show channel group

Use the **show channel group** command to display EtherChannel configuration and statistics information for a channel based on EtherChannel administrative group membership.

show channel group [*admin_group*] [**statistics** | **info** [**spantree** | **trunk** | **protocol** | **gmrp** | **gvrp** | **qos**]]

Syntax Description

admin_group	(Optional) Number of the EtherChannel administrative group. Valid values are from 1 to 1024.
statistics	(Optional) Keyword that specifies to display EtherChannel PAgP statistics.
info	(Optional) Keyword that specifies to display EtherChannel configuration information.
spantree	(Optional) Keyword that specifies to display only spanning-tree-related configuration information.
trunk	(Optional) Keyword that specifies to display only VLAN-trunk-related configuration information.
protocol	(Optional) Keyword that specifies to display only protocol-filtering-related configuration information.
gmrp	(Optional) Keyword that specifies to display only GMRP-related configuration information.
gvrp	(Optional) Keyword that specifies to display only GVRP-related configuration information.
qos	(Optional) Keyword that specifies to display only QoS-related configuration information.

Defaults

This command has no default setting.

Command Types

Switch command.

Command Modes

Normal.

Usage Guidelines

If *admin_group* is not specified, EtherChannel information is shown for all admin groups.

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

Examples

This example shows how to display EtherChannel information for a specific EtherChannel administrative group:

```
Console> show channel group 58
Admin Port  Status     Channel              Channel
group                  Mode                 id
----- ----- ---------- -------------------- --------
   58  7/5  connected  on                        835
   58  7/6  connected  on                        835

Admin Port  Device-ID                      Port-ID                   Platform
group
----- ----- ------------------------------ ------------------------- ----------
   58  7/5  069003103(5500)                3/5                       WS-C5500
   58  7/6  069003103(5500)                3/6                       WS-C5500
Console>
```

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

```
Console> show channel group 58 statistics
Port  Admin   PAgP Pkts   PAgP Pkts PAgP Pkts PAgP Pkts PAgP Pkts PAgP Pkts
      Group   Transmitted Received  InFlush   RetnFlush OutFlush  InError
----- ------- ----------- --------- --------- --------- --------- ---------
 7/5       58         194        81         0         0         0         0
 7/6       58         204        85         0         0         0         0
Console>
```

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

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

Admin Port  if-   Oper-group Neighbor   Chan  Oper-Distribution PortSecurity/
group       Index            Oper-group cost  Method            Dynamic Port
----- ----- ----- ---------- ---------- ----- ----------------- -------------
   58  7/5  379            1                0 mac both
   58  7/6  379            1                0 mac both

Admin Port  Device-ID                      Port-ID                   Platform
group
----- ----- ------------------------------ ------------------------- ----------
   58  7/5  069003103(5500)                3/5                       WS-C5500
   58  7/6  069003103(5500)                3/6                       WS-C5500

Admin Port  Trunk-status Trunk-type    Trunk-vlans
group
----- ----- ------------ ------------- ---------------------------------------
   58  7/5  not-trunking negotiate     1-1005
   58  7/6  not-trunking negotiate     1-1005
Admin Port  Portvlancost-vlans
group
----- ----- ---------------------------------------------------------------------
   58  7/5
   58  7/6
```

```
Admin Port  Port     Portfast Port    Port
group       priority          vlanpri vlanpri-vlans
----- ----- -------- -------- ------- ----------------------------------------
   58  7/5        32 disabled       0
   58  7/6        32 disabled       0

Admin Port  IP       IPX      Group
group
----- ----- -------- -------- --------
   58  7/5  on       auto-on  auto-on
   58  7/6  on       auto-on  auto-on

Admin Port  GMRP     GMRP         GMRP
group       status   registration forwardAll
----- ----- -------- ------------ ----------
   58  7/5  enabled  normal       disabled
   58  7/6  enabled  normal       disabled

Admin Port  GVRP     GVRP          GVRP
group       status   registeration applicant
----- ----- -------- ------------- ---------
   58  7/5  disabled normal        normal
   58  7/6  disabled normal        normal

Admin Port  Qos-Tx Qos-Rx Qos-Trust    Qos-DefCos
group
----- ----- ------ ------ ------------ ----------
   58  7/5  -      -      untrusted             0
   58  7/6  -      -      untrusted             0
Console>
```

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

Table 2-16 show channel group Command Output Fields

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

Table 2-17 describes the fields in the **show channel group statistics** output.

Table 2-17 show channel group statistics Command Output Fields

Field	Description
Port	Port number.
Admin Group	EtherChannel administrative group.
PAgP Pkts Transmitted	Number of PAgP packets transmitted on the port.

Table 2-17 show channel group statistics Command Output Fields (continued)

Field	Description
PAgP Pkts Received	Number of PAgP packets received on the port.
PAgP Pkts InFlush	Number of PAgP flush packets received.
PAgP Pkts RetnFlush	Number of PAgP flush packets returned.
PAgP Pkts OutFlush	Number of PAgP flush packets transmitted.
PAgP Pkts InError	Number of PAgP error packets received.

Table 2-18 describes the fields in the **show channel group info** output.

Table 2-18 show channel group info Command Output Fields

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

Table 2-18 show channel group info Command Output Fields (continued)

Field	Description
IP	IP protocol filtering mode
IPX	IPX protocol filtering mode
Group	Group protocol filtering mode
GMRP status	GMRP enable state
GMRP registration	GMRP registration mode
GMRP forwardAll	GMRP forward-all enable status
GVRP status	GVRP enable state
GVRP registration	GVRP registration mode
GVRP applicant	GVRP applicant mode
Qos-Tx	Transmit queue and threshold port type
Qos-Rx	Receive queue and threshold port type
Qos-Trust	QoS port trust
QoS-DefCos	QoS default CoS

Related Commands

set channel cost
set channel vlancost
set port channel
show channel
show port channel

show config

Use the **show config** command to display the non-default system configuration.

show config {**system** | *mod_num*} [**all**]

Syntax Description

system	Keyword that specifies to display system configuration.
mod_num	Number of the module.
all	(Optional) Keyword that specifies all modules and system configuration information, including the IP address.

Defaults

By default, this command only shows non-default configurations. To view the entire configuration, use the keyword **all**.

Command Types

Switch command.

Command Modes

Privileged.

Examples

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

