(P)</td>
</tr>
<tr>
<td>105</td>
<td>Po105(SU)</td>
<td>Eth</td>
<td>LACP</td>
<td>Eth102/1/5(P)</td>
</tr>
<tr>
<td>106</td>
<td>Po106(SU)</td>
<td>Eth</td>
<td>LACP</td>
<td>Eth102/1/6(P)</td>
</tr>
<tr>
<td>107</td>
<td>Po107(SU)</td>
<td>Eth</td>
<td>LACP</td>
<td>Eth102/1/7(P)</td>
</tr>
<tr>
<td>108</td>
<td>Po108(SU)</td>
<td>Eth</td>
<td>LACP</td>
<td>Eth102/1/8(P)</td>
</tr>
<tr>
<td>109</td>
<td>Po109(SU)</td>
<td>Eth</td>
<td>LACP</td>
<td>Eth102/1/9(P)</td>
</tr>
<tr>
<td>110</td>
<td>Po110(SU)</td>
<td>Eth</td>
<td>LACP</td>
<td>Eth102/1/10(P)</td>
</tr>
<tr>
<td>111</td>
<td>Po111(SU)</td>
<td>Eth</td>
<td>LACP</td>
<td>Eth102/1/11(P)</td>
</tr>
</tbody>
</table>

Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>channel-group</td>
<td>Assigns and configures a physical interface to an EtherChannel.</td>
</tr>
<tr>
<td>(Ethernet)</td>
<td></td>
</tr>
<tr>
<td>interface port-channel</td>
<td>Creates an EtherChannel interface and enters interface configuration mode.</td>
</tr>
</tbody>
</table>
To display the traffic statistics for EtherChannels, use the **show port-channel traffic** command.

\[
\text{show port-channel traffic [interface port-channel number[,subinterface-number]]}
\]

### Syntax Description

- **interface** *(Optional)*: Displays traffic statistics for a specified interface.
- **port-channel number** *(Optional)*: Displays information for a specified EtherChannel. The range is from 1 to 4096.
- **subinterface-number** *(Optional)*: Subinterface number. Use the EtherChannel number followed by a dot (.) indicator and the subinterface number. The format is `portchannel-number.subinterface-number`.

### Command Default

None

### Command Modes

EXEC mode

### Command History

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0(0)N1(1a)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

### Examples

This example shows how to display the traffic statistics for all EtherChannels:

```
switch# show port-channel traffic
ChanId  Port  Rx-Ucst  Tx-Ucst  Rx-Mcst  Tx-Mcst  Rx-Bcst  Tx-Bcst
------- ----- ------ ------ ------ ------ ------ ------
  10    Eth1/7  0.0%   0.0%   0.0%   0.0%   0.0%   0.0%
  10    Eth1/8  0.0%   0.0%   0.0%   0.0%   0.0%   0.0%
  10    Eth1/9  0.0%   0.0%   0.0%   0.0%   0.0%   0.0%
  10    Eth1/10 0.0%  0.0%   0.0%   0.0%   0.0%   0.0%
  4000   Eth1/1  0.0%   0.0%  99.64%  99.81%   0.0%   0.0%
  4000   Eth1/2  0.0%   0.0%  0.06%   0.06%   0.0%   0.0%
  4000   Eth1/3  0.0%   0.0%  0.23%   0.06%   0.0%   0.0%
  4000   Eth1/4  0.0%   0.0%  0.06%   0.06%   0.0%   0.0%
switch#
```

This example shows how to display the traffic statistics for a specific EtherChannel:

```
switch# show port-channel traffic interface port-channel 10
ChanId  Port  Rx-Ucst  Tx-Ucst  Rx-Mcst  Tx-Mcst  Rx-Bcst  Tx-Bcst
------- ----- ------ ------ ------ ------ ------ ------
  10    Eth1/7  0.0%   0.0%   0.0%   0.0%   0.0%   0.0%
  10    Eth1/8  0.0%   0.0%   0.0%   0.0%   0.0%   0.0%
  10    Eth1/9  0.0%   0.0%   0.0%   0.0%   0.0%   0.0%
  10    Eth1/10 0.0%  0.0%   0.0%   0.0%   0.0%   0.0%
switch#
```
### Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>port-channel</code></td>
<td>Configures the load-balancing algorithm for EtherChannels.</td>
</tr>
<tr>
<td><code>load-balance ethernet</code></td>
<td></td>
</tr>
<tr>
<td><code>show tech-support</code></td>
<td>Displays Cisco Technical Support information about EtherChannels.</td>
</tr>
<tr>
<td><code>port-channel</code></td>
<td></td>
</tr>
</tbody>
</table>

Send comments to nx5000-docfeedback@cisco.com
show port-channel usage

To display the range of used and unused EtherChannel numbers, use the `show port-channel usage` command.

```
show port-channel usage
```

**Syntax Description**
This command has no arguments or keywords.

**Command Default**
None

**Command Modes**
EXEC mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0(0)N1(1a)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**

This example shows how to display the EtherChannel usage information:

```
switch# show port-channel usage
Total 29 port-channel numbers used
============================================
Used  :   19 , 21 , 50 , 100 , 150 , 170 - 171 , 198 - 199 , 256
         301 , 400 - 401 , 1032 - 1033 , 1111 , 1504 , 1511 , 1514 , 1516 - 1520
         1532 , 1548 , 1723 , 1905 , 1912
         172 - 197 , 200 - 255 , 257 - 300 , 302 - 399 , 402 - 1031
         1034 - 1110 , 1112 - 1503 , 1505 - 1510 , 1512 - 1513 , 1515 , 1521 - 1531
         1533 - 1547 , 1549 - 1722 , 1724 - 1904 , 1906 - 1911 , 1913 - 4096
         (some numbers may be in use by SAN port channels)
```

switch#

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>port-channel</td>
<td>Configures the load-balancing algorithm for EtherChannels.</td>
</tr>
<tr>
<td>load-balance ethernet</td>
<td></td>
</tr>
<tr>
<td>show tech-support</td>
<td>Displays Cisco Technical Support information about EtherChannels.</td>
</tr>
<tr>
<td>port-channel</td>
<td></td>
</tr>
</tbody>
</table>
show resource

To display the number of resources currently available in the system, use the `show resource` command.

```
show resource [resource]
```

**Syntax Description**

- `resource` Resource name, which can be one of the following:
  - `port-channel`—Displays the number of EtherChannels available in the system.
  - `vlan`—Displays the number of VLANs available in the system.
  - `vrf`—Displays the number of virtual routing and forwardings (VRFs) available in the system.

