Show Commands

show bfd neighbors

To display information about Bidirectional Forwarding Detection (BFD) neighbors, use the **show bfd neighbors** command.

show bfd neighbors {[{**multihop** | **application** *name* | {**dest-ip** | **src-ip**} *ipaddr* **interface** *int-if*}] | [**vrf** *vrf-name*]} [**details**]

Syntax Description

multihop	(Optional) Displays BFD multihop session details.
application *name*	(Optional) Displays BFD information for the named protocol that BFD is enabled on.
dest-ip *ipaddr*	(Optional) Displays BFD information for the destination IP address. The IP address is in dotted decimal notation for IPv4 and in A:B::C:D format for IPv6.
src-ip *ipaddr*	(Optional) Displays BFD information for the source IP address. The IP address is in dotted decimal notation for IPv4 and in A:B::C:D format for IPv6.
interface *int-if*	(Optional) Displays BFD information for the interface. Use the **?** keyword to display a list of supported interfaces.
vrf *vrf-name*	(Optional) Displays BFD information for the virtual routing and forwarding (VRF) instance.
details	(Optional) Displays detailed BFD information.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
8.1(1)	The multihop keyword was added.
5.0(2)	This command was introduced.

Usage Guidelines

Use the **show bfd neighbors** command to display information about BFD sessions. If you use the applications keyword, the application name is one of the following:

- bfd_app (bfd_app is a stub client and not real client)
- bgp
- eigrp
- hsrp
- isis
- ospf

- pim
- static

This command does not require a license.

Examples

This example shows how to display the output from the show bfd neighbors command:

```
switch# show bfd neighbors
OurAddr  NeighAddr  LD/RD                  RH/RS    Holdown(mult)     State      Int
10.0.0.2  10.0.0.1  1124073474/1107296257     Up         582(3)           Up         Po10
```

This example shows how to display the output from the **show bfd neighbors application details** command for BFD:

```
switch# show bfd neighbors application bfd_app details
OurAddr NeighAddr LD/RD                 RH/RS       Holdown(mult)     State       Int
1.1.1.2 1.1.1.1 1090519041/1107296257    Up            137(3)          Up          Eth4/37
Session state is Up and not using echo function
Local Diag: 0, Demand mode: 0, Poll bit: 0
MinTxInt: 50000 us, MinRxInt: 50000 us, Multiplier: 3
Received MinRxInt: 50000 us, Received Multiplier: 3
Holdown (hits): 150 ms (2), Hello (hits): 50 ms (1232223)
Rx Count: 1267540, Rx Interval (ms) min/max/avg: 0/1789/44 last: 12 ms ago
Tx Count: 1232223, Tx Interval (ms) min/max/avg: 41/41/41 last: 13 ms ago
Registered protocols:  bfd_app
Uptime:  0day 15hour 5minute 8second 430ms
Last packet: Version: 1                - Diagnostic: 0
             State bit: Up             - Demand bit: 0
             Poll bit: 0               - Final bit: 0
             Multiplier: 3             - Length: 24
             My Discr.: 1107296257     - Your Discr.: 1090519041
             Min tx interval: 50000    - Min rx interval: 50000
             Min Echo interval: 0
```

This example shows how to display information about BFD multihop sessions:

```
switch# show bfd neighbors multihop details

OurAddr         NeighAddr       LD/RD                 RH/RS           Holdown(mult)
State       Int               Vrf                      Type
200.1.1.1       100.1.1.1       1090519058/1107296266 Up              695(3)            Up
                            default                   MH

Session state is Up and not using echo function

Session type: Multihop
Local Diag: 0, Demand mode: 0, Poll bit: 0, Authentication: None
MinTxInt: 250000 us, MinRxInt: 250000 us, Multiplier: 20
Received MinRxInt: 250000 us, Received Multiplier: 3
Holdown (hits): 750 ms (2), Hello (hits): 250 ms (622317)
Rx Count: 714572, Rx Interval (ms) min/max/avg: 0/2210/196 last: 54 ms ago
Tx Count: 622317, Tx Interval (ms) min/max/avg: 187/187/187 last: 146 ms ago
Registered protocols:  bgp
Uptime: 0 days 12 hrs 21 mins 59 secs
Last packet: Version: 1                - Diagnostic: 0
             State bit: Up             - Demand bit: 0
             Poll bit: 0               - Final bit: 0
             Multiplier: 3             - Length: 24
             My Discr.: 1107296266     - Your Discr.: 1090519058
             Min tx interval: 250000   - Min rx interval: 250000
```

```
            Min Echo interval: 0      - Authentication bit: 0
Hosting LC: 9, Down reason: None, Reason not-hosted: None, Offloaded: No
```

Table 1: show bfd neighbors Field Descriptions, on page 5 describes the significant fields shown in the display.

Table 1: show bfd neighbors Field Descriptions

Field	Description
OurAddr	IP address of the interface for which the **show bfd neighbors** command was entered.
NeighAddr	IPv4 or IPv6 address of the BFD adjacency or neighbor.
LD/RD	Local discriminator and remote discriminator being used for the session.
RH	Remote Heard—Indicates that the remote BFD neighbor has been heard.
Holdown(mult)	Detect timer multiplier that is used for this session.
State	State of the interface—Up or Down.
Int	Interface type and slot/port.
Session state is UP and not using echo function	BFD is up and not running in echo mode.
RX Count	Number of BFD control packets that have been received from the BFD neighbor.
TX Count	Number of BFD control packets that have been sent by the BFD neighbor.
TX Interval	Interval, in milliseconds, between sent BFD packets.
Registered protocols	Routing protocols that have been registered with BFD.
Last packet: Version:	BFD version detected and run between the BFD neighbors.
Diagnostic	Diagnostic code specifying the local system's reason for the last transition of the session from Up to some other state. State values are as follows: • 0—No Diagnostic • 1—Control Detection Time Expired • 2—Echo Function Failed • 3—Neighbor Signaled Session Down • 4—Forwarding Plane Reset • 5—Path Down • 6—Concentrated Path Down • 7—Administratively Down

Field	Description
Demand bit	Demand Mode bit. If set, the transmitting system wants to operate in demand mode. BFD has two modes—asynchronous and demand. The Cisco implementation of BFD supports only asynchronous mode.
Poll bit	Poll bit. If the Poll bit is set, the transmitting system is requesting verification of connectivity or of a parameter change.
Final bit	Final bit. If the Final bit is set, the transmitting system is responding to a received BFD control packet that had a Poll (P) bit set.
Multiplier	Detect time multiplier. The negotiated transmit interval, multiplied by the detect time multiplier, determines the detection time for the transmitting system in BFD asynchronous mode. The detect time multiplier is similar to the hello multiplier in Intermediate System-to-Intermediate System (IS-IS), which is used to determine the hold timer: (hello interval) * (hello multiplier) = hold timer. If a hello packet is not received within the hold-timer interval, a failure has occurred. Similarly, for BFD: (transmit interval) * (detect multiplier) = detect timer. If a BFD control packet is not received from the remote system within the detect-timer interval, a failure has occurred.
Length	Length of the BFD control packet, in bytes.
My Discr.	My Discriminator. Unique, nonzero discriminator value generated by the transmitting system used to demultiplex multiple BFD sessions between the same pair of systems.
Your Discr.	Your Discriminator. The discriminator received from the corresponding remote system. This field reflects the received value of My Discriminator or is zero if that value is unknown.
Min tx interval	Minimum transmission interval, in microseconds, that the local system wants to use when sending BFD control packets.
Min rx interval	Minimum receipt interval, in microseconds, between received BFD control packets that the system can support.
Min Echo interval	Minimum interval, in microseconds, between received BFD control packets that the system can support. If the value is zero, the transmitting system does not support the receipt of BFD echo packets.
Vrf	Virtual routing and forwarding instance (VRF). The BFD session belongs to the specified VRF.
Type	Session type. The session type is either single hop (SH) or multihop (MH).

Related Commands

Command	Description
bfd echo	Enables BFD echo mode.

show cfs application

To display information about applications that are currently enabled to use Cisco Fabric Services (CFS) distribution, use the **show cfs application**command.

show cfs application [**name** *application_name*]

Syntax Description

name *application_name*	(Optional) Displays the name of a specific application.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
7.1(1)D1(0)	The output of the command was updated.
4.1(2)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to display CFS information about applications that are currently enabled to use CFS distribution:

```
switch# show cfs application
----------------------------------------------
 Application     Enabled    Scope
----------------------------------------------
 ntp              No        Physical-fc-ip
 stp              Yes       Physical-eth
 vpc              Yes       Physical-eth
 vpc-config-sync  Yes       Physical-eth
 igmp             Yes       Physical-eth
 l2fm             Yes       Physical-eth
 role             No        Physical-fc-ip
 radius           No        Physical-fc-ip
 callhome         Yes       Physical-fc-ip
Total number of entries = 9
```

This example shows how to display CFS information about the Call Home application:

```
switch# show cfs application name callhome
 Enabled          :  Yes
 Timeout          :  20s
 Merge Capable    :  Yes
 Scope            :  Physical-fc-ip
 Region           :  4
```

Related Commands

Command	Description
show *application_name* **session status**	Displays the CFS configuration session status for the application, including the last action, the result, and the reason if there was a failure.
show cfs internal	Displays information internal to CFS including memory statistics, event history, and so on.
show cfs lock	Displays all active CFS fabric locks.
show cfs merge status name	Displays the merge status for a given CFS application.
show cfs peers	Displays all the CFS peers in the physical fabric.
show cfs regions	Displays all the CFS applications with peers and region information.
show cfs status	Displays the status of CFS distribution on the device as well as IP distribution information.
show tech-support cfs	Displays information about the CFS configuration required by technical support when resolving a CFS issue.
show logging level cfs	Displays the CFS logging configuration.

show errdisable

To display the errdisable recovery and detection run-time information, use the **show errdisable** command.

show errdisable {**detect** | **recovery**}

Syntax Description

detect	Enables errdisable detection on all causes.
recovery	Enables automatic errdisable recovery from all causes.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
6.2(2)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to display errdisable detection on all cases:

```
switch# show errdisable detect
ErrDisable Reason               Timer Status
-----------------               ------------
link-flap                       enabled
udld                            enabled
bpduguard                       enabled
loopback                        enabled
storm-ctrl                      enabled
sec-violation                   enabled
psec-violation                  enabled
vpc-peerlink                    enabled
failed-port-state               enabled
event-debug                     enabled
event-debug1                    enabled
event-debug2                    enabled
event-debug3                    enabled
event-debug4                    enabled
switch#
This example shows how to display errdisable recovery for all the cases:
switch# show errdisable recovery
ErrDisable Reason               Timer Status
-----------------               ------------
link-flap                       disabled
udld                            disabled
bpduguard                       disabled
loopback                        disabled
storm-ctrl                      disabled
sec-violation                   disabled
psec-violation                  disabled
vpc-peerlink                    disabled
failed-port-state               disabled
```

```
event-debug                     disabled
event-debug1                    disabled
event-debug2                    disabled
event-debug3                    disabled
event-debug4                    disabled
        Timer interval: 300
switch#
```

Related Commands

Command	Description
bfd echo	Enables BFD echo mode.

show ethernet oam configuration

To display the current active Ethernet OAM configuration on an interface, use the **show ethernet oam configuration** command in EXEC mode.

show ethernet oam configuration [**interface** *type* *interface-path-id*]

Syntax Description

interface*type*	(Optional) Displays information about the specified interface type.
interface-path-id	(Optional) Physical interface or virtual interface. **Note** Use the **show interfaces** command to see a list of all interfaces currently configured on the switch.

Command Default

If no parameters are specified, the configurations for all Ethernet OAM interfaces is displayed.

Command Modes

EXEC mode.

Supported User Roles

network-admin

vdc--admin

network---operator

vdc-operator

Command History

Release	Modification
7.3(0)D1(1)	This command was introduced.

Usage Guidelines

This command displays the Ethernet OAM configuration information for all interfaces, or a specified interface.

This command does not require a license.

The following example shows how to display Ethernet OAM configuration information for a specific interface:

```
switch# show ethernet oam configuration interface ethernet 2/19

Thu Aug 5 21:54:34.050 DST
Ethernet2/19:
Hello interval: 1s
Link monitoring enabled: Y
Remote loopback enabled: N
Mib retrieval enabled: N
Uni-directional link-fault detection enabled: N
Configured mode: Active
Connection timeout: 5
Symbol period window: 0
Symbol period low threshold: 1
Symbol period high threshold: None
Frame window: 1000
Frame low threshold: 1
```

```
Frame high threshold: None
Frame period window: 1000
Frame period low threshold: 1
Frame period high threshold: None
Frame seconds window: 60000
Frame seconds low threshold: 1
Frame seconds high threshold: None
High threshold action: None
Link fault action: Log
Dying gasp action: Log
Critical event action: Log
Discovery timeout action: Log
Capabilities conflict action: Log
Wiring conflict action: Error-Disable
Session up action: Log
Session down action: Log
Remote loopback action: Log
Require remote mode: Ignore
Require remote MIB retrieval: N
Require remote loopback support: N
Require remote link monitoring: N
```

The following example shows how to display the configuration for all EOAM interfaces:

```
switch# show ethernet oam configuration

Thu Aug 5 22:07:06.870 DST
Ethernet2/19:
Hello interval: 1s
Link monitoring enabled: Y
Remote loopback enabled: N
Mib retrieval enabled: N
Uni-directional link-fault detection enabled: N
Configured mode: Active
Connection timeout: 5
Symbol period window: 0
Symbol period low threshold: 1
Symbol period high threshold: None
Frame window: 1000
Frame low threshold: 1
Frame high threshold: None
Frame period window: 1000
Frame period low threshold: 1
Frame period high threshold: None
Frame seconds window: 60000
Frame seconds low threshold: 1
Frame seconds high threshold: None
High threshold action: None
Link fault action: Log
Dying gasp action: Log
Critical event action: Log
Discovery timeout action: Log
Capabilities conflict action: Log
Wiring conflict action: Error-Disable
Session up action: Log
Session down action: Log
Remote loopback action: Log
Require remote mode: Ignore
Require remote MIB retrieval: N
Require remote loopback support: N
Require remote link monitoring: N
```

show ethernet oam discovery

To display the currently configured OAM information of Ethernet OAM sessions on interfaces, use the **show ethernet oam discovery** command in EXEC mode.

show ethernet oam discovery [{**brief** | [**brief**] **interface** *type* *interface-path-id*}]

Syntax Description

brief	Displays minimal, currently configured OAM information in table form.
interface*type*	(Optional) Displays information about the specified interface type.
interface-path-id	Physical interface or virtual interface. **Note** Use the **show interfaces** command to see a list of all interfaces currently configured on the switch.

Command Default

Displays detailed information for Ethernet OAM sessions on all interfaces.

Command Modes

EXEC mode

Supported User Roles

network-admin

vdc--admin

network--operator

vdc-operator

Command History

Release	Modification
7.3(0)D1(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

The following example shows how to display the minimal, currently configured OAM information for Ethernet OAM sessions on all interfaces:

```
switch# show ethernet oam discovery brief


Sat Jul 4 13:52:42.949 PST
Flags:
L - Link Monitoring support
M - MIB Retrieval support
R - Remote Loopback support
U - Unidirectional detection support
* - data is unavailable


Local
Interface  Remote MAC Address Remote Vendor Mode Capability
---------- ------------------ -------------      ----------
```

```
Gi0/1/5/1  0010.94fd.2bfa     00000A Active        L
Gi0/1/5/2  0020.95fd.3bfa     00000B Active        M
Gi0/1/6/1  0030.96fd.6bfa     00000C Passive       L R
Fa0/1/3/1  0080.09ff.e4a0     00000C Active        L R
```

The following example shows how to display detailed, currently configured OAM information for the Ethernet OAM session on a specific interface:

```
switch# show ethernet oam discovery interface ethernet 2/19

Sat Jul 4 13:56:49.967 PST
Ethernet2/19:
Local client
------------
Administrative configuration:
PDU revision: 1
Mode: Active
Unidirectional support: N
Link monitor support: Y
Remote loopback support: N
MIB retrieval support: N
Maximum PDU size: 1500
Mis-wiring detection key: 5E9D
Operational status:
Port status: Active send
Loopback status: None
Interface mis-wired: N

Remote client
-------------
MAC address: 0030.96fd.6bfa
Vendor (OUI): 00.00.0C (Cisco)
Administrative configuration:
PDU revision: 5
Mode: Passive
Unidirectional support: N
Link monitor support: Y
Remote loopback support: Y
MIB retrieval support: N
Maximum PDU size: 1500
```

Related Commands

Command	Description
show ethernet oam configuration	Displays the current active Ethernet OAM configuration on an interface
show ethernet oam statistics	Displays the local and remote Ethernet OAM statistics for interfaces.
show ethernet oam interfaces	Displays the current state of Ethernet OAM interfaces.

show ethernet oam event-log

To display the most recent OAM event logs per interface, use the **show ethernet oam event-log** command in EXEC mode.

show ethernet oam event-log [{**detail** | [**detail**] *interface type interface-path-id*}]

Syntax Description

interface *typeinterface-path-id*	Filters the output to only include events for the specified interface.
detail	Displays additional details like threshold value, breaching value, total running errors and window size of a particular interface.

Command Default

This command displays event logs for all interfaces which have OAM configured.

Command Modes

EXEC mode.

Supported User Roles

network-admin

vdc--admin

network--operator

vdc-operator

Command History

Release	Modification
7.3(0)D1(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

The following example shows how to display the event logs for all interfaces which have OAM configured:

```
switch# show ethernet oam event-log

Wed Jan 23 06:16:46.684 PST
Local Action Taken:
N/A - No action needed EFD - Interface brought down using EFD
None - No action taken Err.D - Interface error-disabled
Logged - System logged


Ethernet2/19
================================================================================
Time                     Type            Loc'n  Action Threshold Breaching Value
----------------------- --------------  ------ ------ --------- ---------------
Wed Jan 23 06:13:25 PST Symbol period  Local   N/A    1         4
Wed Jan 23 06:13:33 PST Frame          Local   N/A    1         6
Wed Jan 23 06:13:37 PST Frame period   Local   None   9         12
Wed Jan 23 06:13:45 PST Frame seconds  Local   N/A    1         10
Wed Jan 23 06:13:57 PST Dying gasp     Remote Logged  N/A       N/A
```

```
Ethernet2/20
================================================================================
Time                       Type           Loc'n  Action Threshold Breaching Value
-------------------------- -------------- ------ ------ --------- ---------------
Wed Jan 23 06:26:14 PST    Dying gasp     Remote Logged  N/A       N/A
Wed Jan 23 06:33:25 PST    Symbol period  Local  N/A     1         4
Wed Jan 23 06:43:33 PST    Frame period   Remote N/A     9         12
Wed Jan 23 06:53:37 PST    Critical event Remote Logged  N/A       N/A
Wed Jan 23 07:13:45 PST    Link fault     Remote EFD     N/A       N/A
Wed Jan 23 07:18:23 PST    Dying gasp     Local  Logged  N/A       N/A
```

Related Commands

Command	Description
show ethernet oam configuration	Displays the current active Ethernet OAM configuration on an interface.
show ethernet oam discovery	Displays the current status of Ethernet OAM sessions.
show ethernet oam interfaces	Displays the current state of Ethernet OAM interfaces.

show ethernet oam statistics

To display the local and remote Ethernet OAM statistics for interfaces, use the **show ethernet oam statistics** command in EXEC mode.

show ethernet oam statistics [**interface** *type* *interface-path-id*]

Syntax Description

interface *type*	(Optional) Displays information about the specified interface type. For more information, use the question mark (?) online help function.
interface-path-id	Physical interface or virtual interface. **Note** Use the **show interfaces** command to see a list of all interfaces currently configured on the switch.

