

## show port broadcast

Use the **show port broadcast** command to display broadcast information.

```
show port broadcast [mod_num[/port_num]]
```

### Syntax Description

*mod\_num* (Optional) Number of the module. If you do not specify a number, the ports on all modules are shown.

*/port\_num* (Optional) Number of the port on the module. If you do not specify a number, all the ports on the module are shown.

### Default

This command has no default setting.

### Command Type

Switch command.

### Command Mode

Normal.

### Usage Guidelines

On the 1000BaseX switching module, when you specify a port for broadcast suppression, the traffic is suppressed only in the network-to-Catalyst 5000, 2926G, and 2926 series switches bus direction.

This command is not supported by the Catalyst 4000 and 2948G series switches.

### Example

This example shows how to display broadcast information for port 2 on module 1:

```
Console> show port broadcast 1/2
Port      Broadcast-Limit Broadcast-Drop
-----
1/2      -                -
1/2      -                -
Console>
```

Table 2-49 describes the possible fields in the **show port broadcast** command output.

**Table 2-49 show port broadcast Command Output Fields**

Field	Description
Port	Module and port number.
Broadcast-Limit	Broadcast threshold configured for the port.
Broadcast-Drop	Number of broadcast/multicast packets dropped because the broadcast limit for the port was exceeded.

## show port capabilities

Use the **show port capabilities** command to display the capabilities of the modules and ports in a switch.

**show port capabilities** [*mod\_num*[/*port\_num*]]

### Syntax Description

*mod\_num* (Optional) Number of the module.

*/port\_num* (Optional) Number of the port on the module.

### Default

This command has no default setting.

### Command Type

Switch command.

### Command Mode

Normal.

### Usage Guidelines

If you do not specify a *mod\_num*, the ports on all modules are shown.

If you do not specify a */port\_num*, all the ports on the module are shown.

The Catalyst 2948G is a fixed configuration switch. All ports are located on module 2; for this reason, if you enter *mod\_num/port\_num 1/N*, an error message will be displayed.

### Example

This example shows how to show the port capabilities for module 1, port 1:

```
Console> (enable) show port capabilities 1/1
Model                WS-X5509
Port                 1/1
Type                 100BaseTX
Speed                100
Duplex                half, full
Trunk encap type     ISL
Trunk mode            on, off, desirable, auto, nonegotiate
Channel              1/1-2
Broadcast suppression percentage (0-100)
Flow control         no
Security              yes
Membership            static, dynamic
Fast start            yes
Rewrite              no
Console> (enable)
```

Table 2-50 describes the possible fields (depending on the type of port queried) and the values in the **show port capabilities** command output.

**Table 2-50 show port capabilities Command Output Fields**

Field	Description
Model	Module model number.
Port	Module number and port number.
Type <sup>1</sup>	Port type, for example, 100BaseFX MM, 100BaseFX SM, or 10/100BaseTX.
Speed <sup>1</sup>	Port speed setting (for example, auto, 100, or 1000).
Duplex	Duplex mode (half, full, auto, fdx, hdx, or no).
Trunk encap type	Trunk encapsulation type (ISL, 802.1Q, 802.10, or no).
Trunk mode	Trunk administrative status of the port (on, off, auto, desirable, nonegotiate, or no).
Channel	Status of which ports can form a channel group. The ports are shown in <i>mod_num/port_num</i> format. For example, 3/1-2 indicates module 3, ports 1 and 2. Also, any ports in range [ <i>mod/1-mod/high_port</i> ] or no ports may be indicated.
Broadcast suppression	Number of packets-per-second (pps) of broadcast/multicast traffic allowed on the port (0–150000) or the percentage of total available bandwidth that can be used by broadcast/multicast traffic (0–100).
Flow control	Flow-control options you can set (receive-[off, on, desired], send-[off, on, desired], or no).
Security	Status of whether port security is enabled (yes, no).
Membership	Method of membership assignment of a port or range of ports to a VLAN (static, dynamic).
Fast Start	Status of whether the spanning-tree port fast-start feature on the port is enabled (yes, no).
Rewrite	Status of whether the port supports inline rewrite (yes, no).

<sup>1</sup> These fields will change depending on the system configuration.