```
Console> (enable) show config
This command shows non-default configurations only.
Use 'show config all' to show both default and non-default configurations.
........
..

begin
!
# ***** NON-DEFAULT CONFIGURATION *****
!
!
#Time: Thu Dec 23 1999, 21:56:01
!
#version 5.4(0.52)MIA7-Eng
#System Web Interface Version 5.0(0.25)
!
set editing disable
!
#frame distribution method
set port channel all distribution mac unknown
!
#snmp
set snmp trap 0.0.0.0
set snmp trap 0.0.0.0
!
#kerberos
set kerberos server  0.0.0.0                                    0
set kerberos server  0.0.0.0                                    0
set kerberos realm
```

```
set kerberos realm
!
#vtp
set vtp domain Lab_Network
set vtp v2 enable
set vtp pruning enable
set vlan 1 name default type ethernet mtu 1500 said 100001 state active
set vlan 2 name VLAN0002 type ethernet mtu 1500 said 100002 state active
set vlan 6 name VLAN0006 type ethernet mtu 1500 said 100006 state active
set vlan 10 name VLAN0010 type ethernet mtu 1500 said 100010 state active
set vlan 20 name VLAN0020 type ethernet mtu 1500 said 100020 state active
set vlan 50 name VLAN0050 type ethernet mtu 1500 said 100050 state active
... <truncated display>
set vlan 802 name VLAN0802 type trcrf mtu 4472 said 100802 state active parent
set vlan 1003 name trcrf-default type trcrf mtu 4472 said 101003 state active p
set vlan 3 translation 303 translation 0
set vlan 4 translation 304 translation 0
set vlan 5 translation 305 translation 0
set vlan 303 translation 3 translation 0
set vlan 304 translation 4 translation 0
set vlan 305 translation 5 translation 0
set vlan 351 translation 524 translation 0
set vlan 524 translation 351 translation 0
!
#ip
set interface sc0 1 1.10.11.212/255.255.255.0 1.10.11.255

set ip route 0.0.0.0/0.0.0.0         172.20.52.126
set ip route 0.0.0.0/0.0.0.0         172.20.52.125
set ip route 0.0.0.0/0.0.0.0         172.20.52.121
!
#rcp
set rcp username 1
!
#dns
set ip dns server 171.68.10.70 primary
set ip dns server 171.68.10.140
set ip dns enable
set ip dns domain cisco.com
!
#spantree
set spantree fwddelay 4     801
set spantree maxage   10    801
#portfast
set spantree portfast bpdu-guard enable
#vlan 802
set spantree fwddelay 4     802
set spantree maxage   10    802
set spantree portstate 802 block 801
#vlan 1003
set spantree fwddelay 4     1003
set spantree maxage   10    1003
set spantree portstate 1003 block 1005
!
#syslog
set logging server 172.20.101.182
!
#set boot command
set boot config-register 0x100
set boot system flash bootflash:cat6000-sup.5-4-0-52.bin
!
#HTTP commands
set ip http server enable
set ip http port 1922
```

```
!
# default port status is disable
!
#mls
set mls nde disable
!
#qos
set qos enable
set qos map 1q4t 1 1 cos 2
set qos map 1q4t 1 1 cos 3
set qos map 1q4t 1 1 cos 4
set qos map 1q4t 1 1 cos 5
set qos map 1q4t 1 1 cos 6
set qos map 1q4t 1 1 cos 7
!
#Accounting
set accounting commands enable config stop-only tacacs+
!
# default port status is enable
!
#module 1 : 2-port 1000BaseX Supervisor
!
#module 2 empty
!
... <truncated display>
set vlan 100  6/1
set spantree portcost    6/1  200
!
#module 7 : 24-port 10/100BaseTX Ethernet
set vlan 5    7/5
set vlan 100  7/23
set vlan 200  7/9
set port disable    7/5

set port name       7/9  1528 Hub
set port security 7/10 enable
set port security 7/10 maximum 200
set port security 7/10 00-11-22-33-44-55
set port security 7/10 00-11-22-33-44-66
set port security 7/10 00-11-22-33-44-77
set port security 7/10 violation restrict
set port security 7/10 age 30
set trunk 7/1  desirable isl 1-1005
set trunk 7/2  desirable isl 1-1005
set trunk 7/3  desirable isl 1-1005
set trunk 7/4  desirable isl 1-1005
set trunk 7/10 off negotiate 1-1005
set trunk 7/23 on isl 1-1005
set spantree portcost    7/23  150
set spantree portvlancost 7/23 cost 50 100
!
#module 8 empty
!
#module 9 empty
!
#module 15 empty
!
#module 16 empty
end
Console>
```

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

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

This example shows how to display nondefault system configuration information:

```
Console> show config system
begin
!
# ***** NON-DEFAULT CONFIGURATION *****
!
#Current Time: Thu Dec 23 1999, 14:01:24
!
#version 5.4(0.52)
!
!
#set boot command
set boot config-register 0x2
set boot system flash bootflash:kk1
end
Console>
```

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

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

This example shows how to display module nondefault configuration information:

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

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

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

Related Commands

clear config
write

show cops

Use the **show cops** commands to display COPS information.

show cops info [**noalias**]

show cops pib

show cops roles

Syntax Description

info	Keyword that specifies to display COPS status and configuration information.
noalias	(Optional) Keyword that forces the display to show only IP addresses, not IP aliases.
pib	Keyword that specifies to display the COPS policy tree information.
roles	Keyword that specifies to display the ports assigned to each role.

Defaults

This command has no default setting.

Command Types

Switch command.

Command Modes

Normal.

Usage Guidelines

The display output of the **show cops pib** command is a numeric list of the PIB relating to a PRID and its vector of values.

Examples

This example shows how to display COPS status and configuration information:

```
Console> show cops info
COPS general configuration
--------------------------
COPS domain name            : -
Connection retry intervals  : initial   = 30 seconds
                              increment = 30 seconds
                              max       = 300 seconds