Command Default

No parameters displays statistics for all Ethernet OAM interfaces.

Command Modes

EXEC mode.

Supported User Roles

network-admin

vdc--admin

network--operator

vdc-operator

Command History

Release	Modification
7.3(0)D1(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

The following example shows how to display Ethernet OAM statistics for a specific interface:

```
switch# show ethernet oam statistics interface ethernet 2/19

Ethernet2/19:
Counters
--------
Information OAMPDU Tx 161177
Information OAMPDU Rx 151178
Unique Event Notification OAMPDU Tx 0
Unique Event Notification OAMPDU Rx 0
Duplicate Event Notification OAMPDU Tx 0
Duplicate Event Notification OAMPDU Rx 0
Loopback Control OAMPDU Tx 0
Loopback Control OAMPDU Rx 0
Variable Request OAMPDU Tx 0
Variable Request OAMPDU Rx 0
Variable Response OAMPDU Tx 0
Variable Response OAMPDU Rx 0
```

```
Organization Specific OAMPDU Tx 0
Organization Specific OAMPDU Rx 0
Unsupported OAMPDU Tx 45
Unsupported OAMPDU Rx 0
Frames Lost due to OAM 23
Fixed frames Rx 1

Local event logs
----------------
Errored Symbol Period records 0
Errored Frame records 0
Errored Frame Period records 0
Errored Frame Second records 0

Remote event logs
-----------------
Errored Symbol Period records 0
Errored Frame records 0
Errored Frame Period records 0
Errored Frame Second records 0
```

Related Commands

Command	Description
show ethernet oam configuration	Displays the current active Ethernet OAM configuration on an interface.
show ethernet oam discovery	Displays the current status of Ethernet OAM sessions.
show ethernet oam interfaces	Displays the current state of Ethernet OAM interfaces.

show ethernet oam summary

To display a summary of all the active OAM sessions on a switch, use the **show ethernet oam summary** command in privileged EXEC mode.

show ethernet oam summary [**detail**]

Syntax Description

detail	Displays the 10 most recent events across all interfaces along with the action taken.

Command Default

None

Command Modes

Privileged EXEC (#)

Supported User Roles

network-admin

vdc--admin

network--operator

vdc-operator

Command History

Release	Modification
7.3(0)D1(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

The following example shows how to display a summary of all the active OAM sessions on a switch:

```
switch# show ethernet oam summary

Link OAM System Summary
=======================
Profiles 6
Interfaces 10
Interface states:
Port down 1
Passive wait 1
Active send 1
[Evaluating 0]
[Local accept 0]
[Local reject 0]
Remote reject 1
Operational 6
Loopback mode 1
Miswired connections 1
Events 13
Local 4
Symbol error 0
Frame 2
Frame period 1
Frame seconds 1
Remote 9
Symbol error 3
```

```
Frame 4
Frame period 1
Frame seconds 1
```

The following example shows how to use the detail keyword to display the 10 most recent events across all interfaces along with the action taken:

```
switch# show ethernet oam summary detail

Link OAM System Summary
=======================
Profiles 6
Interfaces 10
Interface states:
Port down 1
Passive wait 1
Active send 1
[Evaluating 0]
[Local accept 0]
[Local reject 0]
Remote reject 1
Operational 6
Loopback mode 1
Miswired connections 1
Events 13
Local 4
Symbol error 0
Frame 2
Frame period 1
Frame seconds 1
Remote 9
Symbol error 3
Frame 4
Frame period 1
Frame seconds 1

Recent Event Logs
=================
Interface    Time             Type               Loc'n  Action
------------ ---------------- ------------------ ------ ------
Gi0/0/0/0    Jan 23 06:13:25  PST Symbol period  Local  N/A
Gi0/0/0/0    Jan 23 06:13:33  PST Frame          Local  N/A
Gi0/0/0/2    Jan 23 06:13:37  PST Frame period   Local  N/A
Gi0/0/0/1    Jan 23 06:13:45  PST Frame seconds  Local  EFD
Gi0/0/0/0    Jan 23 06:13:48  PST Dying gasp     Remote Err.D
```

Related Commands

Command	Description
ethernetoamprofile	Creates an EOAM profile and enters EOAM configuration mode.
featureethernet-link-oam	Enables the ethernet link OAM feature.
require-remote	Enters the ethernet OAM require-remote configuration submode to specify the features that you have to enable before an OAM session can become active.

show interface

To display the interface status and information, use the **show interface** command..

show interface

Syntax Description

This command has some keywords. For more details, see the “Usage Guidelines” section for this command.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
6.1(1)	Changed the show interface command output.
5.1(1)	Changed the command output to show the port is suspended due to min-links.
4.0	This command was introduced.

Usage Guidelines

Use the show interface command to display the interface status and information. To display **show interface** commands with valid keywords, see the following commands in this document:

- **show interface brief**—Displays brief information of interface.
- **show interface capabilities**—Displays interface capabilities information.
- **show interface counters**—Displays interface counters.
- **show interface counters brief**—Displays input and output rates for interface counters.
- **show interface counters detailed**—Displays only nonzero counters.
- **show interface counters errors**—Displays interface error counters.
- **show interface counters module**—Displays interface counters on a specified module.
- **show interface counters snmp**—Displays SNMP MIB values.
- **show interface counters storm-control**—Displays interface storm-control counters.
- **show interface counters trunk**—Displays interface trunk counters.
- **show interface debounce**—Displays interface debounce time information.
- **show interface description**—Displays interface description.
- **show interface ethernet**—Displays Ethernet interface information.
- **show interface flowcontrol**—Displays interface flow control information.
- **show interface mgmt**—Displays management interface.
- **show interface port-channel**—Displays port-channel interface.
- **show interface port-channel counters**—Displays interface port-channel counters.

- **show interface status**—Displays the interface line status.
- **show interface switchport**—Displays interface switchport information.
- **show interface transceiver**—Displays interface transceiver information.
- **show interface trunk**—Displays interface trunk information.

This command does not require a license.

Examples

This example shows how to display the enhanced show output for the sub-interfaces. The output is enhanced beginning with Cisco NX-OS Release 6.1(1):

```
switch# show interface ethernet 101/1/1
Ethernet101/1/1 is up
admin state is up,
  Hardware: 100/1000 Ethernet, address: 1cdf.0f3b.8042 (bia 1cdf.0f3b.8042)
  MTU 9216 bytes, BW 1000000 Kbit, DLY 10 usec
  reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, medium is broadcast
  Port mode is trunk
  full-duplex, 1000 Mb/s
  Beacon is turned off
  Auto-Negotiation is turned on
  Input flow-control is off, output flow-control is on
  Auto-mdix is turned off
  Switchport monitor is off
  EtherType is 0x8100
  Last link flapped 2d16h
  Last clearing of "show interface" counters never
  2 interface resets
  30 seconds input rate 64 bits/sec, 0 packets/sec
  30 seconds output rate 72 bits/sec, 0 packets/sec
  Load-Interval #2: 5 minute (300 seconds)
    input rate 64 bps, 0 pps; output rate 72 bps, 0 pps
  RX
    0 unicast packets  6331 multicast packets  0 broadcast packets
    6331 input packets  519142 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
  TX
    0 unicast packets  2124 multicast packets  16 broadcast packets
    2140 output packets  576661 bytes
    0 jumbo packets
    0 output error  0 collision  0 deferred  0 late collision
    0 lost carrier  0 no carrier  0 babble  0 output discard
    0 Tx pause
switch#
```

Related Commands

Command	Description
interface	Enters the interface configuration mode and configures the types and identities of interfaces .

show interface brief

To display brief information about the interface, use the **show interface brief** command.

show interface [{**ethernet** *slot-port* | **port-channel** *channel-number*}]

Syntax Description

ethernet	(Optional) Specifies the slot and port of the Ethernet interface that you want to display.
slot/port	(Optional) Slot number and port number for the Ethernet interface. The range is from 1 to 253.
port-channel	(Optional) Specifies the port-channel number of the port-channel interface that you want to display.
channel-number	(Optional) Channel number. The range is from 1 to 4096.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
4.0	This command was introduced.

Usage Guidelines

If you do not specify an interface, this command displays information about all Layer 2 interfaces. Use the **show interface brief** command to display brief information about the interface.

This command does not require a license.

Examples

This example shows how to display brief information about the interface:

```
switch# show interface brief
--------------------------------------------------------------------------------
Port   VRF          Status IP Address                              Speed    MTU
--------------------------------------------------------------------------------
mgmt0  --           up     172.28.231.193                          1000     1500
--------------------------------------------------------------------------------
Ethernet      VLAN   Type Mode   Status  Reason                   Speed     Port
Interface                                                                    Ch #
--------------------------------------------------------------------------------
Eth2/1        --     eth  routed down    Administratively down      auto(D) --
Eth2/2        --     eth  routed down    Administratively down      auto(D) --
Eth2/3        --     eth  routed down    Administratively down      auto(D) --
Eth2/4        1      eth  pvlan  down    Administratively down      auto(D) --
Eth2/5        --     eth  routed down    Administratively down      auto(D) --
Eth2/6        1      eth  access down    Link not connected         auto(D) --
Eth2/7        1      eth  access up      none                       1000(D) --
Eth2/8        --     eth  routed down    Administratively down      auto(D) --
Eth2/9        1      eth  access up      none                       1000(D) --
Eth2/10       1      eth  access down    Link not connected         auto(D) --
Eth2/11       --     eth  routed down    Administratively down      auto(D) --
Eth2/12       --     eth  routed down    Administratively down      auto(D) --
Eth2/13       --     eth  routed down    Administratively down      auto(D) --
```

```
Eth2/14       --     eth  routed down    Administratively down      auto(D) --
Eth2/15       --     eth  routed down    Administratively down      auto(D) --
Eth2/16       --     eth  routed down    Administratively down      auto(D) --
Eth2/17       --     eth  routed down    Administratively down      auto(D) --
Eth2/18       --     eth  routed down    Administratively down      auto(D) --
Eth2/19       --     eth  routed down    Administratively down      auto(D) --
Eth2/20       --     eth  routed down    Administratively down      auto(D) --
Eth2/21       --     eth  routed down    Administratively down      auto(D) --
Eth2/22       --     eth  routed down    Administratively down      auto(D) --
Eth2/23       --     eth  routed down    Administratively down      auto(D) --
Eth2/24       --     eth  routed down    Administratively down      auto(D) --
Eth2/25       --     eth  routed down    Administratively down      auto(D) --
Eth2/26       --     eth  routed down    Administratively down      auto(D) --
Eth2/27       --     eth  routed down    Administratively down      auto(D) --
Eth2/28       --     eth  routed down    Administratively down      auto(D) --
Eth2/29       --     eth  routed down    Administratively down      auto(D) --
Eth2/30       --     eth  routed down    Administratively down      auto(D) --
Eth2/31       --     eth  routed down    Administratively down      auto(D) --
Eth2/32       --     eth  routed down    Administratively down      auto(D) --
Eth2/33       --     eth  routed down    Administratively down      auto(D) --
Eth2/34       --     eth  routed down    Administratively down      auto(D) --
Eth2/35       --     eth  routed down    Administratively down      auto(D) --
Eth2/36       --     eth  routed down    Administratively down      auto(D) --
Eth2/37       --     eth  routed down    Administratively down      auto(D) --
Eth2/38       --     eth  routed down    Administratively down      auto(D) --
Eth2/39       --     eth  routed down    Administratively down      auto(D) --
Eth2/40       --     eth  routed down    Administratively down      auto(D) --
Eth2/41       --     eth  routed down    Administratively down      auto(D) --
Eth2/42       --     eth  routed down    Administratively down      auto(D) --
Eth2/43       --     eth  routed down    Administratively down      auto(D) --
Eth2/44       --     eth  routed down    Administratively down      auto(D) --
Eth2/45       --     eth  routed down    Administratively down      auto(D) --
Eth2/46       --     eth  routed down    Administratively down      auto(D) --
Eth2/47       --     eth  routed down    Administratively down      auto(D) --
Eth2/48       --     eth  routed down    Administratively down      auto(D) --
--------------------------------------------------------------------------------
Interface      Secondary VLAN(Type)                    Status     Reason
--------------------------------------------------------------------------------
Vlan1          --                                      down       none
```

Related Commands

Command	Description
interface	Enters the interface configuration mode and configures the types and identities of interfaces.

show interface capabilities

To display information about the interface capabilities, use the **show interface capabilities** command.

show interface [{**ethernet** *slot-port* | **port-channel** *channel-number*}]**capabilities**

Syntax Description

ethernet	(Optional) Specifies the slot and port of the Ethernet interface that you want to display.
slot/port	(Optional) Slot number and port number for the Ethernet interface. The range is from 1 to 253.
port-channel	(Optional) Specifies the port-channel number of the port-channel interface that you want to display.
channel-number	(Optional) Channel number. The range is from 1 to 4096.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
4.0	This command was introduced.

Usage Guidelines

Use the **show interface capabilities** command to display information about the capabilities of the interface such as the speed, duplex, and rate mode. If you do not specify an interface, this command displays information about all Layer 2 interfaces.

This command does not require a license.

Examples

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

```
switch# show interface ethernet 2/7 capabilities
Ethernet2/7
  Model:                 COPPER
  Type:                  1000BaseT
  Speed:                 10,100,1000,auto
  Duplex:                half/full/auto
  Trunk encap. type:     802.1Q
  Channel:               yes
  Broadcast suppression: percentage(0-100)
  Flowcontrol:           rx-(off/on/desired),tx-(off/on/desired)
  Rate mode:             dedicated
  QOS scheduling:        rx-(2q4t),tx-(1p3q4t)
  CoS rewrite:           yes
  ToS rewrite:           yes
  SPAN:                  yes
  UDLD:                  yes
  Link Debounce:         yes
  Link Debounce Time:    yes
  MDIX:                  yes
  Port Group Members:    none
```

Related Commands

Command	Description
interface	Enters the interface configuration mode and configures the types and identities of interfaces.

show interface counters

To display in and out counters for all interfaces in the system, use the **show interface counters** command.

show interface [{**ethernet** *slot-port* | **port-channel** *channel-number*}]**counters**

Syntax Description

ethernet	(Optional) Specifies the slot and port of the Ethernet interface that you want to display.
slot/port	(Optional) Slot number and port number for the Ethernet interface. The range is from 1 to 253.
port-channel	(Optional) Specifies the port-channel number of the port-channel interface that you want to display.
channel-number	(Optional) Channel number. The range is from 1 to 4096.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
4.0	This command was introduced.

Usage Guidelines

Use the **show interface counters** command to display in and out counters for all or a specific interface. If you do not specify an interface, this command displays information about all Layer 2 interfaces.

This command does not require a license.

Examples

This example shows how to display the in and out counters for all interfaces:

```
switch# show interface counters
--------------------------------------------------------------------------------
Port                 InOctets       InUcastPkts      InMcastPkts      InBcastPkts
--------------------------------------------------------------------------------
mgmt0              137046816             46882           115497           267729
Eth2/1                     0                 0                0                0
Eth2/2                     0                 0                0                0
Eth2/3                     0                 0                0                0
Eth2/4                     0                 0                0                0
Eth2/5                     0                 0                0                0
Eth2/6                     0                 0                0                0
Eth2/7                295061                 0             1348                0
Eth2/8                     0                 0                0                0
Eth2/9               4174381                 0            53303                0
Eth2/10                    0                 0                0                0
Eth2/11                    0                 0                0                0
Eth2/12                    0                 0                0                0
Eth2/13                    0                 0                0                0
Eth2/14                    0                 0                0                0
Eth2/15                    0                 0                0                0
Eth2/16                    0                 0                0                0
Eth2/17                    0                 0                0                0
```

```
Eth2/18                    0                  0                  0                  0
Eth2/19                    0                  0                  0                  0
Eth2/20                    0                  0                  0                  0
Eth2/21                    0                  0                  0                  0
Eth2/22                    0                  0                  0                  0
Eth2/23                    0                  0                  0                  0
Eth2/24                    0                  0                  0                  0
Eth2/25                    0                  0                  0                  0
Eth2/26                    0                  0                  0                  0
Eth2/27                    0                  0                  0                  0
Eth2/28                    0                  0                  0                  0
Eth2/29                    0                  0                  0                  0
Eth2/30                    0                  0                  0                  0
Eth2/31                    0                  0                  0                  0
Eth2/32                    0                  0                  0                  0
Eth2/33                    0                  0                  0                  0
Eth2/34                    0                  0                  0                  0
Eth2/35                    0                  0                  0                  0
Eth2/36                    0                  0                  0                  0
Eth2/37                    0                  0                  0                  0
Eth2/38                    0                  0                  0                  0
Eth2/39                    0                  0                  0                  0
Eth2/40                    0                  0                  0                  0
Eth2/41                    0                  0                  0                  0
Eth2/42                    0                  0                  0                  0
Eth2/43                    0                  0                  0                  0
Eth2/44                    0                  0                  0                  0
Eth2/45                    0                  0                  0                  0
Eth2/46                    0                  0                  0                  0
Eth2/47                    0                  0                  0                  0
Eth2/48                    0                  0                  0                  0
Vlan1                    0             0             0            --
--------------------------------------------------------------------------------
Port               OutOctets      OutUcastPkts     OutMcastPkts     OutBcastPkts
--------------------------------------------------------------------------------
mgmt0                7555343             45951             1352              136
Eth2/1                     0                 0                0                 0
Eth2/2                     0                 0                0                 0
Eth2/3                     0                 0                0                 0
Eth2/4                     0                 0                0                 0
Eth2/5                     0                 0                0                 0
Eth2/6                     0                 0                0                 0
Eth2/7               4174381                 0            53303                 0
Eth2/8                     0                 0                0                 0
Eth2/9                295061                 0             1348                 0
Eth2/10                    0                 0                0                 0
Eth2/11                    0                 0                0                 0
Eth2/12                    0                 0                0                 0
Eth2/13                    0                 0                0                 0
Eth2/14                    0                 0                0                 0
Eth2/15                    0                 0                0                 0
Eth2/16                    0                 0                0                 0
Eth2/17                    0                 0                0                 0
Eth2/18                    0                 0                0                 0
Eth2/19                    0                 0                0                 0
Eth2/20                    0                 0                0                 0
Eth2/21                    0                 0                0                 0
Eth2/22                    0                 0                0                 0
Eth2/23                    0                 0                0                 0
Eth2/24                    0                 0                0                 0
Eth2/25                    0                 0                0                 0
Eth2/26                    0                 0                0                 0
Eth2/27                    0                 0                0                 0
Eth2/28                    0                 0                0                 0
```

```
Eth2/29                    0                    0                    0                    0
Eth2/30                    0                    0                    0                    0
Eth2/31                    0                    0                    0                    0
Eth2/32                    0                    0                    0                    0
Eth2/33                    0                    0                    0                    0
Eth2/34                    0                    0                    0                    0
Eth2/35                    0                    0                    0                    0
Eth2/36                    0                    0                    0                    0
Eth2/37                    0                    0                    0                    0
Eth2/38                    0                    0                    0                    0
Eth2/39                    0                    0                    0                    0
Eth2/40                    0                    0                    0                    0
Eth2/41                    0                    0                    0                    0
Eth2/42                    0                    0                    0                    0
Eth2/43                    0                    0                    0                    0
Eth2/44                    0                    0                    0                    0
Eth2/45                    0                    0                    0                    0
Eth2/46                    0                    0                    0                    0
Eth2/47                    0                    0                    0                    0
Eth2/48                    0                    0                    0                    0
Vlan1                    0             0             0             --
```

Related Commands

Command	Description
clear counters interface	Clears the counters for the specified interfaces.

show interface counters brief

To display input and output rates for all interfaces in the system, use the **show interface counter brief** command.

show interface [{**ethernet** *slot-port* | **port-channel** *channel-number*}]**countersbrief**
load-interval[**counter**{**1** | **2** | **3**}]

Syntax Description

ethernet	(Optional) Specifies the slot and port of the Ethernet interface that you want to display.
slot/port	(Optional) Slot number and port number for the Ethernet interface. The range is from 1 to 253.
port-channel	(Optional) Specifies the port-channel number of the port-channel interface that you want to display.
channel-number	(Optional) Channel number. The range is from 1 to 4096.
load-interval	(Optional) Specifies the sampling interval for statistics collections on interfaces.
counter	(Optional) Specifies the counter for this load interval.
1 | **2**| **3**	Specifies the counter number configured on the interface.

