

# show accounting

To display accounting setup and configuration information on the switch, use the **show accounting** command.

## show accounting

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

**Defaults** This command has no default settings.

**Command Types** Switch command

**Command Modes** Privileged

**Examples** This example shows the configuration details of a switch with RADIUS accounting enabled:

```

Console> (enable) show accounting
Event      Method1 Mode
-----
exec:      tacacs+ start-stop
connect:   radius  stop-only
system:    tacacs+ stop-only
commands:
config:    tacacs+ stop-only
all:       -      -

TACACS+ Suppress for no username: disabled
Update Frequency: newinfo

Accounting information:
-----

Active Accounted actions on tty21680592841, User NULL Priv 15
  Task ID 3, EXEC Accounting record, 0,00:00:22 Elapsed
  task_id=3 start_time=934463479 timezone=UTC service=shell
Active Accounted actions on tty01, User kannank Priv 15
  Task ID 2, EXEC Accounting record, 0,00:01:23 Elapsed
  task_id=2 start_time=934463418 timezone=UTC service=shell
Active Accounted actions on tty21680592841, User danny Priv 15
  Task ID 4, Connection Accounting record, 0,00:00:07 Elapsed
  task_id=4 start_time=934463495 timezone=UTC service=connection protocol=telnet
  addr=-1407968771 cmd=telnet 172.20.25.253

Overall Accounting Traffic:
      Starts  Stops  Active
Exec      1      0      2
Connect   0      0      1
Command   0      0      0
System    0      0      0
Console> (enable)

```

This example shows the configuration details of a switch with TACACS+ accounting enabled:

```

Console> (enable) show accounting
Tacacs key:
Tacacs login attempts: 3
Tacacs timeout: 5 seconds
Tacacs direct request: disabled

Tacacs-Server                Status
-----
171.69.1.2                    primary
171.69.1.3

TACACS+ Suppress for no username: disabled
Update Frequency: newinfo

Accounting information:
-----

Active Accounted actions on tty21680592841, User NULL Priv 15
Task ID 3, EXEC Accounting record, 0,00:00:22 Elapsed
task_id=3 start_time=934463479 timezone=UTC service=shell

Active Accounted actions on tty01, User kannank Priv 15
Task ID 2, EXEC Accounting record, 0,00:01:23 Elapsed
task_id=2 start_time=934463418 timezone=UTC service=shell

Active Accounted actions on tty21680592841, User danny Priv 15
Task ID 4, Connection Accounting record, 0,00:00:07 Elapsed
task_id=4 start_time=934463495 timezone=UTC service=connection protocol=telnet
addr=-1407968771 cmd=telnet 172.20.25.253

Overall Accounting Traffic:
      Starts  Stops  Active
Exec      1      0      2
Connect  0      0      1
Command  0      0      0
System   0      0      0

Console> (enable)

```

## Related Commands

[set accounting commands](#)  
[set accounting connect](#)  
[set accounting exec](#)  
[set accounting suppress](#)  
[set accounting system](#)  
[set accounting update](#)

# show alias

To display a list of defined command aliases, use the **show alias** command.

```
show alias [name]
```

<b>Syntax Description</b>	<i>name</i> (Optional) Name of the alias to be displayed. If <i>name</i> is not specified, all defined aliases are displayed.
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<b>Defaults</b>	This command has no default settings.
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<b>Command Types</b>	Switch command
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<b>Command Modes</b>	Normal
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<b>Examples</b>	This example shows how to display all aliases:
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```
Console> show alias
shint          show interface
cc             clear config
shf           show flash
sip           show ip route
Console>
```

<b>Related Commands</b>	<a href="#">clear kerberos clients mandatory session</a> <a href="#">set alias</a>
-------------------------	---

# show arp

To display the ARP table, use the **show arp** command.

```
show arp [ip_addr | hostname] [noalias]
```

Syntax	Description
<i>ip_addr</i>	(Optional) Number of the IP address.
<i>hostname</i>	(Optional) Name of the host.
<b>noalias</b>	(Optional) Displays only IP addresses, not IP aliases.

**Defaults** This command has no default settings.

**Command Types** Switch command

**Command Modes** Normal

**Usage Guidelines** The ARP Aging time display in the output is the period of time that indicates when an ARP entry is deleted from the ARP table. Set this value by entering the **set arp agingtime** command. The remaining lines of the display show the mappings of IP addresses (or IP aliases) to MAC addresses.

Use the *ip\_addr* or the *hostname* options to specify a specific IP host when the ARP cache is large.

**Examples** This example shows how to display the ARP table:

```
Console> (enable) show arp
ARP Aging time = 300 sec
+ - Permanent Arp Entries
* - Static Arp Entries
* 2.2.2.2 at 00-08-cc-44-aa-18 on vlan 5
+ 1.1.1.1 at 00-08-94-cc-02-aa on vlan 5
142.10.52.195 at 00-10-07-3c-05-13 port 7/1-4 on vlan 5
Console> (enable)
```

This example shows how to display the ARP table without aliases:

```
Console> (enable) show arp noalias
ARP Aging time = 300 sec
+ - Permanent Arp Entries
* - Static Arp Entries
142.10.52.195 at 00-10-07-3c-05-13 port 7/1-4 on vlan 5
121.23.79.121 at 00-00-1c-03-00-40 port 7/1-4 on vlan 5
Console> (enable)
```

**Related Commands** [clear arp](#)  
[set arp](#)

# show authentication

To display authentication information, use the **show authentication** command.

## show authentication

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

**Defaults** This command has no default settings.

**Command Types** Switch command

**Command Modes** Normal

**Examples** This example shows how to display authentication information:

```

Console> show authentication
Login Authentication: Console Session   Telnet Session   Http Session
-----
tacacs                disabled         disabled         disabled
radius                disabled         disabled         disabled
kerberos              disabled         disabled         disabled
local*                enabled(primary) enabled(primary) enabled(primary)
attempt limit         3                3                -
lockout timeout (sec) disabled         disabled         -

Enable Authentication: Console Session   Telnet Session   Http Session
-----
tacacs                disabled         disabled         disabled
radius                disabled         disabled         disabled
kerberos              disabled         disabled         disabled
local*                enabled(primary) enabled(primary) enabled(primary)
attempt limit         3                3                -
lockout timeout (sec) disabled         disabled         -

*Local User feature enabled.
Console>

```

**Related Commands** [set authentication enable](#)  
[set authentication login](#)

# show authorization

To display authorization setup and configuration information for the switch, use the **show authorization** command.

## show authorization

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

**Defaults** This command has no default settings.

**Command Types** Switch command

**Command Modes** Normal

**Examples** This example shows how to display authorization information:

```
Console> (enable) show authorization
```

```
Telnet:
```

```
-----
```

	Primary	Fallback
	-----	-----
exec:	tacacs+	If-authen
enable:	-	-
commands:		
config:	tacacs+	If-authen
all:	-	-

```
Console:
```

```
-----
```

	Primary	Fallback
	-----	-----
exec:	tacacs+	If-authen
enable:	-	-
commands:		
config:	-	-
all:	-	-

```
Console> (enable)
```

**Related Commands**

- [set authorization commands](#)
- [set authorization enable](#)
- [set authorization exec](#)

# show banner

To view the message of the day (MOTD) banner, use the **show banner** command.

**show banner**

---

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

---

**Defaults** This command has no default settings.

---

**Command Types** Switch command

---

**Command Modes** Normal

---

**Examples** This example shows how to display the MOTD and Catalyst 4000 Family Switch Fabric Module LCD banner stored in NVRAM:

```
Console> show banner
MOTD banner:

Catalyst 4006, Software Release 6.1(1)

Console>
```

---

**Related Commands** [set banner motd](#)

## show boot—ROM monitor

To display the contents of the BOOT environment variables and the configuration register setting, use the **show boot** command.

**show boot**

---

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

---

**Defaults** This command has no default settings.

---

**Command Types** ROM monitor command

---

**Command Modes** Normal

---

**Examples** This example shows how to display information on the BOOT environment variables and the configuration register settings:

```
rommon 1 > show boot
BOOT variable = bootflash:cat4000.6-1-1.bin,1;
Configuration reg is 0x41
ignore-config: enabled
console baud: 9600
boot: first image in "bootflash:"
autoboot state = 2
autoboot count = 0
autoboot sptr = 0
rommon 2 >
```

---

**Related Commands** [boot](#)  
[clear boot—ROM monitor](#)

# show boot—switch



## Note

This command applies to only the Supervisor Engine III or the Catalyst 4000 family and 2948G switch supervisor engine modules. If you attempt to run this command on a Supervisor Engine I or II, an error message is displayed.

To display the contents of the BOOT environment variables and the configuration register setting, use the **show boot** command.

