Addendum to the Sun™ Integrated Lights Out Manager 2.0 User's Guide

Sun Microsystems, Inc.
www.sun.com

Part No. 820-4198-12
April 2009, Revision A

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Contents

Preface

This Addendum describes the features and issues that appear in the ILOM 2.0.x firmware since the original ILOM 2.0 release. Most of the issues described in the Addendum have been fixed in subsequent releases of the ILOM 2.0.x firmware. Likewise, the features described in this document have been incorporated into subsequent releases of the ILOM 2.0.x firmware.

Note – This Addendum describes global ILOM features and issues, which may or may not apply to your specific platform. For ILOM features or issues that are specific to a platform, see the ILOM Supplement document for that platform, or other platform documentation.

Use this Addendum along with the *Sun Integrated Lights Out Manager 2.0 Users Guide* (820-1188), your platform ILOM Supplement, your platform Product Notes, or other platform documentation. You can search for the most recent version of the *Sun Integrated Lights Out Manager 2.0 User's Guide* and this Addendum document on the Sun documentation portal: `http://docs.sun.com`

This Addendum is divided into chapters based on when a particular feature or issue appeared in the ILOM 2.0.x firmware. There are also two appendices in this Addendum.

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.

Documentation, Support, and Training

Sun Function	URL
Documentation	http://www.sun.com/documentation/
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Addendum to the Sun Integrated Lights Out Manager 2.0 User's Guide, part number 820-4198-12.

CHAPTER 1

Features and Issues From 11-2007 to 02-2008

This chapter describes the new features that have been implemented and issues that have been addressed in the ILOM 2.0.x releases between November 2007 and February 2008.

ILOM 2.0.x Cross-Platform Features From 11-2007 to 02-2008

TABLE 1 summarizes the ILOM features that were introduced into the firmware between November 2007 and February 2008. Refer to your platform ILOM Supplement, platform Product Notes, or other platform documentation to determine which of the features applies to a specific platform and specific ILOM firmware release.

The table also includes the Sun internal tracking number (CR) for each feature. Sun Service personnel should refer to the CR number for more information about the feature.

TABLE 1 New ILOM 2.0.x Cross-Platform Features

ILOM Features	Sun Internal Tracking Number (CR)
"Power Monitoring Feature Added" on page 2	6619797
"ILOM Service Snapshot Utility Available for x64 Platforms" on page 2	6647039
"Alternative Naming Conventions Supported for Active Directory Group Information" on page 5	6627792

TABLE 1 New ILOM 2.0.x Cross-Platform Features *(Continued)*

ILOM Features	Sun Internal Tracking Number (CR)
"`show faulty` Alias Added to ILOM CLI" on page 6	6551735
"`show components` Alias Added to ILOM CLI" on page 6	6586938
"`-o table` Option Condenses CLI Output" on page 7	6544915
"Maintenance --> Configuration Management Window Description Revised" on page 7	6569312

Power Monitoring Feature Added

CR: 6619797

Description: A Power Monitoring feature has been added to ILOM. This feature is managed using the ILOM CLI. The Power Monitoring functionality enables you to perform the following power monitoring tasks:

- Monitor system total power consumption
- Monitor individual power supply consumption
- Monitor power capacity
- Monitor maximum power consumption

For more information about the Power Management feature, see Appendix A, "Power Consumption Monitoring" on page 31.

ILOM Service Snapshot Utility Available for x64 Platforms

CR: 6647039

Description: The ILOM Service Snapshot utility gathers service processor (SP) state data on x64 platforms. The utility is not supported on SPARC-based platforms running ILOM 2.0.x.

The ILOM Service Snapshot utility collects log files, runs various commands and collects their output, and sends the data collection as a downloaded file to a user-defined location. This utility enables you to produce a snapshot of the SP at any instant in time. You can run the utility using either the ILOM command-line interface (CLI) or the ILOM web interface. The CLI and web interface procedures follow.

Note – The purpose of the Snapshot utility is to collect data for use by Sun Service personnel to diagnose problems. Customers should not run this utility unless requested to do so by Sun Service personnel.

Run the Snapshot Utility Using the ILOM CLI

To run the Snapshot utility using the ILOM CLI:

1. **Log in to the ILOM CLI as Administrator or Operator.**

   For example:

   ssh root@*host_ip_address*
   Password: *password*

2. **Type these commands:**

   ->**set /SP/diag/snapshot/dataset=***data*
   ->**set /SP/diag/snapshot/dump_uri=***URI*

   Where *data* and *URI* are one of the following:

Variable	Option	Description
data	`normal`	Specifies that ILOM, operating system, and hardware information is to be collected.
	`full`	Specifies that all data is to be collected ("full" collection). **Note -** Using this option may reset the running host.
	`normal-logonly` or `full-logonly`	Specifies that only log files are to be collected.

