

show rsmautostate

Use the **show rsmautostate** command to display the current status of line protocol state determination of the RSM(s) due to Catalyst 5000, 2926G, and 2926 series switch port state change.

show rsmautostate *mod_num*

Syntax Description

mod_num Number of the module.

Default

This command has no default setting.

Command Type

Switch command.

Command Mode

Normal.

Usage Guideline

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

Example

This example shows how to display the current status of RSM line protocol state determination:

```
Console> show rsmautostate  
RSM Auto port state: enabled  
Console>
```

show snmp

Use the **show snmp** command to display SNMP information.

show snmp [**noalias**]

Syntax Description

noalias (Optional) Keyword that forces the display to show IP address, not IP aliases.

Default

This command has no default setting.

Command Type

Switch command.

Command Mode

Normal.

Examples

This example shows how to display SNMP information:

```
Console> show snmp
RMON: Enabled
Traps Enabled: Chassis
Port Traps Enabled: None

Community-Access      Community-String
-----
read-only              public
read-write            private
read-write-all       secret

Trap-Rec-Address      Trap-Rec-Community
-----
192.122.173.42       public
Console>
```

This example shows the SNMP information displayed when a Network Analysis Module is installed:

```

Console> show snmp
RMON: Enabled
Traps Enabled: Chassis
Port Traps Enabled: None

Community-Access      Community-String
-----
read-only             public
read-write           private
read-write-all       secret

Trap-Rec-Address      Trap-Rec-Community
-----
192.122.173.42       public

Extended Rmon:        Disabled
Extended RMON Netflow: Disabled
Extended RMON Vlanmode: Disabled
Extended RMON Vlanagent: Disabled

```

Table 2-58 describes the possible fields (depending on the port type queried) in the **show snmp** command output.

Table 2-58 show snmp Command Output Fields

Field	Description
RMON	Status of whether RMON is enabled or disabled.
Traps Enabled	Trap types that are enabled.
Port Traps Enabled	Set of ports whose linkup/linkdown trap is enabled.
Community-Access	Configured SNMP communities.
Community-String	SNMP community strings associated with each SNMP community.
Trap-Rec-Address	IP address or IP alias of trap receiver hosts.
Trap-Rec-Community	SNMP community string used for trap messages to the trap receiver.
Extended Rmon	Status of whether extended RMON is enabled or disabled.
Extended RMON Netflow	Status of whether Netflow Monitor option is enabled or disabled.
Extended RMON Vlanmode	Status of whether VLAN Monitor option is enabled or disabled.
Extended RMON Vlanagent	Status of whether VLANagent option is enabled or disabled.

Related Commands

set snmp rmon
set snmp trap

show span

Use the **show span** command to display information about the current SPAN configuration:

show span

Syntax Description

This command has no keywords or arguments.

Default

This command has no default setting.

Command Type

Switch command.

Command Mode

Normal.

Usage Guideline

SPAN in the context of a single module is the only possible configuration for Token Ring modules.

Example

These examples show how to display SPAN information for the switch. In this example, the SPAN source is port 2/1 and the SPAN destination is port 2/12. Both transmit traffic and receive traffic are monitored. Normal incoming packets are disabled on the SPAN destination port.

```
Console> (enable) show span
Status          : enabled
Admin Source    : Port 2/1
Oper Source     : Port 2/1
Destination     : Port 2/12
Direction      : transmit/receive
Incoming Packets: disabled
Console> (enable)
```

In this example, the SPAN source is VLAN 522 and the SPAN destination port is port 2/12. Only transmit traffic is monitored. Normal incoming packets are allowed on the SPAN destination port.

```
Console> (enable) show span
Status          : enabled
Admin Source    : VLAN 522
Oper Source     : Port 2/1-2
Destination     : Port 2/12
Direction      : transmit
Incoming Packets: enabled
Console> (enable)
```

Table 2-59 describes the fields in the **show span** command output.

Table 2-59 show span Command Output Fields

Field	Description
Status	Status of whether SPAN is enabled or disabled.
Admin Source	Source port or VLAN for SPAN information.
Oper Source	Operator port or VLAN for SPAN information.
Destination	Destination port for SPAN information.
Direction	Status of whether transmit, receive, or transmit/receive information is monitored.
Incoming Packets	Status of whether reception of normal incoming packets on the SPAN destination port is enabled or disabled.

Related Commands

clear config

set span

show spantree

Use the **show spantree** command to display spanning-tree information for a VLAN.

```
show spantree [vlan | mod_num/port_num] [active]
```

Syntax Description

- vlan* (Optional) Number of the VLAN. If the VLAN number is not specified, the default is VLAN 1.
- mod_num* (Optional) Number of the module.
- port_num* (Optional) Number of the port on the module.
- active** (Optional) Keyword to display only the active ports.

Default

This command has no default setting.

Command Type

Switch command.

Command Mode

Normal.

