

Ethernet Configuration Commands

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interface

To enter Interface configuration mode in order to configure an interface, use the **interface** Global Configuration mode command.

Syntax

interface *interface-id*

Parameters

interface-id—Specifies an interface ID. The interface ID can be one of the following types: Ethernet port, port-channel, VLAN, range, Bluetooth, IP interface or tunnel.

Command Mode

Global Configuration mode

Example 1—For Ethernet ports:

```
switchxxxxxx(config)# interface gi1/0/1
switchxxxxxx(config-if)#
```

Example 2—For port channels (LAGs):

```
switchxxxxxx(config)# interface po1
switchxxxxxx(config-if)#
```

interface range

To execute a command on multiple ports at the same time, use the **interface range** command.

Syntax

interface range *interface-id-list*

Parameters

interface-id-list—Specify list of interface IDs. The interface ID can be one of the following types: Ethernet port, VLAN, or port-channel

Command Mode

Interface (Ethernet, Port Channel, VLAN) Configuration mode

User Guidelines

Commands under the interface range context are executed independently on each interface in the range. If the command returns an error on one of the interfaces, it does not stop the execution of the command on other interfaces.

Example

```
switchxxxxxx(config)# interface range gi1/0/1-4
switchxxxxxx(config-if-range)#
```

shutdown

To disable an interface, use the **shutdown** Interface Configuration mode command. To restart a disabled interface, use the **no** form of this command.

Syntax

shutdown

no shutdown

Parameters

This command has no arguments or keywords.

Default Configuration

The interface is enabled.

Command Mode

Interface Configuration mode

User Guidelines

The shutdown command set a value of ifAdminStatus (see RFC 2863) to DOWN. When ifAdminStatus is changed to DOWN, ifOperStatus will be also changed to DOWN.

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

Notes:

- If the switch shuts down an Ethernet port it additionally shuts down the port MAC sublayer too.
- If the switch shuts down a port channel it additionally shuts down all ports of the port channel too.

Example 1—The following example disables gi1/0/4 operations.

```
switchxxxxxx(config)#  interface gi1/0/4
switchxxxxxx(config-if)#  shutdown
switchxxxxxx(config-if)#
```

Example 2—The following example restarts the disabled Ethernet port.

```
switchxxxxxx(config)#  interface gi1/0/4
switchxxxxxx(config-if)#  no shutdown
switchxxxxxx(config-if)#
```

Example 3—The following example shuts down vlan 100.

```
switchxxxxxx(config)#  interface vlan 100
switchxxxxxx(config-if)#  shutdown
switchxxxxxx(config-if)#
```

Example 4—The following example shuts down tunnel 1.

```
switchxxxxxx(config)#  interface tunnel 1
switchxxxxxx(config-if)#  shutdown
switchxxxxxx(config-if)#
```

Example 5—The following example shuts down Port Channel 3.

```
switchxxxxxx(config)#  interface po3
switchxxxxxx(config-if)#  shutdown
switchxxxxxx(config-if)#
```

operation time

To control the time that the port is up, use the **operation time** Interface (Ethernet, Port Channel) Configuration mode command. To cancel the time range for the port operation time, use the **no** form of this command.

Syntax

operation time *time-range-name*

no operation time

Parameters

- **time-range-name**—Specifies a time range the port operates (in up state). When the Time Range is not in effect, the port is shutdown. (Range: 1–32 characters)

Default Configuration

There is no time range configured on the port authorized state.

Command Mode

Interface (Ethernet, Port Channel) Configuration mode

User Guidelines

It is recommended to disable spanning tree or to enable spanning-tree PortFast mode on 802.1x edge ports (ports in **auto** state that are connected to end stations), in order to proceed to the forwarding state immediately after successful authentication.

Example

The operation time command influences the port if the port status is up. This command defines the time frame during which the port stays up and at which time the port will be shutdown. While the port is in shutdown because of other reasons, this command has no effect.