```
show boot [mod]
```

## Syntax Description

*mod* (Optional) Module number of the supervisor engine containing the Flash device.

## Defaults

This command has no default settings.

## Command Types

Switch command

## Command Modes

Normal

## Examples

This example shows how to use the **show boot** command:

```
Console> show boot
BOOT variable = bootflash:cat5000-sup3.5-1-0-59.bin,1;bootflash:cat5000-sup3.4-;
CONFIG_FILE variable = slot0:cfgfile1;slot0:cfgfile2

Configuration register is 0x10f
ignore-config: disabled
auto-config: recurring
console baud: 9600
boot: image specified by the boot system commands
Console>
```

## Related Commands

[show boot—switch](#)

## show cam

To display the CAM table, use the **show cam** command.

```
show cam count {dynamic | static | permanent | system} [vlan]
```

```
show cam {dynamic | static | permanent} mod/port
```

```
show cam mac_addr [vlan]
```

Syntax Description		
<b>count</b>	Displays only the number of CAM entries.	
<b>dynamic</b>	Displays dynamic CAM entries.	
<b>static</b>	Displays static CAM entries.	
<b>permanent</b>	Displays permanent CAM entries.	
<b>system</b>	Displays system CAM entries.	
<i>vlan</i>	(Optional) Number of the VLAN. If the <i>vlan</i> option is not used, all VLANs are displayed.	
<i>mod/port</i>	(Optional) Number of the module and port.	
<i>mac_addr</i>	MAC address.	

**Defaults** This command has no default settings.

**Command Types** Switch command

**Command Modes** Normal

**Usage Guidelines** If you display the output associated with the MAC address of an ATM dual PHY OC-12 module, additional information is displayed, including the VCD, VPI, VCI, and VC type.

If you enter the **show cam** command on the Catalyst 4000 family switches, the ASE CAM table entries are displayed.

**Examples** This example shows how to display dynamic CAM entries for all VLANs:

```
Console> show cam dynamic
```

```
* = Static Entry. + = Permanent Entry. # = System Entry. R = Router Entry.
```

```
VLAN  Dest MAC/Route Des      Destination Ports or VCs / [Protocol Type]
-----
1      00-60-5c-86-5b-81      4/1 [ALL]
1      00-60-2f-35-48-17      4/1 [ALL]
1      00-80-24-f3-47-20      1/2 [ALL]
1      00-60-09-78-96-fb      4/1 [ALL]
1      00-80-24-1d-d9-ed      1/2 [ALL]
1      00-80-24-1d-da-01      1/2 [ALL]
```

```
1      08-00-20-7a-63-01      4/1 [ALL]
```

```
Total Matching CAM Entries Displayed = 7
Console>
```

This example shows the output associated with the MAC address of an ATM dual PHY OC-12 module, which includes the dynamic CAM entries for all VLANs:

```
Console> show cam dynamic
VLAN  Dest MAC/Route Des  Destination Ports or VCs
-----
12    00-14-14-14-14-1c  6/1
12    00-14-14-14-14-1d  6/1
12    00-14-14-14-14-1a  6/1
12    00-14-14-14-14-1b  6/1
12    00-14-14-14-14-18  6/1
12    00-14-14-14-14-19  6/1
12    00-14-14-14-14-16  6/1
12    00-14-14-14-14-17  6/1
12    00-14-14-14-14-14  6/1
12    00-14-14-14-14-15  6/1
6     00-14-14-14-14-16  4/1 VCD:98  VPI:0 VCI:127  Type: LANE Data Direct
6     00-14-14-14-14-17  4/1 VCD:98  VPI:0 VCI:127  Type: LANE Data Direct
6     00-14-14-14-14-14  4/1 VCD:98  VPI:0 VCI:127  Type: LANE Data Direct
6     00-14-14-14-14-15  4/1 VCD:98  VPI:0 VCI:127  Type: LANE Data Direct
6     00-14-14-14-14-1a  4/1 VCD:98  VPI:0 VCI:127  Type: LANE Data Direct
6     00-14-14-14-14-1b  4/1 VCD:98  VPI:0 VCI:127  Type: LANE Data Direct
6     00-14-14-14-14-18  4/1 VCD:98  VPI:0 VCI:127  Type: LANE Data Direct
6     00-14-14-14-14-19  4/1 VCD:98  VPI:0 VCI:127  Type: LANE Data Direct
6     00-14-14-14-14-1c  4/1 VCD:98  VPI:0 VCI:127  Type: LANE Data Direct
6     00-14-14-14-14-1d  4/1 VCD:98  VPI:0 VCI:127  Type: LANE Data Direct
3     00-14-14-14-14-14  4/1 VCD:101 VPI:0 VCI:130  Type: LANE Data Direct
3     00-14-14-14-14-15  4/1 VCD:101 VPI:0 VCI:130  Type: LANE Data Direct
Do you wish to continue y/n [n]? n
Total Matching CAM Entries Displayed = 21
Console>
```

Table 2-9 describes the fields in the ATM dual PHY OC-12 module `show cam dynamic` output.

**Table 2-9** *show cam dynamic Command Output Fields*

Field	Description
VCD	VCD of the VC
VPI	VPI of the VC
VCI	VCI of the VC
Type	Type of virtual circuit (LANE Data Direct, LANE bus, or AAL5SNAP PVC)

This example shows routers listed as the CAM entries. If the MAC address belongs to a router, it is shown by appending an “R” to the MAC address. If a VLAN is specified, then only those CAM entries matching the VLAN number are displayed.

```
Console> show cam 00-00-81-01-23-45
```

```
* = Static Entry. + = Permanent Entry. # = System Entry. R = Router Entry
```

```
Router Watergate with IP address 172.25.55.1 has CAM entries:
```

```
VLAN  Dest MAC/Route Des      Destination Ports or VCs
```

```
-----
```

```
1      00-00-81-01-23-45R      2/9 [IP]
```

```
2      00-00-81-01-23-45R      2/10 [IP]
```

```
Total Matching CAM Entries = 2
```

```
Console>
```

### Related Commands

- [clear cam](#)
- [set cam agingtime](#)
- [show cam agingtime](#)
- [show config](#)

# show cam agingtime

To display CAM aging time information for all configured VLANs, use the **show cam agingtime** command.

## show cam agingtime

---

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

---

**Defaults** This command has no default settings.

---

**Command Types** Switch command

---

**Command Modes** Normal

---

**Examples** This example shows how to display CAM aging time information:

```
Console> show cam agingtime
VLAN 1 aging time = 300 sec
VLAN 3 aging time = 300 sec
VLAN 5 aging time = 300 sec
VLAN 9 aging time = 300 sec
VLAN 100 aging time = 300 sec
VLAN 200 aging time = 300 sec
VLAN 201 aging time = 300 sec
VLAN 202 aging time = 300 sec
VLAN 203 aging time = 300 sec
Console>
```

---

**Related Commands** [clear cam](#)  
[set cam agingtime](#)  
[show cam](#)

# show cam notification

To display the status of CAM table notifications, notification intervals, and MAC addresses added and deleted, use the **show cam notification** command.

```
show cam notification {all | counters | enable | interval | historysize | mod/port}
```

```
show cam notification history [{[-]number_of_log_entries}]
```

## Syntax Description

<b>all</b>	Displays the CAM notification counters, enable, interval, and historysize information
<b>counters</b>	Displays CAM notification counter information.
<b>enable</b>	Displays CAM notification feature information.
<b>interval</b>	Displays the CAM notification interval.
<b>historysize</b>	Size of the CAM notification log.
<i>mod/port</i>	(Optional) Number of the module and port.
<b>history</b>	Displays CAM notification history logs.
-	(Optional) Most recent log entries.
<i>number_of_log_entries</i>	(Optional) Number of the CAM notification log entries to display. If a CAM notification log number is not specified, the entire log is displayed.

## Defaults

This command has no default settings.

## Command Types

Switch command

## Command Modes

Normal

## Examples

This example shows how to display CAM notification counters:

```
Console> (enable) show cam notification counters
MAC addresses added = 3
MAC addresses removed = 5
MAC addresses added overflowed = 0
MAC addresses removed overflowed = 0
MAC address SNMP traps generated = 0
Console>
```

This example shows how to display CAM notification feature information:

```
Console> (enable) show cam notification enable
MAC address change detection enabled
Console>
```

This example shows how to display CAM notification information for ports 1-6 on module 2:

```
Console> (enable) show cam notification 2/1-6
Mod/Port   Added      Removed
-----
2/1        enabled   disabled
2/2        enabled   disabled
2/3        enabled   enabled
2/4        enabled   enabled
2/5        disabled  enabled
2/6        disabled  enabled
Console>
```

This example shows how to display CAM notification intervals:

