Sun Fire™ Entry-Level Midrange System Controller Command Reference Manual

Firmware Release 5.19.0

Sun Microsystems, Inc.
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Preface

This manual describes how to use the System Controller command-line interface, which controls the system functions and provides environmental monitoring and hardware control. With the System Controller software, you can power on and off boards, power supplies, fans, and other components.

Before You Read This Book

This book is for system administrators, who have a working knowledge of the Solaris™ Operating System. If you do not have such knowledge, you should first read the Solaris User and System Administrator AnswerBook,s and consider UNIX® system administration training.

How This Book Is Organized

This manual provides a summary of all of the System Controller commands designed for an end user. It also provides complete descriptions of each command in alphabetical order, command syntax, and examples of command output.

Typographic Conventions

Typeface[1]	Meaning	Examples
`AaBbCc123`	The names of commands, files, and directories; on-screen computer output	Edit your `.login` file. Use `ls -a` to list all files. `% You have mail.`
`AaBbCc123`	What you type, when contrasted with on-screen computer output	`% `**`su`** `Password:`
AaBbCc123	Book titles, new words or terms, words to be emphasized. Replace command-line variables with real names or values.	Read Chapter 6 in the *User's Guide*. These are called *class* options. You *must* be superuser to do this. To delete a file, type `rm` *filename*.

1 The settings on your browser might differ from these settings.

Shell Prompts

Shell	Prompt
C shell	*machine_name*`%`
C shell superuser	*machine_name*`#`
Bourne shell and Korn shell	`$`
Bourne shell and Korn shell superuser	`#`
LOM shell	`lom>`

Related Documentation

TABLE P-1   Related Documentation

Application	Title	Part Number
System administration	*Sun Fire Entry-Level Midrange System Administration Guide*	819-1269-10

Accessing Sun Documentation

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`http://www.sun.com/documentation`

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`docfeedback@sun.com`

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Alphabetical Command Reference

This section provides in tabular form a summary of all of the system controller commands designed for an end user of entry-level midrange systems (Sun Fire ™ E2900, Sun Fire V1280, and Netra™ 1280) and provides complete descriptions, command syntax, and examples of each system controller command.

System Controller Command Summary

TABLE 1 lists and describes the System Controller commands and how you can access them.

TABLE 1 System Controller Command Summary

Command	Description
addcodlicense	Adds a Capacity on Demand (COD) right-to-use (RTU) license key to the COD license database.
bootmode	Configures the way the Solaris OS boots at the next reboot.
break	Sends a break signal to the console.
console	Opens a console connection.
deletecodlicense	Removes a Capacity on Demand (COD) right-to-use (RTU) license key from the COD license database.
disablecomponent	Deprecated starting with the 5.17.0 release. Replaced by the setls command.
enablecomponent	Deprecated starting with the 5.17.0 release. Replaced by the setls command.
flashupdate	Updates the flash PROMs.

TABLE 1   System Controller Command Summary *(Continued)*

Command	Description
forcepci	Sets the default PCI mode.
help	Provides basic help information.
history	Shows the command history along with date and time stamps.
inventory	Shows the SEPROM contents of a FRU or system.
logout	Logs out from this connection.
password	Sets the LOM access password.
poweroff	Powers off system or components.
poweron	Powers on system or components.
reset	Resets the system.
resetsc	Resets the system controller (LOM).
restartssh	Restarts the SSH server, loading and storing latest host keys.
setalarm	Sets system alarms.
setdate	Sets the time, date, and time zone for the system controller.
setescape	Sets LOM escape characters.
seteventreporting	Sets event reporting.
setlocator	Sets locator light.
setls	Sets the component location status. Replaces enablecomponent and disablecomponent commands starting with the 5.17.0 release.
setupnetwork	Sets up LOM network settings.
setupsc	Configures the system controller (LOM)
showalarm	Displays state of system alarms LEDs.
showboards	Lists status and assignment information for boards in the system.
showcodlicense	Displays the current Capacity on Demand (COD) right-to-use (RTU) licenses stored in the COD license database.
showcodusage	Displays the current usage statistics for Capacity on Demand (COD) resources.
showcomponent	Displays a component or a list of components.
showdate	Displays the time and date.
showenvironment	Displays the current environmental status, temperatures, currents, voltages, fan speeds, and so on.
showerrorbuffer	Shows the contents of the error buffer.

TABLE 1   System Controller Command Summary *(Continued)*

Command	Description
showescape	Displays LOM escape characters.
showeventreporting	Displays event reporting status.
showfault	Displays state of system fault LED.
showhostname	Displays the host name.
showlocator	Displays state of system locator LED.
showlogs	Shows the logs.
showmodel	Displays the platform model.
shownetwork	Displays LOM network settings.
showresetstate	Displays the CPU registers after a reset.
showsc	Displays the system controller uptime and version information.
shutdown	Shuts down Solaris and takes the system to standby mode.
ssh-keygen	Generates SSH host keys and displays host key fingerprint on the system controller.
testboard	Tests the CPU/Memory board in isolation.

FRU State and Test Status

TABLE 2 and TABLE 3 describe the FRU states and the current test status.

TABLE 2   FRU States

Value	Definition
Disabled	FRU has been blacklisted (RPx only).
Assigned	FRU is assigned to the system.
Active	FRU is in use by the system
Auto Speed	Fans run at thermally regulated speed (FT0 only).
High Speed	Fans run at maximum speed (FT0 only).
Unknown Speed	Fans run at unknown speed (FT0 only).

TABLE 2   FRU States *(Continued)*

Value	Definition
Main	FRU is the Main System Controller (SSC1 only).
Unknown	FRU State is unknown.
–	FRU State is not relevant.

TABLE 3   Test Status

Test Status	Description
Passed/OK	All board components passed all tests.
Degraded	A test failed, a failure occurred during normal operation, or a component has been disabled. The board is still accessible and some of its devices can still be used.
Disabled	The FRU has been blacklisted.
Failed	The board failed a test.
Under Test	The system is running POST (power-on self-test). The board status is transitioning between Assigned and Active.
Not Tested	No testing has been done.
–	The slot is empty or not tested. Not applicable for this device.

Alphabetical Listing of System Controller Commands

The following sections describe the System Controller commands.

addcodlicense

Adds a Capacity on Demand (COD) right-to-use (RTU) license key to the COD license database.

Syntax

`addcodlicense` *license-signature*

`addcodlicense -h`

Options/Parameters

The following table lists all options or parameters and describes their use:

license-signature	The COD RTU license key to be added to the COD license database.
-h	Displays help for this command.

Description

Adds the specified COD RTU license key to the COD license database on the system controller.

Note – Before you run this command, you must obtain a COD RTU license key from the Sun License Center. For details on COD RTU license keys, refer to the *Sun Fire Entry-Level Midrange System Administration Guide*.

See Also

deletecodlicense, showcodlicense, showcodusage

bootmode

Configures the way Solaris software uses the OpenBoot™ PROM to boot at the next reboot.

Syntax

```
bootmode normal

bootmode [diag|skipdiag] [forth] [reset_nvram]

bootmode -h
```

Options/Parameters

The following table lists all options or parameters and describes their use:

-h	Displays help for this command
normal	Instructs the OpenBoot™™™™™ PROM on the next reboot to boot the system using the values held in the OpenBoot PROM variables verbosity-level and diag-level. This value also clears any previously requested bootmode command that had not timed out.
diag	Instructs the OpenBoot PROM on the next reboot to boot the system as if the CPU POST verbosity-level had been set to max and the diag-level to max. This ensures that the highest level of POST tests are run prior to Solaris booting.
skipdiag	Instructs the OpenBoot PROM on the next reboot to boot the system as if the CPU POST verbosity-level had been set to min and the diag-level to init. This causes the fastest POST pass prior to booting Solaris.
forth	Instructs the OpenBoot PROM on the next reboot to stop at the ok prompt even if the OpenBoot PROM variable auto-boot? is set to true. This prevents automatic booting to Solaris for that boot attempt.
reset_nvram	Instructs the OpenBoot PROM to reset its OpenBoot PROM NVRAM variables on the next reboot.

Description

Configures the way Solaris software boots at the next reboot.

When a bootmode command is issued it sets a flag that is read by the OpenBoot PROM at the next Solaris reboot. If the system is not rebooted with 10 minutes the bootmode value is restored to normal. Once the system has been rebooted the

bootmode value is also set to `normal`. When `bootmode` is set to `normal` the OpenBoot PROM values `verbosity-level` and `diag-level` are used directly by OpenBoot PROM to control the POST behavior at boot time.

See Also

reset, break, OBP setenv (`verbosity-level`, `diag-level`)

Example

■ To instruct the OpenBoot PROM to use the `skipdiag` option:

```
lom> bootmode skipdiag
```

break

Sends a break signal to the Solaris console.

Syntax

```
break [-y|-n]
break -h
```

Options/Parameters

The following table lists all options or parameters and describes their use:

-y	Does not prompt for confirmation.
-n	Does not execute the command if confirmation is requested.
-h	Displays help for this command.

Description

Sends a 30 ms break signal to the Solaris console.

The Solaris console is resumed after sending the break signal. When the Solaris Operating System is running, and providing the system is not in secure mode, then the usual effect of this command is to force entry into the PROM or the debugger.

See Also

console, setupsc

Example

■ To use the `break` command to drop the system from running Solaris to the OpenBoot PROM:

```
lom> break

This will suspend Solaris.
Do you want to continue? [no] y
Type 'go' to resume
{0} ok
```

console

Connect to the Solaris or OpenBoot PROM console.

Syntax

```
console

console –h
```

Options/Parameters

The following table lists all options or parameters and describes their use:

–h	Displays help for this command.

Description

If the Solaris OS or OpenBoot PROM is booted, leave the lom> prompt and connect to the Solaris or OpenBoot PROM console. The system remains in console mode until the LOM escape sequence is typed.

Note – After issuing the console command and pressing Return, note that no prompt is displayed until you press Return again. If there is output being sent to the Solaris console at the time then the command will continue immediately.

See Also

showescape, showescape

Example

```
lom> console

console login:
```

deletecodlicense

Removes a Capacity on Demand (COD) right-to-use (RTU) license key from the COD license database.

Syntax

deletecodlicense [-f] *license-signature*

deletecodlicense -h

Options/Parameters

The following table lists all options or parameters and describes their use:

-f	Forces the specified COD RTU license key to be deleted from the COD license database, even if the license removal will result in a license violation.
license-signature	The COD RTU license key to be removed from the COD license database.
-h	Displays help for this command.

Description

Removes a COD RTU license key from the COD license database on the system controller. For further information on COD RTU license keys, refer to the *Sun Fire Entry-Level Midrange System Administration Guide*.

The system checks the number of licenses against the number of COD CPUs in use. If the license removal will result in an insufficient number of COD RTU licenses for the COD CPUs in use, the system will not delete the license key from the COD license database. If you want to delete the COD RTU license key, you must reduce the number of COD CPUs in use. You can either power down the domain and disable the appropriate number of boards, then power it on again or use dynamic reconfiguration (DR) to disconnect the appropriate number of boards.

See Also

addcodlicense, showcodlicense, showcodusage

Example

CODE EXAMPLE 1 deletecodlicense Command Example

```
lom> deletecodlicense 01:80d8a9ed:45135285:0201000000:8:00000000:000000000000000000000000
```

Note – The COD RTU license key listed above is provided as an example and is not a valid license key.

disablecomponent

The `disablecomponent` command has been deprecated starting with the 5.17.0 release and has been replaced by the `setls` command. It is suggested that you use the `setls` command even though the `disablecomponent` command is still available. For further information, see the `setls` command description.

See Also

`setls`

enablecomponent

The `enablecomponent` command has been deprecated starting with the 5.17.0 release and has been replaced by the `setls` command. It is suggested that you use the `setls` command even though the `enablecomponent` command is still available. For further information, see the `setls` command description.

See Also

setls

flashupdate

Updates the flash PROMs in the system controller, all the system boards, or a specified board number.

Syntax

```
flashupdate [-y|-n] -f URL all

flashupdate [-y|-n] -f URL systemboards|scapp|rtos|board ...

flashupdate [-y|-n] -u

flashupdate [-y|-n] -c source-board  destination-board

flashupdate -h
```

Options/Parameters

The following table lists all options or parameters and describes their use:

-y	Does not prompt for confirmation.
-n	Does not execute the command if confirmation is requested.
-f	Specifies a URL as the source of the flash images: *URL* is the URL of the directory containing the flash images. Supported protocols are: `ftp://[userid:password@]hostname/path` `http://hostname/path`
-c	Specifies a board as the source of the flash images.
-u	Upgrades boards to the current firmware level.
all	The system controller and all system boards.
scapp	The system controller. This requires the System Controller to be rebooted.
rtos	The Real Time Operating System for the system controller. This requires the system controller to be rebooted.
systemboards	All CPU/Memory boards and I/O assemblies, that is, SB0, SB2, SB4 and IB6.
-h	Displays help for this command.

When you flash update the system controller, the command gives you the following message:

```
As part of this update, the system controller will automatically reboot.

ScApp will be upgraded automatically during the next boot.
Rebooting will interrupt any current operations.
This includes keyswitch changes, Solaris reboots
and all current connections.
Do you want to continue? [no]
```

> **Note –** `flashupdate` cannot retrieve flash images from a secure (password-protected) HTTP URL. A message of the form `flashupdate: failed, URL does not contain required file:` *file* is returned, although the file may exist.

Description

Updates the flash PROMs in the system controller, all the system boards, or a specified board number.

The flash PROMs are located on the CPU/Memory boards, I/O assembly, and system controller boards. There are no flash PROMs on the Repeater boards.

See Also

Sun Fire Entry-Level Midrange System Administration Guide for step-by-step procedures on how to update the firmware.

Examples

■ To update the specified flash PROM in the I/O assembly:

CODE EXAMPLE 2 Using `flashupdate` to Update a Flash PROM in the I/O Assembly

```
lom> flashupdate -f ftp://host/path ib6
Waiting for critical processes to finish.  This may take a while.
Critical processes have finished.

Retrieving: ftp://host/path/lw8pci.flash
Validating  ...... Done

Programming PROM /N0/IB6/FP0
Erasing     ..... Done
Programming ..... Done
Verifying   ..... Done
```

■ To update CPU/Memory board sb0

```
lom> flashupdate ftp://host/path sb0
Waiting for critical processes to finish.  This may take a while.
Critical processes have finished.

Retrieving: ftp://host/path/lw8cpu.flash
Validating  .............. Done

Programming PROM /N0/SB0/FP0
Erasing      ............. Done
Programming ............. Done
Verifying    ............. Done

Programming PROM /N0/SB0/FP1
Erasing      ............. Done
Programming ............. Done
Verifying    ............. Done
lom>
```

■ To update the system controller firmware:

```
lom>flashupdate -f ftp://host/path scapp
As part of this update, the system controller will automatically reboot.

ScApp will be upgraded automatically during the next boot.
Rebooting will interrupt any current operations.
This includes keyswitch changes, Solaris reboots
and all current connections.
Do you want to continue? [no]
```

forcepci

Changes the mode of the card in a PCI-X board slot.

Syntax

forcepci *board_specification* on | off | info

Options/Parameters

on sets the card in the specified PCI-X board slot to PCI mode.

off sets the card in the specified PCI-X board slot to PCI-X mode.

info displays the mode (PCI-X or PCI) of the card in the specified PCI-X board slot.

board_specification identifies the target PCI-X board slot (board/port/bus).