The following example activates an operation time range (named "morning") on port gi1/0/1.

```
switchxxxxxx(config)#  interface gi1/0/1
switchxxxxxx(config-if)#  operation time morning
```

description

To add a description to an interface, use the **description** Interface Configuration mode command. To remove the description, use the **no** form of this command.

Syntax

description *string*

no description

Parameters

string—Specifies a comment or a description of the port to assist the user. (Length: 1–64 characters).

Default Configuration

The interface does not have a description.

Command Mode

Interface (Ethernet, Port Channel, Bluetooth) Configuration mode

Example

The following example adds the description ‘SW#3’ to gi1/0/4.

```
switchxxxxxx(config)#  interface gi1/0/4
switchxxxxxx(config-if)#  description SW#3
```

speed

To configure the speed of a given Ethernet interface when not using auto-negotiation, use the **speed** Interface (Ethernet, Port Channel) Configuration mode command. To restore the default configuration, use the **no** form of this command.

Syntax

speed {**100** | **1000** | **2500** | **5000** | **10000**}

no speed

Parameters

- **100**—Forces 100 Mbps operation
- **1000**—Forces 1000 Mbps operation
- **2500**—Forces 2500 Mbps operation
- **5000**—Forces 5000 Mbps operation
- **10000**—Forces 10000 Mbps operation

Default Configuration

The port operates at its maximum speed capability.

Command Mode

Interface (Ethernet, Port Channel) Configuration mode

User Guidelines

The **no speed** command in a port-channel context returns each port in the port-channel to its maximum capability.

Example

The following example configures the speed of gi1/0/4 to 100 Mbps operation.

```
switchxxxxxx(config)#  interface gi1/0/4
switchxxxxxx(config-if)#  speed 100
```

duplex

To configure the full/half duplex operation of a given Ethernet interface when not using auto-negotiation, use the **duplex** Interface (Ethernet, Port Channel) Configuration mode command. To restore the default configuration, use the **no** form of this command.

Syntax

duplex *{***half** | **full***}*

no duplex

Parameters

- **half**—Forces half-duplex operation.
- **full**—Forces full-duplex operation.

Default Configuration

The interface operates in full duplex mode.

Command Mode

Interface (Ethernet) Configuration mode

Example

The following example configures gi1/0/1 to operate in full duplex mode.

```
switchxxxxxx(config)#  interface gi1/0/1
switchxxxxxx(config-if)#  duplex full
```

negotiation

To enable auto-negotiation operation for the speed and duplex parameters and master-slave mode of a given interface, use the **negotiation** Interface (Ethernet, Port Channel) Configuration mode command. To disable auto-negotiation, use the **no** form of this command.

Syntax

negotiation [*capability* [*capability2... capability5*]] [***preferred*** {***master*** | ***slave***}]

no negotiation

Parameters

- **Capability**—(Optional) Specifies the capabilities to advertise. (Possible values: 10h, 10f, 100h,100f, 1000f, 2500f, 5000f, 10000f).

  10h—Advertise 10 half-duplex

  10f—Advertise 10 full-duplex

  100h—Advertise 100 half-duplex

  100f—Advertise 100 full-duplex

  1000f—Advertise 1000 full-duplex

  2500f—Advertise 2500 full-duplex

  - **5000f**—Advertise 5000 full-duplex
  - **10000f**—Advertise 10000 full-duplex

- **Preferred**—(Optional) Specifies the master-slave preference:

  Master—Advertise master preference

  Slave—Advertise slave preference

Default Configuration

If capability is unspecified, defaults to list of all the capabilities of the port and preferred slave mode.

Command Mode

Interface (Ethernet, Port Channel) Configuration mode

Example

The following example enables auto-negotiation on gi1/0/1.

```
switchxxxxxx(config)#  interface gi1/0/1
switchxxxxxx(config-if)#  negotiation
```

flowcontrol

To configure the Flow Control on a given interface, use the **flowcontrol** Interface (Ethernet, Port Channel) Configuration mode command. To disable Flow Control, use the **no** form of this command.

