show dot1x

To display system 802.1X capabilities and information related to 802.1X users, groups, VLANs, and VLAN groups, use the **show dot1x** command.

show dot1x

show dot1x group {**all** | **authenticated** | *group_name*}

show dot1x user {**all** | *user_name*}

show dot1x vlan {**all** | *vlan_id*}

show dot1x vlan-group {**all** | *vlan_group_name*}

Syntax Description

group	Displays 802.1X user group information.
all	Displays information about all user groups.
authenticated	Displays information about authenticated user groups.
group_name	User group name.
user	Displays 802.1X user information.
all	Displays information about all authenticated users.
user_name	User name.
vlan	Displays information about 802.1X authenticated users in a VLAN.
all	Displays user information in all VLANs.
vlan_id	VLAN number.
vlan-group	Displays 802.1X VLAN group information.
all	Displays information for all 802.1X VLAN groups.
vlan_group_name	Name of the VLAN group.

Defaults

This command has no default settings.

Command Types

Switch command.

Command Modes

Normal.

Examples

This example shows how to display the 802.1X information for the system:

```
Console> show dot1x
PAE Capability Authenticator Only
Protocol Version 1
system-auth-control enabled
critical-eapol disabled
critical-recovery-delay 100 milliseconds
max-authfail-req 3
```

```
max-req 2
max-reauth-req 2
quiet-period 60 seconds
radius-accounting disabled
radius-vlan-assignment enabled
re-authperiod 3600 seconds
server-timeout 30 seconds
shutdown-timeout 300 seconds
supp-timeout 30 seconds
tx-period 30 seconds
violation shutdown

Console>
```

This example shows how to display information about all 802.1X user groups:

```
Console show dot1x group all
Group Manager Info

---------------------------------
Info of Group group-81
User Count  = 2
---------------------------------
User mNo    = 3
User pNo    = 20
Username    = user81
User IP     = 81.81.81.54
User VLAN   = 81
User mNo    = 3
User pNo    = 18
Username    = user81
User IP     = 81.81.81.55
User VLAN   = 81

---------------------------------
Info of Group group-82
User Count  = 1
---------------------------------
User mNo    = 3
User pNo    = 19
Username    = user82
User IP     = 81.81.82.51
User VLAN   = 82

---------------------------------
Info of Group group-83
User Count  = 0
---------------------------------

---------------------------------
Info of Group group-84
User Count  = 0
---------------------------------
Console>
```

This example shows how to display information about authenticated user groups:

```
Console> show dot1x group authenticated
Authenticated Groups Info
---------------------------------
Info of Group group-81
User Count  = 2
---------------------------------
User mNo    = 3
```

```
User pNo    = 20
Username    = user81
User IP     = 81.81.81.54
User VLAN   = 81
User mNo    = 3
User pNo    = 18
Username    = user81
User IP     = 81.81.81.55
User VLAN   = 81

---------------------------------
Info of Group group-82
User Count  = 1
---------------------------------
User mNo    = 3
User pNo    = 19
Username    = user82
User IP     = 81.81.82.51
User VLAN   = 82
Console>
```

This example shows how to display information about a specific group:

```
Console> show dot1x group group-81
---------------------------------
Info of Group group-81
User Count  = 2
---------------------------------
User mNo    = 3
User pNo    = 20
Username    = user81
User IP     = 81.81.81.54
User VLAN   = 81
User mNo    = 3
User pNo    = 18
Username    = user81
User IP     = 81.81.81.55
User VLAN   = 81
Console>
```

This example shows how to display information about all authenticated users:

```
Console> show dot1x user all
Dot1x Info for user user81
----------------------------------------
User Port                   = 3/18
User Vlan                   = 81
User count on this Vlan     = 1
User IP                     = 81.81.81.55

Dot1x Info for user user82
----------------------------------------
User Port                   = 3/19
User Vlan                   = 82
User count on this Vlan     = 1
User IP                     = 81.81.82.51

Dot1x Info for user user81
----------------------------------------
User Port                   = 3/20
User Vlan                   = 81
User count on this Vlan     = 1
User IP                     = 81.81.81.54
Console>
```

This example shows how to display information about a specific authenticated user:

```
Console> show dot1x user user81
Dot1x Info for user user81
----------------------------------------
User Port                    = 3/20
User Vlan                    = 81
User count on this Vlan      = 1
User IP                      = 81.81.81.54
Console>
```

This example shows how to display information about authenticated users in a VLAN:

```
Console> show dot1x vlan 82
Dot1x info for Vlan 81
----------------------------------------
Dot1x Info for user user81
----------------------------------------
User Port                    = 3/18
User Vlan                    = 82
User count on this Vlan      = 2
User IP                      = 81.81.82.55

Dot1x Info for user user82
----------------------------------------
User Port                    = 3/19
User Vlan                    = 82
User count on this Vlan      = 2
User IP                      = 81.81.82.51
Console>
```

This example shows how to display information about a specific VLAN group:

```
Console> show dot1x vlan-group engg-dept
Group Name       Vlans Mapped
---------------------------------
engg-dept        3-4
Console>
```

This example shows how to display information about all VLAN groups:

```
Console> show dot1x vlan-group all
Group Name       Vlans Mapped
---------------------------------
engg-dept        3-4
hr-dept          5-7,10
Console>
```

Related Commands

clear dot1x config
set dot1x

show dvlan statistics

To display dynamic VLAN statistics, use the **show dvlan statistics** command.

show dvlan statistics

Syntax Description

This command has no keywords or arguments.

Defaults

This command has no default settings.

Command Types

Switch command.

Command Modes

Normal.

Examples

This example shows how to display dynamic VLAN statistics:

```
Console> show dvlan statistics
VMPS Client Statistics
----------------------
VQP Queries:               0
VQP Responses:             0
Vmps Changes:              0
VQP Shutdowns:             0
VQP Denied:                0
VQP Wrong Domain:          0
VQP Wrong Version:         0
VQP Insufficient Resource: 0
Console>
```

Related Commands

reconfirm vmps

show environment

To display environmental, temperature, and inline power status information, use the **show environment** command.

show environment [**all** | **temperature** | **power** [*mod*] | **cooling** [*mod*] | **connector** [*mod*]]

Syntax Description

all	(Optional) Displays environmental status information (for example, power supply, fan status, and temperature information) and information about the power available to the system.
temperature	(Optional) Displays temperature information.
power	(Optional) Displays inline power status.
mod	(Optional) Number of the module to display inline power status
cooling	(Optional) Displays cooling information.
connector	(Optional) Displays connector rating information.

Defaults

If you do not enter a keyword, environmental status information (for example, power supply, fan status, and temperature information) only is displayed.

Command Types

Switch command.

Command Modes

Normal.

Usage Guidelines

The **temperature** option is not supported by the NAM.

In the output of the **show environment all** command, environmental status and temperature information for the NAM module is not supported.

In the output of the **show environment temperature** and **show environment all** commands, you will notice three slot 1 displays. The first slot 1 is the actual supervisor engine. The second slot 1 is the switching engine, which is on the supervisor engine (slot 1) and has its own Intake, Exhaust, Device 1, and Device 2 temperature outputs. The third slot 1 is the MSFC, which is also on the supervisor engine and has its own Intake, Exhaust, Device 1, and Device 2 temperature outputs.

If you see a partial-deny card status, this is an indication that some module ports are inline-powered, but not all the ports on the module are inline powered.

Examples

This example shows how to display environmental status information:

```
Console> show environment
Environmental Status (. = Pass, F = Fail, U = Unknown, N = Not Present)
  PS1:.     PS2:N     PS1 Fan:.     PS2 Fan:N
  Chassis-Ser-EEPROM:.     Fan:.
  Clock(A/B):A         Clock A:.     Clock B:.
  VTT1:.    VTT2:.    VTT3:.
Console>
```

This example shows how to display environmental status information and details about the power available to the system:

```
Console> show environment all
Environmental Status (. = Pass, F = Fail, U = Unknown, N = Not Present)
  PS1: .     PS2: N     PS1 Fan: .     PS2 Fan: N
  Chassis-Ser-EEPROM: .     Fan: .
  Clock(A/B): A         Clock A: .     Clock B: .
  VTT1: .    VTT2: .    VTT3: .

                   Intake        Exhaust       Device 1     Device 2
Slot             Temperature   Temperature   Temperature   Temperature
---------------  ------------  ------------  ------------  ------------
1                24C(50C,65C)  32C(60C,75C)  27C           32C
3                N/A           N/A           N/A           N/A
5                22C(50C,65C)  27C(60C,75C)  28C           28C
1  (Switch-Eng)  22C(50C,65C)  22C(60C,75C)  N/A           N/A
1  (MSFC)        26C(50C,65C)  30C(60C,75C)  N/A           N/A

Chassis Modules
------------------
VTT1: 25C(85C,100C)
VTT2: 24C(85C,100C)
VTT3: 25C(85C,100C)

PS1 Capacity: 1153.32 Watts (27.46 Amps @42V)
PS2 Capacity: none
PS Configuration : PS1 and PS2 in Redundant Configuration.
Total Power Available: 1153.32 Watts (27.46 Amps @42V)
Total Power Available for Line Card Usage: 1153.32 Watts (27.46 Amps @42V)
Total Power Drawn From the System: 453.18 Watts (10.79 Amps @42V)
Remaining Power in the System: 700.14 Watts (16.67 Amps @42V)
Default Inline Power allocation per port: 2.00 Watts (0.04 Amps @42V)

Slot power Requirement/Usage :

Slot Card Type           PowerRequested PowerAllocated CardStatus
                         Watts   A @42V Watts   A @42V
---- ------------------- ------- ------ ------- ------ ----------
1    WS-X6K-SUP1A-2GE    138.60   3.30  138.60   3.30  ok
2                          0.00   0.00  138.60   3.30  none
3    WS-X6380-NAM         63.00   1.50   63.00   1.50  ok
5    WS-X6248-RJ-45      112.98   2.69  112.98   2.69  ok
Console>
```

This example shows how to display temperature information:

```
Console> show environment temperature
                   Intake        Exhaust       Device 1     Device 2
Slot             Temperature   Temperature   Temperature   Temperature
---------------  ------------  ------------  ------------  ------------
1                25C(50C,65C)  34C(60C,75C)  27C           32C
3                N/A           N/A           N/A           N/A
5                24C(50C,65C)  27C(60C,75C)  28C           29C
1  (Switch-Eng)  22C(50C,65C)  22C(60C,75C)  N/A           N/A
1  (MSFC)        28C(50C,65C)  32C(60C,75C)  N/A           N/A

Chassis Modules
------------------
VTT1: 25C(85C,100C)
VTT2: 25C(85C,100C)
VTT3: 25C(85C,100C)
Console> (enable)
```