Description

The forcepci on command enables you to change the mode of a card in a specified PCI-X board slot from the default (PCI-X mode–which has a maximum speed of 100 MHz), to PCI mode (which has a maximum speed of 66 MHz). Using the forcepci off command enables you to change the mode of the card in the specified PCI-X board slot from PCI mode back to PCI-X mode.

The changed mode value takes effect upon the next reset of the IO assembly and remains in effect until the mode is changed again, using the forcepci command.

Example

To set the mode of PCI board IB6 on port 0 bus 0 to PCI mode:

```
lom> forcepci IB6/P0/B0 on
```

help

Without arguments, list all available LOM commands. When an argument is supplied, display basic usage of the specified command and a short description.

Syntax

`help` [*command-name]*

`help` [*partial-command-name]*

`help –h`

Options/Parameters

The following table lists all options or parameters and describes their use:

command-name	The name of the LOM command.
partial-command-name	One or more letters of the command name, such as show.
–h	Displays help for this command.

Description

The `help` command, without arguments, lists all available LOM commands. When an argument is supplied, the `help` command displays basic usage of the specified command and a short description.

Examples

- To display help information on the `setlocator` command:

```
lom> help setlocator

setlocator -- set the system locator led

       Usage: setlocator on|off
           setlocator –h

        –h -- display this help message

lom>
```

- To display all commands beginning with `show`:

```
lom> help show
```

- To display all commands beginning with the letter b:

```
lom> help b
```

history

Displays the command history along with date and time stamps.

Syntax

```
history
```

```
history -h
```

Options/Parameters

The following table lists all options or parameters and describes their use:

-h	Displays help for this command.

Description

Shows the command history for the current connection, along with date and time stamps.

Example

CODE EXAMPLE 3   Using the history Command

```
lom> history
Nov 26 14:34:37 : showalarm 1
Nov 26 14:34:40 : showalarm 2
Nov 26 14:34:45 : showalarm system
Nov 26 14:40:01 : showeventreporting
Nov 26 15:06:00 : showfault
Nov 26 15:53:05 : shownetwork
Nov 26 16:15:32 : help setlocator
Nov 26 16:17:32 : history
```

inventory

Displays SEPROM contents of a FRU.

Syntax

```
inventory

inventory [board]

inventory -h
```

Options/Parameters

The following table lists all options or parameters and describes their use:

board	The name of a FRU.
-h	Displays help for this command.

Description

Shows the contents of a FRU SEPROM.

Examples

■ To show all FRU SEPROMs:

```
lom> inventory
```

■ To show a specific FRU (the power supply):

```
lom>inventory PS1
/N0/PS1: PS: 300-1523-01-02 serial# E00254 "Power Supply (A166,V1280)"
    Made on Fri Nov 30 11:47:41 PST 2001 by 03ad at DELTAELECTRONICS CHUNGLI
TAIWAN
    Powered on for 87 days 12 hours 1 minute
```

logout

Logs out from this connection.

Syntax

```
logout
```

```
logout -h
```

Options/Parameters

The following table lists all options or parameters and describes their use:

-h	Displays help for this command.

Description

Only one user can be logically connected to the system console or LOM prompt at any one time. If you wish to establish a connection through the system controller network port then you must first make the connection available by logging out of the serial port connection. The same is true if you are logged into the network port but wish to connect over the serial port.

Note – Typing another character on the serial port after logging out from the serial port is interpreted as an attempt to reconnect the connection.

Example

```
lom> logout
```

password

Sets the password for the LOM.

Syntax

`password`

`password -h`

Options/Parameters

The following table lists all options or parameters and describes their use:

-h	Displays help for this command.

Description

Sets the password for establishing connections to the shared LOM/console port, and for other password-protected activities. Prior to allowing the password to be changed, the current password will be authenticated. Changed passwords take effect immediately. The old password will no longer be accepted.

You can remove the password by pressing Return at the `Enter new password` and `Enter new password again` prompts.

If your password has been lost or forgotten, contact SunService for advice.

See Also

- setupsc
- reset
- break
- *Sun Fire Entry-Level Midrange System Administration Guide*.

Example

You see the following display when you type the `password` command at the LOM shell.

CODE EXAMPLE 4   Using the `password` Command

```
lom> password
Enter current password:
Enter new password:
Enter new password again:
lom>
```

poweroff

Forcibly powers off the whole system to standby, or a FRU, or a list of FRUs.

Syntax

```
poweroff

poweroff [-y|-n]

poweroff [-y|-n] fru-name [fru-name...]

poweroff -h
```

Options/Parameters

The following table lists all options or parameters and describes their use:

-y	Answers yes to all questions. This option is potentially hazardous. You can forcefully power off a component with the -y option.
-n	Answers no to all questions. You cannot forcefully power off a component with the -n option.
fru-name	The name of an individual FRU.
-h	Displays help for this command.

Description

poweroff *fru-name* powers off a FRU or set of FRUs, which can be:

- Power supply (ps*x*)
- System board (sb*x*, ib*x*, rp*x*)
- Fan tray (ft0)

poweroff without an argument explicitly terminates the Solaris system before proceeding to power off the FRUs. The power status of each board is displayed by the showboards output.

Note – In normal circumstances use the shutdown command.

See Also

poweron, shutdown

Examples

■ **To power off CPU/Memory board** sb2**, type:**

```
lom> poweroff sb2
```

■ To terminate and power off the entire system, type:

```
lom> poweroff
```

poweron

Powers on the entire system, or a FRU, or a list of FRUs.

Syntax

`poweron`

`poweron [all|`*fru-name*`[`*fru-name*`...]]`

`poweron -h`

Options/Parameters

The following table lists all options or parameters and describes their use:

`-y`	Does not prompt for confirmation.
`-n`	Does not execute the command if confirmation is requested.
fru-name	Powers on a FRU or set of FRUs.
`all`	Powers on all FRUs but does not boot Solaris.
`-h`	Displays help for this command.

Description

`poweron` without an argument is the normal way to power on a system from standby and boot Solaris.

`poweron` *fru-name* powers on a FRU or set of FRUs, which can be:

- Power supply (ps*x*)
- System board (sb*x*, ib*x*, rp*x*)
- Fan tray (ft0)

Note – `poweron all` powers on all FRUs without booting the Solaris OS. The power status of each board is displayed by the `showboards` output.

See Also

`shutdown`, `showboards`, `poweroff`

Examples

- To power on and boot the entire system, type:

```
lom> poweron
```

■ **To power on CPU/Memory board** sb2**, type:**

```
lom>poweron sb2
```

reset

Resets the Solaris system.

Syntax

```
reset [-x|-a] [-y|-n]
```

```
reset -h
```

Options/Parameters

The following table lists all options or parameters and describes their use:

-y	Does not prompt for confirmation.
-n	Does not execute the command if confirmation is requested.
-x	Forces the default behavior of reset via XIR (Externally initiated reset).
-a	Resets all hardware. Skips externally initiated reset (XIR) data collection. Loss of extra debugging data results.
-h	Displays help for this command.

Note – Typing `reset`, without options, is the same as `reset -x`.

Description

Resets the Solaris system. The operation is not allowed if the system is in secure mode or powered down to standby mode. The Solaris system console will be resumed after completing the reset.

By default, `reset` uses XIR (eXternally Initiated Reset) to reset the CPU processors in the Solaris system. The XIR forces control of the Solaris system into the OpenBoot PROM and begins the OpenBoot PROM's error reset recovery actions. The error reset recovery actions preserve most Solaris system states to allow the collection of the data needed for debugging the hardware and software, including a Solaris Operating System core file. The OpenBoot PROM's error reset recovery actions are controlled by setting the OpenBoot PROM `error-reset-recovery` configuration variable.

If you cannot log into the Solaris Operating System and typing the `break` command did not force control of the Solaris system back to the OpenBoot PROM `ok` prompt), after you type the `reset` command for the first time, you must next type `reset –a` in order to reset everything.

The `reset –a` command is equivalent to the OpenBoot PROM `reset-all` word.

See Also

- `setupsc`
- *Sun Fire Entry-Level Midrange System Administration Guide* for step-by-step procedures on recovering from a hung or hard hung Solaris system.

Examples

- To reset the Solaris system:

```
lom> reset
```

- To reset the entire system, which skips XIR data collection and results in a loss of extra debugging data:

```
lom> reset –a
```

Note – You need to type `reset –a` if you cannot log into the Solaris Operating System and typing the `break` command did not force control of the Solaris system back to the OpenBoot PROM `ok` prompt after typing `reset` (without any options) failed.

resetsc

Resets the system controller.

Syntax

```
resetsc [-y|-n]

resetsc -h
```

Options/Parameters

The following table lists all options or parameters and describes their use:

-y	Do not prompt for confirmation.
-n	Do not execute this command if confirmation is requested.
-h	Displays help for this command.

Description

Reboots the system controller. The system controller log history will be lost.

Note – Do not use this command during any system-wide operational sequences, such as booting and shutting down.

See Also

flashupdate

Example

CODE EXAMPLE 5 Using the resetsc Command to Reset the System Controller

```
lom>resetsc -y
Are you sure you want to reboot the system controller now? yes (-y)
Waiting for critical processes to finish.  This may take a while.
Critical processes have finished.

Rebooting. All telnet connections closed. Reestablish any needed connections.
Fri Dec 12 08:51:25 commando lom: Stopping all services on this SC
Fri Dec 12 08:51:25 commando lom: All services on this SC have been stopped.


Software Reset...
```

```
@(#) SYSTEM CONTROLLER(SC) POST 38 2003/11/18 21:21
PSR = 0x044010e5
PCR = 0x04004000

        Memory size = 128MB


Basic sanity checks done.
Skipping POST ...
ERI Device Present
Getting MAC address for SSC1
Using SCC MAC address
MAC address is 0:3:ba:19:8b:92
Hostname: commando
Address: 129.xxx.xxx.xxx
Netmask: 255.255.255.0
Attached TCP/IP interface to eri unit 0
Attaching interface lo0...done
Gateway: 129.xxx.xxx.xxx
interrupt: 100 Mbps full duplex link up

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Sun Fire System Firmware
RTOS version: 38
ScApp version: 5.17.0 Build_02
SC POST diag level: off

The date is Friday, December 12, 2003, 8:52:42 AM PST.

Fri Dec 12 08:52:43 commando lom: Boot: ScApp 5.17.0, RTOS 38
Fri Dec 12 08:52:45 commando lom: SBBC Reset Reason(s): Peer Reset, Watchdog
Reset
Fri Dec 12 08:52:51 commando lom: Caching ID information
Fri Dec 12 08:52:52 commando lom: Clock Source: 75MHz
Fri Dec 12 08:52:57 commando lom: /N0/PS0: Status is OK
Fri Dec 12 08:52:58 commando lom: /N0/PS1: Status is OK
Fri Dec 12 08:52:58 commando lom: /N0/PS2: Status is OK
Fri Dec 12 08:52:59 commando lom: /N0/PS3: Status is OK
Fri Dec 12 08:52:59 commando lom: Chassis is in single partition mode.
Connected.
```

restartssh

Restarts the SSH server.

Syntax

```
restartssh [-h]
```

Options/Parameters

The following table lists all options or parameters and describes their use:

-y	Answers yes to the informational message. Does not prompt for confirmation.
-n	Answers no to the informational message. Does not execute the command if confirmation is required.
-h	Displays help for this command.

Description

To run this command, SSH must be enabled using the setupnetwork command.

If you have generated new host keys using ssh-keygen, you must restart the SSH server before the new host keys can take effect. By restarting the server, the keys are loaded into memory and stored in the SSH server's dedicated memory structure.

When restarting the SSH server, all existing SSH connections are closed. The command posts an informational message, asking for confirmation before actually restarting the SSH server. You can skip confirmation by specifying the –y or –n switch.

If you have issued the command over an SSH connection, the connection terminates when the SSH server restarts. Since the process only takes seconds, you can re-establish the SSH connection immediately.

See Also

ssh-keygen

setalarm

Sets the system alarm relays and associated LEDS.

Syntax

```
setalarm 1|2|3 on|off
```

```
setalarm -h
```

Options/Parameters

The following table lists all options or parameters and describes their use:

1	Specifies alarm number 1
2	Specifies alarm number 2
3	Specifies alarm number 3
on	Turns on the specified alarm relay and LED.
off	Turns off the specified alarm relay and LED.
-h	Displays help for this command

Description

Sets the system alarm relays and associated LEDs. For information about the system alarm, UNIX running LED, and Alarm 3, see Appendix A of the *Sun Fire Entry-Level Midrange System Administration Guide*.

See Also

showalarm

Examples

```
lom> setalarm 1 on
```

```
lom> setalarm 2 off
```

setdate

Set the date and time for the system.

Syntax

```
setdate [-v] [-t time-zone] [mmdd]HHMM

setdate [-v] [-t time-zone] mmddHHMM[[cc]yy]][.SS]

setdate [-v] -r datehost

setdate [-v] -t GMT <+|-> offset-from-GMT

setdate -h
```

Options/Parameters

The following table lists all options or parameters and describes their use:

-v	Verbose mode.
-t *time-zone*	Sets the time zone using the time zone abbreviation.
-t GMT<+|->*offset-from-GMT*	Sets the time to GMT plus the specified offset.
mm	Month number
dd	Day number in the month
HH	Hour number (24-hour system)
MM	Minute number
cc	First two digits of year number
yy	Last two digits of the year number
SS	Second number.
-r *datehost*	Sets the date based on the current values of *datehost*. The host must be a valid system.
-h	Displays help for this command.

Note – For a full listing of time zones, type showdate -t -v.

Description

Sets the date and time.

Note – If your time zone area is using daylight savings or summer time, the date and time is set automatically.

Note – If Solaris is running you must use the Solaris `date(1)` command.

See Also

showdate

Examples

- To set the date and time to Thursday, April 20, 2000 at 18 hours 15 minutes and 10 seconds:

```
lom> setdate 042018152000.10
```

- To set the date from the datehost system:

```
lom> setdate -r hostname
Mon Apr 03 09:30:58 PST 2000
```

- To set the date and time to Thursday, April 20, 2000 at 18 hours 15 minutes and 10 seconds and the time zone to Eastern Standard Time (EST), using the time zone abbreviations, type:

```
lom> setdate -t EST 042018152000.10
```

- To set just the time zone for the UK, type:

```
lom> setdate -t Europe/London
```

To set the time zone for European Central Time using the time zone abbreviations and not the date and time, type:

```
lom> setdate -t ECT
```

setescape

Sets the sequence of characters used to switch from the Solaris or OpenBoot PROM console to the LOM prompt.

Syntax

`setescape` *escapechars*

`setescape –h`

Options/Parameters

The following table lists all options or parameters and describes their use:

escapechars	Up to five alphanumeric characters can be specified as the escape sequence. The default sequence when the LOM is first started is a pound (#) followed by a period (.), that is, #.
–h	Displays help for this command.

Description

Sets the sequence of characters used to switch from the Solaris or OpenBoot PROM console to the LOM prompt.

