Oracle® Integrated Lights Out Manager (ILOM) 2.0

Supplement for the Sun Netra T5220 Server

Part No. 820-3011-13
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Contents

Preface

The *Sun Integrated Lights Out Manager (ILOM) 2.0 Supplement for Sun Netra T5220 Server* contains information about Oracle Integrated Lights Out Manager (ILOM) service processor (SP). The SP enables you to remotely manage and administer your servers. You should be an experienced system administrator with a knowledge of UNIX® commands.

How This Book Is Organized

Chapter 1 introduces the Integrated Lights Out Manager (ILOM).

Chapter 2 describes managing SPARC specific features of the host.

Chapter 3 describes managing SPARC specific features of the SP.

Chapter 4 describes managing SPARC specific features of system devices.

Appendix A identifies IPMI sensor data (the `/SYS` namespace).

Appendix B lists and describes ALOM CMT equivalents for ILOM commands and properties.

Using UNIX Commands

This document might not contain information on basic UNIX commands and procedures such as shutting down the system, booting the system, and configuring devices. See the following for this information:

- Software documentation that you received with your system
- Oracle Solaris OS documentation, which is at:

  `http://docs.sun.com`

Shell Prompts

Shell	Prompt
C shell	*machine-name*`%`
C shell superuser	*machine-name*`#`
Bourne shell and Korn shell	`$`
Bourne shell and Korn shell superuser	`#`
ILOM service processor	`->`
OpenBoot PROM firmware	`ok`

Typographic Conventions

Typeface	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*.

Note – Characters display differently depending on browser settings. If characters do not display correctly, change the character encoding in your browser to Unicode UTF-8.

Related Documentation

The following table lists the documentation for this product. The online documentation is available at:

`http://docs.sun.com/app/docs/prod/server.nebs`

Application	Title	Part Number	Format	Location
Planning	*Sun Netra T5220 Server Site Planning Guide*	820-3008	PDF, HTML	Online
Installation	*Sun Netra T5220 Server Installation Guide*	820-3009	PDF, HTML	Online
Administration	*Sun Netra T5220 Server Administration Guide*	820-3010	PDF, HTML	Online
Issues & Updates	*Sun Netra T5220 Server Product Notes*	820-3014	PDF, HTML	Online
ILOM Reference	*Oracle Integrated Lights Out Manager (ILOM) 2.0 Supplement for the Sun Netra T5220 Server*	820-3011	PDF, HTML	Online

Application	Title	Part Number	Format	Location
ILOM Reference	*Oracle Integrated Lights Out Manager (ILOM) 2.0 Supplement for the Sun Netra T5220 Server*	820-6892	PDF, HTML	Online
Service	*Sun Netra T5220 Server Service Manual*	820-3012	PDF, HTML	Online
Compliance	*Sun Netra T5220 Server Safety and Compliance Guide*	816-7190	PDF	Online
Overview	*Sun Netra T5220 Server Getting Started Guide*	820-3016	Printed PDF	Shipping kit & Online

Documentation, Support, and Training

Sun Function	URL
Documentation	http://docs.sun.com/
Support	http://www.sun.com/support/
Training	http://www.sun.com/training/

Sun Welcomes Your Comments

Submit your comments by clicking the Feedback[+] link at:

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Include the title and part number of your document with your feedback:

Oracle Integrated Lights Out Manager (ILOM) 2.0 Supplement for the Sun Netra T5220 Server, part number 820-3011-13

CHAPTER 1

Oracle ILOM for the Sun Netra T5220 Server

This chapter introduces ILOM for the Sun Netra T5220 server from Oracle.

This chapter contains the following sections:

SPARC Specific ILOM Features

ILOM operates on many platforms, supporting features that are common to all platforms. There are some ILOM features that belong to a subset of platforms and not to all. This document describes features that belong to the Sun Netra T5220, augmenting the set of features described in the *Sun Integrated Lights Out Manager 2.0 User's Guide*.

ILOM Features Not Supported in SPARC Servers

Among the ILOM features supported on other platforms, ILOM does not support the following features on the server:

- ILOM Remote Console
- Chassis Monitoring Module (CMM) features, such as single sign on

The remainder of this document describes the ILOM features that are supported on the server.

CHAPTER 2

Managing the Host

This chapter contains information on ILOM features on the Sun Netra T5220 server that augment the array of properties that are common to ILOM on other platforms. In particular, this chapter describes the properties in the `/HOST` namespace. This chapter consists of:

Resetting the Host

The `reset` command generates a graceful or forced hardware reset of the host server. By default, the `reset` command gracefully resets the host. If a graceful reset is not possible, a forced reset is performed. For a list of available options for the `reset` command in both the ILOM and ALOM compatibility CLIs, see TABLE B-2.

Managing Remote Control

Use the remote control properties to specify how ILOM handles boot.

- To Manage the Host's Boot Mode Configuration Using the CLI
- To Manage the Host's Boot Mode Script Using the CLI
- To Change the Host's Boot Mode Behavior at Reset Using the CLI
- To Display Host's Boot Mode Expiration Date Using the CLI
- To Change Remote Control Configuration Settings Using the Web Interface

Boot Mode

Boot mode (`bootmode`) properties enable you to override the default method the server uses when it boots. This ability is useful to override particular OpenBoot or LDoms settings that might be incorrect, to set up OpenBoot variables using a script, or similar tasks.

For example, if the OpenBoot settings have become corrupt, you can set the `bootmode state` property to `reset_nvram`, then reset the server with factory default OpenBoot settings.

Service personnel might instruct you to use the `bootmode script` property for problem resolution. The full extent of script capabilities are not documented and exist primarily for debugging.

Because `bootmode` is intended to be used for a single boot only, to correct a problem with the OpenBoot or LDoms settings, the `bootmode` takes effect for a single boot only. Additionally, to prevent an administrator from setting a `bootmode state` property and forgetting about it, a `bootmode state` property expires if the host is not reset within 10 minutes of the `bootmode` state property being set.

▼ To Manage the Host's Boot Mode Configuration Using the CLI

- **At the -> prompt, type the following command:**

```
-> set /HOST/bootmode config=value
```

where the `config` property takes a *configname* value such as a named logical domain configuration downloaded to the SP using the Logical Domains software.

For example, if you have created a logical domain configuration called `ldm-set1`:

```
-> bootmode config=ldm-set1
```

To return the boot mode `config` to the factory default configuration, specify `factory-default`.

For example:

```
-> bootmode config=factory-default
```

▼ To Manage the Host's Boot Mode Script Using the CLI

- **At the -> prompt, type the following command:**

```
-> set /HOST/bootmode script=value
```

where `script` controls the host server OpenBoot PROM firmware method of booting.

The script does not affect the current `/HOST/bootmode` setting. *string* can be up to 64 bytes in length. You can specify a `/HOST/bootmode` setting and set the script within the same command.

For example:

```
-> set /HOST/bootmode state=reset_nvram script="setenv diag-switch? true"
```

After the server resets and OpenBoot PROM reads the values stored in the script, firmware sets the OpenBoot PROM variable `diag-switch?` to the user-requested value of `true`.

Note – Note: If you set `/HOST/bootmode script=""`, ILOM sets the `script` to empty. If you set `/HOST/bootmode config=""`, ILOM sets the `config` to empty.

▼ To Change the Host's Boot Mode Behavior at Reset Using the CLI

The `/HOST/bootmode state` property prepares the service processor firmware for reset, retaining the current settings of OpenBoot nonvolatile read-only memory (NVRAM) variables. Setting `/HOST/bootmode state=reset_nvram` changes the OpenBoot NVRAM variables to default settings.

- **At the `->` prompt, type the following command:**

```
-> set /HOST/bootmode state=value
```

where *value* is one of the following:

- `normal` – At next reset, retains current NVRAM variable settings
- `reset_nvram` – At next reset, returns OpenBoot variables to default settings

Note – `state=reset_nvram` will return to normal after the next server reset (or 10 minutes (see `expires` property in the *Integrated Lights Out Management 2.0 User's Guide*). `config` and `script` properties do not expire and will be cleared upon the next server reset or manually by setting *string* to `""`.

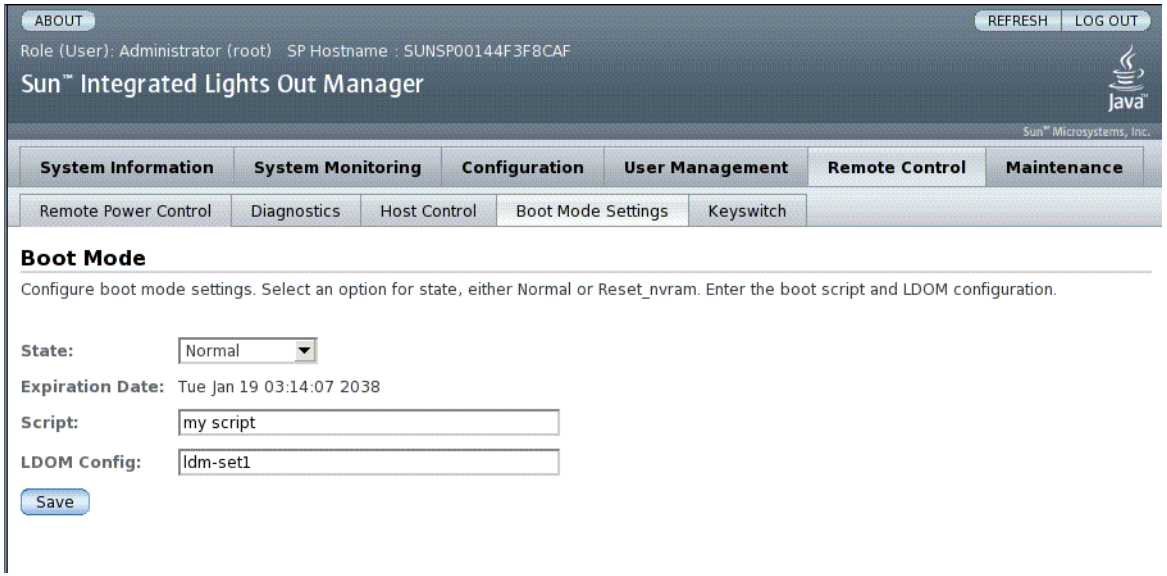
▼ To Display Host's Boot Mode Expiration Date Using the CLI

- **At the `->` prompt, type the following command:**

```
-> show /HOST/bootmode expires
```

where `expires` is the date at which the current bootmode `state` expires.