This example shows how to display the inline power for all modules:

```
Console> show environment power
PS1 Capacity:1153.32 Watts (27.46 Amps @42V)
PS2 Capacity:none
PS Configuration :PS1 and PS2 in Redundant Configuration.

Total Power Available                       :1153.32 Watts (27.46 Amps @42V)
Total Power Chassis Limit                   :3780.00 Watts (90.00 Amps @42V)
Total Power Chassis Recommended             :3780.00 Watts (90.00 Amps @42V)
Total Power Available for Line Card Usage   :1153.32 Watts (27.46 Amps @42V)
Total Power Drawn From the System           : 493.08 Watts (11.74 Amps @42V)
Total Power Drawn by the Chassis            :   0.00 Watt
Total Power Drawn by the modules            : 457.80 Watts (10.90 Amps @42V)
Total Inline Power Drawn From the System    :   0.00 Watts ( 0.00 Amps @42V)
Total Power Reserved as localpool for modules:  34.86 Watts ( 0.83 Amps @42V)
Remaining Power in the System               : 660.24 Watts (15.72 Amps @42V)
Configured Default Inline Power allocation per port:15.40 Watts ( 0.37 Amps @42V)

Slot power Requirement/Usage :

Slot Model                  PowerRequested PowerAllocated CardStatus
                           Watts   A @42V Watts   A @42V
---- ---------------------- ------- ------ ------- ------ ----------
1    WS-X6K-SUP2-2GE          128.52  3.06   128.52  3.06  ok
2    WS-X6K-SUP2-2GE          128.52  3.06   128.52  3.06  standby
5    WS-X6148-RJ45V           100.38  2.39   100.38  2.39  ok
6    WS-X6348-RJ-45           100.38  2.39   100.38  2.39  ok

Slot Inline Power Requirement/Usage :

Slot Sub-Model           Total Allocated   Max H/W Supported  Max H/W Supported
                        To Module (Watts) Per Module (Watts) Per Port (Watts)
---- ------------------- ----------------- ------------------ -----------------
5    WS-F6K-SVDB-FE      0.000             399.84             15.400
Console>
```

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

```
Console> show environment power 9
Module 9:
Default Inline Power allocation per port: 9.500 Watts (0.22 Amps @42V)
Total inline power drawn by module 9: 0 Watt

Slot power Requirement/Usage :

Slot Card Type           PowerRequested PowerAllocated CardStatus
                         Watts   A @42V Watts   A @42V
---- ------------------- ------- ------ ------- ------ ----------
9    WS-X6348            123.06   2.93  123.06   2.93  ok

Default Inline Power allocation per port: 9.500 Watts (0.22 Amps @42V)
Port      InlinePowered     PowerAllocated
      Admin Oper   Detected mWatt mA @42V
----- ----- ------ -------- ----- --------
 9/1  auto  off    no       0     0
 9/2  auto  off    no       0     0
 9/3  auto  off    no       0     0
 9/4  auto  off    no       0     0
 9/5  auto  off    no       0     0
.
.
.
Console>
```

This example shows how to display cooling information:

```
Console> show environment cooling

Chassis per slot cooling capacity : 84 cfm


Fan tray(s) cooling capacity :

Fan  Model               Ver Cooling  Ambient FanStatus
                             capacity temp
---- ------------------- --- -------- ------- ---------
1    FAN-MOD-9             2  690 cfm     55C ok
2    FAN-MOD-9             2  690 cfm     55C ok

Slot cooling requirement :

Slot CardType            Cooling
---- ------------------- -------
3    WS-X6724-SFP         30 cfm
6    WS-X6K-SUP3-BASE     70 cfm
7    FI_WS_X6348_RJ45     30 cfm
9    WS-X6704-10GE        70 cfm
Console>
```

This example shows how to display connector rating information:

```
Console> show environment connector
Chassis connector rating : 756.00  Watts (18.00  Amps @42V)

Slot connector rating :

Slot CardType            ConnectorRating
                         Watts    A @42V
---- ------------------- -------- ------
3    WS-X6724-SFP        693.00   16.50
6    WS-X6K-SUP3-BASE    693.00   16.50
7    FI_WS_X6348_RJ45    693.00   16.50
9    WS-X6704-10GE       756.00   18.00
Console>
```

Table 2-33 describes the fields in the **show environment** output.

Table 2-33 show environment Command Output Fields

Field	Description
Environmental Status[1]	
PS1: and PS2:	Power supply status.
PS1 Fan: and PS2 Fan:	Power supply fan status.
Chassis-Ser-EEPROM:	Chassis serial EEPROM status.
Fan:	Fan status.
Clock A: and Clock B:	Clock A and B status.
VTT1:, VTT2:, and VTT3:	VTT module status. VTT modules are power monitors for the chassis backplane. A minor system alarm is signalled when one of the three VTTs fails, and a major alarm is signalled when two or more VTTs fail.
Intake Temperature and Exhaust Temperature	Temperature of the air flow as it enters, goes over the modules, and exits the chassis. The current temperature is listed first, with the minor and major alarm temperatures listed in parentheses.
Device 1 Temperature and Device 2 Temperature	The devices are additional temperature sensors measuring the internal temperature on each module indicated. The current temperature is listed first, with the warning and critical alarm temperatures listed in parentheses.
Chassis Modules	
VTT1:, VTT2:, and VTT3:	Temperature of the VTT modules. The current temperature is listed first, with the minor and major alarm temperature settings listed in parentheses.
PS1 Capacity: and PS2 Capacity:	Power supply capacity.
PS Configuration:	Power supply configuration.
Total Power Available:	Total available power.
Total Power Available for Line Card Usage:	Total power available for module use.
Total Power Drawn From the System:	Total power drawn from the system.
Remaining Power in the System:	Remaining power in the system.
Configured Default Inline Power allocation per port:	Configured default inline power allocation per port.

Table 2-33 show environment Command Output Fields (continued)

Field	Description
Slot power Requirement/Usage	
Power Requested	Module power requested.
Power Allocated	Module power allocation.
Card Status	Module status (no, ok, partial-deny[2], unknown, power-bad, and power-deny).
Slot Inline Power Requirement/Usage	
Total Allocated to Module	Inline power in Watts already allocated to the specified module.
Max H/W Supported Per Module	Maximum hardware supported per module in Watts.
Max H/W Supported Per Port	Maximum hardware supported per port in Watts.
Total inline power drawn	Total inline power drawn from the system.
InlinePowered—Admin	Inline power management status—auto, on, and off.
InlinePowered—Oper	Inline power status—on indicates power is being supplied by that port, off indicates power is not being supplied by the port, denied indicates there is not have enough power available to provide to the port.
InlinePowered—Detected	Status of whether or not inline power is detected.

1. Environmental status indications are the following: . = Pass, F = Fail, U = Unknown, and N = Not Present.
2. The partial-deny state indicates that some ports but not all ports in the module are inline powered.

Related Commands **set inlinepower**
show port inlinepower

show eou

To display Extensible Authentication Protocol over User Datagram Protocol (EoU) information, use the **show eou** command.

show eou all

show eou authentication {**clientless** | **eap** | **static**}

show eou config

show eou ip-address *ip_addr*

show eou mac-address *mac_addr*

show eou posture-token *posture_token*

Syntax Description

all	Displays a summary of the LAN port IP state on all EoU-enabled ports.
authentication	Displays EoU authentication-related information.
clientless	Displays all clientless ports.
eap	Displays all ports with EAP authentication.
static	Displays all hosts in an exception list.
config	Displays the EoU global configuration.
ip-address *ip_addr*	Displays EoU information for a host with the specified IP address.
mac-address *mac_addr*	Displays EoU information for a host with the specified MAC address.
posture-token *posture_token*	Displays EoU results on a posture-token basis.

Defaults

This command has no default settings.

Command Types

Switch command.

Command Modes

Normal.

Examples

This example shows how to display a summary of the LAN port IP state on all LAN port IP-enabled ports:

```
Console> show eou all
Eou Summary
-----------
Eou Global State = disabled

mNo/pNo   Host Ip            Nac_Token   Host_Fsm_State   Username
-------   ----------------   ---------   --------------   --------
Console>
```

This example shows how to display the EOU configuration:

```
Console> show eou config
Eou Protocol Version = 1
Eou Global Config
-----------------
Eou Global Enable         = Disabled
Eou Clientless            = Disabled
Eou Logging               = Enabled
Eou MaxRetry              = 3
Eou AAA timeout           = 60
Eou Hold timeout          = 180
Eou Retransmit timeout    = 30
Eou Revalidation timeout  = 3600
Eou Status Query timeout  = 300
List of hosts in IP Exception list.
-----------------------------------

List of hosts in Mac Exception list.
-----------------------------------

Exception Hosts Policy
----------------------

Console>
```

Related Commands

clear eou
set eou
set port eou
set security acl ip
show port eou

show errdisable-timeout

To display the configuration and status of the errdisable timeout, use the **show errdisable-timeout** command.

show errdisable-timeout

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Types

Switch command.

Command Modes

Normal.

Usage Guidelines

If your system is configured with a Supervisor Engine 2, the crossbar-fallback error may be displayed in the ErrDisable Reason field.

Examples

This example shows how to display the errdisable timeout configuration and status:

```
Console> show errdisable-timeout
ErrDisable Reason      Timeout Status
---------------------- --------------
aarp-inspection                       enable
bcast-suppression                     enable
bpdu-guard                            enable
cam-monitor                           enable
channel-misconfig                     enable
crossbar-fallback                     enable
duplex-mismatch                       enable
gl2pt-ingress-loop                    enable
gl2pt-threshold-exceed                enable
gl2pt-cdp-threshold-exceed            enable
gl2pt-stp-threshold-exceed            enable
gl2pt-vtp-threshold-exceed            enable
link-rxcrc                            enable
link-txcrc                            enable
udld                                  enable
other                                 enable
Interval: 300 seconds

Ports that will be enabled at the next timeout:
Port  Errdisable Reason  Port ErrDisableTimeout  Action on Timeout
----  -----------------  ----------------------  -----------------
3/3   udld               Disable                 Remain Disabled
3/4   udld               Enable                  Enabled
3/5   other              Disable                 Remain Disabled (PRBS)
Console>(enable)
```

Related Commands set errdisable-timeout

show errordetection

To display error detection settings, use the **show errordetection** command.

show errordetection

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 error detection settings:

```
Console> show errordetection
Inband error detection:                   disabled
Memory error detection:                   disabled
Packet buffer error detection:            errdisable
Port counter error detection:             disabled
Port link-errors detection:               disabled
Port link-errors action:                  port-failover
Port link-errors interval:                30 seconds
Port link-errors threshold inerrors high: 1001 packets
Port link-errors threshold inerrors low:  1000 packets
Port link-errors threshold rxcrc high:    1001 packets
Port link-errors threshold rxcrc low:     1000 packets
Port link-errors threshold txcrc high:    1001 packets
Port link-errors threshold txcrc low:     1000 packets
Port link-errors sampling:                3
Console>
```

Related Commands

set errordetection
set port errordetection
show port errordetection

show ethernet-cfm config-errors

To display the Connectivity Fault Management (CFM) configuration error conditions logged on the device, use the **show ethernet-cfm config-errors** command.

show ethernet-cfm config-errors *mod/port*

Syntax Description

mod/port	(Optional) Module number and port number.

Defaults

This command has no default settings.

Command Types

Switch command.

Command Modes

Privileged.

Usage Guidelines

The **show ethernet-cfm config-errors** command displays the configuration errors that exist due to a misconfiguration.