Command Default

1—30 seconds; 60 seconds for VLAN network interface

2—300 seconds

3—not configured

Command Modes

Any command mode

Command History

Release	Modification
6.2(8)	This command was introduced.

Usage Guidelines

Use the **show interface counters brief** command to display input and output rates for all or a specific interface. If you do not specify an interface, this command displays information about all interfaces. To change the counter from the default number of seconds, use the **load-interval** command.

This command does not require a license.

Examples

These examples show how to display the input and output rates for the interfaces:

```
switch# show interface counters brief

--------------------------------------------------------------------------------
Interface         Input Rate (avg)    Output Rate (avg)
                  ------------------  ------------------
                  Rate     Total      Rate     Total        Rate averaging
                  MB/s     Frames     MB/s     Frames       interval (seconds)
--------------------------------------------------------------------------------
```

```
Eth6/1          0         0         0         0         30
                0         0         0         0         300
Eth6/2          0         0         0         0         30
                0         0         0         0         300
Eth6/3          0         0         0         0         30
                0         0         0         0         300
Eth6/4          0         0         0         0         30
                0         0         0         0         300
Eth6/5          0         0         0         0         30
                0         0         0         0         300
Eth6/6          0         0         0         0         30
                0         0         0         0         300
Eth6/7          0         0         0         0         30
                0         0         0         0         300
Eth6/8          0         0         0         0         30
                0         0         0         0         300
Eth6/9          0         0         0         0         30
                0         0         0         0         300
Eth6/10         0         0         0         0         30
                0         0         0         0         300
Eth6/11         0         0         0         0         30
                0         0         0         0         300
Eth6/12         0         0         0         0         30
                0         0         0         0         300
Eth6/13         0         0         0         0         30
                0         0         0         0         300
Eth6/14         0         0         0         0         30
                0         0         0         0         300
Eth6/15         0         0         0         0         30
                0         0         0         0         300
Eth6/16         0         0         0         0         30
                0         0         0         0         300
Eth6/17         0         0         0         0         30
                0         0         0         0         300
Eth6/18         0         0         0         0         30
                0         0         0         0         300
Eth6/19         0         0         0         0         30
                0         0         0         0         300
Eth6/20         0         0         0         0         30
                0         0         0         0         300
Eth6/21         0         0         0         0         30
                0         0         0         0         300
Eth6/22         0         0         0         0         30
                0         0         0         0         300
Eth6/23         0         0         0         0         30
                0         0         0         0         300
Eth6/24         0         0         0         0         30
                0         0         0         0         300
Eth6/25         0         0         0         0         30
                0         0         0         0         300
Eth6/26         0         0         0         0         30
                0         0         0         0         300
Eth6/27         0         0         0         0         30
                0         0         0         0         300
Eth6/28         0         0         0         0         30
                0         0         0         0         300
Eth6/29         0         0         0         0         30
                0         0         0         0         300
Eth6/30         0         0         0         0         30
                0         0         0         0         300
Eth6/31         0         0         0         0         30
                0         0         0         0         300
Eth6/32         0         0         0         0         30
                0         0         0         0         300
```

```
switch# show interface counters brief load-interval 2
--------------------------------------------------------------------------------
Interface         Input Rate (avg)    Output Rate (avg)
                  ------------------  ------------------
                  Rate     Total      Rate     Total        Rate averaging
                  MB/s     Frames     MB/s     Frames       interval (seconds)
--------------------------------------------------------------------------------
Eth6/1            0        0          0        0            300
Eth6/2            0        0          0        0            300
Eth6/3            0        0          0        0            300
Eth6/4            0        0          0        0            300
Eth6/5            0        0          0        0            300
Eth6/6            0        0          0        0            300
Eth6/7            0        0          0        0            300
Eth6/8            0        0          0        0            300
Eth6/9            0        0          0        0            300
Eth6/10           0        0          0        0            300
Eth6/11           0        0          0        0            300
Eth6/12           0        0          0        0            300
Eth6/13           0        0          0        0            300
Eth6/14           0        0          0        0            300
Eth6/15           0        0          0        0            300
Eth6/16           0        0          0        0            300
Eth6/17           0        0          0        0            300
Eth6/18           0        0          0        0            300
Eth6/19           0        0          0        0            300
Eth6/20           0        0          0        0            300
Eth6/21           0        0          0        0            300
Eth6/22           0        0          0        0            300
Eth6/23           0        0          0        0            300
Eth6/24           0        0          0        0            300
Eth6/25           0        0          0        0            300
Eth6/26           0        0          0        0            300
Eth6/27           0        0          0        0            300
Eth6/28           0        0          0        0            300
Eth6/29           0        0          0        0            300
Eth6/30           0        0          0        0            300
Eth6/31           0        0          0        0            300
Eth6/32           0        0          0        0            300
switch(config)# show interface e6/1 counters brief

--------------------------------------------------------------------------------
Interface         Input Rate (avg)    Output Rate (avg)
                  ------------------  ------------------
                  Rate     Total      Rate     Total        Rate averaging
                  MB/s     Frames     MB/s     Frames       interval (seconds)
--------------------------------------------------------------------------------
Eth6/1            0        0          0        0            30
                  0        0          0        0            300
switch(config)# show interval e6/1 counters brief load-interval 2
--------------------------------------------------------------------------------
Interface         Input Rate (avg)    Output Rate (avg)
                  ------------------  ------------------
                  Rate     Total      Rate     Total        Rate averaging
                  MB/s     Frames     MB/s     Frames       interval (seconds)
--------------------------------------------------------------------------------
Eth6/1            0        0          0        0            300
```

Related Commands

Command	Description
clear counters interface	Clears the counters for all load intervals on the specified interfaces.

show interface counters errors

To display interface error counters, use the **show interface counters errors** command.

show interface [{**ethernet** *slot/port* | **port-channel** *channel-number*}]**counterserrors**

Syntax Description

ethernet	(Optional) Specifies the slot and port of the Ethernet interface that you want to display.
slot/port	(Optional) Slot number and port number for the Ethernet interface. The range is from 1 to 253.
port-channel	(Optional) Specifies the port-channel number of the port-channel interface that you want to display.
channel-number	(Optional) Channel number. The range is from 1 to 4096.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
4.0	This command was introduced.

Usage Guidelines

Use the **show interface counters errors** command to display interface error counters. If you do not specify an interface, this command displays information about all Layer 2 interfaces.

This command does not require a license.

Examples

This example shows how to display the interface error counters:

```
switch# show interface counters errors
--------------------------------------------------------------------------------
Port       Align-Err     FCS-Err    Xmit-Err     Rcv-Err   UnderSize OutDiscards
--------------------------------------------------------------------------------
mgmt0             --          --          --          --          --          --
Eth2/1             0           0           0           0           0           0
Eth2/2             0           0           0           0           0           0
Eth2/3             0           0           0           0           0           0
Eth2/4             0           0           0           0           0           0
Eth2/5             0           0           0           0           0           0
Eth2/6             0           0           0           0           0           0
Eth2/7             0           0           0           0           0           0
Eth2/8             0           0           0           0           0           0
Eth2/9             0           0           0           0           0           0
Eth2/10            0           0           0           0           0           0
Eth2/11            0           0           0           0           0           0
Eth2/12            0           0           0           0           0           0
Eth2/13            0           0           0           0           0           0
Eth2/14            0           0           0           0           0           0
Eth2/15            0           0           0           0           0           0
Eth2/16            0           0           0           0           0           0
Eth2/17            0           0           0           0           0           0
```

```
Eth2/18            0           0           0           0           0           0
Eth2/19            0           0           0           0           0           0
Eth2/20            0           0           0           0           0           0
Eth2/21            0           0           0           0           0           0
Eth2/22            0           0           0           0           0           0
Eth2/23            0           0           0           0           0           0
Eth2/24            0           0           0           0           0           0
Eth2/25            0           0           0           0           0           0
Eth2/26            0           0           0           0           0           0
Eth2/27            0           0           0           0           0           0
Eth2/28            0           0           0           0           0           0
Eth2/29            0           0           0           0           0           0
Eth2/30            0           0           0           0           0           0
Eth2/31            0           0           0           0           0           0
Eth2/32            0           0           0           0           0           0
Eth2/33            0           0           0           0           0           0
Eth2/34            0           0           0           0           0           0
Eth2/35            0           0           0           0           0           0
Eth2/36            0           0           0           0           0           0
Eth2/37            0           0           0           0           0           0
Eth2/38            0           0           0           0           0           0
Eth2/39            0           0           0           0           0           0
Eth2/40            0           0           0           0           0           0
Eth2/41            0           0           0           0           0           0
Eth2/42            0           0           0           0           0           0
Eth2/43            0           0           0           0           0           0
Eth2/44            0           0           0           0           0           0
Eth2/45            0           0           0           0           0           0
Eth2/46            0           0           0           0           0           0
Eth2/47            0           0           0           0           0           0
Eth2/48            0           0           0           0           0           0
--------------------------------------------------------------------------------
Port      Single-Col   Multi-Col    Late-Col   Exces-Col   Carri-Sen       Runts
--------------------------------------------------------------------------------
mgmt0             --          --          --          --          --          --
Eth2/1             0           0           0           0           0           0
Eth2/2             0           0           0           0           0           0
Eth2/3             0           0           0           0           0           0
Eth2/4             0           0           0           0           0           0
Eth2/5             0           0           0           0           0           0
Eth2/6             0           0           0           0           0           0
Eth2/7             0           0           0           0           0           0
Eth2/8             0           0           0           0           0           0
Eth2/9             0           0           0           0           0           0
Eth2/10            0           0           0           0           0           0
Eth2/11            0           0           0           0           0           0
Eth2/12            0           0           0           0           0           0
Eth2/13            0           0           0           0           0           0
Eth2/14            0           0           0           0           0           0
Eth2/15            0           0           0           0           0           0
Eth2/16            0           0           0           0           0           0
Eth2/17            0           0           0           0           0           0
Eth2/18            0           0           0           0           0           0
Eth2/19            0           0           0           0           0           0
Eth2/20            0           0           0           0           0           0
Eth2/21            0           0           0           0           0           0
Eth2/22            0           0           0           0           0           0
Eth2/23            0           0           0           0           0           0
Eth2/24            0           0           0           0           0           0
Eth2/25            0           0           0           0           0           0
Eth2/26            0           0           0           0           0           0
Eth2/27            0           0           0           0           0           0
Eth2/28            0           0           0           0           0           0
Eth2/29            0           0           0           0           0           0
```

```
Eth2/30            0           0           0           0           0           0
Eth2/31            0           0           0           0           0           0
Eth2/32            0           0           0           0           0           0
Eth2/33            0           0           0           0           0           0
Eth2/34            0           0           0           0           0           0
Eth2/35            0           0           0           0           0           0
Eth2/36            0           0           0           0           0           0
Eth2/37            0           0           0           0           0           0
Eth2/38            0           0           0           0           0           0
Eth2/39            0           0           0           0           0           0
Eth2/40            0           0           0           0           0           0
Eth2/41            0           0           0           0           0           0
Eth2/42            0           0           0           0           0           0
Eth2/43            0           0           0           0           0           0
Eth2/44            0           0           0           0           0           0
Eth2/45            0           0           0           0           0           0
Eth2/46            0           0           0           0           0           0
Eth2/47            0           0           0           0           0           0
Eth2/48            0           0           0           0           0           0
--------------------------------------------------------------------------------
Port          Giants SQETest-Err Deferred-Tx IntMacTx-Er IntMacRx-Er  Symbol-Err
--------------------------------------------------------------------------------
mgmt0             --          --          --          --          --          --
Eth2/1             0          --           0           0           0           0
Eth2/2             0          --           0           0           0           0
Eth2/3             0          --           0           0           0           0
Eth2/4             0          --           0           0           0           0
Eth2/5             0          --           0           0           0           0
Eth2/6             0          --           0           0           0           0
Eth2/7             0          --           0           0           0           0
Eth2/8             0          --           0           0           0           0
Eth2/9             0          --           0           0           0           0
Eth2/10            0          --           0           0           0           0
Eth2/11            0          --           0           0           0           0
Eth2/12            0          --           0           0           0           0
Eth2/13            0          --           0           0           0           0
Eth2/14            0          --           0           0           0           0
Eth2/15            0          --           0           0           0           0
Eth2/16            0          --           0           0           0           0
Eth2/17            0          --           0           0           0           0
Eth2/18            0          --           0           0           0           0
Eth2/19            0          --           0           0           0           0
Eth2/20            0          --           0           0           0           0
Eth2/21            0          --           0           0           0           0
Eth2/22            0          --           0           0           0           0
Eth2/23            0          --           0           0           0           0
Eth2/24            0          --           0           0           0           0
Eth2/25            0          --           0           0           0           0
Eth2/26            0          --           0           0           0           0
Eth2/27            0          --           0           0           0           0
Eth2/28            0          --           0           0           0           0
Eth2/29            0          --           0           0           0           0
Eth2/30            0          --           0           0           0           0
Eth2/31            0          --           0           0           0           0
Eth2/32            0          --           0           0           0           0
Eth2/33            0          --           0           0           0           0
Eth2/34            0          --           0           0           0           0
Eth2/35            0          --           0           0           0           0
Eth2/36            0          --           0           0           0           0
Eth2/37            0          --           0           0           0           0
Eth2/38            0          --           0           0           0           0
Eth2/39            0          --           0           0           0           0
Eth2/40            0          --           0           0           0           0
Eth2/41            0          --           0           0           0           0
```

```
Eth2/42          0          --          0          0          0          0
Eth2/43          0          --          0          0          0          0
Eth2/44          0          --          0          0          0          0
Eth2/45          0          --          0          0          0          0
Eth2/46          0          --          0          0          0          0
Eth2/47          0          --          0          0          0          0
Eth2/48          0          --          0          0          0          0
```

Related Commands

Command	Description
clear counters interface	Clears the counters for the specified interfaces.

show interface counters storm-control

To display interface storm control discard counters, use the **show interface counters storm-control** command.

show interface [{**ethernet** *slot/port* | **port-channel** *channel-number*}]**countersstorm-control**

Syntax Description

ethernet	(Optional) Specifies the slot and port of the Ethernet interface that you want to display.
slot/port	(Optional) Slot number and port number for the Ethernet interface. The range is from 1 to 253.
port-channel	(Optional) Specifies the port-channel number of the port-channel interface that you want to display.
channel-number	(Optional) Channel number. The range is from 1 to 4096.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
4.0	This command was introduced.

Usage Guidelines

Use the **show interface counters storm-control** command to display interface storm control discard counters. If you do not specify an interface, this command displays information about all Layer 2 interfaces.

This command does not require a license.

Examples

This example shows how to display the interface storm control discard counters:

```
switch# show interface counters storm-control
--------------------------------------------------------------------------------
Port       UcastSupp %     McastSupp %     BcastSupp %     TotalSuppDiscards
--------------------------------------------------------------------------------
Eth2/1          100.00          100.00          100.00                     0
Eth2/2          100.00          100.00          100.00                     0
Eth2/3          100.00          100.00          100.00                     0
Eth2/4          100.00          100.00          100.00                     0
Eth2/5          100.00          100.00          100.00                     0
Eth2/6          100.00          100.00          100.00                     0
Eth2/7          100.00          100.00          100.00                     0
Eth2/8          100.00          100.00          100.00                     0
Eth2/9          100.00          100.00          100.00                     0
Eth2/10         100.00          100.00          100.00                     0
Eth2/11         100.00          100.00          100.00                     0
Eth2/12         100.00          100.00          100.00                     0
Eth2/13         100.00          100.00          100.00                     0
Eth2/14         100.00          100.00          100.00                     0
Eth2/15         100.00          100.00          100.00                     0
Eth2/16         100.00          100.00          100.00                     0
Eth2/17         100.00          100.00          100.00                     0
Eth2/18         100.00          100.00          100.00                     0
```

```
Eth2/19         100.00          100.00          100.00                      0
Eth2/20         100.00          100.00          100.00                      0
Eth2/21         100.00          100.00          100.00                      0
Eth2/22         100.00          100.00          100.00                      0
Eth2/23         100.00          100.00          100.00                      0
Eth2/24         100.00          100.00          100.00                      0
Eth2/25         100.00          100.00          100.00                      0
Eth2/26         100.00          100.00          100.00                      0
Eth2/27         100.00          100.00          100.00                      0
Eth2/28         100.00          100.00          100.00                      0
Eth2/29         100.00          100.00          100.00                      0
Eth2/30         100.00          100.00          100.00                      0
Eth2/31         100.00          100.00          100.00                      0
Eth2/32         100.00          100.00          100.00                      0
Eth2/33         100.00          100.00          100.00                      0
Eth2/34         100.00          100.00          100.00                      0
Eth2/35         100.00          100.00          100.00                      0
Eth2/36         100.00          100.00          100.00                      0
Eth2/37         100.00          100.00          100.00                      0
Eth2/38         100.00          100.00          100.00                      0
Eth2/39         100.00          100.00          100.00                      0
Eth2/40         100.00          100.00          100.00                      0
Eth2/41         100.00          100.00          100.00                      0
Eth2/42         100.00          100.00          100.00                      0
Eth2/43         100.00          100.00          100.00                      0
Eth2/44         100.00          100.00          100.00                      0
Eth2/45         100.00          100.00          100.00                      0
Eth2/46         100.00          100.00          100.00                      0
Eth2/47         100.00          100.00          100.00                      0
Eth2/48         100.00          100.00          100.00                      0
```

Related Commands

Command	Description
clear counters interface	Clears the counters for the specified interfaces.

show interface counters trunk

To display the counters for Layer 2 switch port trunk interfaces, use the **show interface counters trunk** command.

show interface [{**ethernet***slot/port*}]**counterstrunk**

Syntax Description

ethernet	(Optional) Specifies the slot and port of the Ethernet interface that you want to display.
slot/port	(Optional) Slot number and port number for the Ethernet interface. The range is from 1 to 253.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
4.0	This command was introduced.