## Related Commands

**set port channel**

**set port broadcast**

**set port security**

**set port speed**

**set spantree portfast**

**set trunk**

## show port cdp

Use the **show port cdp** command to display port CDP enable state and message interval on the port.

```
show port cdp [mod_num[/port_num]]
```

### Syntax Description

*mod\_num* (Optional) Number of the module.

*/port\_num* (Optional) Number of the port on the module.

### Default

This command has no default setting.

### Command Type

Switch command.

### Command Mode

Normal.

### Usage Guidelines

If you do not specify a *mod\_num*, the ports on all modules are shown. If you do not specify a */port\_num*, all the ports on the module are shown.

The Catalyst 2948G is a fixed configuration switch. All ports are located on module 2; for this reason, if you enter *mod\_num/port\_num 1/N*, an error message will be displayed.

### Example

This example shows how to display CDP information for all ports:

```
Console> show port cdp
Port      CDP Status  Message-Interval
-----
1/1      enabled     60
1/2      enabled     60
2/1      enabled     60
3/1      enabled     60
Console>
```

Table 2-51 describes the fields in the **show port cdp** command output.

**Table 2-51 show port cdp Command Output Fields**

Field	Description
Port	Module and port number.
CDP Status	CDP status of the port (enabled, disabled).
Message-Interval	Interval between CDP message exchange with neighbor.

## show port channel

Use the **show port channel** command to display EtherChannel information for a specific module or port.

```
show port channel [mod] [info | statistics]
show port channel mod/port [info | statistics]
```

### Syntax Description

**mod** (Optional) Number of the module.

**info** (Optional) Keyword to display port information such as speed, cost, duplex status, priority, secure or dynamic status, trunk status, and associated VLANs.

**statistics** (Optional) Keyword to display statistics about the port (PAgP packets sent and received).

*mod/port* Number of the module and port.

### Default

This command has no default setting.

### Command Type

Switch command.

### Command Mode

Normal.

### Usage Guidelines

If *mod* or *mod/port* is not specified, EtherChannel information is shown for all channeling ports on all modules.

This command is not supported by the three-port Gigabit Ethernet switching module (WS-X5403).

The Catalyst 2948G is a fixed configuration switch. All ports are located on module 2; for this reason, if you enter *mod/port* **1/N**, an error message will be displayed.

### Examples

This example shows how to display Ethernet channeling information for Fast Ethernet module 4:

```
Console> show port channel 4
Port      Status      Channel   Channel   Neighbor   Neighbor
-----  -
4/1      connected  on        channel   WS-C5000 012345678  5/5
4/2      connected  on        channel   WS-C5000 012345678  5/6
-----  -
4/3      connected  off       not channel
4/4      connected  off       not channel
4/5      notconnect desirable not channel
4/6      notconnect desirable not channel
```

## show port channel

```

4/7    notconnect  desirable not channel
4/8    notconnect  desirable not channel
-----
4/9    connected   on         channel    WS-C5000 987654321    3/1
4/10   connected   on         channel    WS-C5000 987654321    3/2
4/11   notconnect  on         channel
4/12   connected   on         channel    WS-C5000 987654321    3/4
-----
Console>

```

This example shows **show port channel** with the statistics parameter:

```

Console> show port channel 1 statistics
Port    PAgP Pkts    PAgP Pkts
        Transmitted Received
-----
1/1     0           0
1/2     0           0
Console>

```

This example shows **show port channel** with the info parameter:

```

>Console> show port channel 5/1 info
>Port  Speed Duplex Vlan Port      Secure port\ Trunk status VLANs
>      priority Dynamic port
>-----
>
> 5/1  a-100 a-full 1   32                trunking    1-1005
> 5/2  a-100 a-full 1   32                trunking    1-1005
>-----
>
>Port  ifIndex  Group      Neighbor      Neighbor Neighbor
>      capability device-id    port-id    capability
>-----
> 5/1  530      1          00-e0-1e-52-1a-44 17        1
> 5/2  530      1          00-e0-1e-52-1a-44 18        1
>-----
Console>

```

Table 2-52 describes the possible fields (depending on the type of port queried) and the values in the **show port channel** command output.