Usage Guideline

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

Examples

This example shows how to display the spanning-tree configuration for VLAN 1005:

```
Console> show spantree 1005
VLAN 1005
Spanning tree enabled

Designated Root          00-40-0b-8f-8b-ec
Designated Root Priority  32768
Designated Root Cost     0
Designated Root Port     1/0
Root Max Age 6 sec      Hello Time 2 sec      Forward Delay 4 sec

Bridge ID MAC ADDR       00-40-0b-8f-8b-ec
Bridge ID Priority        32768
Bridge Max Age 6 sec     Hello Time 2 sec      Forward Delay 4 sec
```

```

Port,Vlan Vlan  Port-State      Cost  Priority  Fast-Start  Group-method
-----
1003      1005  inactive      80    32    disabled
Console>

```

This example shows how to display only the active ports:

```

Console> show spantree active
VLAN 1
Spanning tree enabled
Spanning tree type          ieee

Designated Root              00-60-70-4c-70-00
Designated Root Priority     32768
Designated Root Cost        19
Designated Root Port        1/1
Root Max Age 20 sec  Hello Time 2 sec  Forward Delay 15 sec

Bridge ID MAC ADDR          00-e0-1e-9b-2e-00
Bridge ID Priority          32768
Bridge Max Age 20 sec  Hello Time 2 sec  Forward Delay 15 sec

Port      Vlan  Port-State      Cost  Priority  Fast-Start  Group-Method
-----
1/1       1     forwarding      19    32    disabled
3/1-2     1     forwarding      19    32    disabled  redundancy

```

Table 2-60 describes the possible fields in the **show spantree** command output.

Table 2-60 show spantree Command Output Fields

Field	Description
VLAN	VLAN for which spanning-tree information is shown.
Spanning tree	Status of whether Spanning-Tree Protocol is enabled or disabled.
Designated Root	MAC address of the designated spanning-tree root bridge.
Designated Root Priority	Priority of the designated root bridge.
Designated Root Cost	Total path cost to reach the root.
Designated Root Port	Port through which the root bridge can be reached (shown only on nonroot bridges).
Root Max Age	Amount of time a BPDU packet should be considered valid.
Hello Time	Number of times the root bridge sends BPDUs.
Forward Delay	Amount of time the port spends in listening or learning mode.
Bridge ID MAC ADDR	Bridge MAC address.
Bridge ID Priority	Bridge priority.
Bridge Max Age	Bridge maximum age.
Hello Time	Amount of time the bridge sends BPDUs.
Forward Delay	Amount of time the bridge spends in listening or learning mode.

Table 2-60 show spantree Command Output Fields (continued)

Field	Description
Port	Port number.
Vlan	VLAN to which the port belongs.
Port-State	Spanning-tree port state (disabled, inactive, not-connected, blocking, listening, learning, forwarding, bridging, or type-pvid-inconsistent).
Cost	Cost associated with the port.
Priority	Priority associated with the port.
Fast-Start	Status of whether the port is configured to use the fast-start feature.

show spantree backbonefast

Use the **show spantree backbonefast** command to display whether the spanning-tree Backbone Fast Convergence feature is enabled.

show spantree backbonefast

Syntax Description

This command has no arguments or keywords.

Default

This command has no default setting.

Command Type

Switch command.

Command Mode

Normal.

Example

This example shows how to display whether the spanning-tree Backbone Fast Convergence feature is enabled:

```
Console> show spantree backbonefast  
Backbonefast is enabled.  
Console>
```

show spantree blockedports

Use the **show spantree blockedports** command to display only the blocked ports.

```
show spantree blockedports [vlan_num]
```

Syntax Description

vlan_num (Optional) Number of the VLAN.

Default

This command has no default setting.

Command Type

Switch command.

Command Mode

Normal.

Usage Guideline

If you do not specify a VLAN number, all blocked ports in the system are displayed.

Example

This example shows how to display the blocked ports for VLAN 1002:

```
Console> show spantree blockedports 1002  
Number of blocked ports (segments) in VLAN 1002 : 0  
Console>
```

show spantree portstate

Use the **show spantree portstate** command to determine the current spanning-tree state of a Token Ring port within a spanning tree.

```
show spantree portstate [trcrf]
```

Syntax Description

trcrf (Optional) Token Ring concentrator relay function statistical information.

Default

This command has no default setting.

Command Type

Switch command.

Command Mode

Normal.

Usage Guideline

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

Example

This example shows how to display the current spanning-tree state of a Token Ring port within a spanning tree:

```
Console> show spantree portstate 1003
Port,Vlan Vlan  Port-State      Cost   Priority  Fast-Start  Group-method
-----
 1003     1005  inactive         80     4        disabled
* = portstate set by user configuration
Console>
```

Related Command

show spantree

show spantree portvlancost

Use the **show spantree portvlancost** command to show the path cost for the VLANs on a port.

show spantree portvlancost *mod_num/port_num*

Syntax Description

mod_num Number of the module.

port_num Number of the port.

Default

This command has no default setting.

Command Type

Switch command.

Command Mode

Normal.

Usage Guideline

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

Example

This example shows how to display the path cost for the VLANs on port 2/12:

```
Console> show spantree portvlancost 2/12  
Port 2/12 VLANs 1-1005 have path cost 19.  
Console>
```

Related Command

show spantree

show spantree statistics

Use the **show spantree statistics** command to show spanning-tree statistical information.

```
show spantree statistics mod_num/port_num [vlan]  
show spantree statistics {trcrf | trbrf}
```

Syntax Description

<i>mod_num</i>	Number of the module.
<i>port_num</i>	Number of the port.
<i>vlan</i>	(Optional) Number of the VLAN.
<i>trcrf</i>	Number of the Token Ring concentrator relay function VLAN.
<i>trbrf</i>	Number of the Token Ring bridge relay function VLAN.

Default

This command has no default setting.

Command Type

Switch command.

Command Mode

Normal.

Usage Guidelines

The *trcrf* and *trbrf* arguments are not supported by the Catalyst 4000 and 2948G series switches.