Usage Guidelines

The device supports only IEEE 802.1Q encapsulation. This command also displays the counters for trunk port channels.

This command does not require a license.

Examples

This example shows how to display the counters for a trunk interface. This display shows the frames transmitted and received through the trunk interface, as well as the number of frames with the wrong trunk encapsulation:

```
switch# show interface ethernet 2/9 counters trunk
--------------------------------------------------------------------
Port            TrunkFramesTx   TrunkFramesRx      WrongEncap
--------------------------------------------------------------------
Ethernet2/9                 0               0               0
```

Related Commands

Command	Description
clear counters interface	Clears the counters for the specified interfaces.

show interface debounce

To display the debounce time information about the interface, use the **show interface debounce** command.

show interface [{**ethernet** *slot/port* | **port-channel** *channel-number*}]**debounce**

Syntax Description

ethernet	(Optional) Specifies the slot and port of the Ethernet interface that you want to display.
slot/port	(Optional) Slot number and port number for the Ethernet interface. The range is from 1 to 253.
port-channel	(Optional) Specifies the port-channel number of the port-channel interface that you want to display.
channel-number	(Optional) Channel number. The range is from 1 to 4096.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
4.0	This command was introduced.

Usage Guidelines

Use the **show interface debounce** command to display debounce time information about the interface. If you do not specify an interface, this command displays information about all Layer 2 interfaces.

This command does not require a license.

Examples

This example shows how to display debounce time information about the interface:

```
switch# show interface debounce
--------------------------------------------------------------------------------
Port          Debounce time   Value(ms)
--------------------------------------------------------------------------------
Eth2/1        enable               100
Eth2/2        enable               100
Eth2/3        enable               100
Eth2/4        enable               100
Eth2/5        enable               100
Eth2/6        enable               100
Eth2/7        enable               100
Eth2/8        enable               100
Eth2/9        enable               100
Eth2/10       enable               100
Eth2/11       enable               100
Eth2/12       enable               100
Eth2/13       enable               100
Eth2/14       enable               100
Eth2/15       enable               100
Eth2/16       enable               100
Eth2/17       enable               100
Eth2/18       enable               100
```

```
Eth2/19       enable                100
Eth2/20       enable                100
Eth2/21       enable                100
Eth2/22       enable                100
Eth2/23       enable                100
Eth2/24       enable                100
Eth2/25       enable                100
Eth2/26       enable                100
Eth2/27       enable                100
Eth2/28       enable                100
Eth2/29       enable                100
Eth2/30       enable                100
Eth2/31       enable                100
Eth2/32       enable                100
Eth2/33       enable                100
Eth2/34       enable                100
Eth2/35       enable                100
Eth2/36       enable                100
Eth2/37       enable                100
Eth2/38       enable                100
Eth2/39       enable                100
Eth2/40       enable                100
Eth2/41       enable                100
Eth2/42       enable                100
Eth2/43       enable                100
Eth2/44       enable                100
Eth2/45       enable                100
Eth2/46       enable                100
Eth2/47       enable                100
Eth2/48       enable                100
```

Related Commands

Command	Description
link debounce time	Enables the debounce timer for Ethernet ports.

show interface description

To display a description about the interface, use the **show interface description** command.

show interface description

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
4.0	This command was introduced.

Usage Guidelines

Use the show interface description command to display the interface description.

This command does not require a license.

Examples

This example shows how to display a description of the interface:

```
switch# show interface description
--------------------------------------------------------------------------------
Interface                Description
--------------------------------------------------------------------------------
mgmt0                    --
--------------------------------------------------------------------------------
Port          Type   Speed   Description
--------------------------------------------------------------------------------
Eth2/1        eth    1000    --
Eth2/2        eth    1000    --
Eth2/3        eth    1000    --
Eth2/4        eth    1000    --
Eth2/5        eth    1000    --
Eth2/6        eth    1000    --
Eth2/7        eth    1000    server2
Eth2/8        eth    1000    --
Eth2/9        eth    1000    --
Eth2/10       eth    1000    ethernet slot 2 port 10
Eth2/11       eth    1000    --
Eth2/12       eth    1000    --
Eth2/13       eth    1000    --
Eth2/14       eth    1000    --
Eth2/15       eth    1000    --
Eth2/16       eth    1000    --
Eth2/17       eth    1000    --
Eth2/18       eth    1000    --
Eth2/19       eth    1000    --
Eth2/20       eth    1000    --
Eth2/21       eth    1000    --
Eth2/22       eth    1000    --
Eth2/23       eth    1000    --
Eth2/24       eth    1000    --
Eth2/25       eth    1000    --
```

```
Eth2/26       eth    1000    --
Eth2/27       eth    1000    --
Eth2/28       eth    1000    --
Eth2/29       eth    1000    --
Eth2/30       eth    1000    --
Eth2/31       eth    1000    --
Eth2/32       eth    1000    --
Eth2/33       eth    1000    --
...<additional lines truncated>
```

Related Commands

Command	Description
description	Provides textual interface descriptions for interfaces.

show interface ethernet

To display information about the Ethernet interface, use the **show interface ethernet** command.

showinterfaceethernet*slot/port*[{**brief** | **cable-diagnostics-tdr** | **capabilities** | **counters**{**brief** | **detailed** | **errors** | **snmp** | **storm-control** | **trunk**} | **debounce** | **description** | **fcoe** | **flowcontrol** | **mac-address** | **status**{**err-disabled** | **err-vlans**} | **switchport** | **transceiver** | **trunk**}]

Syntax Description

slot/port	Slot number and port number for the Ethernet interface. The range is from 1 to 253.
brief	(Optional) Displays brief information about the interface.
cable-diagnostics-tdr	(Optional) Displays information about the time domain reflectometer (TDR) test.
capabilities	(Optional) Displays interface capabilities.
counters	Displays the counters.
brief	Displays information about the counters in brief.
detailed	Displays only nonzero counters.
errors	Displays error counters in the interface.
snmp	Displays SNMP MIB values.
storm-control	Displays storm-control counters.
trunk	Displays trunk counters.
debounce	(Optional) Displays the debounce time of the interface.
description	(Optional) Displays the interface description.
fcoe	(Optional) Displays the Fibre Channel over Ethernet (FCoE) information of the interface.
flowcontrol	(Optional) Displays the flow-control information.
mac-address	(Optional) Displays the MAC address.
status	(Optional) Displays the link status of the interface.
err-disabled	Displays the error-disabled state of the interface.
err-vlans	Displays VLAN errors in the interface.
switchport	(Optional) Displays switch-port information.
transceiver	(Optional) Displays the transceiver information.
trunk	(Optional) Displays interface trunk information.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
5.1(1)	Added the **brief, cable-diagnostics-tdr, capabilities, debounce, description, detailed, errors, err-disabled, err-vlans, fcoe, flowcontrol, mac-address, snmp, storm-control, status, switchport, transceiver,** and **trunk** keywords.
4.0	This command was introduced.

Usage Guidelines

Use the **show interface ethernet** command to display information about the Ethernet interface.

This command does not require a license.

Examples

This example shows how to display information about the Ethernet interface:

```
switch# show interface ethernet 2/5
Ethernet2/5 is down (Administratively down)
  Hardware: 10/100/1000 Ethernet, address: 0018.bad8.3ffd (bia 0019.076c.4db0)
  MTU 1500 bytes, BW 1000000 Kbit, DLY 10 usec,
     reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA
  auto-duplex, auto-speed
  Beacon is turned off
  Auto-Negotiation is turned on
  Input flow-control is off, output flow-control is off
  Auto-mdix is turned on
  Switchport monitor is off
  Last clearing of "show interface" counters never
  1 minute input rate 0 bits/sec, 0 packets/sec
  1 minute output rate 0 bits/sec, 0 packets/sec
  L3 in Switched:
    ucast: 0 pkts, 0 bytes - mcast: 0 pkts, 0 bytes
  L3 out Switched:
    ucast: 0 pkts, 0 bytes - mcast: 0 pkts, 0 bytes
  Rx
    0 input packets 0 unicast packets 0 multicast packets
    0 broadcast packets 0 jumbo packets 0 storm suppression packets
    0 bytes
  Tx
    0 output packets 0 multicast packets
    0 broadcast packets 0 jumbo packets
    0 bytes
    0 input error 0 short frame 0 watchdog
    0 no buffer 0 runt 0 CRC 0 ecc
    0 overrun  0 underrun 0 ignored 0 bad etype drop
    0 bad proto drop 0 if down drop 0 input with dribble
    0 input discard
    0 output error 0 collision 0 deferred
    0 late collision 0 lost carrier 0 no carrier
    0 babble
    0 Rx pause 0 Tx pause
  0 interface resets
```

Related Commands

Command	Description
interface	Enters the interface configuration mode and configures the types and identities of interfaces.

show interface flowcontrol

To display the flow-control configuration for all or a specified interface, use the **show interface flowcontrol** command.

show interface flowcontrol [{**fex** | **port-channel** *channel-number*}] **flowcontrol**

Syntax Description

fex	(Optional) Displays the Fabric Extender interface that you want to display. the range is from 100 to 199.
port-channel *channel-number*	(Optional) Displays the port-channel number of the port-channel interface that you want to display. The range is from 1 to 4096.
flowcontrol	(Optional) Displays the interface flowcontrol information.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
4.0	This command was introduced.
5.1	The fex keyword was added.

Usage Guidelines

Use the **show interface flowcontrol** command to display information about the interface flow control. If you do not specify an interface, this command displays information about all Layer 2 interfaces.

This command does not require a license.

Examples

This example shows how to display the interface flow-control information:

```
switch# show interface flowcontrol
--------------------------------------------------------------------------------
Port        Send FlowControl  Receive FlowControl  RxPause TxPause
            admin    oper     admin    oper
--------------------------------------------------------------------------------
Eth2/1      off      off      off      off         0       0
Eth2/2      off      off      off      off         0       0
Eth2/3      off      off      off      off         0       0
Eth2/4      off      off      off      off         0       0
Eth2/5      off      off      off      off         0       0
Eth2/6      off      off      off      off         0       0
Eth2/7      off      off      off      off         0       0
Eth2/8      off      off      off      off         0       0
Eth2/9      off      off      off      off         0       0
Eth2/10     off      off      off      off         0       0
Eth2/11     off      off      off      off         0       0
Eth2/12     off      off      off      off         0       0
Eth2/13     off      off      off      off         0       0
Eth2/14     off      off      off      off         0       0
Eth2/15     off      off      off      off         0       0
Eth2/16     off      off      off      off         0       0
```

```
Eth2/17    off      off      off      off         0       0
Eth2/18    off      off      off      off         0       0
Eth2/19    off      off      off      off         0       0
Eth2/20    off      off      off      off         0       0
Eth2/21    off      off      off      off         0       0
Eth2/22    off      off      off      off         0       0
Eth2/23    off      off      off      off         0       0
Eth2/24    off      off      off      off         0       0
Eth2/25    off      off      off      off         0       0
Eth2/26    off      off      off      off         0       0
Eth2/27    off      off      off      off         0       0
Eth2/28    off      off      off      off         0       0
Eth2/29    off      off      off      off         0       0
Eth2/30    off      off      off      off         0       0
Eth2/31    off      off      off      off         0       0
Eth2/32    off      off      off      off         0       0
Eth2/33    off      off      off      off         0       0
Eth2/34    off      off      off      off         0       0
Eth2/35    off      off      off      off         0       0
Eth2/36    off      off      off      off         0       0
Eth2/37    off      off      off      off         0       0
Eth2/38    off      off      off      off         0       0
Eth2/39    off      off      off      off         0       0
Eth2/40    off      off      off      off         0       0
Eth2/41    off      off      off      off         0       0
Eth2/42    off      off      off      off         0       0
Eth2/43    off      off      off      off         0       0
Eth2/44    off      off      off      off         0       0
Eth2/45    off      off      off      off         0       0
Eth2/46    off      off      off      off         0       0
Eth2/47    off      off      off      off         0       0
Eth2/48    off      off      off      off         0       0
```

Related Commands

Command	Description
flowcontrol	Enables or disables the ability of the Ethernet port to send and receive flow-control pause frames.

show interface mgmt

To display the management interface information, use the **show interface mgmt** command.

show interface mgmt *number* [{**brief** | **counters** [{**detailed** | **errors** [**snmp**]}] | **description** | **status**}]

Syntax Description

number	Information about the management interface number. The valid value is 0 .
brief	(Optional) Displays brief information about the management interface .
counters	(Optional) Displays the counters for the management interface .
detailed	(Optional) Displays detailed information about the counters for the management interface .
errors	(Optional) Displays the errors for the management interface .
snmp	(Optional) Displays the SNMP errors for the management interface .
description	(Optional) Displays the description of the management interface .
status	(Optional) Displays the status of the management interface .

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
4.0	This command was introduced.

Usage Guidelines

Use the **show interface mgmt** *number* command to display information about the management interface.

This command does not require a license.

Examples

This example shows how to display the management interface information:

```
switch# show interface mgmt0
mgmt0 is up
  Hardware: GigabitEthernet, address: 0019.076c.1a78 (bia 0019.076c.1a78)
  Internet Address is 172.28.231.193/23
  MTU 1500 bytes, BW 1000000 Kbit, DLY 10 usec,
     reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA
  full-duplex, 1000 Mb/s
  Auto-Negotiation is turned on
  1 minute input rate 6446522 bits/sec, 78642 packets/sec
  1 minute output rate 1965455 bits/sec, 20644 packets/sec
  Rx
    78681 input packets 15607 unicast packets 20178 multicast packets
    42896 broadcast packets 24189392 bytes
  Tx
    20647 output packets 20377 unicast packets 246 multicast packets
    24 broadcast packets 7370904 bytes
```

Related Commands

Command	Description
interface	Enters the interface configuration mode and configures the types and identities of interfaces.

show interface port-channel

To display descriptive information about port channels, use the **show interface port-channel** command.

show interface port-channel *channel-number* [{**brief** | **description** | **flowcontrol** | **status** | **switchport** | **trunk**}]

Syntax Description

channel-number	Number of the port-channel group. The range is from 1 to 4096.
brief	(Optional) Specifies the summary information for specified port channels.
description	(Optional) Specifies the description of specified port channels.
flowcontrol	(Optional) Specifies information about the flow-control status control for specified port channels and the statistics on received and transmitted flow-control pause packets.
status	(Optional) Specifies information about the status for specified port channels.
switchport	(Optional) Specifies information for specified Layer 2 port channels including access and trunk modes.
trunk	(Optional) Specifies information for specified Layer 2 port channels on the trunk mode.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
4.2(1)	Display of configured static MAC address for Layer 3 port channels was added.
4.0	This command was introduced.

Usage Guidelines

To display more statistics for the specified port channels, use the **show interface port-channel counters** command.

This command does not require a license.

Examples

This example shows how to display information for a specific port channel. This example displays statistical information gathered on the port channel at 1-minute intervals:

```
switch# show interface port-channel 101
port-channel101 is up
admin state is up,
  Hardware: Port-Channel, address: 0026.9825.58e4 (bia 0026.9825.58e4)
  MTU 9216 bytes, BW 20000000 Kbit, DLY 10 usec
  reliability 255/255, txload 16/255, rxload 16/255
  Encapsulation ARPA, medium is broadcast
  Port mode is fex-fabric
  full-duplex, 10 Gb/s
  Input flow-control is off, output flow-control is off
```

```
  Auto-mdix is turned off
  Switchport monitor is off
  EtherType is 0x8100
  Members in this channel: Eth7/1, Eth8/1
  Last clearing of "show interface" counters never
  1 interface resets
  30 seconds input rate 1264864848 bits/sec, 1736043 packets/sec
  30 seconds output rate 1264870712 bits/sec, 1736074 packets/sec
  Load-Interval #2: 5 minute (300 seconds)
    input rate 1.25 Gbps, 1.72 Mpps; output rate 1.25 Gbps, 1.72 Mpps
  RX
    733914 unicast packets  382406768498 multicast packets  11476533567 broadcast packets
    393884035979 input packets  36031214919080 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
    62339596 Rx pause
  TX
    1019601 unicast packets  382406766702 multicast packets  11476533707 broadcast packets
    393884320010 output packets  36030918130654 bytes
    0 jumbo packets
    0 output error  0 collision  0 deferred  0 late collision
    0 lost carrier  0 no carrier  0 babble  0 output discard
    0 Tx pause
```

This example shows how to display a brief description for a specific port channel, including the mode for the port channel, the status, speed, and protocol:

```
switch# show interface port-channel 5 brief
--------------------------------------------------------------------------------
Port-channel VLAN  Type Mode   Status  Reason                    Speed  Protocol
Interface
--------------------------------------------------------------------------------
                  eth  access down    No operational members      auto(D)  lacp
```

This example shows how to display the description for a specific port channel:

```
switch# show interface port-channel 5 description
--------------------------------------------------------------------------------
Interface                Description
--------------------------------------------------------------------------------
port-channel5            test
```

This example shows how to display the flow-control information for a specific port channel:

```
switch# show interface port-channel 50 flowcontrol
--------------------------------------------------------------------------------
Port       Send FlowControl  Receive FlowControl  RxPause TxPause
           admin    oper     admin    oper
--------------------------------------------------------------------------------
Po50       off      off      off      off         0       0
```

The **oper** display for the *show interface port-channel flowcontrol* command shows as on if one member of the port channel is set to on for flow control and all the of the members and the entire port channel is set to on for flow control.

This example shows how to display the status of a specific port channel:

```
switch# show interface port-channel 5 status
```

```
--------------------------------------------------------------------------------
Port          Name               Status   Vlan      Duplex  Speed   Type
--------------------------------------------------------------------------------
               test               down     1         auto    auto    --
```

This example shows how to display information for a specific Layer 2 port channel:

```
switch#
show interface port-channel 50 switchport
Name: port-channel50
  Switchport: Enabled
  Switchport Monitor: Not enabled
  Operational Mode: trunk
  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: none
  Operational private-vlan: none
```

This command displays information for Layer 2 port channels in both the access and trunk modes.

When you use this command for a routed port channel, the device returns the following message:

```
Name: port-channel20
  Switchport: Disabled
```

This example shows how to display information for a specific Layer 2 port channel that is in trunk mode:

```
switch# show interface port-channel 5 trunk
switch# show interface port-channel 50 trunk
port-channel50 is down (No operational members)
    Hardware is Ethernet, address is 0000.0000.0000
    MTU 1500 bytes, BW 100000 Kbit, DLY 10 usec
    Port mode is access
    Speed is auto-speed
    Duplex mode is auto
    Beacon is turned off
    Receive flow-control is off, Send flow-control is off
    Rate mode is dedicated
  Members in this channel: Eth2/10
    Native Vlan: 1
    Allowed Vlans: 1-3967,4048-4093
```

This command displays information for only Layer 2 port channels in the trunk modes; you cannot display information about Layer 2 port channels in the access mode with this command.