URI	Any valid target directory location	Specifies the URI of the target directory. The URI format is as follows:
		`protocol://username:password@host/directory`
		For example, to store the snapshot information in the directory named `data` on the host, define the *URI* as follows:
		`ftp://joe:`*mypasswd@host_IP_address*`/data`
		The directory `data` is relative to the user's login, so the directory would probably be `/home/joe/data`.

Run the Snapshot Utility Using the ILOM Web Interface

To run the Snapshot utility using the ILOM web interface:

1. **Log in to the ILOM web interface as follows:**

   a. **Open a browser window and enter the URL of the ILOM SP.**

      For example:

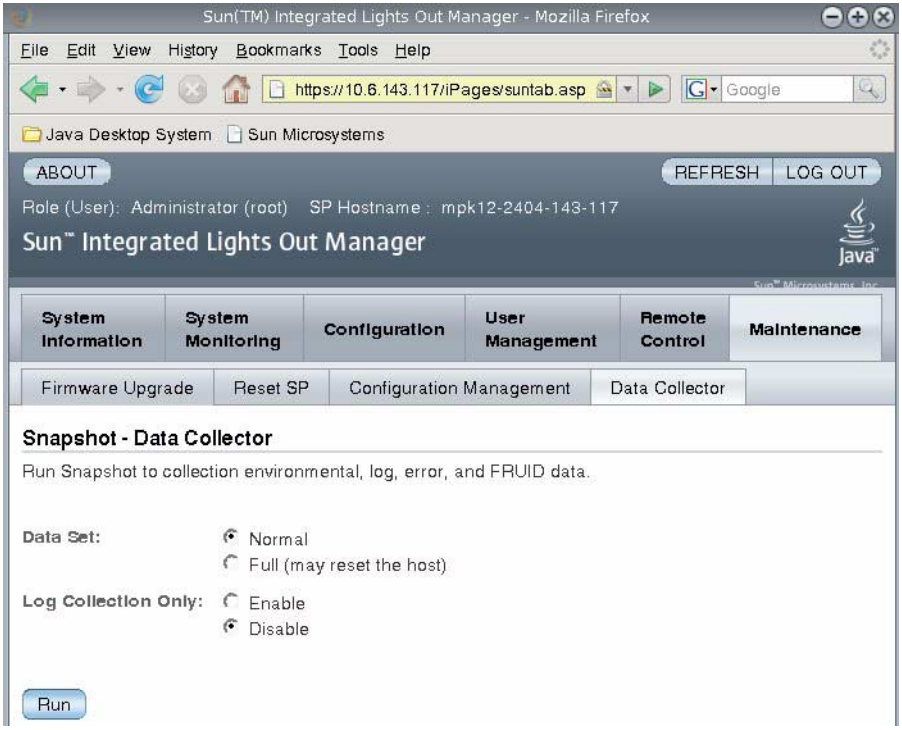
      `http://`*system_IP_address*

   b. **Enter your user name and password.**

      The ILOM web interface appears.

2. **Select the Maintenance --> Data Collector tabs.**

   The Data Collector window appears.



3. **Select the desired Data Set radio button: Normal or Full.**

   Note that selecting Full may reset the system.

4. **Select the desired Log Collection Only radio button: Enable or Disable.**

5. **Click Run.**

   A Save As dialog box appears.

6. **In the dialog box, specify the directory to which to save the file and the file name.**

7. **Click Ok.**

   The file is saved to the specified directory.

Alternative Naming Conventions Supported for Active Directory Group Information

CR: 6627792

Description: The Microsoft Active Directory configured group information supports the standard Distinguished Name (DN) format as well as simple group names.