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

Example

This example shows how to display Token Ring concentrator relay function statistical information:

```
Console> (enable) show spantree statistics 1003 1005  
TR CRF 1003, TR BRF 1005  
  
SpanningTree enabled for vlanNo = 1005  
  
                BPDU-related parameters  
port spanning tree      enabled  
state                   disabled  
port_id                 0xcccf  
port number             0x7eb  
path cost               80  
message age (port/VLAN) 0(10)  
designated_root          00-10-2f-52-eb-ec  
designated_cost          0
```

show spantree statistics

```
designated_bridge          00-10-2f-52-eb-ec
designated_port            0xcccf
top_change_ack            FALSE
config_pending            FALSE
port_inconsistency        none
```

PORT based information & statistics

```
config bpdu's xmitted (port/VLAN)  0(0)
config bpdu's received (port/VLAN)  0(0)
tcn bpdu's xmitted (port/VLAN)      0(0)
tcn bpdu's received (port/VLAN)     0(0)
forward trans count                0
scp failure count                  0
```

Status of Port Timers

```
forward delay timer            INACTIVE
forward delay timer value      0
message age timer              INACTIVE
message age timer value        0
topology change timer          INACTIVE
topology change timer value    0
hold timer                     INACTIVE
hold timer value               0
delay root port timer          INACTIVE
delay root port timer value    0
```

VLAN based information & statistics

```
spanningtree type             ibm
spanningtree multicast address  c0-00-00-00-01-00
bridge priority                32768
bridge mac address             00-10-2f-52-eb-ec
bridge hello time              2 sec
bridge forward delay           4 sec
topology change initiator:     1/0
topology change                FALSE
topology change time           14
topology change detected       FALSE
topology change count          0
topology change last recvd. from 00-00-00-00-00-00
```

Other port-specific info

```
dynamic max age transitions    0
port bpdu ok count            0
msg age expiry count          0
link loading                   1
bpdu in processing             FALSE
num of similar bpdus to process 0
next state                     0
src mac count:                 0
total src mac count            0
curr_src_mac                   00-00-00-00-00-00
next_src_mac                   00-00-00-00-00-00
channel_src_mac                00-00-00-00-00-00
channel src count              0
channel ok count               0
Console> (enable)
```

Table 2-61 describes the possible fields in the **show spantree statistics** command output.

Table 2-61 show spantree statistics Command Output Fields

Field	Description
BPDU-related parameters	
port spanning tree	Status of whether Spanning-Tree Protocol is enabled or disabled on the port.
state	Spanning-tree port state (Disabled, Listening, Learning, Forwarding, or Blocking).
port_id	Port identifier of the associated port.
port number	Port number.
path cost	Contribution of the path through this root port. This applies to the total path cost to the root for this bridge.
message age (port/VLAN)	Age of the received protocol information recorded for a port and the value of the Max Age parameter (shown in parenthesis) recorded by the switch.
designated_root	MAC address of the designated spanning-tree root bridge.
designated_cost	Cost of the path to the root offered by the designated port on the LAN to which this port is attached.
designated_bridge	Bridge identifier of the bridge assumed to be the Designated Bridge for the LAN associated with the port.
designated_port	Port identifier of the Bridge Port assumed to be the Designated Port for the LAN associated with the port.
top_change_ack	Value of the Topology Change Acknowledgement flag in the next configured BPDU to be transmitted on the associated port. The flag is set in reply to a Topology Change Notification BPDU.
config_pending	Boolean parameter set to record that a configured BPDU should be transmitted on expiration of the hold timer for the associated port.
port_inconsistency	Status of whether the port is in an inconsistent (PVID or port type) state or not.
PORT-based information and statistics	
config bpdu's xmitted (port/VLAN)	Number of BPDUs transmitted from the port. The number in parentheses is the number of configured BPDUs transmitted by the switch for this instance of spanning-tree.
config bpdu's received (port/VLAN)	Number of BPDUs received by this port. The number in parentheses is the number of configured BPDUs received by the switch for this instance of spanning-tree.
tcn bpdu's xmitted (port/VLAN)	Number of TCN BDPUs transmitted on this port.
tcn bpdu's received (port/VLAN)	Number of TCN BDPUs received on this port.
forward trans count	Number of times the port state transitioned to FORWARDing state.
scp failure count	Number of SCP failures.
Status of Port Timers	
forward delay timer	Status of the forward delay timer. This timer monitors the time spent by a port in the Listening and Learning States.
forward delay timer value	Current value of the forward delay timer.
message age timer	Status of the message age timer. This timer measures the age of the received protocol information recorded for a port.
message age timer value	Current value of the message age timer.
topology change timer	Status of the topology change timer. This timer determines the time period in which configured BPDUs are transmitted with the topology change flag set by the bridge when it is root following the detection of a topology change.
topology change timer value	Current value of the topology change timer.

Table 2-61 show spantree statistics Command Output Fields (continued)