**Command Default**

None

**Command Modes**

EXEC mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0(0)N1(1a)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**

This example shows how to display the resources available in the system:

```
switch# show resource

<table>
<thead>
<tr>
<th>Resource</th>
<th>Min</th>
<th>Max</th>
<th>Used</th>
<th>Unused</th>
<th>Avail</th>
</tr>
</thead>
<tbody>
<tr>
<td>vlan</td>
<td>16</td>
<td>4094</td>
<td>509</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>monitor-session</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>vrf</td>
<td>2</td>
<td>1000</td>
<td>2</td>
<td>0</td>
<td>998</td>
</tr>
<tr>
<td>port-channel</td>
<td>0</td>
<td>768</td>
<td>2</td>
<td>0</td>
<td>766</td>
</tr>
<tr>
<td>u4route-mem</td>
<td>32</td>
<td>32</td>
<td>1</td>
<td>31</td>
<td>31</td>
</tr>
<tr>
<td>u6route-mem</td>
<td>16</td>
<td>16</td>
<td>1</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>m4route-mem</td>
<td>58</td>
<td>58</td>
<td>0</td>
<td>58</td>
<td>58</td>
</tr>
<tr>
<td>m6route-mem</td>
<td>8</td>
<td>8</td>
<td>0</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>bundle-map</td>
<td>0</td>
<td>16</td>
<td>2</td>
<td>0</td>
<td>14</td>
</tr>
</tbody>
</table>
```

`switch#`

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>show interface</code></td>
<td>Displays information about EtherChannels.</td>
</tr>
<tr>
<td><code>port-channel</code></td>
<td></td>
</tr>
</tbody>
</table>
show running-config

To display the contents of the currently running configuration file, use the `show running-config` command.

```
  show running-config [all]
```

**Syntax Description**

<table>
<thead>
<tr>
<th>Syntax Description</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>all</td>
<td>(Optional) Displays the full operating information including default settings.</td>
</tr>
</tbody>
</table>

**Command Default**

None

**Command Modes**

EXEC mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0(0)N1(1a)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**

This example shows how to display information on the running configuration:

```
switch# show running-config
```

This example shows how to display detailed information on the running configuration:

```
switch# show running-config all
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show startup-config</td>
<td>Displays the contents of the startup configuration file.</td>
</tr>
</tbody>
</table>
show running-config spanning-tree

To display the running configuration for the Spanning Tree Protocol (STP), use the `show running-config spanning-tree` command.

```
show running-config spanning-tree [all]
```

### Syntax Description

<table>
<thead>
<tr>
<th>Syntax Description</th>
<th>all</th>
<th>(Optional) Displays current STP operating information including default settings.</th>
</tr>
</thead>
</table>

### Command Default

None

### Command Modes

EXEC mode

### Command History

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0(0)N1(1a)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

### Examples

This example shows how to display information on the running STP configuration:

```
switch# show running-config spanning-tree
```

This example shows how to display detailed information on the running STP configuration:

```
switch# show running-config spanning-tree all
```

### Note

Display output differs slightly depending on whether you are running Rapid Per VLAN Spanning Tree Plus (Rapid PVST+) or Multiple Spanning Tree (MST).

### Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>show spanning-tree</code></td>
<td>Displays information about STP.</td>
</tr>
</tbody>
</table>
show running-config vlan

To display the running configuration for a specified VLAN, use the `show running-config vlan` command.

```
show running-config vlan vlan-id
```

**Syntax Description**

```
vlan-id
```

Number of VLAN or range of VLANs. Valid numbers are from 1 to 4096.

**Command Default**

None

**Command Modes**

EXEC mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0(0)N1(1a)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Usage Guidelines**

This command provides information on the specified VLAN, including private VLANs. The display varies with your configuration. If you have configured the VLAN name, shutdown status, or suspended status, these are also displayed.

**Examples**

This example shows how to display the running configuration for VLAN 5:

```
switch# show running-config vlan 5
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show vlan</td>
<td>Displays information about all the VLANs on the switch.</td>
</tr>
</tbody>
</table>
show spanning-tree

To display information about the Spanning Tree Protocol (STP), use the `show spanning-tree` command.

```
show spanning-tree [blockedports | inconsistentports | pathcost method]
```

### Syntax Description

<table>
<thead>
<tr>
<th>Syntax Description</th>
<th>Command Default</th>
<th>Command Modes</th>
<th>Command History</th>
<th>Usage Guidelines</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>show spanning-tree</code></td>
<td>None</td>
<td>EXEC mode</td>
<td></td>
<td></td>
</tr>
<tr>
<td><code>blockedports</code></td>
<td>(Optional) Displays the alternate ports blocked by STP.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><code>inconsistentports</code></td>
<td>(Optional) Displays the ports that are in an inconsistent STP state.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><code>pathcost method</code></td>
<td>(Optional) Displays whether short or long path cost method is used. The method differs for Rapid Per VLAN Spanning Tree Plus (Rapid PVST+) (configurable, default is short) and Multiple Spanning Tree (MST) (nonconfigurable, operational value is always long).</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Command Default
None

### Command Modes
EXEC mode

### Command History

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0(0)N1(1a)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

### Usage Guidelines

The STP port type displays only when you have configured the port as either an STP edge port or an STP network port. If you have not configured the STP port type, no port type displays.

Table 3-2 describes the fields that are displayed in the output of `show spanning-tree` commands.

### Table 3-2 show spanning-tree Command Output Fields

<table>
<thead>
<tr>
<th>Field</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Role</td>
<td>Current port STP role. Valid values are as follows:</td>
</tr>
<tr>
<td></td>
<td>• Desg (designated)</td>
</tr>
<tr>
<td></td>
<td>• Root</td>
</tr>
<tr>
<td></td>
<td>• Altn (alternate)</td>
</tr>
<tr>
<td></td>
<td>• Back (backup)</td>
</tr>
</tbody>
</table>
### Chapter 3      Ethernet Show Commands

#### show spanning-tree

**Note**
Display output differs slightly depending on whether you are running Rapid Per VLAN Spanning Tree Plus (Rapid PVST+) or Multiple Spanning Tree (MST).

**Examples**
This example shows how to display spanning tree information:

```plaintext
switch# show spanning-tree

VLAN0001
Spanning tree enabled protocol rstp
Root ID     Priority  1
Address     000d.ecb0.fdbc
Cost        2
Port        4096 (port-channel1)
Hello Time  2 sec  Max Age 20 sec  Forward Delay 15 sec

Bridge ID  61441 (priority 61440 sys-id-ext 1)
Address     0005.9b78.6e7c
Hello Time  2 sec  Max Age 20 sec  Forward Delay 15 sec

<table>
<thead>
<tr>
<th>Interface</th>
<th>Role</th>
<th>Sts</th>
<th>Cost</th>
<th>Prio.Nbr</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Po1</td>
<td>Root</td>
<td>FWD 1</td>
<td>128.4096</td>
<td>(VPC peer-link)</td>
<td>Network P2p</td>
</tr>
<tr>
<td>Po3</td>
<td>Root</td>
<td>FWD 1</td>
<td>128.4098</td>
<td>(VPC)</td>
<td>P2p</td>
</tr>
<tr>
<td>Po123</td>
<td>Desg</td>
<td>FWD 4</td>
<td>128.4218</td>
<td>Edge</td>
<td>P2p</td>
</tr>
<tr>
<td>Eth1/11</td>
<td>Desg</td>
<td>BKN*2</td>
<td>128.139</td>
<td>P2p</td>
<td>*TYPE_Inc</td>
</tr>
<tr>
<td>Eth1/12</td>
<td>Desg</td>
<td>BKN*2</td>
<td>128.140</td>
<td>P2p</td>
<td>*TYPE_Inc</td>
</tr>
<tr>
<td>Eth1/15</td>
<td>Desg</td>
<td>BKN*2</td>
<td>128.143</td>
<td>P2p</td>
<td>*TYPE_Inc</td>
</tr>
<tr>
<td>Eth1/16</td>
<td>Desg</td>
<td>BKN*2</td>
<td>128.144</td>
<td>P2p</td>
<td>*TYPE_Inc</td>
</tr>
<tr>
<td>Eth1/33</td>
<td>Desg</td>
<td>FWD 2</td>
<td>128.161</td>
<td>Edge</td>
<td>P2p</td>
</tr>
<tr>
<td>Eth1/35</td>
<td>Desg</td>
<td>FWD 2</td>
<td>128.163</td>
<td>Edge</td>
<td>P2p</td>
</tr>
</tbody>
</table>
```