COPS Diff-Serv client state
---------------------------
COPS connection state       :not-connected
Last active server          :172.20.25.3 [port:3288]
Primary configured server   :172.20.25.3 [port:3288]

Secondary configured server :-
Console>
```

This example shows how to display COPS policy tree information:

```
Console> show cops pib
PRC                              PRI    Attr Type       Value
-------------------------------- ------ ---- ---------- -----
QosDevicePibIncarnationTable         1    0 Unsigned32 1
                                          1 DisplayStr g1lab-pc4.cisco.com
                                          2 OctetStr
30.30.30.30.30.30.30.30.39.34.37.32.37.35.35.35.31.30.36.31.23.30.39.34.37.32.37.35.35.35
.31.23.35.62.66.36.32.31.30.32.38.65.37.31.65.38.37.30.23.31.23
                                          3 Unsigned32 300
QosDeviceAttributeTable              1    0 Unsigned32 1
                                          1 DisplayStr
                                          2 IpAddress  172.20.55.31
QosInterfaceTypeTable                2    0 Unsigned32 2
                                          1 Integer    3
                                          2 DisplayStr inputclass
                                          3 OctetStr   60.10.20
QosPolicerTable                      -    - -          -
QosAggregateTable                    -    - -          -
QosMacClassificationTable            -    - -          -
QosIpAceTable                     5346    0 Unsigned32 5346
                                          1 IpAddress  0.0.0.7
                                          2 IpAddress  255.255.255.255
QosIfDropPreferenceTable          3642    0 Unsigned32 3642
                                          1 DisplayStr inputclass
                                          2 Integer    10
                                          3 Integer    1
QosIfTailDropTable                   -    - -          -
QosIfWeightsTable                    -    - -          -
(display is truncated)
Console>
```

This example shows how to display the ports assigned to each role:

```
Console> show cops roles
Admin Roles                      Mod/Ports
-------------------------------- ----------------------------------------
access_port                      1/1-2
                                 3/1-5,3/8
backbone_port                    1/1-2
                                 3/1-5,3/8
branch_office_port               3/6-7
                                 4/1-8
net_port                         -

Oper Roles                       Mod/Ports
-------------------------------- ----------------------------------------
access_port                      1/1-2
                                 3/1-5,3/8
backbone_port                    1/1-2
                                 3/8
branch_office_port               3/6-7
                                 4/1-8
Console>
```

Related Commands

clear cops
set cops

show counters

Use the **show counters** command to display hardware counters for a port.

show counters *mod/port*

Syntax Description

mod/port	Number of the module and the port.

Defaults

This command has no default setting.

Command Types

Switch command.

Command Modes

Normal.

Usage Guidelines

The Catalyst 2948G and 2980G switches are fixed configuration switches. Ports are located on module 2 for the 2948G and on modules 2 and 3 for the 2980G; for this reason, if you enter *mod_num/port_num* **1/N**, an error message will be displayed.

Examples

This example shows how to display the counters for port 1 on module 3 (a Token Ring module) on a Catalyst 5000 family or 2926G series switch:

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

```
64 bit counters
0  ifHCInOctets                =                   0
1  ifHCInUcastPkts             =                   0
2  ifHCInMulticastPkts         =                   0
3  ifHCInBroadcastPkts         =                   0
4  ifHCOutOctets               =                   0
5  ifHCOutUcastPkts            =                   0
6  ifHCOutMulticastPkts        =                   0
7  ifHCOutBroadcastPkts        =                   0
32 bit counters
0  dot5StatsLineErrors                      =           0
1  dot5StatsBurstErrors                     =           0
2  dot5StatsACErrors                        =           0
3  dot5StatsAbortTransErrors                =           0
4  dot5StatsInternalErrors                  =           0
5  dot5StatsLostFrameErrors                 =           0
6  dot5StatsReceiveCongestions              =           0
7  dot5StatsFrameCopiedErrors               =           0
8  dot5StatsTokenErrors                     =           0
9  dot5StatsSoftErrors                      =           0
10 dot5StatsHardErrors                      =           0
11 dot5StatsSignalLoss                      =           0
12 dot5StatsTransmitBeacons                 =           0
```