▼ To Change Remote Control Configuration Settings Using the Web Interface



ILOM provides several ways to configure the server's firmware environment. There are four aspects to configuring the boot mode:

- State
- Expiration Date
- Script
- LDom Configuration

1. **Log into the ILOM web interface as Administrator (`root`) to open the web interface.**
2. **Select Remote Control -> Boot Mode Settings.**
3. **Select the Boot Mode State.**
4. **View the Expiration Date.**
5. **Specify a boot script.**
6. **Specify an LDom configuration file.**
7. **Click Save.**

Viewing System Information and Setting System Policy Concerning Error Conditions

Use the system information properties to view system configuration and firmware version information.

▼ To Display the Host's MAC Address Using the CLI

The `/HOST macaddress` property is automatically configured by the system software, so you cannot set it or change it. The value is read and determined from the server's MAC address and then stored as a property in ILOM.

`/HOST macaddress` is the MAC address for the `net0` port. The MAC addresses for each additional port increments from the `/HOST macaddress`. For example, `net1` is equal to the value of `/HOST macaddress` plus one (1).

- **To view the current setting for this property, type the following command:**

```
-> show /HOST macaddress
```

▼ To Display the Host's OpenBoot Version Using the CLI

The `/HOST obp_version` property displays information about the version of OpenBoot on the host.

- **To view the current setting for this property, type the following command:**

```
-> show /HOST obp_version
```

▼ To Display the Host's POST Version Using the CLI

The `/HOST post_version` property displays information about the version of POST on the host.

- **To view the current setting for this property, type the following command:**

```
-> show /HOST post_version
```

▼ To Determine Host Behavior When the Watchdog Timer Expires Using the CLI

Use the `/HOST autorestart` property to specify how ILOM should handle expiration of the Oracle Solaris watchdog timer.

- **To set this property, type the following command:**

```
-> set /HOST autorestart=value
```

where values can be `none`, `reset`, or `dumpcore` (default value: `reset`).

Note – The default option (`reset`) supports the Oracle Solaris watchdog timer.

▼ To Specify Whether the Host Halts During Diagnostics When an Error Is Discovered Using the CLI

Use the `/HOST autorunonerror` property to specify whether the host should continue to boot after system diagnostics have discovered an error.

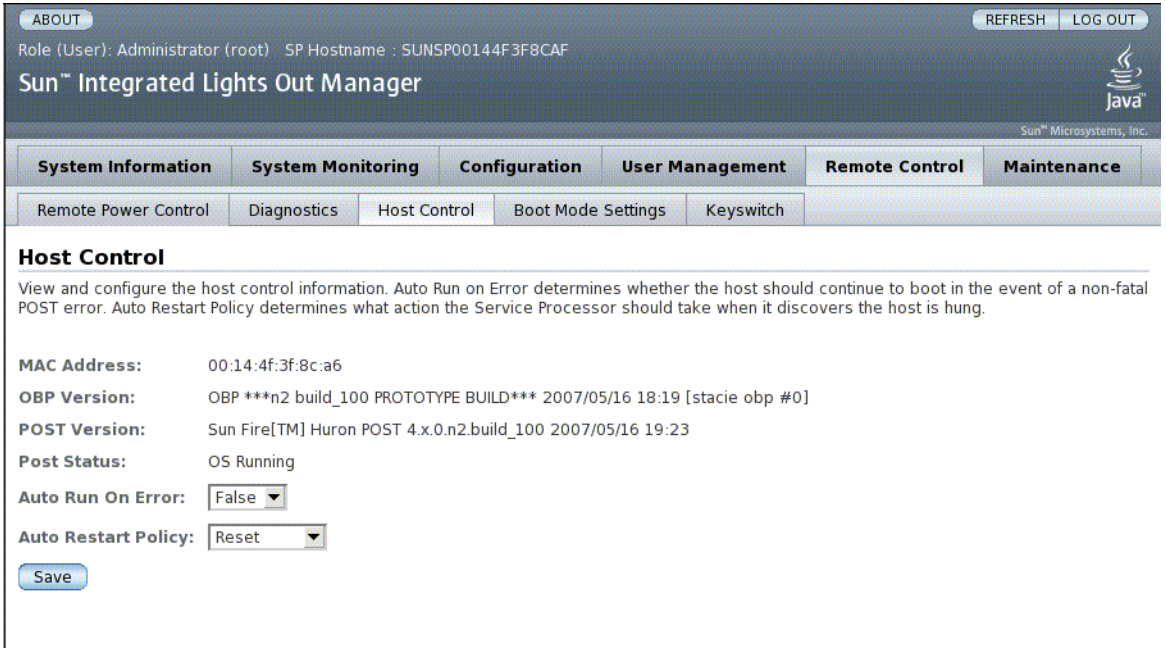
- **To set this property, type the following command:**

```
-> set /HOST autorunonerror=value
```

Where *values* can be `true` or `false`. The default value is `false`.

▼ To View Host Information Using the Web Interface

This procedure describes how to view and configure several kinds of host information.



ILOM provides several ways to view or configure host control features. There are six aspects to host control:

- MAC address
- OpenBoot version
- POST version
- POST status

- Auto Run On Error
- Auto Restart Policy

1. **Log into the ILOM web interface as Administrator (`root`) to open the web interface.**
2. **Select Remote Control -> Host Control.**
3. **View the MAC address.**
4. **View the OpenBoot version.**
5. **View the POST version.**
6. **Select a value for Auto Run On Error.**
7. **Select a value for Auto Restart Policy.**
8. **Click on Save.**

Managing Diagnostics

Use the diagnostic control properties to specify how ILOM behaves when it encounters an error on the host server.

ILOM uses the following diagnostic system interface property:

▼ To Specify the Level of Diagnostics Using the CLI

Use the `/HOST/diag level` property to specify the level of diagnostic testing to be executed when diagnostics are enabled.

- **At the `->` prompt, type the following command:**

```
-> set /HOST/diag level=value
```

where *value* is one of the following:

- `min` – Run the minimum level of diagnostics to verify the system (the default value).
- `max` – Run the maximum set of diagnostics to fully verify system health.

▼ To Change the Diagnostics Mode Using the CLI

Use the `/HOST/diag mode` property to control whether diagnostics are enabled and to specify which diagnostic mode is enabled.

- **At the `->` prompt, type the following command:**

```
-> set /HOST/diag mode=value
```

where *value* is one of the following:

- `off` – Run no diagnostics.
- `normal` – Run diagnostics (the default value).
- `service` – Run service-technician diagnostics, equivalent to using the preset values of `/HOST/diag trigger=all-resets`, `/HOST/diag verbosity`, and `/HOST/diag level=max`. Setting `/HOST/diag mode=service` has the same effect as issuing the set `/SYS keyswitch_state=diag` command.

▼ To Specify Diagnostic Trigger Conditions Using the CLI

Use the `/HOST/diag trigger` property to control the conditions under which POST runs if diagnostics are enabled.

- **At the `->` prompt, type the following command:**

```
-> set /HOST/diag trigger=value
```

where *value* is one (or a combination, supplied within quote marks) of the following:

- `user-reset` – Run diagnostics when the system is reset.
- `error-reset` – Run diagnostics when the system takes a fatal error that requires the system to reset itself to recover.
- `power-on-reset` – Run diagnostics when the system is powered on.
- `all-resets` – Run all of the diagnostics specified by `user-reset`, `error-reset`, and `power-on-reset` [the default value].

- `none` – Skip diagnostics.

The default value is the combination of `power-on-reset error-reset`.

For example:,

```
-> set /HOST/diag trigger="user-reset power-on-reset"
-> show /HOST/diag trigger
user-reset power-on-reset
```

▼ To Choose the Amount of Verbosity in Diagnostic Output Using the CLI

Use the `/HOST/diag verbosity` property to specify the verbosity level of the output from POST diagnostics, if diagnostics are enabled.

- **At the `->` prompt, type the following command:**

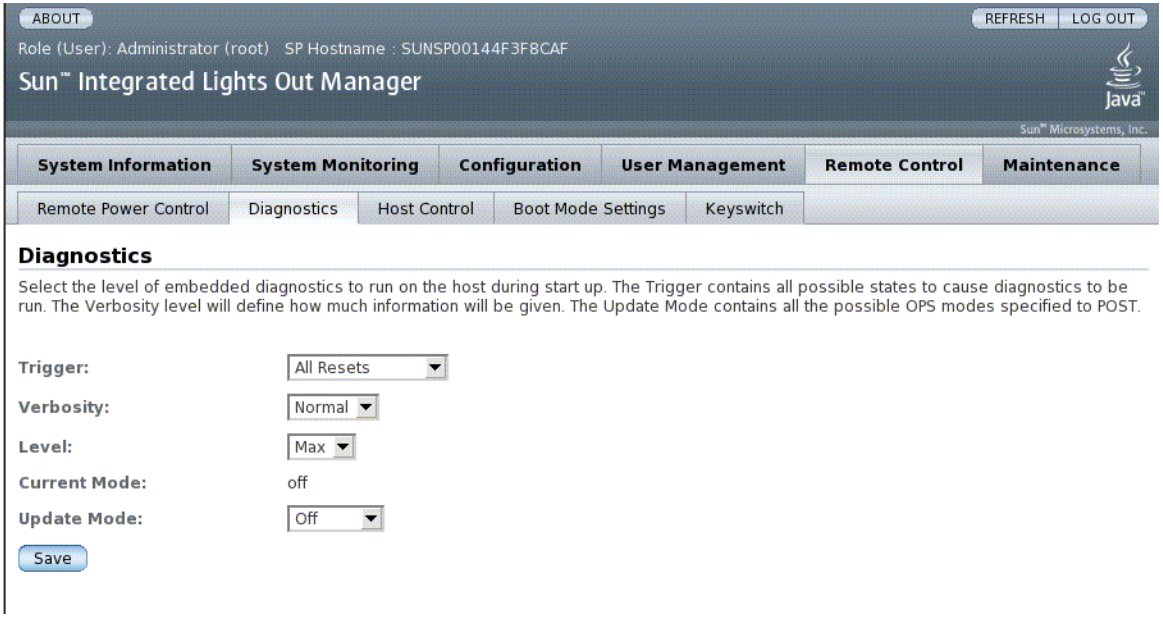
```
-> set /HOST/diag verbosity=value
```

where *value* is one of the following:

- `none` – Diagnostics do not print any output on the system console when running, unless a fault is detected.
- `min` – Diagnostics print a limited amount of output on the system console.
- `max` – Diagnostics print full output on the system console, including the name and results of each test being run.
- `normal` – Diagnostics print a moderate amount of output on the system console (the default value).
- `debug` – Diagnostics print extensive debugging output on the system console, including devices being tested and debug output of each test.