Syntax

flowcontrol *{***on** | **off***}*

no flowcontrol

Parameters

- **on**—Enables Flow Control.
- **off**—Disables Flow Control.

Default Configuration

Flow control is set to Disabled.

Command Mode

Interface (Ethernet, Port Channel) Configuration mode

Example

The following example enables Flow Control on port gi1/0/1

```
switchxxxxxx(config)#  interface gi1/0/1
switchxxxxxx(config-if)#  flowcontrol on
```

mdix

To enable cable crossover on a given interface, use the **mdix** Interface (Ethernet) Configuration mode command. To disable cable crossover, use the **no** form of this command.

Syntax

mdix *{***on** | **auto***}*

no mdix

Parameters

- **on**—Enables manual MDIX.
- **auto**—Enables automatic MDI/MDIX.

Default Configuration

The default setting is Auto.

Command Mode

Interface (Ethernet) Configuration mode

Example

The following example enables automatic crossover on port gi1/0/1.

```
switchxxxxxx(config)#  interface gi1/0/1
switchxxxxxx(config-if)#  mdix auto
```

back-pressure

To enable back pressure on a specific interface, use the **back-pressure** Interface (Ethernet) Configuration mode command. To disable back pressure, use the **no** form of this command.

Syntax

back-pressure

no back-pressure

Parameters

This command has no arguments or keywords.

Default Configuration

Back pressure is disabled.

Command Mode

Interface (Ethernet) Configuration mode

User Guidelines

Back-pressure cannot be enabled when EEE is enabled.

Example

The following example enables back pressure on port gi1/0/1.

```
switchxxxxxx(config)#  interface gi1/0/1
switchxxxxxx(config-if)#  back-pressure
```

port jumbo-frame

To enable jumbo frames on the device, use the **port jumbo-frame** Global Configuration mode command. To disable jumbo frames, use the **no** form of this command.

Syntax

port jumbo-frame

no port jumbo-frame

Parameters

This command has no arguments or keywords.

Default Configuration

Jumbo frames are disabled on the device.

Command Mode

Global Configuration mode

User Guidelines

This command takes effect only after resetting the device.

Example

The following example enables jumbo frames on the device.

```
switchxxxxxx(config)#  port jumbo-frame
```

link-flap prevention

To enable setting a physical interface to err-disable state due to excessive link flapping, use the **link-flap prevention** Global Configuration mode command. Use the **no** form of this command to restore the default configuration.

Syntax

link-flap prevention {**enable** | **disable**}

no link-flap prevention

Parameters

enable—Enables Link-flap Prevention.

disable—Disables Link-flap Prevention.

Default Configuration

Link-flap prevention is enabled on the device.

Command Mode

Global Configuration mode

User Guidelines

This command will shutdown Ethernet (Physical) interfaces if the interface experienced, for a duration of 10 seconds, 3 link flaps (link status changes) within each second.

Example

The following example enables link-flap prevention on the device.

```
switchxxxxxx(config)#  link-flap prevention
```

clear counters

To clear counters on all or on a specific interface, use the **clear counters** Privileged EXEC mode command.

Syntax

clear counters *[interface-id]*

Parameters

interface-id—(Optional) Specifies an interface ID. The interface ID can be one of the following types: Ethernet port or port-channel.

Default Configuration

All counters are cleared.

Command Mode

Privileged EXEC mode

Example

The following example clears the statistics counters for gi1/0/1.

```
switchxxxxxx#  clear counters gi1/0/1
```

set interface active

To reactivate an interface that was shut down, use the **set interface active** Privileged EXEC mode command.

Syntax

set interface active *interface-id*

Parameters

interface-id— Specifies an interface ID. The interface ID can be one of the following types: Ethernet port or port-channel.

Command Mode

Privileged EXEC mode

User Guidelines

This command is used to activate interfaces that were configured to be active, but were shut down by the system.

