Show Commands

SYSTEM COMMANDS

card

Syntax **card**

Context show>system

Description This command enables the context to display card information.

memory-pools

Syntax **memory-pools**

Context show>system>card

Description This command displays the memory pools for the card.

connections

Syntax **connections** [**address** *ip-address*] [**port** *port-number*] [**detail**]

Context show>system

Description This command displays UDP and TCP connection information.
If no command line options are specified, a summary of the TCP and UDP connections displays.

Parameters *ip-address* — Displays only the connection information for the specified IP address.

Values
ipv4-address: a.b.c.d (host bits must be 0)
ipv6-address: x:x:x:x:x:x:x:x[-interface]
x:x:x:x:x:x:d.d.d.d[-interface]
x: [0 — FFFF]H
d: [0 — 255]D
interface: 32 characters maximum, mandatory for link local addresses

port-number — Displays only the connection information for the specified port number.

Values 0 — 65535

detail — Appends TCP statistics to the display output.

Output **Standard Connection Output —** The following table describes the system connections output fields.

Label	Description
Proto	Displays the socket protocol, either TCP or UDP.
RecvQ	Displays the number of input packets received by the protocol.
TxmtQ	Displays the number of output packets sent by the application.
Local Address	Displays the local address of the socket. The socket port is separated by a period.
Remote Address	Displays the remote address of the socket. The socket port is separated by a period.
State	Listen – The protocol state is in the listen mode. Established – The protocol state is established. vRtrID – The virtual router identifier. • vRtrID 0 — listens for connections in all routing instances including the Base and Management VRFs. • vRtrID 1 — Base routing instance • vRtrID 4095 — Management routing instance MSS – The TCP maximum segment size.

Sample Output

```
A:ALA-12# show system connections
===============================================================================
Connections
===============================================================================
Prot RecvQ   TxmtQ   Local Address                                      State
                MSS  Remote Address                                        vRtrID
-------------------------------------------------------------------------------
TCP        0       0 0.0.0.0.21                                        LISTEN
               1024  0.0.0.0.0                                                0
TCP        0       0 0.0.0.0.22                                        LISTEN
               1024  0.0.0.0.0                                                0
TCP        0       0 0.0.0.0.23                                        LISTEN
               1024  0.0.0.0.0                                                0
TCP        0       0 0.0.0.0.830                                       LISTEN
               1024  0.0.0.0.0                                                0
TCP        0       0 0.0.0.0.6068                                      LISTEN
               1024  0.0.0.0.0                                                0
TCP        0       0 0.0.0.0.47806                                     LISTEN
               1024  0.0.0.0.0                                                0
TCP        0       0 ::.21                                             LISTEN
               1024  ::.0                                                     0
TCP        0       0 ::.22                                             LISTEN
               1024  ::.0                                                     0
TCP        0       0 ::.830                                            LISTEN
               1024  ::.0                                                     0
```

```
TCP        0       0 ::.47806                                    LISTEN
               1024  ::.0                                              0
TCP        0       0 127.1.0.11.21                               LISTEN
               1024  0.0.0.0                                         4095
TCP        0       0 127.1.0.11.21059                            LISTEN
               1024  0.0.0.0                                         4095
TCP        0       0 135.121.129.98.22                           LISTEN
               1024  0.0.0.0                                         4095
TCP        0       0 135.121.129.98.23                           ESTABLISH
               1024  138.120.140.149.59042                           4095
TCP        0    1149 135.121.129.98.23                           ESTABLISH
               1024  138.120.140.244.58579                           4095
TCP        0       0 135.121.129.98.830                          LISTEN
               1024  0.0.0.0                                         4095
TCP        0       0 3000::8779:8163.22                          LISTEN
               1024  ::.0                                            4095
TCP        0       0 3000::8779:8163.830                         LISTEN
               1024  ::.0                                            4095
UDP        0       0 0.0.0.0.67                                   ---
                     0.0.0.0                                           0
UDP        0       0 0.0.0.0.68                                   ---
                     0.0.0.0                                           0
UDP        0       0 0.0.0.0.123                                  ---
                     0.0.0.0                                           0
UDP        0       0 0.0.0.0.319                                  ---
                     0.0.0.0                                           0
UDP        0       0 0.0.0.0.320                                  ---
                     0.0.0.0                                           0
UDP        0       0 0.0.0.0.514                                  ---
                     0.0.0.0                                           0
UDP        0       0 0.0.0.0.50055                                ---
                     0.0.0.0                                           0
UDP        0       0 ::.123                                       ---
                     ::.0                                              0
UDP        0       0 ::.50056                                     ---
                     ::.0                                              0
UDP        0       0 0.0.0.0.1025                                 ---
                     0.0.0.0                                           1
UDP        0       0 0.0.0.0.123                                  ---
                     0.0.0.0                                      4095
UDP        0       0 0.0.0.0.49152
-------------------------------------------------------------------------------
No. of Connections: 18
===============================================================================
A:ALA-12#
```

Sample Detailed Output

```
A:ALA-12# show system connections detail
-------------------------------------------------------------------------------
 TCP Statistics
-------------------------------------------------------------------------------
packets sent                              : 659635
data packets                              : 338982 (7435146 bytes)
data packet retransmitted                 : 73 (1368 bytes)
ack-only packets                          : 320548 (140960 delayed)
URG only packet                           : 0
window probe packet                       : 0
```

```
window update packet                          : 0
control packets                               : 32
packets received                              : 658893
acks                                          : 338738 for (7435123 bytes)
duplicate acks                                : 23
ack for unsent data                           : 0
packets received in-sequence                  : 334705 (5568368 bytes)
completely duplicate packet                   : 2 (36 bytes)
packet with some dup. data                    : 0 (0 bytes)
out-of-order packets                          : 20 (0 bytes)
packet of data after window                   : 0 (0 bytes)
window probe                                  : 0
window update packet                          : 3
packets received after close                  : 0
discarded for bad checksum                    : 0
discarded for bad header offset field         : 0
discarded because packet too short            : 0
connection request                            : 4
connection accept                             : 24
connections established (including accepts)   : 27
connections closed                            : 26 (including 2 drops)
embryonic connections dropped                 : 0
segments updated rtt                          : 338742 (of 338747 attempts)
retransmit timeouts                           : 75
connections dropped by rexmit timeout         : 0
persist timeouts                              : 0
keepalive timeouts                            : 26
keepalive probes sent                         : 0
connections dropped by keepalive              : 1
pcb cache lookups failed                      : 0
connections dropped by bad md5 digest         : 0
connections dropped by enhanced auth          : 0
path mtu discovery backoff                    : 0
===============================================================================
A:ALA-12#
```

cpu

Syntax **cpu** [**sample-period** *seconds*]

Context show>system
show>card

Description This command displays CPU utilization per task over a sample period.

Parameters **sample-period** *seconds* — The number of seconds over which to sample CPU task utilization.

Default 1

Values 1 — 300

Output **System CPU Output —** The following table describes the system CPU output fields.

Label	Description
CPU Utilization	The total amount of CPU time.
Name	The process or protocol name.
CPU Time (uSec)	The CPU time each process or protocol has used in the specified time.
CPU Usage	The sum of CPU usage of all the processes and protocols.
Capacity Usage	Displays the level the specified service is being utilized. When this number hits 100%, this part of the system is busied out. There may be extra CPU cycles still left for other processes, but this service is running at capacity. This column does not reflect the true CPU utilization value; that data is still available in the **CPU Usage** column. This column is the **busiest** task in each group, where **busiest** is defined as either actually running or blocked attempting to acquire a lock.

Sample Output

```
*A:cses-E11# show system cpu sample-period 2
===============================================================================
CPU Utilization (Sample period: 2 seconds)
===============================================================================
Name                                    CPU Time       CPU Usage        Capacity
                                          (uSec)                          Usage
-------------------------------------------------------------------------------
BFD                                            10          ~0.00%          ~0.00%
BGP                                             0           0.00%           0.00%
CFLOWD                                         61          ~0.00%          ~0.00%
Cards & Ports                               8,332           0.41%           0.08%
DHCP Server                                    79          ~0.00%          ~0.00%
ICC                                           408           0.02%           0.01%
IGMP/MLD                                    1,768           0.08%           0.08%
IOM                                        17,197           0.85%           0.31%
IP Stack                                    4,080           0.20%           0.09%
IS-IS                                       1,213           0.06%           0.06%
ISA                                         2,496           0.12%           0.07%
LDP                                             0           0.00%           0.00%
Logging                                        32          ~0.00%          ~0.00%
MPLS/RSVP                                   2,380           0.11%           0.08%
MSDP                                            0           0.00%           0.00%
Management                                  5,969           0.29%           0.15%
OAM                                           907           0.04%           0.02%
OSPF                                           25          ~0.00%          ~0.00%
PIM                                         5,600           0.27%           0.27%
RIP                                             0           0.00%           0.00%
RTM/Policies                                    0           0.00%           0.00%
Redundancy                                  3,635           0.18%           0.13%
SIM                                         1,462           0.07%           0.04%
SNMP Daemon                                     0           0.00%           0.00%
Services                                    2,241           0.11%           0.05%
Stats                                           0           0.00%           0.00%
```

```
Subscriber Mgmt                          2,129           0.10%           0.04%
System                                   8,802           0.43%           0.17%
Traffic Eng                                  0           0.00%           0.00%
VRRP                                       697           0.03%           0.02%
WEB Redirect                               125          ~0.00%          ~0.00%
-------------------------------------------------------------------------------
Total                                2,014,761         100.00%
   Idle                              1,945,113          96.54%
   Usage                                69,648           3.45%
Busiest Core Utilization                69,648           3.45%
===============================================================================
*A:cses-E11#


*A:ALA-1# show card 4 cpu

===============================================================================
Card 4 CPU Utilization (Sample period: 1 second)
===============================================================================
Name                                  CPU Time       CPU Usage        Capacity
                                        (uSec)                          Usage
-------------------------------------------------------------------------------
HQoS Algorithm                             70          ~0.00%          ~0.00%
HQoS Statistics                           124          ~0.00%           0.83%
IOM                                    15,904           0.79%           0.94%
-------------------------------------------------------------------------------
Total                                2,003,678         100.00%
   Idle                              1,987,580          99.19%
   Usage                                16,098           0.80%
Busiest Core Utilization                 8,192           0.81%
===============================================================================
```

cron

Syntax **cron**

Context show>cron

Description This command enters the show CRON context.

action

Syntax **action** [*action-name*] [**owner** *action-owner*] **run-history** *run-state*

Context show>cron#

Description This command displays cron action parameters.

Parameters **action** *action-name* — Specifies the action name.

Values maximum 32 characters

owner *action-owner* — Specifies the owner name.

Default TiMOS CLI

run-history *run-state* — Specifies the state of the test to be run.

Values executing, initializing, terminated

Output The following table describes the show cron action output fields.

Label	Description
Action	Displays the name of the action.
Action owner	The name of the action owner.
Administrative status	Enabled — Administrative status is enabled Disabled — Administrative status is disabled
Script	The name of the script
Script owner	The name of the script owner.
Script source location	Displays the location of scheduled script.
Max running allowed	Displays the maximum number of allowed sessions.
Max completed run histories	Displays the maximum number of sessions previously run.
Max lifetime allowed	Displays the maximum amount of time the script may run.
Completed run histories	Displays the number of completed sessions.
Executing run histories	Displays the number of sessions in the process of executing.
Initializing run histories	Displays the number of sessions ready to run/queued but not executed.
Max time run history saved	Displays the maximum amount of time to keep the results from a script run.
Last change	Displays the system time a change was made to the configuration.

Sample Output

```
*A:Redundancy# show cron action run-history terminated
===============================================================================
CRON Action Run History
===============================================================================
Action "test"
Owner "TiMOS CLI"
-------------------------------------------------------------------------------
Script Run #17
```

```
-------------------------------------------------------------------------------
Start time    : 2006/11/06 20:30:09     End time      : 2006/11/06 20:35:24
Elapsed time  : 0d 00:05:15             Lifetime      : 0d 00:00:00
State         : terminated              Run exit code : noError
Result time   : 2006/11/06 20:35:24     Keep history  : 0d 00:49:57
Error time    : never
Results file  : ftp://*:*@192.168.15.18/home/testlab_bgp/cron/_20061106-203008.
                out
Run exit      : Success
-------------------------------------------------------------------------------
Script Run #18
-------------------------------------------------------------------------------
Start time    : 2006/11/06 20:35:24     End time      : 2006/11/06 20:40:40
Elapsed time  : 0d 00:05:16             Lifetime      : 0d 00:00:00
State         : terminated              Run exit code : noError
Result time   : 2006/11/06 20:40:40     Keep history  : 0d 00:55:13
Error time    : never
Results file  : ftp://*:*@192.168.15.18/home/testlab_bgp/cron/_20061106-203523.
                out
Run exit      : Success
-------------------------------------------------------------------------------
*A:Redundancy#


*A:Redundancy# show cron action run-history executing
===============================================================================
CRON Action Run History
===============================================================================
Action "test"
Owner "TiMOS CLI"
-------------------------------------------------------------------------------
Script Run #20
-------------------------------------------------------------------------------
Start time    : 2006/11/06 20:46:00     End time      : never
Elapsed time  : 0d 00:00:56             Lifetime      : 0d 00:59:04
State         : executing               Run exit code : noError
Result time   : never                   Keep history  : 0d 01:00:00
Error time    : never
Results file  : ftp://*:*@192.168.15.18/home/testlab_bgp/cron/_20061106-204559.
                out
===============================================================================
*A:Redundancy#


*A:Redundancy# show cron action run-history initializing
===============================================================================
CRON Action Run History
===============================================================================
Action "test"
Owner "TiMOS CLI"
-------------------------------------------------------------------------------
Script Run #21
-------------------------------------------------------------------------------
Start time    : never                   End time      : never
Elapsed time  : 0d 00:00:00             Lifetime      : 0d 01:00:00
State         : initializing            Run exit code : noError
Result time   : never                   Keep history  : 0d 01:00:00
Error time    : never
Results file  : none
```

```
-------------------------------------------------------------------------------
Script Run #22
-------------------------------------------------------------------------------
Start time    : never                   End time      : never
Elapsed time  : 0d 00:00:00             Lifetime      : 0d 01:00:00
State         : initializing            Run exit code : noError
Result time   : never                   Keep history  : 0d 01:00:00
Error time    : never
Results file  : none
-------------------------------------------------------------------------------
Script Run #23
-------------------------------------------------------------------------------
Start time    : never                   End time      : never
Elapsed time  : 0d 00:00:00             Lifetime      : 0d 01:00:00
State         : initializing            Run exit code : noError
Result time   : never                   Keep history  : 0d 01:00:00
Error time    : never
Results file  : none
===============================================================================
*A:Redundancy#
```

schedule

Syntax **schedule** [*schedule-name*] [**owner** *schedule-owner*]

Context show>cron#

Description This command displays cron schedule parameters.

Parameters *schedule-name* — Displays information for the specified scheduler name.

owner *schedule-owner* **—** Displays information for the specified scheduler owner.

Output The following table describes the show cron schedule output fields.

Label	Description
Schedule name	Displays the schedule name.
Schedule owner	Displays the owner name of the action.
Description	Displays the schedule's description.
Administrative status	Enabled — The administrative status is enabled.
	Disabled — Administratively disabled.
Operational status	Enabled — The operational status is enabled.
	Disabled — Operationally disabled.
Action	Displays the action name

Label	Description (Continued)
Action owner	Displays the name of action owner.
Script	Displays the name of the script.
Script owner	Displays the name of the script.
Script owner	Displays the name of the of script owner.
Script source location	Displays the location of scheduled script.
Script results location	Displays the location where the script results have been sent.
Schedule type	Periodic – Displays a schedule which ran at a given interval. Calendar – Displays a schedule which ran based on a calendar. Oneshot – Displays a schedule which ran one time only.
Interval	Displays the interval between runs of an event.
Next scheduled run	Displays the time for the next scheduled run.
Weekday	Displays the configured weekday.
Month	Displays the configured month.
Day of Month	Displays the configured day of month.
Hour	Displays the configured hour.
Minute	Displays the configured minute.
Number of scheduled runs	Displays the number of scheduled sessions.
Last scheduled run	Displays the last scheduled session.
Number of scheduled failures	Displays the number of scheduled sessions that failed to execute.
Last scheduled failure	Displays the last scheduled session that failed to execute.
Last failure time	Displays the system time of the last failure.

```
A:sim1>show>cron schedule test
===============================================================================
CRON Schedule Information
===============================================================================
Schedule                    : test
Schedule owner              : TiMOS CLI
Description                 : none
Administrative status       : enabled
Operational status          : enabled
Action                      : test
Action owner                : TiMOS CLI
```

```
Script                       : test
Script Owner                 : TiMOS CLI
Script source location       : ftp://*****:******@192.168.15.1/home/testlab_bgp
                               /cron/test1.cfg
Script results location      : ftp://*****:******@192.168.15.1/home/testlab_bgp
                               /cron/res
Schedule type                : periodic
Interval                     : 0d 00:01:00 (60 seconds)
Next scheduled run           : 0d 00:00:42
Weekday                      : tuesday
Month                        : none
Day of month                 : none
Hour                         : none
Minute                       : none
Number of schedule runs      : 10
Last schedule run            : 2008/01/01 17:20:52
Number of schedule failures  : 0
Last schedule failure        : no error
Last failure time            : never
===============================================================================
A:sim1>show>cron
```

information

Syntax **information**

Context show>system

Description This command displays general system information including basic system, SNMP server, last boot and DNS client information.

Output **System Information Output —** The following table describes the system information output fields.

Label	Description
System Name	The configured system name.
System Contact	A text string that describes the system contact information.
System Location	A text string that describes the system location.
System Coordinates	A text string that describes the system coordinates.
System Up Time	The time since the last boot.
SNMP Port	The port number used by this node to receive SNMP request messages and to send replies.
SNMP Engine ID	The SNMP engineID to uniquely identify the SNMPv3 node.
SNMP Max Message Size	The maximum SNMP packet size generated by this node.
SNMP Admin State	Enabled — SNMP is administratively enabled and running. Disabled — SNMP is administratively shutdown and not running.