Group information can be configured in the following ways:

- The original Distinguished Name is still supported. The Distinguished Name must match one of the groups configured on the Active Directory Server that will be used to assign access levels to the users associated with the group. For example:
  - `'CN=SpAdmin,OU=Groups,DC=domain,DC=sun,DC=com'`
  - `'CN=SpOper,OU=Groups,DC=domain,DC=sun,DC=com'`
- A simple group name can be used where the authenticated user's domain is searched for the particular group. For example:
  - `'SpAdmin'` – whichis the simple group name (a pre-Windows 2000 domain name)
- The domain can be specified along with the group name in an "NT-style" format. You can use either the full Distinguished Name domain or the simple domain name. For example:
  - `'DC=domain,DC=sun,DC=com\SpAdmin'` – which is the full Distinguished Name domain and group name
  - `'domain\SpAdmin'` – which is the Windows NT-style domain and group name

`show faulty` Alias Added to ILOM CLI

CR: 6551735

Description: The `show faulty` alias is available for Sun Blade 8000 Series server modules (blades) and SPARC systems only. The alias is a shortcut for the following ILOM command-line interface (CLI) command string:

```
-> show -o table -level all /SP/faultmgmt
```

The alias produces the same output as the above command. Thus, it enables users to view all active faults in the system in a concise, tabular form. For example, it produces output similar to the folllowing:

```
-> show faulty
Target           | Property    | Value
-----------------+-------------+-------------------
/SP/faultmgmt/0  | fru         | /SYS/MB
/SP/faultmgmt/0  | timestamp   | Jan 16 12:53:00
/SP/faultmgmt/0/ | sunw-msg-id | NXGE-8000-0U
faults/0         |             |
/SP/faultmgmt/0/ | uuid        | e19f07a5-580e-4ea0-ed6a-f663aa61
faults/0         |             | 54d5
/SP/faultmgmt/0/ | timestamp   | Jan 16 12:53:00
faults/0         |             |
```

`show components` Alias Added to ILOM CLI

CR: 6586938

Description: The `show components` alias is available for SPARC systems only. The alias is a shortcut for the following command-line interface (CLI) command string:

```
-> show -o table -level all /SYS component_state
```

The alias produces the same output as the above command. Thus, it enables users to restrict the table output to a single property below each target. For example, it produces output similar to the following:

```
-> show components
Target    | Property        | Value
----------+-----------------+--------------
/SYS/FRU1 | component_state | Enabled
/SYS/FRU2 | component_state | Disabled
/SYS/FRU3 | component_state | Enabled
```

`-o table` Option Condenses CLI Output

CR: 6544915

Description: The ILOM command-line interface (CLI) option, `-o table`, condenses the command output to table form. Previously, when you viewed faults using `show -level all /SP/faultmgmt` for example, several pages of output were produced for just a few faults. Now, when you use the `-o table` option, the output is formatted in a condensed, three-column table of targets, properties, and values. The following command example shows the new condensed, three-column output:

```
-> show -o table -level all /SP/sessions
Target           | Property  | Value
-----------------+-----------+-------------------------
/SP/sessions/90  | username  | root
/SP/sessions/90  | starttime | Tue Apr 10 10:57:22 2007
/SP/sessions/90  | type      | shell
```

Note – The default output of the `-o table` is DMTF-compliant.

Maintenance --> Configuration Management Window Description Revised

CR: 6569312

Description: In the ILOM web interface, the description of the Configuration Management window has been corrected, making the text more useful. Previously, the description for the Maintenance --> Configuration Management window read as follows:

"Manage the system configuration on this page. Clicking Reset Defaults will restore the system configuration to factory settings."

This description is not correct because this window is used to manage the service processor (SP), not the system.

The corrected text for the Maintenance --> Configuration Management window is as follows:

"Manage the SP configuration. Clicking Reset Defaults will restore the SP configuration to factory settings."

To manage the system configuration, you use Remote Control tabs in the ILOM web interface, such as Redirection, Remote Power Control, Mouse Control Settings and Diagnostics.

ILOM 2.0.x Cross-Platform Issues From 11-2007 to 02-2008

TABLE 2 summarizes the ILOM issues reported between November 2007 and February 2008. Refer to your platform ILOM Supplement, platform Product Notes, or other platform documentation to determine which of the issues applies to a specific platform and specific ILOM firmware release.

The table also includes the Sun internal tracking number (CR) for each issue. Sun Service personnel should refer to the CR number for more information about the issue.