If you are typing at the console and type the first character of the escape sequence (by default this is #), there is a one second delay before the character appears on the screen. This is because the system waits for one second to see if the next character in the escape sequence is about to be typed. If the next character is typed then the system waits up to one second for the next character and so on. If you type all the characters in the escape sequence then the `lom>` prompt appears. If you do not, then the characters belonging to the escape sequence that were typed are output to the screen.

Choose an escape sequence that does not start with a sequence of characters that is frequently typed at the console, otherwise the delay between your striking the keys and the character appearing on the screen may be confusing and affect your typing.

See Also

showescape

Examples

■ To set the escape characters to #. type:

```
lom> setescape "#."
```

Note – As # is the comment character for the LOM command shell the sequence must be enclosed in quotes.

- To set the escape characters to ~~~.. type:

```
lom> setescape ~~~..
```

seteventreporting

The `seteventreporting` command controls which messages are printed at the LOM prompt and the level of logged messages sent to Solaris.

Syntax

```
seteventreporting on [0|1|2|3|4]

seteventreporting off [0|1|2|3|4]

seteventreporting default [0|1|2|3|4]

seteventreporting -h
```

Options/Parameters

The following table lists all options or parameters and describes their use:

default	By default the LOM software prints messages at the lom> prompt, but only when Solaris is not running. The Solaris software prints messages from the LOM as directed by the syslogd system log daemon configuration file /etc/syslog.conf.
on	All messages are reported to the lom> prompt at the currently set reporting level and below.
off	No messages are reported to the lom> prompt. Messages continue to be sent to Solaris at the current reporting level and below.

The reporting levels are:

0	No messages are reported.
1	Only fatal messages are reported.
2	Fatal and warning messages are reported.
3	Fatal, warning and notice messages are reported.
4	Does not currently have any significance, operates as level 3.

Note – If not specified, the default reporting level is 3.

-h	Displays help for this command.

Description

The seteventreporting command controls which messages are printed at the LOM prompt and the level of logged messages sent to Solaris. The reporting level controls the level of message that is passed to Solaris while it is active, or later retrieved when Solaris next boots. Regardless of the level setting, all messages appear in the system controller internal log, which is displayed using the showlogs command.

See Also

showeventreporting

Examples

■ To turn off event reporting at the LOM prompt:

```
lom> seteventreporting off
```

■ To set default messaging handling at the LOM prompt:

```
lom> seteventreporting default
```

■ To report all fatal and warning messages at the LOM prompt:

```
lom> seteventreporting on 2
```

setlocator

Set the state of the system Locator LED.

Syntax

```
setlocator on|off
```

```
setlocator –h
```

Options/Parameters

The following table lists all options or parameters and describes their use:

on	Turns on the system Locator LED.
off	Turns off the system Locator LED.
–h	Displays help for this command.

Description

Sets the state of the system Locator LED.

See Also

showlocator

Examples

To turn off the system Locator LED:

```
lom> setlocator off
```

To turn on the system Locator LED:

```
lom> setlocator on
```

setls

Sets the component location status.

Scope

Shell

Syntax

```
setls -s new-status -l location
```

```
setls -h
```

Options/Parameters

The following table lists all options or parameters and describes their use:

-s *new-status*	Sets the location status of a component: enable – Enables the specified component location. disable – Disables the specified component location.
-l *location*	Specifies the component location: • *slot/port/physical-bank/logical-bank* for a CPU/Memory board • *slot/port/bus* for an I/O assembly • *slot/card* for an I/O assembly
-h	Displays help for this command.

Description

Controls whether components in a particular location are   configured into a system. The location status of a component can be set to one of the following states:

■ Enabled – The component residing in the specified location is configured into the system, subject to its component health status (CHS). For details on component health status, refer to the *Sun Fire Entry-Level Midrange System Administration Guide.*

In some cases a disabled component cannot be re-enabled by using the setls command. If a disabled component has a POST status of chs, as indicated in the showcomponent command output, the component cannot be configured into the system. Contact your service provider for further service action.

■ Disabled – The component residing in the specified location is not configured into the system.

Note – The location status is updated at the next reboot, board power cycle, or POST execution. For example, POST runs automatically whenever you perform a `setkeyswitch on` or `off` operation.

When you disable the location of a component, its subcomponent locations are also disabled. For example, if you disable the location of a CPU slot, the memory locations that are controlled by that CPU are also automatically disabled.

Similarly, when you enable the location of a component, its subcomponent locations are also enabled, except when the subcomponent locations were previously disabled on an individual basis by using the `setls` command. The subcomponent locations cannot be enabled automatically through the parent component location. Each subcomponent location must be enabled individually by using the `setls` command.

Component locations can be the following (see TABLE 4 and TABLE 5):

- Ports (CPU on a CPU/Memory board and I/O controller on an I/O assembly)
- Physical and logical memory banks
- I/O buses
- I/O cards

TABLE 4   *location* Descriptions for a CPU/Memory Board

Board or Device	Component Location
CPU/Memory board *slots*	SB0, SB1, SB2, SB3, SB4, SB5
Ports on the CPU/Memory board	P0, P1, P2, P3
Physical memory banks on CPU/Memory boards	B0, B1
Logical banks on CPU/Memory boards	L0, L1, L2, L3

TABLE 5   *location* Descriptions for an I/O Assembly

Board or Device	Component Location
I/O assemblies (*slots*)	IB6, IB7, IB8, IB9
Ports on the I/O assembly	P0, P1
Buses on the I/O assembly	B0, B1
I/O cards in the I/O assembly	C0, C1, C2, C3, C4, C5, C6, C7—the number of cards varies with the I/O assembly

Note – If you are disabling the port locations of an I/O assembly, leave at least one I/O controller 0 enabled in a domain, so that the domain can communicate with the system controller.

See Also

showcomponent, *Sun Fire Entry-Level Midrange System Administration Guide*

Examples

■ CODE EXAMPLE 6 enables a component located in slot sb4. This means that the CPU/Memory board in slot sb4 is considered for configuration into the system, subject to the component health status. The status change occurs at the next reboot, board power cycle, or POST execution.

CODE EXAMPLE 6 setls Command Example Enabling the Location of a CPU/Memory Board in Slot sb4

```
lom> setls -s enable -l sb4
```

■ CODE EXAMPLE 7 enables an I/O assembly located in port 1 of slot ib6. This means that I/O assembly 6, port 1 is considered for configuration into the system, subject to the component health status. The status change occurs at the next reboot, board power cycle, or POST execution.

CODE EXAMPLE 7 setls Command Example Enabling the Location of an I/O Assembly in Slot ib6

```
lom> setls -s enable -l ib6/p1
```

■ CODE EXAMPLE 8 disables a component located in slot sb0 and CPU port 3. This means that the CPU/Memory board in slot sb0 is deconfigured from the system at the next reboot, board power cycle, or POST execution. Also, any memory banks on this CPU port are unreachable and are implicitly disabled.

CODE EXAMPLE 8 setls Command Example Disabling the Location of a CPU/Memory Board in Slot sb0 and CPU port 3

```
lom> setls -s disable -l sb0/p3
```

- CODE EXAMPLE 9 disables a component located in slot sb4 and deconfigures the CPU/Memory board in slot sb4 at the next reboot, board power cycle, or POST execution.

CODE EXAMPLE 9 setls Command Example Disabling the Location of a CPU/Memory Board in Slot sb4

```
lom> setls -s disable -l sb4
```

setupnetwork

Sets up System Controller network attributes.

Syntax

`setupnetwork`

`setupnetwork -h`

Options/Parameters

The following table lists all options or parameters and describes their use:

-h	Displays help for this command.

Description

Enables the network details for the system controller to be set up so that it can be accessed through a network connection. After setting these attributes the system controller must be reset in order for them to take effect.

TABLE 6   setupnetwork Attributes

Parameter	Values
Is the system controller on a network?	If the System Controller is to be accessed over a network connection this option should be set to yes.
Use DHCP or static network settings?	• static – The network IP and hostname will be the same each time the system controller is powered on. • DHCP – The hostname and IP address are obtained automatically by using the network service called DHCP.
Hostname	The human-readable network identity for this system controller.
IP Address	The network identity for use by the system controller.
Netmask	For this value specify how much of the address should be reserved for subdividing networks into subnetworks. The mask includes the network part of the local address and the subnet part. The mask contains 1s for the bit positions for the subnet part and 0s for the host.
Gateway	IP address should be extracted from the network using the router discovery mechanism.
DNS Domain	Domain name. For example XXX.XXX.com. There is no default value. You must supply this information.

TABLE 6   `setupnetwork` Attributes

Parameter	Values
Primary DNS Server	IP address of your DNS primary server. No default value.
Secondary DNS Server	IP address of your DNS secondary server. No default value. If the primary DNS server is not working, the secondary DNS server takes over automatically.
Connection type	Type of network connection to the SC. Default value is `none` (no network connection). Set it to `ssh` or `telnet` to enable system administration using a remote connection.

See Also

shownetwork, resetsc

Example

```
lom> setupnetwork

Network Configuration
---------------------
Is the system controller on a network? [no]: yes
Use DHCP or static network settings? [DHCP]: static
Hostname []: somename
IP Address []: 129.xxx.xxx.xxx
Netmask [255.255.255.0]: 255.255.255.0
Gateway []: 129.xxx.xxx.xxx
DNS Domain []: somewhere.nowhere.com
Primary DNS Server []: 129.xxx.xxx.xxx
Secondary DNS Server []: 129.xxx.xxx.xxx
Connection type (ssh, telnet, none) [none]: ssh

Rebooting the SC is required for changes in network settings to take effect.
lom>
```

setupsc

Configures optional system controller features.

Syntax

`setupsc`

`setupsc –h`

Options/Parameters

The following table lists all options or parameters and describes their use:

–h	Displays help for this command.

Description

Configures a number of optional features of the system controller.

- SC POST diagnostic level:

  Controls the level of the Power-On Self-Test diagnostic level for the system controller when it is reset or powered on.

  - `off` – SC POST is not run.
  - `min` – Minimum level SC POST is run (default).
  - `max` – Maximum level SC POST is run.

- Host Watchdog:

  Enables/Disables a system reset when the Solaris watchdog expires

- Rocker Switch:

  Enables/Disables front panel ON/Standby rocker switch

- Secure Mode:

  Enable/Disable use of the `reset` and `break` commands. When Secure Mode is enabled the `reset` and `break` commands are disabled. If a password has been set for the system controller then you are prompted for password confirmation before a new setting for Secure Mode is accepted.

- Capacity On Demand (COD) headroom

  Configure the number of currently installed instant access COD Right-To-Use licenses (RTU).

  You can also configure the COD *headroom* quantity (the number of additional unlicensed COD CPUs that can be used temporarily). The maximum number of instant access CPUs that can be enabled (4) is displayed inside the parentheses.

Specify 0 to disable the instant access CPU quantity only if there are no instant access CPUs currently in use.

The current number of instant access CPUs enabled is displayed inside the brackets.

■ Tolerate correctable memory errors:

If set to true it allows the Solaris Operating System to boot with memory exhibiting correctable ECC errors.

The Solaris 10 Operating System incorporates features that automatically isolate faulty parts of such memory modules, thus avoiding the need to completely disable these modules and increasing system availability. If set to false, memory modules exhibiting correctable ECC errors are disabled by POST and not allowed to partitipate in the Solaris domain.

See Also

break, reset, password

Example

■ To keep the current settings press Return at each field prompt.

```
lom> setupsc

System Controller Configuration
-------------------------------
SC POST diag Level [off]:
Host Watchdog [enabled]:
Rocker Switch [enabled]:
Secure Mode [off]:

PROC RTUs installed: 0
PROC Headroom Quantity (0 to disable, 4 MAX) [0]:
Tolerate correctable memory errors [false]:

lom>
```

- A password may be required in order to accept a new setting for secure mode.

```
lom> setupsc
System Controller Configuration
-------------------------------
SC POST diag Level [off]: min
Host Watchdog [enabled]:
Rocker Switch [enabled]: disabled
Secure Mode [off]: on
Enter Password:

PROC RTUs installed: 0
PROC Headroom Quantity (0 to disable, 4 MAX) [0]:
Tolerate correctable memory errors [false]:

lom>
```

- When secure mode is enabled the reset and break commands cannot be used:

```
lom> break
The break command has been disabled using the Secure Mode
option of the setupsc command.
```

- When secure mode is enabled the reset and break commands cannot be used.

```
lom> reset
The reset command has been disabled using the Secure Mode
option of the setupsc command.
```

showalarm

Displays state of system alarm relays and LEDs.

Syntax

```
showalarm 1|2|3|system
```

```
showalarm -h
```

Options/Parameters

The following table lists all options or parameters and describes their use:

1	Shows the state of the alarm 1 LED and relay.
2	Shows the state of the alarm 2 LED and relay.
3	Shows the state of the alarm 3 LED and relay.
system	Shows state of system (UNIX running) alarm relay and LED.
-h	Displays help for this command.

Description

Show state of system alarm relays and LEDs. For information about the system alarm and Alarm 3, see Appendix A of the *Sun Fire Entry-Level Midrange System Administration Guide*.

See Also

setalarm

Examples

■ To show the state of the system alarm (UNIX running):

```
lom> showalarm system
system alarm  is on
```

■ To show the state of alarm 1:

```
lom> showalarm 1
alarm1 is off
```

■ To show the state of alarm 2:

```
lom> showalarm 2
alarm2 is off
```

■ To show the state of alarm 3:

```
lom> showalarm 3
alarm3 is off
```

showboards

Display the status for all boards in the system

Syntax

```
showboards [-ev] [-p part] ...
```

```
showboards -h
```

Options/Parameters

The following table lists all options or parameters and describes their use:.

-e	Includes empty slots.
-p	Shows a specific part. *part* can be: • board – Shows board status. • cpu – Shows CPU information. • io – Shows I/O information. • memory – Shows memory information. • serial – Shows board serial number information. • version – Shows version information.
-v	Displays all information.
-h	Displays help for this command.

Description

Displays the status of all of the boards in the system (for example CPU/Memory boards, I/O assembly, fan tray and so on).