Label	Description (Continued)
SNMP Oper State	Enabled — SNMP is operationally enabled. Disabled — SNMP is operationally disabled.
SNMP Index Boot Status	Persistent — System indexes are saved between reboots. Not Persistent — System indexes are not saved between reboots.
Telnet/SSH/FTP Admin	Displays the administrative state of the Telnet, SSH, and FTP sessions.
Telnet/SSH/FTP Oper	Displays the operational state of the Telnet, SSH, and FTP sessions.
BOF Source	The location of the BOF.
Image Source	Primary — Indicates that the directory location for runtime image file was loaded from the primary source. Secondary — Indicates that the directory location for runtime image file was loaded from the secondary source. Tertiary — Indicates that the directory location for runtime image file was loaded from the tertiary source.
Config Source	Primary — Indicates that the directory location for configuration file was loaded from the primary source. Secondary — Indicates that the directory location for configuration file was loaded from the secondary source. Tertiary — Indicates that the directory location for configuration file was loaded from the tertiary source.
DNS Resolve Preference	ipv4-only — Dns-names are queried for A-records only. ipv6-first — Dns-server will be queried for AAAA-records first and a successful reply is not received, the dns-server is queried for A-records.
Last Booted Config File	The URL and filename of the last loaded configuration file.
Last Boot Cfg Version	The date and time of the last boot.
Last Boot Config Header	Displays header information such as image version, date built, date generated.
Last Boot Index Version	The version of the persistence index file read when this card was last rebooted.
Last Boot Index Header	The header of the persistence index file read when this card was last rebooted.
Last Saved Config	The location and filename of the last saved configuration file.
Time Last Saved	The date and time of the last time configuration file was saved.

Label	Description (Continued)
Changes Since Last Save	Yes — There are unsaved configuration file changes. No — There are no unsaved configuration file changes.
Time Last Modified	The date and time of the last modification.
Max Cfg/BOF Backup Rev	The maximum number of backup revisions maintained for a configuration file. This value also applies to the number of revisions maintained for the BOF file.
Cfg-OK Script	URL — The location and name of the CLI script file executed following successful completion of the boot-up configuration file execution.
Cfg-OK Script Status	Successful/Failed — The results from the execution of the CLI script file specified in the Cfg-OK Script location. Not used — No CLI script file was executed.
Cfg-Fail Script	URL — The location and name of the CLI script file executed following a failed boot-up configuration file execution. Not used — No CLI script file was executed.
Cfg-Fail Script Status	Successful/Failed — The results from the execution of the CLI script file specified in the Cfg-Fail Script location. Not used — No CLI script file was executed.
Management IP Addr	The management IP address and mask.
DNS Server	The IP address of the DNS server.
DNS Domain	The DNS domain name of the node.
BOF Static Routes	To — The static route destination. Next Hop — The next hop IP address used to reach the destination. Metric — Displays the priority of this static route versus other static routes. None — No static routes are configured.

Sample Output

```
A:Dut-F>show system information
...
Primary DNS Server     : 138.120.252.56
Secondary DNS Server   : 138.120.252.48
Tertiary DNS Server    : 138.120.252.49
DNS Domain             : labs.ca.alcatel-lucent.com
DNS Resolve Preference : ipv4-only
DNSSEC                 AD Validated    : False
DNSSEC Response Control: drop
BOF Static Routes      :

A:Dut-F# show system information
```

```
===============================================================================
System Information
===============================================================================
System Name            : Dut-F
System Type            : 7750 SR-7 7450 ESS-7
System Version         : B-6.0.B1-6
System Contact         :
System Location        :
System Coordinates     :
System Active Slot     : A
System Up Time         : 0 days, 03:42:01.29 (hr:min:sec)

SNMP Port              : 161
SNMP Engine ID         : 0000197f00008c6cff000000
SNMP Max Message Size  : 1500
SNMP Admin State       : Enabled
SNMP Oper State        : Enabled
SNMP Index Boot Status : Not Persistent
SNMP Sync State        : OK

Tel/Tel6/SSH/FTP Admin : Enabled/Disabled/Enabled/Enabled
Tel/Tel6/SSH/FTP Oper  : Up/Down/Up/Up

BOF Source             : ftp://test:test@xxx.xxx.xx.xxx/./images
Image Source           : primary
Config Source          : primary
Last Booted Config File: ftp://*:*@xxx.xxx.xx.xxx/./images/dut-f.cfg
Last Boot Cfg Version  : N/A
Last Boot Index Version: N/A
Last Saved Config      : N/A
Time Last Saved        : N/A
Changes Since Last Save: No
Max Cfg/BOF Backup Rev : 5
Cfg-OK Script          : ftp://*:*@[3000::8acb:466d]/./images/env.cfg
Cfg-OK Script Status   : failed
Cfg-Fail Script        : N/A
Cfg-Fail Script Status : not used
Management IP Addr     : xxx.xxx.xx.xxx/23
Primary DNS Server     : xxx.xxx.xx.xxx
Secondary DNS Server   : xxx.xxx.xx.xxx
Tertiary DNS Server    : N/A
DNS Domain             : sh.bel.alcatel.be
DNS Resolve Preference : ipv4-only
BOF Static Routes      :
  To                   Next Hop
  138.203.0.0/16       xxx.xxx.xx.xxx
  172.0.0.0/8          xxx.xxx.xx.xxx
ATM Location ID        : 01:00:00:00:00:00:00:00:00:00:00:00:00:00:00:00
ATM OAM Retry Up       : 2
ATM OAM Retry Down     : 4
ATM OAM Loopback Period: 10
===============================================================================
A:Dut-F#
```

lldp

Syntax **lldp neighbor**

Context show>system

Description This command displays neighbor information for all configured ports without having to specify each individual port ID.

Parameters **neighbor —** Displays LLDP neighbor information.

Sample Output

```
*A:Dut-C# show system lldp neighbor
Link Layer Discovery Protocol (LLDP) System Information
===============================================================================
NB = nearest-bridge   NTMPR = nearest-non-tpmr   NC = nearest-customer
===============================================================================
Port      Scope  Chassis ID           Index    Port ID     System Name
-------------------------------------------------------------------------------
1/1/1     NB     16:2f:ff:00:00:00    1        35717120    Dut-A
2/1/2     NB     16:34:ff:00:00:00    1        35782656    Dut-D
2/1/1     NB     16:36:ff:00:00:00    2        35684352    Dut-E
1/1/2     NB     16:30:ff:00:00:00    2        35749888    Dut-B
1/1/3     NB     16:30:ff:00:00:00    3        35782656    Dut-B
2/1/3     NB     16:30:ff:00:00:00    3        35815424    Dut-B
===============================================================================
Number of neighbors : 6
*A:Dut-C#


A:GHR-API# show system lldp neighbor
Link Layer Discovery Protocol (LLDP) System Information
===============================================================================
NB = nearest-bridge   NTMPR = nearest-non-tpmr   NC = nearest-customer
===============================================================================
Port      Scope  Chassis ID           Index    Port ID     System Name
-------------------------------------------------------------------------------
1/1/6     NTPMR  00:21:05:1b:bc:17    1        36044800    RXI-AMI
1/1/8     NTPMR  00:21:06:6d:bd:53    2        36110336    YOY-WOW
1/1/9     NTPMR  00:21:08:2b:ab:81    3        36143104    FRI-MON
===============================================================================
Number of neighbors : 3
```

load-balancing-alg

Syntax **load-balancing-alg** [**detail**]

Context show>system

Description This command displays system load balancing settings.

Parameters **detail —** Displays port settings.

Sample Output

```
*A:ALA-49>show>system# load-balancing-alg
===============================================================================
System-wide Load Balancing Algorithms
===============================================================================
L4  - Load Balance                    : exclude-L4
LSR - Load Balance                    : lbl-only
===============================================================================
*A:ALA-49>show>system#
```

memory-pools

Syntax **memory-pools**

Context show>system

Description This command displays system memory status.

Output **Memory Pools Output —** The following table describes memory pool output fields.

Label	Description
Name	The name of the system or process.
Max Allowed	Integer — The maximum allocated memory size.
	No Limit — No size limit.
Current Size	The current size of the memory pool.
Max So Far	The largest amount of memory pool used.
In Use	The current amount of the memory pool currently in use.
Current Total Size	The sum of the Current Size column.
Total In Use	The sum of the In Use column.
Available Memory	The amount of available memory.

Sample Output

```
A:ALA-1# show system memory-pools
===============================================================================
Memory Pools
===============================================================================
Name               Max Allowed    Current Size      Max So Far          In Use
-------------------------------------------------------------------------------
System               No limit      24,117,248      24,117,248      16,974,832
Icc                 8,388,608       1,048,576       1,048,576          85,200
RTM/Policies         No limit       5,242,912       5,242,912       3,944,104
OSPF                 No limit       3,145,728       3,145,728       2,617,384
```

```
MPLS/RSVP             No limit       9,769,480       9,769,480       8,173,760
LDP                   No limit               0               0               0
IS-IS                 No limit               0               0               0
RIP                   No limit               0               0               0
VRRP                  No limit       1,048,576       1,048,576              96
BGP                   No limit       2,097,152       2,097,152       1,624,800
Services              No limit       2,097,152       2,097,152       1,589,824
IOM                   No limit     205,226,800     205,226,800     202,962,744
SIM                   No limit       1,048,576       1,048,576             392
CFLOWD                No limit               0       1,048,576               0
IGMP                  No limit               0               0               0
PIM                   No limit               0               0               0
ATM                   No limit       2,872,648       2,872,648       2,790,104
MMPI                  No limit               0               0               0
MFIB                  No limit               0               0               0
PIP                   No limit      79,943,024      79,943,024      78,895,248
MBUF                 67,108,864       5,837,328       5,837,328       4,834,280
-------------------------------------------------------------------------------
Current Total Size :    343,495,200 bytes
Total In Use       :    324,492,768 bytes
Available Memory   :    640,178,652 bytes
===============================================================================
A:ALA-1#
```

Auth Check	Displays the authentication requirement

ntp

Syntax **ntp**

Context show>system

Description This command displays NTP protocol configuration and state.

Output **Show NTP Output —** The following table describes NTP output fields.

Label	Description
Enabled	yes — NTP is enabled. no — NTP is disabled.
Admin Status	yes — Administrative state is enabled. no — Administrative state is disabled.
NTP Server	Displays NTP server state of this node.
Stratum	Displays stratum level of this node.
Oper Status	yes — The operational state is enabled. no — The operational state is disabled.

Label	Description (Continued)
System Ref. ID	IP address of this node or a 4-character ASCII code showing the state.
Auth Error	Displays the number of authentication errors.
Auth Errors Ignored	Displays the number of authentication errors ignored.
Auth key ID Errors	Displays the number of key identification errors.
Auth Key Type Errors	Displays the number of authentication key type errors.
Reject	The peer is rejected and will not be used for synchronization. Rejection reasons could be the peer is unreachable, the peer is synchronized to this local server so synchronizing with it would create a sync loop, or the synchronization distance is too large. This is the normal startup state.
Invalid	The peer is not maintaining an accurate clock. This peer will not be used for synchronization.
Excess	The peer's synchronization distance is greater than ten other peers. This peer will not be used for synchronization.
Outlyer	The peer is discarded as an outlyer. This peer will not be used for synchronization.
Candidate	The peer is accepted as a possible source of synchronization.
Selected	The peer is an acceptable source of synchronization, but its synchronization distance is greater than six other peers.
Chosen	The peer is chosen as the source of synchronization.
ChosenPPS	The peer is chosen as the source of synchronization, but the actual synchronization is occurring from a pulse-per-second (PPS) signal.
Remote	The IP address of the remote NTP server or peer with which this local host is exchanging NTP packets.
Reference ID	When stratum is between 0 and 15 this field shows the IP address of the remote NTP server or peer with which the remote is exchanging NTP packets. For reference clocks, this field shows the identification assigned to the clock, such as, ".GPS." For an NTP server or peer, if the client has not yet synchronized to a server/peer, the status cannot be determined and displays the following codes:

`Auth Check`	Displays the authentication requirement

Label	Description (Continued)
	Peer Codes: ACST — The association belongs to any cast server. AUTH — Server authentication failed. Please wait while the association is restarted. AUTO — Autokey sequence failed. Please wait while the association is restarted. BCST — The association belongs to a broadcast server. CRPT — Cryptographic authentication or identification failed. The details should be in the system log file or the cryptostats statistics file, if configured. No further messages will be sent to the server. DENY — Access denied by remote server. No further messages will be sent to the server. DROP — Lost peer in symmetric mode. Please wait while the association is restarted. RSTR — Access denied due to local policy. No further messages will be sent to the server. INIT — The association has not yet synchronized for the first time. MCST — The association belongs to a manycast server. NKEY — No key found. Either the key was never installed or is not trusted. RATE — Rate exceeded. The server has temporarily denied access because the client exceeded the rate threshold. RMOT — The association from a remote host running ntpdc has had unauthorized attempted access. STEP — A step change in system time has occurred, but the association has not yet resynchronized. System Codes INIT — The system clock has not yet synchronized for the first time. STEP — A step change in system time has occurred, but the system clock has not yet resynchronized.
St	Stratum level of this node.
Auth	yes — Authentication is enabled. no — Authentication is disabled.
Poll	Polling interval in seconds.
R	Yes — The NTP peer or server has been reached at least once in the last 8 polls. No — The NTP peer or server has not been reached at least once in the last 8 polls.
Offset	The time between the local and remote UTC time, in milliseconds.

Sample Output

```
*A:Dut-A# show system ntp
===============================================================================
NTP Status
===============================================================================
Configured         : Yes                Stratum              : 4
Admin Status       : up                 Oper Status          : up
Server Enabled     : No                 Server Authenticate  : No
Clock Source       : 1111:2222:3333:4444:5555:10:100:2
Auth Check         : Yes
Current Date & Time: 2015/07/10 12:46:30 UTC
===============================================================================

*A:Dut-A# show system ntp all
===============================================================================
NTP Status
===============================================================================
Configured         : Yes                Stratum              : 4
Admin Status       : up                 Oper Status          : up
Server Enabled     : No                 Server Authenticate  : No
Clock Source       : 1111:2222:3333:4444:5555:10:100:2
Auth Check         : Yes
Current Date & Time: 2015/07/10 12:46:32 UTC
===============================================================================
===============================================================================
NTP Active Associations
===============================================================================
State                     Reference ID    St Type  A  Poll Reach     Offset(ms)
    Remote
-------------------------------------------------------------------------------
candidate                 252.242.213.211 3  srvr  -  64   YYYYYYYY  -5.829
    10.10.1.2
candidate                 252.242.213.211 3  srvr  -  64   YYYYYYYY  -6.889
    10.10.100.2
chosen                    252.242.213.211 3  srvr  -  64   ...YYYYY  -6.804
    1111:2222:3333:4444:5555:10:100:2
===============================================================================
===============================================================================
NTP Clients
===============================================================================
vRouter                                                    Time Last Request Rx
    Address
-------------------------------------------------------------------------------
===============================================================================

*A:Dut-A# show system ntp detail
===============================================================================
NTP Status
===============================================================================
Configured         : Yes                Stratum              : 4
Admin Status       : up                 Oper Status          : up
Server Enabled     : No                 Server Authenticate  : No
Clock Source       : 1111:2222:3333:4444:5555:10:100:2
Auth Check         : Yes
Auth Errors        : 0                  Auth Errors Ignored  : 0
Auth Key Id Errors : 0                  Auth Key Type Errors : 0
Current Date & Time: 2015/07/10 12:46:34 UTC
===============================================================================
```

```
===============================================================================
NTP Configured Broadcast/Multicast Interfaces
===============================================================================
vRouter         Interface           Address             Type    Auth    Poll
-------------------------------------------------------------------------------
===============================================================================

*A:Dut-A# show system ntp detail all
===============================================================================
NTP Status
===============================================================================
Configured         : Yes                Stratum              : 4
Admin Status       : up                 Oper Status          : up
Server Enabled     : No                 Server Authenticate  : No
Clock Source       : 1111:2222:3333:4444:5555:10:100:2
Auth Check         : Yes
Auth Errors        : 0                  Auth Errors Ignored  : 0
Auth Key Id Errors : 0                  Auth Key Type Errors : 0
Current Date & Time: 2015/07/10 12:46:36 UTC
===============================================================================
===============================================================================
NTP Configured Broadcast/Multicast Interfaces
===============================================================================
vRouter         Interface           Address             Type    Auth    Poll
-------------------------------------------------------------------------------
===============================================================================
===============================================================================
NTP Active Associations
===============================================================================
State                     Reference ID    St Type  A  Poll Reach     Offset(ms)
    Remote
-------------------------------------------------------------------------------
candidate                 252.242.213.211 3  srvr  -  64   YYYYYYYY  -5.829
    10.10.1.2
candidate                 252.242.213.211 3  srvr  -  64   YYYYYYYY  -6.889
    10.10.100.2
chosen                    252.242.213.211 3  srvr  -  64   ...YYYYY  -6.804
    1111:2222:3333:4444:5555:10:100:2
===============================================================================
===============================================================================
NTP Clients
===============================================================================
vRouter                                                    Time Last Request Rx
    Address
-------------------------------------------------------------------------------
===============================================================================
*A:Dut-A#
```

rollback

Syntax **rollback**

Context show>system

Description This command displays rollback configuration and state.

Sample Output

```
A:dut-a_a># show system rollback
===============================================================================
Rollback Information
===============================================================================
Rollback Location               : cf1:/Rollback
Save
  Last Rollback Save Result     : In Progress, Successful or Failed
  Last Save Completion Time     : 10/15/2010 21:24:06
Revert
  In Progress                   : Yes, No
  Last Revert Initiated Time    : 10/15/2010 21:26:23
  Last Revert Initiated User    : xyz
  Last Initiated Checkpoint     : cf1:/Rollback.rb.3
  Last Completed Revert Result  : Successful or Failed
  Last Revert Completion  Time  : 10/15/2010 21:27:19
===============================================================================
Rollback Files
===============================================================================
Idx      Suffix   Creation time        Release  User
           Comment
-------------------------------------------------------------------------------
latest   .rb      2010/10/15 21:24:02  9.0.R4   fred
           This checkpoint was saved after the 3 VPLS services were created
1        .rb.1    2010/10/15 21:23:58  9.0.R4   John
           John's checkpoint on Sunday
2        .rb.2    2010/10/15 21:23:52  9.0.R4   admin
           A long checkpoint comment that an operator is using to summarize
           various some of the changes that were made.   They may even have so
           much to say that they use the maximum comment size.   Notice that
           words are not chopped.
…
9        .rb.9    2010/10/14 22:00:01  9.0.R4   admin
           VPLS services 1000-2000 created
…
53       .rb.53   2010/10/14 22:10:10  9.0.R4   admin
-------------------------------------------------------------------------------
No. of Rollback Files: 10
===============================================================================
```

ptp

Syntax **ptp** [**standby**]
ptp peers [**router** *router-instance*|**service-name** *service-name*] [**detail**]
ptp port
ptp port *port-id* [**detail**]
ptp statistics
ptp unicast [**router** *router-instance*|**service-name** *service-name*]

Context show>system

Description These commands display Precision Time Protocol (PTP) configuration and state information. This information can be displayed for the entire node or on a per router instance basis.

Parameters **standby —** Displays information for PTP on the standby control module.

unicast — Displays information related to the unicast sessions.

statistics — Displays the message and error statistics for the node.

peers — Displays summary information for the PTP peers.

peer — Displays information for a single PTP peer.

router *router-instance* **—** Qualifier to show only the information for a specific router instance.

detail — Provides additional information on the specified area.

router-instance — router-name|service-id

Values router-name - "Base"

Values service-id - [1..2147483647]

Output **Show PTP Output —** The following table describes PTP output fields.