Example

The following example reactivates gi1/0/1.

```
switchxxxxxx#  set interface active gi1/0/1
```

errdisable recovery cause

To enable automatic re-activation of an interface after an Err-Disable shutdown, use the **errdisable recovery cause** Global Configuration mode command. To disable automatic re-activation, use the **no** form of this command.

Syntax

errdisable recovery cause {**all** | **port-security** | **dot1x-src-address** | **acl-deny** | **stp-bpdu-guard** | **stp-loopback-guard** | **loopback-detection | udld | storm-control | link-flap** }

no errdisable recovery cause {**all** | **port-security** | **dot1x-src-address** | **acl-deny** | **stp-bpdu-guard** | **stp-loopback-guard** | l**oopback-detection** | **udld | storm-control | link-flap** }

Parameters

- **all**—Enables the error recovery mechanism for all reasons described below.
- **port-security**—Enables the error recovery mechanism for the port security Err-Disable state.
- **dot1x-src-address—**Enables the error recovery mechanism for the 802.1x Err-Disable state.
- **acl-deny**—Enables the error recovery mechanism for the ACL Deny Err-Disable state.
- **stp-bpdu-guard**—Enables the error recovery mechanism for the STP BPDU Guard Err-Disable state.
- **stp-loopback-guard**—Enables the error recovery mechanism for the STP Loopback Guard Err-Disable state.
- **loopback-detection**—Enables the error recovery mechanism for the Loopback Detection Err-Disable state.
- **udld**—Enables the error recovery mechanism for the UDLD Shutdown state.
- **storm-control**—Enables the error recovery mechanism for the Storm Control Shutdown state.
- **link-flap**—Enables the error recovery mechanism for the link-flap prevention Err-Disable state.

Default Configuration

Automatic re-activation is disabled, except for link-flap reason where automatic re-creation is enabled by default.

Command Mode

Global Configuration mode

Example

The following example enables automatic re-activation of an interface after all states.

```
switchxxxxxx(config)#  errdisable recovery cause all
```

errdisable recovery interval

To set the error recovery timeout intervalse the **errdisable recovery interval** Global Configuration mode command. To return to the default configuration, use the **no** form of this command.

Syntax

errdisable recovery interval *seconds*

no errdisable recovery interval

Parameters

seconds—Specifies the error recovery timeout interval in seconds. (Range: 30–86400)

Default Configuration

The default error recovery timeout interval is 300 seconds.

Command Mode

Global Configuration mode

Example

The following example sets the error recovery timeout interval to 10 minutes.

```
switchxxxxxx(config)#  errdisable recovery interval 600
```

errdisable recovery reset

To reactivate one or more interfaces that were shut down by a given application, use the **errdisable recovery reset** Privileged EXEC mode command. A single interface, multiple interfaces or all interfaces can be specified.

Syntax

errdisable recovery reset {**all** | **port-security** | **dot1x-src-address** | **acl-deny** |**stp-bpdu-guard** | **stp-loopback-guard** | l**oopback-detection | udld | storm-control | link-flap | interface** *interface-id*}

Parameters

- **all**—Reactivate all interfaces regardless of their state.
- **port-security**—Reactivate all interfaces in the Port Security Err-Disable state.
- **dot1x-src-address—**Reactivate all interfaces in the 802.1x Err-Disable state.
- **acl-deny**—Reactivate all interfaces in the ACL Deny Err-Disable state.
- **stp-bpdu-guard**—Reactivate all interfaces in the STP BPDU Guard Err-Disable state.
- **stp-loopback-guard**—Reactivate all interfaces in the STP Loopback Guard Err-Disable state.
- **loopback-detection**—Reactivate all interfaces in the Loopback Detection Err-Disable state.
- **udld**—Reactivate all interfaces in the UDLD Shutdown state.
- **storm-control**—Reactivate all interfaces in the Storm Control Shutdown state.
- **link-flap**—Reactivate all interfaces in the link-flap prevention Err-Disable state.
- **interface** *interface-id*—Reactivate interfaces that were configured to be active, but were shut down by the system.