Related Commands

Command	Description
show interface port-channel counters	Displays the statistics for channel groups.
show port-channel summary	Displays summary information for all channel groups.

show interface port-channel counters

To display information about port-channel statistics, use the **show interface port-channel** counters command.

show interface port-channel *channel-number* **counters** [{**brief** | **detailed** [{**all** | **snmp**}] | **errors** [**snmp**] | **trunk**}]

Syntax Description

channel-number	Number of the port-channel group. The range is from 1 to 4096.
brief	(Optional) Specifies the rate MB/s and total frames for specified port channels.
detailed	(Optional) Specifies the n onzero counters for specified port channels.
all	(Optional) Specifies the c ounters for specified port channels.
snmp	(Optional) Specifies the SNMP MIB values for specified port channels.
errors	(Optional) Specifies the interface error counters for specified port channels.
trunk	(Optional) Specifies the i nterface trunk counters for specified port channels.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
4.0	This command was introduced.

Usage Guidelines

This command displays statistics for all port channels including the Link Aggregation Control Protocol (LACP)-enabled port channels and those port channels that are not associated with an aggregation protocol.

This command does not require a license.

Examples

This example shows how to display the counters for a specific port channel. This example display shows the transmitted and received unicast and multicast packets:

```
switch# show interface
 port-channel 2
 counters
Port            InOctets   InUcastPkts   InMcastPkts   InBcastPkts
Po2                 6007             1            31             1
Port           OutOctets  OutUcastPkts  OutMcastPkts  OutBcastPkts
Po2                 4428             1            25             1
```

This example shows how to display the brief counters for a specific port channel. This display shows the transmitted and received rate and total frames:

```
switch# show interface port-channel 20 counters brief
--------------------------------------------------------------------------------
Interface              Input (rate is 1 min avg)  Output (rate is 1 min avg)
```

```
                      -------------------------  -----------------------------
                      Rate     Total             Rate     Total
                      MB/s     Frames            MB/s     Frames
--------------------------------------------------------------------------------
port-channel20        0        0                 0        0
```

This example shows how to display all the detailed counters for a specific port channel:

```
switch# show interface port-channel 20 counters detailed all
port-channel20
  64 bit counters:
   0.                     rxHCTotalPkts = 0
   1.                     txHCTotalPks = 0
   2.                   rxHCUnicastPkts = 0
   3.                   txHCUnicastPkts = 0
   4.                 rxHCMulticastPkts = 0
   5.                 txHCMulticastPkts = 0
   6.                 rxHCBroadcastPkts = 0
   7.                 txHCBroadcastPkts = 0
   8.                        rxHCOctets = 0
   9.                        txHCOctets = 0
  10.                rxTxHCPkts64Octets = 0
  11.            rxTxHCpkts65to127Octets = 0
  12.           rxTxHCpkts128to255Octets = 0
  13.           rxTxHCpkts256to511Octets = 0
  14.          rxTxHCpkts512to1023Octets = 0
  15.         rxTxHCpkts1024to1518Octets = 0
  16.         rxTxHCpkts1519to1548Octets = 0
  17.                   rxHCTrunkFrames = 0
  18.                   txHCTrunkFrames = 0
  19.                    rxHCDropEvents = 0
  All Port Counters:
   0.                          InPackets = 0
   1.                           InOctets = 0
   2.                        InUcastPkts = 0
   3.                        InMcastPkts = 0
   4.                        InBcastPkts = 0
   5.                        InJumboPkts = 0
   6.                 StormSuppressPkts = 0
   7.                         OutPackets = 0
   8.                          OutOctets = 0
   9.                       OutUcastPkts = 0
  10.                       OutMcastPkts = 0
  11.                       OutBcastPkts = 0
  12.                       OutJumboPkts = 0
  13.                   rxHCPkts64Octets = 0
  14.              rxHCPkts65to127Octets = 0
  15.             rxHCPkts128to255Octets = 0
  16.             rxHCPkts256to511Octets = 0
  17.            rxHCpkts512to1023Octets = 0
  18.           rxHCpkts1024to1518Octets = 0
  19.           rxHCpkts1519to1548Octets = 0
  20.                   txHCPkts64Octets = 0
  21.              txHCPkts65to127Octets = 0
  22.             txHCPkts128to255Octets = 0
  23.             txHCPkts256to511Octets = 0
  24.            txHCpkts512to1023Octets = 0
  25.           txHCpkts1024to1518Octets = 0
  26.           txHCpkts1519to1548Octets = 0
  27.                        ShortFrames = 0
  28.                         Collisions = 0
  29.                          SingleCol = 0
  30.                           MultiCol = 0
  31.                            LateCol = 0
```

```
 32.                      ExcessiveCol = 0
 33.                       LostCarrier = 0
 34.                         NoCarrier = 0
 35.                             Runts = 0
 36.                            Giants = 0
 37.                          InErrors = 0
 38.                         OutErrors = 0
 39.                     InputDiscards = 0
 40.                     BadEtypeDrops = 0
 41.                       IfDownDrops = 0
 42.                   InUnknownProtos = 0
 43.                             txCRC = 0
 44.                             rxCRC = 0
 45.                            Symbol = 0
 46.                         txDropped = 0
 47.                     TrunkFramesTx = 0
 48.                     TrunkFramesRx = 0
 49.                        WrongEncap = 0
 50.                           Babbles = 0
 51.                         Watchdogs = 0
 52.                               ECC = 0
 53.                          Overruns = 0
 54.                         Underruns = 0
 55.                          Dribbles = 0
 56.                          Deferred = 0
 57.                           Jabbers = 0
 58.                          NoBuffer = 0
 59.                           Ignored = 0
 60.                       bpduOutLost = 0
 61.                       cos0OutLost = 0
 62.                       cos1OutLost = 0
 63.                       cos2OutLost = 0
 64.                       cos3OutLost = 0
 65.                       cos4OutLost = 0
 66.                       cos5OutLost = 0
 67.                       cos6OutLost = 0
 68.                       cos7OutLost = 0
 69.                           RxPause = 0
 70.                           TxPause = 0
 71.                            Resets = 0
 72.                           SQETest = 0
 73.                     InLayer3Routed = 0
 74.               InLayer3RoutedOctets = 0
 75.                    OutLayer3Routed = 0
 76.             OutLayer3RoutedOctets = 0
 77.                  OutLayer3Unicast = 0
 78.            OutLayer3UnicastOctets = 0
 79.                OutLayer3Multicast = 0
 80.          OutLayer3MulticastOctets = 0
 81.                   InLayer3Unicast = 0
 82.             InLayer3UnicastOctets = 0
 83.                 InLayer3Multicast = 0
 84.           InLayer3MulticastOctets = 0
 85.             InLayer3AverageOctets = 0
 86.            InLayer3AveragePackets = 0
 87.            OutLayer3AverageOctets = 0
 88.           OutLayer3AveragePackets = 0
```

This example shows how to display the error counters for a specific port channel:

```
switch#
show interface port-channel 5 counters errors
--------------------------------------------------------------------------------
Port       Align-Err     FCS-Err    Xmit-Err     Rcv-Err   UnderSize OutDiscards
```

```
--------------------------------------------------------------------------------
Po5                0           0           0           0           0           0
--------------------------------------------------------------------------------
Port      Single-Col   Multi-Col    Late-Col   Exces-Col   Carri-Sen       Runts
--------------------------------------------------------------------------------
Po5                0           0           0           0           0           0
--------------------------------------------------------------------------------
Port          Giants SQETest-Err Deferred-Tx IntMacTx-Er IntMacRx-Er  Symbol-Err
--------------------------------------------------------------------------------
                   0          --           0           0           0           0
```

This example shows how to display information about the trunk interfaces for a specific port channel:

```
switch# show interface port-channel 5 counters trunk
--------------------------------------------------------------------------------
Port            TrunkFramesTx   TrunkFramesRx      WrongEncap
--------------------------------------------------------------------------------
port-channel5               0               0               0
```

Related Commands

Command	Description
clear counters	Clears the statistics for all interfaces that belong to a specific channel group.

show interface status

To display the interface line status, use the **show interface status** command.

show interface status [{**auto-column** | **down** | **err-disabled** | **err-vlans** | **error policy** [**detail**] | **inactive** | **module** *number* | **up**}]

Syntax Description

auto-column	(Optional) Displays complete interface status information, such as complete transceiver type and name. **Note** This option is hidden and not visible. To use this option, type **show interface status auto-column**.
down	(Optional) Displays the interface down state.
err-disabled	(Optional) Displays the interface error-disabled state.
err-vlans	(Optional) Displays the VLANs with errors.
error policy	(Optional) Displays the interfaces and VLANs that generated an error during policy programming.
detail	(Optional) Displays details of the interface that generated the error.
inactive	(Optional) Displays the interface inactive state.
module *number*	(Optional) Displays the module number. The range is from 1 to 18.
up	(Optional) Displays the interface up state.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
6.2(2)	Added the error policy keyword to the syntax description.
4.1(2)	The err-vlans parameter was added.
4.0	This command was introduced.

Usage Guidelines

Use the **show interface status** command to display the interface line status.

This command does not require a license.

Examples

This example shows how to view complete interface status information, such as complete transceiver type and name.

```
switch# show interface status auto-column
--------------------------------------------------------------------------------
Port           Name               Status         Vlan     Duplex  Speed   Type
--------------------------------------------------------------------------------
mgmt0          --                 connected     routed    full    a-1000  --
Eth1/1         --                 connected     routed    full    a-100G  QSFP-100G-LR4
Eth1/1.1       --                 connected     routed    full    a-100G  QSFP-100G-LR4
```

This example shows how to display the interface status error policy details:

```
switch# configure terminal
switch# show interface status error policy detail
--------------------------------------------------------------------------------
No. Interface   Error Type      Time Stamp                Reason            VLAN
--------------------------------------------------------------------------------
switch#
```

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

```
switch# show interface status module 2
--------------------------------------------------------------------------------
Port           Name               Status   Vlan      Duplex  Speed   Type
--------------------------------------------------------------------------------
Eth2/1         --                 down     routed    auto    auto    1000BaseT
Eth2/2         --                 down     routed    auto    auto    1000BaseT
Eth2/3         --                 down     routed    auto    auto    1000BaseT
Eth2/4         --                 down     1         auto    auto    1000BaseT
Eth2/5         --                 down     routed    auto    auto    1000BaseT
Eth2/6         --                 down     1         auto    auto    1000BaseT
Eth2/7         server2            up       1         full    1000    1000BaseT
Eth2/8         --                 down     routed    auto    auto    1000BaseT
Eth2/9         --                 up       1         full    1000    1000BaseT
Eth2/10        ethernet slot 2 po down     1         auto    auto    1000BaseT
Eth2/11        --                 down     routed    auto    auto    1000BaseT
Eth2/12        --                 down     routed    auto    auto    1000BaseT
Eth2/13        --                 down     routed    auto    auto    1000BaseT
Eth2/14        --                 down     routed    auto    auto    1000BaseT
Eth2/15        --                 down     routed    auto    auto    1000BaseT
Eth2/16        --                 down     routed    auto    auto    1000BaseT
Eth2/17        --                 down     routed    auto    auto    1000BaseT
Eth2/18        --                 down     routed    auto    auto    1000BaseT
Eth2/19        --                 down     routed    auto    auto    1000BaseT
Eth2/20        --                 down     routed    auto    auto    1000BaseT
Eth2/21        --                 down     routed    auto    auto    1000BaseT
Eth2/22        --                 down     routed    auto    auto    1000BaseT
Eth2/23        --                 down     routed    auto    auto    1000BaseT
Eth2/24        --                 down     routed    auto    auto    1000BaseT
Eth2/25        --                 down     routed    auto    auto    1000BaseT
Eth2/26        --                 down     routed    auto    auto    1000BaseT
Eth2/27        --                 down     routed    auto    auto    1000BaseT
Eth2/28        --                 down     routed    auto    auto    1000BaseT
Eth2/29        --                 down     routed    auto    auto    1000BaseT
Eth2/30        --                 down     routed    auto    auto    1000BaseT
Eth2/31        --                 down     routed    auto    auto    1000BaseT
Eth2/32        --                 down     routed    auto    auto    1000BaseT
Eth2/33        --                 down     routed    auto    auto    1000BaseT
Eth2/34        --                 down     routed    auto    auto    1000BaseT
Eth2/35        --                 down     routed    auto    auto    1000BaseT
Eth2/36        --                 down     routed    auto    auto    1000BaseT
Eth2/37        --                 down     routed    auto    auto    1000BaseT
Eth2/38        --                 down     routed    auto    auto    1000BaseT
```

```
Eth2/39        --                 down     routed    auto    auto    1000BaseT
Eth2/40        --                 down     routed    auto    auto    1000BaseT
Eth2/41        --                 down     routed    auto    auto    1000BaseT
Eth2/42        --                 down     routed    auto    auto    1000BaseT
Eth2/43        --                 down     routed    auto    auto    1000BaseT
Eth2/44        --                 down     routed    auto    auto    1000BaseT
Eth2/45        --                 down     routed    auto    auto    1000BaseT
Eth2/46        --                 down     routed    auto    auto    1000BaseT
Eth2/47        --                 down     routed    auto    auto    1000BaseT
Eth2/48        --                 down     routed    auto    auto    1000BaseT
```

Related Commands

Command	Description
interface	Enters the interface configuration mode and configures the types and identities of interfaces.

show interface switchport

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

show interface [{**ethernet***type/slot* | **port-channel** *channel-number*}] **switchport**

Syntax Description

ethernet *type/slot*	(Optional) Type and number of the interface that you want to display .
port-channel *channel-number*	(Optional) Specifies the port-channel number of the port-channel interface that you want to display. The range is from 1to 4096.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
4.2(1)	Information about private VLAN promiscuous trunk ports was added.
4.0	This command was introduced.

Usage Guidelines

If you do not specify an interface, this command displays information about all Layer 2 interfaces, including access, trunk, port-channel interfaces, and all private VLAN ports.

Use the **show interface counters** command to display statistics for the specified Layer 2 interface.

This command does not require a license.

Examples

This example shows how to display information for all Layer 2 interfaces:

```
switch# show interface switchport
Name: Ethernet2/5
  Switchport: Enabled
  Switchport Monitor: Not enabled
  Operational Mode: access
  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: none
  Operational private-vlan: none
Name: Ethernet2/9
  Switchport: Enabled
  Switchport Monitor: Not enabled
  Operational Mode: trunk
  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: none
  Operational private-vlan: none
Name: port-channel5
  Switchport: Enabled
  Switchport Monitor: Not enabled
  Operational Mode: access
  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: none
  Operational private-vlan: none
```

Beginning with Cisco NX-OS Release 4.2(1), you can display information on private VLAN promiscuous trunk ports on Cisco Nexus 7000 Series devices. This example shows how to display information for those interfaces:

```
switch# show interface switchport
Name: Ethernet7/4
  Switchport: Enabled
  Administrative Mode: private-vlan trunk promiscuous
  Operational Mode: down
  Administrative Trunking Encapsulation: negotiate
  Negotiation of Trunking: on
  Access Mode VLAN: 1 (default)
  Trunking Native Mode VLAN: 1 (default)
  Administrative Native VLAN tagging: enabled
  Voice VLAN: none
  Administrative private-vlan host-association: none
  Administrative private-vlan mapping: none
  Administrative private-vlan secondary mapping: none
  Administrative private-vlan trunk Native VLAN tagging: enabled
  Administrative private-vlan trunk encapsulation: dot1q
  Administrative private-vlan trunk normal VLANs: 1, 4, 3000-4000
  Administrative private-vlan trunk private VLAN mappings:
      2 (VLAN0002)  3 (VLAN0003)           4 (VLAN0004)  5 (VLAN00005)
     10 (VLAN0010)  20 (CLAN0020)          30 (VLAN0030)  40 (Inactive)
  Operational private-vlan: none
```

Related Commands

Command	Description
switchport mode	Sets the specified interfaces as either Layer 2 access or trunk interfaces.

show interface transceiver

To display information about all the transceiver interfaces, use the **show interface transceiver** command.

show interface transceiver [{**calibrations** | **details**}]

Syntax Description

calibrations	(Optional) Displays calibration information for transceivers .
detail	(Optional) Displays detailed information for transceivers.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
4.1(2)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to display calibration information for transceiver interfaces:

```
switch(config)# show interface transceiver calibrations
Ethernet9/25
    sfp is present
    name is CISCO-EXCELIGHT
    part number is SPP5101LR-C1
    revision is A
    serial number is ECL121601PB
    nominal bitrate is 10300 MBits/sec
    Link length supported for 9/125um fiber is 10 km(s)
    cisco id is --
    cisco extended id number is 4
                SFP External Calibrations Information
    ----------------------------------------------------------------------
                Slope  Offset      Rx4/Rx3/Rx2/Rx1/Rx0
    ----------------------------------------------------------------------
    Temperature     0      0
    Voltage         0      0
    Current         0      0
    Tx Power        0      0
    Rx Power                       0.0000/0.0000/0.0000/0.0000/0.0000
```

This example shows how to display detailed information for transceiver interfaces:

```
switch(config)# show interface transceiver detailed
Ethernet10/9
    sfp is present
    name is CISCO
    part number is SPP5101SR-C1
    revision is A
    serial number is ECL1120017J
    nominal bitrate is 10300 MBits/sec
    Link length supported for 50/125um fiber is 82 m(s)
```

```
  Link length supported for 62.5/125um fiber is 26 m(s)
  cisco id is --
  cisco extended id number is 4
         SFP Detail Diagnostics Information (external calibration)
----------------------------------------------------------------------------
                                   Alarms                  Warnings
                              High        Low         High          Low
----------------------------------------------------------------------------
Temperature   25.54 C        75.00 C     -5.00 C     70.00 C        0.00 C
Voltage        3.22 V         3.63 V      2.97 V      3.46 V        3.13 V
Current        4.49 mA       10.00 mA     0.00 mA     9.00 mA       0.00 mA
Tx Power       -3.50 dBm       2.99 dBm  -11.30 dBm   -1.00 dBm     -7.30 dBm
Rx Power       -2.92 dBm       2.99 dBm  -13.97 dBm   -1.00 dBm     -9.91 dBm
Transmit Fault Count = 0
----------------------------------------------------------------------------
```

Related Commands

Command	Description
show interface	Displays information about the specified interfaces.

show interface trunk

To display information about all the trunk interfaces, use the **show interface trunk** command.

show interface [{**ethernet***slot/port* | **port-channel***channel-number*}]**trunk**[{**module***number* | **vlan***vlan-id*}]

Syntax Description

ethernet *slot/port*	(Optional) Type and number of the interface that you want to display .
port-channel *channel-number*	(Optional) Specifies the port-channel number of the port-channel interface that you want to display.
module *number*	(Optional) Specifies the module number. The range is from 1 to 18.
vlan *vlan-id*	(Optional) Specifies the VLAN number. The range is from 1 to 2499 and from 2628 to 4093.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
4.0	This command was introduced.