Label	Description
Pending	When the SR/ESS has initiated a request to a peer but has not yet received a response.
Granted	When the SR/ESS has initiated a request to a peer and it was granted OR a peer has made a request of the SR/ESS and it was granted.
Denied	When the SR/ESS has initiated a request to a peer but it was rejected.
Canceled	When a cancel message has been received from or transmitted toward a peer.
Expired	When a unicast session between the SR/ESS and the peer has expired without being renewed.

Sample Output

```
B:NS082761964# show system ptp
===============================================================================
IEEE 1588/PTP Clock Information
===============================================================================
-------------------------------------------------------------------------------
Local Clock
-------------------------------------------------------------------------------
Clock Type        : boundary           PTP Profile         : ITU-T G.8275.1
Domain            : 0                  Network Type        : sdh
Admin State       : up                 Oper State          : up
Announce Interval : 1 pkt/2 s          Announce Rx Timeout : 3 intervals
Peer Limit        : none (Base Router) G.8275.1 Priority   : 128
Clock Id          : 001af0fffeb2fead   Clock Class         : 255 (slave-only)
Clock Accuracy    : 0xfe (unknown)     Clock Variance      : ffff (not computed)
```

```
Clock Priority1   : 128               Clock Priority2     : 128
PTP Recovery State: locked            Last Changed        : 08/24/2010 13:17:37
Frequency Offset  : +231.920 ppb
-------------------------------------------------------------------------------
Parent Clock
-------------------------------------------------------------------------------
IP Address        : 2.1.1.1           Router              : Base
Port              : 1/2/8             Remote MAC Address: 01:02:03:04:05:06
Local Clock is Parent Clock
Parent Clock Id   : 001af0fffeab36ad  Parent Port Number: 2
GM Clock Id       : 00b0aefffe011ca6  GM Clock Class    : 13
GM Clock Accuracy : 0xfe (unknown)    GM Clock Variance : 0x6400 (3.7E-09)
GM Clock Priority1: 128               GM Clock Priority2: 128
-------------------------------------------------------------------------------
Time Information
-------------------------------------------------------------------------------
Timescale           : PTP
Current Time        : 2011-08-30 15:31:42.99 UTC
Frequency Traceable : yes
Time Traceable      : yes
Time Source         : gps
===============================================================================


B:NS082761964# show system ptp standby
===============================================================================
IEEE 1588/PTP Clock Information
===============================================================================
-------------------------------------------------------------------------------
Local Clock
-------------------------------------------------------------------------------
Clock Type        : ordinary,slave    PTP Profile         : ieee1588-2008
Domain            : 0
Admin State       : up                Oper State          : up
Announce Interval : 1 pkt/2 s         Announce Rx Timeout : 3 intervals
Clock Id          : 001af0fffeb2fead  Clock Class         : 255 (slave-only)
Clock Accuracy    : 0xfe (unknown)    Clock Variance      : ffff (not computed)
Clock Priority1   : 128               Clock Priority2     : 128
PTP Port State    : listening         Last Changed        : 02/11/2013 18:09:58
PTP Recovery State: locked            Last Changed        : 08/24/2010 13:17:37
Frequency Offset  : +231.920 ppb
-------------------------------------------------------------------------------
Parent Clock
-------------------------------------------------------------------------------
IP Address        : 2.1.1.1
Parent Clock Id   : 001af0fffeab36ad  Remote PTP Port Number: 2
GM Clock Id       : 00b0aefffe011ca6  GM Clock Class    : 13
GM Clock Accuracy : 0xfe (unknown)    GM Clock Variance : 0x6400 (3.7E-09)
GM Clock Priority1: 128               GM Clock Priority2: 128
-------------------------------------------------------------------------------
Time Information
-------------------------------------------------------------------------------
Timescale           : PTP
Current Time        : 2011-08-30 15:31:42.99 UTC
Frequency Traceable : yes
Time Traceable      : yes
Time Source         : gps
===============================================================================
```

```
A:bksim1619# show system ptp statistics
===============================================================================
IEEE 1588/PTP Packet Statistics
===============================================================================
                                                        Input              Output
-------------------------------------------------------------------------------
PTP Packets                                           2910253             2393354
  Announce                                              9015               22682
  Sync                                               1153275              622585
  Follow Up                                                0                   0
  Delay Request                                       594036             1153568
  Delay Response                                     1153044              593614
  Signaling                                              883                 905
    Request TLVs                                         428                 598
      Announce                                           304                 350
      Sync                                                62                 124
      Delay Response                                      62                 124
    Grant TLVs (Granted)                                 514                 428
      Announce                                           272                 304
      Sync                                               121                  62
      Delay Response                                     121                  62
    Grant TLVs (Rejected)                                  0                   0
      Announce                                             0                   0
      Sync                                                 0                   0
      Delay Response                                       0                   0
    Cancel TLVs                                            3                   0
      Announce                                             1                   0
      Sync                                                 1                   0
      Delay Response                                       1                   0
    Ack Cancel TLVs                                        0                   3
      Announce                                             0                   1
      Sync                                                 0                   1
      Delay Response                                       0                   1
    Other TLVs                                             0                   0
  Other                                                    0                   0
  Event Packets timestamped at port                   215523              215371
  Event Packets timestamped in software                    0                   0
  Discards                                                 0                   0
    Bad domain value                                       0                   0
    Alternate Master Flag Set                              0                   0
    Other                                                  0                   0
===============================================================================
===============================================================================
IEEE 1588/PTP Clock Recovery State Statistics
===============================================================================
State                                                                  Seconds
-------------------------------------------------------------------------------
Initial                                                                    136
Acquiring                                                                    0
Phase-Tracking                                                               0
Locked                                                                       0
Hold-over                                                                    0
===============================================================================
===============================================================================
IEEE 1588/PTP Clock Recovery Event Statistics
===============================================================================
Event                                                                  Count
-------------------------------------------------------------------------------
```

```
Packet Loss                                                                    0
Excessive Packet Loss                                                          0
Excessive Phase Shift Detected                                                 0
Too Much Packet Delay Variation                                                0
===============================================================================
===============================================================================
===============================================================================
IEEE 1588/PTP Message Rates Per Second
===============================================================================
                                              UDP/IP             Ethernet
Packet Type                                 Input    Output     Input    Output
-------------------------------------------------------------------------------
Announce                                        0         0        16         0
Sync                                            0         0        32         0
Follow Up                                       0         0        32         0
Delay Request                                   0         0         0         4
Delay Response                                  0         0         4         0
Other                                           0         0         0         0
-------------------------------------------------------------------------------
Total                                           0         0        84         4
===============================================================================
===============================================================================


*A:bksim1618# show system ptp peers
===============================================================================
IEEE 1588/PTP Peer Information
===============================================================================
Router
  IP Address                Anno Flow Admin State PTP Port State Parent Clock
-------------------------------------------------------------------------------
Base
  1.4.1.21                  tx        n/a         master         no
1
  1.2.1.20                  rx+tx     up          master         no
  1.3.1.19                  rx        up          slave          yes
2
  1.1.1.21                  tx        n/a         master         no
-------------------------------------------------------------------------------
No. of PTP Peers: 4
===============================================================================


*A:bksim1618# show system ptp peers router Base
===============================================================================
IEEE 1588/PTP Peer Information
===============================================================================
Router
  IP Address                Anno Flow Admin State PTP Port State Parent Clock
-------------------------------------------------------------------------------
Base
  1.4.1.21                  tx        n/a         master         no
-------------------------------------------------------------------------------
No. of PTP Peers: 1
===============================================================================


*A:bksim1618# show system ptp peers router 1
===============================================================================
```

```
IEEE 1588/PTP Peer Information
===============================================================================
Router
  IP Address                 Anno Flow Admin State PTP Port State Parent Clock
-------------------------------------------------------------------------------
1
  1.2.1.20                   rx+tx     up          master         no
  1.3.1.19                   rx        up          slave          yes
-------------------------------------------------------------------------------
No. of PTP Peers: 2
===============================================================================


*A:bksim1618# show system ptp peers detail
===============================================================================
IEEE 1588/PTP Peer Information
===============================================================================
Router            : Base
IP Address        : 1.4.1.21           Announce Direction : tx
Admin State       : n/a                G.8275.1 Priority  : 128
Local PTP Port    : 3                  PTP Port State     : master
Clock Id          : ac65fffffe000000   Remote PTP Port    : 1
-------------------------------------------------------------------------------
Router            : 1
IP Address        : 1.2.1.20           Announce Direction : rx+tx
Admin State       : up                 G.8275.1 Priority  : 128
Local PTP Port    : 2                  PTP Port State     : master
Clock Id          : ac5effffe000000    Remote PTP Port    : 1
Locked Out        : no                 Time Remaining     : n/a
-------------------------------------------------------------------------------
Router            : 1
IP Address        : 1.3.1.19           Announce Direction : rx
Admin State       : up                 G.8275.1 Priority  : 128
Local PTP Port    : 1                  PTP Port State     : slave
Clock Id          : ac5dfffffe000000   Remote PTP Port    : 1
GM Clock Id       : ac5dfffffe000000   GM Clock Class     : 13
GM Clock Accuracy : unknown            GM Clock Variance  : ffff (not computed)
GM Clock Priority1: 0                  GM Clock Priority2 : 128
Steps Removed     : 0                  Parent Clock       : yes
Locked Out        : no                 Time Remaining     : n/a
-------------------------------------------------------------------------------
Router            : 2
IP Address        : 1.1.1.21           Announce Direction : tx
Admin State       : n/a                G.8275.1 Priority  : 128
Local PTP Port    : 4                  PTP Port State     : master
Clock Id          : ac65fffffe000000   Remote PTP Port    : 1
===============================================================================


*A:bksim1618# show system ptp peers router 1 detail
===============================================================================
IEEE 1588/PTP Peer Information
===============================================================================
Router            : 1
IP Address        : 1.2.1.20           Announce Direction : rx+tx
Admin State       : up                 G.8275.1 Priority  : 128
Local PTP Port    : 2                  PTP Port State     : master
Clock Id          : ac5effffe000000    Remote PTP Port    : 1
-------------------------------------------------------------------------------
```

```
Router            : 1
IP Address        : 1.3.1.19           Announce Direction : rx
Admin State       : up                 G.8275.1 Priority  : 128
Local PTP Port    : 1                  PTP Port State     : slave
Clock Id          : ac5dffffffe000000  Remote PTP Port    : 1
GM Clock Id       : ac5dffffffe000000  GM Clock Class     : 13
GM Clock Accuracy : unknown            GM Clock Variance  : ffff (not computed)
GM Clock Priority1: 0                  GM Clock Priority2 : 128
Steps Removed     : 0                  Parent Clock       : yes
===============================================================================


A:bksim1620# show system ptp peer 6.1.1.2 router 5
===============================================================================
IEEE 1588/PTP Peer Information
===============================================================================
Router            : 5
IP Address        : 6.1.1.2            Announce Direction : rx+tx
Admin State       : up                 G.8275.1 Priority  : 128
Local PTP Port    : 2                  PTP Port State     : passive
Clock Id          : ac5dffffffe000000  Remote PTP Port    : 2
GM Clock Id       : ac5cffffffe000000  GM Clock Class     : 13
GM Clock Accuracy : 0xfe (unknown)     GM Clock Variance  : ffff (not computed)
GM Clock Priority1: 128                GM Clock Priority2 : 128
Steps Removed     : 1                  Parent Clock       : no
===============================================================================


A:bksim1620# show system ptp peer 6.1.1.2 router 5 detail
===============================================================================
IEEE 1588/PTP Peer Information
===============================================================================
Router Instance   : 5
IP Address        : 6.1.1.2            Announce Direction : rx+tx
Admin State       : up                 G.8275.1 Priority  : 128
Local PTP Port    : 2                  PTP Port State     : passive
Clock Id          : ac5dffffffe000000  Remote PTP Port    : 2
GM Clock Id       : ac5cffffffe000000  GM Clock Class     : 13
GM Clock Accuracy : 0xfe (unknown)     GM Clock Variance  : ffff (not computed)
GM Clock Priority1: 128                GM Clock Priority2 : 128
Steps Removed     : 1                  Parent Clock       : no
===============================================================================
===============================================================================
IEEE 1588/PTP Unicast Negotiation Information
===============================================================================
IP Address      Dir Type       Rate       Duration State    Time
-------------------------------------------------------------------------------
6.1.1.2         Rx  Announce   1 pkt/2 s  300      Granted  09/01/2010 17:23:04
6.1.1.2         Tx  Announce   1 pkt/2 s  300      Granted  09/01/2010 17:23:04
===============================================================================
===============================================================================
IEEE 1588/PTP Packet Statistics
===============================================================================
                                                          Input             Output
-------------------------------------------------------------------------------
PTP Packets                                                 253                11
  Announce                                                  243                 1
  Sync                                                        0                 0
  Follow Up                                                   0                 0
```

```
  Delay Request                                                    0          0
  Delay Response                                                   0          0
  Signaling                                                       10         10
    Request TLVs                                                   6          4
      Announce                                                     6          4
      Sync                                                         0          0
      Delay Response                                               0          0
    Grant TLVs (Granted)                                           4          6
      Announce                                                     4          6
      Sync                                                         0          0
      Delay Response                                               0          0
    Grant TLVs (Rejected)                                          0          0
      Announce                                                     0          0
      Sync                                                         0          0
      Delay Response                                               0          0
    Cancel TLVs                                                    0          0
      Announce                                                     0          0
      Sync                                                         0          0
      Delay Response                                               0          0
    Ack Cancel TLVs                                                0          0
      Announce                                                     0          0
      Sync                                                         0          0
      Delay Response                                               0          0
    Other TLVs                                                     0          0
  Other                                                            0          0
Discards                                                           0          0
  Bad PTP domain                                                   0          0
  Alternate Master                                                 0          0
  Out Of Sequence                                                  0          0
  Peer Disabled                                                    0          0
  Other                                                            0          0
===============================================================================


A:bksim1618# show system ptp port 1/1/1 detail
===============================================================================
IEEE 1588/PTP Ethernet Port Information
===============================================================================
Port                : 1/1/2
PTP Admin State     : up                 PTP Oper State     : up
Local MAC Addr      : 02:43:BA:01:00:03  Multicast MAC Addr : 01:1b:19:00:00:00
G.8275.1 notSlave   : false              G.8275.1 Priority  : 128
PTP Port Number     : 3                  PTP Port State     : Slave
Cfg Anno Rate       : 1 pkt/2 s          Cfg Sync/Dly Rate  : 64 pkt/s
Neighbor Clocks     : 4                  Timestamp Point    : port
===============================================================================

A:bksim1618# show system ptp port 1/1/2 detail

===============================================================================
IEEE 1588/PTP Ethernet Port Information
===============================================================================
Port              : 1/1/2
PTP Admin State   : up                 PTP Oper State     : up
Local MAC Addr    : a0:f3:e4:33:ee:a3  Multicast MAC Addr : 01:1b:19:00:00:00
PTP Port Number   : 1                  PTP Port State     : slave
Cfg Anno Rate     : 1 pkt/2 s          Cfg Sync/Delay Rate: 64 pkt/s
Neighbors         : 1                  Timestamp Point    : cpm
===============================================================================
```

```
===========================================================
IEEE 1588/PTP Ethernet Port Neighbor Clocks
===========================================================
MAC Address       Clock Id          Port #  Rx Packet Rate
-----------------------------------------------------------
8c:90:d3:c4:3d:f9 a0f3e4fffe637e30       1             128
8c:90:d3:c4:3d:fa a0f3e4fffe637e30       2              64
-----------------------------------------------------------
No. of Neighbor Clocks: 2
===========================================================

================================================================================
IEEE 1588/PTP Ethernet Port Packet Statistics
================================================================================
                                                          Input     Output
--------------------------------------------------------------------------------
PTP Packets                                                3584       1785
  Announce                                                   14          0
  Sync                                                     1785          0
  Follow Up                                                   0          0
  Delay Request                                               0       1785
  Delay Response                                           1785          0
  Signaling                                                   0          0
  Other                                                       0          0
Discards                                                      0          0
  Bad PTP domain                                              0          0
  Alternate Master                                            0          0
  Out Of Sequence                                             0          0
  Other                                                       0          0
================================================================================

================================================================================
IEEE 1588/PTP Ethernet Port Neighbor Clocks
================================================================================
  MAC Address          Clock Id           Port Num     Rx Packet Rate
--------------------------------------------------------------------------------
  01:02:03:04:05:06    ac65fffffe000001      65535           64
  01:02:03:04:05:07    ac65fffffe000002          1            0
  01:02:03:04:05:08    ac65fffffe000003          2           64
  01:02:03:04:05:09    ac65fffffe000004         99            0
================================================================================

================================================================================
IEEE 1588/PTP Ethernet Port Packet Statistics
================================================================================
                                                        Input              Output
--------------------------------------------------------------------------------
PTP Packets                                               253                11
  Announce                                                243                 1
  Sync                                                      0                 0
  Follow Up                                                 0                 0
  Delay Request                                             0                 0
  Delay Response                                            0                 0
  Signaling                                                10                10
  Other                                                     0                 0
Discards                                                    0                 0
  Bad PTP domain                                            0                 0
  Alternate Master                                          0                 0
```

```
  Out Of Sequence                                                    0          0
  Other                                                              0          0
===============================================================================


A:bksim1618# show system ptp port
===============================================================================
IEEE 1588/PTP Ethernet Port Summary Information
===============================================================================
Port        PTP Adm/Opr   PTP State    Neighbors   Tx Rate     Rx Rate
-------------------------------------------------------------------------------
10/2/16       up/up         passive         5          12312       4400
1/1/1         up/up         slave           1          12312       4400
1/1/2         up/up         master         61          12312       4400
1/1/3         up/down       disabled        0              0          0
1/1/4         up/up         listening       0              0          0
-------------------------------------------------------------------------------
No. of PTP Ports : 5                           Total  99999     999999


*A:bksim1618# show system ptp unicast
===============================================================================
IEEE 1588/PTP Unicast Negotiation Information
===============================================================================
Router
  IP Address      Dir Type     Rate       Duration State    Time
-------------------------------------------------------------------------------
Base
  1.4.1.21        Tx  Announce 1 pkt/2 s  300      Granted  04/21/2013 19:14:09
1
  1.2.1.20        Rx  Announce 1 pkt/2 s  300      Granted  04/21/2013 19:14:19
  1.2.1.20        Tx  Announce 1 pkt/2 s  300      Granted  04/21/2013 19:13:25
  1.2.1.20        Tx  Sync     64 pkt/s   300      Granted  04/21/2013 19:13:30
  1.2.1.20        Rx  DelayReq 64 pkt/s   300      Granted  04/21/2013 19:13:30
  1.2.1.20        Tx  DelayRsp 64 pkt/s   300      Granted  04/21/2013 19:13:30
  1.3.1.19        Rx  Announce 1 pkt/2 s  300      Granted  04/21/2013 19:13:16
  1.3.1.19        Rx  Sync     64 pkt/s   300      Granted  04/21/2013 19:13:21
  1.3.1.19        Tx  DelayReq 64 pkt/s   300      Granted  04/21/2013 19:13:21
  1.3.1.19        Rx  DelayRsp 64 pkt/s   300      Granted  04/21/2013 19:13:21
2
  1.1.1.21        Tx  Announce 1 pkt/2 s  300      Granted  04/21/2013 19:14:08
  1.1.1.21        Tx  Sync     64 pkt/s   300      Granted  04/21/2013 19:14:15
  1.1.1.21        Rx  DelayReq 64 pkt/s   300      Granted  04/21/2013 19:14:15
  1.1.1.21        Tx  DelayRsp 64 pkt/s   300      Granted  04/21/2013 19:14:15
-------------------------------------------------------------------------------
PTP Peers               : 4
Total Packet Rate       : 578 packets/second
===============================================================================
*A:bksim1618#


A:bksim1618# show system ptp router 1 unicast
===============================================================================
IEEE 1588/PTP Unicast Negotiation Information
===============================================================================
Router
  IP Address      Dir Type     Rate       Duration State    Time
-------------------------------------------------------------------------------
1
```

```
  1.2.1.20        Rx  Announce 1 pkt/2 s  300      Granted  04/21/2013 19:14:19
  1.2.1.20        Tx  Announce 1 pkt/2 s  300      Granted  04/21/2013 19:13:25
  1.2.1.20        Tx  Sync     64 pkt/s   300      Granted  04/21/2013 19:13:30
  1.2.1.20        Rx  DelayReq 64 pkt/s   300      Granted  04/21/2013 19:13:30
  1.2.1.20        Tx  DelayRsp 64 pkt/s   300      Granted  04/21/2013 19:13:30
  1.3.1.19        Rx  Announce 1 pkt/2 s  300      Granted  04/21/2013 19:13:16
  1.3.1.19        Rx  Sync     64 pkt/s   300      Granted  04/21/2013 19:13:21
  1.3.1.19        Tx  DelayReq 64 pkt/s   300      Granted  04/21/2013 19:13:21
  1.3.1.19        Rx  DelayRsp 64 pkt/s   300      Granted  04/21/2013 19:13:21
-------------------------------------------------------------------------------
PTP Peers               : 2
Total Packet Rate       : 385 packets/second
===============================================================================
*A:bksim1618#
```

sntp

Syntax **sntp**

Context show>system

Description This command displays SNTP protocol configuration and state.