Field	Description
hold timer	Status of the hold timer. This timer ensures that configured BPDUs are not transmitted too frequently through any bridge port.
hold timer value	Current value of the hold timer.
delay root port timer	Status of the delay root port timer. This timer enables fast convergence on linkup when the UplinkFast feature is enabled.
delay root port timer value	Current value of the delay root port timer.
VLAN-based information and statistics	
spanningtree type	Type of spanning tree (IEEE, IBM, CISCO).
spanningtree multicast address	Destination address used to send out configured BPDUs on a bridge port.
bridge priority	Part of the bridge identifier and is taken as the most significant part bridge ID comparisons.
bridge mac address	Bridge MAC address.
bridge hello time	Value of the Hello Time parameter when the bridge is the root or is attempting to become the root.
bridge forward delay	Value of the Forward Delay parameter when the bridge is the root or is attempting to become the root.
topology change	Time the last topology change occurred.
topology change initiator:	Number of the port that caused the topology change.
topology change	Number of times configured BPDUs have been transmitted by the bridge on the LANs for which the bridge is the designated bridge.
topology change time	Time period for which BPDUs are transmitted with the topology change flag set by the bridge when it is the root following the detection of a topology change. It is equal to the sum of the bridge's Max Age and Forward Delay parameters.
topology change detected	Number of topology changes that have been detected by or notified to the bridge.
topology change count	Number of times the topology change has occurred.
topology change last recvd. from	MAC address of the bridge that transmitted the last TCN BPDU.
Other port-specific info	
dynamic max age transitions	Number of dynamic max age transitions.
port bpdu ok count	Number of reported port BPDU counts.
msg age expiry count	Number of message age expires.
link loading	Status of whether the link is oversubscribed.
bpdu in processing	Status of whether the BPDU is under processing.
num of similar bpdus to process	Number of similar BPDUs to process that are received on a specific port.
received_inferior_bpdu	Status of whether the port received an inferior BPDU or in response to an RLQ BPDU.
next state	Port state before it is actually set by spanning tree.
src mac count:	Number of BPDUs with the same source MAC address.
total src mac count	Number of BPDUs with all the source MAC addresses.
curr_src_mac	Source MAC address of the configured BPDU received on a particular port.
next_src_mac	MAC address from a different source.

Table 2-61 show spantree statistics Command Output Fields (continued)

Field	Description
channel_src_mac	Source MAC address of the channel port. It is used to detect channel misconfiguration and avoid spanning-tree loops.
channel src count	Number of times channel_src_mac gets changed, and if the limit is exceeded, a channel misconfiguration is detected.
channel ok count	Boolean flag that records the channel status.

Related Command**show spantree**

show spantree summary

Use the **show spantree summary** command to display a summary of spanning-tree information.

show spantree summary

Syntax Description

This command has no arguments or keywords.

Default

This command has no default setting.

Command Type

Switch command.

Command Mode

Normal.

Example

This example shows how to display a summary of spanning-tree information:

```
Console> show spantree summary
Summary of connected spanning tree ports by vlan

Uplinkfast disabled for bridge.
Backbonefast enabled for bridge.

Vlan  Blocking  Listening  Learning  Forwarding  STP Active
-----
   1           0         0         0           1           1

          Blocking  Listening  Learning  Forwarding  STP Active
          -----
Total           0         0         0           1           1

BackboneFast statistics
-----
Number of inferior BPDUs received (all VLANs) : 0
Number of RLQ req PDUs received (all VLANs)   : 0
Number of RLQ res PDUs received (all VLANs)   : 0
Number of RLQ req PDUs transmitted (all VLANs): 0
Number of RLQ res PDUs transmitted (all VLANs): 0
Console>
```

Related Command

show spantree

show spantree uplinkfast

Use the **show spantree uplinkfast** command to show the uplinkfast settings.

```
show spantree uplinkfast
```

Syntax Description

This command has no arguments or keywords.

Default

This command has no default setting.

Command Type

Switch command.

Command Mode

Normal.

Example

This example shows how to display the uplinkfast settings:

```
Console> show spantree uplinkfast  
VLAN port list  
-----  
1-20   1/1(fwd), 1/2-1/5  
21-50  1/9(fwd), 1/6-1/8, 1/10-1/12  
51-100 2/1(fwd), 2/12  
Console>
```

Related Command

show spantree

show sscop

Use the **show sscop** command to show SSCOP details for all ATM interfaces.

show sscop

Syntax Description

This command has no arguments or keywords.

Default

This command has no default setting.

Command Type

Cisco IOS ATM command.

Command Mode

EXEC.

Usage Guideline

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

Example

This example shows sample output from the **show sscop** command:

```
ATM#show sscop
SSCOP details for interface ATM0
  Current State = Idle,   Uni version = 3.0
  Send Sequence Number: Current = 0,   Maximum = 10
  Send Sequence Number Acked = 0
  Rcv Sequence Number: Lower Edge = 0, Upper Edge = 0, Max = 10
  Poll Sequence Number = 0, Poll Ack Sequence Number = 0
  Vt(Pd) = 0
  Connection Control: timer = 1000
  Timer currently Inactive
  Timer_Keepalive = 30000
  Current Retry Count = 0, Maximum Retry Count = 10
  AckQ count = 0, RcvQ count = 0, TxQ count = 0
  Local connections currently pending = 0
  Max local connections allowed pending = 50
  Statistics -
    Pdu's Sent = 0, Pdu's Received = 0, Pdu's Ignored = 0
    Begin = 0/0, Begin Ack = 0/0, Begin Reject = 0/0
    End = 0/0, End Ack = 0/0
    Resync = 0/0, Resync Ack = 0/0
    Sequenced Data = 0/0, Sequenced Poll Data = 0/0
    Poll = 0/0, Stat = 0/0, Unsolicited Stat = 0/0
    Unassured Data = 0/0, Mgmt Data = 0/0, Unknown Pdu's = 0
ATM#
```

Table 2-62 describes the possible fields (depending on the port type queried) in the **show sscop** output.

Note Interpreting the output of the **show sscop** command requires a thorough understanding of SSCOP. This information is used by Cisco technicians to help diagnose network problems.