#### Table 3-2 show spanning-tree Command Output Fields (continued)

<table>
<thead>
<tr>
<th>Field</th>
<th>Definition</th>
</tr>
</thead>
</table>
| Sts   | Current port STP state. Valid values are as follows:  
- BLK (blocking)  
- DIS (disabled)  
- LRN (learning)  
- FWD (forwarding)  |

| Type | Status information. Valid values are as follows:  
- P2p/Shr—The interface is considered as a point-to-point (shared) interface by the spanning tree.  
- Edge—The port is configured as an STP edge port (either globally using the default command or directly on the interface) and no BPDU has been received.  
- Network—The port is configured as an STP network port (either globally using the default command or directly on the interface).  
- *ROOT_Inc, *LOOP_Inc, *PVID_Inc, *BA_Inc, and *TYPE_Inc—The port is in a broken state (BKN*) for an inconsistency. The broken states are Root inconsistent, Loopguard inconsistent, PVID inconsistent, Bridge Assurance inconsistent, or Type inconsistent. |
This example shows how to display the blocked ports in spanning tree:

```
switch(config)# show spanning-tree blockedports
Name                  Blocked Interfaces List
---------------------- ------------------------------------
VLAN0001              Eth1/11, Eth1/12, Eth1/15, Eth1/16
```

Number of blocked ports (segments) in the system : 4

switch#

This example shows how to determine if any ports are in any STP-inconsistent state:

```
switch# show spanning-tree inconsistentports
Name                  Interface              Inconsistency
---------------------- ---------------------- ------------------
VLAN0001              Eth1/11                Port Type Inconsistent
VLAN0001              Eth1/12                Port Type Inconsistent
VLAN0001              Eth1/15                Port Type Inconsistent
VLAN0001              Eth1/16                Port Type Inconsistent
```

Number of inconsistent ports (segments) in the system : 4

switch#

This example shows how to display the path cost method:

```
switch(config)# show spanning-tree pathcost method
Spanning tree default pathcost method used is short
```

### Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show spanning-tree active</td>
<td>Displays information about STP active interfaces only.</td>
</tr>
<tr>
<td>show spanning-tree bridge</td>
<td>Displays the bridge ID, timers, and protocol for the local bridge on the switch.</td>
</tr>
<tr>
<td>show spanning-tree brief</td>
<td>Displays a brief summary about STP.</td>
</tr>
<tr>
<td>show spanning-tree detail</td>
<td>Displays detailed information about STP.</td>
</tr>
<tr>
<td>show spanning-tree interface</td>
<td>Displays the STP interface status and configuration of specified interfaces.</td>
</tr>
<tr>
<td>show spanning-tree mst</td>
<td>Displays information about Multiple Spanning Tree (MST) STP.</td>
</tr>
</tbody>
</table>
### Command Description

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>show spanning-tree root</code></td>
<td>Displays the status and configuration of the root bridge for the STP instance to which this switch belongs.</td>
</tr>
<tr>
<td><code>show spanning-tree summary</code></td>
<td>Displays summary information about STP.</td>
</tr>
<tr>
<td><code>show spanning-tree vlan</code></td>
<td>Displays STP information for specified VLANs.</td>
</tr>
</tbody>
</table>
show spanning-tree active

To display Spanning Tree Protocol (STP) information on STP-active interfaces only, use the show spanning-tree active command.

    show spanning-tree active [brief | detail]

**Syntax Description**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>brief</td>
<td>(Optional) Displays a brief summary of STP interface information.</td>
</tr>
<tr>
<td>detail</td>
<td>(Optional) Displays a detailed summary of STP interface information.</td>
</tr>
</tbody>
</table>

**Command Default**

None

**Command Modes**

EXEC mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0(0)N1(1a)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**

This example shows how to display STP information on the STP-active interfaces:

    switch# show spanning-tree active

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show spanning-tree</td>
<td>Displays information about STP.</td>
</tr>
<tr>
<td>show spanning-tree bridge</td>
<td>Displays the bridge ID, timers, and protocol for the local bridge on the switch.</td>
</tr>
<tr>
<td>show spanning-tree brief</td>
<td>Displays a brief summary about STP.</td>
</tr>
<tr>
<td>show spanning-tree detail</td>
<td>Displays detailed information about STP.</td>
</tr>
<tr>
<td>show spanning-tree interface</td>
<td>Displays the STP interface status and configuration of specified interfaces.</td>
</tr>
<tr>
<td>show spanning-tree mst</td>
<td>Displays information about Multiple Spanning Tree (MST) STP.</td>
</tr>
<tr>
<td>show spanning-tree root</td>
<td>Displays the status and configuration of the root bridge for the STP instance to which this switch belongs.</td>
</tr>
<tr>
<td>show spanning-tree summary</td>
<td>Displays summary information about STP.</td>
</tr>
<tr>
<td>show spanning-tree vlan</td>
<td>Displays STP information for specified VLANs.</td>
</tr>
</tbody>
</table>
show spanning-tree bridge

To display the status and configuration of the local Spanning Tree Protocol (STP) bridge, use the `show spanning-tree bridge` command.

```
show spanning-tree bridge [address | brief | detail | forward-time | hello-time | id | max-age | priority | system-id | protocol]
```

**Syntax Description**

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>address</td>
<td>(Optional) Displays the MAC address for the STP local bridge.</td>
</tr>
<tr>
<td>brief</td>
<td>(Optional) Displays a brief summary of the status and configuration for the STP bridge.</td>
</tr>
<tr>
<td>detail</td>
<td>(Optional) Displays a detailed summary of the status and configuration for the STP bridge.</td>
</tr>
<tr>
<td>forward-time</td>
<td>(Optional) Displays the STP forward delay interval for the bridge.</td>
</tr>
<tr>
<td>hello-time</td>
<td>(Optional) Displays the STP hello time for the bridge.</td>
</tr>
<tr>
<td>id</td>
<td>(Optional) Displays the STP bridge identifier for the bridge.</td>
</tr>
<tr>
<td>max-age</td>
<td>(Optional) Displays the STP maximum-aging time for the bridge.</td>
</tr>
<tr>
<td>priority</td>
<td>(Optional) Displays the bridge priority for this bridge.</td>
</tr>
<tr>
<td>system-id</td>
<td>(Optional) Displays the bridge priority with the system ID extension for this bridge.</td>
</tr>
<tr>
<td>protocol</td>
<td>(Optional) Displays whether the Rapid Per VLAN Spanning Tree Plus (Rapid PVST+) or Multiple Spanning Tree (MST) protocol is active.</td>
</tr>
</tbody>
</table>

**Command Default**

None

**Command Modes**

EXEC mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0(0)N1(1a)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**