Examples

■ To show all boards (same as showboards –p board):

CODE EXAMPLE 10   Using the showboards Command

```
lom>showboards
Slot       Pwr Component Type               State      Status
----       --- --------------               -----      ------
SSC1       On  System Controller            Main       Passed
/N0/SCC    -   System Config Card           Assigned   OK
/N0/BP     -   Baseplane                    Assigned   OK
/N0/SIB    -   Indicator Board              Assigned   OK
/N0/SPDB   -   System Power Distribution Bd. Assigned  Passed
/N0/PS0    On  A166 Power Supply            -          OK
/N0/PS1    On  A166 Power Supply            -          OK
/N0/FT0    On  Fan Tray                     Auto Speed OK
/N0/RP0    On  Repeater Board               Assigned   OK
/N0/RP2    On  Repeater Board               Assigned   OK
/N0/SB0    On  CPU Board                    Active     Passed
/N0/IB6    On  PCI I/O Board                Active     Passed
/N0/MB     -   Media Bay                    Assigned   OK
```

■ To show all boards, including empty slots:

CODE EXAMPLE 11   Using the showboards -e Command

```
lom>showboards -e
Slot       Pwr Component Type               State      Status
----       --- --------------               -----      ------
SSC1       On  System Controller            Main       Passed
/N0/SCC    -   System Config Card           Assigned   OK
/N0/BP     -   Baseplane                    Assigned   Passed
/N0/SIB    -   Indicator Board              Assigned   OK
/N0/SPDB   -   System Power Distribution Bd. Assigned  Passed
/N0/PS0    On  A166 Power Supply            -          OK
/N0/PS1    On  A166 Power Supply            -          OK
PS2        -   Empty Slot                   Assigned   -
PS3        -   Empty Slot                   Assigned   -
/N0/FT0    On  Fan Tray                     Auto Speed Passed
/N0/RP0    On  Repeater Board               Assigned   OK
/N0/RP2    On  Repeater Board               Assigned   OK
/N0/SB0    On  CPU Board                    Active     Passed
/N0/SB2    On  CPU Board                    Active     Passed
SB4        -   Empty Slot                   Assigned   -
/N0/IB6    On  PCI I/O Board                Active     Passed
/N0/MB     -   Media Bay                    Assigned   OK
```

■ To show all information about a system's boards::

CODE EXAMPLE 12   Using the showboards -v Command

```
lom>showboards -v
Slot      Pwr Component Type              State      Status
----      --- --------------             -----      ------
SSC1      On  System Controller V2       Main       Passed
/N0/SCC   -   System Config Card         Assigned   OK
/N0/BP    -   Baseplane                  Assigned   Passed
/N0/SIB   -   Indicator Board            Assigned   Passed
/N0/SPDB  -   System Power Distribution Bd. Assigned Passed
/N0/PS0   On  A166 Power Supply          -          OK
/N0/PS1   On  A166 Power Supply          -          OK
/N0/PS2   On  A166 Power Supply          -          OK
/N0/PS3   On  A166 Power Supply          -          OK
/N0/FT0   On  Fan Tray                   Auto Speed Passed
/N0/RP0   On  Repeater Board             Assigned   OK
/N0/RP2   On  Repeater Board             Assigned   OK
/N0/SB0   On  CPU Board                  Active     Passed
/N0/SB2   On  CPU Board V3               Active     Passed
/N0/SB4   On  CPU Board                  Active     Passed
/N0/IB6   On  PCI I/O Board              Active     Passed
/N0/MB    -   Media Bay                  Assigned   Passed


Component          J-No.   Size      Reason
---------          -----   ----      ------
/N0/SB0/P0/B0/D0   J13300  256 MB
/N0/SB0/P0/B0/D1   J13400  256 MB
/N0/SB0/P0/B0/D2   J13500  256 MB
/N0/SB0/P0/B0/D3   J13600  256 MB
/N0/SB0/P0/B1/D0   J13301  256 MB
/N0/SB0/P0/B1/D1   J13401  256 MB
/N0/SB0/P0/B1/D2   J13501  256 MB
/N0/SB0/P0/B1/D3   J13601  256 MB
/N0/SB0/P1/B0/D0   J14300  256 MB
/N0/SB0/P1/B0/D1   J14400  256 MB
/N0/SB0/P1/B0/D2   J14500  256 MB
/N0/SB0/P1/B0/D3   J14600  256 MB
/N0/SB0/P1/B1/D0   J14301  256 MB
/N0/SB0/P1/B1/D1   J14401  256 MB
/N0/SB0/P1/B1/D2   J14501  256 MB
/N0/SB0/P1/B1/D3   J14601  256 MB
/N0/SB0/P2/B0/D0   J15300  256 MB
/N0/SB0/P2/B0/D1   J15400  256 MB
/N0/SB0/P2/B0/D2   J15500  256 MB
/N0/SB0/P2/B0/D3   J15600  256 MB
/N0/SB0/P2/B1/D0   J15301  256 MB
```

```
/N0/SB0/P2/B1/D1   J15401   256 MB
/N0/SB0/P2/B1/D2   J15501   256 MB
/N0/SB0/P2/B1/D3   J15601   256 MB
/N0/SB0/P3/B0/D0   J16300   256 MB
/N0/SB0/P3/B0/D1   J16400   256 MB
/N0/SB0/P3/B0/D2   J16500   256 MB
/N0/SB0/P3/B0/D3   J16600   256 MB
/N0/SB0/P3/B1/D0   J16301   256 MB
/N0/SB0/P3/B1/D1   J16401   256 MB
/N0/SB0/P3/B1/D2   J16501   256 MB
/N0/SB0/P3/B1/D3   J16601   256 MB
/N0/SB2/P0/B0      -        -         DRAM DIMM Group 0 Empty
/N0/SB2/P0/B1/D0   J13301   512 MB
/N0/SB2/P0/B1/D1   J13401   512 MB
/N0/SB2/P0/B1/D2   J13501   512 MB
/N0/SB2/P0/B1/D3   J13601   512 MB
/N0/SB2/P1/B0      -        -         DRAM DIMM Group 0 Empty
/N0/SB2/P1/B1/D0   J14301   512 MB
/N0/SB2/P1/B1/D1   J14401   512 MB
/N0/SB2/P1/B1/D2   J14501   512 MB
/N0/SB2/P1/B1/D3   J14601   512 MB
/N0/SB2/P2/B0      -        -         DRAM DIMM Group 0 Empty
/N0/SB2/P2/B1/D0   J15301   512 MB
/N0/SB2/P2/B1/D1   J15401   512 MB
/N0/SB2/P2/B1/D2   J15501   512 MB
/N0/SB2/P2/B1/D3   J15601   512 MB
/N0/SB2/P3/B0      -        -         DRAM DIMM Group 0 Empty
/N0/SB2/P3/B1/D0   J16301   512 MB
/N0/SB2/P3/B1/D1   J16401   512 MB
/N0/SB2/P3/B1/D2   J16501   512 MB
/N0/SB2/P3/B1/D3   J16601   512 MB
/N0/SB4/P0/B0/D0   J13300   256 MB
/N0/SB4/P0/B0/D1   J13400   256 MB
/N0/SB4/P0/B0/D2   J13500   256 MB
/N0/SB4/P0/B0/D3   J13600   256 MB
/N0/SB4/P0/B1/D0   J13301   256 MB
/N0/SB4/P0/B1/D1   J13401   256 MB
/N0/SB4/P0/B1/D2   J13501   256 MB
/N0/SB4/P0/B1/D3   J13601   256 MB
/N0/SB4/P1/B0/D0   J14300   256 MB
/N0/SB4/P1/B0/D1   J14400   256 MB
/N0/SB4/P1/B0/D2   J14500   256 MB
/N0/SB4/P1/B0/D3   J14600   256 MB
/N0/SB4/P1/B1/D0   J14301   256 MB
/N0/SB4/P1/B1/D1   J14401   256 MB
/N0/SB4/P1/B1/D2   J14501   256 MB
/N0/SB4/P1/B1/D3   J14601   256 MB
```

```
/N0/SB4/P2/B0/D0  J15300  256 MB
/N0/SB4/P2/B0/D1  J15400  256 MB
/N0/SB4/P2/B0/D2  J15500  256 MB
/N0/SB4/P2/B0/D3  J15600  256 MB
/N0/SB4/P2/B1/D0  J15301  256 MB
/N0/SB4/P2/B1/D1  J15401  256 MB
/N0/SB4/P2/B1/D2  J15501  256 MB
/N0/SB4/P2/B1/D3  J15601  256 MB
/N0/SB4/P3/B0/D0  J16300  256 MB
/N0/SB4/P3/B0/D1  J16400  256 MB
/N0/SB4/P3/B0/D2  J16500  256 MB
/N0/SB4/P3/B0/D3  J16600  256 MB
/N0/SB4/P3/B1/D0  J16301  256 MB
/N0/SB4/P3/B1/D1  J16401  256 MB
/N0/SB4/P3/B1/D2  J16501  256 MB
/N0/SB4/P3/B1/D3  J16601  256 MB


Component    Segment Compatible In Date       Time  Build Version
---------    ------- ---------- -- ----       ----  ----- -------
SSC1/FP0     -       -          -  -          -     -     RTOS version: 38
SSC1/FP1     ScApp   Reference  12 01/27/2004 11:42 5.0   5.17.0
SSC1/FP1     Ver     -          -  01/27/2004 11:42 5.0   5.17.0 Build_05
/N0/IB6/FP0 iPOST    Yes        12 01/27/2004 11:41 5.0   5.17.0
/N0/IB6/FP0 Ver      -          -  01/27/2004 11:41 5.0   5.17.0 Build_05
/N0/IB6/FP0 Info     -          12 01/27/2004 11:41 5.0   5.17.0
/N0/SB0/FP0 POST     Yes        12 01/27/2004 11:38 5.0   5.17.0
/N0/SB0/FP0 OBP      Yes        12 01/27/2004 11:37 5.0   5.17.0
/N0/SB0/FP0 Ver      -          -  01/27/2004 11:39 5.0   5.17.0 Build_05
/N0/SB0/FP0 Info     -          12 01/27/2004 11:39 5.0   5.17.0
/N0/SB0/FP1 POST     Yes        12 01/27/2004 11:38 5.0   5.17.0
/N0/SB0/FP1 OBP      Yes        12 01/27/2004 11:37 5.0   5.17.0
/N0/SB0/FP1 Ver      -          -  01/27/2004 11:39 5.0   5.17.0 Build_05
/N0/SB0/FP1 Info     -          12 01/27/2004 11:39 5.0   5.17.0
/N0/SB2/FP0 POST     Yes        12 01/27/2004 11:38 5.0   5.17.0
/N0/SB2/FP0 OBP      Yes        12 01/27/2004 11:37 5.0   5.17.0
/N0/SB2/FP0 Ver      -          -  01/27/2004 11:39 5.0   5.17.0 Build_05
/N0/SB2/FP0 Info     -          12 01/27/2004 11:39 5.0   5.17.0
/N0/SB2/FP1 POST     Yes        12 01/27/2004 11:38 5.0   5.17.0
/N0/SB2/FP1 OBP      Yes        12 01/27/2004 11:37 5.0   5.17.0
/N0/SB2/FP1 Ver      -          -  01/27/2004 11:39 5.0   5.17.0 Build_05
/N0/SB2/FP1 Info     -          12 01/27/2004 11:39 5.0   5.17.0
/N0/SB4/FP0 POST     Yes        12 01/27/2004 11:38 5.0   5.17.0
/N0/SB4/FP0 OBP      Yes        12 01/27/2004 11:37 5.0   5.17.0
/N0/SB4/FP0 Ver      -          -  01/27/2004 11:39 5.0   5.17.0 Build_05
/N0/SB4/FP0 Info     -          12 01/27/2004 11:39 5.0   5.17.0
/N0/SB4/FP1 POST     Yes        12 01/27/2004 11:38 5.0   5.17.0
```

```
/N0/SB4/FP1 OBP     Yes          12 01/27/2004 11:37 5.0    5.17.0
/N0/SB4/FP1 Ver     -            -  01/27/2004 11:39 5.0    5.17.0 Build_05
/N0/SB4/FP1 Info    -            12 01/27/2004 11:39 5.0    5.17.0


Slot               Populated Slot Description
----               --------- ----------------
/N0/IB6/P0/B1/C0   Empty     33MHz. 5V Short PCI card
/N0/IB6/P0/B1/C1   Empty     33MHz. 5V Short PCI card
/N0/IB6/P1/B1/C2   Empty     33MHz. 5V Short PCI card
/N0/IB6/P1/B1/C3   Empty     33MHz. 5V Short PCI card
/N0/IB6/P1/B1/C4   Empty     33MHz. 5V Short PCI card
/N0/IB6/P0/B0/C5   Empty     66/33MHz. 3.3V Short PCI card


Component          Part #        Serial #  Description
---------          ------        --------  -----------
/N0/SB0            540-5467-01-50 001004   CPU Board (1280)
/N0/SB4            540-5467-01-50 000096   CPU Board (1280)
/N0/SB0/P0/B0/D0   501-5401-03-50 KD0W2F   256 MB NG SDRAM DIMM
/N0/SB0/P0/B0/D1   501-5401-03-50 KD0W2K   256 MB NG SDRAM DIMM
/N0/SB0/P0/B0/D2   501-5401-03-50 KD0W2P   256 MB NG SDRAM DIMM
/N0/SB0/P0/B0/D3   501-5401-03-50 KD0W2W   256 MB NG SDRAM DIMM
/N0/SB0/P0/B1/D0   501-5401-03-50 KD0W2N   256 MB NG SDRAM DIMM
/N0/SB0/P0/B1/D1   501-5401-03-50 KD0W2R   256 MB NG SDRAM DIMM
/N0/SB0/P0/B1/D2   501-5401-03-50 KD0W2T   256 MB NG SDRAM DIMM
/N0/SB0/P0/B1/D3   501-5401-03-50 KD0W0T   256 MB NG SDRAM DIMM
/N0/SB0/P1/B0/D0   501-5401-03-50 KD0W3B   256 MB NG SDRAM DIMM
/N0/SB0/P1/B0/D1   501-5401-03-50 KD0W1Q   256 MB NG SDRAM DIMM
/N0/SB0/P1/B0/D2   501-5401-03-50 KD0W05   256 MB NG SDRAM DIMM
/N0/SB0/P1/B0/D3   501-5401-03-50 KD24GK   256 MB NG SDRAM DIMM
/N0/SB0/P1/B1/D0   501-5401-03-50 KD0W3C   256 MB NG SDRAM DIMM
/N0/SB0/P1/B1/D1   501-5401-03-50 KD0W35   256 MB NG SDRAM DIMM
/N0/SB0/P1/B1/D2   501-5401-03-50 KD0VZX   256 MB NG SDRAM DIMM
/N0/SB0/P1/B1/D3   501-5401-03-50 KD0W1W   256 MB NG SDRAM DIMM
/N0/SB0/P2/B0/D0   501-5401-03-50 KD0W1R   256 MB NG SDRAM DIMM
/N0/SB0/P2/B0/D1   501-5401-03-50 KD0W0G   256 MB NG SDRAM DIMM
/N0/SB0/P2/B0/D2   501-5401-03-50 KD0VZQ   256 MB NG SDRAM DIMM
/N0/SB0/P2/B0/D3   501-5401-03-50 KD0W24   256 MB NG SDRAM DIMM
/N0/SB0/P2/B1/D0   501-5401-03-50 KD0W1V   256 MB NG SDRAM DIMM
/N0/SB0/P2/B1/D1   501-5401-03-50 KD0W07   256 MB NG SDRAM DIMM
/N0/SB0/P2/B1/D2   501-5401-03-50 KD0W0B   256 MB NG SDRAM DIMM
/N0/SB0/P2/B1/D3   501-5401-03-50 KD0W1X   256 MB NG SDRAM DIMM
/N0/SB0/P3/B0/D0   501-5401-03-50 KD0W1Y   256 MB NG SDRAM DIMM
/N0/SB0/P3/B0/D1   501-5401-03-50 KD0W20   256 MB NG SDRAM DIMM
/N0/SB0/P3/B0/D2   501-5401-03-50 KD0W2B   256 MB NG SDRAM DIMM
/N0/SB0/P3/B0/D3   501-5401-03-50 KD0W27   256 MB NG SDRAM DIMM
```

```
/N0/SB0/P3/B1/D0   501-5401-03-50 KD0W1Z   256 MB NG SDRAM DIMM
/N0/SB0/P3/B1/D1   501-5401-03-50 KD0W23   256 MB NG SDRAM DIMM
/N0/SB0/P3/B1/D2   501-5401-03-50 KD0W25   256 MB NG SDRAM DIMM
/N0/SB0/P3/B1/D3   501-5401-03-50 KD0W2D   256 MB NG SDRAM DIMM
/N0/SB2/P0/B1/D0   501-5030-03-50 479985   512 MB NG SDRAM DIMM
/N0/SB2/P0/B1/D1   501-5030-03-50 479986   512 MB NG SDRAM DIMM
/N0/SB2/P0/B1/D2   501-5030-03-50 479987   512 MB NG SDRAM DIMM
/N0/SB2/P0/B1/D3   501-5030-03-50 479988   512 MB NG SDRAM DIMM
/N0/SB2/P1/B1/D0   501-5030-03-50 479989   512 MB NG SDRAM DIMM
/N0/SB2/P1/B1/D1   501-5030-03-50 479797   512 MB NG SDRAM DIMM
/N0/SB2/P1/B1/D2   501-5030-03-50 479975   512 MB NG SDRAM DIMM
/N0/SB2/P1/B1/D3   501-5030-03-50 479795   512 MB NG SDRAM DIMM
/N0/SB2/P2/B1/D0   501-5030-03-50 479977   512 MB NG SDRAM DIMM
/N0/SB2/P2/B1/D1   501-5030-03-50 479978   512 MB NG SDRAM DIMM
/N0/SB2/P2/B1/D2   501-5030-03-50 479979   512 MB NG SDRAM DIMM
/N0/SB2/P2/B1/D3   501-5030-03-50 479980   512 MB NG SDRAM DIMM
/N0/SB2/P3/B1/D0   501-5030-03-50 479981   512 MB NG SDRAM DIMM
/N0/SB2/P3/B1/D1   501-5030-03-50 479982   512 MB NG SDRAM DIMM
/N0/SB2/P3/B1/D2   501-5030-03-50 479983   512 MB NG SDRAM DIMM
/N0/SB2/P3/B1/D3   501-5030-03-50 479984   512 MB NG SDRAM DIMM
/N0/SB4/P0/B0/D0   501-5401-03-50 712800   256 MB NG SDRAM DIMM
/N0/SB4/P0/B0/D1   501-5401-03-50 712818   256 MB NG SDRAM DIMM
/N0/SB4/P0/B0/D2   501-5401-03-50 812216   256 MB NG SDRAM DIMM
/N0/SB4/P0/B0/D3   501-5401-03-50 812243   256 MB NG SDRAM DIMM
/N0/SB4/P0/B1/D0   501-5401-03-50 712806   256 MB NG SDRAM DIMM
/N0/SB4/P0/B1/D1   501-5401-03-50 712802   256 MB NG SDRAM DIMM
/N0/SB4/P0/B1/D2   501-5401-03-50 712815   256 MB NG SDRAM DIMM
/N0/SB4/P0/B1/D3   501-5401-03-50 812213   256 MB NG SDRAM DIMM
/N0/SB4/P1/B0/D0   501-5401-03-50 812241   256 MB NG SDRAM DIMM
/N0/SB4/P1/B0/D1   501-5401-03-50 812239   256 MB NG SDRAM DIMM
/N0/SB4/P1/B0/D2   501-5401-03-50 812246   256 MB NG SDRAM DIMM
/N0/SB4/P1/B0/D3   501-5401-03-50 812234   256 MB NG SDRAM DIMM
/N0/SB4/P1/B1/D0   501-5401-03-50 812208   256 MB NG SDRAM DIMM
/N0/SB4/P1/B1/D1   501-5401-03-50 812235   256 MB NG SDRAM DIMM
/N0/SB4/P1/B1/D2   501-5401-03-50 812237   256 MB NG SDRAM DIMM
/N0/SB4/P1/B1/D3   501-5401-03-50 812209   256 MB NG SDRAM DIMM
/N0/SB4/P2/B0/D0   501-5401-03-50 712750   256 MB NG SDRAM DIMM
/N0/SB4/P2/B0/D1   501-5401-03-50 712751   256 MB NG SDRAM DIMM
/N0/SB4/P2/B0/D2   501-5401-03-50 712826   256 MB NG SDRAM DIMM
/N0/SB4/P2/B0/D3   501-5401-03-50 712829   256 MB NG SDRAM DIMM
/N0/SB4/P2/B1/D0   501-5401-03-50 812232   256 MB NG SDRAM DIMM
/N0/SB4/P2/B1/D1   501-5401-03-50 712827   256 MB NG SDRAM DIMM
/N0/SB4/P2/B1/D2   501-5401-03-50 712833   256 MB NG SDRAM DIMM
/N0/SB4/P2/B1/D3   501-5401-03-50 712807   256 MB NG SDRAM DIMM
/N0/SB4/P3/B0/D0   501-5401-03-50 712835   256 MB NG SDRAM DIMM
/N0/SB4/P3/B0/D1   501-5401-03-50 712681   256 MB NG SDRAM DIMM
/N0/SB4/P3/B0/D2   501-5401-03-50 712687   256 MB NG SDRAM DIMM
```

```
/N0/SB4/P3/B0/D3  501-5401-03-50 712803    256 MB NG SDRAM DIMM
/N0/SB4/P3/B1/D0  501-5401-03-50 712808    256 MB NG SDRAM DIMM
/N0/SB4/P3/B1/D1  501-5401-03-50 712810    256 MB NG SDRAM DIMM
/N0/SB4/P3/B1/D2  501-5401-03-50 712683    256 MB NG SDRAM DIMM
/N0/SB4/P3/B1/D3  501-5401-03-50 712688    256 MB NG SDRAM DIMM
/N0/SB0/P0/E0     370-4128-03-50 4A5TDM    4MB Ecache Module
/N0/SB0/P0/E1     370-4128-03-50 4A5TBD    4MB Ecache Module
/N0/SB0/P1/E0     370-4128-03-50 4A5TBB    4MB Ecache Module
/N0/SB0/P1/E1     370-4128-03-50 4A5TDN    4MB Ecache Module
/N0/SB0/P2/E0     370-4128-03-50 4A5TBG    4MB Ecache Module
/N0/SB0/P2/E1     370-4128-03-50 4A5TBJ    4MB Ecache Module
/N0/SB0/P3/E0     370-4128-03-50 4A5TDY    4MB Ecache Module
/N0/SB0/P3/E1     370-4128-03-50 4A5TDV    4MB Ecache Module
/N0/SB2/P0/E0     370-4129-01-01 2APK8W    8MB Ecache Module
/N0/SB2/P0/E1     370-4129-01-01 2APK9D    8MB Ecache Module
/N0/SB2/P1/E0     370-4129-01-01 2APK91    8MB Ecache Module
/N0/SB2/P1/E1     370-4129-01-01 2APK97    8MB Ecache Module
/N0/SB2/P2/E0     370-4129-01-01 2APK95    8MB Ecache Module
/N0/SB2/P2/E1     370-4129-01-01 2APK87    8MB Ecache Module
/N0/SB2/P3/E0     370-4129-01-01 2APKA7    8MB Ecache Module
/N0/SB2/P3/E1     370-4129-01-01 2APKA5    8MB Ecache Module
/N0/SB4/P0/E0     370-4128-03-50 4A57JT    4MB Ecache Module
/N0/SB4/P0/E1     370-4128-03-50 4A580U    4MB Ecache Module
/N0/SB4/P1/E0     370-4128-03-50 4A580Y    4MB Ecache Module
/N0/SB4/P1/E1     370-4128-03-50 4A57ZT    4MB Ecache Module
/N0/SB4/P2/E0     370-4128-03-50 4A57JK    4MB Ecache Module
/N0/SB4/P2/E1     370-4128-03-50 4A57HP    4MB Ecache Module
/N0/SB4/P3/E0     370-4128-03-50 4A57HG    4MB Ecache Module
/N0/SB4/P3/E1     370-4128-03-50 4A57HV    4MB Ecache Module
/N0/SB2           501-6520-02-01 A00065    CPU Board V3
/N0/IB6           540-5564-01-01 A08712    IB_SSC Assembly (1280)


Component    Cpu Mask  Description
---------    --------  -----------
/N0/SB0/P0  2.2        UltraSPARC-III+, 660MHz, 8M ECache
/N0/SB0/P1  2.2        UltraSPARC-III+, 660MHz, 8M ECache
/N0/SB0/P2  2.2        UltraSPARC-III+, 660MHz, 8M ECache
/N0/SB0/P3  2.2        UltraSPARC-III+, 660MHz, 8M ECache
/N0/SB2/P0  1.1        UltraSPARC-IV, 660MHz, 16M ECache
/N0/SB2/P1  1.1        UltraSPARC-IV, 660MHz, 16M ECache
/N0/SB2/P2  1.1        UltraSPARC-IV, 660MHz, 16M ECache
/N0/SB2/P3  1.1        UltraSPARC-IV, 660MHz, 16M ECache
/N0/SB4/P0  6.0        UltraSPARC-III+, 660MHz, 8M ECache
/N0/SB4/P1  6.0        UltraSPARC-III+, 660MHz, 8M ECache
/N0/SB4/P2  6.0        UltraSPARC-III+, 660MHz, 8M ECache
/N0/SB4/P3  6.0        UltraSPARC-III+, 660MHz, 8M ECache
```