Output **Show SNTP Output —** The following table describes SNTP output fields.

Label	Description
SNTP Server	The SNTP server address for SNTP unicast client mode.
Version	The SNTP version number, expressed as an integer.
Preference	Normal — When more than one time server is configured, one server can be configured to have preference over another. Preferred — Indicates that this server has preference over another.
Interval	The frequency, in seconds, that the server is queried.

Sample Output

```
A:ALA-1# show system sntp
===============================================================================
SNTP
===============================================================================
SNTP Server            Version            Preference         Interval
-------------------------------------------------------------------------------
10.10.20.253           3                  Preferred          64
===============================================================================
A:ALA-1#
```

thresholds

Syntax **thresholds**

Context show>system

Description This command display system monitoring thresholds. The "Threshold Events Log" table will keep only the last 201 entries.

Output **Thresholds Output —** following table describes system threshold output fields.

Label	Description
Variable	Displays the variable OID.
Alarm Id	Displays the numerical identifier for the alarm.
Last Value	Displays the last threshold value.
Rising Event Id	Displays the identifier of the RMON rising event.
Threshold	Displays the identifier of the RMON rising threshold.
Falling Event Id	Displays the identifier of the RMON falling event.
Threshold	Displays the identifier of the RMON falling threshold.
Sample Interval	Displays the polling interval, in seconds, over which the data is sampled and compared with the rising and falling thresholds.
Sample Type	Displays the method of sampling the selected variable and calculating the value to be compared against the thresholds.
Startup Alarm	Displays the alarm that may be sent when this alarm is first created.
Owner	Displays the owner of this alarm.
Description	Displays the event cause.
Event Id	Displays the identifier of the threshold event.
Last Sent	Displays the date and time the alarm was sent.
Action Type	log — An entry is made in the RMON-MIB log table for each event occurrence. This does not create a TiMOS logger entry. The RMON-MIB log table entries can be viewed using the **show>system>thresholds** CLI command. trap — A TiMOS logger event is generated. The TiMOS logger utility then distributes the notification of this event to its configured log destinations which may be CONSOLE, telnet session, memory log, cflash file, syslog, or SNMP trap destinations logs. both — Both a entry in the RMON-MIB logTable and a TiMOS logger event are generated. none — No action is taken
Owner	Displays the owner of the event.

Sample Output

```
A:ALA-48# show system thresholds
===============================================================
Threshold Alarms
===============================================================
Variable: tmnxCpmFlashUsed.1.11.1
Alarm Id         : 1        Last Value : 835
Rising Event Id  : 1        Threshold  : 5000
Falling Event Id : 2        Threshold  : 2500
Sample Interval  : 2147483* SampleType : absolute
Startup Alarm    : either   Owner      : TiMOS CLI
Variable: tmnxCpmFlashUsed.1.11.1
Alarm Id         : 2        Last Value : 835
Rising Event Id  : 3        Threshold  : 10000
Falling Event Id : 4        Threshold  : 5000
Sample Interval  : 2147483* SampleType : absolute
Startup Alarm    : rising   Owner      : TiMOS CLI
Variable: sgiMemoryUsed.0
Alarm Id         : 3        Last Value : 42841056
Rising Event Id  : 5        Threshold  : 4000
Falling Event Id : 6        Threshold  : 2000
Sample Interval  : 2147836  SampleType : absolute
Startup Alarm    : either   Owner      : TiMOS CLI
===============================================================
* indicates that the corresponding row element may have been truncated.
===============================================================
Threshold Events
===============================================================
Description: TiMOS CLI - cflash capacity alarm rising event
Event Id         : 1        Last Sent  : 10/31/2006 08:47:59
Action Type      : both     Owner      : TiMOS CLI
Description: TiMOS CLI - cflash capacity alarm falling event
Event Id         : 2        Last Sent  : 10/31/2006 08:48:00
Action Type      : both     Owner      : TiMOS CLI
Description: TiMOS CLI - cflash capacity warning rising event
Event Id         : 3        Last Sent  : 10/31/2006 08:47:59
Action Type      : both     Owner      : TiMOS CLI
Description: TiMOS CLI - cflash capacity warning falling event
Event Id         : 4        Last Sent  : 10/31/2006 08:47:59
Action Type      : both     Owner      : TiMOS CLI
Description: TiMOS CLI - memory usage alarm rising event
Event Id         : 5        Last Sent  : 10/31/2006 08:48:00
Action Type      : both     Owner      : TiMOS CLI
Description: TiMOS CLI - memory usage alarm falling event
Event Id         : 6        Last Sent  : 10/31/2006 08:47:59
Action Type      : both     Owner      : TiMOS CLI
===============================================================
Threshold Events Log
===============================================================
Description      : TiMOS CLI - cflash capacity alarm falling eve
                   nt : value=835, <=2500 : alarm-index 1, event
                   -index 2 alarm-variable OID tmnxCpmFlashUsed.
                   1.11.1
Event Id         : 2        Time Sent  : 10/31/2006 08:48:00
Description      : TiMOS CLI - memory usage alarm rising event :
                    value=42841056, >=4000 : alarm-index 3, even
                   t-index 5 alarm-variable OID sgiMemoryUsed.0
Event Id         : 5        Time Sent  : 10/31/2006 08:48:00
```

```
===============================================================
A:ALA-48#
```

time

Syntax **time**

Context show>system

Description This command displays the system time and zone configuration parameters.

Output **System Time Output —** The following table describes system time output fields.

Label	Description
Date & Time	The system date and time using the current time zone.
DST Active	Yes — Daylight Savings Time is currently in effect.
	No — Daylight Savings Time is not currently in effect.
Zone	The zone names for the current zone, the non-DST zone, and the DST zone if configured.
Current Time Zone	Indicates the process currently controlling the system time. SNTP, NTP, PTP or NONE.
Zone type	Non-standard — The zone is user-defined.
	Standard — The zone is system defined.
Offset from UTC	The number of hours and minutes added to universal time for the zone, including the DST offset for a DST zone.
Offset from Non-DST	The number of hours (always 0) and minutes (0—60) added to the time at the beginning of Daylight Saving Time and subtracted at the end Daylight Saving Time.
Starts	The date and time Daylight Saving Time begins.
Ends	The date and time Daylight Saving Time ends.

Sample Output

```
A:ALA-1# show system time
===============================================================================
Date & Time
===============================================================================
Current Date & Time : 2006/05/05 23:03:13    DST Active            : yes
Current Zone        : PDT                    Offset from UTC       : -7:00
-------------------------------------------------------------------------------
```

```
Non-DST Zone        : PST                    Offset from UTC       : -8:00
Zone type           : standard
-------------------------------------------------------------------------------
DST Zone            : PDT                    Offset from Non-DST   : 0:60
Starts              : first sunday in april 02:00
Ends                : last sunday in october 02:00
===============================================================================
A:ALA-1#


A:ALA-1# show system time (with no DST zone configured)
===============================================================================
Date & Time
===============================================================================
Current Date & Time : 2006/05/12 11:12:05       DST Active      :     no
Current Zone    : APA       Offset from UTC :  -8:00
-------------------------------------------------------------------------------
Non-DST Zone    : APA       Offset from UTC :  -8:00
Zone Type           : non-standard
-------------------------------------------------------------------------------
No DST zone configured
===============================================================================
A:ALA-1#
```

time

Syntax **time**

Context show

Description This command displays the current day, date, time and time zone.

The time is displayed either in the local time zone or in UTC depending on the setting of the root level **time-display** command for the console session.

Output **Sample Output**

```
A:ALA-49# show time
Tue Oct 31 12:17:15 GMT 2006
```

tod-suite

Syntax **tod-suite** [**detail**]
tod-suite associations
tod-suite failed-associations

Context show>cron

Description This command displays information on the configured time-of-day suite.

Output **CRON TOD Suite Output —** The following table describes TOD suite output fields:

Label	Description
Associations	Shows which SAPs this tod-suite is associated with.
failed-associations	Shows the SAPs or Multiservice sites where the TOD Suite could not be applied successfully.
Detail	Shows the details of this tod-suite.

Sample Output

```
A:kerckhot_4# show cron tod-suite suite_sixteen detail
===============================================================================
Cron tod-suite details
===============================================================================
Name        : suite_sixteen
Type / Id                       Time-range                      Prio  State
-------------------------------------------------------------------------------
Ingress Qos Policy
  1160                          day                             5     Inact
  1190                          night                           6     Activ
Ingress Scheduler Policy
  SchedPolCust1_Day             day                             5     Inact
  SchedPolCust1_Night           night                           6     Activ
Egress Qos Policy
  1160                          day                             5     Inact
  1190                          night                           6     Activ
Egress Scheduler Policy
  SchedPolCust1Egress_Day       day                             5     Inact
===============================================================================
A:kerckhot_4#
```

The following example shows output for TOD suite associations.

```
A:kerckhot_4# show cron tod-suite suite_sixteen associations
===============================================================================
Cron tod-suite associations for suite suite_sixteen
===============================================================================
Service associations
-------------------------------------------------------------------------------
Service Id  : 1                         Type   : VPLS
 SAP 1/1/1:1
 SAP 1/1/1:2
 SAP 1/1/1:3
 SAP 1/1/1:4
 SAP 1/1/1:5
 SAP 1/1/1:6
 SAP 1/1/1:20
-------------------------------------------------------------------------------
Number of SAP's : 7
Customer Multi-Service Site associations
-------------------------------------------------------------------------------
Multi Service Site: mss_1_1
-------------------------------------------------------------------------------
Number of MSS's: 1
```

```
===============================================================================
A:kerckhot_4#
```

The following example shows output for TOD suite failed-associations.

```
A:kerckhot_4# show cron tod-suite suite_sixteen failed-associations
===============================================================================
Cron tod-suite associations failed
===============================================================================
tod-suite suite_sixteen : failed association for SAP
-------------------------------------------------------------------------------
Service Id  : 1                         Type   : VPLS
  SAP 1/1/1:2
  SAP 1/1/1:3
  SAP 1/1/1:4
  SAP 1/1/1:5
  SAP 1/1/1:6
  SAP 1/1/1:20
-------------------------------------------------------------------------------
tod-suite suite_sixteen : failed association for Customer MSS
-------------------------------------------------------------------------------
None
-------------------------------------------------------------------------------
Number of tod-suites failed/total : 1/1
===============================================================================
A:kerckhot_4#
```

Zooming in on one of the failed SAPs, the assignments of QoS and scheduler policies are shown as not as intended:

```
A:kerckhot_4# show service id 1 sap 1/1/1:2
===============================================================================
Service Access Points(SAP)
===============================================================================
Service Id         : 1
SAP                : 1/1/1:2                 Encap             : q-tag
Dot1Q Ethertype    : 0x8100                  QinQ Ethertype    : 0x8100
Admin State        : Up                      Oper State        : Up
Flags              : None
Last Status Change : 10/05/2006 18:11:34
Last Mgmt Change   : 10/05/2006 22:27:48
Max Nbr of MAC Addr: No Limit                Total MAC Addr    : 0
Learned MAC Addr   : 0                       Static MAC Addr   : 0
Admin MTU          : 1518                    Oper MTU          : 1518
Ingress qos-policy : 1130                    Egress qos-policy : 1130
Intend Ing qos-pol*: 1190                    Intend Egr qos-po*: 1190
Shared Q plcy      : n/a                     Multipoint shared : Disabled
Ingr IP Fltr-Id    : n/a                     Egr IP Fltr-Id    : n/a
Ingr Mac Fltr-Id   : n/a                     Egr Mac Fltr-Id   : n/a
Ingr IPv6 Fltr-Id  : n/a                     Egr IPv6 Fltr-Id  : n/a
tod-suite          : suite_sixteen           qinq-pbit-marking : both
Egr Agg Rate Limit : max
ARP Reply Agent    : Unknown                 Host Conn Verify  : Disabled
Mac Learning       : Enabled                 Discard Unkwn Srce: Disabled
Mac Aging          : Enabled                 Mac Pinning       : Disabled
L2PT Termination   : Disabled                BPDU Translation  : Disabled

Multi Svc Site     : None
```

```
I. Sched Pol       : SchedPolCust1
Intend I Sched Pol : SchedPolCust1_Night
E. Sched Pol       : SchedPolCust1Egress
Intend E Sched Pol : SchedPolCust1Egress_Night
Acct. Pol          : None                    Collect Stats     : Disabled
Anti Spoofing      : None                    Nbr Static Hosts  : 0
===============================================================================
A:kerckhot_4#
```

If a time-range is specified for a filter entry, use the **show filter** command to view results:

```
A:kerckhot_4# show filter ip  10
===============================================================================
IP Filter
===============================================================================
Filter Id    : 10                              Applied        : No
Scope        : Template                        Def. Action    : Drop
Entries      : 2
-------------------------------------------------------------------------------
Filter Match Criteria : IP
-------------------------------------------------------------------------------
Entry        : 1010
time-range   : day                             Cur. Status    : Inactive
Log Id       : n/a
Src. IP      : 0.0.0.0/0                       Src. Port      : None
Dest. IP     : 10.10.100.1/24                  Dest. Port     : None
Protocol     : Undefined                       Dscp           : Undefined
ICMP Type    : Undefined                       ICMP Code      : Undefined
Fragment     : Off                             Option-present : Off
Sampling     : Off                             Int. Sampling  : On
IP-Option    : 0/0                             Multiple Option: Off
TCP-syn      : Off                             TCP-ack        : Off
Match action : Forward
Next Hop     : 138.203.228.28
Ing. Matches : 0                               Egr. Matches   : 0
Entry        : 1020
time-range   : night                           Cur. Status    : Active
Log Id       : n/a
Src. IP      : 0.0.0.0/0                       Src. Port      : None
Dest. IP     : 10.10.1.1/16                    Dest. Port     : None
Protocol     : Undefined                       Dscp           : Undefined
ICMP Type    : Undefined                       ICMP Code      : Undefined
Fragment     : Off                             Option-present : Off
Sampling     : Off                             Int. Sampling  : On
IP-Option    : 0/0                             Multiple Option: Off
TCP-syn      : Off                             TCP-ack        : Off
Match action : Forward
Next Hop     : 172.22.184.101
Ing. Matches : 0                               Egr. Matches   : 0
===============================================================================
A:kerckhot_4#
```

If a filter is referred to in a TOD Suite assignment, use the show filter associations command to view the output:

```
A:kerckhot_4# show filter ip 160 associations
===============================================================================
IP Filter
===============================================================================
Filter Id    : 160                             Applied        : No
```

```
Scope        : Template                          Def. Action    : Drop
Entries      : 0
-------------------------------------------------------------------------------
Filter Association : IP
-------------------------------------------------------------------------------
Tod-suite "english_suite"
 - ingress, time-range "day" (priority 5)
===============================================================================
A:kerckhot_4#
```

redundancy

Syntax **redundancy**

Context show

Description This command enables the context to show redundancy information.

mgmt-ethernet

Syntax **mgmt-ethernet**

Context show>redundancy

Description This command shows the management Ethernet port redundancy status. The **show router "management" interface** command also shows the CPM Ethernet port used by the management interface. If the primary CPM's port is active, then it shows "A/1" under the Port field,. If the secondary CPM's port is active, then it shows "B/1 -> A/1"in the Port field.

This feature is not supported on 7750 SR-a, 7750 SR-c or VSR platforms.

Output **Show Redundancy Mgmt-Ethernet Output —** The following table describes the Redundancy Mgmt-Ethernet fields:

Label	Description
Admin Status	Enabled — Administrative status is enabled. Disabled — Administratively disabled.
Oper Status	Displays the CPM on which the management Ethernet port is operating.
Revert Time	Displays the revert time.