Command Mode

Privileged EXEC mode

Example 1—The following example reactivates interface gi1/0/1:

```
switchxxxxxx# errdisable recovery reset interface gi1/0/1
```

Example 2—The following example reactivates all interfaces regardless their state:

```
switchxxxxxx# errdisable recovery reset all
```

Example 3—The following example enables all interfaces in the port security Err-Disable state

```
switchxxxxxx# errdisable recovery reset port-security
```

show interfaces configuration

To display the configuration for all configured interfaces or for a specific interface, use the **show interfaces configuration** Privileged EXEC mode command.

Syntax

show interfaces configuration *[interface-id* | **detailed**]

Parameters

- **interface-id**—(Optional) Specifies an interface ID. The interface ID can be one of the following types: Ethernet port or port-channel.
- **detailed**—(Optional) Displays information for non-present ports in addition to present ports.

Default Configuration

Display all interfaces. If detailed is not used, only present ports are displayed.

Command Mode

Privileged EXEC mode

Example

The following example displays the configuration of all configured interfaces:

```
switchxxxxxx#  show interfaces configuration
                                          Flow     Admin  Back      Mdix
Port   Type     Duplex  Speed  Neg      control  State  Pressure  Mode
------ -------- ------  -----  -------- -------  -----  --------  ----
gi1/0/1 1G-Copper   Full    1000   Enabled  Off      Up     Disabled  Off
gi1/0/2 1G-Copper   Full    1000   Disabled Off      Up     Disabled  Off
gi1/0/2 10G-Copper  Full    10000  Disabled Off      Up     Disabled  Off
gi1/0/3 10G-Copper  Full    2500   Disabled Off      Up     Disabled  Off
gi1/0/4 10G-Copper  Full    5000   Disabled Off      Up     Disabled  Off
                                 Flow      Admin
PO      Type   Speed  Neg        Control   State
------  ------ -----  --------   -------   -----
Po1                   Disabled   Off       Up
```

show interfaces status

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

Syntax

show interfaces status *[interface-id* | **detailed**]

Parameters

- **interface-id**—(Optional) Specifies an interface ID. The interface ID can be one of the following types: Ethernet port or port-channel.
- **detailed**—(Optional) Displays information for non-present ports in addition to present ports.

Command Mode

Privileged EXEC mode

Default Configuration

Display for all interfaces. If detailed is not used, only present ports are displayed.

Example

The following example displays the status of all configured interfaces.

```
switchxxxxxx#  show interfaces status
                                          Flow  Link   Back     Mdix
Port   Type      Duplex  Speed Neg      ctrl  State  Pressure Mode
------ --------- ------  ----- -------- ----  ------ -------- --
gi1/0/1  1G-Copper  Full   1000  Disabled Off   Up     Disabled Off
gi1/0/2  1G-Copper  --     --     --      --    Down   --       --
te1/0/1  10G-Copper --     2500   --      --    Down   --       --
                                       Flow     Link
PO     Type      Duplex Speed  Neg     control  State
-----  -------   ------ -----  ------- ----     ------
Po1    1G        Full   10000  Disabled Off     Up
*: The interface was suspended by the system.
```

show interfaces advertise

To display auto-negotiation advertisement information for all configured interfaces or for a specific interface, use the **show interfaces advertise** Privileged EXEC mode command.

Syntax

show interfaces advertise *[interface-id* | **detailed**]

Parameters

- **interface-id**—(Optional) Specifies an interface ID. The interface ID can be one of the following types: Ethernet port or port-channel.
- **detailed**—(Optional) Displays information for non-present ports in addition to present ports.

Default Configuration

Display for all interfaces. If detailed is not used, only present ports are displayed.