▼ To Manage Diagnostics Settings Using the Web Interface

This procedure describes how to view and configure diagnostics settings.



ILOM provides several ways to view or configure diagnostics. There are four aspects to host control:

- Trigger
- Verbosity
- Level
- Mode

1. **Log into the ILOM web interface as Administrator (`root`) to open the web interface.**
2. **Select Remote Control -> Diagnostics.**
3. **Select a value for Trigger.**
4. **Select a value for Verbosity.**
5. **Select a value for Level.**
6. **View the Current Mode.**
7. **Select a value for Update Mode.**

Managing System User Interactions

The system user properties enable you to customize the way ILOM identifies and interacts with the host server.

▼ To Choose Host Response Modes to Break Signals Using the CLI

Use the `set /HOST send_break_action` command to bring the server to a menu from which you can choose to go to the OpenBoot PROM prompt (`ok`). If you have configured the `kmdb` debugger, then the `break` command brings the server into debug mode.

- **At the `->` prompt, type the following command:**

```
-> set /HOST send_break_action=value
```

where *value* is one of the following:

- `break` – Sends a break to the host.
- `dumpcore` – Forces a panic core dump of the managed system OS (not supported by all OS versions).

▼ To Display Host Status Information Using the CLI

Use the `show /HOST status` command to display information about the host server's platform ID and status.

- **At the `->` prompt, type the following command:**

```
-> show /HOST status
```

The command returns information similar to the following:

```
-> show /HOST status
    Properties:
        status = OS Running

    Commands:
        show ->
```

CHAPTER 3

Managing the Service Processor

This chapter contains information on ILOM properties on the Sun Netra T5220 server that augment the array of properties that are common to ILOM on other platforms. In particular, this chapter covers properties in the `/SP` namespace. This chapter consists of:

Storing Customer Information Using the SP

This section describes ILOM features that enable you to store information (for purposes such as inventory control or site resource management) on the SP and FRU PROMs.

▼ To Change Customer FRU Data Using the CLI

Use the `/SP customer_frudata` property to store information in all FRU PROMs.

- **At the -> prompt, type the following command:**

```
-> set /SP customer_frudata=data
```

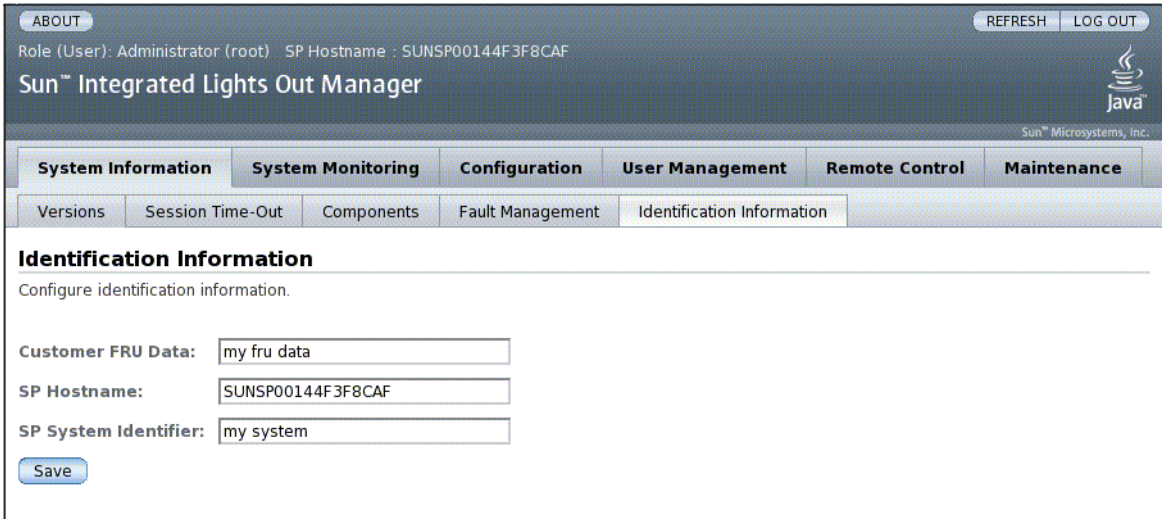
▼ To Change System Identification Information Using the CLI

Use the `/SP system_identifier` property to store customer identification information.

- **At the -> prompt, type the following command:**

```
-> set /SP system_identifier=data
```

▼ To Change Customer Identification Information Using the Web Interface



ILOM provides features that enable you to store information on FRUs and the SP.

1. **Log into the ILOM web interface as Administrator (`root`) to open the web interface.**

2. **Select System Information --> Identification Information.**
3. **Edit the Customer FRU data field.**
4. **View the SP Hostname.**
5. **Edit the SP System Identifier field.**
6. **Click Save.**

Changing Service Processor Settings to Factory Defaults

This section describes how to set service processor settings back to the factory defaults.

▼ To Reset the Service Processor Settings to Factory Default Values Using the CLI

Use the `reset_to_defaults` property to set all ILOM configuration properties back to their factory default values. The `all` option sets the ILOM configuration and all user information back to the factory default values.

1. **At the `->` prompt, type the following command:**

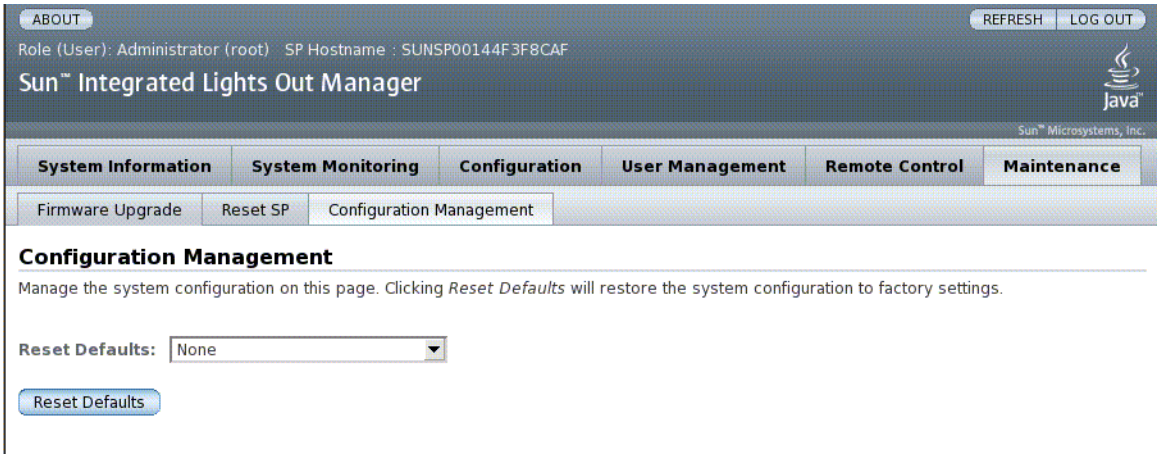
```
-> set /SP reset_to_defaults=all
```

where for `reset_to_defaults` can be set to one of the following:

- `none` – Make no changes.
- `configuration` – Preserve the user database.
- `all` – Reset (clear) the user database.

2. **Reset the service processor so that the new property value can take effect.**

▼ To Reset the Service Processor Settings to Factory Defaults Using the Web Interface



1. **Log into the ILOM web interface as Administrator (`root`) to open the web interface.**
2. **Select Maintenance --> Configuration Management.**
3. **Select a Reset Defaults value.**
4. **Click Save.**

Modifying Console Escape Characters

This section describes creating new character combinations for use as escape characters.

- To Change Console Escape Characters Using the CLI

▼ To Change Console Escape Characters Using the CLI

Use the `/SP/console escapechars` property to change the escape character sequence to switch from a system console session back to ILOM.

- **At the `->` prompt, type the following command:**

```
-> set /SP/console escapechars=x.
```

The sequence is limited to two characters. The second character is always `.` (Period). The default value is `#.` (Hash-Period). The sequence can be customized.

where *x* is any printable character.

Note – Changing the escape character does not take effect in a currently active console session.

Changing Configuration Policy Settings

This section describes managing configuration system policies using ILOM.

▼ To Disable or Re-Enable Backup of the User Database Using the CLI

The `/SP/policy BACKUP_USER_DATA` property specifies whether the local user database on ILOM (that is, user, password, and permission information) should be backed up. When this property is set to `enable`, this data is backed up on the removable system configuration card (SCC PROM) on the system.

- **At the `->` prompt, type the following command:**

```
-> set /SP/policy BACKUP_USER_DATA=value
```

where the *value* can be one of the following:

- `enabled` – Backs up the user database to the SCC (This is the default value).
- `disabled` – No backup.