```
Console> (enable) show cam notification interval
CAM notification interval = 10 second(s).
Console>
```

This example shows how to display CAM notification history information:

```
Console> (enable) show cam notification history
Index Timestamp  Operation Address                Vlan Mod/Port
-----
4 16676708 Unlearned 00:00:00:00:00:64      2 2/6
   Unlearned 00:00:00:00:00:63      2 2/6
   Unlearned 00:00:00:00:00:62      2 2/6
   Learned   00:00:00:00:00:61      2 2/4
   Learned   00:00:00:00:00:60      2 2/4
   Unlearned 00:00:00:00:00:5f      2 2/4
   Unlearned 00:00:00:00:00:5e      2 2/5
5 16697903 Learned   00:00:00:00:00:1a      1 2/1
Console>
```

This example shows how to display CAM notification history size information:

```
Console> (enable) show cam notification historysize
MAC address change history log size = 300
Console>
```

This example shows how to display CAM notification configuration information:

```
Console> (enable) show cam notification all
MAC address change detection enabled
CAM notification interval = 10 second(s).
MAC address change history log size = 300
MAC addresses added = 3
MAC addresses removed = 5
MAC addresses added overflowed = 0
MAC addresses removed overflowed = 0
MAC address SNMP traps generated = 0
Console>
```

## Related Commands

- [clear cam](#)
- [set cam](#)
- [set cam agingtime](#)
- [set cam notification](#)
- [set snmp trap](#)
- [show cam](#)

# show cdp

To display CDP information, use the **show cdp** command set.

**show cdp**

**show cdp neighbors** [*mod*] [**vlan** | **duplex** | **capabilities** | **detail**]

**show cdp neighbors** [*mod/port*] [**vlan** | **duplex** | **capabilities** | **detail**]

**show cdp port** [*mod*]

**show cdp port** [*mod/port*]

## Syntax Description

<b>neighbors</b>	Displays CDP information for Cisco products connected to the switch.
<i>mod</i>	(Optional) Number of the module for which CDP information is displayed. If no module number is specified, CDP information for the entire switch is displayed.
<b>vlan</b>	(Optional) Displays the native VLAN number for the neighboring Cisco products.
<b>duplex</b>	(Optional) Displays the duplex mode of the neighboring Cisco products.
<b>capabilities</b>	(Optional) Displays the capability codes for the neighboring Cisco products; valid values are <b>R</b> , <b>T</b> , <b>B</b> , <b>S</b> , <b>H</b> , <b>I</b> , <b>r</b> (R=Router, T=Trans Bridge, B=Source Route Bridge, S=Switch, H=Host, I=IGMP, and r=Repeater).
<b>detail</b>	(Optional) Displays detailed information about neighboring Cisco products.
<i>port</i>	(Optional) Number of the port for which CDP information is displayed.
<b>port</b>	Displays CDP port settings.

## Defaults

This command has no default settings.

## Command Types

Switch command

## Command Modes

Normal

## Examples

This example shows how to display CDP information for the system:

```
Console> show cdp
CDP                :enabled
Message Interval   :60
Hold Time          :180
Version            :V2
Console>
```

This example shows how to display detailed CDP neighbor information. The display varies depending on your network configuration at the time you run the command.

```
Console> show cdp neighbors 4/4 detail
Port (Our Port):4/4
```

```

Device-ID:69046406
Device Addresses:
  IP Address:172.20.25.161
Holdtime:150 sec
Capabilities:TRANSPARENT_BRIDGE SWITCH
Version:
  WS-C5509 Software, Version McpSW: 5.3(0.29)BOU NmpSW: 5.3(0.29)BOU
  Copyright (c) 1995-1999 by Cisco Systems
Port-ID (Port on Device):4/8
Platform:WS-C6009
VTP Management Domain:unknown
Native VLAN:1
Duplex:half
Console>

```

This example shows how to display CDP information about neighboring systems:

```

Console> show cdp neighbors
* - indicates vlan mismatch.
# - indicates duplex mismatch.

```

Port	Device-ID	Port-ID	Platform
3/5	002267619	3/6 *	WS-C4000
3/6	002267619	3/5	WS-C4000
4/1	002267619	4/2	WS-C4000
4/2	002267619	4/1 #	WS-C4000
4/20	069000057	8/5	WS-C5500
5/1	005763872	2/1	WS-C5000
5/1	066506245	2/1	WS-C5505
5/1	066508595	5/12 *#	WS-C5505
5/1	066508596	5/1	WS-C5505

```

Console>

```

This example shows how to display VLAN information about neighboring systems:

```

Console> show cdp vlan
* - indicates vlan mismatch.
# - indicates duplex mismatch.

```

Port	Device-ID	Port-ID	NativeVLAN
3/5	002267619	3/6 *	1
3/6	002267619	3/5	1
4/1	002267619	4/2	1
4/2	002267619	4/1 #	1
4/20	069000057	8/5	-
5/1	066508595	5/12 *#	1
5/1	066508596	5/1	1

```

Console>

```

## ■ show cdp

This example shows how to display duplex information about neighboring systems:

```
Console> show cdp neighbors duplex
```

```
* - indicates vlan mismatch.
```

```
# - indicates duplex mismatch.
```

Port	Device-ID	Port-ID	Duplex
3/5	002267619	3/6 *	half
3/6	002267619	3/5	half
4/1	002267619	4/2	full
4/2	002267619	4/1 #	full
4/20	069000057	8/5	-
5/1	005763872	2/1	-
5/1	066506245	2/1	-
5/1	066508595	5/12 **	half
5/1	066508596	5/1	half

```
Console>
```

This example shows how to display capability information about neighboring systems:

```
Console> show cdp neighbors capabilities
```

```
* - indicates vlan mismatch.
```

```
# - indicates duplex mismatch.
```

Port	Device-ID	Port-ID	Capabilities
3/5	002267619	3/6 *	T S
3/6	002267619	3/5	T S
4/1	002267619	4/2	T S
4/2	002267619	4/1 #	T S
4/20	069000057	8/5	T B S
5/1	005763872	2/1	T B S
5/1	066506245	2/1	T B S
5/1	066508595	5/12 **	T B S
5/1	066508596	5/1	T B S

```
Console>
```

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

```
Console> show cdp port
```

```
CDP :enabled
```

```
Message Interval :60
```

```
Hold Time :180
```

```
Version :V2
```

Port	CDP Status
2/1	enabled
2/2	enabled
5/1	enabled
5/2	enabled
5/3	enabled
5/4	enabled
5/5	enabled
5/6	enabled
5/7	enabled
5/8	enabled

```
Console>
```

---

**Related Commands**    [set cdp](#)

# show cgmp leave

To display the status of the CGMP leave feature, use the **show cgmp leave** command.

**show cgmp leave**

---

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

---

**Defaults** This command has no default settings.

---

**Command Types** Switch command

---

**Command Modes** Normal

---

**Examples** This example shows how to display the status of the CGMP leave feature:

```
Console> show cgmp leave
CGMP:          enabled
CGMP leave:    enabled
CGMP FastLeave: enabled
Console>
```

---

**Related Commands**

- [set cgmp](#)
- [set cgmp fastleave](#)
- [set cgmp leave](#)

## show cgmp statistics

To display CGMP statistics, use the **show cgmp statistics** command.

```
show cgmp statistics [vlan_id]
```

<b>Syntax Description</b>	<i> vlan_id </i> (Optional) VLAN number for which to display CGMP statistics.
---------------------------	---

<b>Defaults</b>	This command has no default settings.
-----------------	---------------------------------------

<b>Command Types</b>	Switch command
----------------------	----------------

<b>Command Modes</b>	Normal
----------------------	--------

<b>Examples</b>	This example shows how to display CGMP statistics for VLAN 1:
-----------------	---

```
Console> show cgmp statistics 1
CGMP enabled

CGMP statistics for vlan 1:
valid rx pkts received          211915
invalid rx pkts received        0
valid cgmp joins received       211729
valid cgmp leaves received      186
valid igmp leaves received       0
valid igmp queries received     3122
igmp gs queries transmitted      0
igmp leaves transmitted         0
failures to add GDA to EARL     0
topology notifications received  80
number of CGMP packets dropped 2032227
Console>
```

[Table 2-10](#) describes the fields in the **show cgmp statistics** output.

**Table 2-10** show cgmp statistics Command Output Fields

Field	Description
Valid rx pkts received	Number of valid CGMP packets received
Invalid rx pkts received	Number of invalid CGMP packets received
valid cgmp joins received	Number of CGMP group-specific queries received
valid cgmp leaves received	Number of CGMP leaves received
valid igmp leaves received	Number of IGMP leaves received

**Table 2-10** show cgmp statistics Command Output Fields (continued)

Field	Description
valid igmp queries received	Number of IGMP reports received
igmp gs queries transmitted	Number of IGMP group specific-equivalent queries transmitted by the switch
igmp leaves transmitted	Number of IGMP leaves transmitted by the switch
failures to add GDA to EARL	Number of times that the switch failed to add a multicast entry (GDA) to the EARL table
topology notifications received	Number of topology change notifications received by the switch
number of CGMP packets dropped	Number of IGMP packets dropped by the switch

**Related Commands**

[clear cgmp statistics](#)  
[set cgmp](#)

# show channel

To display EtherChannel configuration and statistics information for a channel based on EtherChannel ID, use the **show channel** command.