**Table 2-52 show port channel Command Output Fields**

Field	Description
Port	Module and port number.
Status	Channeling status of the port (connected, notconnect).
Channel mode	Status of whether EtherChannel is on, off, auto, or desirable on the port.
Channel status	Status of whether the port is channeling (channel, not channel).
Neighbor device	Neighboring device with which the port is channeling.
Neighbor port	Port on the neighboring device with which the port is channeling.
Speed	Speed setting for the port.
Duplex	Duplex setting for the port (auto, full, fdx, half, hdx, a-half, a-hdx, a-full, or a-fdx).
Vlan	VLAN to which the port belongs.
Port priority	Priority associated with the port.

**Table 2-52 show port channel Command Output Fields (continued)**

<b>Field</b>	<b>Description</b>
Secure port/Dynamic port	Status of whether the port is secure or dynamic.
Trunk status	Status of whether the port is trunking or not.
VLANs	VLANs to which the port belongs.
ifIndex	Interface number to which the port belongs.
Group capability	Capability of the group.
Neighbor device-id	Device ID of the neighboring device with which the port is channeling.
Neighbor port-id	Port ID of the neighboring device with which the port is channeling.
Neighbor capability	Capability of the neighboring device.
PAgP Pkts Transmitted	Number of PAgP packets transmitted.
PAgP Pkts Received	Number of PAgP packets received.

**Related Command****set port channel**

## show port counters

Use the **show port counters** command to show all the counters for a port.

**show port counters** [*mod\_num/port\_num*]

### Syntax Description

*mod\_num* (Optional) Number of the module for which to show port counter information.

*/port\_num* (Optional) Number of the port on the module for which to show port counter information.

### Default

This command has no default setting.

### Command Type

Switch command.

### Command Mode

Normal.

### Usage Guidelines

If you do not specify a *mod\_num*, the ports on all modules are shown.

If you do not specify a */port\_num*, all the ports on the module are shown.

The Catalyst 2948G is a fixed configuration switch. All ports are located on module 2; for this reason, if you enter *mod\_num/port\_num 1/N*, an error message will be displayed.

### Example

This example shows the output of the **show port counters** command:

```
Console> show port counters
```

Port	Align-Err	FCS-Err	Xmit-Err	Rcv-Err	UnderSize
1/1	0	0	0	0	0
1/2	0	0	0	0	0
4/1	0	0	0	0	0
4/2	0	0	0	0	0
4/3	0	0	0	0	0
4/4	0	0	0	0	0

```

Port  Single-Col Multi-Coll Late-Coll  Excess-Col Carri-Sen Runts  Giants
-----
1/1      12         0         0         0         0         0         0
1/2       0         0         0         0         0         0         0
4/1       0         0         0         0         0         0         0
4/2       0         0         0         0         0         0         0
4/3       0         0         0         0         0         0         0
4/4       0         0         0         0         0         0         0

                                Ler
Port  CE-State Conn-State Type Neig Con Est Alm Cut Lem-Ct  Lem-Rej-Ct Tl-Min
-----
3/1  isolated connecting A   U  no   9   9   7         0         0 102
3/2  isolated connecting B   U  no   9   8   7         0         0 40

Last-Time-Cleared
-----
Fri Aug 11 1998, 14:58:19

```

Table 2-53 describes the possible fields (depending on the port type queried) in the **show port counters** command output.

**Table 2-53 show port counters Command Output Fields**

Field	Description
Port	Module and port number.
Align-Err	Number of frames with alignment errors (frames that do not end with an even number of octets and have a bad CRC) received on the port.
FCS-Err	Number of frame check sequence errors that occurred on the port.
Xmit-Err	Number of transmit errors that occurred on the port (indicating that the internal transmit buffer is full).
Rcv-Err	Number of receive errors that occurred on the port (indicating that the internal receive buffer is full).
UnderSize	Number of received frames less than 64 octets long (but are otherwise well formed).
Single-Coll	Number of times one collision occurred before the port successfully transmitted a frame to the media.
Multi-Coll	Number of times multiple collisions occurred before the port successfully transmitted a frame to the media.
Late-Coll	Number of late collisions (collisions outside the collision domain).
Excess-Col	Number of excessive collisions that occurred on the port (indicating that a frame encountered 16 collisions and was discarded).
Carri-Sen	Number of times the port sensed a carrier (to determine whether the cable is currently being used).
Runts	Number of received runt frames (frames that are smaller than the minimum IEEE 802.3 frame size) on the port.
Giants	Number of received giant frames (frames that exceed the maximum IEEE 802.3 frame size) on the port.
CE-State	Connection entity status.