For example, if you want the local user database on ILOM to be backed up, type the following command:

```
-> set /SP/policy BACKUP_USER_DATA=enabled
```

▼ To Disable or Re-Enable Powering On the Host Server Using the CLI

ILOM runs as soon as power is applied to the host server, even if the server is powered off. When you first apply power to the host server, ILOM starts to run, but the server does not start up until you power it on.

You can use the `/SP/policy HOST_LAST_POWER_STATE` property to disable the host server (keep the host server off) or re-enable the server (return the server to the state it was in when the power was removed). This property is useful in the event of a power failure, or if you physically move the server to a different location.

For example, if the host server is running when power is lost and the `/SP/policy HOST_LAST_POWER_STATE` property is set to `disabled`, the host server remains off when power is restored. If the `/SP/policy HOST_LAST_POWER_STATE` property is set to `enabled`, the host server restarts when the power is restored.

- **At the -> prompt, type the following command:**

```
-> set /SP/policy HOST_LAST_POWER_STATE=enabled
```

where the value for this property can be one of the following:

- `enabled` – When power is restored, returns the server to the state it was in before the power was removed.
- `disabled` – Keeps the server off when power is applied.

If you enable this property, you must configure `/SP/policy HOST_POWER_ON_DELAY` as well. For further information, see "To Disable or Re-Enable Power On Delay Using the CLI" on page 23

▼ To Disable or Re-Enable Power On Delay Using the CLI

Use the `/SP/policy HOST_POWER_ON_DELAY` property to cause the server to wait for a short time before powering on automatically. The delay is a random interval of one to five seconds. Delaying the server poweron helps minimize current surges on the main power source. This poweron delay is important when multiple servers in racks power on after a power outage.

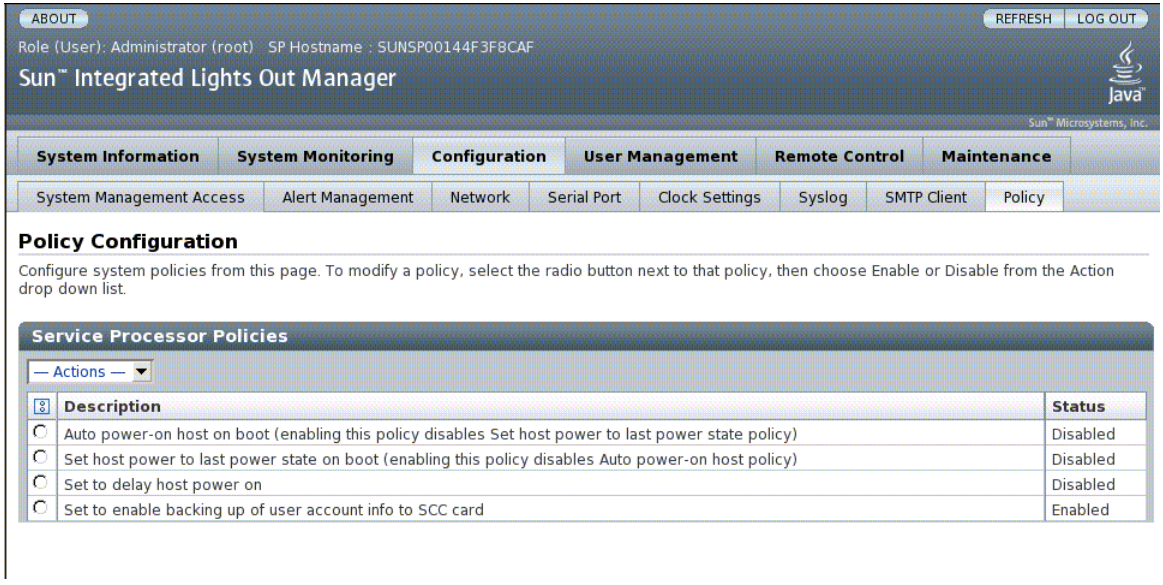
This property takes effect only if `/SP/policy HOST_LAST_POWER_STATE` is set to `enabled`.

- **At the `->` prompt, type the following command:**

```
-> set /SP/policy HOST_POWER_ON_DELAY=value
```

where *value* can be `enabled` or `disabled`.

▼ To Manage Configuration Policy Settings Using the Web Interface



1. **Log into the ILOM web interface as Administrator (`root`) to open the web interface.**
2. **Select Configuration --> Policy.**
3. **Click the Policy radio button of the policy you want to change.**
4. **Select an Action value to apply the Action (enable or disable) you have chosen.**

Managing SSH Server Settings

▼ To Change the Type of SSH Keys Using the CLI

Use the `set /SP/services/ssh generate_new_key_type` command to change the type of Secure Shell (SSH) host keys generated on your server. After changing the type, you must use the `set /SP/services/ssh generate_new_key_action` command to generate a new set of keys of the new type.

- **At the `->` prompt, type the following command:**

```
-> set /SP/services/ssh generate_new_key_type=value
```

where *value* can be `rsa` or `dsa`.

▼ To Generate a New Set of SSH Keys Using the CLI

Use the `set /SP/services/ssh generate_new_key_action` command to generate a new set of Secure Shell (SSH) host keys.

- **At the -> prompt, type the following command:**

```
-> set /SP/services/ssh generate_new_key_action=true
```

▼ To Restart the SSH Server Using the CLI

Use the `set /SP/services/ssh restart_sshd_action` command to restart the SSH server after you have generated new host keys using the `set /SP/services/ssh generate_new_key_action` command. This reloads the keys into the server's dedicated data structure in memory.

- **At the -> prompt, type the following command:**

```
-> set /SP/services/ssh restart_sshd_action=true
```

▼ To Specify or Disable the Remote Connection Using the CLI

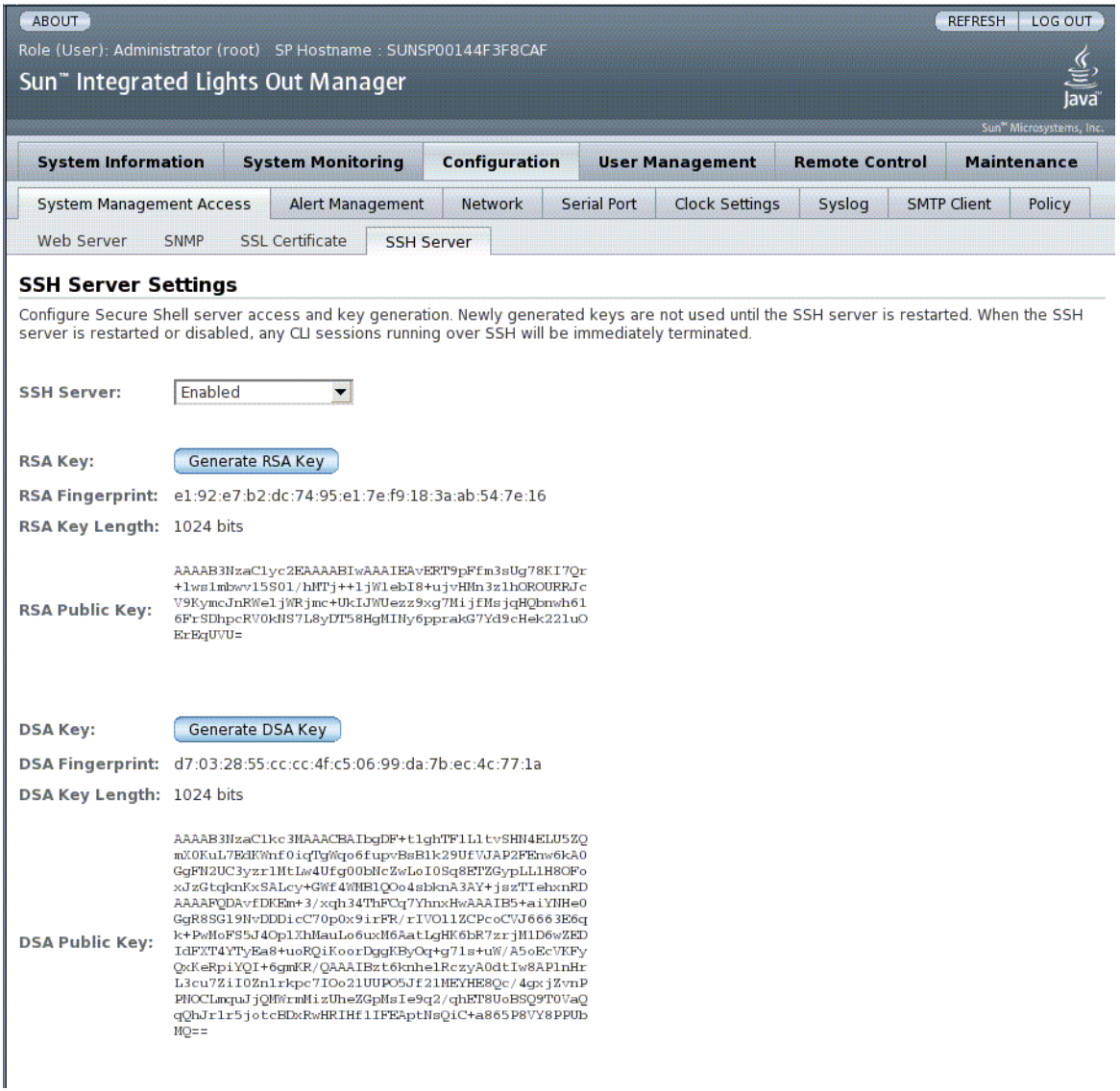
Use the `/SP/services/ssh state` property with the `set` command to specify or disable the remote connection.

- **At the -> prompt, type the following command:**

```
-> set /SP/services/ssh state=value
```

where *value* is `enabled` or `disabled`.

▼ To Manage SSH Server Settings Using the Web Interface



1. **Log into the ILOM web interface as Administrator (`root`) to open the web interface.**
2. **Select Configuration --> SSH Server Settings.**

3. **Select an action from the SSH Server pulldown menu.**

4. **Click Generate RSA Key or Click Generate DSA Key to generate a new key type and a new key.**

   If you have generated a new key, you must restart the SSH server for the new key to take effect.