This example shows how to display STP information for the bridge:

```
switch# show spanning-tree bridge
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show spanning-tree</td>
<td>Displays information about STP.</td>
</tr>
<tr>
<td>show spanning-tree active</td>
<td>Displays information about STP active interfaces only.</td>
</tr>
</tbody>
</table>
### Command Description

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show spanning-tree</td>
<td>Displays a brief summary about STP.</td>
</tr>
<tr>
<td>brief</td>
<td></td>
</tr>
<tr>
<td>show spanning-tree</td>
<td>Displays detailed information about STP.</td>
</tr>
<tr>
<td>detail</td>
<td></td>
</tr>
<tr>
<td>show spanning-tree</td>
<td>Displays the STP interface status and configuration of specified interfaces.</td>
</tr>
<tr>
<td>interface</td>
<td></td>
</tr>
<tr>
<td>show spanning-tree</td>
<td>Displays information about Multiple Spanning Tree (MST) STP.</td>
</tr>
<tr>
<td>mst</td>
<td></td>
</tr>
<tr>
<td>show spanning-tree</td>
<td>Displays the status and configuration of the root bridge for the STP instance to which this switch belongs.</td>
</tr>
<tr>
<td>root</td>
<td></td>
</tr>
<tr>
<td>show spanning-tree</td>
<td>Displays summary information about STP.</td>
</tr>
<tr>
<td>summary</td>
<td></td>
</tr>
<tr>
<td>show spanning-tree</td>
<td>Displays STP information for specified VLANs.</td>
</tr>
<tr>
<td>vlan</td>
<td></td>
</tr>
</tbody>
</table>
show spanning-tree brief

To display a brief summary of the Spanning Tree Protocol (STP) status and configuration on the switch, use the `show spanning-tree brief` command.

```
show spanning-tree brief [active]
```

**Syntax Description**

<table>
<thead>
<tr>
<th><code>active</code></th>
<th>(Optional) Displays information about STP active interfaces only.</th>
</tr>
</thead>
</table>

**Command Default**

None

**Command Modes**

EXEC mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0(0)N1(1a)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**

This example shows how to display a brief summary of STP information:

```
switch(config)# show spanning-tree brief

VLAN0001
  Spanning tree enabled protocol rstp
  Root ID    Priority    32769
  Address    000d.ecb0.fc7c
  Cost       1
  Port       4495 (port-channel400)
  Hello Time 2 sec  Max Age 20 sec  Forward Delay 15 sec
  Bridge ID  Priority    32769 (priority 32768 sys-id-ext 1)
  Address    000d.ece7.df7c
  Hello Time 2 sec  Max Age 20 sec  Forward Delay 15 sec

  Interface        Role Sts Cost      Prio.Nbr Type
  ---------------- ---- --- --------- -------- --------------------------------
  Po19             Desg FWD 1         128.4114 Edge P2p
  Po400            Root FWD 1         128.4495 (vPC peer-link) Network P2p
  Eth170/1/17      Desg FWD 1         128.3857 Edge P2p
  Eth171/1/17      Desg FWD 2         128.3857 Edge P2p
  Eth171/1/8       Desg FWD 1         128.3976 (vPC) Edge P2p
  Eth198/1/11      Desg FWD 1         128.1291 (vPC) Edge P2p
  Eth199/1/13      Desg FWD 2         128.1677 Edge P2p

VLAN0300
  Spanning tree enabled protocol rstp
  Root ID    Priority    4396
```

```
--More--
```

switch#
## Chapter 3      Ethernet Show Commands

### show spanning-tree brief

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show spanning-tree</td>
<td>Displays information about STP.</td>
</tr>
<tr>
<td>show spanning-tree</td>
<td>Displays information about STP active interfaces only.</td>
</tr>
<tr>
<td>active</td>
<td></td>
</tr>
<tr>
<td>show spanning-tree</td>
<td>Displays the bridge ID, timers, and protocol for the local bridge on the</td>
</tr>
<tr>
<td>bridge</td>
<td>switch.</td>
</tr>
<tr>
<td>show spanning-tree</td>
<td>Displays detailed information about STP.</td>
</tr>
<tr>
<td>detail</td>
<td></td>
</tr>
<tr>
<td>show spanning-tree</td>
<td>Displays the STP interface status and configuration of specified interfaces.</td>
</tr>
<tr>
<td>interface</td>
<td></td>
</tr>
<tr>
<td>show spanning-tree</td>
<td>Displays information about Multiple Spanning Tree (MST) STP.</td>
</tr>
<tr>
<td>mst</td>
<td></td>
</tr>
<tr>
<td>show spanning-tree</td>
<td>Displays the status and configuration of the root bridge for the STP</td>
</tr>
<tr>
<td>root</td>
<td>instance to which this switch belongs.</td>
</tr>
<tr>
<td>show spanning-tree</td>
<td>Displays summary information about STP.</td>
</tr>
<tr>
<td>summary</td>
<td></td>
</tr>
<tr>
<td>show spanning-tree</td>
<td>Displays STP information for specified VLANs.</td>
</tr>
<tr>
<td>vlan</td>
<td></td>
</tr>
</tbody>
</table>
show spanning-tree detail

To display detailed information on the Spanning Tree Protocol (STP) status and configuration on the switch, use the `show spanning-tree detail` command.

```
show spanning-tree detail [active]
```

**Syntax Description**

| active | (Optional) Displays information about STP active interfaces only. |

**Command Default**

None

**Command Modes**

EXEC mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0(0)N1(1a)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**

This example shows how to display detailed information on the STP configuration:

```
switch(config)# show spanning-tree detail
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show spanning-tree</td>
<td>Displays information about STP.</td>
</tr>
<tr>
<td>show spanning-tree active</td>
<td>Displays information about STP active interfaces only.</td>
</tr>
<tr>
<td>show spanning-tree bridge</td>
<td>Displays the bridge ID, timers, and protocol for the local bridge on the switch.</td>
</tr>
<tr>
<td>show spanning-tree brief</td>
<td>Displays a brief summary about STP.</td>
</tr>
<tr>
<td>show spanning-tree interface</td>
<td>Displays the STP interface status and configuration of specified interfaces.</td>
</tr>
<tr>
<td>show spanning-tree mst</td>
<td>Displays information about Multiple Spanning Tree (MST) STP.</td>
</tr>
<tr>
<td>show spanning-tree root</td>
<td>Displays the status and configuration of the root bridge for the STP instance to which this switch belongs.</td>
</tr>
<tr>
<td>show spanning-tree summary</td>
<td>Displays summary information about STP.</td>
</tr>
<tr>
<td>show spanning-tree vlan</td>
<td>Displays STP information for specified VLANs.</td>
</tr>
</tbody>
</table>
show spanning-tree interface

To display information on the Spanning Tree Protocol (STP) interface status and configuration of specified interfaces, use the `show spanning-tree interface` command.

```
show spanning-tree interface {ethernet slot/port | port-channel number} [active | brief | detail] | brief [active] | cost | detail [active] | edge | inconsistency | priority | rootcost | state]
```