```
show channel [channel_id] [statistics | mac | info [spantree | trunk | protocol | gmrp | gvrp | qos | auxiliaryvlan | jumbo]]
```

Syntax Description	
<i>channel_id</i>	(Optional) EtherChannel ID of the channel.
<b>statistics</b>	(Optional) Displays EtherChannel PAgP statistics.
<b>mac</b>	(Optional) Displays EtherChannel traffic statistics.
<b>info</b>	(Optional) Displays EtherChannel configuration information.
<b>spantree</b>	(Optional) Displays only spanning tree-related configuration information.
<b>trunk</b>	(Optional) Displays only VLAN-trunk-related configuration information.
<b>protocol</b>	(Optional) Displays only protocol-filtering-related configuration information.
<b>gmrp</b>	(Optional) Displays only GMRP-related configuration information.
<b>gvrp</b>	(Optional) Displays only GVRP-related configuration information.
<b>qos</b>	(Optional) Displays only QoS-related configuration information.
<b>auxiliaryvlan</b>	(Optional) Displays only auxiliary vlan related configuration information.
<b>jumbo</b>	(Optional) Displays only jumbo related configuration information.

**Defaults** This command has no default settings.

**Command Types** Switch command

**Command Modes** Normal

**Usage Guidelines** If *channel\_id* is not specified, EtherChannel information is shown for all channels.

If you use the **info** keyword without qualifying it with one of the feature-specific keywords, all configuration information is displayed.

No information is displayed if the EtherChannel specified is not in use.

**Examples** This example shows how to display PAgP statistics for EtherChannel 835:

```
Console> show channel 835 statistics
Port  Channel  PAgP Pkts    PAgP Pkts  PAgP Pkts  PAgP Pkts  PAgP Pkts  PAgP Pkts
      id      Transmitted Received  InFlush   RetnFlush OutFlush  InError
-----
 7/5   835         194       81         0         0         0         0
 7/6   835         204       85         0         0         0         0
Console>
```

This example shows how to display traffic statistics for EtherChannel:

```

Console> show channel 835 mac
Channel Rcv-Unicast          Rcv-Multicast          Rcv-Broadcast
-----
835                    0                    114650                    0

Channel Xmit-Unicast          Xmit-Multicast          Xmit-Broadcast
-----
835                    0                    177145                    0

Channel Rcv-Octet          Xmit-Octet
-----
835                    10852890          14371660

Channel Dely-Exced MTU-Exced In-Discard Lrn-Discrd In-Lost Out-Lost
-----
835                    0          0          0          0          0          0
Console>

```

This example shows how to display EtherChannel information for all channels:

```

Console> show channel
Channel Id  Ports
-----
768        2/1-2
769        4/3-4
770        4/7-8
Console>

```

This example shows how to display configuration information for EtherChannel 835:

```

Console> show channel 835 info
Chan Port  Status  Channel          Admin Speed Duplex Vlan
id         id      mode            group
-----
835 7/5 connected on          58 a-100 a-full 1
835 7/6 connected on          58 a-100 a-full 1

Chan Port  if-  Oper-group Neighbor  Chan  Oper-Distribution PortSecurity/
id         Index Oper-group Oper-group cost  Method          Dynamic Port
-----
835 7/5 379 1          0 mac both
835 7/6 379 1          0 mac both

Chan Port  Device-ID          Port-ID          Platform
id
-----
835 7/5 069003103(5500)    3/5              WS-C5500
835 7/6 069003103(5500)    3/6              WS-C5500

Chan Port  Trunk-status Trunk-type  Trunk-vlans
id
-----
835 7/5 not-trunking negotiate 1-1005
835 7/6 not-trunking negotiate 1-1005

Chan Port  Portvlancost-vlans
id
-----
835 7/5
835 7/6

```

## show channel

```

Chan Port  Port      Portfast Port  Port
id       priority          vlanpri vlanpri-vlans
-----
835  7/5      32 disabled      0
835  7/6      32 disabled      0

Chan Port  IP      IPX      Group
id
-----
835  7/5  on      auto-on  auto-on
835  7/6  on      auto-on  auto-on

Chan Port  GMRP      GMRP      GMRP
id       status    registration forwardAll
-----
835  7/5  enabled  Normal    disabled
835  7/6  enabled  Normal    disabled

Chan Port  GVRP      GVRP      GVRP
id       status    registration applicant
-----
835  7/5  disabled Normal    Normal
835  7/6  disabled Normal    Normal

Chan Port  Qos-Tx Qos-Rx Qos-Trust  Qos-DefCos
id
-----
835  7/5  1q4t  -      untrusted      0
835  7/6  1q4t  -      untrusted      0
Console>

```

Table 2-11 describes the fields in the **show channel statistics** output.

**Table 2-11** *show channel statistics Command Output Fields*

Field	Description
Port	Port number
Channel id	EtherChannel ID
PAGP Pkts Transmitted	Number of PAGP packets transmitted on the port
PAGP Pkts Received	Number of PAGP packets received on the port
PAGP Pkts InFlush	Number of PAGP flush packets received
PAGP Pkts RetnFlush	Number of PAGP flush packets returned
PAGP Pkts OutFlush	Number of PAGP flush packets transmitted
PAGP Pkts InError	Number of PAGP error packets received

Table 2-12 describes the fields in the **show channel mac** output.

**Table 2-12 show channel mac Command Output Fields**

Field	Description
Channel	EtherChannel ID
Rcv-Unicast	Number of unicast frames received on the EtherChannel
Rcv-Multicast	Number of multicast frames received on the EtherChannel
Rcv-Broadcast	Number of broadcast frames received on the EtherChannel
Xmit-Unicast	Number of unicast frames transmitted on the EtherChannel
Xmit-Multicast	Number of multicast frames transmitted on the EtherChannel
Xmit-Broadcast	Number of broadcast frames transmitted on the EtherChannel
Rcv-Octet	Number of octet frames received on the EtherChannel
Xmit-Octet	Number of octet frames transmitted on the EtherChannel

Table 2-13 describes the fields in the **show channel info** output.

**Table 2-13 show channel info Command Output Fields**

Field	Description
Chan id	EtherChannel ID
Port	Port number
Status	Port connection status
Channel mode	EtherChannel mode
Admin group	EtherChannel administrative group
Speed	Port speed
Duplex	Port duplex
Vlan	Port VLAN membership
if-index	Interface index number
Oper-group	Capability of the group
Neighbor Oper-group	Device ID of the neighboring device with which the port is channeling
Chan cost	EtherChannel spanning tree port cost
Oper-Distribution Method	EtherChannel frame distribution method
PortSecurity/Dynamic Port	Status of whether the port is secure or dynamic
Device-ID	Serial number and hostname of neighboring device
Port-ID	Connected port number on neighboring device
Platform	Neighboring device platform
Trunk-status	VLAN trunking mode
Trunk-type	VLAN trunk encapsulation type

**Table 2-13** *show channel info Command Output Fields (continued)*

Field	Description
Trunk-vlans	Allowed VLAN list for the trunk
Portvlancost-vlans	Spanning tree port-VLAN cost and associated VLAN IDs
Port priority	Spanning tree port priority
Portfast	Spanning tree PortFast enable state
Port vlanpri-vlans	Spanning tree port-VLAN priority and associated VLAN IDs
IP	IP protocol filtering mode
IPX	IPX protocol filtering mode
Group	Group protocol filtering mode
GMRP status	GMRP enable state
GMRP registration	GMRP registration mode
GMRP forwardAll	GMRP forward-all enable status
GVRP status	GVRP enable state
GVRP registration	GVRP registration mode
GVRP applicant	GVRP applicant mode
Qos-Tx	Transmit queue and threshold port type
Qos-Rx	Receive queue and threshold port type
Qos-Trust	QoS port trust
QoS-DefCos	QoS default CoS

**Related Commands**

[set channel cost](#)  
[set channel vlancost](#)  
[set port channel](#)  
[show channel group](#)  
[show port channel](#)

# show channel group

To display EtherChannel configuration and statistics information for a channel based on EtherChannel administrative group membership, use the **show channel group** command.