Note – When the SSH server is restarted or disabled, any CLI sessions running over SSH will be terminated immediately.

CHAPTER 4

Managing Devices

This chapter contains information on ILOM properties on the Sun Netra T5220 server that augment the array of properties that are common to ILOM on other platforms. In particular, this chapter covers properties in the `/SYS` namespace.

Managing Virtual Keyswitch Settings

▼ To Control the Virtual Keyswitch Using the CLI

Use the /SYS `setkeyswitch_state` property to control the virtual keyswitch position of the system.

- **At the `->` prompt, type the following command:**

```
-> set /SYS keyswitch_state=value
```

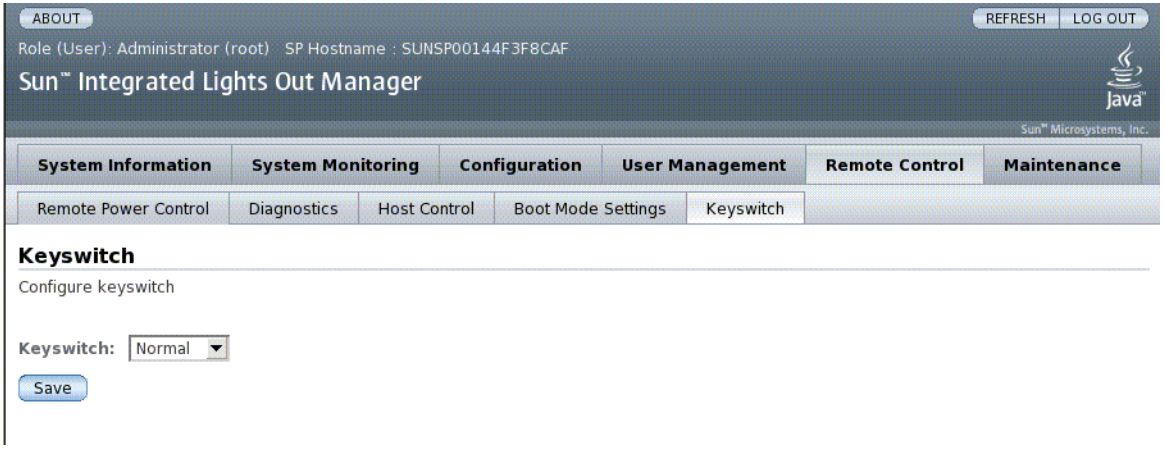
where the `setkeyswitch_state` property has the following values:

TABLE 4-1 `keyswitch_state` Values

Option	Description
`normal`	The system can power itself on and start the boot process.
`stby`	The system cannot power itself on.
`diag`	The system can power itself on using preset values of diagnostic properties (`/HOST/diag level=max`, `/HOST/diag mode=max`, `/HOST/diag verbosity=max`) to provide thorough fault coverage. This option overrides the values of diagnostic properties that you might have set.
`locked`	The system can power itself on, however you are prohibited from updating any of the flash devices or setting `/HOST send_break_action=break`.

▼ To Control the Virtual Keyswitch Using the Web Interface

You can use the web interface to control the virtual keyswitch position of the system.



1. **Log into the ILOM web interface as Administrator (`root`) to open the web interface.**
2. **Select Remote Control --> Keyswitch.**

3. **Select the Keyswitch state value.**
4. **Click Save.**

APPENDIX **A**

IPMI Sensor Reference

Your server includes a number of IPMI-compliant sensors and indicators that measure things such as voltage and temperature ranges. Sensors include security latches that detect when the components are installed or devices that notify you that service may be required. TABLE A-1 shows the sensors on your server. TABLE A-2 shows the indicators on your server.

TABLE A-1 Sensors on Sun Netra T5220 Server

Name	Path	Description
V_+3V3_STBY	/SYS/MB/V_+3V3_STBY	3.3V Standby Voltage Threshold Sensor
V_+3V3_MAIN	/SYS/MB/V_+3V3_MAIN	3.3V Main Voltage Threshold Sensor
V_+12V0_MAIN	/SYS/MB/V_+12V0_MAIN	12V Main Voltage Threshold Sensor
V_VBAT	/SYS/MB/V_VBAT	Voltage Threshold Sensor
V_VDDIO	/SYS/MB/V_VDDIO	Voltage Threshold Sensor
T_AMB	/SYS/MB/T_AMB	Ambient Temperature Threshold Sensor
I_USBn	/SYS/MB/I_USBn	USB Port (0-1) Current Sensor
PSn/AC_POK	/SYS/PSn/AC_POK	Power Supply (0-1) Power Within Specification Sensor
V_VCORE	/SYS/MB/V_VCORE	CPU Core Voltage Threshold Sensor
V_VMEML	/SYS/MB/V_VMEML	Left Branch Voltage Threshold Sensor
V_VMEMR	/SYS/MB/V_VMEMR	Right Branch Voltage Threshold Sensor

TABLE A-1 Sensors on Sun Netra T5220 Server *(Continued)*

Name	Path	Description
VCORE_POK	/SYS/MB/VCORE_POK	Core Power Within Specification Sensor
VMEML_POK	/SYS/MB/VMEML_POK	Left Branch Power Within Specification Sensor
VMEMR_POK	/SYS/MB/VMEMR_POK	Right Branch Power Within Specification Sensor
BRn/CH0/D0/PRSNT	/SYS/MB/CMP0/BRn/CH0/D0/PRSNT	Branch (0-3) Presence Sensor
PSn/VOLT_FAULT	/SYS/PSn/VOLT_FAULT	Power Supply (0-1) Voltage Fault Sensor
PSn/TEMP_FAULT	/SYS/PSn/TEMP_FAULT	Power Supply (0-1) Temperature Fault Sensor
PSn/CUR_FAULT	/SYS/PSn/CUR_FAULT	Power Supply (0-1) Current Fault Sensor
PSn/DC_POK	/SYS/PSn/DC_POK	Power Supply (0-1) DC Power Sensor
PSn/FAN_FAULT	/SYS/PSn/FAN_FAULT	Power Supply (0-1) Fan Fault Sensor
FANBDn/FMn/Fn/TACH	/SYS/FANBDn/FMn/Fn/TACH	Fan Board (0-1) Fan Module (0-1) Fan (0-1) Speed Sensor
T_TCORE	/SYS/MB/CMP0/T_TCORE	Top of Core Temperature Sensor
T_BCORE	/SYS/MB/CMP0/T_BCORE	Bottom of Core Temperature Sensor
PSn/PRSNT	/SYS/PSn/PRSNT	Power Supply (0-1) Presence Sensor
FANBDn/FMn/PRSNT	/SYS/FANBDn/FMn/PRSNT	Fan Board (0-1) Fan Module (0-2) Presence Sensor
BRn/CH0/D0/T_AMB	/SYS/MB/CMP0/BRn/CH0/D0/T_AMB	Branch (0-3) Temperature Sensor
HDDn/PRSNT	/SYS/HDDn/PRSNT	Hard Disk (0-7) Presence Sensor

TABLE A-2 Indicators on Sun Netra T5220 Server

Name	Path	Description
LOCATE	/SYS/LOCATE	Locate Indicator
ACT	/SYS/ACT	System Power Activity Indicator
SERVICE	/SYS/SERVICE	Service Indicator
BRn/CH0/D0/SERVICE	/SYS/MB/CMP0/BRn/CH0/D0/SERVICE	Branch Service Indicator
PS_FAULT	/SYS/PS_FAULT	Power Supply Fault Indicator
TEMP_FAULT	/SYS/TEMP_FAULT	Temperature Fault Indicator
FAN_FAULT	/SYS/FAN_FAULT	Fan Fault Indicator
FANBDn/FMn/SERVICE	/SYS/FANBDn/FMn/SERVICE	Fan Board (0-1) Fan Module (0-2) Service Indicator
HDDn/SERVICE	/SYS/HDDn/SERVICE	Hard Disk (0-7) Service Indicator
HDDn/OK2RM	/SYS/HDDn/OK2RM	Hard Disk (0-7) Okay to Remove Indicator

TABLE A-3 Sun Netra T5220 Server Traps Corresponding to Sensors and Components in SDR

Trap Name	Trap OID	Sensors or Components
sunHwTrapVoltageFatalThresholdExceeded	enterprises.42.2.175.103.2.0.1	/MB/V_+3V3_STBY /MB/V_+3V3_MAIN /MB/V_+12V0_MAIN /MB/V_+5V0_VCC /MB/V_VDDIO /MB/V_+1V8_GBE0 /MB/V_+1V8_GBE1 /MB/V_+1V1_VDD /MB/V_+1V0_VDD /MB/V_+1V2_VDD /MB/V_+1V5_VDD /MB/V_VCORE /MB/V_VMEML /MB/V_VMEMR /MB/V_VTTL /MB/V_VTTR
sunHwTrapVoltageFatalThresholdDeasserted	enterprises.42.2.175.103.2.0.2	/MB/V_+3V3_STBY /MB/V_+3V3_MAIN /MB/V_+12V0_MAIN /MB/V_+5V0_VCC /MB/V_VDDIO /MB/V_+1V8_GBE0 /MB/V_+1V8_GBE1 /MB/V_+1V1_VDD /MB/V_+1V0_VDD /MB/V_+1V2_VDD /MB/V_+1V5_VDD /MB/V_VCORE /MB/V_VMEML /MB/V_VMEMR /MB/V_VTTL /MB/V_VTTR

TABLE A-3 Sun Netra T5220 Server Traps Corresponding to Sensors and Components in SDR *(Continued)*