Sample Output

```
A:SR12# show redundancy mgmt-ethernet

===============================================================================
Management Ethernet Redundancy
===============================================================================
```

```
Admin Status  : Enabled
Oper Status   : Management port operating on active CPM
Revert Time   : 5 seconds
===============================================================================
```

Show Router "Management" Interface Detail Output — The following is a sample output that shows "A/1" when the primary CPM's Ethernet port is acitve and "B/1 ->A/1" if the secondary CPM's port is active.

```
*B:Dut-A# show router "management" interface

===============================================================================
Interface Table (Router: management)
===============================================================================
Interface-Name                   Adm          Opr(v4/v6)  Mode    Port/SapId
   IP-Address                                                     PfxState
-------------------------------------------------------------------------------
management                       Up           Up/Up       Network B/1 -> A/1
   138.120.186.219/24                                             n/a
   3000::8a78:badb/96                                             PREFERRED
   fe80::221:5ff:fece:df49/64                                     PREFERRED
-------------------------------------------------------------------------------
Interfaces : 1
===============================================================================

*B:Dut-A# show router "management" interface detail

===============================================================================
Interface Table (Router: management)
===============================================================================

-------------------------------------------------------------------------------
Interface
-------------------------------------------------------------------------------
If Name          : management
Admin State      : Up                   Oper (v4/v6)      : Up/Up
Protocols        : None
IP Addr/mask     : 138.120.186.219/24   Address Type      : Primary
IGP Inhibit      : Disabled             Broadcast Address : Host-ones
HoldUp-Time      : 0                    Track Srrp Inst   : 0
IPv6 Address     : 3000::8a78:badb/96
IPv6 Addr State  : PREFERRED
CGA modifier     : (Not Specified)
HoldUp-Time      : 0                    Track Srrp Inst   : 0
Link Lcl Address : fe80::221:5ff:fece:df49/64
Link Lcl State   : PREFERRED
-------------------------------------------------------------------------------
Details
-------------------------------------------------------------------------------
Description      : (Not Specified)
If Index         : 1280                 Virt. If Index    : 1280
Last Oper Chg    : 06/16/2015 21:01:07  Global If Index   : 16384
Lag Link Map Prof: none
Port Id          : B/1 -> A/1
TOS Marking      : Trusted              If Type           : Network
Egress Filter    : none                 Ingress Filter    : none
Egr IPv6 Flt     : none                 Ingr IPv6 Flt     : none
BGP IP FlowSpec  : Disabled
BGP IPv6 FlowSpec: Disabled
SNTP B.Cast      : True                 Network QoS Policy: 1
```

```
MAC Address      : 00:21:05:ce:df:49    Mac Accounting    : Disabled
```

multi-chassis

Syntax **multi-chassis**

Context show>redundancy

Description This command enables the context to show multi-chassis redundancy information.

all

Syntax **all** [**detail**]

Context show>redundancy>multi-chassis

Description This command displays brief multi-chassis redundancy information.

Parameters **detail** — Shows detailed multi-chassis redundancy information.

Output **Show Redundancy Multi-Chassis All Output —** The following table describes Redundancy Multi-Chassis All fields:

Label	Description
Peer IP Address	Displays the multi-chassis redundancy peer.
Description	The text string describing the peer.
Authentication	If configured, displays the authentication key used between this node and the MC peer.
Source IP Address	Displays the source address used to communicate with the MC peer.
Admin State	Displays the administrative state of the peer.

Sample Output

```
B:Dut-B# show redundancy multi-chassis all
===============================================================================
Multi-chassis Peer Table
===============================================================================
Peer
-------------------------------------------------------------------------------
Peer IP Address         : 10.10.10.2
Description             : Mc-Lag peer 10.10.10.2
Authentication          : Disabled
Source IP Address       : 0.0.0.0
Admin State             : Enabled
===============================================================================
B:Dut-B#
```

```
B:Dut-B# show lag detail
===============================================================================
LAG Details
===============================================================================
LAG 1
-------------------------------------------------------------------------------
Description: Description For LAG Number 1
-------------------------------------------------------------------------------
Details
-------------------------------------------------------------------------------
Lag-id              : 1                     Mode                 : access
Adm                 : up                    Opr                  : up
Thres. Exceeded Cnt : 9                     Port Threshold       : 0
Thres. Last Cleared : 05/20/2006 00:12:35   Threshold Action     : down
Dynamic Cost        : false                 Encap Type           : null
Configured Address  : 1c:71:ff:00:01:41     Lag-IfIndex          : 1342177281
Hardware Address    : 1c:71:ff:00:01:41     Adapt Qos            : distribute
Hold-time Down      : 0.0 sec
LACP                : enabled               Mode                 : active
LACP Transmit Intvl : fast                  LACP xmit stdby      : enabled
Selection Criteria  : highest-count         Slave-to-partner     : disabled
Number of sub-groups: 1                     Forced               : -
System Id           : 1c:71:ff:00:00:00     System Priority      : 32768
Admin Key           : 32768                 Oper Key             : 32666
Prtr System Id      : 20:f4:ff:00:00:00     Prtr System Priority : 32768
Prtr Oper Key       : 32768

MC Peer Address     : 10.10.10.2            MC Peer Lag-id       : 1
MC System Id        : 00:00:00:33:33:33     MC System Priority   : 32888
MC Admin Key        : 32666                 MC Active/Standby    : active
MC Lacp ID in use   : true                  MC extended timeout  : false
MC Selection Logic  : peer decided
MC Config Mismatch  : no mismatch
-------------------------------------------------------------------------------
Port-id        Adm    Act/Stdby Opr    Primary   Sub-group     Forced   Prio
-------------------------------------------------------------------------------
331/2/1          up     active    up     yes       1             -        32768
331/2/2          up     active    up               1             -        32768
331/2/3          up     active    up               1             -        32768
331/2/4          up     active    up               1             -        32768
-------------------------------------------------------------------------------
Port-id        Role      Exp   Def   Dist  Col   Syn   Aggr  Timeout  Activity
-------------------------------------------------------------------------------
331/2/1          actor     No    No    Yes   Yes   Yes   Yes   Yes      Yes
331/2/1          partner   No    No    Yes   Yes   Yes   Yes   Yes      Yes
331/2/2          actor     No    No    Yes   Yes   Yes   Yes   Yes      Yes
331/2/2          partner   No    No    Yes   Yes   Yes   Yes   Yes      Yes
331/2/3          actor     No    No    Yes   Yes   Yes   Yes   Yes      Yes
331/2/3          partner   No    No    Yes   Yes   Yes   Yes   Yes      Yes
331/2/4          actor     No    No    Yes   Yes   Yes   Yes   Yes      Yes
331/2/4          partner   No    No    Yes   Yes   Yes   Yes   Yes      Yes
===============================================================================
B:Dut-B#
```

mc-endpoint

Syntax **mc-endpoint statistics**
mc-endpoint peer *[ip-address]* **statistics**
mc-endpoint endpoint [*mcep-id*] **statistics**
mc-endpoint peer [*ip-address*]

Context show>redundancy>multi-chassis

Description This command displays multi-chassis endpoint information.

Parameters **statistics —** Displays the global statistics for the MC endpoint.

peer *ip-address* **—** Specifies the IP address of multi-chassis end-point peer.

endpoint *mcep-id* **—** Specifies the nulti-chassis endpoint.

Values 1 — 4294967295

Sample Output

```
*A:Dut-B# show redundancy multi-chassis mc-endpoint statistics
===============================================================================
Multi-Chassis Endpoint Global Statistics
===============================================================================
Packets Rx                                 : 533
Packets Rx Keepalive                       : 522
Packets Rx Config                          : 3
Packets Rx Peer Config                     : 1
Packets Rx State                           : 7
Packets Dropped Keep-Alive Task            : 7
Packets Dropped Too Short                  : 0
Packets Dropped Verify Failed              : 0
Packets Dropped Tlv Invalid Size           : 0
Packets Dropped Out Of Seq                 : 0
Packets Dropped Unknown Tlv                : 0
Packets Dropped Tlv Invalid MC-Endpoint Id  : 0
Packets Dropped MD5                        : 0
Packets Dropped Unknown Peer               : 0
Packets Dropped MC Endpoint No Peer        : 0
Packets Tx                                 : 26099
Packets Tx Keepalive                       : 8221
Packets Tx Config                          : 2
Packets Tx Peer Config                     : 17872
Packets Tx State                           : 4
Packets Tx Failed                          : 0
===============================================================================
*A:Dut-B#

*A:Dut-B# show redundancy multi-chassis mc-endpoint peer 3.1.1.3 statistics
===============================================================================
Multi-Chassis MC-Endpoint Statistics
===============================================================================
Peer Addr                        : 3.1.1.3
-------------------------------------------------------------------------------
Packets Rx                       : 597
Packets Rx Keepalive             : 586
Packets Rx Config                : 3
Packets Rx Peer Config           : 1
Packets Rx State                 : 7
```

```
Packets Dropped State Disabled    : 0
Packets Dropped Packets Too Short : 0
Packets Dropped Tlv Invalid Size  : 0
Packets Dropped Tlv Invalid LagId : 0
Packets Dropped Out of Seq        : 0
Packets Dropped Unknown Tlv       : 0
Packets Dropped MD5               : 0
Packets Tx                        : 636
Packets Tx Keepalive              : 600
Packets Tx Peer Config            : 30
Packets Tx Failed                 : 0
Packets Dropped No Peer           : 0
===============================================================================
*A:Dut-B#

*A:Dut-B# show redundancy multi-chassis mc-endpoint  endpoint 1 statistics
===============================================================================
Multi-Chassis Endpoint Statistics
===============================================================================
===============================================================================
MC-Endpoint Id 1
===============================================================================
Packets Rx Config                 : 3
Packets Rx State                  : 7
Packets Tx Config                 : 2
Packets Tx State                  : 4
Packets Tx Failed                 : 0
===============================================================================
Number of Entries 1
===============================================================================
```

mc-lag

Syntax **mc-lag** [**lag** *lag-id*]

Context show>redundancy>multi-chassis

Description This command displays multi-chassis LAG information.

Parameters **lag** *lag-id* — Shows information for the specified LAG identifier.

Values 1 — 800

mc-mobile

Syntax **mc-mobile peer** {*ip-address* | *ip6-address*}

Context show>redundancy>multi-chassis

Description This command displays multi-chassis LAG information.

Parameters *ip-address* — Shows information for the specified IPv4 peer.

ipv6-address — Shows information for the specified IPv6 peer.

Sample Output

```
*A:Dut-A# show redundancy multi-chassis mc-mobile peer 10.90.1.2
===============================================================================
Multi-chassis Peer Mc-Mobile Table
===============================================================================
Peer                  : 10.90.1.2
Last State Change     : 12/04/2012 23:23:43
Admin State           : Up/Down               Oper State      : Up/Down/ISSU
Peer Version          : 5.0Rx
Keep Alive            : 10 deci-sec      Hold On Nbr Fail     : 3
BFD Svc ID            : 0                BFD Interface Name   : mc_intloopback
-------------------------------------------------------------------------------
Gateway Id            : 2
-------------------------------------------------------------------------------
Admin Role            : Primary          Oper Role            : Master
Peer Admin Role       : Secondary        Peer Oper Role       : Slave
Admin State           : Up               Oper State           : Up
Last Time Peer Connected : 12/04/2012 23:23:43

Last State Change     : 12/04/2012 23:23:43
Last State Chg Reason: Traffic Evnt
Geo-Redundancy State : Hot

CPM                   : 0                Geo Redundancy       : Hot
MSCP Group            : 1                Geo Redundancy       : Hot
===============================================================================
*A:Dut-A#
```

peer

Syntax **peer** *ip-address* [**lag** *lag-id*]

Context show>redundancy>multi-chassis>mc-lag

Description This command enables the context to display mc-lag peer-related redundancy information.

Parameters *ip-address* — Shows peer information about the specified IP address.

lag *lag-id* **—** Shows information for the specified LAG identifier.

Values 1 — 800

Output **Show Redundancy Multi-chassis MC-Lag Peer Output —** The following table describes show redundancy multi-chassis mc-lag peer output fields:

Label	Description
Last Changed	Displays date and time of the last mc-lag peer.
Admin State	Displays the administrative state of the mc-lag peer.
Oper State	Displays the operation state of the mc-lag peer.

Label	Description
KeepAlive	Displays the length of time to keep alive the mg-lag peer.
Hold On Ngbr Failure	Specifies how many “keepalive” intervals the standby SR will wait for packets from the active node before assuming a redundant-neighbor node failure.

Sample Output

```
A:subscr_mgt# show redundancy multi-chassis mc-lag peer 10.10.10.30
===============================================================================
Multi-Chassis MC-Lag Peer 10.10.10.30
===============================================================================
Last Changed    : 01/23/2007 18:20:13
Admin State     : Up                  Oper State           : Up
KeepAlive       : 10 deci-seconds     Hold On Ngbr Failure : 3
-------------------------------------------------------------------------------
Lag Id Lacp Key Remote Lag Id System Id          Sys Prio Last Changed
-------------------------------------------------------------------------------
1      1        1             00:00:00:00:00:01  1        01/23/2007 18:20:13
2      2        2             00:00:00:00:00:02  2        01/24/2007 08:53:48
-------------------------------------------------------------------------------
Number of LAGs : 2
===============================================================================
A:subscr_mgt#


A:subscr_mgt# show redundancy multi-chassis mc-lag peer 10.10.10.30 lag 1
===============================================================================
Multi-Chassis MC-Lag Peer 10.10.10.30
===============================================================================
Last Changed    : 01/23/2007 18:20:13
Admin State     : Up                  Oper State           : Up
KeepAlive       : 10 deci-seconds     Hold On Ngbr Failure : 3
-------------------------------------------------------------------------------
Lag Id Lacp Key Remote Lag Id System Id          Sys Prio Last Changed
-------------------------------------------------------------------------------
1      1        1             00:00:00:00:00:01  1        01/23/2007 18:20:13
-------------------------------------------------------------------------------
Number of LAGs : 1
===============================================================================
A:subscr_mgt#
```

statistics

Syntax **statistics mc-lag** [**peer** *ip-address* [**lag** *lag-id*]]

Context show>redundancy>multi-chassis>mc-lag

Description This command displays multi-chassis statistics.

Parameters **mc-lag —** Displays multi-chassis LAG statistics.

peer *ip-address* — Shows the specified address of the multi-chassis peer.

lag *lag-id* — Shows information for the specified LAG identifier.

Values 1 — 800

Output **Show Redundancy Multi-chassis MC-Lag Peer Statistics Output —** The following table describes show redundancy multi-chassis mc-lag peer output fields:

Label	Description
Packets Rx	Indicates the number of MC-Lag packets received from the peer.
Packets Rx Keepalive	Indicates the number of MC-Lag keepalive packets received from the peer.
Packets Rx Config	Indicates the number of received MC-Lag configured packets from the peer.
Packets Rx Peer Config	Indicates the number of received MC-Lag packets configured by the peer.
Packets Rx State	Indicates the number of MC-Lag "lag" state packets received from the peer.
Packets Dropped State Disabled	Indicates the number of packets that were dropped because the peer was administratively disabled.
Packets Dropped Packets Too Short	Indicates the number of packets that were dropped because the packet was too short.
Packets Dropped Tlv Invalid Size	Indicates the number of packets that were dropped because the packet size was invalid.
Packets Dropped Tlv Invalid LagId	Indicates the number of packets that were dropped because the packet referred to an invalid or non multi-chassis lag.
Packets Dropped Out of Seq	Indicates the number of packets that were dropped because the packet size was out of sequence.
Packets Dropped Unknown Tlv	Indicates the number of packets that were dropped because the packet contained an unknown TLV.
Packets Dropped MD5	Indicates the number of packets that were dropped because the packet failed MD5 authentication.
Packets Tx	Indicates the number of packets transmitted from this system to the peer.
Packets Tx Keepalive	Indicates the number of keepalive packets transmitted from this system to the peer.
Packets Tx Peer Config	Indicates the number of configured packets transmitted from this system to the peer.
Packets Tx Failed	Indicates the number of packets that failed to be transmitted from this system to the peer.

Label	Description (Continued)

Sample Output

```
A:subscr_mgt# show redundancy multi-chassis mc-lag statistics
===============================================================================
Multi-Chassis Statistics
===============================================================================
Packets Rx                        : 52535
Packets Rx Keepalive              : 52518
Packets Rx Config                 : 2
Packets Rx Peer Config            : 4
Packets Rx State                  : 6
Packets Dropped KeepaliveTask     : 0
Packets Dropped Packet Too Short  : 0
Packets Dropped Verify Failed     : 0
Packets Dropped Tlv Invalid Size  : 0
Packets Dropped Out of Seq        : 0
Packets Dropped Unknown Tlv       : 0
Packets Dropped Tlv Invalid LagId : 0
Packets Dropped MD5               : 0
Packets Dropped Unknown Peer      : 0
Packets Tx                        : 52583
Packets Tx Keepalive              : 52519
Packets Tx Config                 : 2
Packets Tx Peer Config            : 54
Packets Tx State                  : 8
Packets Tx Failed                 : 0
===============================================================================
A:subscr_mgt#

B:Dut-B# show redundancy multi-chassis mc-lag peer 10.10.10.2 statistics
===============================================================================
Multi-Chassis Statistics, Peer 10.10.10.2
===============================================================================
Packets Rx                        : 231
Packets Rx Keepalive              : 216
Packets Rx Config                 : 1
Packets Rx Peer Config            : 2
Packets Rx State                  : 12
Packets Dropped State Disabled    : 0
Packets Dropped Packets Too Short : 0
Packets Dropped Tlv Invalid Size  : 0
Packets Dropped Tlv Invalid LagId : 0
Packets Dropped Out of Seq        : 0
Packets Dropped Unknown Tlv       : 0
Packets Dropped MD5               : 0
Packets Tx                        : 235
Packets Tx Keepalive              : 216
Packets Tx Peer Config            : 3
Packets Tx Failed                 : 0
===============================================================================
B:Dut-B#
```

mc-ring

Syntax **mc-ring peer** *ip-address* **statistics**
mc-ring peer *ip-address* [**ring** *sync-tag* [**detail**|**statistics**]]
mc-ring peer *ip-address* **ring** *sync-tag* **ring-node** [*ring-node-name* [**detail**|**statistics**]]
mc-ring global-statistics

Context show>redundancy>multi-chassis

Description This command displays multi-chassis ring information.

Parameters *ip-address* — Specifies the address of the multi-chassis peer to display.

ring *sync-tag* **—** Specifies a synchronization tag to be displayed that was used while synchronizing this port with the multi-chassis peer.

node *ring-node-name* **—** Specifies a ring-node name.

global-statistics — Displays global statistics for the multi-chassis ring.

detail — Displays detailed peer information for the multi-chassis ring.

Output **Show mc-ring peer ip-address ring Output —** The following table describes mc-ring peer ip-address ring output fields.

Label	Description
Sync Tag	Displays the synchronization tag that was used while synchronizing this port with the multi-chassis peer.
Oper State	noPeer – The peer has no corresponding ring configured.
	connected – The in-band control connection with the peer is operational.
	broken – The in-band control connection with the peer has timed out.
	conflict – The in-band control connection with the peer has timed out but the physical connection is still OK; the failure of the in-band signaling connection is caused by a misconfiguration. For example, a conflict between the configuration of this system and its peer, or a misconfiguration on one of the ring access node systems.
	testingRing – The in-band control connection with the peer is being set up. Waiting for result.
	waitingForPeer – Verifying if this ring is configured on the peer.
	configErr – The ring is administratively up, but a configuration error prevents it from operating properly.
	halfBroken – The in-band control connection indicates that the ring is broken in one direction (towards the peer).