Usage Guidelines

If you do not specify an interface, a module number, or a VLAN number, the system displays information for all trunk interfaces.

This command displays information about all Layer 2 trunk interfaces and trunk port-channel interfaces.

Use the **show interface counters** command to display statistics for the specified Layer 2 interface.

This command does not require a license.

Examples

This example shows how to display information for all Layer 2 trunk interfaces:

```
switch(config)# show interface trunk
--------------------------------------------------------------------------------
Port       Native  Status        Port
           Vlan                  Channel
--------------------------------------------------------------------------------
Eth2/9     1       trunking      --
Eth2/10    1       trnk-bndl     Po50
Po50       1       not-trunking  --
--------------------------------------------------------------------------------
Port       Vlans Allowed on Trunk
--------------------------------------------------------------------------------
Eth2/9     1-3967,4048-4093
Eth2/10    1-3967,4048-4093
Po50       1-3967,4048-4093
--------------------------------------------------------------------------------
Port       STP Forwarding
--------------------------------------------------------------------------------
Eth2/9     none
```

```
Eth2/10    none
Po50       none
```

Related Commands

Command	Description
switchport mode trunk	Sets the specified interfaces as Layer 2 trunk interfaces.

show interface tunnel

To display information about the tunnel interfaces, use the **show interface tunnel** command.

show interface tunnel *number*

Syntax Description

number	Number of the tunnel interface that you want to display information for. The range is from 0 to 65503.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
4.2(1)	Display of configured static MAC address was added.
4.1(2)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to display information about tunnel interfaces:

```
switch(config)# show interface tunnel 5
Tunnel5 is down (Administratively down)
    MTU 1476 bytes, BW 9 Kbit
    Transport protocol is in VRF "default"
    Tunnel protocol/transport GRE/IP
    Last clearing of "show interface" counters never
    Tx
    0 packets output, 1 minute output rate 0 packets/sec
    Rx
    0 packets input, 1 minute input rate 0 packets/sec
```

Related Commands

Command	Description
show interface	Displays information about the specified interfaces.

show ip dhcp snooping statistics

To display statistics related to the Dynamic Host Configuration Protocol (DHCP), use the **show ip dhcp snooping statistics** command.

show ip dhcp snooping statistics

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

EXEC mode

Command History

Release	Modification
5.1(1)	Added the command output (added two counters)
4.0	This command was introduced.

Usage Guidelines

To enable this feature, use the **feature dhcp** command.

Examples

This example shows how to display statistics related to DHCP:

```
switch# show ip dhcp snooping statistics
Packets processed 0
Packets received through cfsoe 0
Packets forwarded 0
Packets forwarded on cfsoe 0
Total packets dropped 0
Packets dropped from untrusted ports 0
Packets dropped due to MAC address check failure 0
Packets dropped due to Option 82 insertion failure 0
Packets dropped due to o/p intf unknown 0
Packets dropped which were unknown 0
Packets dropped due to dhcp relay not enabled 0
Packets dropped due to no binding entry 0
Packets dropped due to interface error/no interface 0
Packets dropped due to max hops exceeded 0
switch#
```

Related Commands

Command	Description
show ip dhcp snooping statistics	Display statistics related to the Dynamic Host Configuration Protocol.

show lacp counters

To display information about Link Aggregation Control Protocol (LACP) statistics, use the **show lacp counters** command.

show lacp counters [**interface port-channel** *channel-number*]

Syntax Description

interface port-channel	(Optional) Specifies the interface port channel.
channel-number	(Optional) Number of the LACP channel group. The range is from 1 to 4096.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
4.0	This command was introduced.

Usage Guidelines

If you do not specify the *channel-number*, all channel groups are displayed.

This command does not require a license.

Examples

This example shows how to display the LACP statistics for a specific channel group:

```
switch# show lacp counters interface port-channel 1
LACPDUs         Marker      Marker Response    LACPDUs
Port              Sent   Recv     Sent   Recv     Sent   Recv      Pkts Err
--------------------------------------------------------------------------------
port-channel1
Ethernet1/1        554    536      0      0        0      0         0
Ethernet1/2        527    514      0      0        0      0         0
Ethernet1/3        535    520      0      0        0      0         0
Ethernet1/4        515    502      0      0        0      0         0
Ethernet1/5        518    505      0      0        0      0         0
Ethernet1/6        540    529      0      0        0      0         0
Ethernet1/7        541    530      0      0        0      0         0
Ethernet1/8        547    532      0      0        0      0         0
Ethernet1/9        544    532      0      0        0      0         0
Ethernet1/10       513    501      0      0        0      0         0
Ethernet1/11       497    485      0      0        0      0         0
Ethernet1/12       493    486      0      0        0      0         0
Ethernet1/13       492    485      0      0        0      0         0
Ethernet1/14       482    481      0      0        0      0         0
Ethernet1/15       481    476      0      0        0      0         0
Ethernet1/16       482    477      0      0        0      0         0
```

Related Commands

Command	Description
clear lacp counters	Clears the statistics for all LACP interfaces or those interfaces that belong to a specific LACP channel group.

show lacp interface

To display information about specific Link Aggregation Control Protocol (LACP) interfaces, use the **show lacp interface** command.

show lacpinterface ethernet *slot/port*

Syntax Description

slot/port	Slot number and port number for the interface you want to display. The range is from 1 to 253.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
4.0	This command was introduced.

Usage Guidelines

The LACP_Activity field displays whether the link is configured in the active or passive port-channel mode.

The Port Identifier field displays the port priority as part of the information. The part of the information in this field is the port number. The following example shows how to identify the port priority and the port number:

Port Identifier=0x8000,0x101

The port priority value is 0x8000, and the port number value is 0x101 in this example.

This command does not require a license.

Examples

This example shows how to display the LACP statistics for a specific channel group:

```
switch# show lacp interface ethernet 1/1
switch(config-if-range)# show lacp interface eth1/1
Interface Ethernet1/1 is up
  Channel group is 1 port channel is Po1
  PDUs sent: 556
  PDUs rcvd: 538
  Markers sent: 0
  Markers rcvd: 0
  Marker response sent: 0
  Marker response rcvd: 0
  Unknown packets rcvd: 0
  Illegal packets rcvd: 0
Lag Id: [ [(8000, 0-11-11-22-22-74, 0, 8000, 101), (8000, 0-11-11-22-22-75, 0, 8
000, 401)] ]
Operational as aggregated link since Wed Jun 11 20:37:59 2008
Local Port: Eth1/1   MAC Address= 0-11-11-22-22-74
  System Identifier=0x8000,0-11-11-22-22-74
  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=
Actor Oper State=
Neighbor: 4/1
  MAC Address= 0-11-11-22-22-75
  System Identifier=0x8000,0-11-11-22-22-75
  Port Identifier=0x8000,0x401
  Operational key=0
  LACP_Activity=active
  LACP_Timeout=Long Timeout (30s)
  Synchronization=IN_SYNC
  Collecting=true
  Distributing=true
Partner Admin State=
Partner Oper State=
```

Related Commands

Command	Description
show port-channel summary	Displays information about all port-channel groups.

show lacp neighbor

To display information about Link Aggregation Control Protocol (LACP) neighbors, use the **show lacp neighbor** command.

show lacp neighbor [**interface port-channel** *channel-number*]

Syntax Description

interface port-channel	(Optional) Specifies the interface port channel.
channel-number	(Optional) Port-channel number for the LACP neighbor that you want to display. The range is from 1 to 4096.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
4.0	This command was introduced.

Usage Guidelines

If you do not specify the *channel-number*, all channel groups are displayed.

This command does not require a license.

Examples

This example shows how to display the information about the LACP neighbors for a specific port channel:

```
switch# show lacp neighbor interface port-channel 1
Flags:  S - Device is sending Slow LACPDUs F - Device is sending Fast LACPDUs
        A - Device is in Active mode       P - Device is in Passive mode
port-channel1 neighbors
Partner's information
          Partner               Partner                     Partner
Port      System ID             Port Number     Age         Flags
Eth1/1    32768,0-11-11-22-22-750x401           44817       SA
          LACP Partner          Partner                     Partner
          Port Priority         Oper Key                    Port State
          32768                 0x0                         0x3d
Partner's information
          Partner               Partner                     Partner
Port      System ID             Port Number     Age         Flags
Eth1/2    32768,0-11-11-22-22-750x402           44817       SA
          LACP Partner          Partner                     Partner
          Port Priority         Oper Key                    Port State
          32768                 0x0                         0x3d
```

Related Commands

Command	Description
show port-channel summary	Displays information about all port-channel groups.

show lacp port-channel

To display information about Link Aggregation Control Protocol (LACP) port channels, use the **show lacp port-channel** command.

show lacp port-channel [**interface port-channel** *channel-number*]

Syntax Description

interface port-channel	(Optional) Specifies the interface port channel.
channel-number	(Optional) Port-channel number for the LACP neighbor that you want to display. The range is from 1 to 4096.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
4.0	This command was introduced.

Usage Guidelines

If you do not specify the *channel-number*, all channel groups are displayed.

This command does not require a license.

Examples

This example shows how to display the information about LACP port channels:

```
switch# show lacp port-channel
port-channel1
  Local System Identifier=0x8000,0-11-11-22-22-74
  Admin key=0x0
  Operational key=0x0
  Partner System Identifier=0x8000,0-11-11-22-22-75
  Operational key=0x0
  Max delay=0
  Aggregate or individual=1
port-channel2
  Local System Identifier=0x8000,0-11-11-22-22-74
  Admin key=0x1
  Operational key=0x1
  Partner System Identifier=0x8000,0-11-11-22-22-75
  Operational key=0x1
  Max delay=0
  Aggregate or individual=1
```

Related Commands

Command	Description
show port-channel summary	Displays information about all port-channel groups.

show lacp summary

To display Link Aggregation Control Protocol (LACP) summary information, use the **show lacp summary** command.

show lacp [**phy-port-vpc**] **summary**

Syntax Description

phy-port-vpc	(Optional) Displays information about the LACP status for the physical port VPC.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
7.1(1)D1(0)	This command was introduced.

Usage Guidelines

If the Link Aggregation Control Protocol (LACP) is not enabled, the output shows “NONE” in the Protocol column of the display.

A channel-group interface can be in the following operational states:

- Down—The interface is down because it is administratively shut down or some other reason not related to port channels.
- Individual—The interface is part of a port channel but is unable to aggregate into a port channel because of protocol exchange problems.
- Suspended—The operational parameters of the interface are not compatible with the port channel. This interface is not forwarding traffic, although the physical MAC link state is still up.
- Switched—The interface is switched.
- Up (port channel)—The port channel is up.
- Up in port channel (members)—The port member of the port channel is up.
- Hot standby (LACP only)—The interface is eligible to join the port group if one of the interfaces currently participating in the LACP channel goes down.
- Module-removed—The module has been removed.
- Routed—The interface is routed.

This command does not require a license.

Examples

This example shows how to display information about the LACP status for the physical port VPC :

```
switch(config)# show lacp phy-port-vpc summary
Flags:  D - Down           P - up
           s -  Suspended   H - Hot-standby (LACP only)
           r - Module-removed
```

```
_____________________________________
VPC-Id                     Member Port
_____________________________________
1                               Eth1/1(P)
2                               Eth1/2(H)
3                               Eth1/3(s)
4                               Eth2/1(r)
```

Related Commands

Command	Description
show lacp counters	Displays information about LACP statistics

show lacp system-identifier

To display the Link Aggregation Control Protocol (LACP) system identifier for the device, use the **show lacp system-identifier** command.

show lacp system-identifier

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
4.0	This command was introduced.

Usage Guidelines

The LACP system ID is the combination of the configurable LACP system priority value and the MAC address.

Each system that runs LACP has an LACP system priority value. You can accept the default value of 32768 for this parameter, or you can configure a value between 1 and 65535. LACP uses the system priority with the MAC address to form the system ID and also uses the system priority during negotiation with other devices. A higher system priority value means a lower priority.

The system ID is different for each virtual device context (VDC).

This command does not require a license.

Examples

This example shows how to display the information about the LACP port channel for a specific port channel:

```
switch# show lacp system-identifier
8000,AC-12-34-56-78-90
```

Related Commands

Command	Description
lacp system-priority	Sets the system priority for LACP.

show ospfv3

To display general information about the Open Shortest Path First version 3 (OSPFv3) routing process, use the **show ospfv3** command.

show ospfv3 [*process-id*]

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

Interface configuration mode

Command History

Release	Modification
6.2(2)	This command was introduced.

Usage Guidelines

OSPFv3 must be running on all participating devices. You must configure the he baseline parameters for Bidirectional Forwarding Detection (BFD) sessions on the interfaces over which you want to run BFD sessions to BFD neighbors must be configured.

Examples

This example shows how to display the general information about to discover the OSPFv3 routing process:

```
switch# configure terminal

switch(config)# interface ethernet 3/1
switch(config-router)# ospfv3 bfd disable
switch(config-if)# exit
switch(config)# show bfd neighbors details
switch(config)# show ospfv3
Routing Process 3 with ID 172.1.2.1 VRF default
Routing Process Instance Number 1
Stateful High Availability enabled
Graceful-restart is configured
Grace period: 60 state: Inactive
Last graceful restart exit status: None
Supports only single TOS(TOS0) routes
Supports opaque LSA
Administrative distance 110
Reference Bandwidth is 40000 Mbps
SPF throttling delay time of 200.000 msecs,
SPF throttling hold time of 1000.000 msecs,
SPF throttling maximum wait time of 5000.000 msecs
LSA throttling start time of 0.000 msecs,
LSA throttling hold interval of 5000.000 msecs,
LSA throttling maximum wait time of 5000.000 msecs
Minimum LSA arrival 1000.000 msec
LSA group pacing timer 10 secs
Maximum paths to destination 8
Number of external LSAs 0, checksum sum 0
Number of areas is 0, 0 normal, 0 stub, 0 nssa
Number of active areas is 0, 0 normal, 0 stub, 0 nssa
Install discard route for summarized external routes.
```

```
Install discard route for summarized internal routes.
BFD is enabled
Routing Process 200 with ID 172.1.2.1 VRF default
Routing Process Instance Number 2
Stateful High Availability enabled
Graceful-restart is configured
Grace period: 60 state: Inactive
Last graceful restart exit status: None
Supports only single TOS(TOS0) routes
Supports opaque LSA
Administrative distance 110
Reference Bandwidth is 40000 Mbps
SPF throttling delay time of 200.000 msecs,
SPF throttling hold time of 1000.000 msecs,
SPF throttling maximum wait time of 5000.000 msecs
LSA throttling start time of 0.000 msecs,
LSA throttling hold interval of 5000.000 msecs,
LSA throttling maximum wait time of 5000.000 msecs
 Minimum LSA arrival 1000.000 msec
 LSA group pacing timer 10 secs
 Maximum paths to destination 8
 Number of external LSAs 0, checksum sum 0
 Number of areas is 0, 0 normal, 0 stub, 0 nssa
 Number of active areas is 0, 0 normal, 0 stub, 0 nssa
 Install discard route for summarized external routes.
 Install discard route for summarized internal routes.
switch(config)#
```

Related Commands

Command	Description
ospfv3 bfd	Enables BFD on a per-interface basis for one or more interfaces associated with the OSPFv3 routing process.

show port-channel compatibility-parameters

To display the parameters that must be the same among the member ports in order to join a port channel, 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

Any command mode

Command History

Release	Modification
4.0	This command was introduced.

Usage Guidelines

When you add an interface to a channel group, the software checks certain interface attributes to ensure that the interface is compatible with the channel group. For example, you cannot add a Layer 3 interface to a Layer 2 channel group. The software also checks the operational attributes for an interface before allowing that interface to participate in the port-channel aggregation.

This command displays the list of compatibility checks that the system uses.

Using the **channel-group** command, you can force ports with incompatible parameters to join the port channel as long as the following parameters are the same:

- (Link) speed capability
- Speed configuration
- Duplex capability
- Duplex configuration
- Flow-control capability
- Flow-control configuration

Note See the **channel-group** command for information about forcing ports to join a port channel.

This command does not require a license.

Examples

This example shows how to display the list of compatibility checks that the system makes to ensure that an interface is compatible with a channel group:

```
switch# show port-channel compatibility-parameters
* port mode
Members must have the same port mode configured, either E or AUTO. If they
are configured in AUTO port mode, they have to negotiate E 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.
* MEDIUM
Members have to have the same medium type configured. This only applies to
ethernet port-channel.
* Span mode
Members must have the same span mode.
* sub interfaces
Members must not have sub-interfaces.
* Duplex Mode
Members must have same Duplex Mode configured.
* Ethernet Layer
Members must have same Ethernet Layer (switchport/no-switchport) configured.
* Span Port
Members cannot be SPAN ports.
* Storm Control
Members must have same storm-control configured.
* Flow Control
Members must have same flowctrl configured.
* Capabilities
Members must have common capabilities.
* port
Members port VLAN info.
* port
Members port does not exist.
* switching port
Members must be switching port, Layer 2.
* port access VLAN
Members must have the same port access VLAN.
* port native VLAN
Members must have the same port native VLAN.
* port allowed VLAN list
Members must have the same port allowed VLAN list.
```

Related Commands

Command	Description
channel-group	Adds or removes interfaces to port-channel groups and assigns the port-channel mode to the interface.

show port-channel database

To display information about the port channels, use the **show port-channel database** command.

show port-channel database [**interface port-channel** *channel-number*]

Syntax Description

interface port-channel	(Optional) Specifies the interface port channel.
channel-number	(Optional) Port-channel number for the Link Aggregation Control Protocol (LACP) neighbor that you want to display. The range is from 1 to 4096.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
4.0	This command was introduced.

Usage Guidelines

If you do not specify the *channel-number*, all channel groups are displayed. This command displays Link Aggregation Control Protocol (LACP)-enabled ports channels and port channels without an associated aggregation protocol.

This command does not require a license.

Examples

This example shows how to display information about all port channels:

```
switch# show port-channel database
port-channel5
    Administrative channel mode is active
    Operational channel mode is active
    Last membership update is successful
    1 ports in total, 0 ports up
    Age of the port-channel is 1d:16h:18m:50s
    Time since last bundle is 1d:16h:18m:56s
    Last bundled member is
    Ports:   Ethernet2/5            [down]
port-channel20
    Administrative channel mode is active
    Operational channel mode is active
    Last membership update is successful
    1 ports in total, 0 ports up
    Age of the port-channel is 1d:16h:18m:50s
    Time since last bundle is 1d:16h:18m:56s
    Last bundled member is
    Ports:   Ethernet2/20           [down]
```

This example shows how to display information about a specific port channel:

```
switch# show port-channel database interface port-channel 20
port-channel20
    Administrative channel mode is active
```

```
Operational channel mode is active
Last membership update is successful
1 ports in total, 0 ports up
Age of the port-channel is 1d:16h:23m:14s
Time since last bundle is 1d:16h:23m:20s
Last bundled member is
Ports:   Ethernet2/20           [down]
```

Related Commands

Command	Description
show port-channel summary	Displays a summary of information about all port channels.

show port-channel load-balance

To display information about load balancing using port channels, use the **show port-channel load-balance** command.

show port-channel load-balance [**forwarding-path interface port-channel** *channel-number*]

Syntax Description

forwarding-path interface port-channel	(Optional) Identifies the port in the port channel that forwards the packet.
channel-number	Port-channel number for the load-balancing forwarding path that you want to display. The is from 1 to 4096.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
4.0	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to display information about the current port-channel load balancing for the system:

```
switch# show port-channel load-balance
Port Channel Load-Balancing Configuration:
System: source-dest-ip-vlan
Port Channel Load-Balancing Addresses Used Per-Protocol:
Non-IP: source-dest-mac
IP: source-dest-ip-vlan
```

Related Commands

Command	Description
port-channel load-balance ethernet	Configures load balancing using port channels.

show port-channel rbh-distribution

To display information about the Result Bundle Hash (RBH) for port channels, use the **show port-channel rbh-distribution** command.

show port-channel rbh-distribution [**interface port-channel** *channel-number*]

Syntax Description

interface port-channel	(Optional) Specifies the interface port channel.
channel-number	(Optional) Port-channel number for the LACP neighbor that you want to display. The range is from 1 to 4096.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
4.0	This command was introduced.