Trap Name	Trap OID	Sensors or Components
sunHwTrapVoltageCritThresholdExceeded	enterprises.42.2.175.103.2.0.3	/MB/V_+3V3_STBY /MB/V_+3V3_MAIN /MB/V_+12V0_MAIN /MB/V_+5V0_VCC /MB/V_VDDIO /MB/V_+1V8_GBE0 /MB/V_+1V8_GBE1 /MB/V_+1V0_VDD /MB/V_+1V1_VDD /MB/V_+1V2_VDD /MB/V_+1V5_VDD /MB/V_VCORE /MB/V_VMEML /MB/V_VMEMR /MB/V_VTTL /MB/V_VTTR
sunHwTrapVoltageCritThresholdDeasserted	enterprises.42.2.175.103.2.0.4	/MB/V_+3V3_STBY /MB/V_+3V3_MAIN /MB/V_+12V0_MAIN /MB/V_+5V0_VCC /MB/V_VDDIO /MB/V_+1V8_GBE0 /MB/V_+1V8_GBE1 /MB/V_+1V1_VDD /MB/V_+1V0_VDD /MB/V_+1V2_VDD /MB/V_+1V5_VDD /MB/V_VCORE /MB/V_VMEML /MB/V_VMEMR /MB/V_VTTL /MB/V_VTTR

TABLE A-3 Sun Netra T5220 Server Traps Corresponding to Sensors and Components in SDR *(Continued)*

Trap Name	Trap OID	Sensors or Components
sunHwTrapVoltageNonCritThresholdExceeded	enterprises.42.2.175.103.2.0.5	/MB/V_+3V3_STBY /MB/V_+3V3_MAIN /MB/V_+12V0_MAIN /MB/V_+5V0_VCC /MB/V_VDDIO /MB/V_+1V8_GBE0 /MB/V_+1V8_GBE1 /MB/V_+1V1_VDD /MB/V_+1V0_VDD /MB/V_+1V2_VDD /MB/V_+1V5_VDD /MB/V_VCORE /MB/V_VMEML /MB/V_VMEMR /MB/V_VTTL /MB/V_VTTR /MB/V_VBAT
sunHwTrapVoltageOk	enterprises.42.2.175.103.2.0.6	/MB/V_+3V3_STBY /MB/V_+3V3_MAIN /MB/V_+12V0_MAIN /MB/V_+5V0_VCC /MB/V_VDDIO /MB/V_+1V8_GBE0 /MB/V_+1V8_GBE1 /MB/V_+1V1_VDD /MB/V_+1V0_VDD /MB/V_+1V2_VDD /MB/V_+1V5_VDD /MB/V_VCORE /MB/V_VMEML /MB/V_VMEMR /MB/V_VTTL /MB/V_VTTR /MB/V_VBAT

TABLE A-3 Sun Netra T5220 Server Traps Corresponding to Sensors and Components in SDR *(Continued)*

Trap Name	Trap OID	Sensors or Components
sunHwTrapTempCritThresholdExceeded	enterprises.42.2.175.103.2.0.9	/MB/T_AMB /MB/T_BUS_BAR0 /MB/T_BUS_BAR1 /MB/CMP0/T_TCORE /MB/CMP0/T_BCORE /B0/CH0/D0/TEMP /B0/CH1/D0/TEMP /B1/CH0/D0/TEMP /B1/CH1/D0/TEMP /B2/CH0/D0/TEMP /B2/CH1/D0/TEMP /B3/CH0/D0/TEMP /B3/CH1/D0/TEMP
sunHwTrapTempCritThresholdDeasserted	enterprises.42.2.175.103.2.0.10	/MB/T_AMB /MB/T_BUS_BAR0 /MB/T_BUS_BAR1 /MB/CMP0/T_TCORE /MB/CMP0/T_BCORE /B0/CH0/D0/TEMP /B0/CH1/D0/TEMP /B1/CH0/D0/TEMP /B1/CH1/D0/TEMP /B2/CH0/D0/TEMP /B2/CH1/D0/TEMP /B3/CH0/D0/TEMP /B3/CH1/D0/TEMP
sunHwTrapTempNonCritThresholdExceeded	enterprises.42.2.175.103.2.0.11	/MB/T_AMB /MB/T_BUS_BAR0 /MB/T_BUS_BAR1 /MB/CMP0/T_TCORE /MB/CMP0/T_BCORE /B0/CH0/D0/TEMP /B0/CH1/D0/TEMP /B1/CH0/D0/TEMP /B1/CH1/D0/TEMP /B2/CH0/D0/TEMP /B2/CH1/D0/TEMP /B3/CH0/D0/TEMP /B3/CH1/D0/TEMP

TABLE A-3 Sun Netra T5220 Server Traps Corresponding to Sensors and Components in SDR *(Continued)*

Trap Name	Trap OID	Sensors or Components
sunHwTrapTempOk	enterprises.42.2.175.103.2.0.12	/MB/T_AMB /MB/T_BUS_BAR0 /MB/T_BUS_BAR1 /MB/CMP0/T_TCORE /MB/CMP0/T_BCORE /B0/CH0/D0/TEMP /B0/CH1/D0/TEMP /B1/CH0/D0/TEMP /B1/CH1/D0/TEMP /B2/CH0/D0/TEMP /B2/CH1/D0/TEMP /B3/CH0/D0/TEMP /B3/CH1/D0/TEMP
sunHwTrapFanSpeedFatalThresholdExceeded	enterprises.42.2.175.103.2.0.19	/FT0/F0/TACH /FT0/F1/TACH /FT0/F2/TACH /FT1/F0/TACH /FT1/F1/TACH /FT2/F0/TACH
sunHwTrapFanSpeedFatalThresholdDeasserted	enterprises.42.2.175.103.2.0.20	/FT0/F0/TACH /FT0/F1/TACH /FT0/F2/TACH /FT1/F0/TACH /FT1/F1/TACH /FT2/F0/TACH
sunHwTrapFanSpeedCritThresholdExceeded	enterprises.42.2.175.103.2.0.21	/FT0/F0/TACH /FT0/F1/TACH /FT0/F2/TACH /FT1/F0/TACH /FT1/F1/TACH /FT2/F0/TACH
sunHwTrapFanSpeedCritThresholdDeasserted	enterprises.42.2.175.103.2.0.22	
sunHwTrapFanSpeedNonCritThresholdExceeded	enterprises.42.2.175.103.2.0.23	

TABLE A-3 Sun Netra T5220 Server Traps Corresponding to Sensors and Components in SDR *(Continued)*

Trap Name	Trap OID	Sensors or Components
sunHwTrapFanSpeedOk	enterprises.42.2.175.103.2.0.24	/FT0/F0/TACH /FT0/F1/TACH /FT0/F2/TACH /FT1/F0/TACH /FT1/F1/TACH /FT2/F0/TACH
sunHwTrapSensorFatalThresholdExceeded	enterprises.42.2.175.103.2.0.25	/SYS/VPS
sunHwTrapSensorFatalThresholdDeasserted	enterprises.42.2.175.103.2.0.26	/SYS/VPS
sunHwTrapSensorCritThresholdExceeded	enterprises.42.2.175.103.2.0.27	/SYS/VPS
sunHwTrapSensorCritThresholdDeasserted	enterprises.42.2.175.103.2.0.28	/SYS/VPS
sunHwTrapSensorNonCritThresholdExceede	enterprises.42.2.175.103.2.0.29	/SYS/VPS
sunHwTrapSensorThresholdOk	enterprises.42.2.175.103.2.0.30	/SYS/VPS
sunHwTrapPowerSupplyError	enterprises.42.2.175.103.2.0.32	/PS0/FAIL /PS1/FAIL /PS0/CUR_FAULT /PS0/PWROK /PS0/TEMP_FAULT /PS0/VINOK /PS0/VOLT_FAULT /PS1/CUR_FAULT /PS1/PWROK /PS1/TEMP_FAULT /PS1/VINOK /PS1/VOLT_FAULT
sunHwTrapPowerSupplyOk	enterprises.42.2.175.103.2.0.33	/PS0/FAIL /PS1/FAIL /PS0/CUR_FAULT /PS0/PWROK /PS0/TEMP_FAULT /PS0/VINOK /PS0/VOLT_FAULT /PS1/CUR_FAULT /PS1/PWROK /PS1/TEMP_FAULT /PS1/VINOK /PS1/VOLT_FAULT

TABLE A-3 Sun Netra T5220 Server Traps Corresponding to Sensors and Components in SDR *(Continued)*

Trap Name	Trap OID	Sensors or Components
sunHwTrapFanError	enterprises.42.2.175.103.2.0.35	/PS0/FAN_FAULT
		/PS1/FAN_FAULT
sunHwTrapFanOk	enterprises.42.2.175.103.2.0.36	/PS0/FAN_FAULT
		/PS1/FAN_FAULT
sunHwTrapComponentError	enterprises.42.2.175.103.2.0.53	MB/P0/CBUS_BIT0
		MB/P0/CBUS_BIT1
		MB/P0/CBUS_BIT2
		MB/P0/CBUS_BIT3
		MB/P0/CBUS_BIT4
		MB/P0/CBUS_BIT5
		MB/P0/CBUS_BIT6
		MB/P0/CBUS_BIT7
		MB/P0/CBUS_BIT8
		MB/P0/CBUS_BIT9
		MB/P0/CBUS_BIT10
		MB/P0/CBUS_BIT11
		/MB/I_USB0
		/MB/VCORE_POK
		/MB/VMEML_POK
		/MB/VMEMR_POK
		/MB/I_USB1
		/PS0/AC_POK
		/PS0/DC_POK
		/PS0/CUR_FAULT
		/PS0/VOLT_FAULT
		/PS1/AC_POK
		/PS1/DC_POK
		/PS1/CUR_FAULT
		/PS1/VOLT_FAULT

TABLE A-3 Sun Netra T5220 Server Traps Corresponding to Sensors and Components in SDR *(Continued)*