Table 2-62 show sscop Command Output Fields

Field	Description
SSCOP details for interface	Interface for which details are returned.
Current State	Current SSCOP state for the interface.
Uni version	Version of UNI configured on the interface.
Send Sequence Number	Current and maximum send sequence number.
Send Sequence Number Acked	Sequence number of packets already acknowledged.
Rcv Sequence Number	Sequence number of packets received.
Poll Sequence Number	Current poll sequence number.
Poll Ack Sequence Number	Poll sequence number already acknowledged.
Vt(Pd)	Number of Pd frames sent that triggers the sending of a Poll frame.
Connection Control	Timer value for establishing and terminating SSCOP, and indicates whether the timer is active or inactive.
Timer_Keepalive	Timer value used to send keepalives on an idle link.
Current Retry Count	Current count of the retry counter.
Maximum Retry Count	Maximum number of retries allowed.
AckQ count	Current value of the acknowledgment queue count.
RcvQ count	Current value of the receive queue count.
TxQ count	Current value of the transmit queue count.
Local connections currently pending	Current number of local connections pending.
Max local connections allowed pending	Maximum number of pending local connections.
Pdu's Sent	Total number of SSCOP frames sent.
Pdu's Received	Total number of SSCOP frames received.
Pdu's Ignored	Number of invalid SSCOP frames ignored.
Begin	Number of Begin frames sent/received.
Begin Ack	Number of Begin Ack frames sent/received.
Begin Reject	Number of Begin Reject frames sent/received.
End	Number of End frames sent/received.
End Ack	Number of End Ack frames sent/received.
Resync	Number of Resync frames sent/received.
Resync Ack	Number of Resync Ack frames sent/received.

Table 2-62 show sscop Command Output Fields (continued)

Field	Description
Sequenced Data	Number of Sequenced Data frames sent/received.
Sequenced Poll Data	Number of Sequenced Poll Data frames sent/received.
Poll	Number of Poll frames sent/received.
Stat	Number of Stat frames sent/received.
Unsolicited Stat	Number of Unsolicited Stat frames sent/received.
Unassured Data	Number of Unassured Data frames sent/received.
Mgmt Data	Number of Mgmt Data frames sent/received.
Unknown Pdu's	Number of Unknown SSCOP frames sent/received.

show station controltable

Use the **show station controltable** command to display a collection of statistics and status information associated with each Token Ring station on the local ring. In addition, this command provides status information for each ring being monitored.

show station controltable [*mod_num*[/*port_num*]]

Syntax Description

mod_num (Optional) Number of the module.

/port_num (Optional) Number of the port on the module.

Default

This command has no default setting.

Command Type

Switch command.

Command Mode

Normal.

Usage Guidelines

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

This command is only supported on Token Ring modules.

Example

This example shows how to display a collection of statistics and status information associated with each Token Ring station on Token Ring module 3:

```

Console> show station controltable 3
Port      TableSize      ActiveStation      RingState
-----
3/1       0               0                  Normal Operation
3/2       0               0                  Normal Operation
3/3       0               0                  Normal Operation
3/4       0               0                  Normal Operation
3/5       0               0                  Normal Operation
3/6       0               0                  Normal Operation
3/7       0               0                  Normal Operation
3/8       0               0                  Normal Operation
3/9       0               0                  Normal Operation
3/10      0               0                  Normal Operation
3/11      0               0                  Normal Operation
3/12      0               0                  Normal Operation
3/13      0               0                  Normal Operation
3/14      0               0                  Normal Operation
3/15      0               2                  Normal Operation
3/16      0               0                  Normal Operation

```

show station controltable

```
Port      BeaconSender      BeaconNAUN      OrderChanges
-----
3/1      00:00:00:00:00:00  00:00:00:00:00:00  0
3/2      00:00:00:00:00:00  00:00:00:00:00:00  0
3/3      00:00:00:00:00:00  00:00:00:00:00:00  0
3/4      00:00:00:00:00:00  00:00:00:00:00:00  0
3/5      00:00:00:00:00:00  00:00:00:00:00:00  0
3/6      00:00:00:00:00:00  00:00:00:00:00:00  0
3/7      00:00:00:00:00:00  00:00:00:00:00:00  0
3/8      00:00:00:00:00:00  00:00:00:00:00:00  0
3/9      00:00:00:00:00:00  00:00:00:00:00:00  0
3/10     00:00:00:00:00:00  00:00:00:00:00:00  0
3/11     00:00:00:00:00:00  00:00:00:00:00:00  0
3/12     00:00:00:00:00:00  00:00:00:00:00:00  0
3/13     00:00:00:00:00:00  00:00:00:00:00:00  0
3/14     00:00:00:00:00:00  00:00:00:00:00:00  0
3/15     00:00:00:00:00:00  00:00:00:00:00:00  1
3/16     00:00:00:00:00:00  00:00:00:00:00:00  0
Console>
```

Table 2-63 describes the fields in the **show station controltable** command output.

Table 2-63 show station controltable Command Output Fields

Field	Description
Port	Module and port number.
TableSize	Number of Token Ring station entries in the table associated with this port.
ActiveStation	Number of active Token Ring station entries in the table associated with this port.
RingState	Current status of the ring.
BeaconSender	Address of the sender of the last beacon frame received on this ring. If no beacon frames have been received, this object shall be equal to six octets of zero.
BeaconNAUN	Address of the nearest upstream neighbor in the last beacon frame received on this ring. If no beacon frames have been received, this object shall be equal to six octets of zero.
OrderChanges	Number of add and delete events in the table associated with this port.

Related Commands

show counters

show station ordertable

show station ordertable

Use the **show station ordertable** command to display a listing of the order of stations on the monitored rings.

```
show station ordertable [mod_num[/port_num]]
```

Syntax Description

mod_num (Optional) Number of the module.