```
13 dot5StatsRecoverys                              =           0
14 dot5StatsLobeWires                              =           0
15 dot5StatsRemoves                                =           0
16 dot5StatsSingles                                =           0
17 dot5StatsFreqErrors                             =           0
18 dot1dSrPortSpecInFrames                         =           0
19 dot1dSrPortSpecOutFrames                        =           0
20 dot1dSrPortApeInFrames                          =           0
21 dot1dSrPortApeOutFrames                         =           0
22 dot1dSrPortSteInFrames                          =           0
23 dot1dSrPortSteOutFrames                         =           0
24 dot1dSrPortSegmentMismatchDiscards              =           0
25 dot1dSrPortDuplicateSegmentDiscards             =           0
26 dot1dSrPortHopCountExceededDiscards             =           0
27 dot1dSrPortDupLanIdOrTreeErrors                 =           0
28 dot1dSrPortLanIdMismatches                      =           0
29 tokenRingMLStatsDropEvents                      =           0
30 tokenRingMLStatsMacOctets                       =           0
31 tokenRingMLStatsMacPkts                         =           0
32 tokenRingMLStatsRingPurgeEvents                 =           0
33 tokenRingMLStatsRingPurgePkts                   =           0
34 tokenRingMLStatsBeaconEvents                    =           0
35 tokenRingMLStatsBeaconPkts                      =           0
36 tokenRingMLStatsBeaconTime                      =           0
37 tokenRingMLStatsClaimTokenEvents                =           0
38 tokenRingMLStatsClaimTokenPkts                  =           0
39 tokenRingMLStatsNAUNChanges                     =           0
40 tokenRingMLStatsLineErrors                      =           0
41 tokenRingMLStatsInternalErrors                  =           0
42 tokenRingMLStatsBurstErrors                     =           0
43 tokenRingMLStatsACErrors                        =           0
44 tokenRingMLStatsAbortErrors                     =           0
45 tokenRingMLStatsLostFrameErrors                 =           0
46 tokenRingMLStatsCongestionErrors                =           0
47 tokenRingMLStatsFramesCopiedErrors              =           0
48 tokenRingMLStatsFrequencyErrors                 =           0
49 tokenRingMLStatsTokenErrors                     =           0
50 tokenRingMLStatsSoftErrorReports                =           0
51 tokenRingMLStatsRingPollEvents                  =           0
52 tokenRingMLStatsHistoryActiveStations           =           0
53 tokenRingPStatsDropEvents                       =           0
54 tokenRingPStatsDataOctets                       =           0
55 tokenRingPStatsDataPkts                         =           0
56 tokenRingPStatsDataBroadcastPkts                =           0
57 tokenRingPStatsDataMulticastPkts                =           0
58 tokenRingPStatsDataPkts18to63Octets             =           0
59 tokenRingPStatsDataPkts64to127Octets            =           0
60 tokenRingPStatsDataPkts128to255Octets           =           0
61 tokenRingPStatsDataPkts256to511Octets           =           0
62 tokenRingPStatsDataPkts512to1023Octets          =           0
63 tokenRingPStatsDataPkts1024to2047Octets         =           0
64 tokenRingPStatsDataPkts2048to4095Octets         =           0
65 tokenRingPStatsDataPkts4096to8191Octets         =           0
66 tokenRingPStatsDataPkts8192to18000Octets        =           0
67 tokenRingPStatsDataPktsGreaterThan18000Octets(null) =       0
68 dot1dTpPortInFrames                             =           0
69 dot1dTpPortOutFrames                            =           0
70 dot1dTpPortInDiscards                           =           0
Console>
```

Table 2-19 describes the fields in the **show counters** command output when the command is issued against a Token Ring module port.

Table 2-19 show counters Command Token Ring Output Fields

Field	Description
64-Bit Counters	
ifHCInOctets	Total number of octets received on the interface, including framing characters. This object is a 64-bit version of ifInOctets.
ifHCInUcastPkts	Number of packets delivered by this sublayer to a higher sublayer not addressed to a multicast or broadcast address. This object is a 64-bit version of ifInUcastPkts.
ifHCInMulticastPkts	Number of packets delivered by this sublayer to a higher sublayer addressed to a multicast address at this sublayer. For a MAC-layer protocol, these addresses include both group and functional addresses. This object is a 64-bit version of ifInMulticastPkts.
ifHCInBroadcastPkts	Number of packets delivered by this sublayer to a higher sublayer addressed to a broadcast address at this sublayer. This object is a 64-bit version of ifInBroadcastPkts.
ifHCOutOctets	Total number of octets transmitted out the interface, including framing characters. This object is a 64-bit version of ifOutOctets.
ifHCOutUcastPkts	Total number of packets that higher-level protocols requested be transmitted and were not addressed to a multicast or broadcast address at this sublayer, including those that were discarded or not sent. This object is a 64-bit version of ifOutUcastPkts.
ifHCOutMulticastPkts	Total number of packets that higher-level protocols requested be transmitted and were addressed to a multicast address at this sublayer, including those that were discarded or not sent. For a MAC-layer protocol, these addresses include both group and functional addresses. This object is a 64-bit version of ifOutMulticastPkts.
ifHCOutBroadcastPkts	Total number of packets that higher-level protocols requested be transmitted and were addressed to a broadcast address at this sublayer, including those that were discarded or not sent. This object is a 64-bit version of ifOutBroadcastPkts.
32-Bit Counters	
dot5StatsLineErrors	Number of times a frame or token was copied or repeated by a station.
dot5StatsBurstErrors	Number of times a station detected the absence of transitions for five half-bit timers (burst-five error).
dot5StatsACErrors	Number of times a station received an AMP frame or an SMP frame where the AC bits were both set to 0. This indicates that no station recognized the destination address and copied the frame, and then received another SMP frame where both AC-bits were set to 0 without first receiving an AMP frame. This condition indicates a station that cannot set the A bit and the C bit properly.

Table 2-19 show counters Command Token Ring Output Fields (continued)

Field	Description
dot5StatsAbortTransErrors	Number of times a station transmitted an abort delimiter while transmitting.
dot5StatsInternalErrors	Number of times a station recognized an internal error.
32-Bit Counters (continued)	
dot5StatsLostFrameErrors	Number of times a station was transmitting and its return-to-repeat timer expired. This condition indicates that a transmitting station in strip mode did not receive the frame trailer before the return-to-repeat timer went off.
dot5StatsReceiveCongestions	Number of times a station recognized a frame addressed to its specific address but had no available buffer space. This condition indicates a congested station.
dot5StatsFrameCopiedErrors	Number of times a station recognized a frame addressed to its specific address and detected that the frame status field A-bits were set to 1. This condition indicates a possible line hit or duplicate address.
dot5StatsTokenErrors	Number of times a station acting as the active monitor recognized an error condition that required a token to be transmitted.
dot5StatsSoftErrors	Number of soft errors the port detected. Soft errors are recoverable by the MAC-layer protocols. The soft error number directly corresponds to the number of report error MAC frames that this port has transmitted.
dot5StatsHardErrors	Number of times the port detected an immediately recoverable fatal error. This denotes the number of times this port has either transmitted or received a beacon MAC frame.
dot5StatsSignalLoss	Number of times the port detected a loss of signal condition from the ring.
dot5StatsTransmitBeacons	Number of times the port transmitted a beacon frame.
dot5StatsRecoverys	Number of claim token MAC frames received or transmitted after the port received a ring-purge MAC frame. This counter signifies the number of times the ring was purged and had recovered back into a normal operating state.
dot5StatsLobeWires	Number of times the port detected an open or short circuit in the lobe data path. The adapter is closed and the ring state signifies this condition.
dot5StatsRemoves	Number of times the port received a remove ring station MAC frame request. When the port receives this, it enters the closed state.
dot5StatsSingles	Number of times the port sensed that it is the only station on the ring. This occurs if the port is the first one up on a ring or if there is a hardware problem.
dot5StatsFreqErrors	Number of times the port detected that the incoming signal frequency differs from the expected frequency specified by the IEEE 802.5 standard.
dot1dSrPortSpecInFrames	Number of Specifically-Routed frames received.
dot1dSrPortSpecOutFrames	Number of Specifically-Routed frames transmitted.
dot1dSrPortApeInFrames	Number of All-Paths (All-Routes) Explorer frames received.
dot1dSrPortApeOutFrames	Number of All-Paths (All-Routes) Explorer frames transmitted.

Table 2-19 show counters Command Token Ring Output Fields (continued)

Field	Description
dot1dSrPortSteInFrames	Number of Spanning-Tree Explorer frames received.
dot1dSrPortSteOutFrames	Number of Spanning-Tree Explorer frames transmitted.