- To show memory information for boards:

CODE EXAMPLE 13   Using the `showboards -p memory` Command

```
lom>showboards -p memory
Component        Size       Reason
---------        ----       ------
/N0/SB0          8192 MB
/N0/SB2          8192 MB
```

- To show the version of each board:

CODE EXAMPLE 14   Using the `showboards -p version` Command

```
lom>showboards -p version
Component    Compatible Version
---------    ---------- -------
SSC1         Reference  5.17.0 Build_05
/N0/IB6      Yes        5.17.0 Build_05
/N0/SB0      Yes        5.17.0 Build_05
/N0/SB2      Yes        5.17.0 Build_05
/N0/SB4      Yes        5.17.0 Build_05
```

- To show I/O information for boards:

CODE EXAMPLE 15   Using the `showboards -p io` Command

```
lom>showboards -p io
Slot              Populated Slot Description
----              --------- ----------------
/N0/IB6/P0/B1/C0 Empty     33MHz. 5V Short PCI card
/N0/IB6/P0/B1/C1 Empty     33MHz. 5V Short PCI card
/N0/IB6/P1/B1/C2 Empty     33MHz. 5V Short PCI card
/N0/IB6/P1/B1/C3 Empty     33MHz. 5V Short PCI card
/N0/IB6/P1/B1/C4 Empty     33MHz. 5V Short PCI card
/N0/IB6/P0/B0/C5 Empty     66/33MHz. 3.3V Short PCI card
```

- To show board serial number information:

CODE EXAMPLE 16   Using the `showboards -p serial` Command

```
lom>showboards -p serial

Component        Part #          Serial # Description
---------        ------          -------- -----------
/N0/SB0          501-4362-08-50 013362    CPU Board
/N0/SB2          501-4362-08-50 014812    CPU Board
```

```
/N0/SB0/P0/B0/D0   501-5030-02-50 428079    512 MB NG SDRAM DIMM
/N0/SB0/P0/B0/D1   501-5030-02-50 428080    512 MB NG SDRAM DIMM
/N0/SB0/P0/B0/D2   501-5030-02-50 428081    512 MB NG SDRAM DIMM
/N0/SB0/P0/B0/D3   501-5030-02-50 428082    512 MB NG SDRAM DIMM
/N0/SB0/P1/B0/D0   501-5030-02-01 010398    512 MB NG SDRAM DIMM
/N0/SB0/P1/B0/D1   501-5030-02-01 010486    512 MB NG SDRAM DIMM
/N0/SB0/P1/B0/D2   501-5030-02-01 010400    512 MB NG SDRAM DIMM
/N0/SB0/P1/B0/D3   501-5030-02-01 010392    512 MB NG SDRAM DIMM
/N0/SB0/P2/B0/D0   501-5030-02-50 072411    512 MB NG SDRAM DIMM
/N0/SB0/P2/B0/D1   501-5030-02-50 428072    512 MB NG SDRAM DIMM
/N0/SB0/P2/B0/D2   501-5030-02-50 428073    512 MB NG SDRAM DIMM
/N0/SB0/P2/B0/D3   501-5030-02-50 428074    512 MB NG SDRAM DIMM
/N0/SB0/P3/B0/D0   501-5030-02-50 428075    512 MB NG SDRAM DIMM
/N0/SB0/P3/B0/D1   501-5030-02-50 428076    512 MB NG SDRAM DIMM
/N0/SB0/P3/B0/D2   501-5030-02-50 428077    512 MB NG SDRAM DIMM
/N0/SB0/P3/B0/D3   501-5030-02-50 428078    512 MB NG SDRAM DIMM
/N0/SB2/P0/B1/D0   501-5030-02-50 072392    512 MB NG SDRAM DIMM
/N0/SB2/P0/B1/D1   501-5030-02-50 072403    512 MB NG SDRAM DIMM
/N0/SB2/P0/B1/D2   501-5030-02-50 072399    512 MB NG SDRAM DIMM
/N0/SB2/P0/B1/D3   501-5030-02-50 072396    512 MB NG SDRAM DIMM
/N0/SB2/P1/B1/D0   501-5030-02-50 072388    512 MB NG SDRAM DIMM
/N0/SB2/P1/B1/D1   501-5030-02-50 072273    512 MB NG SDRAM DIMM
/N0/SB2/P1/B1/D2   501-5030-02-50 072398    512 MB NG SDRAM DIMM
/N0/SB2/P1/B1/D3   501-5030-02-50 072394    512 MB NG SDRAM DIMM
/N0/SB2/P2/B1/D0   501-5030-02-50 072395    512 MB NG SDRAM DIMM
/N0/SB2/P2/B1/D1   501-5030-02-50 072393    512 MB NG SDRAM DIMM
/N0/SB2/P2/B1/D2   501-5030-02-50 072406    512 MB NG SDRAM DIMM
/N0/SB2/P2/B1/D3   501-5030-02-50 072410    512 MB NG SDRAM DIMM
/N0/SB2/P3/B1/D0   501-5030-02-50 072402    512 MB NG SDRAM DIMM
/N0/SB2/P3/B1/D1   501-5030-02-50 072404    512 MB NG SDRAM DIMM
/N0/SB2/P3/B1/D2   501-5030-02-50 072400    512 MB NG SDRAM DIMM
/N0/SB2/P3/B1/D3   501-5030-02-50 072397    512 MB NG SDRAM DIMM
/N0/SB0/P0/E0      370-4125-01-01 498D2H    4MB Ecache Module
/N0/SB0/P0/E1      370-4125-01-01 498BUW    4MB Ecache Module
/N0/SB0/P1/E0      370-4125-01-01 498BD0    4MB Ecache Module
/N0/SB0/P1/E1      370-4125-01-01 498D1D    4MB Ecache Module
/N0/SB0/P2/E0      370-4125-01-01 498BTV    4MB Ecache Module
/N0/SB0/P2/E1      370-4125-01-01 498BKY    4MB Ecache Module
/N0/SB0/P3/E0      370-4125-01-01 498AYK    4MB Ecache Module
/N0/SB0/P3/E1      370-4125-01-01 498BU6    4MB Ecache Module
/N0/SB2/P0/E0      370-4125-01-01 4950NH    4MB Ecache Module
/N0/SB2/P0/E1      370-4125-01-01 4951EZ    4MB Ecache Module
/N0/SB2/P1/E0      370-4125-01-01 494XTW    4MB Ecache Module
/N0/SB2/P1/E1      370-4125-01-01 495581    4MB Ecache Module
/N0/SB2/P2/E0      370-4125-01-01 4951NN    4MB Ecache Module
/N0/SB2/P2/E1      370-4125-01-01 4951AV    4MB Ecache Module
```

```
/N0/SB2/P3/E0      370-4125-01-01 4951DK      4MB Ecache Module
/N0/SB2/P3/E1      370-4125-01-01 4950P0      4MB Ecache Module
/N0/IB6            000-0000-01-01 6543        PCI I/O Board
```

■ To show CPU information:

CODE EXAMPLE 17   Using the `showboards –p cpu` Command

```
lom>showboards -p cpu
Component    Description
---------    -----------
/N0/SB0/P0  UltraSPARC-III+, 900MHz, 8M ECache
/N0/SB0/P1  UltraSPARC-III+, 900MHz, 8M ECache
/N0/SB0/P2  UltraSPARC-III+, 900MHz, 8M ECache
/N0/SB0/P3  UltraSPARC-III+, 900MHz, 8M ECache
/N0/SB2/P0  UltraSPARC-III+, 900MHz, 8M ECache
/N0/SB2/P1  UltraSPARC-III+, 900MHz, 8M ECache
/N0/SB2/P2  UltraSPARC-III+, 900MHz, 8M ECache
/N0/SB2/P3  UltraSPARC-III+, 900MHz, 8M ECache
```

TABLE 7   Output Header Definitions for the `showboards` Command

Header	Description
Slot	Slot designator. The N0 preceding the slot designator for CPU/Memory boards and I/O assemblies is the node number, which is always 0.
Pwr	Indicates if the FRU is powered off or on.
Component type	Describes the board attached to each slot.
FRU state	Describes FRU state (see TABLE 2).
Test status	Describes test status (see TABLE 3).

showcodlicense

Displays the current Capacity on Demand (COD) right-to-use (RTU) licenses stored in the COD license database.