**Syntax Description**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>interface</td>
<td>Specifies the interface. The interface can be Ethernet or EtherChannel.</td>
</tr>
<tr>
<td>ethernet slot/port</td>
<td>Specifies the Ethernet interface slot number and port number. The slot number is from 1 to 255, and the port number is from 1 to 128.</td>
</tr>
<tr>
<td>port-channel number</td>
<td>Specifies the EtherChannel interface and number. The EtherChannel number is from 1 to 4096.</td>
</tr>
<tr>
<td>active</td>
<td>(Optional) Displays information about STP active interfaces only on the specified interfaces.</td>
</tr>
<tr>
<td>brief</td>
<td>(Optional) Displays brief summary of STP information on the specified interfaces.</td>
</tr>
<tr>
<td>detail</td>
<td>(Optional) Displays detailed STP information about the specified interfaces.</td>
</tr>
<tr>
<td>cost</td>
<td>(Optional) Displays the STP path cost for the specified interfaces.</td>
</tr>
<tr>
<td>edge</td>
<td>(Optional) Displays the STP-type edge port information for the specified interfaces.</td>
</tr>
<tr>
<td>inconsistency</td>
<td>(Optional) Displays the port STP inconsistency state for the specified interfaces.</td>
</tr>
<tr>
<td>priority</td>
<td>(Optional) Displays the STP port priority for the specified interfaces.</td>
</tr>
<tr>
<td>rootcost</td>
<td>(Optional) Displays the path cost to the root for specified interfaces.</td>
</tr>
<tr>
<td>state</td>
<td>(Optional) Displays the current port STP state.</td>
</tr>
</tbody>
</table>

**Command Default**

None

**Command Modes**

EXEC mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0(0)N1(1a)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Usage Guidelines**

The STP port type displays only when you have configured the port as either an STP edge port or an STP network port. If you have not configured the STP port type, no port type displays.

If you specify an interface that is not running STP, the switch returns an error message.

When you are running Multiple Spanning Tree (MST), this command displays the Per VLAN Spanning Tree (PVST) simulation setting.
If you are running Multiple Spanning Tree (MST), use the **show spanning-tree mst** command to show more detail on the specified interfaces.

### Examples

This example shows how to display STP information on a specified interface:

```
switch(config)# show spanning-tree interface ethernet 1/3
```

This example shows how to display detailed STP information on a specified interface:

```
switch(config)# show spanning-tree interface ethernet 1/3 detail
```

### Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show spanning-tree</td>
<td>Displays information about STP.</td>
</tr>
<tr>
<td>show spanning-tree</td>
<td>Displays information about STP active interfaces only.</td>
</tr>
<tr>
<td>show spanning-tree</td>
<td>Displays the bridge ID, timers, and protocol for the local bridge on the</td>
</tr>
<tr>
<td>bridge</td>
<td>switch.</td>
</tr>
<tr>
<td>show spanning-tree</td>
<td>Displays a brief summary about STP.</td>
</tr>
<tr>
<td>brief</td>
<td></td>
</tr>
<tr>
<td>show spanning-tree</td>
<td>Displays detailed information about STP.</td>
</tr>
<tr>
<td>detail</td>
<td></td>
</tr>
<tr>
<td>show spanning-tree</td>
<td>Displays information about Multiple Spanning Tree (MST) STP.</td>
</tr>
<tr>
<td>mst</td>
<td></td>
</tr>
<tr>
<td>show spanning-tree</td>
<td>Displays the status and configuration of the root bridge for the STP instance</td>
</tr>
<tr>
<td>root</td>
<td>to which this switch belongs.</td>
</tr>
<tr>
<td>show spanning-tree</td>
<td>Displays summary information about STP.</td>
</tr>
<tr>
<td>summary</td>
<td></td>
</tr>
<tr>
<td>show spanning-tree</td>
<td>Displays STP information for specified VLANs.</td>
</tr>
<tr>
<td>vlan</td>
<td></td>
</tr>
</tbody>
</table>
show spanning-tree mst

To display information on Multiple Spanning Tree (MST) status and configuration, use the show spanning-tree mst command.

```
show spanning-tree mst [instance-id [detail | interface [ethernet slot/port | port-channel number] [detail]]]
show spanning-tree mst [configuration [digest]]
show spanning-tree mst [detail | interface [ethernet slot/port | port-channel number] [detail]]
```

### Syntax Description

- **instance-id** (Optional) Multiple Spanning Tree (MST) instance range that you want to display. For example, 0 to 3, 5, 7 to 9.
- **detail** (Optional) Displays detailed Multiple Spanning Tree (MST) information.
- **interface** (Optional) Specifies the interface. The interface can be Ethernet or EtherChannel.
- **ethernet slot/port** (Optional) Specifies the Ethernet interface and its slot number and port number. The slot number is from 1 to 255, and the port number is from 1 to 128.
- **port-channel number** (Optional) Specifies the EtherChannel interface and number. The EtherChannel number is from 1 to 4096.
- **configuration** (Optional) Displays current Multiple Spanning Tree (MST) regional information including the VLAN-to-instance mapping of all VLANs.
- **digest** (Optional) Displays information about the MD5 digest.

### Command Default

None

### Command Modes

EXEC mode

### Command History

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0(0)N1(1a)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

### Usage Guidelines

If the switch is not running in STP Multiple Spanning Tree (MST) mode when you enter this command, it returns the following message:

```
ERROR: Switch is not in mst mode
```

### Examples

This example shows how to display STP information about Multiple Spanning Tree (MST) instance information for the VLAN ports that are currently active:

```
switch# show spanning-tree mst
```
This example shows how to display STP information about a specific Multiple Spanning Tree (MST) instance:

```
switch)# show spanning-tree mst 0
```

This example shows how to display detailed STP information about the Multiple Spanning Tree (MST) protocol:

```
switch)# show spanning-tree mst detail
```

This example shows how to display STP information about specified Multiple Spanning Tree (MST) interfaces:

```
switch)# show spanning-tree mst interface ethernet 8/2
```

This example shows how to display information about the Multiple Spanning Tree (MST) configuration:

```
switch)# show spanning-tree mst configuration
```

This example shows how to display the MD5 digest included in the current Multiple Spanning Tree (MST) configuration:

```
switch)# show spanning-tree mst configuration digest
```

See Table 3-2 on page 3-52 for descriptions of the fields that are displayed in the output of the `show spanning-tree` commands.

### Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show spanning-tree</td>
<td>Displays information about STP.</td>
</tr>
<tr>
<td>show spanning-tree active</td>
<td>Displays information about STP active interfaces only.</td>
</tr>
<tr>
<td>show spanning-tree bridge</td>
<td>Displays the bridge ID, timers, and protocol for the local bridge on the switch.</td>
</tr>
<tr>
<td>show spanning-tree brief</td>
<td>Displays a brief summary about STP.</td>
</tr>
<tr>
<td>show spanning-tree detail</td>
<td>Displays detailed information about STP.</td>
</tr>
<tr>
<td>show spanning-tree interface</td>
<td>Displays the STP interface status and configuration of specified interfaces.</td>
</tr>
<tr>
<td>show spanning-tree root</td>
<td>Displays the status and configuration of the root bridge for the STP instance to which this switch belongs.</td>
</tr>
<tr>
<td>show spanning-tree summary</td>
<td>Displays summary information about STP.</td>
</tr>
<tr>
<td>show spanning-tree vlan</td>
<td>Displays STP information for specified VLANs.</td>
</tr>
</tbody>
</table>
show spanning-tree root

To display the status and configuration of the Spanning Tree Protocol (STP) root bridge, use the `show spanning-tree root` command.

```
show spanning-tree root [address | brief | cost | detail | forward-time | hello-time | id | max-age | port | priority [system-id]]
```

**Syntax Description**

- **address** (Optional) Displays the MAC address for the STP root bridge.
- **brief** (Optional) Displays a brief summary of the status and configuration for the root bridge.
- **cost** (Optional) Displays the path cost from the root to this bridge.
- **detail** (Optional) Displays detailed information on the status and configuration for the root bridge.
- **forward-time** (Optional) Displays the STP forward delay interval for the root bridge.
- **hello-time** (Optional) Displays the STP hello time for the root bridge.
- **id** (Optional) Displays the STP bridge identifier for the root bridge.
- **max-age** (Optional) Displays the STP maximum-aging time for the root bridge.
- **port** (Optional) Displays which port is the root port.
- **priority** (Optional) Displays the bridge priority for the root bridge.
- **system-id** (Optional) Displays the bridge identifier with the system ID extension for the root bridge.