dot1dSrPortSegmentMismatchDiscards	Number of Explorer frames discarded by this port because the route descriptors field contained an invalid adjacent segment value.
dot1dSrPortDuplicateSegmentDiscards	Number of Explorer frames discarded by this port because the routing descriptor field contained a duplicate segment value.
32-Bit Counters (continued)	
dot1dSrPortHopCountExceededDiscards	Number of Explorer frames discarded because the number of routing descriptors in the RIF exceeded the specified maximum hop count.
dot1dSrPortDupLanIdOrTreeErrors	Number of duplicate LAN IDs or tree errors. This helps to detect problems in networks containing older IBM source routing bridges.
dot1dSrPortLanIdMismatches	Number of discarded All-Routes Explorer and Spanning-Tree Explorer frames because the last LAN ID in the routing information field did not equal the LAN-in ID. This error can occur in implementations that do only a LAN-in ID and bridge number check instead of a LAN-in ID, bridge number, and LAN-out ID check before forwarding broadcast frames.
tokenRingMLStatsDropEvents	Number of events when packets were dropped by the probe due to lack of resources. This number is not necessarily the number of packets dropped; it is the number of times this condition was detected. This value is the same as the corresponding tokenRingPStatsDropEvents.
tokenRingMLStatsMacOctets	Number of octets of data in MAC packets (excluding those that were not good frames) received on the network. This excludes framing bits but includes FCS octets.
tokenRingMLStatsMacPkts	Number of MAC packets (excluding packets that were not good frames) received.
tokenRingMLStatsRingPurgeEvents	Number of times that the ring entered the ring-purge state from a normal ring state. The ring-purge state that occurs in response to the claim token or beacon state is not counted.
tokenRingMLStatsRingPurgePkts	Number of ring-purge MAC packets detected by the probe.
tokenRingMLStatsBeaconEvents	Number of times that the ring entered a beaconing state (beaconFrameStreamingState, beaconBitStreamingState, beaconSetRecoveryModeState, or beaconRingSignalLossState) from a non-beaconing state. A change of the source address of the beacon packet does not constitute a new beacon event.
tokenRingMLStatsBeaconPkts	Number of beacon MAC packets detected by the probe.
tokenRingMLStatsBeaconTime	Amount of time that the ring was in the beaconing state.
tokenRingMLStatsClaimTokenEvents	Number of times the ring entered the claim token state from the normal ring state or ring-purge state. The claim token state that comes in response to a beacon state is not counted.

Table 2-19 show counters Command Token Ring Output Fields (continued)

Field	Description
tokenRingMLStatsClaimTokenPkts	Number of claim token MAC packets detected by the probe.
tokenRingMLStatsNAUNChanges	Number of NAUN changes detected by the probe.
tokenRingMLStatsLineErrors	Number of line errors reported in error reporting packets detected by the probe.
tokenRingMLStatsInternalErrors	Number of adapter internal errors reported in error reporting packets detected by the probe.
tokenRingMLStatsBurstErrors	Number of burst errors reported in error reporting packets detected by the probe.
tokenRingMLStatsACErrors	Number of AC (address copied) errors reported in error reporting packets detected by the probe.
32-Bit Counters (continued)	
tokenRingMLStatsAbortErrors	Number of abort delimiters reported in error reporting packets detected by the probe.
tokenRingMLStatsLostFrameErrors	Number of lost frame errors reported in error reporting packets detected by the probe.
tokenRingMLStatsCongestionErrors	Number of receive congestion errors reported in error reporting packets detected by the probe.
tokenRingMLStatsFramesCopiedErrors	Number of frame-copied errors reported in error reporting packets detected by the probe.
tokenRingMLStatsDropEvents	Number of events where packets were dropped by the probe due to lack of resources. This number is not necessarily the number of packets dropped; it indicates the number of times this condition was detected. This value is the same as the corresponding tokenRingPStatsDropEvents.
tokenRingMLStatsFrequencyErrors	Number of frequency errors reported in error reporting packets detected by the probe.
tokenRingMLStatsTokenErrors	Number of token errors reported in error reporting packets detected by the probe.
tokenRingMLStatsSoftErrorReports	Number of soft error report frames detected by the probe.
tokenRingMLStatsRingPollEvents	Number of ring poll events detected by the probe.
tokenRingMLStatsHistoryActiveStations	Maximum number of active stations on the ring detected by the probe during this sampling interval.
tokenRingPStatsDropEvents	Number of events where packets were dropped by the probe due to lack of resources. This number is not necessarily the number of packets dropped; it indicates the number of times this condition was detected. This value is the same as the corresponding tokenRingMLStatsDropEvents.
tokenRingPStatsDataOctets	Number of octet data in good frames received on the network (excluding framing bits but including FCS octets) in non-MAC packets.
tokenRingPStatsDataPkts	Number of non-MAC packets in good frames received.
tokenRingPStatsDataBroadcastPkts	Number of good non-MAC frames received that were directed to an LLC broadcast address (0xFFFFFFFFFFFF or 0xC000FFFFFFFF).

Table 2-19 show counters Command Token Ring Output Fields (continued)

Field	Description
tokenRingPStatsDataMulticastPkts	Number of good non-MAC frames received that were directed to a local or global multicast or functional address. This number does not include packets directed to the broadcast address.
tokenRingPStatsDataPkts18to63Octets	Number of good non-MAC frames received between 18 and 63 octets in length inclusive, excluding framing bits, but including FCS octets.
tokenRingPStatsDataPkts64to127Octets	Number of good non-MAC frames received between 64 and 127 octets in length inclusive, excluding framing bits, but including FCS octets.
tokenRingPStatsDataPkts128to255Octets	Number of good non-MAC frames received between 128 and 255 octets in length inclusive, excluding framing bits, but including FCS octets.
tokenRingPStatsDataPkts256to511Octets	Number of good non-MAC frames received between 256 and 511 octets in length inclusive, excluding framing bits, but including FCS octets.
32-Bit Counters (continued)	
tokenRingPStatsDataPkts512to1023Octets	Number of good non-MAC frames received between 512 and 1023 octets in length inclusive, excluding framing bits, but including FCS octets.
tokenRingPStatsDataPkts1024to2047Octets	Number of good non-MAC frames received between 1024 and 2047 octets in length inclusive, excluding framing bits, but including FCS octets.
tokenRingPStatsDataPkts2048to4095Octets	Number of good non-MAC frames received between 2048 and 4095 octets in length inclusive, excluding framing bits, but including FCS octets.
tokenRingPStatsDataPkts4096to8191Octets	Number of good non-MAC frames received between 4096 and 8191 octets in length inclusive, excluding framing bits, but including FCS octets.
tokenRingPStatsDataPkts8192to18000Octets	Number of good non-MAC frames received between 8192 and 18000 octets in length inclusive, excluding framing bits, but including FCS octets.
tokenRingPStatsDataPktsGreaterThan18000Octets(null)	Number of good non-MAC frames received that were greater than 18000 octets in length, excluding framing bits but including FCS octets.
dot1dTpPortInFrames	Number of frames received by this port from its segment. Frames received on the interface corresponding to this port are counted by this object only if they are for a protocol being processed by the local bridging function, including bridge management frames.
dot1dTpPortOutFrames	Number of frames transmitted by this port to its segment. Frames transmitted on the interface corresponding to this port are counted by this object only if they are for a protocol being processed by the local bridging function, including bridge management frames.
dot1dTpPortInDiscards	Number of valid frames received that were discarded (for example, filtered) by the forwarding process.

When you enter the **show counters** command against a Catalyst 4000 family or 2948G switch port, the display is similar to that of a Catalyst 5000 family or 2926G series switch.

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

**10/100 PORT
Console> sh counters 3/3
0  rxUnicastPacketCount       = 0
1  txUnicastPacketCount       = 0
2  rxMulticastPacketCount     = 0
3  txMulticastPacketCount     = 0
4  rxBroadcastPacketCount     = 0
5  txBroadcastPacketCount     = 0
6  rxByteCount                = 0
7  txByteCount                = 0
8  pkts64                     = 0
9  pkts65to127                = 0
10 pkts128to255               = 0
11 pkts256to511               = 0
```

```
12 pkts512to1023              = 0
13 pkts1024to1522             = 0
14 rxNoPacketBufferCount      = 0
15 rxCRCAlignErrorPacketCount = 0
16 rxUndersizedPacketCount    = 0
17 rxOversizedPacketCount     = 0
18 rxFragmentPacketCount      = 0
19 rxJabberPacketCount        = 0
20 pauseControlFramesRx       = 0
21 pauseControlFramesTx       = 0
22 unsupportedOpcodesRx       = 0
23 txQueueNotAvailable        = 0
24 totalCollisionCount        = 0
25 lateCollisionCount         = 0
26 singleCollisionFrames      = 0
27 multipleCollisionFrames    = 0
28 excessiveCollisionFrames   = 0
29 deferredTransmissions      = 0
30 carrierSenseErrors         = 0
31 falseCarrierDuringIdle     = 0
32 symbolErrorDuringCarrier   = 0
33 sequenceErrorDuringCarrier = 0
```