Label	Description
	localBroken – The in-band control connection with the peer is known to be broken due to local failure or local administrative action. shutdown – The ring is shutdown.
Failure Reason	Displays the reason of the failure of the operational state of a MC ring.
No. of MC Ring entries	Displays the number of MC ring entries.

Sample Output

```
*A:ALA-48>show>redundancy>multi-chassis# mc-ring peer 10.0.0.2 ring ring11 detail
===============================================================================
Multi-Chassis MC-Ring Detailed Information
===============================================================================
Peer           : 10.0.0.2
Sync Tag       : ring11
Port ID        : 1/1/3
Admin State    : inService
Oper State     : connected
Admin Change   : 01/07/2008 21:40:07
Oper Change    : 01/07/2008 21:40:24
Failure Reason : None
-------------------------------------------------------------------------------
In Band Control Path
-------------------------------------------------------------------------------
Service ID     : 10
Interface Name : to_an1
Oper State     : connected
Dest IP        : 10.10.0.2
Src  IP        : 10.10.0.1
-------------------------------------------------------------------------------
VLAN Map B Path Provisioned
-------------------------------------------------------------------------------
range 13-13
range 17-17
-------------------------------------------------------------------------------
VLAN Map Excluded Path Provisioned
-------------------------------------------------------------------------------
range 18-18
-------------------------------------------------------------------------------
VLAN Map B Path Operational
-------------------------------------------------------------------------------
range 13-13
range 17-17
-------------------------------------------------------------------------------
VLAN Map Excluded Path Operational
-------------------------------------------------------------------------------
range 18-18
===============================================================================
*A:ALA-48>show>redundancy>multi-chassis#


*A:ALA-48>show>redundancy>multi-chassis# mc-ring peer 192.251.10.104
```

```
===============================================================================
MC Ring entries
===============================================================================
Sync Tag                        Oper State      Failure Reason
-------------------------------------------------------------------------------
No. of MC Ring entries: 0
===============================================================================
*A:ALA-48>show>redundancy>multi-chassis#


*A:ALA-48>show>redundancy>multi-chassis# mc-ring peer 10.0.0.2
===============================================================================
MC Ring entries
===============================================================================
Sync Tag                        Oper State      Failure Reason
-------------------------------------------------------------------------------
ring11                          connected       None
ring12                          shutdown        None
-------------------------------------------------------------------------------
No. of MC Ring entries: 4
===============================================================================
*A:ALA-48>show>redundancy>multi-chassis#


*A:ALA-48>show>redundancy>multi-chassis# mc-ring peer 10.0.0.2 ring ring11 ring-node an1
detail
===============================================================================
Multi-Chassis MC-Ring Node Detailed Information
===============================================================================
Peer           : 10.0.0.2
Sync Tag       : ring11
Node Name      : an1
Oper State Loc : connected
Oper State Rem : notTested
In Use         : True
Admin Change   : 01/07/2008 21:40:07
Oper Change    : 01/07/2008 21:40:25
Failure Reason : None
-------------------------------------------------------------------------------
Ring Node Connectivity Verification
-------------------------------------------------------------------------------
Admin State    : inService
Service ID     : 11
VLAN Tag       : 11
Dest IP        : 10.11.3.1
Src  IP        : None
Interval       : 1 minutes
Src MAC        : None
===============================================================================
*A:ALA-48>show>redundancy>multi-chassis#


*A:ALA-48>show>redundancy>multi-chassis# mc-ring peer 10.0.0.2 ring ring11 ring-node
===============================================================================
MC Ring Node entries
===============================================================================
Name                            Loc Oper St.      Failure Reason
  In Use                          Rem Oper St.
-------------------------------------------------------------------------------
```

```
an1                              connected         None
  Yes                              notTested
an2                              connected         None
  Yes                              notTested
-------------------------------------------------------------------------------
No. of MC Ring Node entries: 2
===============================================================================
*A:ALA-48>show>redundancy>multi-chassis#
```

Show Redundancy Multi-Chassis Ring Peer Statistics Output — The following table describes multi-chassis ring peer output fields.

Label	Description
Message	Displays the message type.
Received	Indicates the number of valid MC-ring signalling messages received from the peer.
Transmitted	Indicates the number of valid MC-ring signalling messages transmitted from the peer.
MCS ID Request	Displays the number of valid MCS ID requests were received from the peer.
MCS ID Response	Displays the number of valid MCS ID responses were received from the peer.
Ring Exists Request	Displays the number of valid 'ring exists' requests were received from the peer.
Ring Exists Response	Displays the number of valid ring exists' responses were received from the peer.
Keepalive	Displays the number of valid MC-ring control packets of type 'keepalive' were received from the peer.

Sample Output

```
*A:ALA-48>show>redundancy>multi-chassis# mc-ring peer 192.251.10.104 statistics
===============================================================================
MC Ring statistics for peer 192.251.10.104
===============================================================================
Message                                          Received     Transmitted
-------------------------------------------------------------------------------
MCS ID Request                                   0            0
MCS ID Response                                  0            0
Ring Exists Request                              0            0
Ring Exists Response                             0            0
Keepalive                                        0            0
-------------------------------------------------------------------------------
Total                                            0            0
===============================================================================
*A:ALA-48>show>redundancy>multi-chassis#
```

Show mc-ring ring-node Command Output

Label	Description
Oper State	Displays the state of the connection verification (both local and remote). notProvisioned – Connection verification is not provisioned. configErr – Connection verification is provisioned but a configuration error prevents it from operating properly. notTested – Connection verification is administratively disabled or is not possible in the current situation. testing – Connection Verification is active, but no results are yet available. connected – The ring node is reachable. disconnected – Connection verification has timed out.
In Use	Displays "True" if the ring node is referenced on an e-pipe or as an inter-dest-id on a static host or dynamic lease.

Show mc-ring global-statistics Command Output

Label	Description
Rx	Displays the number of MC-ring signalling packets were received by this system.
Rx Too Short	Displays the number of MC-ring signalling packets were received by this system that were too short.
Rx Wrong Authentication	Displays the number of MC-ring signalling packets were received by this system with invalid authentication.
Rx Invalid TLV	Displays the number of MC-ring signalling packets were received by this system with invalid TLV.
Rx Incomplete	Displays the number of MC-ring signalling packets were received by this system that were incomplete.
Rx Unknown Type	Displays the number of MC-ring signalling packets were received by this system that were of unknown type.
Rx Unknown Peer	Displays the number of MC-ring signalling packets were received by this system that were related to an unknown peer.
Rx Unknown Ring	Displays the number of MC-ring signalling packets were received by this system that were related to an unknown ring.

Label	Description
Rx Unknown Ring Node	Displays the number of MC-ring signalling packets were received by this system that were related to an unknown ring node.
Tx	Displays the number of MC-ring signalling packets were transmitted by this system.
Tx No Buffer	Displays the number of MC-ring signalling packets could not be transmitted by this system due to a lack of packet buffers.
Tx Transmission Failed	Displays the number of MC-ring signalling packets could not be transmitted by this system due to a transmission failure.
Tx Unknown Destination	Displays the number of MC-ring 'unknown destination' signalling packets were transmitted by this system.
Missed Configuration Events	Displays the number of missed configuration events on this system.
Missed BFD Events	Displays the number of missed BFD events on this system.

```
*A:ALA-48>show>redundancy>multi-chassis# mc-ring global-statistics
===============================================================================
Global MC Ring statistics
===============================================================================
Rx                          : 0
Rx Too Short                : 0
Rx Wrong Authentication     : 0
Rx Invalid TLV              : 0
Rx Incomplete               : 0
Rx Unknown Type             : 0
Rx Unknown Peer             : 0
Rx Unknown Ring             : 0
Rx Unknown Ring Node        : 0
Tx                          : 36763
Tx No Buffer                : 0
Tx Transmission Failed      : 0
Tx Unknown Destination      : 0
Missed Configuration Events : 0
Missed BFD Events           : 0
===============================================================================
*A:ALA-48>show>redundancy>multi-chassis#
```

sync

Syntax **sync** [**port** *port-id* | *lag-id*]

Context show>redundancy>multi-chassis

Description This command displays synchronization information.

Parameters **port** *port-id* — Shows the specified port ID of the multi-chassis peer.

lag *lag-id* — Shows information for the specified LAG identifier.

Values 1 — 800

Output **Show Redundancy Multi-chassis Sync Output —** The following table describes show redundancy multi-chassis sync output fields:

Label	Description
Peer IP Address	Displays the multi-chassis redundancy peer.
Description	The text string describing the peer.
Authentication	If configured, displays the authentication key used between this node and the multi-chassis peer.
Source IP Address	Displays the source address used to communicate with the multi-chassis peer.
Admin State	Displays the administrative state of the peer.
Client Applications	Displays the list of client applications synchronized between SRs.
Sync Admin State	Displays the administrative state of the synchronization.
Sync Oper State	Displays the operation state of the synchronization.
DB Sync State	Displays the database state of the synchronization.
Num Entries	Displays the number of entries on local router.
Lcl Deleted Entries	Displays the number of deleted entries made at the local router.
Alarm Entries	Displays the alarm entries on the local router.
Rem Num Entries	Displays the number of entries on the remote router.
Rem Lcl Deleted Entries	Displays the number of locally deleting entries made by the remote router.
Rem Alarm Entries	Displays alarm entries on the remote router.

Sample Output

```
*A:subscr_mgt_2# show redundancy multi-chassis sync
===============================================================================
Multi-chassis Peer Table
===============================================================================
Peer
-------------------------------------------------------------------------------
Peer IP Address         : 10.10.10.20
Description             : Mc-Lag peer 10.10.10.20
Authentication          : Disabled
Source IP Address       : 0.0.0.0
```

```
Admin State             : Enabled
-------------------------------------------------------------------------------
Sync-status
-------------------------------------------------------------------------------
Client Applications     : SUBMGMT
Sync Admin State        : Up
Sync Oper State         : Up
DB Sync State           : inSync
Num Entries             : 1
Lcl Deleted Entries     : 0
Alarm Entries           : 0
Rem Num Entries         : 1
Rem Lcl Deleted Entries : 0
Rem Alarm Entries       : 0
===============================================================================
A:subscr_mgt_2#
```

peer

Syntax **peer** *ip-address*

Context show>redundancy>multi-chassis>sync

Description This command enables the context to display peer-related redundancy information.

Parameters *ip-address* — Shows peer information about the specified IP address.

Output **Show Redundancy Multi-chassis Sync Peer Output —** The following table describes show redundancy multi-chassis sync output fields:

Label	Description
Peer IP Address	Displays the multi-chassis redundancy peer.
Description	The text string describing the peer.
Authentication	If configured, displays the authentication key used between this node and the multi-chassis peer.
Source IP Address	Displays the source address used to communicate with the multi-chassis peer.
Admin State	Displays the administrative state of the peer.
Client Applications	Displays the list of client applications synchronized between SRs.
Sync Admin State	Displays the administrative state of the synchronization.
Sync Oper State	Displays the operation state of the synchronization.
DB Sync State	Displays the database state of the synchronization.
Num Entries	Displays the number of entries on local router.

Lcl Deleted Entries	Displays the number of deleted entries made at the local router.
Alarm Entries	Displays the alarm entries on the local router.
Rem Num Entries	Displays the number of entries on the remote router.
Rem Lcl Deleted Entries	Displays the number of locally deleting entries made by the remote router.
Rem Alarm Entries	Displays alarm entries on the remote router.

Sample Output

```
*A:subscr_mgt_2# show redundancy multi-chassis sync peer 10.10.10.20
===============================================================================
Multi-chassis Peer Table
===============================================================================
Peer
-------------------------------------------------------------------------------
Peer IP Address         : 10.10.10.20
Description             : Mc-Lag peer 10.10.10.20
Authentication          : Disabled
Source IP Address       : 0.0.0.0
Admin State             : Enabled
-------------------------------------------------------------------------------
Sync-status
-------------------------------------------------------------------------------
Client Applications     : SUBMGMT
Sync Admin State        : Up
Sync Oper State         : Up
DB Sync State           : inSync
Num Entries             : 1
Lcl Deleted Entries     : 0
Alarm Entries           : 0
Rem Num Entries         : 1
Rem Lcl Deleted Entries : 0
Rem Alarm Entries       : 0
===============================================================================
MCS Application Stats
===============================================================================
Application             : igmp
Num Entries             : 0
Lcl Deleted Entries     : 0
Alarm Entries           : 0
-------------------------------------------------------------------------------
Rem Num Entries         : 0
Rem Lcl Deleted Entries : 0
Rem Alarm Entries       : 0
-------------------------------------------------------------------------------
Application             : igmpSnooping
Num Entries             : 0
Lcl Deleted Entries     : 0
Alarm Entries           : 0
-------------------------------------------------------------------------------
Rem Num Entries         : 0
Rem Lcl Deleted Entries : 0
```

```
Rem Alarm Entries       : 0
-------------------------------------------------------------------------------
Application             : subMgmt
Num Entries             : 1
Lcl Deleted Entries     : 0
Alarm Entries           : 0
-------------------------------------------------------------------------------
Rem Num Entries         : 1
Rem Lcl Deleted Entries : 0
Rem Alarm Entries       : 0
-------------------------------------------------------------------------------
Application             : srrp
Num Entries             : 0
Lcl Deleted Entries     : 0
Alarm Entries           : 0
-------------------------------------------------------------------------------
Rem Num Entries         : 0
Rem Lcl Deleted Entries : 0
Rem Alarm Entries       : 0
===============================================================================
*A:subscr_mgt_2#
```

detail

Syntax **detail**

Context show>redundancy>multi-chassis>peer

Description This command displays detailed peer information.

Output **Show Redundancy Multi-chassis Sync Peer Detail Output —** The following table describes show redundancy multi-chassis sync detail output fields:

Label	Description
Peer IP Address	Displays the multi-chassis redundancy peer.
Description	The text string describing the peer.
Authentication	If configured, displays the authentication key used between this node and the multi-chassis peer.
Source IP Address	Displays the source address used to communicate with the multi-chassis peer.
Admin State	Displays the administrative state of the peer.
Client Applica-tions	Displays the list of client applications synchronized between routers.
Sync Admin State	Displays the administrative state of the synchronization.
Sync Oper State	Displays the operation state of the synchronization.

Label	Description (Continued)
DB Sync State	Displays the database state of the synchronization.
Num Entries	Displays the number of entries on local router.
Lcl Deleted Entries	Displays the number of deleted entries made at the local router.
Alarm Entries	Displays the alarm entries on the local router.
Rem Num Entries	Displays the number of entries on the remote router.
Rem Lcl Deleted Entries	Displays the number of locally deleting entries made by the remote router.
Rem Alarm Entries	Displays alarm entries on the remote router.

Sample Output

```
*A:subscr_mgt_2# show redundancy multi-chassis sync peer 10.10.10.20 detail
===============================================================================
Multi-chassis Peer Table
===============================================================================
Peer
-------------------------------------------------------------------------------
Peer IP Address         : 10.10.10.20
Description             : Mc-Lag peer 10.10.10.20
Authentication          : Disabled
Source IP Address       : 0.0.0.0
Admin State             : Enabled
-------------------------------------------------------------------------------
Sync-status
-------------------------------------------------------------------------------
Client Applications     : SUBMGMT
Sync Admin State        : Up
Sync Oper State         : Up
DB Sync State           : inSync
Num Entries             : 1
Lcl Deleted Entries     : 0
Alarm Entries           : 0
Rem Num Entries         : 1
Rem Lcl Deleted Entries : 0
Rem Alarm Entries       : 0
===============================================================================
MCS Application Stats
===============================================================================
Application             : igmp
Num Entries             : 0
Lcl Deleted Entries     : 0
Alarm Entries           : 0
-------------------------------------------------------------------------------
Rem Num Entries         : 0
Rem Lcl Deleted Entries : 0
Rem Alarm Entries       : 0
```

```
-------------------------------------------------------------------------------
Application             : igmpSnooping
Num Entries             : 0
Lcl Deleted Entries     : 0
Alarm Entries           : 0
-------------------------------------------------------------------------------
Rem Num Entries         : 0
Rem Lcl Deleted Entries : 0
Rem Alarm Entries       : 0
-------------------------------------------------------------------------------
Application             : subMgmt
Num Entries             : 1
Lcl Deleted Entries     : 0
Alarm Entries           : 0
-------------------------------------------------------------------------------
Rem Num Entries         : 1
Rem Lcl Deleted Entries : 0
Rem Alarm Entries       : 0
-------------------------------------------------------------------------------
Application             : srrp
Num Entries             : 0
Lcl Deleted Entries     : 0
Alarm Entries           : 0
-------------------------------------------------------------------------------
Rem Num Entries         : 0
Rem Lcl Deleted Entries : 0
Rem Alarm Entries       : 0
===============================================================================
Ports synced on peer 10.10.10.20
===============================================================================
Port/Encap                    Tag
-------------------------------------------------------------------------------
lag-1                         test123
===============================================================================
*A:subscr_mgt_2#
```

synchronization

Syntax **synchronization**

Context show>redundancy

Description This command displays redundancy synchronization times.

Sample Output

```
A:ALA-48>show>redundancy# synchronization
===============================================================================
Synchronization Information
===============================================================================
Standby Status               : disabled
Last Standby Failure         : N/A
Standby Up Time              : N/A
Failover Time                : N/A
Failover Reason              : N/A
```

```
Boot/Config Sync Mode        : None
Boot/Config Sync Status      : No synchronization
Last Config File Sync Time   : Never
Last Boot Env Sync Time      : Never
===============================================================================
A:ALA-48>show>redundancy#
```

time-range

Syntax **time-range** *name* **associations [detail]**

Context show>cron

Description This command displays information on the configured time ranges.

Output **Time Range Output —** The following table displays system time range output fields:

Label	Description
Associations	Shows the time-range as it is associated with the TOD suites and ACL entries as well as the SAPs using them.
Detail	Shows the details of this time-range.

Sample Output

The following example shows time-range detail output.

```
A:ala# show cron time-range time-range2 detail
===============================================================================
Cron time-range
===============================================================================
Name     : time-range1
Periodic    : Start * * * * End * * * *
Absolute     : Start * * * * End * * * *
```

The following example shows output for time-range associations with previously created IP and MAC filters.

```
A:ala# show cron time-range day associations
===============================================================================
Cron time-range associations
===============================================================================
Name          : day                            State  : Inactive
-------------------------------------------------------------------------------
IP Filter associations
-------------------------------------------------------------------------------
IP filter Id  : 10, entry 1010
-------------------------------------------------------------------------------
MAC Filter associations
-------------------------------------------------------------------------------
None
-------------------------------------------------------------------------------
```

```
Tod-suite associations
-------------------------------------------------------------------------------
Tod-suite : suite_sixteen, for Ingress Qos Policy "1160"
Tod-suite : suite_sixteen, for Ingress Scheduler Policy "SchedPolCust1_Day"
Tod-suite : suite_sixteen, for Egress Qos Policy "1160"
Tod-suite : suite_sixteen, for Egress Scheduler Policy "SchedPolCust1Egress_Day
===============================================================================
```

script-control

Syntax **script-control**

Context show>system

Description This command enables the context to display script information.

script

Syntax **script** [*script-name*] [**owner** *script-owner*]

Context show>system>script-control

Description This command displays script parameters.