Usage Guidelines

The RBH value ranges from 0 to 7 and is shared among port members in a port channel.

This command does not require a license.

Examples

This example shows how to display RBH distribution for a specific port channel:

```
switch# show port-channel rbh-distribution interface port-channel 4
ChanId    Member port    RBH values         Num of buckets
--------  -------------  -----------------  ----------------
 4         Eth3/13        4,5,6,7            4
 4         Eth3/14        0,1,2,3            4
```

Related Commands

Command	Description
port-channel summary	Displays summary information about port channels.

show port-channel summary

To display summary information about the port channels, 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

Any command mode

Command History

Release	Modification
5.1(1)	Added a new port channel status 'M' to the command output.
4.0	This command was introduced.

Usage Guidelines

If the Link Aggregation Control Protocol (LACP) is not enabled, the output shows "**NONE"** in the Protocol column of the display.

A channel-group interface can be in the following operational states:

- Down—The interface is down because it is administratively shut down or some other reason not related to port channels.
- Individual—The interface is part of a port channel but is unable to aggregate into a port channel because of protocol exchange problems:
  - This interface continues to forward traffic as an individual link.
  - STP is aware of this interface.
- Suspended—The operational parameters of the interface are not compatible with the port channel. This interface is not forwarding traffic, although the physical MAC link state is still up.
- Switched—The interface is switched.
- Up (port channel)—The port channel is up.
- Up in port channel (members)—The port member of the port channel is up.
- Hot standby (LACP only)—The interface is eligible to join the port group if one of the interfaces currently participating in the LACP channel goes down.
  - This interface does not forward data traffic; it forwards only protocol data units (PDUs).
  - This interface does not run STP.
- Module-removed—The module has been removed.
- Routed—The interface is routed.

This command does not require a license.

Examples

This example shows how to display summary information for the port channels:

```
switch(config-if)# 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)
  M - Not in use. Min-links not met
--------------------------------------------------------------------------------
Group Port-       Type     Protocol  Member Ports
  Channel
--------------------------------------------------------------------------------
2     Po2(SU)     Edge     LACP      Eth4/9(D)    Eth4/10(D)   Eth4/11(P)
                                     Eth4/12(P)
3     Po3(SU)     Edge     LACP      Eth4/27(P)   Eth4/28(P)   Eth4/29(P)
                                     Eth4/30(P)
10    Po10(SU)    Edge     LACP      Eth4/1(P)    Eth4/2(P)    Eth4/3(P)
                                     Eth4/4(P)    Eth4/13(P)   Eth4/14(P)
                                     Eth4/15(P)   Eth4/16(P)   Eth4/17(P)
                                     Eth4/18(P)   Eth4/19(P)   Eth4/20(P)
                                     Eth4/21(P)   Eth4/22(P)   Eth4/23(P)
                                     Eth4/24(P)
```

Related Commands

Command	Description
show port-channel usage	Displays the port-channel numbers used and available.
show port-channel traffic	Displays transmitted and received unicast, multicast, and broadcast percentages for the port channels.

show port-channel traffic

To display traffic statistics for port channels, use the **show port-channel traffic** command.

show port-channel traffic [**interface port-channel** *channel-number*]

Syntax Description

interface port-channel	(Optional) Specifies the interface port channel.
channel-number	(Optional) Port-channel number for the LACP neighbor that you want to display. The range is from 1 to 4096.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
4.0	This command was introduced.

Usage Guidelines

This command displays the percentage of transmitted and received unicast, multicast, and broadcast traffic about the port channel.

If you do not specify the *channel-number*, information for all port channels is displayed.

This command does not require a license.

Examples

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

```
switch(config)# show port-channel traffic
ChanId      Port Rx-Ucst Tx-Ucst Rx-Mcst Tx-Mcst Rx-Bcst Tx-Bcst
------ --------- ------- ------- ------- ------- ------- -------
     5    Eth2/5    0.0%    0.0%    0.0%    0.0%    0.0%    0.0%
------ --------- ------- ------- ------- ------- ------- -------
    20   Eth2/20    0.0%    0.0%    0.0%    0.0%    0.0%    0.0%
```

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

```
switch(config)# show port-channel traffic interface port-channel 5
ChanId      Port Rx-Ucst Tx-Ucst Rx-Mcst Tx-Mcst Rx-Bcst Tx-Bcst
------ --------- ------- ------- ------- ------- ------- -------
     5    Eth2/5    0.0%    0.0%    0.0%    0.0%    0.0%    0.0%
```

Related Commands

Command	Description
port-channel summary	Displays summary information about port channels.

show port-channel usage

To display the port-channel numbers used and available, 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

Any command mode

Command History

Release	Modification
4.0	This command was introduced.

Usage Guidelines

This command displays port-channel numbers used and available in the virtual device context (VDC) that you are monitoring.

The number of port-channel numbers available across all VDCs for the entire system is from 1 to 4096.

This command does not require a license.

Examples

This example shows how to display the usage for all port channels:

```
switch# show port-channel usage
Totally 2 port-channel numbers used
===================================
Used  :   5 , 20
Unused:   1 - 4 , 6 - 19 , 21 - 4096
```

Related Commands

Command	Description
port-channel summary	Displays summary information about port channels.

show port-profile

To display information about port profiles, use the **show port-profile** command.

show port-profile [{**brief** | **expand-interface** [**name** *name*] | **name** *name* | **usage**}]

Syntax Description

brief	(Optional) Displays brief information about the port profiles.
expand-interface name	(Optional) Displays the configured attributes at an interface per port profile. An optional name can be specified to show the expanded interface output for that specific port profile.
name *name*	(Optional) Displays information for the specified port profile.
usage	(Optional) Displays a list of interfaces to which each profile is attached.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
4.2(1)	This command was introduced.

Usage Guidelines

Use the **show port-profile** command to display information about the configured port profiles on the device. It displays all configured port profiles.

Port profiles are not aware of default values, so the default value configuration appears in the port profiles. For example, MTU 1500 is a default value and does not appear in the running-configuration of an interface. However, because port profiles are unaware of default values, MTU 1500 appears in the port-profile display.

This command does not require a license.

Examples

This example shows how to display information about port profiles:

```
switch(config)# show port-profile
 try1
 type: Ethernet
 description:
 status: enabled
 max-ports: 512
 inherit:
 config attributes:
  channel-group 5
 evaluated config attributes:
  channel-group 5
 assigned interfaces:
  Ethernet1/1
 try2
 type: Ethernet
 description:
 status: disabled
 max-ports: 512
```

```
 inherit:
 config attributes:
 evaluated config attributes:
 assigned interfaces:
```

This example shows how to display brief port profile information:

```
switch(config)# show port-profile brief
-------------------------------------------------------------
Port                Profile  Conf   Eval   Assigned  Child
Profile              State   Items  Items  Intfs     Profs
-------------------------------------------------------------
try1                1        1      1      1         0
try2                0        0      0      0         0
```

This example shows how to display expanded port profile interface information:

```
switch(config)# show port-profile expand-interface
 try1
 Ethernet1/1
  channel-group 5
 try2
```

This example shows how to display specific port profile information:

```
switch(config)# show port-profile name try1
 try1
 type: Ethernet
 description:
 status: enabled
 max-ports: 512
 inherit:
 config attributes:
  channel-group 5
 evaluated config attributes:
  channel-group 5
 assigned interfaces:
  Ethernet1/1
switch(config)# show port-profile usage
 try1
 Ethernet1/1
```

This example shows how to display port profiles and values that you have entered in interface configuration mode using the **show running-config** command:

```
switch(config)# show running-config interface ethernet 8/5
interface ethernet8/5
 inherit  try1
 mtu 3000
```

Related Commands

Command	Description
port-profile	Configures, names, and allows you to enter port-profile configuration mode.
inherit port-profile	Assigns port profile to specified interfaces and allows one port profile to inherit configuration parameters from another port profile.

show running-config bfd

To display the running BFD configuration, use the **show running-config bfd** command.

show running-config bfd [**all**]

Syntax Description

all	Displays the default configurations.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
4.0	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to display all the running BFD configurations:

```
switch# show running-config bfd all
!Command: show running-config bfd
!Time: Tue Nov 22 06:15:17 2016
version 8.0(1)
feature bfd
bfd interval 555 min_rx 555 multiplier 5
bfd slow-timer 2000
no bfd echo-interface
bfd echo-rx-interval 50
bfd c-bit
```

Related Commands

Command	Description
bfdc-bit	Configures the independent control plane setting in outgoing BFD packets.

show running-config interface

To display the running configuration for a specific interface, use the **show running-config interface** command.

show running-config interface [{**all** | {**ethernet**{*slot/port*}[**all**]} | **expand-port-profile** | {**loopback**{*number*}[**all**]} | {**mgmt0**[**all**]} | {**port-channel**{*channel-number*}[**membership**]} | {**tunnel**{*number*}[**all**]} | {**vlan**{*vlan-id*}[**all**]}}]

Syntax Description

all	(Optional) Displays the configuration with defaults.
ethernet *slot/port*	Displays the number of the module and port number. The range is from 1 to 253.
expand-port-profile	(Optional) Displays port profiles.
loopback *number*	Displays the number of the loopback interface. The range is from 1 to 4096.
mgmt0	(Optional) Displays the management interface.
port-channel *channel-number*	Displays the number of the port-channel group. The range is from 0 to 1023.
membership	(Optional) Specifies the membership of the specified port channel.
tunnel *number*	Displays the number of the tunnel interface. The range is from 0 to 65535.
vlan *vlan-id*	Displays the number of the VLAN. The range is from 1 to 4096.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
4.0	This command was introduced.
4.2(1)	The **expand-port-profile** parameter was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to display information about the running configuration for a specific Ethernet interface:

```
switch(config)# show running-config interface ethernet 2/7
version 4.0(3)
interface Ethernet2/7
  description Ethernet port 3 on module 1
  mtu 8000
  delay 20
  udld enable
  no shutdown
```

This example shows how to display information about the running configuration for a specific range of Ethernet interfaces:

```
switch(config)# show running-config interface ethernet 2/7 - 9
version 4.0(3)
interface Ethernet2/7
  description Ethernet port 3 on module 1
  mtu 8000
  delay 20
  udld enable
  no shutdown
interface Ethernet2/8
  no shutdown
interface Ethernet2/9
  no shutdown
```

This example shows how to display information about the running configuration for a specific loopback interface:

```
switch(config)# interface loopback 345
switch(config-if)# show running-config interface loopback 345
version 4.0(3)
interface loopback345
```

This example shows how to display the running configuration for a specific port channel:

```
switch(config)#
show running-config interface port-channel 10
version 4.0(1)
interface port-channel10
  switchport
  switchport mode trunk
```

This example shows how to display information about the running configuration for VLAN interface 50:

```
switch(config)# show running-config interface vlan 50
version 4.0(3)
interface Vlan50
```

Related Commands

Command	Description
interface	Enters the interface configuration mode and configures the types and identities of interfaces.
interface vlan	Creates a VLAN interface and enters interface configuration mode.
show interface ethernet	Displays information about the Ethernet interface.
show port-channel summary	Displays a summary of port-channel information.
show running-config	Displays the running configuration on the device.

show running-config interface mgmt

To display the running configuration for a specific management interface, use the **show running-config interface mgmt** command.

showrunning-config interfacemgmt*number*

Syntax Description

number	Management interface number that you want to display. The value is from 0 to 0.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
4.0	This command was introduced.

Usage Guidelines

Use the **show running-config interface mgmt** command to display the running configuration for a management interface.

This command does not require a license.

Examples

This example shows how to display information about the running configuration for management interface 0:

```
switch# show running-config interface mgmt 0
version 4.0(3)
interface mgmt0
  ip address 172.28.231.193/23
```

Related Commands

Command	Description
show interface mgmt	Displays the management interface information.

show running-config vpc

To display the running configuration information for virtual port channels (vPCs), use the **show running-config vpc** command.

show running-config vpc [**all**]

Syntax Description

all	(Optional) Displays the running configuration for all vPCs.

Command Default

None

Command Modes

Any command mode.

Command History

Release	Modification
4.1(3)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to display the running configuration for a vPC:

```
switch (config)# show running-config vpc
version 4.1(2)
feature vpc
vpc domain 2
role priority 1
system-priority 32667
peer-keepalive destination 10.10.76.52 source 10.10.76.51 udp-port 3200 vrf ma
engagement interval 1000 timeout 5
interface port-channel10
vpc 20
interface port-channel101
vpc 101
interface port-channel200
vpc peer-link
interface port-channel201
vpc 201
```

Related Commands

Command	Description
show vpc brief	Displays information about vPCs. If the feature is not enabled, this command returns an error.

show running-config vpc-config-sync

To display the virtual port channels (vPC) configuration synchronization-related configuration in the running configuration, use the **show running-config vpc-config-sync** command.

show running-config vpc-config-sync

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

Any command mode.

Command History

Release	Modification
7.1(1)D1(0)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to display vPC configuration synchronization-related configuration in the running configuration:

```
switch# show running-config vpc-config-sync
!Time: Wed Jul 23 10:01:08 2014
version 7.1(0)D1(1)
vpc domain 10
  config-sync
```

Related Commands

Command	Description
config-sync	Enables vPC configuration synchronization.

show startup-config interface

To display interface configuration information in the startup configuration, use the s**how startup-config interface** command.

show startup-config interface [{**ethernet***slot/port* | **expand-port-profile** | **loopback***number* | **mgmt** | **port-channel**{*channel-number*}[**membership**] | **tunnel***number* | {**vlan***vlan-id*}}]

Syntax Description

ethernet *slot/port*	(Optional) Displays the number of the module and port number.
expand-port-profile	(Optional) Displays the port profiles.
loopback *number*	(Optional) Displays the number of the loopback interface. The range is from 1 to 4096.
mgmt	(Optional) Displays the management interface.
port-channel *channel-number*	(Optional) Displays the number of the port-channel group. The range is from 0 to 1023.
membership	(Optional) Displays the membership of the specified port channel.
tunnel *number*	(Optional) Displays the number of the tunnel interface. The range is from 0 to 65535.
vlan *vlan-id*	(Optional) Displays the number of the VLAN. The range is from 1 to 4096.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
4.1(2)	This command was introduced.
4.2(1)	The **expand-port-profile** parameter was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to display the information in the startup configuration for the interface Ethernet 7/1:

```
switch(config)# show startup-config interface ethernet 7/1
version 4.1(2)
interface Ethernet7/1
  ip pim sparse-mode
```

Related Commands

Command	Description
show interface	Displays information about the specified interface.

show startup-config vpc

To display virtual port-channel (vPC) configuration information in the startup configuration, use the **show startup-config vpc** command.

show startup-config vpc [**all**]

Syntax Description

all	(Optional) Displays the startup-configuration information for all vPCs.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
4.1(3)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to display the vPC information in the startup configuration:

```
switch(config)# show startup-config vpc
version 4.1(2)
feature vpc
vpc domain 1
interface port-channel10
  vpc peer-link
interface port-channel20
  vpc 100
```

Related Commands

Command	Description
show vpc brief	Displays information about vPCs.

show udld

To display information about the Unidirectional Link Detection (UDLD) configuration, use the **show udld** command.

showudld[{**ethernet***slot/port* | **global** | **neighbors**}]

Syntax Description

ethernet *slot/port*	(Optional) Displays the Ethernet slot and port number you want to display. The range is from 1 to 253.
global	(Optional) Displays the UDLD global status and configuration on all interfaces.
neighbors	(Optional) Displays the UDLD neighbor interfaces.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
4.0	This command was introduced.

Usage Guidelines

Use the **show udld** command to display information about the UDLD configuration for an interface. UDLD must be enabled on the device before you can display this command; enter the **feature udld** command to enable UDLD globally on the device.

This command does not require a license.

Examples

This example shows how to display information about the UDLD configuration for Ethernet port 2/7:

```
switch# show udld ethernet 2/7
Interface Ethernet2/7
--------------------------------
Port enable administrative configuration setting: disabled
Port enable operational state: disabled
Current bidirectional state: unknown
Current operational state:  udld-init - Multiple neighbor not detected
Message interval: 7
Timeout interval: 5
```

Related Commands

Command	Description
udld	Configures the ports to use a UDLD mode.
feature udld	Enables UDLD globally on device.

show vdc

To display virtual device contexts (VDCs), use the **show vdc** command.

show vdc

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to display VDCs:

```
switch# show vdc
Switchwide mode is m1 f1 m1xl f2 m2xl
vdc_id  vdc_name                          state               mac
  type        lc
------  --------                          -----               ----------
  ---------   ------
1       switch                            active              00:22:55:79:a4:c1
  Ethernet    m1 f1 m1xl m2xl
2       2                                 active              00:22:55:79:a4:c2
  Ethernet    m1 f1 m1xl m2xl
switch#
```

Related Commands

Command	Description
show lacp	Displays LACP information.

show vpc brief

To display brief information about the virtual port channels (vPCs), use the **show vpc brief** command.

show vpc brief [**vpc** *number*]

Syntax Description

vpc *number*	(Optional) Displays brief information about the specified vPC. The range is from 1 to 4096.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
6.1(2)E1	Added an example with the fabricpath load balance command and the no port-channel limit command.
6.1(2)	Changed the command output.
4.2(1)	Added the vpc keyword and *number* argument.
4.1(3)	This command was introduced.

Usage Guidelines

The **show vpc brief** command displays the vPC domain ID, the peer-link status, the keepalive message status, whether the configuration consistency is successful, and whether the peer-link formed or failed to form.

This command is not available if you have not enabled the vPC feature. See the **feature vpc** command for information on enabling vPCs.

Beginning with Cisco Release 4.2(1), you can display the track object, if you have configured a tracked object for running vPCs on a single module under the vpc-domain configuration mode.

This command does not require a license.