Trap Name	Trap OID	Sensors or Components
sunHwTrapComponentOk	enterprises.42.2.175.103.2.0.54	MB/P0/CBUS_BIT0
		MB/P0/CBUS_BIT1
		MB/P0/CBUS_BIT2
		MB/P0/CBUS_BIT3
		MB/P0/CBUS_BIT4
		MB/P0/CBUS_BIT5
		MB/P0/CBUS_BIT6
		MB/P0/CBUS_BIT7
		MB/P0/CBUS_BIT8
		MB/P0/CBUS_BIT9
		MB/P0/CBUS_BIT10
		MB/P0/CBUS_BIT11
		/MB/I_USB0
		/MB/VCORE_POK
		/MB/VMEML_POK
		/MB/VMEMR_POK
		/MB/I_USB1
		/PS0/AC_POK
		/PS0/DC_POK
		/PS0/CUR_FAULT
		/PS0/VOLT_FAULT
		/PS1/AC_POK
		/PS1/DC_POK
		/PS1/CUR_FAULT
		/PS1/VOLT_FAULT

TABLE A-3 Sun Netra T5220 Server Traps Corresponding to Sensors and Components in SDR *(Continued)*

Trap Name	Trap OID	Sensors or Components
sunHwTrapFruInserted	enterprises.42.2.175.103.2.0.55	/MB/XAUI0/PRSNT
		/MB/XAUI1/PRSNT
		/B0/CH0/D0/PRSNT
		/B0/CH0/D1/PRSNT
		/B0/CH1/D0/PRSNT
		/B0/CH1/D1/PRSNT
		/B1/CH0/D0/PRSNT
		/B1/CH0/D1/PRSNT
		/B1/CH1/D0/PRSNT
		/B1/CH1/D1/PRSNT
		/B2/CH0/D0/PRSNT
		/B2/CH0/D1/PRSNT
		/B2/CH1/D0/PRSNT
		/B2/CH1/D1/PRSNT
		/B3/CH0/D0/PRSNT
		/B3/CH0/D1/PRSNT
		/B3/CH1/D0/PRSNT
		/B3/CH1/D1/PRSNT
		/SASBP/PRSNT
		/PS0/PRSNT
		/PS1/PRSNT

TABLE A-3 Sun Netra T5220 Server Traps Corresponding to Sensors and Components in SDR *(Continued)*

Trap Name	Trap OID	Sensors or Components
sunHwTrapFruRemoved	enterprises.42.2.175.103.2.0.56	/MB/XAUI0/PRSNT
		/MB/XAUI1/PRSNT
		/B0/CH0/D0/PRSNT
		/B0/CH0/D1/PRSNT
		/B0/CH1/D0/PRSNT
		/B0/CH1/D1/PRSNT
		/B1/CH0/D0/PRSNT
		/B1/CH0/D1/PRSNT
		/B1/CH1/D0/PRSNT
		/B1/CH1/D1/PRSNT
		/B2/CH0/D0/PRSNT
		/B2/CH0/D1/PRSNT
		/B2/CH1/D0/PRSNT
		/B2/CH1/D1/PRSNT
		/B3/CH0/D0/PRSNT
		/B3/CH0/D1/PRSNT
		/B3/CH1/D0/PRSNT
		/B3/CH1/D1/PRSNT
		/SASBP/PRSNT
		/PS0/PRSNT
		/PS1/PRSNT

APPENDIX **B**

ALOM CMT Compatibility Shell

ILOM supports some of the features of the ALOM CMT command-line interface by means of a compatiblity shell. There are significant differences between ILOM and ALOM CMT. This appendix describes those differences. This appendix includes the following topics:

Note – The ALOM compatibility CLI has been provided to aid the transition to ILOM. ILOM is a superset of the features available through the ALOM compatibility CLI.

Backward Compatibility Limits

The backward compatibility shell supports some, but not all features of ALOM CMT. Some of the more significant differences between ILOM and ALOM CMT are described here or in the product notes for your server.

Adding a Commit Step to Procedures That Configure ILOM Network Configuration Properties

When changing the values of some ALOM CMT variables (such as network and serial port configuration variables), it was necessary to reset the system controller before the changes took effect. By comparison, in ILOM it is not necessary to reset the service processor after changing the values of comparable properties. In ILOM, if you change the value of the property and then reset the SP, you will lose the new property setting.

Instead, change the network configuration property then *commit* it using `setsc netsc_commit` in the the ALOM compatibility CLI or `set /SP/network commitpending` using the ILOM CLI. To change the serial port configuration property then commit it using `setsc ser_commit` in the the ALOM compatibility CLI or `set /SP/serial/external commitpending` using the ILOM CLI..

For example, set a static IP address using the ALOM compatiblitiy CLI:

```
sc> setsc netsc_ipaddr xxx.xxx.xxx.xxx
sc> setsc netsc_commit
```

To set the same property using the ILOM CLI:

```
-> set /SP/network pendingipaddress=xxx.xxx.xxx.xxx
Set 'pendingipaddress' to 'xxx.xxx.xxx.xxx'
-> set /SP/network commitpending=true
Set 'commitpending' to 'true'
->
```

In summary, you must *commit* the changes before they can take effect.

TABLE B-1 ALOM CMT `commit` Variables and Comparable ILOM Properties

ALOM CMT Variable	Comparable ILOM Property
`netsc_commit`	`/SP/network commitpending`
`ser_commit`	`/SP/serial/external commitpending`

Creating an ALOM CMT Shell

Your server is configured to operate under an ILOM shell, by default. You can create an ALOM compatibility shell if you prefer to use commands that resemble ALOM CMT commands to administer your server.

▼ To Create an ALOM CMT Compatibility Shell

1. **Log onto the service processor with the username:** `root`.

   When powered on, the SP boots to the ILOM login prompt. The factory default password is `changeme`.

```
SUNSPxxxxxxxxxxxx login: root
Password:
Waiting for daemons to initialize...

Daemons ready

Sun(TM) Integrated Lights Out Manager

Version 2.0.0.0

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Warning: password is set to factory default.
```

2. **Create a user named** `admin`, **and set the** `admin` **account role to** `Administrator` **and the CLI mode to** `alom`.

```
-> create /SP/users/admin
Creating user...
Enter new password: ********
Enter new password again: ********
Created /SP/users/admin
-> set /SP/users/admin role=Administrator
Set 'role' to 'Administrator'
-> set /SP/users/admin cli_mode=alom
Set 'cli_mode' to 'alom'
```

Note – The asterisks in the example will not appear when you enter your password.

You can combine the `create` and `set` commands on a single line:

```
-> create /SP/users/admin role=Administrator cli_mode=alom
Creating user...
Enter new password: ********
Enter new password again: ********
Created /SP/users/admin
```

3. **Log out of the `root` account after you have finished creating the `admin` account.**

```
-> exit
```

4. **Log in to the ALOM CLI shell (indicated by the `sc>` prompt) from the ILOM login prompt.**

```
SUNSPxxxxxxxxxxx login: admin
Password:
Waiting for daemons to initialize...

Daemons ready

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sc>
```

Using the ALOM CMT compatibility shell (with few exceptions) you can use commands that resemble the commands of ALOM CMT. Remember that the ALOM CMT compatibility shell is an ILOM interface. The comparisons between the ILOM CLI and ALOM CMT compatibility CLI are described in "ILOM and ALOM CMT Command Comparison" on page 51.

ILOM and ALOM CMT Command Comparison

The following table provides a command-by-command comparison between the command sets of ALOM CMT and the default ILOM CLI command set. Only the supported ALOM CMT command options are listed in TABLE B-2. Where there are ALOM CMT command-line arguments that have no corresponding ILOM properties, those ALOM CMT arguments have been omitted. The command set of the ALOM compatibility shell provides a close approximation of the equivalent commands and arguments (where supported) in ALOM CMT.

.

TABLE B-2 ALOM CMT Shell Commands by Function

ALOM CMT Command	Summary	Comparable ILOM Command
Configuration Commands		
`password`	Changes the login password of the current user.	`set /SP/users/username password`
`restartssh`	Restarts the SSH server so that new host keys generated by the `ssh-keygen` command are reloaded.	`set /SP/services/ssh restart_sshd_action=true`
`setalarm critical|major|minor|user on|off`	Turns the alarm and associated LED on and off.	`set /SYS/ALARM/MINOR value=on`
`setdate` [[*mmdd*]*HHMM*|*mmddHHMM*[*cc*]*yy*][.*SS*]	Sets ALOM CMT date and time.	`set /SP/clock datetime=`*value*
`setdefaults` [`-a`]	Resets all ALOM CMT configuration parameters to their default values. The `-a` option resets the user information to the factory default (one `admin` account only).	`set /SP reset_to_defaults=all`

TABLE B-2 ALOM CMT Shell Commands by Function *(Continued)*

ALOM CMT Command	Summary	Comparable ILOM Command
`setkeyswitch [normal|stby|diag|locked]`	Set the status of the virtual keyswitch. Setting the virtual keyswitch to standby (`stby`) powers off the server. Before powering off the host server, ALOM CMT asks for a confirmation.	`set /SYS keyswitch_state=`*value*
`setsc` [*param*] [*value*]	Sets the specified ALOM CMT parameter to the assigned value.	`set` *target property=value*
`setupsc`	Runs the interactive configuration script. This script configures the ALOM CMT configuration variables.	No equivalent in ILOM
`showplatform` [`-v`]	Displays information about the host system's hardware configuration, and whether the hardware is providing service. The `-v` option displays verbose information about the displayed components.	`show /HOST`
`showfru`	Displays information about the field-replaceable units (FRUs) in a host server.	No equivalent in ILOM
`showusers` [–g *lines*]	Displays a list of users currently logged in to ALOM CMT. The display for this command has a similar format to that of the UNIX command `who`. The `-g` option pauses the display after the number of lines you specify for *lines*.	`show /SP/sessions`
`showhost` [*version*]	Displays version information for host-side components	`show /HOST`
`showkeyswitch`	Displays status of virtual keyswitch.	`show /SYS keyswitch_state`
`showsc` [*param*]	Displays the current non-volatile read-only memory (NVRAM) configuration parameters.	`show` *target property*