**Table 2-53 show port counters Command Output Fields (continued)**

<b>Field</b>	<b>Description</b>
Conn-State	<p>Connection state of the port, as follows:</p> <ul style="list-style-type: none"> <li>• Disabled—The port has no line module or was disabled by the user.</li> <li>• Connecting—The port attempted to connect or was disabled.</li> <li>• Standby—The connection was withheld or was the inactive port of a dual-homing concentrator.</li> <li>• Active—The port made a connection.</li> <li>• Other—The concentrator was unable to determine the Conn-State.</li> </ul>
Type	Type of port, such as A—A port and B—B port.
Neig	<p>Type of port attached to this port. The neighbor can be one of these types:</p> <ul style="list-style-type: none"> <li>• A—A port</li> <li>• B—B port</li> <li>• M—M port</li> <li>• S—Slave port</li> <li>• U—The concentrator cannot determine the type of the neighbor port.</li> </ul>
Ler Con	Status of whether the port is currently in a LER condition.
Est	Estimated LER.
Alm	LER at which a link connection exceeds the LER alarm threshold.
Cut	LER cutoff value (the LER at which a link connection is flagged as faulty).
Lem-Ct	Number of LEM errors received on the port.
Lem-Rej-Ct	Number of times a connection was rejected because of excessive LEM errors.
Tl-Min	TL-min value (the minimum time to transmit a FDDI PHY line state) before advancing to the next PCM state.
Last-Time-Cleared	Last time the port counters were cleared.

**Related Command**

**show port**

## show port filter

Use the **show port filter** command to view MAC addresses and protocol filters that have been configured on the Token Ring module ports.

```
show port filter [mod_num] [canonical]
show port filter mod_num/port_num [canonical]
show port filter mac_addr [canonical]
```

### Syntax Description

*mod\_num* (Optional) Number of the module.

**canonical** (Optional) Keyword to specify the MAC address display in canonical format.

*/port\_num* Number of the port on the module.

*mac\_addr* MAC address contained in the packets to be filtered. You need to enter this address in canonical format (00-11-33-44-55) or in noncanonical format (00:11:22:33:44:55).

### Default

By default, MAC addresses are shown in noncanonical format.

### Command Type

Switch command.

### Command Mode

Normal.

### Usage Guideline

This command is not supported on the Catalyst 4000 and 2948G series switches.

### Example

This example shows how to display the filters configured for a port on the Token Ring module:

```
Console> show port filter 3/1
Port  Mac-Addr          Type
-----
 3/1  00:00:00:00:00:00 deny
      00:00:00:00:00:00 deny
      00:00:00:00:00:00 deny
      00:00:00:00:00:00 deny
      00:00:00:00:00:00 deny
      00:00:00:00:00:00 deny

Port  Protocol          Type
-----
 3/1  0x8038            deny
      0xf0f0            deny
```

Table 2-54 describes the fields in the **show port filter** command output.

**Table 2-54 show port filter Command Output Fields**

<b>Field</b>	<b>Description</b>
Port	Module and port number.
MAC-Addr	MAC address contained in packets to be filtered.
Type	Type of MAC address filter configured. Possible types are deny (block any packet containing a specific MAC address) or permit (allow any packet containing a specific MAC address).
Protocol	Types of protocols that you want to filter.
Type	Type of protocol filter configured. Possible types are deny (block any packet containing a specific protocol type) or permit (allow any packet containing a specific protocol type).

**Related Commands**

**clear port filter**

**set port filter**

## show port flowcontrol

Use the **show port flowcontrol** command to display per-port status information and statistics related to flow control.

```
show port flowcontrol [mod_num[/port_num]]
```

### Syntax Description

*mod\_num* (Optional) Number of the module.

*/port\_num* (Optional) Number of the port on the module. If you do not specify a number, filters configured on all the ports on the module are shown.

### Default

This command has no default setting.

### Command Type

Switch command.

### Command Mode

Normal.

### Usage Guideline

The Catalyst 2948G is a fixed configuration switch. All ports are located on module 2; for this reason, if you enter *mod\_num/port\_num 1/N*, an error message will be displayed.