```
show channel group [admin_group] [statistics | info [spantree | trunk | protocol | gmrp | gvrp | qos | auxiliaryvlan | jumbo]]
```

Syntax Description	
<i>admin_group</i>	(Optional) Number of the EtherChannel administrative group; valid values are from 1 to 1024.
<b>statistics</b>	(Optional) Displays EtherChannel PAgP statistics.
<b>info</b>	(Optional) Displays EtherChannel configuration information.
<b>spantree</b>	(Optional) Displays only spanning tree-related configuration information.
<b>trunk</b>	(Optional) Displays only VLAN-trunk-related configuration information.
<b>protocol</b>	(Optional) Displays only protocol-filtering-related configuration information.
<b>gmrp</b>	(Optional) Displays only GMRP-related configuration information.
<b>gvrp</b>	(Optional) Displays only GVRP-related configuration information.
<b>qos</b>	(Optional) Displays only QoS-related configuration information.
<b>auxiliaryvlan</b>	(Optional) Displays only auxiliary vlan-related configuration information.
<b>jumbo</b>	(Optional) Displays only jumbo-related configuration information.

**Defaults** This command has no default settings.

**Command Types** Switch command

**Command Modes** Normal

**Usage Guidelines** If *admin\_group* is not specified, EtherChannel information is shown for all admin groups.

If you use the **info** keyword without qualifying it with one of the feature-specific keywords, all configuration information is displayed.

**Examples** This example shows how to display EtherChannel information for EtherChannel administrative group 58:

```
Console> show channel group 58
Admin Port  Status      Channel      Channel
group       Mode           id
-----
    58  6/5  connected  on           835
    58  6/6  connected  on           835
```

## show channel group

```

Admin Port  Device-ID                               Port-ID           Platform
group
-----
   58  6/5  069003103 (5500)                               3/5               WS-C5500
   58  6/6  069003103 (5500)                               3/6               WS-C5500
Console>

```

This example shows how to display PAgP statistics for EtherChannel administrative group 58:

```

Console> show channel group 58 statistics
Port Admin  PAgP Pkts  PAgP Pkts PAgP Pkts PAgP Pkts PAgP Pkts
      Group  Transmitted Received InFlush  RetnFlush OutFlush InError
-----
  6/5    58      194      81        0         0         0         0
  6/6    58      204      85        0         0         0         0
Console>

```

This example shows how to display EtherChannel configuration information for EtherChannel administrative group 58:

```

Console> show channel group 58 info
Admin Port  Status      Channel          Ch   Speed Duplex Vlan
group                               id
-----
   58  6/5  connected  on                835 a-100 a-full  1
   58  6/6  connected  on                835 a-100 a-full  1

Admin Port  if-  Oper-group Neighbor  Chan  Oper-Distribution  PortSecurity/
group      Index      Oper-group Oper-group cost  Method              Dynamic Port
-----
   58  6/5  379          1          0 mac both
   58  6/6  379          1          0 mac both

Admin Port  Device-ID                               Port-ID           Platform
group
-----
   58  6/5  069003103 (5500)                               3/5               WS-C5500
   58  6/6  069003103 (5500)                               3/6               WS-C5500

Admin Port  Trunk-status Trunk-type      Trunk-vlans
group
-----
   58  6/5  not-trunking negotiate      1-1005
   58  6/6  not-trunking negotiate      1-1005
Admin Port  Portvlan cost-vlans
group
-----
   58  6/5
   58  6/6

Admin Port  Port  Portfast  Port  Port
group      priority      disabled  vlanpri  vlanpri-vlans
-----
   58  6/5      32 disabled      0
   58  6/6      32 disabled      0

Admin Port  IP      IPX      Group
group
-----
   58  6/5  on      auto-on  auto-on
   58  6/6  on      auto-on  auto-on

```

```

Admin Port  GMRP      GMRP      GMRP
group       status    registration forwardAll
-----
   58  6/5  enabled  Normal    disabled
   58  6/6  enabled  Normal    disabled

Admin Port  GVRP      GVRP      GVRP
group       status    registration applicant
-----
   58  6/5  disabled Normal    Normal
   58  6/6  disabled Normal    Normal

Admin Port  Qos-Tx  Qos-Rx  Qos-Trust  Qos-DefCos
group
-----
   58  6/5  -      -      untrusted    0
   58  6/6  -      -      untrusted    0
Console>

```

Table 2-14 describes the fields in the **show channel group** output.

**Table 2-14 show channel group Command Output Fields**

Field	Description
Admin group	EtherChannel administrative group
Port	Port number
Status	Port connection status
Channel Mode	EtherChannel mode
Channel id	EtherChannel ID
Device-ID	Serial number and hostname of neighboring device
Port-ID	Connected port number on neighboring device
Platform	Neighboring device platform

Table 2-15 describes the fields in the **show channel group statistics** output.

**Table 2-15 show channel group statistics Command Output Fields**

Field	Description
Port	Port number
Admin Group	EtherChannel administrative group
PAGP Pkts Transmitted	Number of PAGP packets transmitted on the port
PAGP Pkts Received	Number of PAGP packets received on the port
PAGP Pkts InFlush	Number of PAGP flush packets received
PAGP Pkts RetnFlush	Number of PAGP flush packets returned
PAGP Pkts OutFlush	Number of PAGP flush packets transmitted
PAGP Pkts InError	Number of PAGP error packets received

Table 2-16 describes the fields in the **show channel group info** output.

**Table 2-16 show channel group info Command Output Fields**

Field	Description
Admin group	EtherChannel administrative group
Port	Port number
Status	Port connection status
Channel mode	EtherChannel mode
Ch id	EtherChannel ID
Speed	Port speed
Duplex	Port duplex
Vlan	Port VLAN membership
if-Index	Interface index number
Oper-group	Capability of the group
Neighbor Oper-group	Device ID of the neighboring device with which the port is channeling
Chan cost	EtherChannel spanning tree port cost
Oper-Distribution Method	EtherChannel frame distribution method
PortSecurity/Dynamic Port	Status of whether the port is secure or dynamic
Device-ID	Serial number and hostname of neighboring device
Port-ID	Connected port number on neighboring device
Platform	Neighboring device platform
Trunk-status	VLAN trunking mode
Trunk-type	VLAN trunk encapsulation type
Trunk-vlans	Allowed VLAN list for the trunk
Portvlancost-vlans	Spanning tree port-VLAN cost and associated VLAN IDs
Port priority	Spanning tree port priority
Portfast	Spanning tree PortFast enable state
Port vlanpri-vlans	Spanning tree port-VLAN priority and associated VLAN IDs
IP	IP protocol filtering mode
IPX	IPX protocol filtering mode
Group	Group protocol filtering mode
GMRP status	GMRP enable state
GMRP registration	GMRP registration mode
GMRP forwardAll	GMRP forward-all enable status
GVRP status	GVRP enable state
GVRP registration	GVRP registration mode

**Table 2-16** *show channel group info Command Output Fields (continued)*

<b>Field</b>	<b>Description</b>
GVRP applicant	GVRP applicant mode
Qos-Tx	Transmit queue and threshold port type
Qos-Rx	Receive queue and threshold port type
Qos-Trust	QoS port trust
QoS-DefCos	QoS default CoS

**Related Commands**

[set channel cost](#)  
[set channel vlancost](#)  
[set port channel](#)  
[show channel](#)  
[show port channel](#)

# show channel mac

To display MAC information in a channel, use the **show channel mac** command.

## show channel mac

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

**Defaults** This command has no default settings.

**Command Types** Switch command

**Command Modes** Normal

**Examples** This example shows how to display MAC information in a channel:

```

Console> (enable) show channel mac
Channel  Rcv-Unicast          Rcv-Multicast          Rcv-Broadcast
-----  -----
Channel  Xmit-Unicast             Xmit-Multicast         Xmit-Broadcast
-----  -----

Channel  Rcv-Octet                Xmit-Octet
-----  -----

Channel  Dely-Exced MTU-Exced    In-Discard Lrn-Discrd  In-Lost    Out-Lost
-----  -----
Console> (enable)

```

# show channelprotocol

To display the channeling protocol used by each module in the system, use the **show channelprotocol** command.

## **show channelprotocol**

---

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

---

**Defaults** This command has no default settings.

---

**Command Types** Switch command

---

**Command Modes** Normal

---

**Examples** This example shows how to display the protocol used by each module in the system:

```
Console> show channelprotocol
      Channel
Module Protocol
-----
1      LACP
2      LACP
3      PAGP
4      LACP
Console>
```

---

**Related Commands** [set channelprotocol](#)

# show channel traffic

To display channel port utilization based on MAC counters, use the **show channel traffic** command.

**show channel traffic** [*channel\_id*]

<b>Syntax Description</b>	<i>channel_id</i> (Optional) Number of the channel.
---------------------------	---

<b>Defaults</b>	This command has no default settings.
-----------------	---------------------------------------

<b>Command Types</b>	Switch command
----------------------	----------------

<b>Command Modes</b>	Normal
----------------------	--------

<b>Usage Guidelines</b>	If you do not specify <i>channel_id</i> , EtherChannel information is shown for all channels. No information is displayed if the channel specified is not in use.
-------------------------	--

<b>Examples</b>	This example shows how to display traffic information in a channel:
-----------------	---

```

Console> show channel traffic 769
ChanId Port  Rx-Ucst Tx-Ucst Rx-Mcst Tx-Mcst Rx-Bcst Tx-Bcst
-----
   769  1/1   0.00%  0.00%   0.00%   0.00%   0.00%   0.00%
   769  1/2  100.00% 100.00% 100.00% 100.00%   0.00%   0.00%
Console>

```

# show config

To display the non-default system configuration, use the **show config** command.