Table 2-20 describes the additional fields which may be displayed.

Table 2-20 show counters Command Output Fields for Catalyst 4000 Family and 2948G Series Switches

Field	Description
txUnicastPacketCount (size 64 bits)	Number of transmitted unicast packets (size 64 bits).
rxUnicastPacketCount (size 64 bits)	Received unicast packets (size 64 bits).
txMulticastPacketCoun t (size 64 bits)	Number of transmitted multicast packets (size 64 bits).
rxMulticastPacketCount (size 64 bits)	Number of received multicast packets (size 64 bits).
txBroadcastPacketCount (size 64 bits)	Number of transmitted broadcast packets (size 64 bits).
rxBroadcastPacketCount (size 64 bits)	Number of received broadcast packets (size 64 bits).
rxNoPacketBufferCount	Number of received no packet buffer packets.
rxCRCAlignErrorPacketCount	Number of received CRC align error packets.
rxFragmentPacketCount	Number of received fragment packets (size 64 bits).
rxJabberPacketCount	Number of received Jabber packets (size 64 bits).
unsupportedOpcodesRx	Number of unsupported Opcodes received errors.
txQueueNotAvailable	Number of transmit queue not available errors.
totalCollisionCount	Total collision count (Fast Ethernet)
falseCarrierDuringIdle	Number of false carrier duringidle (Fast Ethernet) errors.

Table 2-20 show counters Command Output Fields for Catalyst 4000 Family and 2948G Series Switches (continued)

Field	Description
symbolErrorDuringCarrier	Number of symbol error during carrier (Fast Ethernet) errors.
SequenceErrorDuringCarrier	Number of sequence error during carrier (Gigabit Ethernet) errors.

Related Commands **clear counters**

show default

Use the **show default** command to check the status of the default port status setting.

show default

Syntax Description

This command has no keywords or arguments.

Defaults

This command has no default setting.

Command Types

Switch command.

Command Modes

Privileged.

Usage Guidelines

The command shows whether the **set default portstatus** command is in disable or enable mode.

Examples

This example shows how to display the status of the default port status:

```
Console> (enable) show default
portstatus: disable
Console> (enable)
```

Related Commands

set default portstatus

show drip statistics

Use the **show drip statistics** command to display DRiP statistics.

show drip statistics

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default setting.

Command Types

Switch command.

Command Modes

Privileged.