/port_num (Optional) Number of the port on the module.

Default

This command has no default setting.

Command Type

Switch command.

Command Mode

Normal.

Usage Guideline

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

Example

This example shows how to display a listing of the order of stations on the Token Ring module 3:

```
Console> show station ordertable 3
Port      OrderIndex      Address
-----
3/15     1                00:05:77:05:40:63
         2                00:00:30:cf:a0:98
Console>
```

Table 2-64 describes the fields in the **show station ordertable** command output.

Table 2-64 show station ordertable Command Output Fields

Field	Description
Port	Module and port number.
OrderIndex	Location of the station with respect to other stations on the ring.
Address	Physical address of the station.

Related Commands

show counters

show station controltable

show standbyports

Use the **show standbyports** command to display the current status of the standby ports feature. The standby ports feature allows the ports on the standby supervisor engine module to pass traffic. If this feature is disabled, the ports are in standby mode.

show standbyports

Syntax Description

This command has no arguments or keywords.

Default

This command has no default setting.

Command Mode

Normal.

Command Type

Switch command.

Usage Guideline

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

Example

This example shows how to display the current status of the standby ports feature:

```
Console> show standbyports  
Standby ports feature enabled  
Console>
```

Related Command

set standbyports

show summertime

Use the **show summertime** command to display the current status of the **summertime** feature.

show summertime

Syntax Description

This command has no arguments or keywords.

Default

This command has no default setting.

Command Type

Switch command.

Command Mode

Normal.

Example

This example shows how to display the current status of the **summertime** feature:

```
Console> show summertime  
Summertime is enabled and set to 'pst'  
Console>
```

The output indicates whether the feature is enabled or disabled and the time zone configured for use with the feature.

Related Command

set summertime

show system

Use the **show system** command to display system information.

show system

Syntax Description

This command has no keywords or arguments.

Default

This command has no default setting.

Command Type

Switch command.

Command Mode

Normal.

Usage Guideline

In a Token Ring module, the values shown for Traffic and Peak are the average of three switching buses.

Example

This example shows the system status and other information:

```
Console> show system
PS1-Status PS2-Status Fan-Status Temp-Alarm Sys-Status Uptime d,h:m:s Logout
-----
ok          none          ok           off          ok           3,02:08:53   20 min

PS1-Type   PS2-Type   Modem   Baud   Traffic  Peak  Peak-Time
-----
WS-C5008A  none      disable 9600   0%      0%   Thu Aug 10 1998, 03:22:20

System Name           System Location           System Contact
-----
Catalyst 5000         San Jose, CA              Susan x237
Console>
```

Table 2-65 describes the fields in the **show system** command output.

Table 2-65 show system Command Output Fields

Field	Description
PS1-Status	Status of power supply 1 (ok, fan failed, faulty, or none).
PS2-Status	Status of power supply 2 (ok, fan failed, faulty, or none).
Fan-Status	Status of the fan (ok, faulty, or other).
Temp-Alarm	Status of whether the temperature alarm is off or on.
Sys-Status	System status (ok or faulty). Corresponds to system LED status.
Uptime d, h:m:s	Amount of time in days, hours, minutes, and seconds, that the system has been up and running.
Logout	Amount of time after which an idle session is disconnected.
PS1-Type	Part number of the power supply.
PS2-Type	Part number of the redundant power supply, if present.
Modem	Status of the modem status (enable or disable).
Baud	Baud rate to which the modem is set.
Traffic	Current traffic percentage.
Peak	Peak percentage of traffic on the backplane.
Peak-Time	Time stamp when peak percentage was recorded.
System Name	System name.
System Location	System location.
System Contact	System contact information.

Related Commands

set system baud
set system contact
set system location
set system modem
set system name

show tacacs

Use the **show tacacs** command to display the TACACS+ protocol configuration.

show tacacs [**noalias**]

Syntax Description

noalias (Optional) Keyword to force the display to show IP addresses, not IP aliases.

Default

This command has no default setting.

Command Type

Switch command.

Command Mode

Normal.

Example

This example shows how to display the TACACS+ protocol configuration:

```
Console> show tacacs
Login Authentication: Console Session   Telnet Session
-----
tacacs                disabled          disabled
local                 enabled(primary)  enabled(primary)

Enable Authentication: Console Session   Telnet Session
-----
tacacs                disabled          disabled
local                 enabled(primary)  enabled(primary)

Tacacs login attempts:3
Tacacs timeout:5 seconds
Tacacs direct request:disabled

Tacacs-Server                Status
-----
171.69.193.114              primary
Console>
```

Table 2-66 describes the fields in the **show tacacs** command output.

Table 2-66 show tacacs Command Output Fields

Field	Description
Login authentication	Display of the login authentication types.
Console Session	Status of whether the console session is enabled or disabled.
Telnet Session	Status of whether the telnet session is enabled or disabled.
Enable Authentication:	Display of the enable authentication types.
Tacacs login attempts	Number of failed login attempts allowed.
Tacacs timeout	Time in seconds to wait for a response from the TACACS+ server.
Tacacs direct request	Status of whether TACACS+ directed-request option is enabled or disabled.
Tacacs-Server	IP addresses or IP aliases of configured TACACS+ servers.
Status	Primary TACACS+ server.

Related Commands

set tacacs attempts

set tacacs directedrequest

set tacacs key

set tacacs server

set tacacs timeout

show test

Use the **show test** command to display the results of diagnostic tests.

show test [*mod_num*]

Syntax Description

mod_num (Optional) Number of the module. If you do not specify a number, test statistics are given for the general system as well as for module 1.