### Example

This example shows how to display the flow-control port status and statistics:

```
Console> show port flowcontrol
Port      Send-Flowcontrol   Receive-Flowcntl   RxPause   TxPause
          Admin   Oper           Admin   Oper
-----
3/1      on     disagree      on     disagree    0         0
3/2      off    off           off    off         0         0
3/3      desired on           desired off        10        10
```

Table 2-55 describes the fields in the **show port flowcontrol** command output.

**Table 2-55 show port flowcontrol Command Output Fields**

Field	Description
Port	Module and port number.
Send-Flowcontrol Admin	Flow-control administration. Possible settings: on indicates the local port sends flow control to the far end; off indicates the local port does not send flow control to the far end; desired indicates the local end sends flow control to the far end if the far end supports it.

**Table 2-55 show port flowcontrol Command Output Fields (continued)**

<b>Field</b>	<b>Description</b>
Send-Flowcontrol Oper	Flow-control operation. Possible setting: disagree indicates the two ports could not agree on a link protocol.
Receive-Flowcntl Admin	Flow-control administration. Possible settings: on indicates the local port requires the far end to send flow control; off indicates the local port does not allow the far end to send flow control; desired indicates the local end allows the far end to send flow control.
Receive-Flowcntl Oper	Flow-control operation. Possible setting: disagree indicates the two ports could not agree on a link protocol.
RxPause	Number of Pause frames received.
TxPause	Number of Pause frames transmitted.

**Related Command**  
**set port flowcontrol**

## show port ifindex

Use the **show port ifindex** command to view IfIndex information on a per-port or per-module basis.

```
show port ifindex [mod_num]  
show port ifindex mod_num/port_num
```

### Syntax Description

*mod\_num* (Optional) Number of the module.

*port\_num* Number of the port.

### Default

This command has no default settings.

### Command Type

Switch command.

### Command Mode

Normal.

### Usage Guideline

The Catalyst 2948G is a fixed configuration switch. All ports are located on module 2; for this reason, if you enter *mod\_num/port\_num* **1/N**, an error message will be displayed.

### Example

This example shows how to display IfIndex information for all the ports:

```
Console> show port ifindex  
Port    ifIndex  
-----  
1/1     3  
1/2     4  
3/1     383  
3/2     384  
4/1     385  
4/2     386  
4/3     387  
4/4     388  
4/5     389  
4/6     390  
4/7     391  
4/8     392  
4/9     393  
4/10    394  
4/11    395  
4/12    396  
4/13    397  
Console>
```

## show port negotiation

Use the **show port negotiation** command to display the link negotiation protocol setting for the specified port.

**show port negotiation** [*mod\_num*[/*port\_num*]]

### Syntax Description

*mod\_num* (Optional) Number of the module.

*/port\_num* (Optional) Number of the port on the module.

### Default

This command has no default setting.

### Command Type

Switch command.

### Command Mode

Normal.

### Usage Guidelines

The Catalyst 2948G is a fixed configuration switch. All ports are located on module 2; for this reason, if you enter *mod\_num/port\_num* **1/N**, an error message will be displayed.

This command only applies to Gigabit Ethernet ports.

### Example

This example shows how to display the link negotiation protocol settings on module 3, port 1:

```
Console> show port negotiation 3/1
Port      Link Negotiation
-----
3/1      enabled
Console>
```

### Related Commands

**show port flowcontrol**  
**set port negotiation**

## show port protocol

Use the **show port protocol** command to view protocol filters configured on the ports.

```
show port protocol [mod_num[/port_num]]
```

### Syntax Description

*mod\_num* (Optional) Number of the module.

*/port\_num* (Optional) Number of the port on the module.

### Default

This command has no default setting.

### Command Type

Switch command.

### Command Mode

Normal.

### Usage Guidelines

If you do not specify a */port\_num*, filters configured on all the ports on the module are shown.

The Catalyst 2948G is a fixed configuration switch. All ports are located on module 2; for this reason, if you enter *mod\_num/port\_num 1/N*, an error message will be displayed.