Syntax

showcodlicense [-r][-v]

showcodlicense -h

Options/Parameters

The following table lists all options or parameters and describes their use:

-r	Displays the license information in the raw license key format, as stored in the COD license database.
-v	Verbose mode. Displays both the formatted license information and raw license key format.
-h	Displays help for this command.

Description

TABLE 8 describes the default COD information displayed by the showcodlicense command.

TABLE 8   COD License Information

Item	Description
Description	Type of resource (processor)
Ver	Version number of the license
Expiration	None. Not supported (no expiration date)
Count	Number of RTU licenses granted for the given resource
Status	One of the following states: • GOOD – Indicates the resource license is valid • EXPIRED – Indicates the resource license is no longer valid

See Also

addcodlicense, deletecodlicense, showcodusage

Examples

■ To show formatted COD RTU license key data:

CODE EXAMPLE 18 `showcodlicense` Example Output – Formatted COD RTU License
Data

```
lom> showcodlicense
Description  Ver    Expiration  Count  Status
-----------  ---    ----------  -----  ------
PROC         01           NONE      4 GOOD
```

■ To show COD RTU license keys:

CODE EXAMPLE 19 `showcodlicense -r` Example Output – COD RTU License Keys

```
lom> showcodlicense -r
01:83198b89:001:0201000000:4:00000000:E4pE0udO78XFReGXQd88Xg
```

■ To show COD RTU license key data in both formatted and raw format:

CODE EXAMPLE 20 `showcodlicense -v` Example Output – Formatted and Raw COD RTU License Data

```
lom> showcodlicense -v
Description  Ver    Expiration  Count  Status
-----------  ---    ----------  -----  ------
PROC         01           NONE      4 GOOD
01:83198b89:001:0201000000:4:00000000:E4pE0udO78XFReGXQd88Xg
```

showcodusage

Displays the current usage statistics for Capacity on Demand (COD) resources.

Syntax

```
showcodusage [-v] [-p domains|all] ...
```

```
showcodusage -h
```

Options/Parameters

The following table lists all options or parameters and describes their use:

-p domains	Displays COD usage information for the CPUs that are part of the Solaris domain.
-p all	Displays COD usage information both by resource type and by domain.
-v	Verbose mode.
-h	Displays help for this command.

Description

This command shows current information on the COD RTU licenses in use. By default, the command displays a summary of COD RTU licenses used and installed, along with the current state of each resource.

See Also

showcodlicense

Examples

■ To show information by domain, type:

CODE EXAMPLE 21 showcodusage Example Output by Domain

```
lom> showcodusage –v -p domains
Domain/Resource  In Use  Installed  Reserved  Status
---------------  ------  ---------  --------  ------
A - PROC            4         4         0
    SB0 - PROC      4         4
    /N0/SB0/P0                                  Licensed
    /N0/SB0/P1                                  Licensed
    /N0/SB0/P2                                  Licensed
```

CODE EXAMPLE 21 `showcodusage` Example Output by Domain *(Continued)*

```
      /N0/SB0/P3                                    Licensed
Unused - PROC           0             0            0
```

TABLE 9 describes the domain information displayed.

TABLE 9 `showcodusage` Domain Information

Item	Description
Domain/Resource	The COD resource (processor) for each domain. An unused processor is a COD CPU that has not yet been assigned to a domain.
In Use	The number of COD CPUs currently used in the domain
Installed	The number of COD CPUs installed in the domain
Reserved	The number of COD RTU licenses allocated to the domain
Status	One of the following CPU states: • Licensed – The COD CPU has an RTU license. • Unused – The COD CPU is not in use. • Unlicensed – A COD RTU license could not be obtained for the COD CPU, so the COD CPU cannot be used.

■ To show information by both resource type and domain:

CODE EXAMPLE 22 `showcodusage` Example Output by Both Resource and Domain

```
lom> showcodusage -v
Resource        In Use  Installed  Licensed  Status
--------        ------  ---------  --------  ------
PROC                 4          4         0
    /N0/SB0/P0                                Licensed
    /N0/SB0/P1                                Licensed
    /N0/SB0/P2                                Licensed
    /N0/SB0/P3                                Licensed
Unused - PROC        0          0         0
```

showcomponent

Display a component or a list of components.

Syntax

showcomponent [–v] *component-name* [*component-name . . .*]

showcomponent –h

Options/Parameters

The following table lists all options or parameters and describes their use:

–v	Verbose.
component-name	The name of the board, as shown in TABLE 10.
–h	displays help for this command. Includes *component-name* syntax.

TABLE 10   Descriptions for the showcomponent Command

Component Description	Value of component-name
CPU system	*slot*
CPU/Memory boards (*slot*)	sb0, sb2, sb4
Ports on the CPU/Memory board	p0, p1, p2, p3
Physical memory banks on CPU/Memory boards	b0, b1
Logical banks on CPU/Memory boards	l0, l1, l2, l3
Repeater system	*slot*
Repeater boards	rp0, rp2
I/O assembly system	*slot*
I/O assemblies (*slot*)	ib6
Ports on the I/O assembly	p0, p1
Busses on the I/O assembly	b0, b1
I/O cards in the I/O assembly	c0, c1, c2, c3, c4, c5

Description

Displays a component or a list of components, together with their POST and blacklist status. The Status column shows the current blacklist status of the component. The Pending column displays the requested blacklist status of the component to be activated after the next reboot or Dynamic Reconfiguration of that component. The POST column shows the results of the most recent POST.

Note – When a Repeater board has been blacklisted using the `disablecomponent` command or removed from the blacklist using the `enablecomponent` command while the system is in Standby mode, these changes will not be reflected in the `showcomponent` output until the system is powered on again.

See Also

- `enablecomponent`
- `disablecomponent`
- *Sun Fire Entry-Level Midrange System Administration Guide* (for a step-by-step procedure on displaying a component).

Examples

- To display a list of components for slot `sb0`:

CODE EXAMPLE 23   Using the `showcomponent` Command for a CPU/Memory Board

```
lom>showcomponent sb0
Component          Status  Pending  POST   Description
---------          ------  -------  ----   -----------
/N0/SB0/P0         enabled -        pass   UltraSPARC-III, 750MHz, 8M ECache
/N0/SB0/P1         enabled -        pass   UltraSPARC-III, 750MHz, 8M ECache
/N0/SB0/P2         enabled -        pass   UltraSPARC-III, 750MHz, 8M ECache
/N0/SB0/P3         enabled -        pass   UltraSPARC-III, 750MHz, 8M ECache
/N0/SB0/P0/B0/L0   enabled -        pass   512M DRAM
/N0/SB0/P0/B0/L2   enabled -        pass   512M DRAM
/N0/SB0/P0/B1/L1   enabled -        untest empty
/N0/SB0/P0/B1/L3   enabled -        untest empty
/N0/SB0/P1/B0/L0   enabled -        pass   512M DRAM
/N0/SB0/P1/B0/L2   enabled -        pass   512M DRAM
/N0/SB0/P1/B1/L1   enabled -        untest empty
/N0/SB0/P1/B1/L3   enabled -        untest empty
/N0/SB0/P2/B0/L0   enabled -        pass   512M DRAM
/N0/SB0/P2/B0/L2   enabled -        pass   512M DRAM
/N0/SB0/P2/B1/L1   enabled -        untest empty
/N0/SB0/P2/B1/L3   enabled -        untest empty
/N0/SB0/P3/B0/L0   enabled -        pass   512M DRAM
/N0/SB0/P3/B0/L2   enabled -        pass   512M DRAM
/N0/SB0/P3/B1/L1   enabled -        untest empty
/N0/SB0/P3/B1/L3   enabled -        untest empty
```

■ To display a list of components for ib6:

CODE EXAMPLE 24   Using the showcomponent Command for the IB6 Subassembly of the IB_SSC FRU

```
lom> showcomp ib6

Component           Status   Pending  POST   Description
---------           ------   -------  ----   -----------
/N0/IB6/P0          enabled  -        untest IO Controller 0
/N0/IB6/P1          enabled  -        untest IO Controller 1
/N0/IB6/P0/B0       enabled  -        untest 66/33MHz. PCI Bus
/N0/IB6/P0/B1       enabled  -        untest 33MHz. PCI Bus
/N0/IB6/P1/B0       enabled  -        untest 66/33MHz. PCI Bus
/N0/IB6/P1/B1       enabled  -        untest 33MHz. PCI Bus
/N0/IB6/P0/B1/C0    enabled  -        untest 33MHz. 5V Short PCI card
/N0/IB6/P0/B1/C1    enabled  -        untest 33MHz. 5V Short PCI card
/N0/IB6/P1/B1/C2    enabled  -        untest 33MHz. 5V Short PCI card
/N0/IB6/P1/B1/C3    enabled  -        untest 33MHz. 5V Short PCI card
/N0/IB6/P1/B1/C4    enabled  -        untest 33MHz. 5V Short PCI card
/N0/IB6/P0/B0/C5    enabled  -        untest 66/33MHz. 3.3V Short PCI card
```

showdate

Displays the current date and time for the system.

Syntax

```
showdate [-tv]
```

```
showdate -h
```

Options/Parameters

The following table lists all options or parameters and describes their use:

-v	Verbose.
-t	Lists available time zones.
-h	Displays help for this command.

Description

Shows the current date and time for the system, or if −t −v is selected then lists all available timezones.

See Also

setdate

Example

CODE EXAMPLE 25 Using the `showdate` Command

```
lom> showdate
Mon Apr 03 12:31:40 EDT 2000
```

showenvironment

Displays the current environmental status, temperatures, voltages, fan status, and so on, for the system.

Syntax

```
showenvironment [-ltuvw] [-p part] [component]

showenvironment [-ltuvw] [component]

showenvironment -h
```

Options/Parameters

The following table lists all options or parameters and describes their use:

-l	Shows the thresholds that apply to each selected measurement. Exceeding the thresholds will cause the status to display appropriate warning information.
-t	Shows in sections (by board) with titles.
-u	Before displaying readings, polls all sensors for new values.
-v	Verbose mode.
-w	Shows the warning thresholds that apply to each selected measurement.
-p	Shows a specific part. *part* can be: • faults – Show measurements that are suspect. • temps – Show temperatures. • voltage – Show voltages. • fans – Show fan status.
component	The name of the FRU. Displays information for this FRU only.
-h	Displays help for this command.

Description

Displays the current environmental status, temperatures, voltages, fan status, and so on, for the system.

This command also displays minimum and maximum allowable values for each sensor being monitored. If no arguments are supplied, all applicable environmental information will be displayed.

Example

- To display the current status for all devices in a system:

CODE EXAMPLE 26 Using the showenvironment Command

```
lom> showenvironment

Slot Device     Sensor    Value  Units     Age     Status
---- --------- --------- ------ --------- ------- ------
SSC1 SBBC 0    Temp. 0    37     Degrees C  1 sec OK
SSC1 CBH 0     Temp. 0    45     Degrees C  1 sec OK
SSC1 Board 0   Temp. 0    24     Degrees C  1 sec OK
SSC1 Board 0   Temp. 1    22     Degrees C  1 sec OK
SSC1 Board 0   Temp. 2    28     Degrees C  1 sec OK
SSC1 Board 0   1.5 VDC 0  1.49 Volts DC    1 sec OK
SSC1 Board 0   3.3 VDC 0  3.35 Volts DC    1 sec OK
SSC1 Board 0   5 VDC 0    5.01 Volts DC    1 sec OK
/N0/PS0 Input 0   Volt. 0        - -       6 sec OK
/N0/PS0 48 VDC 0  Volt. 0   48.00 Volts DC  6 sec OK
/N0/PS1 Input 0   Volt. 0        - -       5 sec OK
/N0/PS1 48 VDC 0  Volt. 0   48.00 Volts DC  5 sec OK
/N0/FT0 Fan 0     Cooling 0  Auto          5 sec OK
/N0/FT0 Fan 1     Cooling 0  Auto          5 sec OK
/N0/FT0 Fan 2     Cooling 0  Auto          5 sec OK
/N0/FT0 Fan 3     Cooling 0  Auto          5 sec OK
/N0/FT0 Fan 4     Cooling 0  Auto          5 sec OK
/N0/FT0 Fan 5     Cooling 0  Auto          5 sec OK
/N0/FT0 Fan 6     Cooling 0  Auto          5 sec OK
/N0/FT0 Fan 7     Cooling 0  Auto          5 sec OK
/N0/RP0 Board 0   1.5 VDC 0  1.51 Volts DC  5 sec OK
/N0/RP0 Board 0   3.3 VDC 0  3.35 Volts DC  5 sec OK
/N0/RP0 Board 0   Temp. 0    22     Degrees C  5 sec OK
/N0/RP0 Board 0   Temp. 1    22     Degrees C  5 sec OK
/N0/RP0 SDC 0     Temp. 0    63     Degrees C  5 sec OK
/N0/RP0 AR 0      Temp. 0    47     Degrees C  5 sec OK
/N0/RP0 DX 0      Temp. 0    62     Degrees C  5 sec OK
/N0/RP0 DX 1      Temp. 0    66     Degrees C  5 sec OK
/N0/RP2 Board 0   1.5 VDC 0  1.49 Volts DC  4 sec OK
/N0/RP2 Board 0   3.3 VDC 0  3.33 Volts DC  4 sec OK
/N0/RP2 Board 0   Temp. 0    24     Degrees C  5 sec OK
/N0/RP2 Board 0   Temp. 1    23     Degrees C  5 sec OK
/N0/RP2 SDC 0     Temp. 0    57     Degrees C  5 sec OK
/N0/RP2 AR 0      Temp. 0    42     Degrees C  5 sec OK
/N0/RP2 DX 0      Temp. 0    53     Degrees C  5 sec OK
/N0/RP2 DX 1      Temp. 0    56     Degrees C  5 sec OK
/N0/SB0 Board 0   1.5 VDC 0  1.50 Volts DC  4 sec OK
/N0/SB0 Board 0   3.3 VDC 0  3.33 Volts DC  5 sec OK
/N0/SB0 SDC 0     Temp. 0    49     Degrees C  5 sec OK
```

```
/N0/SB0 AR 0      Temp. 0      39      Degrees C    5 sec OK
/N0/SB0 DX 0      Temp. 0      50      Degrees C    5 sec OK
/N0/SB0 DX 1      Temp. 0      55      Degrees C    5 sec OK
/N0/SB0 DX 2      Temp. 0      58      Degrees C    5 sec OK
/N0/SB0 DX 3      Temp. 0      53      Degrees C    5 sec OK
/N0/SB0 SBBC 0    Temp. 0      53      Degrees C    5 sec OK
/N0/SB0 Board 1   Temp. 0      28      Degrees C    5 sec OK
/N0/SB0 Board 1   Temp. 1      26      Degrees C    5 sec OK
/N0/SB0 CPU 0     Temp. 0      56      Degrees C    5 sec OK
/N0/SB0 CPU 0     1.8 VDC 0    1.72 Volts DC    5 sec OK
/N0/SB0 CPU 1     Temp. 0      50      Degrees C    5 sec OK
/N0/SB0 CPU 1     1.8 VDC 1    1.74 Volts DC    5 sec OK
/N0/SB0 SBBC 1    Temp. 0      40      Degrees C    5 sec OK
/N0/SB0 Board 1   Temp. 2      28      Degrees C    5 sec OK
/N0/SB0 Board 1   Temp. 3      29      Degrees C    5 sec OK
/N0/SB0 CPU 2     Temp. 0      53      Degrees C    6 sec OK
/N0/SB0 CPU 2     1.8 VDC 0    1.72 Volts DC    6 sec OK
/N0/SB0 CPU 3     Temp. 0      49      Degrees C    6 sec OK
/N0/SB0 CPU 3     1.8 VDC 1    1.72 Volts DC    6 sec OK
/N0/SB2 Board 0   1.5 VDC 0    1.52 Volts DC    6 sec OK
/N0/SB2 Board 0   3.3 VDC 0    3.35 Volts DC    6 sec OK
/N0/SB2 SDC 0     Temp. 0      51      Degrees C    6 sec OK
/N0/SB2 AR 0      Temp. 0      41      Degrees C    6 sec OK
/N0/SB2 DX 0      Temp. 0      52      Degrees C    6 sec OK
/N0/SB2 DX 1      Temp. 0      55      Degrees C    6 sec OK
/N0/SB2 DX 2      Temp. 0      61      Degrees C    6 sec OK
/N0/SB2 DX 3      Temp. 0      53      Degrees C    6 sec OK
/N0/SB2 SBBC 0    Temp. 0      52      Degrees C    6 sec OK
/N0/SB2 Board 1   Temp. 0      27      Degrees C    6 sec OK
/N0/SB2 Board 1   Temp. 1      26      Degrees C    7 sec OK
/N0/SB2 CPU 0     Temp. 0      54      Degrees C    7 sec OK
/N0/SB2 CPU 0     1.8 VDC 0    1.72 Volts DC    7 sec OK
/N0/SB2 CPU 1     Temp. 0      52      Degrees C    7 sec OK
/N0/SB2 CPU 1     1.8 VDC 1    1.73 Volts DC    7 sec OK
/N0/SB2 SBBC 1    Temp. 0      43      Degrees C    7 sec OK
/N0/SB2 Board 1   Temp. 2      27      Degrees C    7 sec OK
/N0/SB2 Board 1   Temp. 3      27      Degrees C    7 sec OK
/N0/SB2 CPU 2     Temp. 0      51      Degrees C    7 sec OK
/N0/SB2 CPU 2     1.8 VDC 0    1.71 Volts DC    7 sec OK
/N0/SB2 CPU 3     Temp. 0      51      Degrees C    7 sec OK
/N0/SB2 CPU 3     1.8 VDC 1    1.71 Volts DC    7 sec OK
/N0/IB6 Board 0   1.5 VDC 0    1.51 Volts DC    7 sec OK
/N0/IB6 Board 0   3.3 VDC 0    3.29 Volts DC    7 sec OK
/N0/IB6 Board 0   5 VDC 0      4.95 Volts DC    7 sec OK
/N0/IB6 Board 0   12 VDC 0    11.88 Volts DC    7 sec OK
/N0/IB6 Board 0   Temp. 0      30      Degrees C    7 sec OK
/N0/IB6 Board 0   Temp. 1      28      Degrees C    7 sec OK
```

CODE EXAMPLE 26 Using the `showenvironment` Command *(Continued)*

```
/N0/IB6 Board 0    3.3 VDC 1    3.30 Volts DC    7 sec OK
/N0/IB6 Board 0    3.3 VDC 2    3.30 Volts DC    7 sec OK
/N0/IB6 Board 0    1.8 VDC 0    1.81 Volts DC    7 sec OK
/N0/IB6 Board 0    2.5 VDC 0    2.51 Volts DC    7 sec OK
/N0/IB6 Fan 0      Cooling 0    High             3 sec OK
/N0/IB6 Fan 1      Cooling 0    High             3 sec OK
/N0/IB6 SDC 0      Temp. 0      63    Degrees C  8 sec OK
/N0/IB6 AR 0       Temp. 0      73    Degrees C  8 sec OK
/N0/IB6 DX 0       Temp. 0      68    Degrees C  8 sec OK
/N0/IB6 DX 1       Temp. 0      72    Degrees C  8 sec OK
/N0/IB6 SBBC 0     Temp. 0      49    Degrees C  8 sec OK
/N0/IB6 IOASIC 0   Temp. 0      45    Degrees C  8 sec OK
/N0/IB6 IOASIC 1   Temp. 1      51    Degrees C  8 sec OK
```

For explanations of the `showenvironment` output headers see TABLE 11.

TABLE 11 `showenvironment` Output Header Description

Code Example Header	Value	Description
Slot		Slot ID
Device		Device being monitored by the sensor
Sensor		Component that measures the environmental data of the device
Value		The value returned by the sensor (data was acquired `Age` seconds ago)
Units		Applicable unit for the sensor (for valid units, see the Value column)
	C	Celsius
	V	Volts
Age		Age of the reading being displayed (seconds)
Status		For values for Status see the Value column
	*** WARNING HIGH ***	Value exceeded Max threshold
	* NOTICE High *	Value between High-Warning and Max thresholds
	* NOTICE Low *	Value below Min threshold
	*** WARNING LOW ***	Value below Min threshold
	OK	Value is within limits
	failed	Failed to receive sensor's value

showerrorbuffer

Shows the contents of the error buffer.

Syntax

```
showerrorbuffer [-p [-n nnn]]
```

```
showerrorbuffer -h
```

Options/Parameters

The following table lists all options or parameters and describes their use:

-p	Displays the error messages contained in the persistent system error buffer. This option is available only in systems configured with enhanced-memory system controllers (SC V2s).
-n *nnn*	Displays a specified number (where *nnn* is an integer) of error messages in chronological order. For example,-p -n 5 displays the last five error messages in the persistent system error buffer.
-h	Displays help for the command.

Description

Captures error message information detected by the system hardware error registers and stores them in an error buffer.

All entry-level midrange systems have a dynamic error buffer that provides short-term storage of system error records. Once the system errors are recorded in the message log buffer, system error records are cleared automatically from the dynamic error buffer whenever more space in the buffer is required.

Entry-level midrange systems with SC V2s have both dynamic and persistent error buffers. The persistent error buffer captures the system errors that occur and stores the system error records until the error buffer is full. Once the persistent error buffer is full, any new system error records will overwrite the existing error records in the persistent buffer, starting with the records at the beginning of the buffer.

■ If your system is configured with SC V2s, which feature a persistent error buffer, you can use the −p and −n options to display messages stored in the persistent error buffer. This information is maintained even after a system reboot occurs.

■ Systems that have a small error buffer (where the SCs do not have enhanced memory) cannot maintain persistent error messages—the contents of the error buffer are cleared when the SC reboots.

However, if your domains are set to reboot automatically upon error, the output from the `showerrorbuffer` command shows error messages that otherwise might be lost when your domains are rebooted.

You and your service provider can use this command to obtain information for troubleshooting purposes.

See Also

None.

Examples

■ To show a hardware error:

CODE EXAMPLE 27   `showerrorbuffer` Example Output for a Hardware Error

```
lom> showerrorbuffer
ErrorData[0]
  Date: Fri Jan 30 10:23:32 EST 2004
  Device: /SSC1/sbbc0/systemepld
  Register: FirstError[0x10] : 0x0200
            SB0 encountered the first error
ErrorData[1]
  Date: Fri Jan 30 10:23:32 EST 2004
  Device: /SB0/bbcGroup0/repeaterepld
  Register: FirstError[0x10]: 0x0002
            sdc0 encountered the first error
ErrorData[2]
  Date: Fri Jan 30 10:23:32 EST 2004
  Device: /SB0/sdc0
  ErrorID: 0x60171010
  Register: SafariPortError0[0x200] : 0x00000002
                ParSglErr [01:01] : 0x1 ParitySingle error
```

■ To show persistent hardware error information maintained in the message buffer of a system configured with SC V2s.

CODE EXAMPLE 28   showerrorbuffer Example Output – Persistent Error Information

```
lom> showerrorbuffer -p -n 2
  Date: Fri Jan 30 10:23:32 EST 2004
  Device: /SB0/bbcGroup0/repeaterepld
  Register: FirstError[0x10]: 0x0002
            sdc0 encountered the first error

  Date: Fri Jan 30 10:23:32 EST 2004
  Device: /SB0/sdc0
```

```
   ErrorID: 0x60171010
   Register: SafariPortError0[0x200] : 0x00000002
                 ParSglErr [01:01] : 0x1 ParitySingle error
```

showescape

Displays the current escape sequence.

Syntax

showescape

showescape –h

Options/Parameters

The following table lists all options or parameters and describes their use:

–h	Shows help for this command.

Description

This command shows the current escape sequence.

See Also

setescape

Example

```
lom> showescape
#.
```

showeventreporting

Displays the settings applied to the LOM software event reporting and messages.

Syntax

showeventreporting

showeventreporting –h

Options/Parameters

The following table lists all options or parameters and describes their use:

–h	Shows help for this command.

Description

Shows the settings applied to the LOM software event reporting and messages.

See Also

seteventreporting

Example

```
lom> showeventreporting
eventreporting is default
reporting level is fatal, warning & information (3)
```

showfault

Displays the state of the system Fault LED.

Syntax

```
showfault
```

```
showfault -h
```

Options/Parameters

The following table lists all options or parameters and describes their use:

-h	Displays help for this command.

Description

Shows the state of the system Fault LED.

See Also

showalarm

Example

```
lom> showfault
fault is off
```

showhostname

Displays the system hostname.

Syntax

```
showhostname
```

```
showhostname -h
```

Options/Parameters

The following table lists all options or parameters and describes their use:

-h	Displays help for this command.

Description

Display the hostname of the Solaris host.

The hostname is only displayed if the Solaris Operating System is running, otherwise a – is displayed

See Also

showmodel

Example

```
lom> showhostname
hostname
```

showlocator

Display the state of the system Locator LED.

Syntax

```
showlocator
```

```
showlocator -h
```

Options/Parameters

The following table lists all options or parameters and describes their use:

-h	Displays help for this command.

Example

```
lom> showlocator
locator is off
```

See Also

setlocator

showlogs

Displays the system controller logged events stored in the system controller message buffer.

Syntax

```
showlogs [–p [–f filter][–n nnn]][–v]
```

```
showlogs –h
```

Options/Parameters

The following table lists all options or parameters and describes their use:

–p	Displays the error messages contained in the persistent error buffer. This option is available only in systems configured with enhanced-memory system controllers (SC V2s).
–n *nnn*	Displays a specified number (where *nnn* is an integer) of error messages in chronological order. For example,–p –n 5 displays the last five error messages in the persistent error buffer.
–f *filter*	Indicates a certain type of message information is to be displayed, where *filter* is one of the following: • alert – alert messages • critical – critical messages • emergency – emergency messages • error – error messages • fault – fault messages • warning – warning messages
–h	Displays help for the command.

Description

Displays the log messages that are stored in the dynamic message buffer. Message storage in this dynamic buffer is temporary.

- Once the dynamic buffer is filled, the old messages that are logged to the consoles are overwritten by the new messages (these are messages from the system controller, not the Solaris Operating System).
- The dynamic buffer is cleared when you reboot the system controller or when a loss in power occurs.

In systems with SC V2s, messages in the dynamic buffer that have the following severity levels are retained in persistent storage, and will survive a system reboot or loss in power: `.alert`, `.error`, `.emerg`, `.warning`, and `.critical`. If the persistent storage buffer becomes full, any new messages will wrap to the beginning of the buffer and the existing messages at the beginning of the buffer will be overwritten by the newest messages.

If the loghost has been configured, then the messages will also be logged to the loghost for storage.