Examples

This example shows how to display the DRiP settings:

```
Console> (enable) show drip statistics
DRiP statistics:
DRiP is Disabled
ARE reduction is Enabled
CRF distribution is Disabled
Input queue drops = 0. Output drops = 0
Console> (enable)
```

Related Commands

clear drip statistics

show dvlan statistics

Use the **show dvlan statistics** command to display DVLAN statistics.

show dvlan statistics

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default setting.

Command Types

Switch command.

Command Modes

Normal.

Examples

This example shows how to display the DVLAN statistical information:

```
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>
```

show fddi

Use the **show fddi** command to display the settings for FDDI and CDDI modules.

show fddi

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default setting.

Command Types

Switch command.

Command Modes

Normal.

Usage Guidelines

This command is supported by the Catalyst 5000 family switches, except for the three-port Gigabit Ethernet switching module (WS-X5403).

Examples

This example shows how to display the FDDI settings:

```
Console> show fddi
Mod  SMT User-Data               T-Notify  TReq
---  --------------------------  --------  -------
2    Engineering                 30        165000
5    Marketing                   20        150000

Port   Tlmin     Ler-CutOff  Ler-Alarm
-----  --------  ----------  ---------
2/1    40        7           8
2/2    40        7           8
5/1    40        10          11
5/2    40        9           12
Console>
```

Table 2-21 describes the fields in the **show fddi** command output.

Table 2-21 show fddi Command Output Fields

Field	Description
Mod	Module number.
SMT User-Data	Configured user-data string for the module.
T-Notify	TNotify timer value for the FDDI module.
Tlmin	TL_MIN value for the FDDI port.

Table 2-21 show fddi Command Output Fields (continued)

Field	Description
Ler-CutOff	LER-cutoff value for the FDDI port.
Ler-Alarm	LER-alarm value for the FDDI port.

Related Commands

set fddi alarm
set fddi cutoff
set fddi tlmin
set fddi tnotify
set fddi treq
set fddi userdata

show fddicam

Use the **show fddicam** command to display the FDDI CAM table for a FDDI module.

show fddicam *mod_num* [**fddi**] [*mac_addr*]

Syntax Description

mod_num	Number of the module.
fddi	(Optional) Keyword that specifies to cause MAC addresses to display in noncanonical format.
mac_addr	(Optional) Specific MAC address that displays FDDI CAM table information.

Defaults

This command has no default setting.

Command Types

Switch command.

Command Modes

Normal.

Usage Guidelines

This command is supported by the Catalyst 5000 family switches, except the three-port Gigabit Ethernet switching module (WS-X5403).

Examples

This example shows how to display the FDDI CAM table for module 4:

```
Console> show fddicam 4
MAC Address        VLAN   Protocol Type
-----------------  ----   -------------
00-40-0b-d0-00-2b     1   FDDI
00-40-0b-d0-00-3b     1   FDDI
Total FDDI CAM entries = 2
Console>
```

Table 2-22 describes the fields in the **show fddicam** command output.

Table 2-22 show fddicam Command Output Fields

Field	Description
MAC Address	MAC address of the FDDI module.
VLAN	VLAN that the MAC address was learned on.
Protocol Type	Protocol type learned for the MAC address.
Total FDDI CAM entries	Total number of FDDI CAM table entries found.

Related Commands clear cam
set bridge fddicheck
show config

show file

Use the **show file** command to display the contents of a file.

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

Syntax Description

device:	(Optional) Supervisor Engine III only: valid devices are **bootflash**, **slot0**, and **slot1**; Catalyst 4000 family and 2948G supervisor engine module: valid value is **bootflash**.
filename	Name of the file.
dump	(Optional) Keyword that specifies to show the hex dump of the file.

Defaults

This command has no default setting.

Command Types

Switch command.

Command Modes

Privileged.

Usage Guidelines

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

Examples

This example shows how to use the **show file** command on Supervisor Engines III, III F, and Catalyst 4000 family, 2926G series, 2948G, and 2980G switch:

```
Console> (enable) show file slot0:cfgfile

begin
#version 5.3(0.11)BOU-Eng
!
set password $1$FMFQ$HfZR5DUszVHIRhrz4h6V70
set enablepass $1$FMFQ$HfZR5DUszVHIRhrz4h6V70
set prompt Console>
set length 24 default
...
Console> (enable)
```

This example shows how to view the hex dump of a file:

```
Console> (enable) show file slot0: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   d $1$FMFQ$HfZR5D
8099d180  55737A56 48495268 727A3468 36563730   UszVHIRhrz4h6V70
8099d1b0  7A564849 5268727A 34683656 37300A73   zVHIRhrz4h6V70.s
8099d1c0  65742070 726F6D70 7420436F 6E736F6C   et prompt Consol
8099d1d0  653E0A73 6574206C 656E6774 68203234   e>.set length 24
...
Console> (enable)
```

This example shows how to use the **show file** command on Supervisor Engines II G and III G:

```
Console> (enable) show file cfg2

begin
!
# ***** NON-DEFAULT CONFIGURATION *****
!
!
# Wed Apr 21 1999, 22:55:10
!
#version 5.3(0.53-Eng)ASP
!
set prompt test>
!
#frame distribution method
set port channel all distribution mac both
!
#ip
set interface sc0 1 172.20.25.145/255.255.0.0 172.20.255.255

set ip route 0.0.0.0/0.0.0.0         172.20.25.201
!
#set boot command
set boot auto-config non-recurring
!
#qos
set qos map 1q4t 0 0 cos 0
set qos map 1q4t 0 0 cos 1
set qos map 1q4t 0 0 cos 2
set qos map 1q4t 0 0 cos 4
set qos map 1q4t 0 0 cos 5
set qos map 1q4t 0 0 cos 6
set qos map 1q4t 0 0 cos 7
set qos wred-threshold 1q4t tx queue 1 0 0 0 0
!
#module 1 : 4-port 10/100BaseTX Supervisor
!
#module 2 : 24-port 10BaseF Ethernet
!
#module 3 : 12-port 10/100BaseTX Ethernet
!
#module 4 empty
!
#module 5 empty
end
Console> (enable)
```

show flash

Use the **show flash** command to list Flash information, including file code names, version numbers, and sizes.