**Command Default**

None

**Command Modes**

EXEC mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0(0)N1(1a)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**

This example shows how to display information for the root bridge:

```
switch(config)# show spanning-tree root
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show spanning-tree</td>
<td>Displays information about STP.</td>
</tr>
<tr>
<td>show spanning-tree active</td>
<td>Displays information about STP active interfaces only.</td>
</tr>
</tbody>
</table>
## Chapter 3      Ethernet Show Commands

### Command Description

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show spanning-tree</td>
<td>Displays the bridge ID, timers, and protocol for the local bridge on the switch.</td>
</tr>
<tr>
<td>bridge</td>
<td></td>
</tr>
<tr>
<td>show spanning-tree</td>
<td>Displays a brief summary of STP information.</td>
</tr>
<tr>
<td>brief</td>
<td></td>
</tr>
<tr>
<td>show spanning-tree</td>
<td>Displays detailed information about STP.</td>
</tr>
<tr>
<td>detail</td>
<td></td>
</tr>
<tr>
<td>show spanning-tree</td>
<td>Displays the STP interface status and configuration of specified interfaces.</td>
</tr>
<tr>
<td>interface</td>
<td></td>
</tr>
<tr>
<td>show spanning-tree</td>
<td>Displays information about Multiple Spanning Tree (MST) STP.</td>
</tr>
<tr>
<td>mst</td>
<td></td>
</tr>
<tr>
<td>show spanning-tree</td>
<td>Displays summary information about STP.</td>
</tr>
<tr>
<td>summary</td>
<td></td>
</tr>
<tr>
<td>show spanning-tree</td>
<td>Displays STP information for specified VLANs.</td>
</tr>
<tr>
<td>vlan</td>
<td></td>
</tr>
</tbody>
</table>
show spanning-tree summary

To display summary Spanning Tree Protocol (STP) information on the switch, use the show spanning-tree summary command.

```
show spanning-tree summary [totals]
```

### Syntax Description

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>totals</td>
<td>(Optional) Displays totals only of STP information.</td>
</tr>
</tbody>
</table>

### Command Default

None

### Command Modes

EXEC mode

### Command History

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0(0)N1(1a)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

### Usage Guidelines

The display output for this command differs when you are running Rapid Per VLAN Spanning Tree Plus (Rapid PVST+) or Multiple Spanning Tree (MST).

### Examples

This example shows how to display a summary of STP information on the switch:

```
switch(config)# show spanning-tree summary
```

### Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show spanning-tree</td>
<td>Displays information about STP.</td>
</tr>
<tr>
<td>show spanning-tree</td>
<td>Displays information about STP active interfaces only.</td>
</tr>
<tr>
<td>show spanning-tree</td>
<td>Displays the bridge ID, timers, and protocol for the local bridge on the</td>
</tr>
<tr>
<td>bridge</td>
<td>switch.</td>
</tr>
<tr>
<td>show spanning-tree</td>
<td>Displays detailed information about STP.</td>
</tr>
<tr>
<td>detail</td>
<td></td>
</tr>
<tr>
<td>show spanning-tree</td>
<td>Displays the STP interface status and configuration of specified interfaces.</td>
</tr>
<tr>
<td>interface</td>
<td></td>
</tr>
<tr>
<td>show spanning-tree</td>
<td>Displays information about Multiple Spanning Tree (MST) STP.</td>
</tr>
<tr>
<td>mst</td>
<td></td>
</tr>
<tr>
<td>show spanning-tree</td>
<td>Displays the status and configuration of the root bridge for the STP instance to which this switch belongs.</td>
</tr>
<tr>
<td>root</td>
<td></td>
</tr>
<tr>
<td>show spanning-tree</td>
<td>Displays STP information for specified VLANs.</td>
</tr>
<tr>
<td>vlan</td>
<td></td>
</tr>
</tbody>
</table>
To display Spanning Tree Protocol (STP) information for specified VLANs, use the `show spanning-tree vlan` command.

```bash
show spanning-tree vlan [vlan-id] [active [brief | detail]]
show spanning-tree vlan [vlan-id] [blockedports]
show spanning-tree vlan [vlan-id] [bridge [address] | brief | detail | forward-time | hello-time | id | max-age | priority [system-id] | protocol]
show spanning-tree vlan [vlan-id] [brief [active]]
show spanning-tree vlan [vlan-id] [detail [active]]
show spanning-tree vlan [vlan-id] [inconsistentports]
show spanning-tree vlan [vlan-id] [interface [ethernet slot|port | port-channel number] [active [brief | detail]] | brief [active] | cost | detail [active] | edge | inconsistency | priority | rootcost | state]
show spanning-tree vlan [vlan-id] [root [address | brief | cost | detail | forward-time | hello-time | id | max-age | port | priority [system-id]]]
show spanning-tree vlan [vlan-id] [summary]
```

### Syntax Description

<table>
<thead>
<tr>
<th><strong>Parameter</strong></th>
<th><strong>Description</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>vlan-id</strong></td>
<td>VLAN or range of VLANs that you want to display.</td>
</tr>
<tr>
<td><strong>active</strong></td>
<td>(Optional) Displays information about STP VLANs and active ports.</td>
</tr>
<tr>
<td><strong>brief</strong></td>
<td>(Optional) Displays a brief summary of STP information for the specified VLANs.</td>
</tr>
<tr>
<td><strong>detail</strong></td>
<td>(Optional) Displays detailed STP information for the specified VLANs.</td>
</tr>
<tr>
<td><strong>blockedports</strong></td>
<td>(Optional) Displays the STP alternate ports in the blocked state for the specified VLANs.</td>
</tr>
<tr>
<td><strong>bridge</strong></td>
<td>(Optional) Displays the status and configuration of the bridge for the specified VLANs.</td>
</tr>
<tr>
<td><strong>address</strong></td>
<td>(Optional) Displays the MAC address for the specified STP bridge for the specified VLANs.</td>
</tr>
<tr>
<td><strong>forward-time</strong></td>
<td>(Optional) Displays the STP forward delay interval for the bridge for the specified VLANs.</td>
</tr>
<tr>
<td><strong>hello-time</strong></td>
<td>(Optional) Displays the STP hello time for the bridge for the specified VLANs.</td>
</tr>
<tr>
<td><strong>id</strong></td>
<td>(Optional) Displays the STP bridge identifier for the specified VLANs.</td>
</tr>
<tr>
<td><strong>max-age</strong></td>
<td>(Optional) Displays the STP maximum-aging time for the specified VLANs.</td>
</tr>
<tr>
<td><strong>priority</strong></td>
<td>(Optional) Displays the STP priority for the specified VLANs.</td>
</tr>
<tr>
<td><strong>system-id</strong></td>
<td>(Optional) Displays the bridge identification with the system ID added for the specified VLANs.</td>
</tr>
<tr>
<td><strong>protocol</strong></td>
<td>(Optional) Displays which STP protocol is active on the switch.</td>
</tr>
</tbody>
</table>
**show spanning-tree vlan**

(Optional) Displays the ports that are in an inconsistent STP state for specified VLANs.

### Command Default
None

### Command Modes
EXEC mode

### Command History

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0(0)N1(1a)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

### Examples

This example shows how to display STP information on VLAN 1:

```
switch# show spanning-tree vlan 1
```

### Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show spanning-tree</td>
<td>Displays information about STP.</td>
</tr>
<tr>
<td>show spanning-tree active</td>
<td>Displays information about STP active interfaces only.</td>
</tr>
<tr>
<td>show spanning-tree bridge</td>
<td>Displays the bridge ID, timers, and protocol for the local bridge on the switch.</td>
</tr>
</tbody>
</table>
### Command Description

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>show spanning-tree brief</code></td>
<td>Displays a brief summary about STP.</td>
</tr>
<tr>
<td><code>show spanning-tree detail</code></td>
<td>Displays detailed information about STP.</td>
</tr>
<tr>
<td><code>show spanning-tree interface</code></td>
<td>Displays the STP interface status and configuration of specified interfaces.</td>
</tr>
<tr>
<td><code>show spanning-tree mst</code></td>
<td>Displays information about Multiple Spanning Tree (MST) STP.</td>
</tr>
<tr>
<td><code>show spanning-tree root</code></td>
<td>Displays the status and configuration of the root bridge for the STP instance to which this switch belongs.</td>
</tr>
<tr>
<td><code>show spanning-tree summary</code></td>
<td>Displays summary information about STP.</td>
</tr>
</tbody>
</table>
show startup-config

To display the contents of the currently running configuration file, use the `show startup-config` command.

```
switch# show startup-config
```

**Syntax Description**

This command has no arguments or keywords.

**Command Default**

None

**Command Modes**

EXEC mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0(0)N1(1a)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**

This example shows how to display information from the startup configuration file:

```
switch# show startup-config
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show running-config</td>
<td>Displays the contents of the currently running configuration file.</td>
</tr>
</tbody>
</table>
show tech-support port-channel

To display troubleshooting information about EtherChannel interfaces, use the show tech-support port-channel command.

show tech-support port-channel

Syntax Description
This command has no arguments and keywords.

Command Default
None

Command Modes
EXEC mode

Command History
Release  Modification
4.0(0)N1(1a)  This command was introduced.

Usage Guidelines
The output from the show tech-support port-channel command is very long. To better manage this output, you can redirect the output to a file.

Examples
This example shows how to display Cisco technical support information for EtherChannel interfaces:

switch# show tech-support port-channel
`show port-channel internal event-history all`
Low Priority Pending queue: len(0), max len(2) [Thu Jul  8 04:05:04 2010]
High Priority Pending queue: len(0), max len(32) [Thu Jul  8 04:05:04 2010]
PCM Control Block info:
pcm_max_channels : 4096
pcm_max_channel_in_use : 1912
pc count : 29
hif-pc count : 20
Max PC Cnt : 768
===============================================
PORT CHANNELS:

port-channel19
channel : 19
bundle : 65535
ifindex : 0x16000012
admin mode : active
oper mode : active
fop ifindex : 0x1fc605c0
nports : 4
active : 4
pre cfg : 0
lt1 : 0
lif : 0
iod : 43
global id : 1

Low Priority Pending queue: len(0), max len(2) [Thu Jul  8 04:05:04 2010]
High Priority Pending queue: len(0), max len(32) [Thu Jul  8 04:05:04 2010]
PCM Control Block info:
pcm_max_channels : 4096
pcm_max_channel_in_use : 1912
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PORT CHANNELS:

port-channel19
channel : 19
bundle : 65535
ifindex : 0x16000012
admin mode : active
oper mode : active
fop ifindex : 0x1fc605c0
nports : 4
active : 4
pre cfg : 0
lt1 : 0
lif : 0
iod : 43
global id : 1
```show tech-support port-channel
flag          : 0
--More--
<<<output truncated--->
switch#
```

### Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>port-channel</td>
<td>Configures the load-balancing method among the interfaces in the channel-group bundle.</td>
</tr>
<tr>
<td>load-balance ethernet</td>
<td>Displays information on EtherChannel load balancing.</td>
</tr>
<tr>
<td>show port-channel load-balance</td>
<td></td>
</tr>
</tbody>
</table>
show udld

To display the Unidirectional Link Detection (UDLD) information for a switch, use the `show udld` command.

```
show udld [ethernet slot/port | global | neighbors]
```

**Syntax Description**

- `ethernet slot/port` Displays UDLD information for an Ethernet IEEE 802.3z interface. The `slot` number is from 1 to 255, and the `port` number is from 1 to 128.
- `global` Displays the UDLD global status and configuration information on all interfaces.
- `neighbors` Displays information about UDLD neighbor interfaces.

**Command Default**

None

**Command Modes**

EXEC mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0(1a)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**

This example shows how to display UDLD information for all interfaces:

```
switch# show udld

Interface Ethernet1/1
------------------------
Port enable administrative configuration setting: device-default
Port enable operational state: enabled
Current bidirectional state: bidirectional
Current operational state: advertisement - Single neighbor detected
Message interval: 15
Timeout interval: 5

Entry 1
-------
Expiration time: 41
Cache Device index: 1
Current neighbor state: bidirectional
Device ID: FLC12280095
Port ID: Ethernet1/1
Neighbor echo 1 devices: SSI130205RT
Neighbor echo 1 port: Ethernet1/1

Message interval: 15
Timeout interval: 5
CDP Device name: N5Kswitch-2(FlC12280095)

Interface Ethernet1/2
```

Send comments to nx5000-docfeedback@cisco.com
This example shows how to display the UDLD information for a specified interface:

```
switch# show udld ethernet 1/1
```

```
Interface Ethernet1/1
-------------------
Port enable administrative configuration setting: device-default
Port enable operational state: enabled
Current bidirectional state: bidirectional
Current operational state: advertisement - Single neighbor detected
Message interval: 15
Timeout interval: 5
Entry 1
---------
Expiration time: 41
Cache Device index: 1
Current neighbor state: bidirectional
Device ID: FLC12280095
Port ID: Ethernet1/1
Neighbor echo 1 devices: SSI130205RT
Neighbor echo 1 port: Ethernet1/1

Message interval: 15
Timeout interval: 5
CDP Device name: N5Kswitch-2(FLC12280095)
```

This example shows how to display the UDLD global status and configuration on all interfaces:

```
switch# show udld global
```

```
UDLD global configuration mode: enabled
UDLD global message interval: 15
```