Parameters *script-name* — Displays information for the specified script.

owner *script-owner* **—** Displays information for the specified script owner.

Output The following table describes the show script output fields.

Label	Description
Script	Displays the name of the script.
Script owner	Displays the owner name of script.
Administrative status	Enabled – Administrative status is enabled.
	Disabled – Administratively disabled.
Operational status	Enabled – Operational status is enabled.
	Disabled – Operationally disabled.
Script source location	Displays the location of scheduled script.
Last script error	Displays the system time of the last error.
Last change	Displays the system time of the last change.

Sample Output

```
A:sim1>show>system>script-control# script
===============================================================================
Script Information
===============================================================================
Script                       : test
Owner name                   : TiMOS CLI
Description                  : asd
Administrative status        : enabled
Operational status           : enabled
Script source location       : ftp://*****:******@100.100.100.1/home/testlab_bgp
                               /test1.cfg
Last script error            : none
Last change                  : 2015/01/07 17:10:03
===============================================================================
A:sim1>show>cron#
```

script-policy

Syntax **script-policy** *script-policy-name* [**owner** *owner-name*]
script-policy run-history [*run-state*]

Context show>system>script-control

Description This command displays script policy information.

Parameters *script-policy-name* — Displays policy information for the specified script.

owner *owner-name* **—** Displays information for the specified script owner.

Default "TiMOS CLI"

run-state — Displays information for script policies in the specified state.

Values executing | initializing | terminated

Output **Script Policy Output —** The following table describes script policy output fields.

Label	Description
`Script policy`	Displays the name of the script policy.
`Script policy owner`	The name of the script policy owner.
`Administrative status`	`Enabled` — Administrative status is enabled. `Disabled` — Administrative status is disabled.
`Script`	The name of the script.
`Script owner`	The name of the script owner.

Label	Description (Continued)
Script source location	Displays the location of scheduled script.
Max running allowed	Displays the maximum number of allowed sessions.
Max completed run histories	Displays the maximum number of sessions previously run.
Max lifetime allowed	Displays the maximum amount of time the script may run.
Completed run histories	Displays the number of completed sessions.
Executing run histories	Displays the number of sessions in the process of executing.
Initializing run histories	Displays the number of sessions ready to run/queued but not executed.
Max time tun history saved	Displays the maximum amount of time to keep the results from a script run.
Last change	Displays the system time a change was made to the configuration.

Sample Output

```
*A:Redundancy# show system script-control script-policy run-history terminated
===============================================================================
Script-policy Run History
===============================================================================
Script policy "test"
Owner "TiMOS CLI"
-------------------------------------------------------------------------------
Script Run #17
-------------------------------------------------------------------------------
Start time : 2006/11/06 20:30:09 End time : 2006/11/06 20:35:24
Elapsed time : 0d 00:05:15 Lifetime : 0d 00:00:00
State : terminated Run exit code : noError
Result time : 2006/11/06 20:35:24 Keep history : 0d 00:49:57
Error time : never
Results file : ftp://*:*@192.168.15.18/home/testlab_bgp/cron/_20061106-203008.
out
Run exit : Success
-------------------------------------------------------------------------------
Script Run #18
-------------------------------------------------------------------------------
Start time : 2006/11/06 20:35:24 End time : 2006/11/06 20:40:40
Elapsed time : 0d 00:05:16 Lifetime : 0d 00:00:00
State : terminated Run exit code : noError
Result time : 2006/11/06 20:40:40 Keep history : 0d 00:55:13
Error time : never
Results file : ftp://*:*@192.168.15.18/home/testlab_bgp/cron/_20061106-203523.
```

```
out
Run exit : Success
-------------------------------------------------------------------------------
*A:Redundancy#

*A:Redundancy# show system script-control script-policy run-history executing
===============================================================================
Script-policy Run History
===============================================================================
Script policy "test"
Owner "TiMOS CLI"
-------------------------------------------------------------------------------
Script Run #20
-------------------------------------------------------------------------------
Start time : 2006/11/06 20:46:00 End time : never
Elapsed time : 0d 00:00:56 Lifetime : 0d 00:59:04
State : executing Run exit code : noError
Result time : never Keep history : 0d 01:00:00
Error time : never
Results file : ftp://*:*@192.168.15.18/home/testlab_bgp/cron/_20061106-204559.
out
===============================================================================
*A:Redundancy#

*A:Redundancy# show system script-control script-policy run-history initializing
===============================================================================
Script-policy Run History
===============================================================================
Script policy "test"
Owner "TiMOS CLI"
-------------------------------------------------------------------------------
Script Run #21
-------------------------------------------------------------------------------
Start time : never End time : never
Elapsed time : 0d 00:00:00 Lifetime : 0d 01:00:00
State : initializing Run exit code : noError
Result time : never Keep history : 0d 01:00:00
Error time : never
Results file : none
-------------------------------------------------------------------------------
Script Run #22
-------------------------------------------------------------------------------
Start time : never End time : never
Elapsed time : 0d 00:00:00 Lifetime : 0d 01:00:00
State : initializing Run exit code : noError
Result time : never Keep history : 0d 01:00:00
Error time : never
Results file : none
-------------------------------------------------------------------------------
Script Run #23
-------------------------------------------------------------------------------
Start time : never End time : never
Elapsed time : 0d 00:00:00 Lifetime : 0d 01:00:00
State : initializing Run exit code : noError
Result time : never Keep history : 0d 01:00:00
Error time : never
Results file : none
===============================================================================
*A:Redundancy#
```

uptime

Syntax **uptime**

Context show

Description This command displays the time since the system started.

Output **Uptime Output —** The following table describes uptime output fields.

Label	Description
System Up Time	Displays the length of time the system has been up in days, hr:min:sec format.

Sample Output

```
A:ALA-1# show uptime
System Up Time         : 11 days, 18:32:02.22 (hr:min:sec)

A:ALA-1#
```

switch-fabric

Syntax **switch-fabric**

Context show>system

Description This command displays switch fabric information.

Output **Switch fabric output —** The following table describes switch-fabric output fields for 12-slot and 7-slot chassis models:.

Label	Description
Slot/MDA	Displays the fabric slot within a chassis in the system. The CPM cards and IOM cards cannot be physically inserted into the switch fabric card slots.
Min. Forwarding Capacity	Displays the minimum forwarding capacity of the slot and MDA as a percentage.
Max. Forwarding Capacity	Displays the maximum forwarding capacity of the slot and MDA as a percentage.

Sample Output

```
A:ALA-7# show system switch-fabric
===============================================================================
Switch Fabric
===============================================================================
```

```
Slot/Mda Min. Forwarding Capacity Max. Forwarding Capacity
-------------------------------------------------------------------------------
1/1  100%     100%
1/2  100%     100%
2/1  100%     100%
2/2  100%     100%
3/1  100%     100%
3/2  100%     100%
4/1  100%     100%
4/2  100%     100%
5/1  100%     100%
5/2  100%     100%
A    100%     100%
B    100%     100%
===============================================================================
A:ALA-7#

A:ALA-12# show system switch-fabric
===============================================================================
Switch Fabric
===============================================================================
Slot/Mda Min. Forwarding Capacity Max. Forwarding Capacity
-------------------------------------------------------------------------------
1/1  100%     100%
1/2  100%     100%
2/1  100%     100%
2/2  100%     100%
3/1  100%     100%
3/2  100%     100%
4/1  100%     100%
4/2  100%     100%
5/1  100%     100%
5/2  100%     100%
6/1  100%     100%
6/2  100%     100%
7/1  100%     100%
7/2  100%     100%
8/1  100%     100%
8/2  100%     100%
A    100%     100%
B    100%     100%
===============================================================================
A:ALA-12
```

sync-if-timing

Syntax **sync-if-timing**

Context show>system

Description This command displays synchronous interface timing operational information.

Output **System Timing Output —** The following table describes sync-if-timing output fields.

Label	Description
System Status CPM A/B	Indicates the present status of the synchronous timing equipment subsystem (SETS). Not Present — Only shown on systems without central clocks (7450 ESS-1) Master Freerun — The clock is in free-run because it hasn't had a qualified input reference to lock to Master Holdover — The clock was locked to an input reference but has lost all qualified input references and is in holdover. Master Locked — The clock is locked to an input reference Acquiring — The clock is training to a qualified input reference.
Reference Input Mode	Revertive — Indicates that for a re-validated or a newly validated reference source which has a higher priority than the currently selected reference has reverted to the new reference source. Non-revertive — The clock cannot revert to a higher priority clock if the current clock goes offline.
Quality Level Selection	Indicates whether the ql-selection command has been enabled or disabled. If this command is enabled, then the reference is selected first using the QL value, then by the priority reference order. If this command is not enabled, then the reference is selected by the priority reference order.
Reference Selected	Indicates which reference has been selected: • ref1, ref2 - (for all chassis) • BITS A, BITS B - (7750 SR-7/12) • Mate CPM (BITS A), Mate CPM (BITS B) - (7750 SR-7/12 on the active CPM) • Mate CPM (none) - **show>system>sync-if-timing> standby** when standby locked to active which is freerun or holdover - (7750 SR-7/12) • Mate CPM (ref1), Mate CPM (ref2) - **show>system>sync-if-timing>standby** when standby locked to active which is locked to ref1 or ref2 - (7750 SR-7/12) • BITS 1, BITS2 - (7750 SR-c4 only)
System Quality Level	Indicates the quality level being generated by the system clock.
Current Frequency Offset	(value) — The frequency offset of the currently selected timing reference in parts per million.
Reference Order	ref1, ref2, bits — Indicates that the priority order of the timing references.
Reference Mate CPM	Data within this block represents the status of the timing reference provided by the Mate CPM. This will be the BITS input from the standby CPM.

Label	Description (Continued)
Admin Status	down – The **ref1** or **ref2** configuration is administratively shutdown. up – The **ref1** or **ref2** configuration is administratively enabled. diag – Indicates the reference has been forced using the force-reference command.
Quality Level Override	Indicates whether the QL value used to determine the reference was configured directly by the user.
Rx Quality Level	Indicates the QL value received on the interface. • inv - SSM received on the interface indicates an invalid code for the interface type. • unknown - No QL value was received on the interface.
Qualified for Use	Indicates whether the reference has been qualified to be used as a source of timing for the node.
Not Qualified Due To	Indicates the reason why the reference has not been qualified: - disabled - LOS - OOPIR - OOF
Selected for Use	Indicates whether the method is presently selected.
Not Selected Due To	Indicates the reason why the method is not selected: - disabled - not qualified - previous failure - LOF - AIS-L - validating - on standby - ssm quality
Source Port	Identifies the Source port for the reference.
Interface Type	The interface type configured for the BITS port.
Framing	The framing configured for the BITS port.
Line Coding	The line coding configured for the BITS port.
Line Length	The line length value of the BITS output.
Output Admin Status	down – The BITS output is administratively shutdown. up – The BITS output is administratively enabled.

Label	Description (Continued)
	diag – Indicates the BITS output has been forced using the force-reference command.
Output Source	The source to be used to provide the signal on the BITS output port. line reference – unfiltered recovered line reference. internal clock – filtered node clock output.
Output Reference Selected	The reference selected as the source for the BITS output signal (ref1 or ref2).
TX Quality Level	QL value for BITS output signal.

The following example is for a node locked to the active BITS input and directing the signal on ref1 to the BITS output:

Sample Output

```
*A:SR7# show system sync-if-timing
===============================================================================
System Interface Timing Operational Info
===============================================================================
System Status CPM A                : Master Locked
    Reference Input Mode           : Non-revertive
    Quality Level Selection        : Disabled
    Reference Selected             : BITS A
    System Quality Level           : prs
    Current Frequency Offset (ppm) : +0

Reference Order                    : bits ref1 ref2

Reference Mate CPM
    Qualified For Use              : Yes
    Selected For Use               : No
        Not Selected Due To        :     on standby

Reference Input 1
    Admin Status                   : up
    Rx Quality Level               : prs
    Qualified Level Override       : none
    Qualified For Use              : Yes
    Selected For Use               : No
        Not Selected Due To        :     on standby
    Source Port                    : 3/1/2

Reference Input 2
    Admin Status                   : down
    Rx Quality Level               : unknown
    Qualified Level Override       : none
    Qualified For Use              : No
        Not Qualified Due To       :     disabled
    Selected For Use               : No
        Not Selected Due To        :     disabled
    Source Port                    : None
```

```
Reference BITS A
    Admin Status                    : up
    Rx Quality Level                : prs
    Qualified Level Override        : none
    Qualified For Use               : Yes
    Selected For Use                : Yes
    Interface Type                  : DS1
    Framing                         : ESF
    Line Coding                     : B8ZS
    Line Length                     : 550-660ft
    Output Admin Status             : up
    Output Source                   : line reference
    Output Reference Selected       : ref1
    Tx Quality Level                : prs

===============================================================================
*A:SR7#
```

The following example is for a node locked to the standby CPM BITS input and directing the ref1 signal to the BITS output port:

```
*A:Dut-B# show system sync-if-timing
===============================================================================
System Interface Timing Operational Info
===============================================================================
System Status CPM A                 : Master Locked
    Reference Input Mode            : Non-revertive
    Quality Level Selection         : Disabled
    Reference Selected              : Mate CPM (BITS B)
    System Quality Level            : prs
    Current Frequency Offset (ppm) : +0

Reference Order                     : bits ref1 ref2

Reference Mate CPM
    Qualified For Use               : Yes
    Selected For Use                : Yes

Reference Input 1
    Admin Status                    : up
    Rx Quality Level                : prs
    Quality Level Override          : none
    Qualified For Use               : Yes
    Selected For Use                : No
        Not Selected Due To         : on standby
    Source Port                     : 3/1/2

Reference Input 2
    Admin Status                    : down
    Rx Quality Level                : unknown
    Quality Level Override          : none
    Qualified For Use               : No
        Not Qualified Due To        : disabled
    Selected For Use                : No
        Not Selected Due To         : disabled
    Source Port                     : None

Reference BITS A
```

```
    Admin Status                    : up
    Rx Quality Level                : unknown
    Quality Level Override          : none
    Qualified For Use               : No
        Not Qualified Due To        : LOS
    Selected For Use                : No
        Not Selected Due To         : not qualified
    Interface Type                  : DS1
    Framing                         : ESF
    Line Coding                     : B8ZS
    Line Length                     : 550-660ft
    Output Admin Status             : up
    Output Source                   : line reference
    Output Reference Selected       : ref1
    Tx Quality Level                : prs
===============================================================================
```

The following example is for a node whose standby CPM is locked to its local BITS port and the signal from ref1 is directed to the BITS output port:

```
A:SR7# show system sync-if-timing standby
===============================================================================
System Interface Timing Operational Info
===============================================================================
System Status CPM B                 : Master Locked
    Reference Input Mode            : Non-revertive
    Quality Level Selection         : Disabled
    Reference Selected              : BITS B
    System Quality Level            : prs
    Current Frequency Offset (ppm) : +0

Reference Order                     : bits ref1 ref2

Reference Mate CPM
    Qualified For Use               : Yes
    Selected For Use                : No
        Not Selected Due To         : on standby

Reference Input 1
    Admin Status                    : down
    Rx Quality Level                : unknown
    Quality Level Override          : none
    Qualified For Use               : No
        Not Qualified Due To        : disabled
    Selected For Use                : No
        Not Selected Due To         : disabled
    Source Port                     : None

Reference Input 2
    Rx Quality Level                : unknown
    Quality Level Override          : none
    Qualified For Use               : No
        Not Qualified Due To        : disabled
    Selected For Use                : No
        Not Selected Due To         : disabled
    Source Port                     : None

Reference BITS B
    Admin Status                    : up
```

```
    Rx Quality Level               : prs
    Quality Level Override         : none
    Qualified For Use              : Yes
    Selected For Use               : Yes
    Interface Type                 : DS1
    Framing                        : ESF
    Line Coding                    : B8ZS
    Line Length                    : 550-660ft
    Output Admin Status            : up
    Output Source                  : line reference
    Output Reference Selected      : ref1
    Tx Quality Level               : prs
===============================================================================
*A:SR7#
```

synchronization

Syntax **synchronization**

Context show>redundancy>synchronization

Description This command displays redundancy synchronization times.

Output **Synchronization Output —** The following table describes redundancy synchronization output fields.

Label	Description
Standby Status	Displays the status of the standby CPM.
Last Standby Failure	Displays the timestamp of the last standby failure.
Standby Up Time	Displays the length of time the standby CPM has been up.
Failover Time	Displays the timestamp when the last redundancy failover occurred causing a switchover from active to standby CPM. If there is no redundant CPM card in this system or no failover has occurred since the system last booted, the value will be 0.
Failover Reason	Displays a text string giving an explanation of the cause of the last redundancy failover. If no failover has occurred, an empty string displays.
Boot/Config Sync Mode	Displays the type of synchronization operation to perform between the primary and secondary CPMs after a change has been made to the configuration files or the boot environment information contained in the boot options file (BOF).
Boot/Config Sync Status	Displays the results of the last synchronization operation between the primary and secondary CPMs.

Label	Description
Last Config File Sync Time	Displays the timestamp of the last successful synchronization of the configuration files.
Last Boot Env Sync Time	Displays the timestamp of the last successful synchronization of the boot environment files.

Sample Output

```
A:ALA-1>show>redundancy# synchronization
===============================================================================
Synchronization Information
===============================================================================
Standby Status               : disabled
Last Standby Failure         : N/A
Standby Up Time              : N/A
Failover Time                : N/A
Failover Reason              : N/A
Boot/Config Sync Mode        : None
Boot/Config Sync Status      : No synchronization
Last Config File Sync Time   : Never
Last Boot Env Sync Time      : Never
===============================================================================
A:ALA-1>show>redundancy#
```

Debug Commands

sync-if-timing

Syntax **sync-if-timing**

Context debug

Description The context to debug synchronous interface timing references.

force-reference

Syntax **force-reference** {**ref1 | ref2 | bits | ptp**}
no force-reference

Context debug>sync-if-timing

Description This command allows an operator to force the system synchronous timing output to use a specific reference.

Note: The debug sync-if-timing force-reference command should only be used to test and debug problems. Network synchronization problems may appear if network elements are left with this manual override setting. Once the system timing reference input has been forced, it may be cleared using the no force-reference command.

The CPM clock can be forced to use a specific input reference using the force-reference command.

When the command is executed, the CPM clock on the active CPM immediately switches its input reference to that specified by the command. If the specified input is not available (shutdown), or in a disqualified state, the CPM clock shall use the next qualified input reference based on the selection rules.

This command also affects the BITS output port on the active CPM. If the BITS output port selection is set to line-reference and the reference being forced is not the BITS input port, then the system uses the forced reference to generate the signal out the BITS output port. If the BITS output port selection is set to internal-clock, then the system uses the output of the CPM clock to generate the signal for the BITS output port.