Default

This command has no default setting.

Command Type

Switch command.

Command Mode

Normal.

Usage Guideline

The NMP information only applies to module 1; therefore, only the display for module 1 includes the NMP status. If you specify other modules, the NMP status is not displayed.

Examples

This example shows how to display general test results for the system and for module 1 on a Catalyst 5000, 2926G, or 2926 series switch:

```
Console> show test
Environmental Status (. = Pass, F = Fail, U = Unknown)
  PS (3.3V): .   PS (12V): .   PS (24V): .   PS1: .   PS2: .
  Temperature: .   Fan: .

Module 1 : 2-port 10/100BaseTX Supervisor
Network Management Processor (NMP) Status: (. = Pass, F = Fail, U = Unknown)
  ROM: .   Flash-EEPROM: .   Ser-EEPROM: .   NVRAM: .   MCP Comm: .

EARL Status :
  NewLearnTest: .
  IndexLearnTest: .
  DontForwardTest: .
  MonitorTest: .
  DontLearn: .
  FlushPacket: .
  ConditionalLearn: .
  EarlLearnDiscard: .
  EarlTrapTest: .
```

```

LCP Diag Status for Module 1 (. = Pass, F = Fail, N = N/A)
CPU          : .   Sprom      : .   Bootcsum : .   Archsum  : .
RAM          : .   LTL       : .   CBL       : .   DPRAM   : .   SAMBA   : .
Saints      : .   Pkt Bufs  : .   Repeater  : N   FLASH   : .
Phoenix     : .   TrafficMeter: . UplinkSprom : . PhoenixSprom: .

MII Status:
Ports 1 2
-----
      N  N

SAINT/SAGE Status :
Ports 1 2
-----
      .  .

PHOENIX Port Status :
Ports 9 17 18 19 20 21 22
      INBAND A->B B->A B->C C->B A->C C->A
-----
      .  .  .  .  .  .  .

Packet Buffer Status :
Ports 1 2
-----
      .  .

PHOENIX Packet Buffer Status :
Ports INBAND A<->B B<->C A<->C
-----
      .  .  .  .

Loopback Status [Reported by Module 1] :
Ports 1 2 9
-----
      .  .  .

Channel Status :
Ports 1 2
-----
      .  .

Console>

```

This example shows how to display general test results for a Catalyst 4000 or Catalyst 2948G series switch:

```

Console> show test

Environmental Status (. = Pass, F = Fail, U = Unknown, N = Not Present)
PS1: .   PS2: N   PS1 Fan: .   PS2 Fan: N   Fan Tray: .
Temperature: .   Chassis Temperature: 39 degC (102 degF)

Module 1 : 0-port Switching Supervisor
Network Management Processor (NMP) Status: (. = Pass, F = Fail, U = Unknown)
Control Processor Status:
      DRAM : .   EEPROM : .   FLASH : .   NVRAM : .

SX1000:
Register      : .   Network Memory : .

```

```
Mgmt Port Loopback Status: .
Console>
```

This example shows how to display general test results for module 3 on a Catalyst 4000 or 2948G series switch:

```
Console> show test 3
Module 3: 48 10/100 Base T port Ethernet Card

(HX,CX)1000:
  Ports 1-8:..   Ports 9-16:..   Ports 17-24:..
  Ports 25-32:.. Ports 33-40:..   Ports 41-48:..

10/100BaseTX Loopback Status:
  Ports  1  2  3  4  5  6  7  8  9  10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
  -----
  Ports  25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48
  -----
```

Table 2-67 describes the fields in the **show test** command output.

Table 2-67 show test Command Output Fields

Field	Description
Environmental Status	Test results that apply to the general system environment.
PS (3.3V)	Test results for the 3.3V power supply.
PS (12V)	Test results for the 12V power supply.
PS (24V)	Test results for the 24V power supply.
PS1	Test results for power supply 1.
PS2	Test results for power supply 2.
Temperature	Test results for temperature.
Fan	Test results for the fan.
Module 1	Test results that apply to module 1. The module type is indicated as well.
Network Management Processor (NMP) Status	Test results that apply to the NMP on the supervisor module.
ROM	Test results for ROM.
Flash-EEPROM	Test results for the Flash EEPROM.
Ser-EEPROM	Test results for serial EEPROM.
NVRAM	Test results for the NVRAM.
EARL Status	Fields that display the EARL status information.
NewLearnTest	Test results for NewLearn test (EARL).
IndexLearnTest	Test results for IndexLearn test (EARL).
DontForwardTest	Test results for DontForward test (EARL).
MonitorTest	Test results for Monitor test (EARL).
DontLearn	Test results for DontLearn test (EARL).