Examples

This example shows how to display the CFM configuration errors:

```
Console> (enable) show ethernet-cfm config-errors
Config Error List:
-------------------------------------------------
Port   Level     Vlan        Error-Code
-------------------------------------------------
3/14    5        10          CFM Leak
Console> (enable)
```

show ethernet-cfm continuity-check statistics

To display continuity-check message statistics, use the **show ethernet-cfm continuity-check statistics** command.

show ethernet-cfm continuity-check statistics {**level** *level* | **domain** *domain_name*}

Syntax Description

level *level*	Displays statistics for maintenance points at a specific level; valid values are from 0 to 7.
domain *domain_name*	Displays statistics for maintenance points in a specific domain.

Defaults

This command has no default settings.

Command Types

Switch command.

Command Modes

Normal.

Usage Guidelines

This output for this command displays the remote MPIDs, the module and port numbers, the number of received packets, the number of packets discarded because of cross-connected CSIs, the number of packets discarded because of duplicate CSIDs, and the number of packets discarded because of out-of-order transaction IDs.

Examples

This example shows how to display statistics for all the maintenance points on the switch with a maintenance level 1:

```
Console> show ethernet-cfm continuity-check statistics level 1
-----------------------------------------------------------------------
Remote MPID  Port  Rcvd  Cross-connect  Duplicate  out-of-order
-----------------------------------------------------------------------
3033         4/11  13756              0          0             0
3031         4/13   4329              0          0             0
3033         4/11  11438              0          0             0
3031         4/13   4329              0          0             0
3033         4/11  11438              0          0             0
3031         4/13   4329              0          0             0
3033         4/11  11438              0          0             0
3031         4/13   4329              0          0             0
3033         4/11  11438              0          0             0
3031         4/13   4329              0          0             0
3033         4/11  11438              0          0             0
3031         4/13   4329              0          0             0
3033         4/11  11438              0          0             0
3031         4/13   4329              0          0             0
3033         4/11  11438              0          0             0
3031         4/13   4329              0          0             0
3033         4/11  11438              0          0             0
3031         4/13   4329              0          0             0
```

```
3033          4/11  11438              0           0              0
3031          4/13   4329              0
Console>
```

show ethernet-cfm domain

To display all the configured CFM domains, use the **show ethernet-cfm domain** command.

show ethernet-cfm domain [*domain_name*]

Syntax Description

domain_name	(Optional) Domain name.

Defaults

This command has no default settings.

Command Types

Switch command.

Command Modes

Normal.

Usage Guidelines

If you do not specify a *domain_name* argument, all domains, their maintenance levels, and their total services are displayed.

Examples

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

```
Console> show ethernet-cfm domain
-----------------------------------------
Domain Name                Level  Services
-----------------------------------------
sjlabf1                        1        99
sjlabg3                        3        99
sjlabg4                        4        50
Console>
```

This example shows how to display information on only the sjlabf1 domain:

```
Console> show ethernet-cfm domain sjlabf1
Domain Name : sjlabf1
Level : 1
archive time : 0
Total Services : 99
Console>
```

show ethernet-cfm earl-match-status

To check the status of the Enhanced Address Recognition Logic (EARL) match registers that are configured for the Connectivity Fault Management (CFM) packets, use the s**how ethernet-cfm earl-match-status** command.

show ethernet-cfm earl-match-status

Syntax Description

This command has no keywords or arguments.

Defaults

This command has no default settings.

Command Types

Switch command.

Command Modes

Privileged.

Examples

These examples show how to display the status of the EARL match registers:

```
Console> (enable) show ethernet-cfm earl-match-status
CFM Earl Register Match is disabled on the switch.

Console> (enable) show ethernet-cfm earl-match-status
CFM Earl Register Match is enabled on the switch.
```

Related Commands

set ethernet-cfm earl-match-reg

show ethernet-cfm errors

To display the Connectivity Fault Management (CFM) and Alarm Indication Signal and Remote Defect Indication (AIS/RDI) error conditions logged since the last reload, use the **show ethernet-cfm errors** command.

show ethernet-cfm errors [**level** *level*]

show ethernet-cfm errors [**domain** *domain_name*]

Syntax Description

level *level*	(Optional) Displays the CFM error conditions for maintenance points that have a specific maintenance level; valid values are from 0 to 7.
domain *domain_name*	(Optional) Specifies the name of the device domain.

Defaults

This command has no default settings.

Command Types

Switch command.

Command Modes

Privileged.

Usage Guidelines

If you do not specify a maintenance level, errors for all levels are displayed.

Use this command for the following conditions:

- A Maintenance End Point (MEP) is down.
- Configuration errors.
- Forwarding loops.
- A cross-connected VC.
- AIS/RDI errors for MEPs.

Examples

This example shows how to display Ethernet CFM errors:

```
Console> (enable) show ethernet-cfm errors
--------------------------------------------------------------------------------
Level Vlan MPID Remote MAC      Reason                 Domain-name  MA-name
1      20  1021 aa-bb-cc-dd-ee-ff Lifetime Timer expd    CustX       csi_l5_1
Console> (enable)
```

This example shows how to display AIS errors and RDI errors for the local maintenance points:

```
Console> (enable) show ethernet-cfm errors
--------------------------------------------------------------------------------------------
Lvl Vlan MPID Remote-MAC        Reason           MA-Name              Domain-Name
--------------------------------------------------------------------------------------------
0   2010 8190 00-14-f2-31-c1-08 AIS-Errror       vlan2010             dom0
6   2000 8190 00-0b-45-a9-2c-fb RDI-Error        vlan2000             dom6
```

show ethernet-cfm maintenance-association

To display the configured maintenance association within the maintenance domain, use the **show ethernet-cfm maintenance-association** command.

show ethernet-cfm maintenance-association [**domain** *domain-name*]

Syntax Description

domain *domain_name*	(Optional) Specifies the name of the maintenance association domain.

Defaults

This command has no default settings.

Command Types

Switch command.

Command Modes

Privileged.

Examples

This example shows how to display the maintenance association within the domain Operator:

```
Console> (enable) show ethernet-cfm maintenance-association domain Operator
Domain Name : Operator
Level : 5
Total Service Maintenance Associations : 3

Maintenance Association Details :

* - indicates vlan does not exist
$ - indicates vlan is suspended
------------------------------------------------------------------------
Vlan   Dir   MA-Format  MA-Name CC-Interval Loss-Threshold CC-Enable
------------------------------------------------------------------------
   1   down  text       VLAN1 10 sec         3              FALSE
   2   down  text       VLAN2 10 sec         3              FALSE
   3   down  text       VLAN3 10 sec         3              FALSE
Console> (enable)
```

This example shows how to display all the AIS attributes of the Maintenance Association:

```
Console> (enable) show ethernet-cfm maintenance-association

Maintenance Association Details :

* - indicates vlan does not exist
$ - indicates vlan is suspended
-------------------------------------------------------------------------------------------
Vlan  Dir  Domain               Lvl MA      MA-Name              CC-    Loss  CC-    AIS
           Name                     Format                       Intv   Thres Enable state
-------------------------------------------------------------------------------------------
2000  up   dom3                  3 text    MA-2000              10 sec     3 FALSE  TRUE

Total Service Maintenance Associations : 1
Console> (enable)
```

Related Commands

clear ethernet-cfm maintenance-association

set ethernet-cfm maintenance-association

show port ethernet-cfm

show ethernet-cfm maintenance-point

To display all the local or remote maintenance points, use the **show ethernet-cfm maintenance-point** command.

show ethernet-cfm maintenance-point {**local** | **remote**} [**domain** *domain_name*]

Syntax Description

local	Displays all local maintenance points on the switch.
remote	Displays all remote maintenance points on the switch.
domain *domain_name*	(Optional) Specifies the name of the domain.

Defaults

This command has no default settings.

Command Types

Switch command.

Command Modes

Privileged.

Usage Guidelines

For remote maintenance points, this command displays the module and port number, the VLAN number, the Maintenance Point Identifier (MPID), whether the maintenance point is a Maintenance Intermediate Point (MIP) or a Maintenance Intermediate Point (MEP), the maintenance level, the MAC address, and the CSID. For local maintenance points, this command displays the module and port number, the MPID, whether the maintenance point is a MIP or a MEP, the level, the domain name, the status of the continuity check, and the VLAN number or range of VLANs.

If you do not enter a maintenance level, all levels are displayed.

Examples

This example shows how to display remote maintenance points:

```
Console> (enable) show ethernet-cfm maintenance-point remote

* - indicates port is a channel port
-------------------------------------------------------------------------------------
MPID Port    Vlan Level Mac-Addr          Domain Name          MA Name              RDI
-------------------------------------------------------------------------------------
200  3/14    10   4     00-30-19-c0-a0-a5 cust-1               MA-10                n
200  3/14    20   4     00-30-19-c0-a0-a5 cust-1               MA-20                n
200  3/14    30   4     00-30-19-c0-a0-a5 cust-1               MA-30                n
200  3/14    40   4     00-30-19-c0-a0-a5 cust-1               MA-40                n
200  3/14    50   4     00-30-19-c0-a0-a5 cust-1               MA-50                n
Console>
```

This example shows how to display local maintenance points:

```
Console> show ethernet-cfm maintenance-point local
-------------------------------------------------------------------------
Port  MPID  Type  Level         DomainName  CC-stat    Vlans
-------------------------------------------------------------------------
```

```
4/37  3033   MEP      1            sjlabf1   enable    1-100
4/37  4040   MEP      3            sjlabg3   enable    1-100
Console>
```

This example shows how to display the AIS defect receive status (1 or 0) for the local maintenance points. 1 indicates that a local MEP is in the AIS defect condition and 0 represents no AIS status for the local MEP.

```
Console> (enable) show ethernet-cfm maintenance-point local
* - indicates vlan does not exist
$ - indicates vlan is suspended
@ - indicates vlan is not allowed on this port
LOCAL MEPS:
--------------------------------------------------------------------------------
Port   MPID  Dir  Level  DomainName          CC   Vlan   MA-name              AIS
                                             stat                             det
--------------------------------------------------------------------------------
3/33   1     DOWN 0      dom0                  1  2002   vlan2002              0
3/9    2     DOWN 0      dom0                  1  2010   vlan2010              0
3/9    1     UP   3      dom3                  1  2000   vlan2000              0
3/9    1     UP   4      dom4                  1  2000   vlan2000              0

Total Local MEP's = 4
LOCAL MIPS:
------------------------------------------------
Port   Level     Vlans
------------------------------------------------
3/9    6         2000
Total Local MIP's = 1
```

This example shows how to display remote maintenance points at level 3:

```
Console> (enable) show ethernet-cfm maintenance-point remote level 3
--------------------------------------------------------------------------------
MPID Port    Vlan Level Mac-Addr          Domain Name          MA Name             RDI
--------------------------------------------------------------------------------
4040 4/11    10    3    00-50-3e-8f-8f-fb  cust-1               MA-10                n
4020 4/13    20    3    00-d0-00-b3-6b-fb  cust-2               MA-20                n
4040 4/11    30    3    00-50-3e-8f-8f-fb  cust-1               MA-30                n
4020 4/13    40    3    00-d0-00-b3-6b-fb  cust-2               MA-40                n
4040 4/11    50    3    00-50-3e-8f-8f-fb  cust-1               MA-50                n
4020 4/13    60    3    00-d0-00-b3-6b-fb  cust-2               MA-60                n
Console>
```

show ethernet-cfm maintenance-point remote detail

To query a specific maintenance point in detail, use the **show ethernet-cfm maintenance-point remote detail** command.

show ethernet-cfm maintenance-point local [level *level***]**

show ethernet-cfm maintenance-point remote [detail mpid *mpid***]**

Syntax Description

level *level*	(Optional) Specifies an integer. Values are from 0 to 7.
detail mpid *mpid*	(Optional) Specifies the Maintenance Point Identifier (MPID). Values are from 1 to 8191.