On a CPM activity switch, the force command is cleared and normal reference selection is determined.

Debug configurations are not saved between reboots.

Note: The 7750 SR-c4 has two BITS input ports on the CFM. The force reference command on this system allows the selection of the specific port.

7750 SR-c4 CLI Syntax: **debug>sync-if-timing>force-reference** {**ref1** | **ref2** | **bits1** | **bits2**}

Parameters **ref1 —** The clock will use the first timing reference.

ref2 — The clock will use the second timing reference.

bits — The clock will use the external network interface on the active CPM to be the highest priority input.

bits1 — (7750 SR-c4) The clock will use the bits1 timing reference.

bits2 — (7750 SR-c4) The clock will use the bits2 timing reference.

ptp — The clock will use the PTP slave as the timing reference.

system

Syntax [**no**] **system**

Context debug

Description This command displays system debug information.

http-connections

Syntax **http-connections** [*host-ip-address/mask*]
http-connections

Context debug>system

Description This command displays HTTP connections debug information.

Parameters *host-ip-address/mask* — Displays information for the specified host IP address and mask.

ntp

Syntax [**no**] **router** *router-name* **interface** *ip-int-name*

Context debug>system

Description This command enables and configures debugging for NTP.

The **no** form of the command disables debugging for NTP.

Parameters *router-name* — Base, management

Default Base

ip-int-name — maximum 32 characters; must begin with a letter. If the string contains special characters (#, $, spaces, etc.), the entire string must be enclosed within double quotes.

persistence

Syntax [**no**] **persistence**

Context debug>system

Description This command displays persistence debug information.

Tools Commands

redundancy

Syntax **redundancy**

Context tools>dump

Description This command enables the context to dump redundancy parameters.

multi-chassis

Syntax **multi-chassis**

Context tools>dump>redundancy

Description This command enables the context to dump multi-chassis parameters.

mc-endpoint

Syntax **mc-endpoint peer** *ip-address*

Context tools>dump>redundancy>multi-chassis

Description This command dumps multi-chassis endpoint information.

Parameters **peer** *ip-address* — Specifies the peer's IP address.

Sample Output

```
*A:Dut-B# tools dump redundancy multi-chassis mc-endpoint peer 3.1.1.3
MC Endpoint Peer Info
    peer addr                   : 3.1.1.3
    peer name                   : Dut-C
    peer name refs              : 1
    src addr conf               : Yes
    source addr                 : 2.1.1.2
    num of mcep                 : 1
    num of non-mcep             : 0
    own sess num                : 58ba0d39
    mc admin state              : Up
    tlv own mc admin state      : Up
    tlv peer mc admin state     : Up
    reachable                   : Yes

    own sys priority            : 50
    own sys id                  : 00:03:fa:72:c3:c0
    peer sys priority           : 21
```

```
        peer sys id                 : 00:03:fa:c6:31:f8
        master                      : No

        conf boot timer             : 300
        boot timer active           : No
        conf ka intv                : 10
        conf hold on num of fail    : 3
        tlv own ka intv             : 10
        tlv peer ka intv            : 10
        ka timeout tmr active       : Yes
        ka timeout tmr intvl        : 20
        ka timeout tmr time left    : 4
        peer ka intv                : 10
        mc peer timed out           : No

        initial peer conf rx        : Yes
        peer-mc disabled            : No
        initial peer conf sync      : Yes
        peer conf sync              : Yes

        own passive mode            : Disable
        peer passive mode           : No

        retransmit pending          : No
        non-mcep retransmit pending : No
        retransmit intvl            : 5
        last tx time                : 1437130
        last rx time                : 1437156

        own bfd                     : Enable
        peer bfd                    : Enable
        bfd vrtr if                 : 2
        bfd handle                  : 1
        bfd state                   : 3
        bfd code                    : 0

    *A:Dut-B#
```

mc-ring

Syntax **mc-ring**
mc-ring peer *ip-address* [**ring** *sync-tag*]

Context tools>dump>redundancy>multi-chassis

Description This command dumps multi-chassis ring information.

peer *ip-address* — Specifies the peer's IP address.

ring *sync-tag* — Specifies the ring's sync-tag created in the **config>redundancy>mc>peer>mcr> ring** context.

sync-database

Syntax **sync-database** [**peer** *ip-address*] [**port** *port-id* | *lag-id*] [**sync-tag** *sync-tag*] [**application** *application*] [**detail**] [**type** *type*]

Context tools>dump>redundancy>multi-chassis

Description This command dumps MCS database information.

peer *ip-address* — Specifies the peer's IP address.

port *port-id* | *lag-id* — Indicates the port or LAG ID to be synchronized with the multi-chassis peer.

slot/mda/port or lag-*lag-id*

sync-tag *sync-tag* — Specifies a synchronization tag to be used while synchronizing this port with the multi-chassis peer.

application *application* — Specifies a particular multi-chassis peer synchronization protocol application.

Values

dhcp-server:	local dhcp server
igmp:	Internet group management protocol
igmp-snooping:	igmp-snooping
mc-ring:	multi-chassis ring
mld-snooping:	multicast listener discovery-snooping
srrp:	simple router redundancy protocol
sub-host-trk:	subscriber host tracking
sub-mgmt:	subscriber management

type *type* — Indicates the locally deleted or alarmed deleted entries in the MCS database per multi-chassis peer.

Values alarm-deleted, local-deleted

detail — Displays detailed information.

srrp-sync-data

Syntax **srrp-sync-database** [**instance** *instance-id*] [**peer** *ip-address*]

Context tools>dump>redundancy>multi-chassis

Description This command dumps SRRP database information.

peer *ip-address* — Specifies the peer's IP address.

instance *instance-id* — Dumps information for the specified Subscriber Router Redundancy Protocol instance configured on this system.

Values 1 — 4294967295

mgmt-ethernet

Syntax **mgmt-ethernet**

Context tools>perform>redundancy>mgmt-ethernet

Description This command triggers redundancy mode, just as if the management Ethernet port of the primary CPM has gone down. The router will revert if the management Ethernet port of the primary CPM has been up for the revert duration.

set-fabric-speed

Syntax **set-fabric-speed** *speed*

Context tools>perform

Description This command sets fabric speed. With the introduction of SFM5-12e and the mini-SFM5-12e, a new tools command (**set-fabric-speed**) was added to set the fabric operating speed. (tools command does not apply to SFM4-12e) **fabric-speed-a**).

Parameters **fabric-speed-a —** The 7750 SR-12e chassis defaults to the **fabric-speed-a** when initially deployed with SFM5-12e. It operates at 200GB per slot which permits a mixture of FP2/FP3 based cards to co-exist.

fabric-speed-b — Eenables the 7750 SR-12e to operate at up to 400 Gb/s, for which all cards in the 7750 SR-12e are required to be T3 based (FP3 IMM and/or IOM3-XP-C). The system will not support any FP2 based cards when the chassis is set to **fabric-speed-b**.

stop

Syntax **stop** [*script-policy-name*] [**owner** *script-policy-owner*] [**all**]

Context tools>perform>system>script-control>script-policy

Description This command stops the execution of scripts.

Parameters *script-policy-name* — Only stop scripts with the specified script-policy.

owner *script-policy-owner* — Only stop scripts that are associated with script-policies with the specified owner.

Default "TiMOS CLI"

all — Keyword to stop all running scripts.

customer

Syntax **customer** *customer-id* [**site** *customer-site-name*]

Context tools>perform>system>cron>tod>re-evaluate

Description This command is used to re-evaluate the time-of-day state of a multi-service site.

Parameters *customer-id* — Re-evaluate time-of-day state of a specific customer.

Values 1 to 2147483647

customer-site-name — Re-evaluate time-of-day state of a specific customer site. 32 characters max.

filter

Syntax **filter** {**ip-filter | ipv6-filter | mac-filter**}

Context tools>perform>system>cron>tod>re-evaluate

Description This command is used to re-evaluate the time-of-day state of a filter entry.

Parameters **ip-filter —** Re-evaluate time-of-day state of an IP filter entry.

ipv6-filter — Re-evaluate time-of-day state of an IPv6 filter entry.

mac-filter — Re-evaluate time-of-day state of a MAC filter entry.

service

Syntax **service** *service-id* [**sap** *sap-id*]

Context tools>perform>system>cron>tod>re-evaluate

Description This command is used to re-evaluate the time-of-day state of a SAP.

Parameters *service-id* — Re-evaluate time-of-day state of a specific service.

Values 1 to 2148007978 | *svc-name*: 64 characters max

sap-id — Re-evaluate time-of-day state of a specific SAP.

Values

sap-id	null	port-id|bundle-id|bpgrp-id|lag-id|aps-id>
	dot1q	port-id|bundle-id|bpgrp-id|lag-id| aps-id|pw-id>:qtag1
	qinq	port-id|bundle-id|bpgrp-id|lag-id|pw-id>:qtag1.qtag2
	atm	<port-id|aps-id>[:vpi/vci|vpi|vpi1.vpi2|cp.conn-prof-id]
		cp keyword
		conn-prof-id 1..8000
	frame	port-id|aps-id:dlci
	cisco-hdlc	slot/mda/port.channel
	cem	slot/mda/port.channel
	ima-grp	bundle-id>[:vpi/vci|vpi|vpi1.vpi2|cp.conn-prof-id]
		cp keyword
		conn-prof-id 1..8000
	port-id	slot/mda/port[.channel]
	bundle-id	bundle-<type>-slot/mda.*bundle-num*
		bundle keyword
		type ima, fr, ppp

	bundle-num	1..336
bpgrp-id	bpgrp-<type>-<bpgrp-num>	
	bpgrp	keyword
	type	ima, ppp
	bpgrp-num	1..2000
aps-id	aps-<group-id>[.channel]	
	aps	keyword
	group-id	1..64
ccag-id	*ccag-id.path-id*[*cc-type*]<*cc-id*	
	ccag	keyword
	id	1..8
	path-id	a, b
	cc-type	.sap-net, .net-sap
	cc-id	0..4094
eth-tunnel	eth-tunnel-*id*[:eth-tun-sap-id]	
	id	1..1024
	eth-tun-sap-id	0..4094
lag-id	lag-id	
	lag	keyword
	id	1..800
pw-id	pw-*id*	
	pw	keyword
	id	1..10239
qtag1	*, 0..4094	
qtag2	*|0..4094	
vpi	0..4095 (NNI)	
	0..255 (UNI)	
vci	1, 2, 5..65535	
dlci	16..1022	
tunnel-id	tunnel-*id*.private|public:*tag*	
	tunnel	keyword
	id	1..16
	tag	0..4094

tod-suite

Syntax **tod-suite** [*tod-suite-name*]

Context tools>perform>system>cron>tod>re-evaluate

Description This command is used to re-evaluate the time-of-day state for objects referring to a tod-suite.

Parameters *tod-suite-name* — Re-evaluate time-of-day state for all objects referring to a specific tod-suite. 32 characters maximum.

Clear Commands

application-assurance

Syntax **application-assurance**

Context clear

Description This command clears application assurance commands.

group

Syntax **group** *isa-aa-group-id* **statistics**
group *isa-aa-group-id* **status**

Context clear>app-assure

Description This command clears application assurance group data.

Parameters *isa-aa-group-id* — Specifies the ISA-AA group index.

Values 1

status — Specifies that application assurance system statistics are cleared.

statistics — Specifies that application assurance statistics are cleared.

redundancy

Syntax **redundancy**

Context clear

Description This command enables the context to clear redundancy parameters.

multi-chassis

Syntax **multi-chassis**

Context clear>redundancy

Description This command enables the context to clear multi-chassis parameters.

mc-mobile

Syntax **mc-mobile statistics peer** {**ip-address** | **ipv6-address**}

Context clear>redundancy

Description This command enables the context to clear multi-chassis parameters.

mc-endpoint

Syntax **mc-endpoint endpoint** [*mcep-id*] **statistics**
mc-endpoint statistics
mc-endpoint peer [*ip-address*] **statistics**

Context clear>redundancy>multi-chassis

Description This command clears multi-chassis endpoint statistics.

endpoint *mcep-id* **—** Clears information for the specified multi-chassis endpoint ID.

Values 1 — 4294967295

peer *ip-address* **—** Clears information for the specified peer IP address.

statistics — Clears statistics for this multi-chassis endpoint.

mc-lag

Syntax **mc-lag** [**peer** *ip-address* [**lag** *lag-id*]]

Context clear>redundancy>multi-chassis

Description This command clears multi-chassis Link Aggregation Group (LAG) information.

Parameters **peer** *ip-address* **—** Clears the specified address of the multi-chassis peer.

lag *lag-id* — Clears the specified LAG on this system.

Values 1 — 100

mc-ring

Syntax **mc-ring**

Context clear>redundancy>multi-chassis

Description This command clears multi-chassis ring data.

debounce

Syntax **debounce peer** *ip-address* **ring** *sync-tag*

Context clear>redundancy>multi-chassis

Description This command clears multi-chassis ring operational state debounce history.

Parameters *ip-address* — Clears debounce history for the specified IP address.

ring *sync-tag* — Clears debounce history for the specified sync tag.

ring-nodes

Syntax **ring-nodes peer** *ip-address* **ring** *sync-tag*

Context clear>redundancy>multi-chassis>mcr

Description This command clears multi-chassis ring unreferenced ring nodes.

Parameters *ip-address* — Clears ring statistics for the specified IP address.

ring *sync-tag* — Clears ring statistics for the specified sync tag.

statistics

Syntax **statistics**

Context clear>redundancy>multi-chassis>mcr

Description This command clears multi-chassis ring

global

Syntax **global**

Context clear>redundancy>multi-chassis>mcr>statistics

Description This command clears multi-chassis ring global statistics.

peer

Syntax **peer** *ip-address*

Context clear>redundancy>multi-chassis>mcr>statistics

Description This command clears multi-chassis ring peer statistics.

Parameters *ip-address* — Clears ring peer statistics for the specified IP address.

ring

Syntax **ring peer** *ip-address* **ring** *sync-tag*

Context clear>redundancy>multi-chassis>mcr>statistics

Description This command clears multi-chassis ring statistics.

Parameters *ip-address* — Clears ring statistics for the specified IP address.

ring *sync-tag* **—** Clears ring statistics for the specified sync tag.

ring-node

Syntax **ring-node peer** *ip-address* **ring** *sync-tag* **node** *ring-node-name*

Context clear>redundancy>multi-chassis>mcr>statistics

Description This command clears multi-chassis ring statistics.

Parameters **peer** *ip-address* **—** Clears ring-node peer statistics for the specified IP address.

ring *sync-tag* **—** Clears ring-node peer statistics for the specified sync-tag.

node *ring-node-name* **—** Clears ring-node peer statistics for the specified ring node name.

ptp

Syntax **ptp inactive-peers**
ptp statistics
ptp peer *ip_address* **statistics**

Context clear>system

Description This command clears PTP statistics.

Parameters **inactive-peers —** Removes PTP peers which are not currently exchanging PTP packets with the router.

peer *ip-address* **statistics —** Clears statistics for the specified peer.

statistics — Clears all ptp statistics.

sync-database

Syntax **sync-database peer** *ip-address* **all application** *application*
sync-database peer *ip-address* {**port** *port-id* | *lag-id* | **sync-tag** *sync-tag* } **application** *application*

sync-database peer *ip-address* **port** *port-id* | *lag-id* **sync-tag** *sync-tag* **application** *application*

Context clear>redundancy>multi-chassis

Description This command clears multi-chassis sync database information.

Parameters **peer** *ip-address* — Clears the specified address of the multi-chassis peer.

port *port-id* — Clears the specified port ID of the multi-chassis peer.

port *lag-id* — Clears the specified Link Aggregation Group (LAG) on this system.

all — Clears all ports and/or sync tags.

sync-tag *sync-tag* — Clears the synchronization tag used while synchronizing this port with the multi-chassis peer.

application — Clears the specified application information that was synchronized with the multi-chassis peer.

Values

all:	All supported applications
dhcp-server:	local dhcp server
igmp:	internet group management protocol
igmp-snooping:	igmp-snooping
mc-ring:	multi-chassis ring
mld-snooping:	multicast listener discovery-snooping
srrp:	simple router redundancy protocol
sub-host-trk	subscriber host tracking
sub-mgmt:	subscriber management

screen

Syntax **screen**

Context clear

Description This command allows an operator to clear the Telnet or console screen.

system

Syntax **system sync-if-timing** {**ref1** | **ref2** | **bits**}

Context clear

Description This command allows an operator to individually clear (re-enable) a previously failed reference. As long as the reference is one of the valid options, this command is always executed. An inherent behavior enables the revertive mode which causes a re-evaluation of all available references.

ptp

Syntax **ptp**

Context clear>system

Description This command enables the context to clear Precision Timing Protocol (PTP) information.

inactive-peers

Syntax **inactive-peers**

Context clear>system>ptp

Description This command clears inactive peer information.

peer

Syntax **peer** *ip-address* [**router** *router-instance*] **statistics**

Context clear>system>ptp

Description This command clears PTP peer information.

Parameters *ip-address* — Clears information that specific to the address of the PTP 1588 peer.

router *router-instance* **—** Clears information that is specific to a virtual router instance.

statistics — Clears statistics information of the specified IP address.

port

Syntax **port** *port-id* **statistics**

Context clear>system>ptp

Description This command clears PTP port information.

Parameters **port** *port-id* **—** Clears the specified port ID.

statistics — Clears statistics information of the specified port ID.

statistics

Syntax **statistics**

Context clear>system

Description This command clears system specific statistics.

statistics

Syntax **statistics**

Context clear>system>ptp

Description This command clears all PTP statistics.

xmpp

Syntax **xmpp server** *xmpp-server-name*

Context clear>system>statistics

Description This command clears XMPP server statistics.

script-control

Syntax **script-control**

Context clear>system

Description This command enables the context to clear script information.

script-policy

Syntax **script-policy**

Context clear>system>script-control

Description This command enables the context to clear script policy information.

completed

Syntax **completed** [*script-policy-name*] [**owner** *owner-name*]

Context clear>system>script-control>script-policy

Description This command clears completed script run history entries.

Parameters *script-policy-name* — Only clear history entries for the specified script-policy.

owner *owner-name* **—** Only clear history entries for script-policies with the specified owner.

Default "TiMOS CLI"

sync-if-timing

Syntax **system sync-if-timing** {**ref1** | **ref2** | **bits**}

Context clear

Description This command allows an operator to individually clear (re-enable) a previously failed reference. As long as the reference is one of the valid options, this command is always executed. An inherent behavior enables the revertive mode which causes a re-evaluation of all available references.

Parameters **ref1** — clears the first timing reference.

ref2 — clears the second timing reference.

bits — Clears the bits timing reference.

trace

Syntax **trace**

Context clear

Description This command clears commands for traces

log

Syntax **log**

Context clear>trace

Description This command allows an operator to clear the trace log.