Command Mode

Privileged EXEC mode

Examples

The following examples display auto-negotiation information.

```
switchxxxxxx#  show interfaces advertise

Port    Type        Neg     Prefered Operational Link Advertisement
----    --------    ------  -------  ----------------------------
gi1/0/1 1G-Copper   Enable  Master   1000f, 100f, 10f, 10h
gi1/0/2 1G-Copper   Enable  Slave    1000f

tw1/03  2.5G-Copper Enable           2500f, 1000f, 100f, 100h
                            Slave

te1/0/1 10G-Copper  Enable  Slave    10000f, 5000f, 2500f,1000f
```

```
switchxxxxxx#  show interfaces advertise gi1/0/1
Port:gi1/0/1
Type: 1G-Copper
Link state: Up
Auto Negotiation: enabled
Preference: Master

Admin Local link Advertisement                  10h  10f  100h  100f  1G    2.5G
Oper Local link Advertisement                   ---  ---  ----  ----  ----- -----
Remote Local link Advertisement                 yes  yes  yes   yes   yes   no
Priority Resolution                             yes  yes  yes   yes   yes   no
                                                no   no   yes   yes   yes   no
                                                -    -    -     -     yes   -
```

```
switchxxxxxx#  show interfaces advertise gi1/0/1
Port: gi1/0/1
Type: 1G-Copper
Link state: Up
Auto negotiation: disabled.
```

show interfaces description

To display the description for all configured interfaces or for a specific interface, use the **show interfaces description** Privileged EXEC mode command.

Syntax

show interfaces description *[interface-id* | **detailed**]

Parameters

- **interface-id**—(Optional) Specifies an interface ID. The interface ID can be one of the following types: Ethernet port or port-channel.
- **detailed**—(Optional) Displays information for non-present ports in addition to present ports.

Default Configuration

Display description for all interfaces. If detailed is not used, only present ports are displayed.

Command Mode

Privileged EXEC mode

Example

The following example displays the description of all configured interfaces.

```
switchxxxxxx#  show interfaces description

Port          Descriptions
------        ---------------------------------------------
gi1/0/1       Port that should be used for management only
gi1/0/2
gi1/0/3
gi1/0/4

PO            Description
----          -----------
Po1           Output
```

show interfaces counters

To display traffic seen by all the physical interfaces or by a specific interface, use the **show interfaces counters** Privileged EXEC mode command.

Syntax

show interfaces counters *[interface-id* | **detailed**]

Parameters

- **interface-id**—(Optional) Specifies an interface ID. The interface ID can be one of the following types: Ethernet port or port-channel.
- **detailed**—(Optional) Displays information for non-present ports in addition to present ports.

Default Configuration

Display counters for all interfaces. If detailed is not used, only present ports are displayed.

Command Mode

Privileged EXEC mode

Example

The following example displays traffic seen by all the physical interfaces.

```
switchxxxxxx#  show interfaces counters gi1/0/1
Port       InUcastPkts  InMcastPkts  InBcastPkts    InOctets
---------- ------------ ------------ ------------ ------------
gi1/0/1           0            0            0            0
Port       OutUcastPkts OutMcastPkts OutBcastPkts  OutOctets
---------- ------------ ------------ ------------ ------------
gi1/0/1           0            1            35          7051
FCS Errors: 0
Single Collision Frames: 0
Multiple Collision Frames: 0
SQE Test Errors: 0
Deferred Transmissions: 0
Late Collisions: 0
Excessive Collisions: 0
Carrier Sense Errors: 0
Oversize Packets: 0
Internal MAC Rx Errors: 0
Symbol Errors: 0
Received Pause Frames: 0
Transmitted Pause Frames: 0
```

The following table describes the fields shown in the display.

Field	Description
InOctets	Number of received octets.
InUcastPkts	Number of received Unicast packets.