Defaults

This command has no default settings.

Command Types

Switch command.

Command Modes

Privileged.

Usage Guidelines

You can use this command to display detailed information about the local port that received the last Continuity Check (CC) message, IP or management address of the maintenance point, the number of lost CC messages, and so on.

Examples

This example shows how to query the maintenance point with MPID 200:

```
Console> (enable) show ethernet-cfm maintenance-point remote detail mpid 200

Version: IEEE-CFM
MAC Address: 00-30-19-c0-a0-a5
Domain Name: sonal
MA Name: MA-10
Level: 4
VLAN: 10
MPID: 200
Sender Chassis ID: 2042
Incoming Port(s): 3/14
Remote UNI Port : 4/14
Remote UNI Port Status : Forwarding
Remote UNI Interface Status : Up
CC Lifetime(sec): 35
Age of Last CC Message(sec): 1
Rcvd CCM Sequence Number : 10202
No of CCM's Received : 1089
No of CCM errors : 0
No of CCM's received with Duplicate TID : 0
No of CCM's received with out of order TID : 1
```

show ethernet-cfm mipccdb

To display the remote maintenance point entries of the Maintenance Intermediate Point (MIP) Continuity Check Database (CCDB), use the **show ethernet-cfm mipccdb** command.

show ethernet-cfm mipccdb [**domain** *domain name* | **detail mpid** *mpid*]

Syntax Description

domain *domain name*	(Optional) Specifies the name of the domain.
detail mpid *mpid*	(Optional) Specifies the Maintenance Point Identifier (MPID).

Defaults

This command has no default settings.

Command Types

Switch command.

Command Modes

Privileged.

Usage Guidelines

If you specify a domain name, entries that belong to the specified domain are displayed. If you do not specify a domain name, all the entries are displayed.

Examples

This example shows how to query the maintenance point with the domain ID customerXYDomain:

```
Console> (enable) show ethernet-cfm mipccdb domain customerXYDomain
* - indicates port is a channel port
-------------------------------------------------------------------------------------------
MPID Port    Vlan Level Mac-Addr          Domain Name           MA Name             Age(s)
-------------------------------------------------------------------------------------------
1    3/13    10   1     00-0e-38-b5-3e-94   snmp                snmp_ma_1            0
3033 4/11     1   1     00-50-3e-8f-8f-fb   custA1              Service1             4s
3031 4/13     1   1     00-d0-00-b3-6b-fb   custA1              Service1             6s
3033 4/11     2   1     00-50-3e-8f-8f-fb   custA2              Service2             7s
3031 4/13     2   1     00-d0-00-b3-6b-fb   custA2              Service3             5s
3033 4/11     3   1     00-50-3e-8f-8f-fb   custA3              service4             4s
3031 4/13     3   1     00-d0-00-b3-6b-fb   custA3              Service5             3s
3033 4/11     4   1     00-50-3e-8f-8f-fb   custA4              Service6             4s
3031 4/13     4   1     00-d0-00-b3-6b-fb   custA4              Service7             8s
3033 4/11     5   1     00-50-3e-8f-8f-fb   custA5              Service8             7s
3031 4/13     5   1     00-d0-00-b3-6b-fb   custA5              Service9             5s
```

This example shows how to query the maintenance point with MPID 3100:

```
Console> (enable) show ethernet-cfm mipccdb detail mpid 3100
Version : 0
MAC Address: 00-09-00-00-00-08
Domain Name : PROVIDER
MA Name : CUST1_SERVICE
Level : 4
VLAN : 100
MPID : 3100
```

```
Incoming Port :1/2
CC Lifetime(sec) : 10
Age of Last CC Message(sec): 3
```

show ethernet-cfm port-mac-enable

To display the port MAC configuration for Maintenance End Points (MEPs) that are down in a particular module and port number of a VLAN, use the **show ethernet-cfm port-mac-enable** command

show ethernet-cfm port-mac-enable {*mod* | *mod/port*}

Syntax Description

mod	Module number.
mod/port	Module number and port number.

Defaults

This command has no default settings.

Command Types

Switch command.

Command Modes

Privileged.

Usage Guidelines

If you specify the module number and port number, then the specified port entries are displayed. If you do not specify the module number and port number, then the specified module number entries are displayed.

Examples

This example shows how to display the port MAC configuration for MEPs that are down in module 3, port 14:

```
Console> (enable) show ethernet-cfm port-mac-enable 3/14
-------------------------------------------------------------------
Port     Vlan(s)
-------------------------------------------------------------------
3/14     10
```

Related Commands

clear ethernet-cfm port-mac-enable

set ethernet-cfm port-mac-enable

show ethernet-cfm statistics

To display the Connectivity Fault Management (CFM) packet statistics such as the Continuity Check Messages (CCMs) sent, CCMs received with out-of-order transaction IDs, or the Loopback Replies (LBR) and Linktrace Replies (LTRs), use the **show ethernet-cfm statistics** command.

show ethernet-cfm statistics [**mpid** *mpid*]

Syntax Description

mpid *mpid*	(Optional) Specifies the Maintenance Point Identifier (MPID).

Defaults

This command has no default settings.

Command Types

Switch command.

Command Modes

Privileged.

Usage Guidelines

If you do not specify an MPID, statistics for all the Maintenance End Points (MEPs) are shown.

Examples

This example shows how to display the CFM statistics:

```
Console> (enable) show ethernet-cfm statistics
* - indicates vlan does not exist
$ - indicates vlan is suspended
@ - indicates vlan is not allowed on this port

-------------------------------------------------------------------------------
MPID  Port    Vlan   CCM    CCM Seq  LTR        LBR   LBR     LBR     LBR
                    Sent   Error    unexpected sent  seq-err recvd   bad-msdu

3033 4/11   1  13756   0       0              0     0       0        0
3031 4/13   1  4329    0       0              0     0       0        0
3033 4/11   2  11438   2       0              0     0       0        0
3031 4/13   2  4329    0       0              0     0       0        0
3033 4/11   3  11438   0       0              0     0       0        0
3031 4/13   3  4329    0       0              0     0       0        0
3033 4/11   4  11438   0       0              0     0       0        0
3031 4/13   4  4329    0       0              0     0       0        0
3033 4/11   5  11438
Console>
```

Related Commands

clear ethernet-cfm statistics

show ethernet-cfm status

To display the global Connectivity Fault Management (CFM) and Alarm Indication Signal status, the maximum configured maintenance level, and the maintenance points with the same MAC address, use the **show ethernet-cfm status** command.

show ethernet-cfm status

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Types

Switch command.

Command Modes

Privileged.

Usage Guidelines

For all maintenance points configured on the switch, this command displays the type of CFM configured, the maximum Maintenance End Point (MEP) and Maintenance Intermediate Point (MIP) level, and all the maintenance points that have the same MAC address.

Examples

This example shows how to display the CFM and AIS status:

```
Console> (enable) show ethernet-cfm status
Ethernet CFM is enabled on this switch.
Max configured level is 4.
Bridge Brain Mac Address is 00-13-5f-1f-67-3b.
CFM CC Multicast Address is 01-80-c2-00-00-30.
CFM LTM Multicast Address is 01-80-c2-00-00-38.
CFM AIS is enabled.
CFM AIS Default Transmission Interval is 1sec.
CFM AIS configured level is 8.
CFM AIS PDUs to be transmitted at 1sec Interval is 8.
Console> (enable)
```

show ethernet-cfm traceroute-database

To display the contents of the traceroute database, use the **show ethernet-cfm traceroute-database** command.

show ethernet-cfm traceroute-database

show ethernet-cfm traceroute-database size

show ethernet-cfm traceroute-database hold-time

Syntax Description

size	Specifies the size of the traceroute database.
hold-time	Specifies the hold time set to the traceroute database.

Defaults

This command has no default settings.

Command Types

Switch command.

Command Modes

Privileged.

Examples

This example shows how to display the contents of the traceroute database:

```
Console> (enable) show ethernet-cfm traceroute-database
Traceroute to 00-0e-38-b5-3e-94 on Domain snmp, Level 1,
Vlan 10 issued at Wed Sep 10 2008, 07:12:21
B = Intermediary Bridge
! = Target Destination
* = Per hop Timeout
-------------------------------------------------------------------------------
                            MAC          Ingress      Ingr Action  Relay Action
  Hops   Host             Forwarded       Egress       Egr Action   Prev Hop
-------------------------------------------------------------------------------
!  1  Sup720-2011      00-0e-38-b5-3e-94     3/13        IngOk          RlyHit
                         Not Forwarded                         00-12-7f-3e-62-18
Console>
```

This example shows how to display the size of the traceroute database:

```
Console> (enable) show ethernet-cfm traceroute-database size
Ethernet TRDB cache size is 100
```

This example shows how to display the hold time of the traceroute database:

```
Console> (enable) show ethernet-cfm traceroute-database hold-time
Ethernet TRDB cache hold-time is 100
```

Related Commands

clear ethernet-cfm traceroute-database

set ethernet-cfm traceroute-database

show ethernet-evc

To display the Ethernet Virtual Connections (EVCs) configured on a device, use the **show ethernet-evc** command.

show ethernet-evc {[**detail**] | *evc_id* [**detail**]}

Syntax Description

detail	(Optional) Specifies the details of the EVC.
evc_id	(Optional) EVC identifier.

Defaults

This command has no default settings.

Command Types

Switch command.

Command Modes

Privileged.

Examples

These examples show how to display EVCs configured on the device:

```
Console> (enable) show ethernet-evc
St  EVC Id CE-Vlan
--- ---------- --------------------------------
A   EVC1 10
A   EVC2 20

Key: St=Status, A=Active, P=Partially Active, I=Inactive, ?=ELMI Link Down

Console> (enable) show ethernet-evc detail
EVC Id: EVC1
EVC Type: P-P
EVC Status: Active
EVC Uni Count: 2
Number of Remote UNIs up: 1
Number of Local UNIs up: 1
CFM Service Maintenance Domain: ELMI
CFM Service Maintenance Name: CFM1
EVC CE-Vlan Mapping: 10
Ports associated to this EVC: 7/1

Remote UNI Details:
UNI Id  UNI Status Port
-------------- ------------ -----------
SANFRANCISCO Up 4/47

EVC Id: EVC2
EVC Type: P-P
EVC Status: Inactive
EVC Uni Count: 2
Number of Remote UNIs up: 0
Number of Local UNIs up: 1
CFM Service Maintenance Domain: SJC
CFM Service Maintenance Name: CFM2
```

```
EVC CE-Vlan Mapping: 20
Ports associated to this EVC: 7/1
```

Related Commands

clear ethernet-evc

set ethernet-evc

show fabric channel

To display Switch Fabric Module information, use the **show fabric channel** command.

show fabric channel counters {*mod* | **all**} [**hex**]

show fabric channel utilization

show fabric channel switchmode [*mod*]

Syntax Description

counters	Displays fabric channel counter information.
mod	Number of the fabric-enabled module.
all	Displays counters for all fabric-enabled modules.
hex	(Optional) Displays counters in hexadecimal format.
utilization	Displays fabric channel utilization information.
switchmode	Displays switch mode and fabric channel status.