TABLE 2 ILOM 2.0.x Cross-Platform Issues

ILOM Issue	Sun Internal Tracking Number (CR)
"ILOM CLI Cannot Properly Parse Values Surrounded by Quotation Marks" on page 9	6559544
"`lanplus` Interface Recommended for `ipmiflash`" on page 9	6597289
"`<USERNAME>` Value of User Domains Table Does Not Appear in Active Directory Web Interface" on page 10	6641113
"Active Directory Web Interface Does Not Display `logdetail` Trace Messages" on page 10	6630310
"Web Interface Does Not Allow Removal of Active Directory Alternate Server Configurations" on page 10	6626645
"Alternate Server Table Is Misaligned in Active Directory When Using Internet Explorer 6.0" on page 11	6612204
"Alt Graph Key Renders the Keyboard Unusable; Requires a Remote Console Restart" on page 11	6654272
"Certain Keys and Key Combinations Are Unsupported on International Keyboards" on page 11	6547563
"Documentation Updates and Errata" on page 12	6654413

ILOM CLI Cannot Properly Parse Values Surrounded by Quotation Marks

CR: 6559544

Description: Users are unable to input values in the command-line interface (CLI) that are surrounded by quotation marks. The first character of the string is dropped and the string is incorrectly parsed, which results in a bad value. You need to enclose a value within quotation marks only when the value being entered contains spaces.

Workaround: If you enclose a character string within double quotes, you have to add an extra character to parse the value correctly. For example, if you want to set the LDAP `binddn` value to "`cn=Space Manager,dc=sun,dc=org`", you would add an extra, initial character:

```
-> cd /SP/clients/ldap
-> set binddn="Xcn=Space Manager,dc=sun,dc=org"
```

`lanplus` Interface Recommended for `ipmiflash`

CR: 6597289

Description: This issue applies to x64 systems only. When using `ipmiflash`, the `lanplus` interface is recommended. The alternative interface, called `bmc` on Solaris and `open` on Linux, is not designed to handle large amounts of data. Flashing firmware using `bmc` or `open` can take over an hour, as opposed to 10 minutes or less for `lanplus`. For example, suppose you are using the following Linux command:

`ipmiflash -I open write` *imagefile*

Or the following Solaris command:

`ipmiflash -I bmc write` *imagefile*

Both commands should be changed to:

`ipmiflash -I lanplus -H` *ipaddress imagefile*

Where *ipaddress* is the service processor IP address, and *imagefile* is the image file being flashed.

Workaround: Use the `lanplus` interface when using `ipmiflash` to flash the firmware.

<USERNAME> Value of User Domains Table Does Not Appear in Active Directory Web Interface

CR: 6641113

Description: The <USERNAME> value is not displayed in the User Domains table in the top level of Microsoft Active Directory using the ILOM web interface.

Workaround: Use the ILOM command-line interface (CLI) to view the <USERNAME> value. However, you can verify the <USERNAME> value in the ILOM web interface by clicking the radio button next to any User ID in the User Domains table, then clicking the Edit button.

Active Directory Web Interface Does Not Display `logdetail` Trace Messages

CR: 6630310

Description: Certain `logdetail` trace messages and some error messages from Microsoft Active Directory do not display in the ILOM web interface. However, the `logdetail` trace messages are displayed correctly in the command-line interface (CLI).

Workaround: Use the ILOM CLI to display `logdetail` trace messages from the Microsoft Active Directory.

Web Interface Does Not Allow Removal of Active Directory Alternate Server Configurations

CR: 6626645

Description: The ILOM web interface does not allow you to remove Alternate Server configurations by setting the address to an empty string.

Workaround: Set the address to `0.0.0.0` to remove Alternate Server configurations.

Alternate Server Table Is Misaligned in Active Directory When Using Internet Explorer 6.0

CR: 6612204

Description: When using the Internet Explorer 6.0 browser, the Microsoft Active Directory's Alternate Server Table rows are misaligned. As a result, the `unset` value displays as a "none" check box in Administrator-level access, and as an empty string to users with Operator-level access.

Workaround: This is a browser display issue only, and the inconsistency does not affect the functionality of the Alternate Server table.

Alt Graph Key Renders the Keyboard Unusable; Requires a Remote Console Restart

CR: 6654272

Description: On international keyboards, when running the ILOM Remote Console application (JavaRConsole) in a Windows OS (Java 1.5, 1.6), pressing the Alt Graph key causes the keyboard to become slow or unresponsive in the JavaRConsole window, then ultimately unusable until JavaRConsole is restarted.

Workaround: Restart JavaRConsole and do not press the Alt Graph key. Instead, use the Keyboard menu drop-down list to select the Alt Graph option.