TABLE B-2 ALOM CMT Shell Commands by Function *(Continued)*

ALOM CMT Command	Summary	Comparable ILOM Command
`showdate`	Displays the ALOM CMT date. ALOM CMT time is expressed in Coordinated Universal Time (UTC) rather than local time. The Oracle Solaris OS and ALOM CMT time are not synchronized.	`show /SP/clock datetime`
`ssh-keygen -l -t (rsa|dsa)`	Generates Secure Shell (SSH) host keys and displays the host key fingerprint on the SC.	`show /SP/services/ssh/keys/dsa` `show /SP/services/ssh/keys/rsa`
`usershow` [*username*]	Displays a list of all user accounts, permission levels, and whether passwords are assigned.	`show /SP/users`
`useradd` *username*	Adds a user account to ALOM CMT.	`create /SP/users/`*username*
`userdel` *username*	Deletes a user account from ALOM CMT. The `-y` option enables you to skip the confirmation question.	`delete /SP/users/`*username*
`userdel -y` *username*		`delete -script /SP/users/`*username*
`userpassword` [*username*]	Sets or changes a user password.	`set /SP/users/`*username* `password`
`userperm` [*username*] [`c`] [`u`] [`a`] [`r`]	Sets the permission level for a user account.	`set /SP/users/`*username* `role=`*permissions* (where *permissions* are `Administrator` or `Operator`)
Log Commands		
`showlogs` [`-p` *logtype* [`p`]]	Displays the history of all events logged in the ALOM CMT RAM event log, or major and critical events in the persistent log. The `-p` option selects whether to display entries only from the RAM event log (*logtype* `r`) or the persistent event log (*logtype* `p`).	`show /SP/logs/event/list`
`consolehistory` [`-b` lines|`-e` lines|`-v`] [`-g` lines] [`boot`|`run`]	Displays the host server console output buffers.	No equivalent in ILOM

TABLE B-2 ALOM CMT Shell Commands by Function *(Continued)*

ALOM CMT Command	Summary	Comparable ILOM Command
Status and Control Commands		
`showenvironment`	Displays the environmental status of the host server. This information includes system temperatures, power supply status, front panel LED status, hard disk drive status, fan status, voltage, and current sensor status.	`show -o table -level all /SYS`
`shownetwork` [`-v`]	Displays the current network configuration information. The `-v` option shows additional information about your network, including information about your DHCP server.	`show /SP/network`
`console` [`-f`]	Connects to the host system console. The `-f` option forces the console write lock from one user to another.	`start /SP/console`
`break` [`-c`]	Drops the host server from running the Oracle Solaris OS software into OpenBoot PROM or `kmdb`, depending upon the mode in which the Oracle Solaris software was booted.	`set /HOST send_break_action=break`
`break` [`-D`]		`set /HOST send_break_action=dumpcore`
`bootmode` [`normal`] [`reset_nvram`] [`config=`*configname*`]` [`bootscript=`*string*]	Controls the host server OpenBoot PROM firmware method of booting.	`set /HOST/bootmode` *property=value* (where *property* is `state`, `config`, or `script`)
`flashupdate -s` *IPaddr* `-f` *pathname* [`-v`]	Downloads and updates system firmware (both host firmware and ALOM CMT firmware). For ILOM, *ipaddr* must be a TFTP server. If DHCP is used, *ipaddr* can be replaced by the name of the TFTP host.	`load -source tftp://`*ipaddr*`/`*pathname*
`reset` [`-c`]	Attempts to gracefully reset the system. If that fails this option forcefully resets the system.	`reset /SYS`
`reset` [`-y`] [`-c`]		`reset -script /SYS`
`reset -f`	Forcefully resets the system	`reset -f /SYS`

TABLE B-2 ALOM CMT Shell Commands by Function *(Continued)*

ALOM CMT Command	Summary	Comparable ILOM Command
`reset -d`	Attempts to gracefully reset the control domain. If that fails, this option forcefully resets the control domain.	`reset /HOST/domain/control`
`reset [-d][-f]`	Forcefully resets the control domain.	`reset -f /HOST/domain/control`
`reset [-d][-n]`	When resetting the control domain, this option may automatically boot, this is default behavior when the `auto-boot` option is not specified.	`set /HOST/domain/control auto-boot= disable reset /HOST/domain/control`
`reset [-d][-f][-n]`	When resetting the control domain, this option does not automatically boot and stays at the OpenBoot `ok` prompt. This option overrides all reboot variables and stops the control domain at the OpenBoot `ok` prompt after host reset. The `auto-boot?` option remains unchanged, thus subsequent `reset` commands automatically reboot host if the `auto-boot?` option is set to `true`.	`set /HOST/domain/control auto-boot= disable reset -f /HOST/domain/control`
`powercycle [-y][-f]`	`poweroff` followed by `poweron`. The `-f` option forces an immediate `poweroff`, otherwise the command attempts a graceful shutdown.	`stop /SYS` `start /SYS`
`powercycle -y`		`stop -script /SYS` `start -script /SYS`
`powercycle -f`		`stop -force /SYS` `start -force /SYS`
`poweroff`	Removes the main power from the host server. The `-y` option enables you to skip the confirmation question. ALOM CMT attempts to shut the server down gracefully. The `-f` option forces an immediate shutdown.	`stop /SYS`
`poweroff -y`		`stop -script /SYS`
`poweroff -f`		`stop -force /SYS`
`poweron`	Applies the main power to the host server or FRU.	`start /SYS`

TABLE B-2 ALOM CMT Shell Commands by Function *(Continued)*

ALOM CMT Command	Summary	Comparable ILOM Command
`setlocator` [`on/off`]	Turns the Locator LED on the server on or off.	`set /SYS/LOCATE value=`*value*
`showfaults [-v]`	Displays current valid system faults.	`show /SP/faultmgmt`
`clearfault` *UUID*	Manually repairs system faults.	`set /SYS/`*component* `clear_fault_action=true`
`showlocator`	Displays the current state of the Locator LED as either on or off.	`show /SYS/LOCATE`
FRU Commands		
`setfru -c` *data*	The `-c` option enables you to store information (such as inventory codes) on all FRUs in a system.	`set /SP customer_frudata=`*data*
`showfru` [`-g` lines] [`-s`|`-d`] [FRU]	Displays information about the FRUs in a host server.	No equivalent in ILOM
`removefru [-y]` [*FRU*]	Prepares a FRU (for example, a power supply) for removal. The `-y` option enables you to skip the confirmation question.	`set /SYS/PS0 prepare_to_remove_action=true`
Automatic System Recovery (ASR) Commands		
`enablecomponent` *asr-key*	Removes a component from the asr-db blacklist.	`set /SYS/`*component* `component_state= enabled`
`disablecomponent` *asr-key*	Adds a component to the asr-db blacklist.	`set /SYS/`*component* `component_state= disabled`
`showcomponent` *asr-key*	Displays system components and their test status (ASR state).	`show /SYS/`*component* `component_state`
`clearasrdb`	Removes all entries from the asr-db blacklist.	No equivalent in ILOM
Other Commands		

TABLE B-2 ALOM CMT Shell Commands by Function *(Continued)*

ALOM CMT Command	Summary	Comparable ILOM Command
`help` [*command*]	Displays a list of all ALOM CMT commands with their syntax and a brief description of how each command works. Specifying a command name as an option enables you to view the help for that command.	`help`
`resetsc`	Reboots ALOM CMT. The `-y` option enables you to skip the confirmation question.	`reset /SP`
`resetsc -y`		`reset -script /SP`
`userclimode`	Sets the type of shell to *shelltype*, where *shelltype* is `default` or `alom`.	`set /SP/users/username cli_mode=` *shelltype*
`logout`	Logs out from an ALOM CMT shell session.	`exit`

ALOM CMT Variable Comparison

The following table displays ALOM CMT variables and the ILOM properties to which they can be compared. The comparison does not imply a one-to-one mapping. To understand the ILOM properties it is necessary to view them in their own context, ILOM.

TABLE B-3 ALOM CMT Variables and Comparable ILOM Properties

ALOM CMT Variable	Comparable ILOM Property
`diag_level`	`/HOST/diag level`
`diag_mode`	`/HOST/diag mode`
`diag_trigger`	`/HOST/diag trigger`
`diag_verbosity`	`/HOST/diag verbosity`
`if_connection`	`/SP/services/ssh state`
`if_emailalerts`	`/SP/clients/smtp state`
`if_network`	`/SP/network state`
`if_snmp`	`/SP/services/snmp`

TABLE B-3 ALOM CMT Variables and Comparable ILOM Properties *(Continued)*

ALOM CMT Variable	Comparable ILOM Property
mgt_mailalert	/SP/alertmgmt/rules
mgt_mailhost	/SP/clients/smtp address
mgt_snmptraps	/SP/services/snmp v1|v2c|v3
mgt_traphost	/SP/alertmgmt/rules /SP/services/snmp port
netsc_dhcp	/SP/network pendingipdiscovery
netsc_commit	/SP/network commitpending
netsc_enetaddr	/SP/network macaddress
netsc_ipaddr	/SP/network pendingipaddress
netsc_ipgateway	/SP/network pendingipgateway
netsc_ipnetmask	/SP/network pendingipnetmask
sc_backupuserdata	/SP/policy BACKUP_USER_DATA
sc_clieventlevel	N/A
sc_cliprompt	N/A
sc_clitimeout	N/A
sc_clipasswdecho	N/A
sc_customerinfo	/SP system_identifier
sc_escapechars	/SP/console escapechars
sc_powerondelay	/SP/policy HOST_POWER_ON_DELAY
sc_powerstatememory	/SP/policy HOST_LAST_POWER_STATE
ser_baudrate	/SP/serial/external pendingspeed
ser_data	N/A
ser_parity	/SP/serial/external pendingparity
ser_stopbits	/SP/serial/external pendingstopbits
sys_autorestart	/SP autorestart
sys_autorunonerror	/SP autorunonerror
sys_eventlevel	N/A
sys_enetaddr	/HOST macaddress

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