Defaults

This command has no default settings.

Command Types

Switch command.

Command Modes

Normal.

Usage Guidelines

The term "CEF720" refers to any module that has a part number that conforms to WS-X67*xx-xxx* (such as WS-X6724-SFP). These modules connect to the integrated 720-Gbps switch fabric on the Supervisor Engine 720 and to the 32-Gbps switching bus.

Note The integrated 720-Gbps switch fabric is supported only on Supervisor Engine 720.

The term "CEF256" refers to any module that has a part number that conforms to WS-X65*xx-xxx* (such as WS-X6548-GE-TX), the Optical Services Modules, the enhanced FlexWAN module, and most service modules (such as the FWSM, the SSLM, the VPNSM, the NAM-1, the NAM-2, the IDSM-2, the CSG, and the CMM). These modules connect to either the integrated 720-Gbps switch fabric on the Supervisor Engine 720 or to the external 256-Gbps Switch Fabric Modules that are supported by the Supervisor Engine 2, and these modules connect to the 32-Gbps switching bus.

Note The external Switch Fabric Modules are supported only with Supervisor Engine 2 in the Catalyst 6500 series switch.

A non-fabric-enabled module is not included in the CEF720 or CEF256 categories. These modules have no fabric connections and connect only to the 32-Gbps switching bus.

The CEF256/CEF720 modules operate in one of three modes when using centralized forwarding:

- Compact mode—Operational mode when all modules in the system are CEF256 or CEF720 (no non-fabric-enabled modules can be present for this mode).

  In this mode, the CEF256 or CEF720 modules send a "compact" 32-byte header for each frame to the supervisor engine over the switching bus. Once a forwarding decision is made, the CEF256 or CEF720 modules send the entire frame through the switch fabric to the egress module.

- Truncated mode—Operational mode when at least one non-fabric-enabled module is present in the system.

  In this mode, the CEF256 or CEF720 modules send the first 64 bytes of each frame to the supervisor engine over the switching bus. Once a forwarding decision is made, the CEF256 or CEF720 modules send the entire frame through the switch fabric to the egress module.

- Flow-through mode—Operational mode for the CEF256 modules when there is no switch fabric present.

  In this mode, the CEF256 modules send the entire packet to the supervisor engine over the switching bus. This mode is not applicable for the CEF720 modules, which require the presence of the switch fabric.

Examples

This example shows how to display fabric channel counter information for a specific module:

```
Console> show fabric channel counters 2
Channel 0 counters:
0 rxErrors                          =                   0
1 txErrors                          =                   0
2 txDropped                         =                   0
Console>
```

This example shows how to display fabric channel utilization information:

```
Console> show fabric channel utilization
Fab Chan Input Output
-------- ----- ------
       0    0%     0%
       1    0%     0%
       2    0%     0%
       3    0%     0%
.
.
.
      15    0%     0%
      16    0%     0%
      17    0%     0%
Console>
```

This example shows how to display switch mode and fabric channel status:

```
Console> show fabric channel switchmode
Global switching mode: flow through
Module Num Fab Chan Fab Chan Switch Mode  Channel Status
------ ------------ -------- ------------ --------------
     2            1   0, 1   flow through ok
     3            0   n/a    n/a          n/a
     5           18   0, 0   n/a          unknown
     5           18   1, 1   n/a          ok
.
.
.
     5           18  15, 15  n/a          unknown
     5           18  16, 16  n/a          unknown
     5           18  17, 17  n/a          unknown
    16            0 n/a      n/a          n/a
Console>
```

This example shows how to display the counters for all fabric-enabled modules:

```
Console> show fabric channel counters all
Counters for module 1
------------------------
Channel 0 counters:
0  rxErrors =                    0/0/0
1  txErrors  =                    0/0/0
2  txDropped  =                     0/0/0
Counters for module 4
------------------------
Channel 0 counters:
0  rxErrors =                    0/0/0
1  txErrors =                    0/0/0
2  txDropped =                    0/0/0
Counters for module 8
------------------------
Channel 0 counters:
0  rxErrors =                    0/0/0
1  txErrors =                    0/0/0
2  txDropped =                    0/0/0
Console>
```

This example shows how to display switch mode and fabric channel status on a Supervisor Engine 720 and on other fabric-enabled modules in the chassis:

```
Console> show fabric channel switchmode
Global switching mode: truncated
Fabric status : Online

Module Num Fab Chan Fab Chan Switch Mode  Channel Status
------ ------------ -------- ------------ --------------
     4            1   0, 3   truncated    ok
     6            1   0, 4   flow-through ok
     6           18   0, 0   n/a          ok
     6           18   1, 1   n/a          unused
     6           18   2, 2   n/a          unused
     6           18   3, 3   n/a          ok
     6           18   4, 4   n/a          unused
     6           18   5, 5   n/a          unused
     6           18   6, 6   n/a          unused
     6           18   7, 7   n/a          ok
     6           18   8, 8   n/a          unused
     6           18   9, 9   n/a          unused
     6           18  10, 10  n/a          unused
```

```
      6            18  11, 11  n/a          unused
      6            18  12, 12  n/a          unused
      6            18  13, 13  n/a          unused
      6            18  14, 14  n/a          unused
      6            18  15, 15  n/a          unused
      6            18  16, 16  n/a          unused
      6            18  17, 17  n/a          unused
      7             0    n/a   n/a          n/a
      8             1   0, 7   truncated    ok
Console>
```

This example shows how to display fabric channel utilization information on a system that uses a Supervisor Engine 720:

```
Console> show fabric channel utilization
Fab Chan Speed Input Output
-------- ----- ----- ------
       0   n/a    0%     0%
       1   n/a    0%     0%
       2   n/a    0%     0%
       3   n/a    0%     0%
       4   20G    0%     0%
       5   n/a    0%     0%
       6   n/a    0%     0%
       7   20G    0%     0%
       8    8G    0%     0%
       9   n/a    0%     0%
      10   n/a    0%     0%
      11   n/a    0%     0%
      12   n/a    0%     0%
      13   n/a    0%     0%
      14   n/a    0%     0%
      15   n/a    0%     0%
      16   20G    0%     0%
      17   n/a    0%     0%
Console>
```

Table 2-34 describes the fields in the **show fabric channel** output.

Table 2-34 show fabric channel Command Output Fields

Field	Description
rxErrors	Number of received errors.
txErrors	Number of transmitted errors.
txDropped	Number of dropped transmitted packets.
Input	Percentage of input traffic utilization.
Output	Percentage of output traffic utilization.
Num Fab Chan	Number of fabric channels associated with the module.
Global switching mode	Global switching mode of the switch (flow through, truncated, and compact).
Fab Chan	Fabric channel number; see the “Usage Guidelines” section for additional information.
Switch Mode	Channel switch mode type (flow through, truncated, and compact).
Channel Status	Channel status (ok, sync error, CRC error, heartbeat error, buffer error, timeout error, or unknown).

Table 2-34 show fabric channel Command Output Fields (continued)

Field	Description
Speed	Speed of the fabric link (8 Gbps or 20 Gbps).
Input	Percentages of input traffic utilization.
Output	Percentages of output traffic utilization.

Related Commands switch fabric

show fabric errors

To display the fabric error counters on one or all modules, use the **show fabric errors** command.

show fabric errors {*mod* | **all**}

Syntax Description

mod	Number of the module.
all	Displays fabric error counters for all modules.

Defaults

This command has no default settings.

Command Types

Switch command.

Command Modes

Normal.

Examples

This example shows how to display fabric error counters on all modules:

```
Console> show fabric errors all
Module errors:
 slot    channel         crc       hbeat        sync    DDR sync
    3          0           0           0           0           0
    3          1           0           0           0           0
    5          0           0           0           0           0

Fabric errors:
 slot    channel        sync      buffer     timeout
    3          0           0           0           0
    3          1           0           0           0
    5          0           0           0           0
Console>
```

Table 2-35 describes the fields in the **show fabric errors** output.

Table 2-35 show fabric errors Command Output Fields

Field	Description
slot	Module number.
channel	Fabric channel number that is associated with the module.
crc	Cyclic redundancy check errors.
hbeat	Heartbeat errors.
sync	Synchronization errors on the module side.
DDR sync	Double Data Rate synchronization errors.
sync	Synchronization errors on the fabric side.

Table 2-35 show fabric errors Command Output Fields (continued)

Field	Description
buffer	Buffer errors.
timeout	Timeout errors.

Related Commands show fabric channel
show fabric status

show fabric status

To display the integrated switch fabric status and forwarding speed, use the **show fabric status** command.

Syntax Description

This command has no keywords or arguments.

Defaults

This command has no default settings.

Command Types

Switch command.

Command Modes

Normal.

Usage Guidelines

The integrated 720 Gbps switch fabric is supported only on the Supervisor Engine 720.

Note For software release 8.3(4) and later releases, the **show fabric status** command will not indicate the fabric speed.

Examples

This example shows how to display the integrated switch fabric status and forwarding speed that is configured on the switch:

```
Console> show fabric status
Mod Speed  Fabric
           status
--- ----- -------
  5   20G  active
Console> (enable)
```

Related Commands

set system crossbar-fallback
set system switchmode allow
show fabric channel

show file

To display the contents of a file that have been saved to flash memory, use the **show file** command.

show file [*device***:**]*filename* [**dump**]

Syntax Description

*device***:**	(Optional) Device where the flash memory resides.
filename	Name of the configuration file.
dump	(Optional) Shows the hexadecimal dump of the file.

Defaults

This command has no default settings.

Command Types

Switch command.

Command Modes

Privileged.

Usage Guidelines

A colon (:) is required after the specified device.

Examples

This example shows how to display the contents of the configuration file saved to flash memory:

```
Console> (enable) show file slot0:cfgfile
begin
!
#version 5.4
!
set password $1$FMFQ$HfZR5DUszVHIRhrz4h6V70
set enablepass $1$FMFQ$HfZR5DUszVHIRhrz4h6V70
set prompt Console>
set length 24 default
!
#system
set system baud  9600
set system modem disable
...
Console> (enable)
```

This example shows how to display the hexadecimal dump from a file:

```
Console> (enable) show file slot:cfgfile dump
8099d140  0A626567 696E0A21 0A237665 7273696F   .begin.!.#versio
8099d150  6E20352E 3328302E 31312942 4F552D45   n 5.3(0.11)BOU-E
8099d160  6E670A21 0A736574 20706173 73776F72   ng.!.set passwor
8099d170  64202431 24464D46 51244866 5A523544   n $1$FMFQ$HfZR5D
8099d180  55737A56 48495268 727A3468 36563730   UszVHIRhrz4h6V70
8099d190  0A736574 20656E61 626C6570 61737320   .set enablepass
8099d1a0  24312446 4D465124 48665A52 35445573   $1$FMFQ$HfZR5DUs
8099d1b0  7A564849 5268727A 34683656 37300A73   zVHIRhrz4h6V70.s
...
```

show firewall

To display the parameters that are configured for a Firewall Services Module (FWSM), use the **show firewall** command.

show firewall multiple-vlan-interfaces

Syntax Description		
	multiple-vlan-interfaces	Displays the status of the multiple VLAN interface feature.