See Also

- history
- resetsc

Example

- To display the output of the `showlogs` command, run at the console after rebooting the system:

CODE EXAMPLE 29   Example Output of the `showlogs` Command Run After Rebooting the System

```
lom> showlogs

Fri Jan 30 10:07:19 commando lom: [ID 512236 local0.notice] Boot: ScApp 5.17.0,
RTOS 38
Fri Jan 30 10:07:21 commando lom: [ID 427980 local0.notice] SBBC Reset
Reason(s): Peer Reset, Watchdog Reset
Fri Jan 30 10:07:28 commando lom: [ID 390645 local0.notice] Caching ID
information
Fri Jan 30 10:07:29 commando lom: [ID 667165 local0.notice] Clock Source: 12430-
synthesizer
Fri Jan 30 10:07:34 commando lom: [ID 641509 local0.notice] /N0/PS0: Status is OK
Fri Jan 30 10:07:35 commando lom: [ID 251798 local0.notice] /N0/PS1: Status is OK
Fri Jan 30 10:07:36 commando lom: [ID 762068 local0.notice] /N0/PS2: Status is OK
Fri Jan 30 10:07:36 commando lom: [ID 372357 local0.notice] /N0/PS3: Status is OK
Fri Jan 30 10:07:37 commando lom: [ID 515227 local0.notice] Chassis is in single
partition mode.
Fri Jan 30 10:08:24 commando lom: [ID 428967 local0.notice] Partially powered
on board CPU Board V3 at /N0/SB2 powered off
Fri Jan 30 10:08:39 commando lom: [ID 939453 local0.notice] Clear
/N0/SB4/P1/B1/D2 invalid segment
Fri Jan 30 10:09:10 commando lom: [ID 965595 local0.warning] Keyswitch was
interrupted on domain A. Recovering....
Fri Jan 30 10:09:29 commando lom: [ID 629580 local0.notice] Domain A is now in
keyswitch "off" position
Fri Jan 30 10:09:30 commando lom: [ID 596773 local0.notice] Starting telnet
server ...
```

■ To display persistent log output for a system with SC V2s, run at the console:

CODE EXAMPLE 30   Example `showlogs` Persistent Log Output

```
lom>showlogs -p

Fri Jan 30 10:09:10 commando lom: [ID 965595 local0.warning] Keyswitch was
interrupted on domain A. Recovering....
Fri Jan 30 10:13:45 commando lom: [ID 991471 local0.warning] Agent {/N0/SB0/P0}
is disabled.
Fri Jan 30 10:13:45 commando lom: [ID 388680 local0.warning] Agent {/N0/SB0/P1}
is disabled.
Fri Jan 30 10:14:04 commando lom: [ID 685870 local0.warning] Agent {/N0/SB0/P2}
is disabled.
Fri Jan 30 10:14:04 commando lom: [ID 983060 local0.warning] Agent {/N0/SB0/P3}
is disabled.
Fri Jan 30 10:14:27 commando lom: [ID 392085 local0.warning] Agent
{/N0/SB2/P0/C0}  is disabled.
Fri Jan 30 10:14:27 commando lom: [ID 689275 local0.warning] Agent
{/N0/SB2/P0/C1}  is disabled.
Fri Jan 30 10:14:28 commando lom: [ID 403192 local0.warning] Port {/N0/SB2/P0}
is disabled.
Fri Jan 30 10:14:28 commando lom: [ID 392149 local0.warning] Agent
{/N0/SB2/P1/C0}  is disabled.
Fri Jan 30 10:14:28 commando lom: [ID 689339 local0.warning] Agent
{/N0/SB2/P1/C1}  is disabled.
Fri Jan 30 10:14:28 commando lom: [ID 700382 local0.warning] Port {/N0/SB2/P1}
is disabled.
Fri Jan 30 10:14:44 commando lom: [ID 392213 local0.warning] Agent
{/N0/SB2/P2/C0}  is disabled.
Fri Jan 30 10:14:44 commando lom: [ID 689403 local0.warning] Agent
{/N0/SB2/P2/C1}  is disabled.
Fri Jan 30 10:14:45 commando lom: [ID 997572 local0.warning] Port {/N0/SB2/P2}
is disabled.
Fri Jan 30 10:14:45 commando lom: [ID 392277 local0.warning] Agent
{/N0/SB2/P3/C0}  is disabled.
Fri Jan 30 10:14:45 commando lom: [ID 689467 local0.warning] Agent
{/N0/SB2/P3/C1}  is disabled.
Fri Jan 30 10:14:45 commando lom: [ID 394781 local0.warning] Port {/N0/SB2/P3}
is disabled.
Fri Jan 30 10:15:15 commando lom: [ID 152595 local0.warning] Agent {/N0/SB4/P0}
is CHS disabled.
Fri Jan 30 10:15:15 commando lom: [ID 152597 local0.warning] Agent {/N0/SB4/P1}
is CHS disabled.
Fri Jan 30 10:15:41 commando lom: [ID 152599 local0.warning] Agent {/N0/SB4/P2}
is CHS disabled.
Fri Jan 30 10:15:41 commando lom: [ID 152601 local0.warning] Agent {/N0/SB4/P3}
is CHS disabled.
```

```
Fri Jan 30 10:18:30 commando lom: [ID 947844 local0.warning] Excluded unusable,
failed or disabled board: /N0/SB0
Fri Jan 30 10:18:31 commando lom: [ID 947848 local0.warning] Excluded unusable,
failed or disabled board: /N0/SB4
Fri Jan 30 10:18:31 commando lom: [ID 947846 local0.warning] Excluded unusable,
failed or disabled board: /N0/SB2
Fri Jan 30 10:18:31 commando lom: [ID 304509 local0.error] No usable Cpu board
in domain.
```

■ To display persistent log output in which only critical messages are displayed:

CODE EXAMPLE 31   Example `showlogs` Persistent Log Output, Critical messages Only

```
lom>showlogs -p -f critical

Mon Jan 26 10:06:07 commando lom: [ID 920266 local0.crit] ErrorMonitor: Domain
A has a SYSTEM ERROR
Mon Jan 26 10:06:07 commando lom: [ID 920266 local0.crit] ErrorMonitor: Domain
A has a SYSTEM ERROR
Mon Jan 26 10:06:11 commando lom: [ID 764738 local0.crit] A fatal condition is
detected on Domain A. Initiating automatic restoration for this domain.
Mon Jan 26 10:06:11 commando lom: [ID 764738 local0.crit] A fatal condition is
detected on Domain A. Initiating automatic restoration for this domain.
Fri Jan 30 10:02:39 commando lom: [ID 920266 local0.crit] ErrorMonitor: Domain
A has a SYSTEM ERROR
Fri Jan 30 10:02:39 commando lom: [ID 920266 local0.crit] ErrorMonitor: Domain
A has a SYSTEM ERROR
Fri Jan 30 10:02:49 commando lom: [ID 764738 local0.crit] A fatal condition is
detected on Domain A. Initiating automatic restoration for this domain.
Fri Jan 30 10:02:50 commando lom: [ID 764738 local0.crit] A fatal condition is
detected on Domain A. Initiating automatic restoration for this domain.
Fri Jan 30 10:22:55 commando lom: [ID 920266 local0.crit] ErrorMonitor: Domain
A has a SYSTEM ERROR
Fri Jan 30 10:22:55 commando lom: [ID 920266 local0.crit] ErrorMonitor: Domain
A has a SYSTEM ERROR
Fri Jan 30 10:23:06 commando lom: [ID 764738 local0.crit] A fatal condition is
detected on Domain A. Initiating automatic restoration for this domain.
Fri Jan 30 10:23:06 commando lom: [ID 764738 local0.crit] A fatal condition is
detected on Domain A. Initiating automatic restoration for this domain.
```

■ To display the last five messages in the buffer of persistent log output:

CODE EXAMPLE 32   Example `showlogs` Persistent Log Output, Specific Number of Messages Displayed

```
lom>showlogs -p -n 5

Fri Jan 30 10:26:20 commando lom: [ID 392277 local0.warning] Agent
{/N0/SB2/P3/C0}  is disabled.
```

CODE EXAMPLE 32 Example `showlogs` Persistent Log Output, Specific Number of Messages Displayed

```
Fri Jan 30 10:26:20 commando lom: [ID 689467 local0.warning] Agent
{/N0/SB2/P3/C1}  is disabled.
Fri Jan 30 10:26:20 commando lom: [ID 394781 local0.warning] Port {/N0/SB2/P3}
is disabled.
Fri Jan 30 10:26:23 commando lom: [ID 947846 local0.warning] Excluded unusable,
failed or disabled board: /N0/SB2
Fri Jan 30 10:26:28 commando lom: [ID 304509 local0.error] No usable Cpu board
in domain.
lom>
```

showmodel

Displays the platform model.

Syntax

```
showmodel
```

```
showmodel –h
```

Options/Parameters

The following table lists all options or parameters and describes their use:

–h	Displays help for this command.

Description

Displays the name of the system platform model.

See Also

showhostname

Example

```
lom>showmodel
model: Sun Fire V1280
```

shownetwork

Displays system controller (LOM) network settings and MAC addresses.

Syntax

```
shownetwork [–v]
```

```
shownetwork –h
```

Options/Parameters

The following table lists all options or parameters and describes their use:

–v	Verbose mode. Displays the system Ethernet (MAC) addresses.
–h	Displays help for this command.

Description

Show System Controller (LOM) network settings and MAC addresses.

Example

```
lom> shownetwork

Network
-------
The system controller is configured to be on a network.
Network settings: static
Hostname: commando-sc
IP Address: 129.xxx.xxx.xxx
Gateway: 129.xxx.xxx.xxx
DNS Domain: noone.somewhere.com
Primary DNS Server: 129.xxx.xxx.xxx
Secondary DNS Server: 129.xxx.xxx.xxx
Connection type: telnet
```

```
lom> shownetwork -v

Network
-------
The system controller is configured to be on a network.
Network settings: static
Hostname: commando-sc
IP Address: 129.xxx.xxx.xxx
Netmask: 255.255.255.0
Gateway: 129.xxx.xxx.xxx
DNS Domain: noone.somewhere.com
Primary DNS Server: 129.xxx.xxx.xxx
Secondary DNS Server: 129.xxx.xxx.xxx
Connection type: telnet

MAC Address                      HostID
------------------------------   --------
Host net0     00:03:ba:19:8b:89    83198b89
Host net1     00:03:ba:19:8b:8a    83198b8a
SC net        00:03:ba:19:8b:92    83198b92
```

See Also

setupnetwork

showresetstate

Displays the CPU registers after an abnormal Solaris reset.

Syntax

```
showresetstate [–w|–s|–v] [-f URL]
```

```
showresetstate –h
```

Options/Parameters

The following table lists all options or parameters and describes their use:

–w	Shows windows.
–s	Shows secondary save registers.
–v	Shows all registers.
–f	Specify a URL for the output
URL	The file to receive the output. The supported protocol is FTP: `ftp://[userid:password@]hostname/path`
–h	Displays help for this command.

Description

Shows the CPU registers after an abnormal Solaris reset, for example, as a result of a Solaris watchdog timeout.

showsc

Displays version and uptime information about the system controller.

Syntax

```
showsc [-v]
```

```
showsc -h
```

Options/Parameters

The following table lists all options or parameters and describes their use:

-v	Verbose.
-h	Displays help for this command.

Description

Displays version, uptime, as well as Solaris status and COD information about the system controller.

Example

CODE EXAMPLE 33 Using the showsc Command

```
lom> showsc

SC: SSC1
System Controller
Clock failover disabled.

SC date: Thu Jul 01 11:19:03 EDT 2004
SC uptime: 1 hour 26 minutes 52 seconds

ScApp version: 5.18.0 Build_09
RTOS version: 40

Solaris Host Status: Powered Off

Chassis HostID: 83198b89
PROC RTUs installed: 0
PROC Headroom Quantity: 0
lom>
```

shutdown

Shuts down the Solaris software and enters standby mode.

Syntax

```
shutdown
```

```
shutdown -h
```

Options/Parameters

The following table lists all options or parameters and describes their use:

-h	Displays help for this command.

Description

If Solaris is running, the system is cleanly halted and then powered off to standby mode. If Solaris is not running then the system is powered off to standby mode.

This should be used in preference to the `poweroff` command.

See Also

poweron, poweroff

Example

```
lom>shutdown
Shutting down Solaris ...
lom>
lom>console


The system is down.
syncing file systems... done
Powering off ...
lom>Powering boards off ...
```

ssh-keygen

Generates Secure Shell (SSH) host keys or displays the SSH host key fingerprint.

Syntax

```
ssh-keygen [-l] [-t <rsa|dsa>]

ssh-keygen [-r]

ssh-keygen [-h]
```

Options/Parameters

The following table lists all options or parameters and describes their use:

-l	Shows the host key fingerprint. Default is RSA.
-t	Specifies the type of host key. Default is RSA.
-r	Regenerates host key.
-h	Displays help for this command.

Description

Generates SSH host keys or displays the host key fingerprint on the SC.

When the SSH server has been enabled on the SC, the firmware checks whether an SSH host key exists. If not, the firmware generates (automatically) a pair of RSA private/public host keys. If you want DSA host keys on the SC, you must invoke ssh-keygen manually with the -t switch.

Once generated, new host keys take effect (are loaded into memory) after:

- The SSH server is (re-) enabled
- The system is rebooted and the SSH server is enabled
- The restartssh command is invoked while the SSH server is enabled

It is good security practice for well-managed machines to get new host keys periodically. If you suspect that the key has been compromised, you can run the ssh-keygen command to regenerate system host keys. Host keys, once generated, can only be replaced and not deleted. For newly generated host keys to take effect, the SSH server must be restarted, either by running the restartssh command or with a reboot.

Since host keys are large, 1 Kbyte in size, it is difficult to verify an entire host key. ssh-keygen can be used to display a host key fingerprint, which is the output of the md5 message-digest algorithm presented as a sequence of 16 octets printed as hexadecimal with lowercase letters and separated by colons. See CODE EXAMPLE 34.

Since host keys are stored on the SC, they get backed up with `dumpconfig` and can be restored by `restoreconfig` (By default, the `dumpconfig` command saves keys in encrypted format). When an SC failover occurs, the keys get copied to the redundant SC. In other words, the main SC and the redundant SC share the same set of SSH keys.

You can regenerate the host keys at any time by running `ssh-keygen`. If the host key already exists, you must specify the `-r` switch.

See Also

restartssh

Example

CODE EXAMPLE 34 `ssh-keygen` Command Example

```
lom> ssh-keygen -r -t rsa
Use 'restartssh' to restart the SSH server with the new host key.
lom>ssh-keygen -l
7d:0f:e7:50:b3:dc:68:75:89:cc:d5:4b:0d:35:b0:e7 (RSA host key)
```

testboard

Tests the specified CPU/Memory board.

Syntax

```
testboard [-f] board-name

testboard -h
```

Options/Parameters

The following table lists all options or parameters and describes their use:

-f	Force testing of an already-tested board.
board-name	The board to be tested, and must be one of sb0, sb2 or sb4.
-h	Displays help for this command.

Description

Runs POST on the CPU/Memory board specified on the command line. The board must not be in use by Solaris at the time (that is, its status as displayed by showboards must not be Active). To display the board status use the showboards command.

Example

■ To test CPU/Memory board, sb0, type:

```
lom> testboard sb0
```

Glossary

Capacity on Demand (COD) Capacity on Demand (COD) is an option that provides additional processing resources (CPUs) when you need them. These additional CPUs are provided on COD CPU/Memory boards that are installed in Sun Fire entry-level midrange systems. You can access the COD CPUs after you purchase the COD right-to-use (RTU) licenses for them.

environmental monitoring All systems have a large number of sensors that monitor temperature, voltage, and current. The system controller polls devices in a timely manner and makes the environmental data available. The system controller shuts down various components to prevent damage.

FRU Field-Replaceable Unit. A discrete part of the system, such as a power supply, a CPU/Memory board or a fan.

LOM Lights Out Management.

LOM prompt The LOM prompt provides configuration control, environmental status, the ability to power on and off the system, the ability to change the System Controller password and access to other system controller functions.

If POST, the Solaris Operating System, or the OpenBoot PROM is *not* running and only the system controller software is running, you can access the LOM prompt, which is lom>.

It also provides a location for console messages to be displayed.

POST Power-on self-test. This program that takes probes and tests the components of uninitialized system hardware, configures the components into a coherent initialized system, and hands it off to the OpenBoot PROM.

RTU license Right-to-use license.

ScApp The software application that runs on the system controller and which provides a command-line interface for you to modify the system settings.

SEPROM   Serial Eraseable Programmable Read-Only Memory.

System Controller   The system controller is an embedded system resident on the IB_SSC assembly
that connects to the system baseplane. The system controller is responsible for
providing the Lights Out Management (LOM) functions which include power
on sequencing, sequencing module power-on self-tests (POST), environmental
monitoring, fault indication and alarms.

virtual time of day
(TOD)   The TOD/NVRAM chip is located on the system controller board. The system
controller multiplexes the physical TOD chip to provide TOD services.

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