This example shows how to display the UDLD neighbor interfaces:

```
switch# show udld neighbors
```

```
Port  Device Name  Device ID  Port ID    Neighbor State
-------------------------------------------------------------------
Ethernet1/1  FLC12280095   1   Ethernet1/1  bidirectional
Ethernet1/2  FLC12280095   1   Ethernet1/2  bidirectional
Ethernet1/3  FLC12280095   1   Ethernet1/3  bidirectional
Ethernet1/4  FLC12280095   1   Ethernet1/4  bidirectional
Ethernet1/7  JAF1346000H   1   Ethernet1/7  bidirectional
Ethernet1/8  JAF1346000H   1   Ethernet1/8  bidirectional
Ethernet1/9  JAF1346000C   1   Ethernet1/9  bidirectional
Ethernet1/10 JAF1346000C   1   Ethernet1/10 bidirectional
```

```
switch#
```
# show udld

## Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>udld</code> (configuration mode)</td>
<td>Configures the UDLD protocol on the switch.</td>
</tr>
<tr>
<td><code>udld</code> (Ethernet)</td>
<td>Configures the UDLD protocol on an Ethernet interface.</td>
</tr>
</tbody>
</table>
show vlan

To display VLAN information, use the `show vlan` command.

```
show vlan [brief | name {name} | summary]
```

**Syntax Description**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>brief</td>
<td>(Optional) Displays only a single line for each VLAN, naming the VLAN, status, and ports.</td>
</tr>
<tr>
<td>name name</td>
<td>(Optional) Displays information about a single VLAN that is identified by the VLAN name.</td>
</tr>
<tr>
<td>summary</td>
<td>(Optional) Displays the number of existing VLANs on the switch.</td>
</tr>
</tbody>
</table>

**Command Default**

None

**Command Modes**

EXEC mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0(0)N1(1a)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Usage Guidelines**

This command displays information for all VLANs, including private VLANs, on the switch.

Each access port can belong to only one VLAN. Trunk ports can be on multiple VLANs.

**Note**

Although a port can be associated with a VLAN as an access VLAN, a native VLAN, or one of the trunk allowed ports, only access VLANs are shown under Ports in the display.

If you shut down a VLAN using the `state suspend` or the `state active` command, these values appear in the Status field:

- suspended—VLAN is suspended.
- active—VLAN is active.

If you shut down a VLAN using the `shutdown` command, these values appear in the Status field:

- act/lshut—VLAN status is active but shut down locally.
- sus/lshut—VLAN status is suspended but shut down locally.

If a VLAN is shut down internally, these values appear in the Status field:

- act/ishut—VLAN status is active but shut down internally.
- sus/ishut—VLAN status is suspended but shut down internally.

If a VLAN is shut down locally and internally, the value that is displayed in the Status field is act/ishut or sus/ishut. If a VLAN is shut down locally only, the value that is displayed in the Status field is act/lshut or sus/lshut.
Examples

This example shows how to display information for all VLANs on the switch:
```
switch# show vlan
```

This example shows how to display the VLAN name, status, and associated ports only:
```
switch# show vlan brief
```

This example shows how to display the VLAN information for a specific VLAN by name:
```
switch# show vlan name test
```

This example shows how to display information about the number of VLANs configured on the switch:
```
switch# show vlan summary
```

Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show interface</td>
<td>Displays information about the ports, including those in private VLANs.</td>
</tr>
<tr>
<td>switchport</td>
<td></td>
</tr>
<tr>
<td>show vlan private-vlan</td>
<td>Displays private VLAN information.</td>
</tr>
</tbody>
</table>

show vlan dot1Q tag native

To display the status of tagging on the native VLANs, use the `show vlan dot1Q tag native` command.

```
show vlan dot1Q tag native
```

**Syntax Description**

This command has no arguments or keywords.

**Command Default**

None

**Command Modes**

EXEC mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0(0)N1(1a)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**

This example shows how to display the status of 802.1Q tagging on the native VLANs:

```
switch# show vlan dot1Q tag native
vlan dot1q native tag is enabled
switch#
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>vlan dot1q tag native</code></td>
<td>Enables dot1q (IEEE 802.1Q) tagging for all native VLANs on all trunked ports on the switch.</td>
</tr>
</tbody>
</table>
show vlan id

To display information and statistics for an individual VLAN or a range of VLANs, use the `show vlan id` command.

```
show vlan id {vlan-id}
```

**Syntax Description**

- `vlan-id` VLAN or range of VLANs that you want to display.

**Command Default**

None

**Command Modes**

EXEC mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0(0)N1(1a)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Usage Guidelines**

Use this command to display information and statistics on an individual VLAN or a range of VLANs, including private VLANs.

**Note**

You can also display information about individual VLANs using the `show vlan name` command.

**Examples**

This example shows how to display information for the individual VLAN 5:

```
switch# show vlan id 5
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>show vlan</code></td>
<td>Displays information about VLANs on the switch.</td>
</tr>
</tbody>
</table>
show vlan private-vlan

To display private VLAN information, use the show vlan private-vlan command.

```
show vlan [id {vlan-id}] private-vlan [type]
```

**Syntax Description**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>id vlan-id</td>
<td>(Optional) Displays private VLAN information for the specified VLAN.</td>
</tr>
<tr>
<td>type</td>
<td>(Optional) Displays the private VLAN type (primary, isolated, or community).</td>
</tr>
</tbody>
</table>

**Command Default**

None

**Command Modes**

EXEC mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0(0)N1(1a)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**

This example shows how to display information on all private VLANs on the switch:

```
switch(config)# show vlan private-vlan
```

This example shows how to display information for a specific private VLAN:

```
switch(config)# show vlan id 42 private-vlan
```

This example shows how to display information on the types of all private VLANs on the switch:

```
switch(config)# show vlan private-vlan type
```

This example shows how to display information on the type for the specified private VLAN:

```
switch(config)# show vlan id 42 private-vlan type
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show interface private-vlan mapping</td>
<td>Displays information about the private VLAN mapping between the primary and secondary VLANs so that both VLANs share the same primary VLAN interface.</td>
</tr>
<tr>
<td>show interface switchport</td>
<td>Displays information about the ports, including those in private VLANs.</td>
</tr>
<tr>
<td>show vlan</td>
<td>Displays information about all the VLANs on the switch.</td>
</tr>
</tbody>
</table>
show vtp status

To display the VLAN Trunking Protocol (VTP) domain status information, use the `show vtp status` command.

```
switch# show vtp status
VTP Version : 1
Configuration Revision : 0
Maximum VLANs supported locally : 1005
VTP Operating Mode : Transparent
VTP Domain Name :
VTP Pruning Mode : Disabled
VTP V2 Mode : Disabled
VTP Traps Generation : Disabled
switch#
```

**Syntax Description**
This command has no arguments or keywords.

**Command Default**
None

**Command Modes**
EXEC mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.2(1)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Usage Guidelines**
Before you use this command, you must enable VTP on the switch by using the `feature vtp` command.

**Examples**
This example shows how to display the VTP domain status:

```
switch# show vtp status
VTP Version : 1
Configuration Revision : 0
Maximum VLANs supported locally : 1005
VTP Operating Mode : Transparent
VTP Domain Name :
VTP Pruning Mode : Disabled
VTP V2 Mode : Disabled
VTP Traps Generation : Disabled
switch#
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>feature vtp</td>
<td>Enables VTP on the switch.</td>
</tr>
<tr>
<td>vtp domain</td>
<td>Configures the VTP domain.</td>
</tr>
<tr>
<td>vtp mode</td>
<td>Configures the VTP device mode.</td>
</tr>
<tr>
<td>vtp version</td>
<td>Configures the VTP version.</td>
</tr>
</tbody>
</table>
show vtp status