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 multiple VLAN interface feature on the FWSM:

```
Console> show firewall multiple-vlan-interfaces
multiple-vlan-interface feature disabled for firewall modules
Console>
```

Related Commands

set firewall

show flash

To list bootflash or Flash PC card information, including file code names, version numbers, volume ID, status, and sizes, use the **show flash** command.

show flash devices

show flash [[*m*/]*device*:] [**all** | **chips** | **filesys**]

Syntax Description

m/	(Optional) Module number of the supervisor engine containing the flash device.
device:	(Optional) Valid devices are **bootflash** and **slot0**.
all	(Optional) Lists deleted files, undeleted files, and files with errors on a flash memory device.
chips	(Optional) Shows information about the flash chip.
filesys	(Optional) Shows the Device Info Block, the Status Info, the Usage Info, and the volume ID.

Defaults

This command has no default settings.

Command Types

Switch command.

Command Modes

Normal.

Usage Guidelines

A colon (:) is required after the specified device.

Examples

This example shows how to list the flash files:

```
Console> show flash devices
slot0, bootflash, tftp
Console>
```

These examples show how to list supervisor engine flash information:

```
Console> show flash
-#- ED --type-- --crc--- -seek-- nlen -length- -----date/time------ name
  1 .. ffffffff fec05d7a  4b3a4c   25  4667849 Mar 03 2000 08:52:09 cat6000-sup.
5-3-4-CSX.bin
  2 .. ffffffff 4e5efc31  c0fadc   30  7716879 May 19 2000 06:50:55 cat6000-sup-
d.6-1-0-83-ORL.bin

3605796 bytes available (12384988 bytes used)
Console>
```

```
Console> show flash chips
******** Intel Series 2+ Status/Register Dump ********

ATTRIBUTE MEMORY REGISTERS:
  Config Option Reg (4000): 2
  Config Status Reg (4002): 0
  Card Status   Reg (4100): 1
  Write Protect Reg (4104): 4
  Voltage Cntrl Reg (410C): 0
  Rdy/Busy Mode Reg (4140): 2
COMMON MEMORY REGISTERS: Bank 0
  Intelligent ID Code  : 8989A0A0
  Compatible Status Reg: 8080
  Global     Status Reg: B0B0
  Block Status Regs:
    0  :  B0B0  B0B0  B0B0  B0B0  B0B0  B0B0  B0B0  B0B0
    8  :  B0B0  B0B0  B0B0  B0B0  B0B0  B0B0  B0B0  B0B0
    16 :  B0B0  B0B0  B0B0  B0B0  B0B0  B0B0  B0B0  B0B0
    24 :  B0B0  B0B0  B0B0  B0B0  B0B0  B0B0  B0B0  B0B0

COMMON MEMORY REGISTERS: Bank 1
  Intelligent ID Code  : 8989A0A0
  Compatible Status Reg: 8080
  Global     Status Reg: B0B0
  Block Status Regs:
    0  :  B0B0  B0B0  B0B0  B0B0  B0B0  B0B0  B0B0  B0B0
    8  :  B0B0  B0B0  B0B0  B0B0  B0B0  B0B0  B0B0  B0B0
    16 :  B0B0  B0B0  B0B0  B0B0  B0B0  B0B0  B0B0  B0B0
    24 :  B0B0  B0B0  B0B0  B0B0  B0B0  B0B0  B0B0  B0B0

COMMON MEMORY REGISTERS: Bank 2
  Intelligent ID Code  : FF00FF
    IID Not Intel -- assuming bank not populated

COMMON MEMORY REGISTERS: Bank 3
Console>

Console> show flash all
-#- ED --type-- --crc--- -seek-- nlen -length- -----date/time------ name
  1 .. ffffffff fec05d7a  4b3a4c   25  4667849 Mar 03 2000 08:52:09 cat6000-sup.
5-3-4-CSX.bin
  2 .. ffffffff 4e5efc31  c0fadc   30  7716879 May 19 2000 06:50:55 cat6000-sup-
d.6-1-0-83-ORL.bin

3605796 bytes available (12384988 bytes used)

-------- F I L E   S Y S T E M   S T A T U S --------
  Device Number = 0
DEVICE INFO BLOCK:
  Magic Number          = 6887635   File System Vers = 10000    (1.0)
  Length                = 800000    Sector Size      = 20000
  Programming Algorithm = 4         Erased State     = FFFFFFFF
  File System Offset    = 20000     Length = 7A0000
  MONLIB Offset         = 100       Length = C730
  Bad Sector Map Offset = 1FFF8     Length = 8
  Squeeze Log Offset    = 7C0000    Length = 20000
  Squeeze Buffer Offset = 7E0000    Length = 20000
  Num Spare Sectors     = 0
    Spares:
STATUS INFO:
  Writable
  NO File Open for Write
  Complete Stats
  No Unrecovered Errors
```

```
USAGE INFO:
  Bytes Used     = 201D9B  Bytes Available = 5FE265
  Bad Sectors    = 0       Spared Sectors  = 0
  OK Files       = 1       Bytes = 100FC0
  Deleted Files  = 1       Bytes = 100DDB
  Files w/Errors = 0       Bytes = 0

******** Intel Series 2+ Status/Register Dump ********

ATTRIBUTE MEMORY REGISTERS:
  Config Option Reg (4000): 2
  Config Status Reg (4002): 0
  Card Status   Reg (4100): 1
  Write Protect Reg (4104): 4
  Voltage Cntrl Reg (410C): 0
  Rdy/Busy Mode Reg (4140): 2

COMMON MEMORY REGISTERS: Bank 0
  Intelligent ID Code  : 8989A0A0
  Compatible Status Reg: 8080
  Global     Status Reg: B0B0
  Block Status Regs:
    0  :  B0B0  B0B0  B0B0  B0B0  B0B0  B0B0  B0B0  B0B0
    8  :  B0B0  B0B0  B0B0  B0B0  B0B0  B0B0  B0B0  B0B0
    16 :  B0B0  B0B0  B0B0  B0B0  B0B0  B0B0  B0B0  B0B0
    24 :  B0B0  B0B0  B0B0  B0B0  B0B0  B0B0  B0B0  B0B0

COMMON MEMORY REGISTERS: Bank 1
  Intelligent ID Code  : 8989A0A0
  Compatible Status Reg: 8080
  Global     Status Reg: B0B0
  Block Status Regs:
    0  :  B0B0  B0B0  B0B0  B0B0  B0B0  B0B0  B0B0  B0B0
    8  :  B0B0  B0B0  B0B0  B0B0  B0B0  B0B0  B0B0  B0B0
    16 :  B0B0  B0B0  B0B0  B0B0  B0B0  B0B0  B0B0  B0B0
    24 :  B0B0  B0B0  B0B0  B0B0  B0B0  B0B0  B0B0  B0B0

COMMON MEMORY REGISTERS: Bank 2
  Intelligent ID Code  : FF00FF
    IID Not Intel -- assuming bank not populated

COMMON MEMORY REGISTERS: Bank 3
  Intelligent ID Code  : FF00FF
    IID Not Intel -- assuming bank not populated

COMMON MEMORY REGISTERS: Bank 4
  Intelligent ID Code  : FF00FF
    IID Not Intel -- assuming bank not populated
Console>
```

Related Commands

download
reset—switch

show ftp

To display the parameters configured for File Transfer Protocol (FTP), use the **show ftp** command.

show ftp

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 how to display the parameters configured for FTP:

```
Console> (enable) show ftp
FTP username set to: ski
FTP password for user 'ski' is configured
FTP passive mode : disabled
Console> (enable)
```

Related Commands

clear ftp
set ftp

show garp timer

To display all the values of the General Attribute Registration Protocol (GARP) timers, use the **show garp timer** command.

show garp timer

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Types

Switch command.

Command Modes

Normal.

Usage Guidelines

You must maintain the following *relationship* for the various timer values:

- Leave time must be greater than or equal to three times the join time.
- Leaveall time must be greater than the leave time.

Caution Set the same GARP application (for example, GMRP and GVRP) timer values on all Layer 2-connected devices. If the GARP timers are set differently on the Layer 2-connected devices, GARP applications will not operate successfully.

Note The modified timer values are applied to all GARP application (for example, GMRP and GVRP) timer values.

Examples

This example shows how to display all the values of the GARP timers:

```
Console> (enable) show garp timer
Timer     Timer Value (milliseconds)
--------  --------------------------
Join      200
Leave     600
LeaveAll  10000
Console> (enable)
```

Related Commands

set garp timer
set gmrp timer
set gvrp timer

show gmrp configuration

To display complete GMRP-related configuration information, use the **show gmrp configuration** command.

show gmrp configuration

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Types

Switch command.

Command Modes

Normal.

Usage Guidelines

If the port list exceeds the available line spaces, the list wraps to the next line.

Examples

This example shows how to display GMRP-related configuration information:

```
Console> (enable) show gmrp configuration
Global GMRP Configuration:
GMRP Feature is currently enabled on this switch.
GMRP Timers (milliseconds):
Join = 200
Leave = 600
LeaveAll = 10000
Port based GMRP Configuration:
GMRP-Status Registration ForwardAll Port(s)
----------- ------------ ---------- -------------------------------------------
Enabled     Normal       Disabled   1/1-2
                                    2/1-48
                                    15/1
Console> (enable)
```

Related Commands

set gmrp registration

show gmrp statistics

To display all the GMRP-related statistics for a specified VLAN, use the **show gmrp statistics** command.

show gmrp statistics [*vlan*]

Syntax Description

vlan	(Optional) VLAN for which to show GMRP statistics; valid values are from 1 to 4094.

Defaults

The default is that if you do not specify a VLAN, statistics for VLAN 1 are shown.

Command Types

Switch command.

Command Modes

Normal.