```
show config {system | mod} [all]
```

Syntax Description	
<b>system</b>	Displays system configuration.
<i>mod</i>	Number of the module.
<b>all</b>	(Optional) All modules and system configuration information, including the IP address.

**Defaults** Only nondefault configurations are displayed.

**Command Types** Switch command

**Command Modes** Privileged

**Usage Guidelines** To view the entire configuration, use the **all** keyword.

**Examples** This example shows how to display the nondefault system and module configuration:

```
Console> (enable) show config
This command shows non-default configurations only.
Use 'show config all' to show both default and non-default configurations.
.....
..
begin
!
# ***** NON-DEFAULT CONFIGURATION *****
!
!
#Time: Thu Dec 23 1999, 21:56:01
!
#version 5.4(0.52)MIA7-Eng
#System Web Interface Version 5.0(0.25)
!
set editing disable
!
#frame distribution method
set port channel all distribution mac unknown
!
#snmp
set snmp trap 0.0.0.0
set snmp trap 0.0.0.0
!
#kerberos
set kerberos server 0.0.0.0
set kerberos server 0.0.0.0
```

## show config

```

set kerberos realm
set kerberos realm
!
#vtp
set vtp domain Lab_Network
set vtp v2 enable
set vtp pruning enable
set vlan 1 name default type ethernet mtu 1500 said 100001 state active
set vlan 2 name VLAN0002 type ethernet mtu 1500 said 100002 state active
set vlan 6 name VLAN0006 type ethernet mtu 1500 said 100006 state active
set vlan 10 name VLAN0010 type ethernet mtu 1500 said 100010 state active
set vlan 20 name VLAN0020 type ethernet mtu 1500 said 100020 state active
set vlan 50 name VLAN0050 type ethernet mtu 1500 said 100050 state active
set vlan 100 name VLAN0100 type ethernet mtu 1500 said 100100 state active
set vlan 152 name VLAN0152 type ethernet mtu 1500 said 100152 state active
set vlan 200 name VLAN0200 type ethernet mtu 1500 said 100200 state active
set vlan 300 name VLAN0300 type ethernet mtu 1500 said 100300 state active
set vlan 303 name VLAN0303 type fddi mtu 1500 said 100303 state active
set vlan 400 name VLAN0400 type ethernet mtu 1500 said 100400 state active
set vlan 500 name VLAN0500 type ethernet mtu 1500 said 100500 state active
set vlan 521 name VLAN0521 type ethernet mtu 1500 said 100521 state active
set vlan 524 name VLAN0524 type ethernet mtu 1500 said 100524 state active
set vlan 570 name VLAN0570 type ethernet mtu 1500 said 100570 state active
set vlan 801 name VLAN0801 type trbrf mtu 4472 said 100801 state active bridge
set vlan 850 name VLAN0850 type ethernet mtu 1500 said 100850 state active
set vlan 917 name VLAN0917 type ethernet mtu 1500 said 100917 state active
set vlan 999 name VLAN0999 type ethernet mtu 1500 said 100999 state active
set vlan 1002 name fddi-default type fddi mtu 1500 said 101002 state active
set vlan 1004 name fddinet-default type fddinet mtu 1500 said 101004 state active
set vlan 1005 name trbrf-default type trbrf mtu 4472 said 101005 state active b
set vlan 802 name VLAN0802 type trcrf mtu 4472 said 100802 state active parent
set vlan 1003 name trcrf-default type trcrf mtu 4472 said 101003 state active p
set vlan 3 translation 303 translation 0
set vlan 4 translation 304 translation 0
set vlan 5 translation 305 translation 0
set vlan 303 translation 3 translation 0
set vlan 304 translation 4 translation 0
set vlan 305 translation 5 translation 0
set vlan 351 translation 524 translation 0
set vlan 524 translation 351 translation 0
!
#ip
set interface sc0 1 1.10.11.212/255.255.255.0 1.10.11.255

set ip route 0.0.0.0/0.0.0.0          172.20.52.126
set ip route 0.0.0.0/0.0.0.0          172.20.52.125
set ip route 0.0.0.0/0.0.0.0          172.20.52.121
!
#rcp
set rcp username 1
!
#dns
set ip dns server 171.68.10.70 primary
set ip dns server 171.68.10.140
set ip dns enable
set ip dns domain cisco.com
!
#spanntree
set spanntree fwddelay 4      801
set spanntree maxage 10      801
#portfast
set spanntree portfast bpdu-guard enable
#vlan 802
set spanntree fwddelay 4      802

```

```

set spantree maxage 10 802
set spantree portstate 802 block 801
#vlan 1003
set spantree fwddelay 4 1003
set spantree maxage 10 1003
set spantree portstate 1003 block 1005
!
#syslog
set logging server 172.20.101.182
!
#set boot command
set boot config-register 0x100
set boot system flash bootflash:cat6000-sup.5-4-0-52.bin
!
#HTTP commands
set ip http server enable
set ip http port 1922
!
# default port status is disable
!
#mls
set mls nde disable
!
#qos
set qos enable
set qos map 1q4t 1 1 cos 2
set qos map 1q4t 1 1 cos 3
set qos map 1q4t 1 1 cos 4
set qos map 1q4t 1 1 cos 5
set qos map 1q4t 1 1 cos 6
set qos map 1q4t 1 1 cos 7
!
#Accounting
set accounting commands enable config stop-only tacacs+
!
# default port status is enable
!
#module 1 : 2-port 1000BaseX Supervisor
!
#module 2 empty
!
#module 3 : 48-port 10/100BaseTX (RJ-45)
set spantree portfast 3/8 enable
!
#module 4 empty
!
#module 5 : 48-port 10/100BaseTX (RJ-45)
!
#module 6 empty
!
set vlan 100 6/1
set spantree portcost 6/1 200
!
#module 7 : 24-port 10/100BaseTX Ethernet
set vlan 5 7/5
set vlan 100 7/23
set vlan 200 7/9
set port disable 7/5

set port name 7/9 1528 Hub
set port security 7/10 enable
set port security 7/10 maximum 200
set port security 7/10 00-11-22-33-44-55
set port security 7/10 00-11-22-33-44-66

```

## ■ show config

```

set port security 7/10 00-11-22-33-44-77
set port security 7/10 violation restrict
set port security 7/10 age 30
set trunk 7/1 desirable isl 1-1005
set trunk 7/2 desirable isl 1-1005
set trunk 7/3 desirable isl 1-1005
set trunk 7/4 desirable isl 1-1005
set trunk 7/10 off negotiate 1-1005
set trunk 7/23 on isl 1-1005
set spantree portcost 7/23 150
set spantree portvlancost 7/23 cost 50 100
!
#module 8 empty
!
#module 9 empty
!
#module 15 empty
!
#module 16 empty
end
Console>

```

This example shows how to display default and nondefault configuration information:

```

Console> show config all
begin
!
# ***** ALL (DEFAULT and NON-DEFAULT) CONFIGURATION *****
!
#Current Time: Thu Dec 23 1999, 14:01:24
!
#version 5.4(0.52)
!
set password $1$FMFQ$HfZR5DUszVHIRhrz4h6V70
set enablepass $1$FMFQ$HfZR5DUszVHIRhrz4h6V70
set prompt Console>
set length 24 default
set logout 20
set banner motd ^C^C
!
#system
set system baud 9600
set system modem disable
set system name
set system location
set system contact
!
... <truncated display>
#gvrp
set gvrp dynamic-vlan-creation disable
set gvrp disable
end
console>

```

This example shows how to display nondefault system configuration information:

```

Console> show config system
begin
!
# ***** NON-DEFAULT CONFIGURATION *****
!
#Current Time: Thu Dec 23 1999, 14:01:24
!
#version 5.4(0.52)

```