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

Syntax Description

m/	(Optional) Supervisor Engine III and Catalyst 4000 family and 2948G switch supervisor engine modules only; module number of the supervisor engine containing the Flash device.
device:	(Optional) Supervisor Engine III only: valid devices are **bootflash**, **slot0**, and **slot1**; Catalyst 4000 family and 2948G switch supervisor engine module: valid value is **bootflash**.
all	(Optional) Supervisor Engine III and Catalyst 4000 family and 2948G switch supervisor engine module only: keyword that specifies to list deleted files, undeleted files, and files with errors on a Flash memory device.
chips	(Optional) Supervisor Engine III and Catalyst 4000 family and 2948G switch supervisor engine modules only: keyword that specifies to show information about the Flash chip.
filesys	(Optional) Supervisor Engine III and Catalyst 4000 family and 2948G switch supervisor engine modules only: keyword that specifies to show the Device Info Block, the Status Info, and the Usage Info.

Defaults

This command has no default setting.

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 information for Supervisor Engines I or II:

```
Console> show flash
File            Version       Sector        Size    Built
--------------  ------------  ------------  ------- -----------------
c5000 nmp       3.1(213-Eng)  02-11         1606709 06/16/98 00:16:21
      epld      3.1           30              72920 06/14/98 20:33:06
      lcp atm   3.1           12-15           23747 06/14/98 12:16:37
      lcp tr    3.1           12-15           28737 06/14/98 12:22:52
      lcp c5ip  3.1           12-15           23723 06/14/98 12:27:36
      lcp 64k   3.1           12-15           57100 06/14/98 12:24:57
      atm/fddi  3.1           12-15           24502 06/14/98 11:57:58
      lcp 360   3.1(212)      12-15          120648 06/14/98 12:32:50
      mcp       3.1           12-15           26278 06/14/98 11:50:41
```

```
cfg1                                               7124 04/23/99 09:20:50
cfg2                                                849 04/20/99 13:45:01
Console>
```

The following examples show how to list Flash information for Supervisor Engine III (the output is similar to that displayed for Catalyst 4000 family and 2948G switch supervisor engine modules):

```
Console> show flash
-#- ED --type-- --crc--- -seek-- nlen -length- -----date/time------ name
1   .D 2        2D6B310A 100fc0  15   1052123  Aug 26 1998 15:43:50 cat5k_r47_1.cbi
2   .. 2        43B312DF 201ed8  15   1052608  Aug 27 1998 10:23:30 cat5k_r47_1.cbi

6283877 bytes available (2104731 bytes used)

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
  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> show flash filesys

-------- 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

Console> show flash all
-#- ED --type-- --crc--- -seek-- nlen -length- -----date/time------ name
1   .D 2        2D6B310A 100fc0  15   1052123  Aug 26 1998 15:43:50 cat5k_r47_1.cbi
2   .. 2        43B312DF 201ed8  15   1052608  Aug 27 1998 10:23:30 cat5k_r47_1.cbi

6283877 bytes available (2104731 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
```

Related Commands

download
reset—switch
show version—switch
upload

show gmrp configuration

Use the **show gmrp configuration** command to display complete GMRP-related configuration information.

show gmrp configuration

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default setting.

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 the display when GMRP is enabled:

```
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      Forward All    Port
---------------------------------------------------------------------
Enabled           Fixed            Disabled       2/1,3/1-2
Console> (enable)
```

Related Commands

set gmrp registration

show gmrp statistics

Use the **show gmrp statistics** command to display GMRP-related statistics for a specified VLAN.

show gmrp statistics [*vlan*]

Syntax Description

vlan	(Optional) VLAN for which to show GMRP statistics.

Defaults

If no VLAN is specified, the default is that statistics for VLAN 1 are shown.

Command Types

Switch command.

Command Modes

Normal.

Examples

This example shows the display for 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 Emptys:                                            200
Join INs:                                               250
Leaves:                                                 10
Leave Alls:                                             35
Emptys:                                                 5
Fwd Alls:                                               0
Fwd Unregistered:                                       0
Total valid GMRP Packets Transmitted:                   600
Join Emptys:                                            200
Join INs:                                               150
Leaves:                                                 45
Leave Alls:                                             200
Emptys:                                                 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

Use the **show gmrp timer** command to display all the GMRP timers values.

show gmrp timer

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default setting.

Command Types

Switch command.

Command Modes

Normal.

Usage Guidelines

You can enter the **show multicast group** command to display GMRP configuration values.

Examples

This example shows how to display all the GMRP timer values:

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

Related Commands

set gmrp timer
set gvrp timer
set garp timer
show multicast group

show gvrp configuration

Use the **show gvrp configuration** command to display GVRP configuration information, including timer values, whether GVRP and dynamic VLAN creation is enabled, and which ports are running GVRP.

show gvrp configuration

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default setting.

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 view 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 Port
-------------- --------------- ------------------------------------------------------
Enabled     Normal       2/1-2,3/1-8,7/1-24,8/1-24
GVRP Participants running on 3/7-8.
Console>
```

Related Commands

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

show gvrp statistics

Use the **show gvrp statistics** command to view GVRP statistics for a port.

show gvrp statistics [*mod/port*]

Syntax Description

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

Defaults

This command has no default setting.

Command Types

Switch command.

Command Modes

Normal.

Examples

This example shows how to view 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 2-23 describes the fields in the **show gvrp statistics** output.

Table 2-23 show gvrp statistics Command Output Fields

Field	Description
GVRP Enabled	Status of whether GVRP is enabled or disabled.
Total valid pkts recvd	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 2-23 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

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

show ifindex

Use the **show ifindex** command to display the information of the specific ifIndex.

show ifindex *number*

Syntax Description

number	Number of the ifIndex.

Defaults

This command has no default setting.

Command Types

Switch command.

Command Modes

Normal.

Usage Guidelines

You can designate multiple ifIndex numbers by separating each number with commas. 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> (enable) show ifindex 1,2,3,4-15
 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.
```