Table 2-67 show test Command Output Fields (continued)

Field	Description
FlushPacket	Test results for FlushPacket test (EARL).
ConditionalLearn	Test results for ConditionalLearn test (EARL).
EarlLearnDiscard	Test results for EarlLearnDiscard test (EARL).
EarlTrapTest	Test results for EarlTrap test (EARL).
LCP Diag Status for Module 1	Test results for the specified module.
CPU	Test results for the CPU.
Sprom	Test results for serial PROM.
Bootsum	Test results for Boot ROM checksum.
Archsum	Test results for archive Flash checksum.
RAM	Test results for the RAM.
LTL	Test results for local-target logic.
CBL	Test results for color-blocking logic.
DPRAM	Test results for dual-port RAM.
SAMBA	Test results for SAMBA chip.
Saints	Test results for SAINT chips.
Pkt Bufs	Test results for the packet buffers.
Repeater	Test results for repeater module.
FLASH	Test results for the Flash.
Phoenix	Test results for the Phoenix.
TrafficMeter	Test results for the TrafficMeter.
UplinkSprom	Test results for the UplinkSprom.
PhoenixSprom	Test results for the Phoenix.
MII Status	Test results for MII ports.
SAINT/SAGE Status	Test results for individual SAINT/SAGE chip.
Phoenix Port Status	Test results for Phoenix ports.
Packet Buffer Status	Test results for individual packet buffer.
Phoenix Packet Buffer Status	Test results for Phoenix packet buffer.
Loopback Status	Test results for the loopback test.
Channel Status	Test results for the channel test.

show test

This example shows how to display test results for module 10 (an FDDI module):

```
Console> show test 10

Module 10 : 2-port MM MIC FDDI
Module 10 : FDDI Module Status: (. = Pass, F = Fail, U = Unknown)

FDDI Control Processor (FCP) Status:
  ROM: .   RAM: .   Flash-EEPROM: .   Dpram: .

  Switch Memory Status:
  RAM: .   Cache-SRAM: .   DmpCom: .   Loadgen: .

FDDI Status:
  Port A Access: .   Port B Access: .
  Port A Loopback: .   Port B Loopback: .
  MAC Access: .   MAC Buffer R/W: .
  MAC Internal LB: .   MAC External LB: .
  CAM: . . . .

Data Movement Processor (DMP) Status:
  Flash-EEPROM: .   RAM: .   SRAM: .   COMM: .

  Switch Memory Status:
  RAM: .   Cache-SRAM: .

FDDI Status:
  MAC Access: .   MAC Buffer R/W: .
  MAC Internal LB: .   MAC External LB: .   LoadGen:.
  FBIGA Access: .   FBIGA->MAC Buffer R/W: .
  FBIGA->MAC TxDMA: .   FBIGA->MAC RxDMA: .
  FBIGA->MAC Internal LB:.   FBIGA->MAC External LB:.   LoadGen:.

Bus Interface Status:
  SBIGA Access: .   SBIGA->SAGE RxDMA: .   SBIGA<-SAGE TxDMA:.
  Biga Loop Access: .   Biga Loop Rx: .   Biga Loop Tx: .

LCP Diag Status for Module 10 (. = Pass, F = Fail, N = N/A)
CPU      : .   Sprom   : .   Bootcsum : .   Archsum  : N
RAM      : .   LTL     : .   CBL      : .   DPRAM    : .   SAMBA    : N
Saints   : .   Pkt Bufs : .   Repeater : N   FLASH    : N

SAINT/SAGE Status :
  Ports 1
  -----
  .

Packet Buffer Status :
  Ports 1
  -----
  .

Loopback Status :
  Ports 1
  -----
  .

Console>
```

Table 2-68 describes the fields in the **show test** command output for an FDDI module.

Table 2-68 show test Command Output Fields (FDDI)

Field	Description
Module 10	Fields that indicate subsequent test results apply to module 10. The module type is indicated as well.
FDDI Control Processor (FCP) Status	Fields that indicate FCP status.
ROM	Test results for the ROM.
RAM	Test results for the RAM.
Flash-EEPROM	Test results for the Flash EEPROM.
Dpram	Test results for the dynamic PRAM.
Switch Memory Status	Fields that indicate the switch memory status.
RAM	Test results for the RAM.
Cache-SRAM	Test results for the queue SRAM.
DmpCom	Test results for communication block.
Loadgen	Test results for MAC LoadGen test.
FDDI Status	Fields that indicate FDDI status.
Port A Access	Test results for port A PHY register test.
Port B Access	Test results for port B PHY register test.
Port A Loopback	Test results for port A PHY loopback test.
Port B Loopback	Test results for port B PHY loopback test.
MAC Access	Test results for MAC register test.
MAC Buffer R/W	Test results for MAC buffer memory test.
MAC Internal LB	Test results for MAC internal loopback test.
MAC External LB	Test results for MAC external loopback test.
CAM	Test results for the CAM.
Data Movement Processor (DMP) Status	Fields that indicate the DMP status.
Flash-EEPROM	Test results for the Flash EEPROM.
RAM	Test results for the RAM.
SRAM	Test results for the SRAM test.
COMM	Test results for communication block.
Switch Memory Status	Fields that indicate switch memory status.
RAM	Test results for the RAM.
Cache-SRAM	Test results for the queue SRAM.
FDDI Status	Fields that indicate FDDI status.
MAC Access	Test results for MAC register test.
MAC Buffer R/W	Test results for MAC buffer memory test.
MAC Internal LB	Test results for MAC internal loopback test.
MAC External LB	Test results for MAC external loopback test.

Table 2-68 show test Command Output Fields (FDDI) (continued)

Field	Description
LoadGen	Test results for MAC LoadGen test.
FBIGA Access	Test results for FBIGA register test.
FBIGA->MAC Buffer R/W	Test results for FBIGA buffer memory test.
FBIGA->MAC TxDMA	Test results for FBIGA transmit test.
FBIGA->MAC RxDMA	Test results for FBIGA receive test
FBIGA->MAC Internal LB	Test results for FBIGA internal loopback test.
FBIGA->MAC External LB	Test results for FBIGA external loopback test.
LoadGen	Test results for FBIGA LoadGen test.
Bus Interface Status	Fields that indicate bus interface status.