```

!
#set boot command
set boot config-register 0x2
set boot system flash bootflash:kk1
end
Console>

```

This example shows how to display all system default and nondefault configuration information:

```

Console> show config system all
begin
!
#system
set system baud 9600
set system modem disable
set system name
set system location
set system contact
!
end
Console>

```

This example shows how to display nondefault configuration information for module 1:

```

Console> show config 1
.....
begin
!
# ***** NON-DEFAULT CONFIGURATION *****
!
!
#Current Time: Thu Dec 23 1999, 14:01:24
!
#version 5.4(0.52)
!
!
#module 1 : 4-port 10/100BaseTX Supervisor
!
end
Console>

```

This example shows how to display default and nondefault configuration information for module 1:

```

Console> show config 1 all
begin
!
#module 1 : 4-port 10/100BaseTX Supervisor
set module name 1
set vlan 1 1/1-4
set port channel 1/1-4 off
... <truncated display>
set port flowcontrol 1/1-4 receive on
set cdp enable 1/1-4
set trunk 1/1 auto negotiate 1-1005
... <truncated display>
set trunk 1/4 auto negotiate 1-1005
set spantree portfast 1/1-4 disable
... <truncated display>
set spantree portvlancost 1/4 cost 99
set port gvrp 1/1-4 disable
set gvrp registration Normal 1/1-4
set gvrp applicant Normal 1/1-4
set port gmrp 1/1-4 enable
set gmrp registration Normal 1/1-4
set gmrp fwdall disable 1/1-4

```

## ■ show config

```
!  
end  
Console>
```

---

**Related Commands**

[clear config—switch](#)  
[write](#)

# show config mode

To display the current system configuration mode, use the **show config mode** command.

**show config mode**

---

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

---

**Defaults** This command has no default settings.

---

**Command Types** Switch command

---

**Command Modes** Privileged

---

**Examples** These examples show how to display the current system configuration mode:

```
Console> (enable) show config mode
System configuration mode set to text.
System configuration file = bootflash:switch.cfg
Console> (enable)
```

```
Console> (enable) show config mode
System configuration mode set to binary.
Console> (enable)
```

---

**Related Commands** [set config mode](#)

# show counters

To display hardware counters for a port, use the **show counters** command.

**show counters** *mod/port*

Syntax Description	<i>mod/port</i>	Number of the module and the port.
--------------------	-----------------	------------------------------------

Defaults	This command has no default settings.
----------	---------------------------------------

Command Types	Switch command
---------------	----------------

Command Modes	Normal
---------------	--------

Examples	This example shows how to display the counters for module 2, port 1:
----------	--



### Note

The counters displayed may change depending on the module type queried.

```

Console> show counters 2/1
Generic counters version 1
64 bit counters
0 rxHCTotalPkts = 2170558
1 txHCTotalPkts = 2588911
2 rxHCUnicastPkts = 2142669
3 txHCUnicastPkts = 2585457
4 rxHCMulticastPkts = 19552
5 txHCMulticastPkts = 1789
6 rxHCBroadcastPkts = 8332
7 txHCBroadcastPkts = 1665
8 rxHCOctets = 190513843
9 txHCOctets = 227423299
10 rxTxHCPkts64Octets = 20996
11 rxTxHCPkts65to127Octets = 4737279
12 rxTxHCPkts128to255Octets = 1170
13 rxTxHCPkts256to511Octets = 16
14 rxTxHCPkts512to1023Octets = 8
15 rxTxHCPkts1024to1518Octets = 0
16 rxDropEvents = 0
17 txHCTrunkFrames = 0
18 rxHCTrunkFrames = 0
19 rxHCDropEvents = 0
32 bit counters
0 rxCRCAAlignErrors = 0
1 rxUndersizedPkts = 0
2 rxOversizedPkts = 0
3 rxFragmentPkts = 0
4 rxJabbers = 0
5 txCollisions = 0
6 ifInErrors = 0

```

```

7 ifOutErrors = 0
8 ifInDiscards = 0
9 ifInUnknownProtos = 0
10 ifOutDiscards = 0
11 txDelayExceededDiscards = 0
12 txCRC = 0
13 linkChange = 2
Dot3 counters version 1
0 dot3StatsAlignmentErrors = 0
1 dot3StatsFCSErrors = 0
2 dot3StatsSingleColFrames = 0
3 dot3StatsMultiColFrames = 0
4 dot3StatsSQETestErrors = 0
5 dot3StatsDeferredTransmissions = 0
6 dot3StatsLateCollisions = 0
7 dot3StatsExcessiveCollisions = 0
8 dot3StatsInternalMacTransmitErrors = 0
9 dot3StatsCarrierSenseErrors = 0
10 dot3StatsFrameTooLongs = 0
11 dot3StatsInternalMacReceiveErrors = 0
Flowcontrol counters version 1
0 txPause = 0
1 rxPause = 0
Last-Time-Cleared
-----
Tue Mar 21 2000, 19:19:03
Console>

```

This example shows how to display hardware counter information for module 2, port 1, a gigabit port:

```

**GIGABIT PORT
Console> show counters 2/1
0 rxUnicastPacketCount = 0
1 txUnicastPacketCount = 0
2 rxMulticastPacketCount = 0
3 txMulticastPacketCount = 0
4 rxBroadcastPacketCount = 0
5 txBroadcastPacketCount = 0
6 rxByteCount = 0
7 txByteCount = 0
8 pkts64 = 0
9 pkts65to127 = 0
10 pkts128to255 = 0
11 pkts256to511 = 0
12 pkts512to1023 = 0
13 pkts1024to1522 = 0
14 rxNoPacketBufferCount = 0
15 rxCRCAAlignErrorPacketCount = 0
16 rxUndersizedPacketCount = 0
17 rxOversizedPacketCount = 0
18 rxFragmentPacketCount = 0
19 rxJabberPacketCount = 0
20 pauseControlFramesRx = 0
21 pauseControlFramesTx = 0
22 unsupportedOpcodesRx = 0
23 txQueueNotAvailable = 0
24 totalCollisionCount = 0
25 lateCollisionCount = 0
26 singleCollisionFrames = 0
27 multipleCollisionFrames = 0
28 excessiveCollisionFrames = 0
29 deferredTransmissions = 0
30 carrierSenseErrors = 0

```

## ■ show counters

```

31 falseCarrierDuringIdle      = 0
32 symbolErrorDuringCarrier    = 0
33 sequenceErrorDuringCarrier  = 0
Console>

```

This example shows how to display hardware counter information for module 3, port 3, a 10/100 port:

```

**10/100 PORT
Console> show counters 3/3
0  rxUnicastPacketCount      = 0
1  txUnicastPacketCount      = 0
2  rxMulticastPacketCount    = 0
3  txMulticastPacketCount    = 0
4  rxBroadcastPacketCount    = 0
5  txBroadcastPacketCount    = 0
6  rxByteCount               = 0
7  txByteCount               = 0
8  pkts64                    = 0
9  pkts65to127               = 0
10 pkts128to255              = 0
11 pkts256to511              = 0
12 pkts512to1023             = 0
13 pkts1024to1522            = 0
14 rxNoPacketBufferCount     = 0
15 rxCRCAlignErrorPacketCount = 0
16 rxUndersizedPacketCount    = 0
17 rxOversizedPacketCount    = 0
18 rxFragmentPacketCount     = 0
19 rxJabberPacketCount       = 0
20 pauseControlFramesRx      = 0
21 pauseControlFramesTx      = 0
22 unsupportedOpCodesRx      = 0
23 txQueueNotAvailable       = 0
24 totalCollisionCount       = 0
25 lateCollisionCount        = 0
26 singleCollisionFrames     = 0
27 multipleCollisionFrames    = 0
28 excessiveCollisionFrames   = 0
29 deferredTransmissions     = 0
30 carrierSenseErrors        = 0
31 falseCarrierDuringIdle    = 0
32 symbolErrorDuringCarrier   = 0
33 sequenceErrorDuringCarrier = 0
Console>

```

Table 2-17 describes the possible fields in the **show counters** command output.

**Table 2-17** show counters Command Output Fields

Field	Description
rxUnicastPacketCount	Number of unicast ethernet packets received.
txUnicastPacketCount	Number of unicast ethernet packets transmitted.
rxMulticastPacketCount	Number of multicast ethernet packets received.
txMulticastPacketCount	Number of multicast ethernet packets transmitted.
rxBroadcastPacketCount	Number of broadcast ethernet packets received.

Table 2-17 show counters Command Output Fields (continued)

Field	Description
txBroadcastPacketCount	Number of broadcast ethernet packets transmitted.
rxByteCount	Number of bytes received, excluding error packets and framing bits but including FCS octets.
txByteCount	Number of bytes transmitted, excluding framing bits but including FCS octets.
pkts64	Number of packets (including bad packets) received that were 64 octets in length (excluding framing bits but including FCS octets).
pkts65to127	Number of packets (including bad packets) received that were between 65 and 127 octets in length inclusive (excluding framing bits but including FCS octets).
pkts128to255	Number of packets (including bad packets) received that were between 128 and 255 octets in length inclusive (excluding framing bits but including FCS octets).
pkts256to511	Number of packets (including bad packets) received that were between 256 and 511 octets in length inclusive (excluding framing bits but including FCS octets).
pkts512to1023	Number of packets (including bad packets) received that were between 512 and 1023 octets in length inclusive (excluding framing bits but including FCS octets).
pkts1024to1522	Number of packets (including bad packets) received that were between 1024 and 1522 octets in length inclusive (excluding framing bits but including FCS octets).
rxNoPacketBufferCount	Number of packets dropped due to packet buffers not available.
rxCRCAlignErrorPacketCount	Number of packets received that had a length (excluding framing bits, but including FCS octets) between 64 and 1518 octets, inclusive, and had either a bad FCS with an integral number of octets (FCS Error) or a bad FCS with a non-integral number of octets (Alignment Error).
rxUndersizedPacketCount	Number of packets received that were less than 64 octets long (excluding framing bits, but including FCS octets) and were otherwise well-formed.
rxOversizedPacketCount	Number of packets received that were longer than 1518 octets (excluding framing bits, but including FCS octets) and were otherwise well-formed.
rxFragmentPacketCount <sup>1</sup>	Number of packets received that were less than 64 octets in length (excluding framing bits but including FCS octets) and had either a bad FCS with an integral number of octets (FCS Error) or a bad FCS with a non-integral number of octets (Alignment Error).
rxJabberPacketCount <sup>2</sup>	Number of packets received that were longer than 1518 octets (excluding framing bits, but including FCS octets), and had either a bad FCS with an integral number of octets (FCS Error) or a bad FCS with a non-integral number of octets (Alignment Error).
unsupportedOpcodesRx	Generalized non resettable counter. This counter has a maximum increment of 16,000 counts per second at 10Mbps, 160,000 counts per second at 100Mbps, 1,600,000 counts per second at 1Gbps, 16,000,000 counts per second at 10Gbps.  A count of MAC Control frames received that contain an opcode from 802.3 Clause 31 Table 31A-1 that is not supported by the device. This counter is incremented when a ReceiveFrame function call returns a valid frame with a lengthOrType field value equal to the reserved Type for 802.3_MAC_Control as specified in 31.4.1.3, and with an opcode for a function that is not supported by the device.

Table 2-17 show counters Command Output Fields (continued)

Field	Description
txQueueNotAvailable	<p>Generalized non resettable counter. This counter maximum increment depends upon the network load and specific configuration.</p> <p>A count of frames that are not transmitted due to transmit buffer error (i.e. unavailable transmit buffer). This count is incremented when a frame is scheduled to transmit but the transmit buffer is not available to store the frame.</p>
totalCollisionCount <sup>3</sup>	<p>The best estimate of the total number of collisions on this Ethernet segment.</p> <p>The value returned will depend on the location of the RMON probe. Section 8.2.1.3 (10BASE5) and section 10.3.1.3 (10BASE2) of IEEE standard 802.3 states that a station must detect a collision in the receive mode if three or more stations are transmitting simultaneously. A repeater port must detect a collision when two or more stations are transmitting simultaneously. Thus, a probe placed on a repeater port could record more collisions than a probe connected to a station on the same segment would. Probe location plays a much smaller role when considering 10BASE-T.</p>
lateCollisionCount	<p>Generalized non resettable counter. This counter has a maximum increment of 16,000 counts per second at 10Mbps, 160,000 counts per second at 100Mbps.</p> <p>A count of the times that a collision has been detected later than oneSlotTime, from the start of the packet transmission. A late collision is counted twice, i.e. both as a collision and as a lateCollision. This counter is incremented when the lateCollisionCount variable is nonzero. The contents of this attribute are undefined for MAC entities operating in full-duplex mode.</p>
singleCollisionFrames	<p>Generalized non resettable counter. This counter has a maximum increment of 13,000 counts per second at 10Mbps, 130,000 counts per second at 100Mbps.</p> <p>A count of frames that are involved in a single collision, and are subsequently transmitted successfully. This counter is incremented when the result of a transmission is reported as transmitOK and the attempt value is 2. The contents of this attribute are undefined for MAC entities operating in full-duplex mode.</p>
multipleCollisionFrames	<p>Generalized non resettable counter. This counter has a maximum increment of 11,000 counts per second at 10Mbps, 110,000 counts per second at 100Mbps.</p> <p>A count of frames that are involved in more than one collision, and are subsequently transmitted successfully. This counter is incremented when the result of a transmission is reported as transmitOK and the attempt value of attempt variable is greater than 2 and less than or equal to attemptLimit. The contents of this attribute are undefined for MAC entities operating in full-duplex mode.</p>
excessiveCollisionFrames	<p>Generalized non resettable counter. This counter has a maximum increment of 3255 counts per second at 10Mbps, 32550 counts per second at 100Mbps.</p> <p>A count of frames that, due to excessive collision, are not transmitted successfully. This counter is incremented when the value of the attempts variable equals attemptLimit during a transmission. The contents of this attribute are undefined for MAC entities operating in full-duplex mode.</p>

Table 2-17 show counters Command Output Fields (continued)

Field	Description
deferredTransmissions	<p>Generalized non resettable counter. This counter has a maximum increment of 13, 000 counts per second at 10Mbps, 130,000 counts per second at 100Mbps.</p> <p>A count of frames whose transmission was delayed on its first attempt because the medium was busy. This counter is incremented when the Boolean variable deferred has been asserted by the TransmitLinkMgmt function. Frames involved in any collisions are not counted. The contents of this attribute are undefined for MAC entities operating in full-duplex mode.</p>
carrierSenseErrors	<p>Generalized non resettable counter. This counter has a maximum increment of 16, 000 counts per second at 10Mbps, 160,000 counts per second at 100Mbps.</p> <p>A count of times that the carrierSense variable was not asserted or was deserted during the transmission of a frame without collision. This counter is incremented when carrierSenseFailureFlag is true at the end of transmission. The contents of this attribute are undefined for MAC entities operating in full-duplex mode.</p>
falseCarrierDuringIdle	<p>Generalized non resettable counter. This counter has a maximum increment of 160, 000 counts per second at under maximum network load, and 10 counts per second under zero network load, for 100Mbps implementations.</p> <p>A count of the number of false carrier events during IDLE in 100BASE-X links. This counter does not increment at the symbol rate. For 100BASE-X it can increment after a valid carrier completion at a maximum rate of once per 100ms until the next CarrierEvent. For 1000BASE-X, it can increment after a valid carrier completion at a maximum rate of once per 10us until the next CarrierEvent.</p>
symbolErrorDuringCarrier	<p>Generalized non resettable counter. This counter has a maximum increment of 160,000 counts per second at 100Mbps.</p> <p>For 100Mbps operation it is a count of the number of times when valid carrier was present and there was at least one occurrence of an invalid data symbol. For 1000Mbps operation it is a count of the number of times the receiving media is non-idle (a carrier event) for a period greater than or equal to minFrameSize for full-duplex operation, and during which there was at least one occurrence of an event that causes the PHY to indicate “Data reception error” on the GMII. At all speeds this counter shall be incremented only once per valid CarrierEvent and if a collision is present this counter shall not increment.</p>
sequenceErrorDuringCarrier	<p>Non-Standard counter.</p> <p>A count of receive events that results in bad framing errors. This counter is incremented when the coding errors occur in SSD or EPD during a carrier. This count can increment with symbolErrorDuringCarrier or rxCRCAAlignErrorPacketCount.</p>
<b>Flowcontrol counters version 1</b>	
pauseControlFramesTx	Number of valid control frames transmitted.
pauseControlFramesRx	Number of valid control frames received.

1. It is entirely normal for etherStatsFragments to increment because it counts both runts (which are normal occurrences due to collisions) and noise hits.
2. This definition of jabber is different than the definition in IEEE-802.3 section 8.2.1.5 (10BASE5) and section 10.3.1.4 (10BASE2), which define jabber as the condition where any packet exceeds 20 ms. The allowed range to detect jabber is between 20 ms and 150 ms.
3. An RMON probe inside a repeater should ideally report collisions between the repeater and one or more other hosts (transmit collisions as defined by IEEE 802.3k) plus receiver collisions observed on any coax segments to which the repeater is connected.

### Related Commands [clear counters](#)

■ show counters