Field	Description
InMcastPkts	Number of received Unicast packets.
InBcastPkts	Number of received broadcast packets.
OutOctets	Number of transmitted octets.
OutUcastPkts	Number of transmitted Unicast packets.
OutMcastPkts	Nmber of transmitted Unicast packets.
OutBcastPkts	Number of transmitted Broadcast packets.
FCS Errors	Number of frames received that are an integral number of octets in length but do not pass the FCS check.
Single Collision Frames	Number of frames that are involved in a single collision, and are subsequently transmitted successfully.
Multiple Collision Frames	Number of frames that are involved in more than one collision and are subsequently transmitted successfully.
SQE Test Errors	Number of times that the SQE TEST ERROR is received. The SQE TEST ERROR is set in accordance with the rules for verification of the SQE detection mechanism in the PLS Carrier Sense Function as described in IEEE Std. 802.3, 2000 Edition, section 7.2.4.6.
Deferred Transmissions	Number of frames for which the first transmission attempt is delayed because the medium is busy.
Late Collisions	Number of times that a collision is detected later than one slotTime into the transmission of a packet.
Excessive Collisions	Number of frames for which transmission fails due to excessive collisions.
Oversize Packets	Number of frames received that exceed the maximum permitted frame size.
Internal MAC Rx Errors	Number of frames for which reception fails due to an internal MAC sublayer receive error.
Received Pause Frames	Number of MAC Control frames received with an opcode indicating the PAUSE operation.
Transmitted Pause Frames	Number of MAC Control frames transmitted on this interface with an opcode indicating the PAUSE operation.

show ports jumbo-frame

To display whether jumbo frames are enabled on the device, use the **show ports jumbo-frame** Privileged EXEC mode command.

Syntax

show ports jumbo-frame

Parameters

This command has no arguments or keywords.

Command Mode

Privileged EXEC mode

Example

The following example displays whether jumbo frames are enabled on the device.

```
switchxxxxxx#  show ports jumbo-frame
Jumbo frames are disabled
Jumbo frames will be enabled after reset
```

show link-flap prevention

To display whether link-flap prevention is enabled on the device, use the **show link-flap prevention** Privileged EXEC mode command.

Syntax

show link-flap prevention

Parameters

This command has no arguments or keywords.

Command Mode

Privileged EXEC mode

Example

The following example displays whether link-flap prevention is enabled on the device.

```
switchxxxxxx#  show link-flap prevention
link-flap prevention is currently enabled on device
```

show errdisable recovery

To display the Err-Disable configuration of the device, use the **show errdisable recovery** Privileged EXEC mode command.

Syntax

show errdisable recovery

Parameters

This command has no arguments or keywords.

Command Mode

Privileged EXEC mode

Example

The following example displays the Err-Disable configuration.

```
switchxxxxxx#  show errdisable recovery
Timer interval: 300 Seconds
Reason                  Automatic Recovery
----------------------- ------------------
port-security           Disable
dot1x-src-address       Disable
acl-deny                Enable
stp-bpdu-guard          Disable
stp-loopback-guard      Disable
loop-detection          Disable
udld                    Disable
storm control           Disable
link-flap              Disable
```

show errdisable interfaces

To display the Err-Disable state of all interfaces or of a specific interface, use the **show errdisable interfaces** Privileged EXEC mode command.

Syntax

show errdisable interfaces [*interface-id*]

Parameters

- **interface**—(Optional) Port or port-channel number.

Default Configuration

Display for all interfaces.

Command Mode

Privileged EXEC mode

Example

The following example displays the Err-Disable state of gi1/0/1.

```
switchxxxxxx#  show errdisable interfaces
Interface                  Reason                        Time to recovery
(sec)
------------          ------------------                 -------------
gi1/0/1                    port-security                        250
gi1/0/5                    acl-deny                             NA
```

clear switchport monitor

To clear monitored statistics on all or on a specific interface or interface list, use the **clear switchport monitor** Privileged EXEC mode command.

Syntax

clear switchport monitor *[interface-id-list]*

Parameters

interface-id-list—(Optional) Specifies a list of interface ID. The interface ID can be one of the following types: Ethernet port or port-channel.

Default Configuration

All monitored statistics are cleared.

Command Mode

Privileged EXEC mode

Example

The following example clears the monitored statistics for gi1/0/1.

```
switchxxxxxx#  clear switchport monitor gi1/0/1
```

show switchport monitor

To display the monitored statistics gathered by a specific interface, use the **show switchport monitor** Privileged EXEC mode command.