Examples

This example shows how to display brief information about the vPCs:

```
switch(config)# show vpc brief
switch-peer1(config)# show vpc brief
Legend:
                (*) - local vPC is down, forwarding via vPC peer-link
vPC domain id                     : 1
vPC+ switch id                    : 2
Peer status                       : peer adjacency formed ok
vPC keep-alive status             : peer is alive
vPC fabricpath status             : peer is reachable through fabricpath
Configuration consistency status  : success
Per-vlan consistency status       : success
Type-2 inconsistency reason       : Consistency Check Not Performed
vPC role                          : primary
Number of vPCs configured         : 8
Peer Gateway                      : Disabled
Dual-active excluded VLANs        : -
```

```
Graceful Consistency Check        : Enabled
Auto-recovery status              : Disabled
Fabricpath load balancing         : Enabled
Port Channel Limit                : limit to 244
vPC Peer-link status
---------------------------------------------------------------------
id   Port   Status Active vlans
--More-
```

This example shows how to displays brief information about the vPCs when the fabricpath load balance command and the no port-channel limit command are configured:

```
switch(config-vpc-domain)# show vpc
Legend:
(*) - local vPC is down, forwarding via vPC peer-link
vPC domain id : 1
vPC+ switch id : 1
Peer status : peer adjacency formed ok
vPC keep-alive status : peer is alive
vPC fabricpath status : peer is not reachable through fabricpath
Configuration consistency status : success
Per-vlan consistency status : success
Type-2 consistency status : success
vPC role : secondary
Number of vPCs configured : 1
Peer Gateway : Disabled
Dual-active excluded VLANs : -
Graceful Consistency Check : Enabled
Auto-recovery status : Disabled
Fabricpath load balancing : Enabled
Operational Layer3 Peer : Disabled
Port Channel Limit : no limit
vPC Peer-link status
---------------------------------------------------------------------
id Port Status Active vlans

-- ---- ------ --------------------------------------------------


1 Po100 up 1-10
vPC status
----------------------------------------------------------------------------
id Port Status Consistency Reason Active vlans vPC+ Attribute
-- ---- ------ ----------- ------ ------------ --------------
1 Po1 up success success 1-10 DF: Partial, FP
MAC: 1.1.4513
```

This example shows how to display brief information about the vPCs when no port-channel limit is added:

```
switch-peer1(config-vpc-domain)# no port-channel limit
switch-peer1(config-vpc-domain)# show vpc brief
Legend:
                (*) - local vPC is down, forwarding via vPC peer-link
vPC domain id                     : 1
vPC+ switch id                    : 2
Peer status                       : peer adjacency formed ok
vPC keep-alive status             : peer is alive
vPC fabricpath status             : peer is reachable through fabricpath
Configuration consistency status  : success
Per-vlan consistency status       : success
Type-2 inconsistency reason       : Consistency Check Not Performed
vPC role                          : primary
```

```
Number of vPCs configured         : 8
Peer Gateway                      : Disabled
Dual-active excluded VLANs        : -
Graceful Consistency Check        : Enabled
Auto-recovery status              : Disabled
Fabricpath load balancing         : Enabled
Port Channel Limit                : no limit
vPC Peer-link status
---------------------------------------------------------------------
id   Port   Status Active vlans
--More--
```

This example also shows how to display brief information about the vPCs. In this example, the port channel failed the consistency check, and the device displays the reason for the failure:

```
switch(config)# show vpc brief
Legend:
                (*) - local vpc is down, forwarding via vPC peer-link
vPC domain id                     : 10
Peer status                       : peer adjacency formed ok
vPC keep-alive status             : peer is alive
Configuration consistency status: failed
Configuration consistency reason: vPC type-1 configuration incompatible - STP interface
port type inconsistent
vPC role                          : secondary
Number of vPC configured          : 1
vPC Peer-link status
---------------------------------------------------------------------
id   Port   Status Active vlans
--   ----   ------ --------------------------------------------------
1    Po10   up     1-100
vPC status
----------------------------------------------------------------------
id   Port   Status Consistency Reason                     Active vlans
--   ----   ------ ----------- -------------------------- ------------
20   Po20   up     failed      vPC type-1 configuration   -
                               incompatible - STP
                               interface port type
                               inconsistent
```

This example shows how to display information about the tracked objects in the vPCs, which is available beginning in Cisco NX-OS Release 4.2(1):

```
switch(config)# show vpc brief
Legend:
                (*) - local vpc is down, forwarding via vPC peer-link
vPC domain id                     : 1
Peer status                       : peer adjacency formed ok
vPC keep-alive status             : peer is alive
Configuration consistency status: success
vPC role                          : secondary
Number of vPC configured          : 3
Track object                      : 12
vPC Peer-link status
---------------------------------------------------------------------
id   Port   Status Active vlans
--   ----   ------ --------------------------------------------------
1    Po10   up     1-100
```

Related Commands

Command	Description
feature vpc	Enables vPCs on the device.
show port channel summary	Displays information about port channels.

show vpc config-sync

To display information relating to the virtual port channels (vPC) configuration synchronization process, use the **show vpc config-sync** command.

show vpc config-sync {**status** | **cli syntax** | **database** | **merge status**}

Syntax Description

status	Displays the status of the last 10 operations performed by the configuration synchronization process.
cli syntax	Displays the list of commands that are able to be configuration synchronized.
database	Displays the configuration synchronization database.
merge status	Displays the status of the merge with each peer switch.

Command Default

None

Command Modes

Any command mode.

Command History

Release	Modification
7.1(1)D1(0)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to display the list of commands that are able to be configuration synchronized:

```
(config)# show vpc config-sync cli syntax
MODE configuration terminal
(1)  [ no ] spanning-tree mode [ <stp-mode> ]
(2)  [ no ] spanning-tree { vlan <vlan-id> | bridge-domain <bd-id> } priority [ <prio> ]
(3) no spanning-tree mst configuration
(4)  [ no ] spanning-tree { vlan <vlan-id> | bridge-domain <bd-id> }
(5)  [ no ] spanning-tree port type edge default
(6)  [ no ] spanning-tree port type edge bpduguard default
(7)  [ no ] spanning-tree port type edge bpdufilter default
(8)  [ no ] spanning-tree port type network default
(9)  [ no ] spanning-tree bridge assurance
(10)  [ no ] spanning-tree mst simulate pvst global
(11)  [ no ] spanning-tree loopguard default
(12) spanning-tree mst configuration
(13) instance <instance-id> vlan <vlan-list>
(14) no instance <instance-id> [ vlan <vlan-list> ]
(15)  [ no ] name [ <name-val> ]
(16)  [ no ] revision [ <rev-id> ]
MODE interface ethernet
(17) no switchport
(18)  [ no ] spanning-tree mst simulate pvst [ <simpvst-disable> ]
(19)  [ no ] spanning-tree port type [ <port-type> ]
(20)  [ no ] spanning-tree port type edge [ trunk ]
```

```
(21)  [ no ] spanning-tree guard [ <guard-type> ]
(22) switchport
(23)  [ no ] duplex [ <duplex_mode> ]
(24)  [ no ] mtu [ <mtu_val> ]
(25)  [ no ] speed [ { <speed_val> | auto [ 10 100 [ 1000 ] ] } ]
(26)  [ no ] switchport vlan mapping enable
(27)  [ no ] vpc <vpc_num>
(28)  [ no ] switchport access vlan
(29)  [ no ] switchport mode
(30)  [ no ] switchport mode fex-fabric
MODE interface port-channel
(31) switchport
(32) no switchport
(33)  [ no ] duplex [ <duplex_mode> ]
(34)  [ no ] mtu [ <mtu_val> ]
(35)  [ no ] speed [ { <speed_val> | auto [ 10 100 [ 1000 ] ] } ]
(36)  [ no ] vpc [ <vpc_num> ]
(37)  [ no ] switchport mode fex-fabric
(38)  [ no ] switchport vlan mapping enable
(39)  [ no ] vpc peer-link
(40)  [ no ] switchport mode
(41)  [ no ] switchport access vlan
(42)  [ no ] spanning-tree mst simulate pvst [ <simpvst-disable> ]
(43)  [ no ] spanning-tree port type [ <port-type> ]
(44)  [ no ] spanning-tree port type edge [ trunk ]
(45)  [ no ] spanning-tree guard [ <guard-type> ]
MODE vpc-domain
(46)  [ no ] graceful consistency-check
(47)  [ no ] peer-switch
(48)  [ no ] system-mac
(49)  [ no ] system-priority
(50)  [ no ] dual-active exclude interface-vlan
(51)  [ no ] peer-gateway
(52)  [ no ] layer3 peer-router
(53)  [ no ] self-isolation
(54)  [ no ] delay restore
(55)  [ no ] delay restore interface-vlan
(56)  [ no ] mode auto
(57)  [ no ] fabricpath switch-id [ <es_id> ]
(58)  [ no ] fabricpath multicast load-balance
(59)  [ no ] auto-recovery [ reload-delay <time-out> ]
```

This example shows how to display the configuration synchronization database:

```
switch(config)# show vpc config-sync database
Config-sync Database:
---------------------
Distribution: Enabled
Mode: Sync
Features synced:
  sync-feature vpc always-sync
  sync-feature vpc-type-1 always-sync
Interfaces synced:
  interface port-channel400
    vpc 400
  interface port-channel300
    vpc 300
```

This example shows how to display the status of the merge with each peer switch:

```
switch(config)# show vpc config-sync merge status
System merge status  : Peer partially in-sync
  Failure reason     : Conflicting configuration on peer switch.
```

```
  Local switch config:
    interface port-channel300
      speed 10000
      mtu 9200
  Peer switch config :
    interface port-channel300
      speed 1000
      mtu 9216
Global configuration  : Peer in-sync
Interface merge status:
  interface port-channel400 : Peer in-sync
  interface port-channel300 : Peer out-of-sync
```

Related Commands

Command	Description
config-sync	Enables vPC configuration synchronization.

show vpc consistency-parameters

To display the consistency of parameters that must be compatible across the virtual port-channel (vPC) interfaces, use the s**how vpc consistency-parameters** command.

show vpc consistency-parameters {**global** | **interface port-channel** *channel-number* | **vlan** | **vpc** *number*}

Syntax Description

global	(Optional) Displays the configuration of all Type 1 global parameters on both sides of the vPC peer link.
interfaceport-channel	(Optional) Displays the configuration of all Type 1 interface parameters on both sides of the vPC peer link.
channel- number	(Optional) Channel number. The range is from 1 to 4096.
vlan	(Optional) Displays the configuration of all Type 1 interface parameters on both sides of the vPC peer link for the specified VLAN.
vpc *number*	(Optional) Displays the configuration of all Type 1 interface parameters on both sides of the vPC peer link for the specified vPC. The range is from 1 to 4096.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
4.1(3)	This command was introduced.
4.2(1)	Added the display of local suspended VLANs. **Note** The command does not display the vPC peer device's suspended VLANs.
4.2(1)	Added the *vpc* argument.
5.2(1)	Added the **vlan** keyword.

Usage Guidelines

The **show vpc consistency-parameters** command displays the configuration of all the vPC Type 1 parameters on both sides of the vPC peer link.

Note All the Type 1 configurations must be identical on both sides of the vPC peer link, or the link does not come up.

The vPC Type 1 configuration parameters are as follows:

- Port-channel mode: on, off, or active

- Link speed per channel
- Duplex mode per channel
- Trunk mode per channel
  - Native VLAN
  - VLANs allowed on trunk
  - Tagging of native VLAN traffic
- Spanning Tree Protocol (STP) mode
- STP region configuration for Multiple Spanning Tree
- Enable/disable state the same per VLAN
- STP global settings
  - Bridge Assurance setting
  - Port type setting—We recommend that you set all vPC peer link ports as network ports.
  - Loop Guard settings
- STP interface settings:
  - Port type setting
  - Loop Guard
  - Root Guard
- Maximum transmission unit (MTU)
- Allowed VLAN bit set

This command is not available if you have not enabled the vPC feature. See the **feature vpc** command for information on enabling vPCs.

This command does not require a license.

Examples

This example shows how to display the vPC consistency parameters for the specified port channel:

```
switch (config)# show vpc consistency-parameters global
Legend:
        Type 1 : vPC will be suspended in case of mismatch
Name            Type Local Value              Peer Value
-------------   ---- ------------------------ --------------------------
STP Mode        1    Rapid-PVST               Rapid-PVST
STP Disabled    1    None                     None
STP MST         1    ""                       ""
Region Name
STP MST         1    0                        0
Region
Revision
STP MST         1
Region
Instance to
```

```
VLAN Mapping
STP Loopguard   1    Disabled                 Disabled
STP Bridge      1    Enabled                  Enabled
Assurance
STP Port Type   1    Normal                   Normal
Allowed VLAN    -    1-100                    1-100
Local suspended -    1-50                     -
VLANs
```

This example shows how to display the vPC consistency parameters for the specified port channel:

```
switch (config)# show vpc consistency-parameters interface port-channel 20
Legend:
        Type 1 : vPC will be suspended in case of mismatch
Name            Type Local Value              Peer Value
-------------   ---- ------------------------ --------------------------
STP Port Type   1    Default                  Default
STP Port        1    None                     None
Guard
mode            1    on                       on
Speed           1    10 Gb/s                  10 Gb/s
Duplex          1    full                     full
Port Mode       1    trunk                    trunk
Native Vlan     1    1                        1
MTU             1    1500                     1500
Allowed VLAN    -    1-100                    1-100
bitset
```

Related Commands

Command	Description
show vpc brief	Displays information about vPCs. If the feature is not enabled, the system displays an error when you enter this command.
show port channel summary	Displays information about port channels.

show vpc orphan-ports

To display ports that are not part of the virtual port channel (vPC) but have common VLANs, use the **show vpc orphan-ports** command.

show vpc orphan-ports

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
4.2(1)	This command was introduced.

Usage Guidelines

The **show vpc orphan-ports** command displays those ports that are not part of the vPC but that share common VLANs with ports that are part of the vPC.

This command is not available if you have not enabled the vPC feature. See the **feature vpc** command for information on enabling vPCs.

This command does not require a license.

Examples

This example shows how to display vPC orphan ports:

```
switch(config)# show vpc orphan ports
Note:
--------::Going through port database. Please be patient.::--------
VLAN           Orphan Ports
-------        -------------------------
1              Po600
2              Po600
3              Po600
4              Po600
5              Po600
6              Po600
7              Po600
8              Po600
9              Po600
10             Po600
11             Po600
12             Po600
13             Po600
14             Po600
15             Po600
```

Related Commands

Command	Description
feature vpc	Enables vPCs on the device.

Command	Description
show vpc brief	Displays brief information about vPCs.

show vpc peer-keepalive

To display the destination IP for the virtual port-channel (vPC) peer keepalive message and the status of the messages, use the **show vpc peer-keepalive** command.

show vpc peer-keepalive

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
4.1(3)	This command was introduced.

Usage Guidelines

The show **vpc peer-keepalive** command displays the destination IP of the peer keepalive message for the vPC. The command also displays the send and receive status as well as the last update from the peer in seconds and milliseconds

Note We recommend that you create a separate virtual routing and forwarding (VRF) instance on the peer devices to send and receive the vPC peer keepalive messages. Do not use the peer link itself to send the vPC peer-keepalive messages.

This command is not available if you have not enabled the vPC feature. See the **feature vpc** command for information on enabling vPCs.

This command does not require a license.

Examples

This example shows how to display information about the peer-keepalive message:

```
n7k-2(config-vpc-domain)# show vpc peer-keepalive
vPC keep-alive status           : peer is alive
--Send status                   : Success
--Last send at                  : 2008.05.17 18:23:53 986 ms
--Sent on interface             : Eth7/16
--Receive status                : Success
--Last receive at               : 2008.05.17 18:23:54 99 ms
--Received on interface         : Eth7/16
--Last update from peer         : (0) seconds, (486) msec
vPC Keep-alive parameters
--Destination                   : 172.23.145.213
--Keepalive interval            : 1000 msec
--Keepalive timeout             : 5 seconds
--Keepalive hold timeout        : 3 seconds
--Keepalive vrf                 : pkal
--Keepalive udp port            : 3200
--Keepalive tos                 : 192
```

Related Commands

Command	Description
show vpc brief	Displays information about vPCs. If the feature is not enabled, the system displays an error when you enter this command.

show vpc role

To display information about the virtual port-channel (vPC) role of the peer device, use the **show vpc role** command.

show vpc role

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
4.1(3)	This command was introduced.

Usage Guidelines

The **show vpc role** command displays the following information about the vPC status:

- Status of peer adjacency
- vPC role of the VDC that you are working on
- vPC MAC address
- vPC system priority
- MAC address of the device that you are working on
- System priority for the device that you are working on

This command is not available if you have not enabled the vPC feature. See the **feature vpc** command for information on enabling vPCs.

This command does not require a license.

Examples

This example shows how to display the vPC role information of the device that you are working on:

```
switch (config)# show vpc role

Primary:
vPC Role status
----------------------------------------------------
vPC role                        : primary
Dual Active Detection Status    : 0
vPC system-mac                  : 00:23:04:ee:be:01
vPC system-priority             : 32667
vPC local system-mac            : 00:22:55:79:ea:c1
vPC local role-priority         : 32667
Secondary:
vPC Role status
----------------------------------------------------
vPC role                        : secondary
Dual Active Detection Status    : 0
```

```
vPC system-mac                  : 00:23:04:ee:be:01
vPC system-priority             : 32667
vPC local system-mac            : 00:22:55:79:de:41
vPC local role-priority         : 32667
```

When you reload the primary vPC peer device, the secondary vPC peer device assumes the role of the primary device. The following example shows how the vPC role displays on the new primary device:

```
switch (config)# show vpc role

vPC Role status
----------------------------------------------------
vPC role                        : secondary, operational primary
Dual Active Detection Status    : 0
vPC system-mac                  : 00:23:04:ee:be:64
vPC system-priority             : 32667
vPC local system-mac            : 00:22:55:79:de:41
vPC local role-priority         : 32667
```

Related Commands

Command	Description
show vpc brief	Displays information about vPCs. If the feature is not enabled, the system displays an error when you enter this command.
show port channel summary	Displays information about port channels.

show vpc statistics

To display virtual port-channel (vPC) statistics, use the **show vpc statistics** command.

show vpc statistics {**peer-keepalive** | **peer-link** | **vpc** *number*}

Syntax Description

peer-keepalive	Displays statistics about the peer-keepalive message.
peer-link	Displays statistics about the peer link.
vpc *number*	Displays statistics about the specified vPC. The range is from 1 to 4096.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
4.1(3)	This command was introduced.

Usage Guidelines

The **peer-link** parameter displays the same information as the **show interface port-channel** *channel number* command for the vPC peer-link port channel.

The **vpc** *number* parameter displays the same information as the **show interface port-channel** *channel number* command for the specified vPC port channel.

This command is not available if you have not enabled the vPC feature. See the **feature vpc** command for information on enabling vPCs.

This command does not require a license.

Examples

This example shows how to display statistics about the peer-keepalive message:

```
switch# show vpc statistics peer-keepalive
vPC keep-alive status           : peer is alive
VPC keep-alive statistics
--------------------------------------------------
peer-keepalive tx count:          1036
peer-keepalive rx count:          1028
average interval for peer rx:     995
Count of peer state changes:      1
```

Related Commands

Command	Description
show vpc brief	Displays information about vPCs. If the feature is not enabled, the system displays an error when you enter this command.
show port channel summary	Displays information about port channels.