### Example

This example shows how to view protocol filters on configured ports:

```
Console> show port protocol
```

Port	Vlan	IP	IP Hosts	IPX	IPX Hosts	Group	Group Hosts
1/1	1	on	0	on	0	on	0
1/2	1	on	0	on	0	on	0
2/1	1	on	3	auto-on	0	auto-on	0
2/2	1	on	0	on	0	on	0
2/3	1	on	0	on	0	on	0
2/4	1	on	0	on	0	on	0
2/5	1	on	0	on	0	on	0
2/6	1	on	0	on	0	on	0
2/7	1	on	0	on	0	on	0
2/8	1	on	0	on	0	on	0
2/9	1	on	0	on	0	on	0
2/10	1	on	0	on	0	on	0

```
Console>
```

### Related Command

**set port protocol**

## show port status

Use the **show port status** command to display port status information.

```
show port status [mod_num[/port_num]]
```

### Syntax Description

*mod\_num* (Optional) Number of the module.

*/port\_num* (Optional) Number of the port on the module.

### Default

This command has no default setting.

### Command Type

Switch command.

### Command Mode

Normal.

### Usage Guidelines

The Catalyst 2948G is a fixed configuration switch. All ports are located on module 2; for this reason, if you enter *mod\_num/port\_num 1/N*, an error message will be displayed.

If you do not specify a *mod\_num*, the ports on all modules are shown.

If you do not specify a */port\_num*, all the ports on the module are shown.

### Example

This example shows how to display port status information for all ports:

```
Console> show port status
Port  Name                Status      Vlan      Level  Duplex  Speed  Type
-----
 1/1                connected  523      normal  half    100    100BaseTX
 1/2                notconnect 1         normal  half    100    100BaseTX
 2/1                connected  trunk    normal  half    400    Route Switch
 3/1                notconnect trunk     normal  full    155    OC3 MMF ATM
 5/1                notconnect 1         normal  half    100    FDDI
 5/2                notconnect 1         normal  half    100    FDDI
Console>
```

Table 2-56 describes the fields in the **show port status** command output.

**Table 2-56 show port status Command Output Fields**

<b>Field</b>	<b>Description</b>
Port	Module and port number.
Name	Name (if configured) of the port.
Status	Status of the port (connected, notconnect, connecting, standby, faulty, inactive, shutdown, disabled, or monitor).
Vlan	VLANs to which the port belongs.
Level	Level setting for the port (normal or high).
Duplex	Duplex setting for the port (auto, full, fdx, half, hdx, a-half, a-hdx, a-full, or a-fdx).
Speed	Speed setting for the port (auto, 10, 100,155, a-10, a-100, 4, 16, a-14,or a-16).
Type <sup>1</sup>	Port type, for example, 10BaseT, 10BaseFL MM, 100BaseTX, 100BaseT4, 100BaseFX MM, 100BaseFX SM, 10/100BaseTX, TokenRing, FDDI, CDDI, or RSM.

<sup>1</sup> These fields will change according to the system configuration.

## show protocolfilter

Use the **show protocolfilter** command to list whether protocol filtering is enabled or disabled.

**show protocolfilter**

### Syntax Description

This command has no keywords or arguments.

### Default

This command has no default setting.

### Command Type

Switch command.

### Command Mode

Normal.

### Usage Guideline

This command is not supported by the three-port Gigabit Ethernet switching module (WS-X5403).

### Example

This example shows how to display whether protocol filtering is enabled or disabled:

```
Console> show protocolfilter  
Protocol filtering is enabled on this switch.  
Console>
```

### Related Command

**set port protocol**

## show rif

Use the **show rif** command to display RIF information.

```
show rif [vlan_num]
```

### Syntax Description

*vlan\_num* (Optional) Number of the VLAN that you want to view RIF information on.

### Default

This command has no default setting.

### Command Type

Switch command.

### Command Mode

Normal.

### Examples

These examples show how to display RIF information for the system and for a VLAN:

```
Console> show rif
MAC                VLAN      RIF
-----
00:00:30:e2:cf:00 on 401 via 0610.001a.0020
00:05:77:01:bc:4a on 1020 via 0690.00d1.00e2
00:05:77:01:bc:4b on 1020 via 0690.00d1.00e2
00:05:77:01:bc:48 on 1020 via 0690.00d1.00e2

Console> show rif 401
MAC                VLAN      RIF
-----
00:00:30:e2:cf:00 on 401 via 0610.001a.0020
Console>
```