Syntax

show switchport monitor *interface-id* {**seconds** | **minutes** | **hours** | **days** |**weeks**} *[***utilization** | **tx** | **rx** | **frames]**

show switchport monitor *interface-id* {***days*** |**weeks**}

show switchport monitor utilization *[interface-id]*

Parameters

- **interface-id**—(Optional) Specifies an interface ID. The interface ID can be one of the following types: Ethernet port or port-channel.
- **seconds**— last 20 samples, sampled every 15 seconds.
- **minutes** —last 60 samples, sampled every 60 seconds (every round minute according to system time).
- **hours** —last 24 samples, sampled every 60 minutes (every round hour according to system time).
- **days** —last 7 samples, sampled every 24 hours (midnight to midnight according to system time).
- **weeks** —last 12 samples, sampled every 7 days (midnight saturday to midnight saturday according to system time).
- **utilization** —shows per time frame the utilization calculated.
- **rx** —shows received counters statistics.
- **tx** —shows sent counters statistics.
- **frames** —show received counters statistics collected per packet size**.**

Default Configuration

Display monitored statistics for an interface or all interface in case of s**how switchport monitor *utilization*** command.

Command Mode

Privileged EXEC mode

User Guidelines

The **show switchport monitor *utilization*** is used to show a utilization summary per interface of the last time frame in each time frame(i.e. last minute, last hour, last day and last week).

The **show switchport monitor** *interface-id* is used to show monitored statistics samples collected per time frame and per counter types.

Example 1—The following example displays monitored statistics utilization seen by interface gi1/0/1.

```
switchxxxxxx#  show switchport monitor utilization gi1/0/1
```

Interface --------- gi1/0/1	Minutes Rx/TX utilization ------------ 95%	Hours Rx/TX utilization ----------- 80%	Days Rx/TX utilization ----------- 60%	Weeks Rx/TX utilization ----------- 20%

Example 2—The following example displays monitored Tx statistics gathered in minutes time frame seen by interface gi1/0/1.

```
switchxxxxxx#  show switchport monitor gi1/0/1 minutes tx
```

Time ---------- 04:22:00(~) 04:23:00	Unicast frames Sent -------------- 95% 80%	Broadcast frames Sent ----------- 80% 70%	Multicast frames Sent ----------- 60% 60%	Good Octet Sent ------- 20% 50%

(~) Not all samples are available.

The following table describes the fields shown in the display.

Field	Description
Time	Time stamp of the current sample in system real time clock. For seconds, minutes and hours format is: hh:mm:ss. For days and weeks format is: <day of week> dd/mm/yy.
Good Octets Received	Number of received octets.
Good Unicast frames Received	Number of received Unicast packets.
Good Multicast frames Received	Number of received Unicast packets.
Good Broadcast frames Received	Number of received broadcast packets.
Good Octets Sent	Number of transmitted octets.
Good Unicast frames Sent	Number of transmitted Unicast packets.
Good Multicast frames Sent	Nmber of transmitted Unicast packets.
Good Broadcast frames Sent	Number of transmitted Broadcast packets.
Frames of 64 bytes	Number of received packets size of 64 bytes.
Frames of 65-127 bytes	Number of received packets size of 65-127 bytes.
Frames of 128-255 bytes	Number of received packets size of 128-255 bytes.
Frames of 256-511 bytes	Number of received packets size of 256-511 bytes.

Field	Description
Frames of 512-1023 bytes	Number of received packets size of 512-1023 bytes.
Frames of 1024-1518 bytes	Number of received packets size of 1024-1518 bytes.
Rx Error Frames Received	Number of frames received that are an integral number of octets in length but do not pass the FCS check.
Rx Utilization	Utilization in percentage for Received frames on the interface.
Tx Utilization	Utilization in percentage for Sent frames on the interface.
Rx/Tx Utilization	An average of the Rx Utilization and the Tx Utilization in percentage on the interface.