Examples

This example shows how to display all the GMRP-related statistics for VLAN 23:

```
Console> show gmrp statistics 23
GMRP Statistics for vlan <23>:
Total valid GMRP Packets Received:                  500
Join Empties:                                       200
Join INs:                                           250
Leaves:                                             10
Leave Alls:                                         35
Empties:                                            5
Fwd Alls:                                           0
Fwd Unregistered:                                   0
Total valid GMRP Packets Transmitted:               600
Join Empties:                                       200
Join INs:                                           150
Leaves:                                             45
Leave Alls:                                         200
Empties:                                            5
Fwd Alls:                                           0
Fwd Unregistered:                                   0
Total valid GMRP Packets Received:                  0
Total GMRP packets dropped:                         0
Total GMRP Registrations Failed:                    0
Console>
```

Related Commands

clear gmrp statistics
set gmrp

show gmrp timer

To display all the values of the GMRP timers, use the **show gmrp timer** command.

show gmrp timer

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 all the values of the GMRP timers:

```
Console> (enable) show gmrp timer
Timer                Timer Value(milliseconds)
-------------------------------------------
Join                 200
Leave                600
Leave All            10000
Console> (enable)
```

Related Commands

set garp timer
set gmrp timer
set gvrp timer
show gmrp configuration

show gvrp configuration

To display GVRP configuration information, including timer values, whether or not GVRP and dynamic VLAN creation is enabled, and which ports are running GVRP, use the **show gvrp configuration** command.

show gvrp configuration

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Types

Switch command.

Command Modes

Normal.

Usage Guidelines

If the port list exceeds the available line spaces, the list wraps to the next line.

If no ports are GVRP participants, the message output changes from:

```
GVRP Participants running on port_list
```

to:

```
GVRP Participants running on no ports.
```

Examples

This example shows how to display GVRP configuration information:

```
Console> show gvrp configuration

Global GVRP Configuration:
GVRP Feature is currently enabled on the switch.
GVRP dynamic VLAN creation is enabled.
GVRP Timers(milliseconds)
Join = 200
Leave = 600
LeaveAll = 10000

Port based GVRP Configuration:
GVRP-Status Registration Applicant Port(s)
----------- ------------ --------- -----------------------------------------
Enabled.    Normal       Normal    2/1
Enabled.    Normal       Active    4/4
Enabled.    Fixed        Normal    4/9
Enabled.    Fixed        Active    4/11
Enabled.    Forbidden    Normal    4/10
Enabled.    Forbidden    Active    4/5
Disabled    Normal       Normal    2/2
                                   4/12-24
                                   5/1-8
Disabled    Normal       Active    4/1,4/8
```

```
Disabled   Fixed       Normal   4/2
Disabled   Fixed       Active   4/7
Disbled    Forbidden   Normal   4/3
Disbled    Forbidden   Active   4/6

GVRP Participants running on no ports.
Console>
```

Related Commands

clear gvrp statistics
set gvrp
set gvrp dynamic-vlan-creation
set gvrp registration
set gvrp timer
show gvrp statistics

show gvrp statistics

To view GVRP statistics for a port, use the **show gvrp statistics** command.

show gvrp statistics [*mod/port*]

Syntax Description

mod/port	(Optional) Number of the module and port on the module.

Defaults

The default is, that if you do not specify a VLAN, statistics for VLAN 1 are shown.

Command Types

Switch command.

Command Modes

Normal.

Examples

This example shows how to display GVRP statistics for module 2, port 1:

```
Console> show gvrp statistics 2/1
GVRP enabled

GVRP statistics for port 2/1:
Total valid pkts rcvd:           18951
Total invalid pkts recvd         0
General Queries recvd            377
Group Specific Queries recvd     0
MAC-Based General Queries recvd  0
Leaves recvd                     14
Reports recvd                    16741
Queries  Xmitted                 0
GS Queries Xmitted               16
Reports Xmitted                  0
Leaves Xmitted                   0
Failures to add GDA to EARL      0
Topology Notifications rcvd      10
GVRP packets dropped             0
Console>
```

Table 2-36 describes the fields in the **show gvrp statistics** output.

Table 2-36 show gvrp statistics Command Output Fields

Field	Description
GVRP Enabled	Status of whether or not GVRP is enabled or disabled.
Total valid pkts rcvd	Total number of valid GVRP packets received.
Total invalid pkts recvd	Total number of invalid GVRP packets received.
General Queries recvd	Total number of GVRP general queries received.
Group Specific Queries recvd	Total number of GVRP group-specific queries received.

Table 2-36 show gvrp statistics Command Output Fields (continued)

Field	Description
MAC-Based General Queries recvd	Total number of MAC-based general queries received.
Leaves recvd	Total number of GVRP leaves received.
Reports recvd	Total number of GVRP reports received.
Queries Xmitted	Total number of GVRP general queries transmitted by the switch.
GS Queries Xmitted	Total number of GVRP group specific-equivalent queries transmitted by the switch.
Reports Xmitted	Total number of GVRP reports transmitted by the switch.
Leaves Xmitted	Total number of GVRP leaves transmitted by the switch.
Failures to add GDA to EARL	Total number of times the switch failed to add a multicast entry (GDA) to the EARL table.
Topology Notifications rcvd	Total number of topology change notifications received by the switch.
GVRP packets dropped	Total number of GVRP packets dropped by the switch.

Related Commands

clear gvrp statistics
set gvrp
set gvrp dynamic-vlan-creation
set gvrp registration
set gvrp timer
show gvrp configuration

show ifindex

To display the information of the specific ifIndex, use the **show ifindex** command.

show ifindex *number*

Syntax Description

number	Number of the ifIndex.

Defaults

This command has no default settings.

Command Types

Switch command.

Command Modes

Normal.

Usage Guidelines

You can designate multiple ifIndex numbers by separating each number with a comma. To specify a range of numbers, use a dash (-) between the low and high numbers.

Examples

This example shows how to display ifIndex information:

```
Console> show ifindex 1,2,3,4-15,40-45
 Ifindex 1 is mapped to interface sc0.
 Ifindex 2 is mapped to interface sl0.
 Ifindex 3 is mapped to port 1/1.
 Ifindex 4 is mapped to port 1/2.
 Ifindex 5 is mapped to port 1/3.
 Ifindex 6 is mapped to port 1/4.
 Ifindex 7 is mapped to vlan 1.
 Ifindex 8 is mapped to vlan 1002.
 Ifindex 9 is mapped to vlan 1004.
 Ifindex 10 is mapped to vlan 1005.
 Ifindex 11 is mapped to vlan 1003.
 Ifindex 12 is mapped to port 9/1.
 Ifindex 13 is mapped to port 9/2.
 Ifindex 14 is mapped to port 9/3.
 Ifindex 15 is mapped to port 9/4.
 Ifindex 40 is mapped to port 8/5.
 Ifindex 41 is mapped to port 8/6.
 Ifindex 42 is mapped to port 8/7.
 Ifindex 43 is mapped to port 8/8.
 Ifindex 44 is mapped to port 8/9.
 Ifindex 45 is mapped to FEC-1/1-2.
Console>
```

show igmp flooding

To display whether the IGMP flooding feature is enabled or disabled, use the **show igmp flooding** command.

show igmp flooding

Syntax Description

This command has no keywords or arguments.

Defaults

This command has no default settings.

Command Types

Switch command.

Command Modes

Normal.

Usage Guidelines

Using the IGMP flooding feature, you can activate or prevent the flooding of multicast traffic after the last host leaves a multicast group.

For more information about IGMP flooding, refer to the "Understanding How IGMP Snooping Works" section of the "Configuring Multicast Services" chapter of the *Catalyst 6500 Series Switch Software Configuration Guide*.

Examples

This example show how to display the status of the IGMP flooding feature:

```
Console> show igmp flooding
Mcast flooding disabled
Console>
```

Related Commands

set igmp flooding

show igmp gda_status

To display the active multicast groups that are included in a Group Destination Address (GDA) in a particular VLAN for which there is a Layer 2 CAM entry created, use the **show igmp gda_status** command.

show igmp gda_status *vlan mac_addr*

Syntax Description

vlan	Number of the VLAN that forms the Layer 2 CAM entry.
mac_addr	MAC address of the GDA.

Defaults

This command has no default settings.

Command Types

Switch command.

Command Modes

Normal mode.

Examples

This example shows how to display the active group IP addresses in VLAN 1 and the GDA with the specified MAC address:

```
Console> show igmp gda_status 1 01-00-5e-0a-0a-0a
Multicast-Groups active under this GDA are:
    232.10.10.10
Console>
```

This example shows how to display the active group IP addresses in VLAN 100 and the GDA with the specified MAC address:

```
Console> show igmp gda_status 100 01-00-5e-00-01-28
Multicast-Groups active under this GDA are:
    224.0.1.40
Console>
```

Related Commands

show multicast group

show igmp leave-query-type

To display the type of query to be sent when a port receives a leave message, use the **show igmp leave-query-type** command.

show igmp leave-query-type

Syntax Description

This command has no keywords or arguments.

Defaults

This command has no default settings.

Command Types

Switch command.

Command Modes

Normal.

Examples

This example shows how to display the type of IGMP query that is sent when a port receives a leave message:

```
Console> show igmp leave-query-type
IGMP Leave Query Type : Mac based General Query
Console>
```

Related Commands

set igmp leave-query-type

show igmp mode

To display the IGMP mode on the switch, use the **show igmp mode** command.

show igmp mode

Syntax Description

This command has no keywords or arguments.

Defaults

This command has no default settings.

Command Types

Switch command.

Command Modes

Normal.

Usage Guidelines

The switch dynamically chooses either IGMP-only or IGMP-CGMP mode, depending on the traffic present on the network. IGMP-only mode is used in networks with no CGMP devices. IGMP-CGMP mode is used in networks with both IGMP and CGMP devices.

The **show igmp mode** command output includes three fields:

- IGMP Mode—Possible values are auto, igmp-only, and igmp-cgmp.
- IGMP-Operational-Mode—Possible values are igmp-only and igmp-cgmp.
- IGMP Address Aliasing Mode—Possible values are normal and fallback.

Examples

This example shows how to display the IGMP mode:

```
Console> show igmp mode
IGMP Mode:                  auto
IGMP Operational Mode:      igmp-only
IGMP Address Aliasing Mode: normal
Console>
```

Related Commands

set igmp mode

show igmp querier information

To display querier information specific to a configured VLAN, use the **show igmp querier information** command.

show igmp querier information [*vlan*]

Syntax Description

vlan	(Optional) Number of the VLAN.

Defaults

This command has no default settings.

Command Types

Switch command.

Command Modes

Normal.

Usage Guidelines

If you do not specify a VLAN number, IGMP querier information is displayed for all configured VLANs.

Examples

This example shows how to display querier information for VLAN 1:

```
Console> show igmp querier information 1
VLAN Querier State         Query Tx Count QI (seconds) OQI (seconds)
---- --------------------- -------------- ------------ -------------
1    QUERIER               26             125          300
Console>
```

Related Commands

set igmp querier

show igmp statistics

To view IGMP statistics for a particular VLAN, use the **show igmp statistics** command.

show igmp statistics [*vlan_id*]

Syntax Description

vlan_id	(Optional) VLAN for which to show IGMP statistics; valid values are from 1 to 4094.

Defaults

The default is that if you do not specify a VLAN, statistics for VLAN 1 are shown.

Command Types

Switch command.

Command Modes

Normal.

Examples

This example shows how to view IGMP statistics for VLAN 1:

```
Console> show igmp statistics 1
IGMP enabled

IGMP statistics for vlan 1:
Total valid pkts rcvd:           18951
Total invalid pkts recvd         0
General Queries recvd            377
Group Specific Queries recvd     0
MAC-Based General Queries recvd  0
Leaves recvd                     14
Reports recvd                    16741
Queries  Xmitted                 0
GS Queries Xmitted               16
Reports Xmitted                  0
Leaves Xmitted                   0
Failures to add GDA to EARL      0
Topology Notifications rcvd      10
IGMP packets dropped             0
Console>
```

Table 2-37 describes the fields in the **show igmp statistics** output.

Table 2-37 show igmp statistics Command Output Fields

Field	Description
IGMP enabled	Status of whether IGMP snooping is enabled or disabled.
Total valid pkts rcvd	Number of valid IGMP packets received.
Total invalid pkts recvd	Number of invalid IGMP packets received.
General Queries recvd	Number of IGMP general queries received.
Group Specific Queries recvd	Number of IGMP group-specific queries received.

Table 2-37 show igmp statistics Command Output Fields (continued)

Field	Description
MAC-Based General Queries recvd	Number of MAC-based general queries received.
Leaves recvd	Number of IGMP leaves received.
Reports recvd	Number of IGMP reports received.
Queries Xmitted	Number of IGMP general queries transmitted by the switch.
GS Queries Xmitted	Number of IGMP group-specific equivalent queries transmitted by the switch.
Reports Xmitted	Number of IGMP reports transmitted by the switch.
Leaves Xmitted	Number of IGMP leaves transmitted by the switch.
Failures to add GDA to EARL	Number of times the switch failed to add a multicast entry (GDA) to the EARL table.
Topology Notifications rcvd	Number of topology change notifications received by the switch.
IGMP packets dropped	Number of IGMP packets dropped by the switch.

Related Commands

clear igmp statistics
clear multicast router
set igmp
set multicast router
show multicast group
show multicast router

show imagemib

To display image information provided in the CISCO-IMAGE-MIB for a particular image, use the **show imagemib** command.

show imagemib *filename*

Syntax Description

filename	Name of the flash device on the supervisor engine.

Defaults

This command has no default settings.

Command Types

Switch command.

Command Modes

Normal.

Examples

This example shows how to display CISCO-IMAGE-MIB information for the flash image:

```
Console> (enable) show imagemib bootflash:cat6000-sup.6-1-1.bin
show mib info for file bootflash:cn50
CW_BEGIN$cat6000-WS-X6K-SUP1$
CW_IMAGE$bootflash:at6000-sup.5-5-1.bin$
CW_FAMILY$Catalyst 6000 Switch$
CW_MODULE$Catalyst Supervisor Module$
CW_VERSION$5.5.1$
CW_MIN_DRAM$ 32 MB$
CW_MIN_BOOTFLASH$  8 MB$
CW_MIN_NVRAM$ 512 KB$
CW_BUILDTIME$  Mar 24 2000 00:32:33$
CW_SYSDESCR$Catalyst Operating System$
CW_END$cat6000-WS-X6K-SUP1$
Console>
```

show image-verification

To display the status of the image verification feature, use the **show image-verifcation** command.

show image-verification

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Types

Switch command.

Command Modes

Normal.

Usage Guidelines

This command shows whether or not the integrity of the image will be verified when the system is booting, after the image has been copied, or before a system resets.

Examples

This example shows how to display the status of the image verification feature:

```
Console> show image-verification
Image Verification Status:
Boot:  Enable
Copy:  Disable
Reset: Disable
Console> (enable)
```

show inlinepower

To display status of inline power for all modules, use the **show inlinepower** command.

show inlinepower

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 inline power for all modules that are configured for inline power:

```
Console> show inlinepower
Configured Default Inline Power allocation per port:15.40 Watts ( 0.37 Amps @42V)

Mod         Ports        Notify-Thld    Inline Power (Watts)   Usage Status
    on deny errdis off  (% of Max)   Max     Thld    Admin
---  -- ---- ------ ---  -----------  ------- ------- ------- ------------
4    1  0    0      95   99           800.10  792.09  7.07     Ok
6    0  0    0      48   99           378.00  374.22  0.00     Ok

(*) "errdis" ports are static ports with insufficient power

Console>
```

Table 2-38 describes the fields in the **show inlinepower** output.

Table 2-38 show inlinepower Command Output Fields

Field	Description
Mod	Module number.
Ports on	Number of ports that are operational.
Ports deny	Number of ports that are denied power.
Ports errdis	Number of ports that are static and that have insufficient power.
Ports off	Number of ports that are not operational.
Notify-Thld (% of Max)	Percentage of power usage that must be reached before a syslog notification goes out.
Inline Power Max	Maximum wattage that is allocated to the module.
Inline Power Thld	Wattage that must be reached before a syslong notification goes out.

Table 2-38 show inlinepower Command Output Fields (continued)

Field	Description
Inline Power Admin	Total power that is allocated to the ports on the module.
Usage Status	Status of the inline power on the module: • OK—The module is below the inline power threshold. • Over-Thld—The module is over the inline power threshold. • OFF—The module is not operational.

Related Commands

set inlinepower
set port inlinepower
show port inlinepower

show interface

To display information on network interfaces, use the **show interface** command.

show interface

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 sl0 and sc0:

```
Console> show interface
sl0: flags=51<UP,POINTOPOINT,RUNNING>
        slip 0.0.0.0 dest 0.0.0.0
sc0: flags=63<UP,BROADCAST,RUNNING>
        vlan 1 inet 172.20.52.19 netmask 255.255.255.224 broadcast 172.20.52.31
sc1: flags=63<UP,BROADCAST,RUNNING>
        vlan 2 inet 0.0.0.0 netmask 255.0.0.0 broadcast 0.255.255.255
dhcp server: 174.44.67.201
Console>
```

Table 2-39 describes the fields in the **show interface** command output.

Table 2-39 show interface Command Output Fields

Field	Description
sl0	Information on the SLIP interface.
flags	Flags indicating the interface state (decoded in the subsequent field).
<UP, POINTOPOINT, RUNNING>	Interface state (UP, DOWN, BROADCAST, LOOPBACK, POINTOPOINT, or RUNNING).
slip	IP address of the SLIP interface.

Table 2-39 show interface Command Output Fields (continued)

Field	Description
dest	IP address of the host to which the console port will be connected.
sc0	Information on the sc0 in-band interface.
vlan	Number of the VLAN to which the sc0 interface has been assigned (known as the management VLAN).
inet	IP address of the interface.
netmask	Network mask for the interface.
broadcast	Broadcast address for the interface.
sc1	Information on the sc1 in-band interface.
dhcp server	IP address of the DHCP server.

Related Commands set interface

show inventory

To display the product inventory listing of all Cisco products that are installed in a networking device, use the **show inventory** command.

show inventory [*entity*]

Syntax Description

entity	(Optional) Name of a Cisco entity (for example, chassis, backplane, module, or slot).

Defaults

This command has no default settings.

Command Types

Switch command.

Command Modes

Normal.

Usage Guidelines

The **show inventory** command retrieves and displays inventory information about each Cisco product in the form of a Cisco Unique Device Indentifier (UDI). The UDI is a combination of three separate data elements: a product identifier (PID), a version identifier (VID), and the serial number (SN).

The PID is the name by which the product can be ordered and is also called the "Product Name" or "Part Number." You can use this identifier to order an exact replacement part. The VID is the version of the product. Whenever a product has been revised, the VID will be incremented. The SN is the vendor-unique serialization of the product. Each manufactured product carries a unique serial number assigned at the factory; this number identifies a specific instance of a product. This number cannot be changed in the field.

The UDI refers to each product as an entity. Some entities, such as a chassis, have subentities, such as slots. Each entity displays on a separate line.

Examples

The following is sample output from the **show inventory** command without any arguments.

```
Console> show inventory
NAME: "Chassis", DESCR: "Cisco Systems WS-C6509 9 slot switch"
PID: WS-C6509          , VID:    , SN: SCA034401LQ

NAME: "Clock 1", DESCR: "Clock"
PID: WS-C6000-CL       , VID:    , SN: SMT03462479

NAME: "Clock 2", DESCR: "Clock"
PID: WS-C6000-CL       , VID:    , SN: SMT03462480

NAME: "VTT 1", DESCR: "VTT"
PID: WS-C6000-VTT      , VID:    , SN: SMT03460976

NAME: "VTT 2", DESCR: "VTT"
PID: WS-C6000-VTT      , VID:    , SN: SMT03460843

NAME: "VTT 3", DESCR: "VTT"
```

```
PID: WS-C6000-VTT      , VID:    , SN: SMT03461008

NAME: "2", DESCR: "1000BaseX Supervisor 2 port WS-X6K-SUP2-2GE Rev. 1.1"
PID: WS-X6K-SUP2-2GE   , VID:    , SN: SAD04450LF1

NAME: "submodule 2/1", DESCR: "L3 Switching Engine II"
PID: WS-F6K-PFC2       , VID:    , SN: SAD04440HVU

NAME: "3", DESCR: "10/100BaseTX Ethernet 48 port WS-X6248-RJ-45 Rev. 1.0"
PID: WS-X6248-RJ-45    , VID:    , SN: SAD03181468

NAME: "5", DESCR: "Switch Fabric Module 0 port WS-C6500-SFM Rev. 1.0"
PID: WS-C6500-SFM      , VID:    , SN: SAD04420JR5

NAME: "7", DESCR: "Network Analysis Module 2 port WS-X6380-NAM Rev. 0.201"
PID: WS-X6380-NAM      , VID:    , SN: JAB0343055Y

NAME: "8", DESCR: "1000BaseX Ethernet 8 port WS-X6408-GBIC Rev. 0.202"
PID: WS-X6408-GBIC     , VID:    , SN: SAD02430406

NAME: "PS 1", DESCR: "1300 watt supply AC"
PID: WS-CAC-1300W      , VID:    , SN: ACP03380477

NAME: "Fan 1", DESCR: "Fan 1"
PID: WS-C6K-9SLOT-FAN  , VID:    , SN:

Console>
```

Table 2-40 describes the fields in the **show inventory** command output.

Table 2-40 show inventory Command Output Fields

Field	Description
NAME	Physical name (text string) assigned to the Cisco entity. For example, console or a simple component number (port or module number), such as “1,” depending on the physical component naming syntax of the device. Equivalent to the entPhysicalName MIB variable in RFC 2737.
DESCR	Physical description of the Cisco entity that characterizes the object. Equivalent to the entPhysicalDesc MIB variable in RFC 2737.
PID	Entity product identifier. Equivalent to the entPhysicalModelName MIB variable in RFC 2737.
VID	Entity version identifier. Equivalent to the entPhysicalHardwareRev MIB variable in RFC 2737.
SN	Entity serial number. Equivalent to the entPhysicalSerialNum MIB variable in RFC 2737.

show ip alias

To show a listing of defined IP aliases, use the **show ip alias** command.

show ip alias [*name*]

Syntax Description

name	(Optional) Alias for a specific host.

Defaults

This command has no default settings.

Command Types

Switch command.

Command Modes

Normal.

Examples

This example shows how to display a listing of all IP aliases:

```
Console> show ip alias
default         0.0.0.0
sparc20         192.168.10.69
cat6000-1       172.16.169.16
cat6000-2       172.16.169.20
Console>
```

Related Commands

clear ip alias
set ip alias