Certain Keys and Key Combinations Are Unsupported on International Keyboards

CR: 6547563

Description: When accessing the ILOM Remote Console application (JavaRConsole) using an international keyboard (non-English), certain international keyboard keys and key combinations operate incorrectly. In addition, this issue applies to some international keys that represent more than one character (for example, Shift and Alt Graph). This issue pertains to the following locales and international keyboards:

- German
  - Locale: de_DE
  - Keyboard: de
- French
  - Locale: fr_FR
  - Keyboard: fr

- Spanish
  - Locale: es_ES
  - Keyboard: es
- Portuguese
  - Locale: pt_PT
  - Keyboard: pt
- Italian
  - Locale: it_IT
  - Keyboard: it
- Turkey
  - Locale: tr_TR
  - Keyboard: tr
- Estonian
  - Locale: et_EE
  - Keyboard: ee

Workaround: As of January 31, 2008 all international keyboards listed above have been fixed.

Documentation Updates and Errata

This section describes errors that have been found in the *Sun Integrated Lights Out Manager 2.0 User's Guide* (820-1188). Specific change request (CR) identification numbers and workarounds for the issues are provided, where available.

Documentation Issue	Sun Internal Tracking Number (CR)
""Edit Existing IP Addresses in ILOM Using the CLI" Procedure Gives Incorrect Instruction" on page 13	6654413
"`-force` Option Is Not Described" on page 13	none

"Edit Existing IP Addresses in ILOM Using the CLI" Procedure Gives Incorrect Instruction

CR: 6654413

Description: A typographical error appears in the following passage in the section titled "Edit Existing IP Addresses in ILOM Using the CLI" in the *Sun Integrated Lights Out Manager 2.0 User's Guide* (820-1188-11):

```
set pendingipaddress=129.144.82.26

set pendingipnetmask=255.255.255.0

set pendingipnetmask=129.144.82.254

set commitpending=true
```

In the above passage, `set pendingipnetmask=` appears twice. The second instance should be `set pendingipgateway=129.144.82.254`.

```
set pendingipaddress=129.144.82.26

set pendingipnetmask=255.255.255.0

set pendingipgateway=129.144.82.254

set commitpending=true
```

Workaround: The correct information is documented in the latest version of the *Sun Integrated Lights Out Manager 2.0 User's Guide* (820-1188).

`-force` Option Is Not Described

CR: None

Description: You can use the `-force` option in the command-line interface to specify that an action will be performed immediately. The `-force` option works with the `start`, `stop` and `reset` commands.

Workaround: The `-force` option is documented in the -12 version of the *Sun Integrated Lights Out Manager 2.0 User's Guide* (820-1188).

CHAPTER 1

Features and Issues From 03-2008 to 09-2008

This chapter describes the new features that have been implemented and issues that have been addressed in the ILOM 2.0.x releases between March 2008 and September 2008.

New Features and Issues

ILOM 2.0.x Cross-Platform Features From 03-2008 to 09-2008

TABLE 1 summarizes the ILOM features that were introduced into the firmware between March 2008 and September 2008. Refer to your platform ILOM Supplement, platform Product Notes, or other platform documentation to determine which of the features applies to a specific platform and specific ILOM firmware release.

The table also includes the Sun internal tracking number (CR) for each feature. Sun Service personnel should refer to the CR number for more information about the feature.

TABLE 1 New ILOM 2.0.x Cross-Platform Features

ILOM Features	Sun Internal Tracking Number (CR)
"SNMP Trap Destination Is Configurable" on page 16	6654887
"Older Linux Installations Using Absolute Mouse Mode Must Be Switched to Relative Mode; Newer Linux Installations Can Work With Absolute Mouse Mode" on page 16	6730145
"Diagnostics Tab Supports Manual Operation of Pc-Check on x64 Platforms" on page 17	6657584

SNMP Trap Destination Is Configurable

CR: 6654887

Description: By default, SNMP agents listen to port 161 for SNMP requests and agents send traps to port 162. However, you can configure the SNMP trap destination port to any valid port. Using either the web interface or the command-line interface (CLI), set the value for the destination port. Refer to the *Sun Integrated Lights Out Manager 2.0 User's Guide* (820-1188) for the web and CLI procedures.

Older Linux Installations Using Absolute Mouse Mode Must Be Switched to Relative Mode; Newer Linux Installations Can Work With Absolute Mouse Mode

CR: 6730145

Description: The ILOM Remote Console (JavaRConsole) must be set to Relative mouse mode to work correctly with older versions of Linux releases. If you have installed Linux with the default Absolute mouse mode enabled, or if you are upgrading from ELOM to ILOM, your existing Linux installation might not work properly. Newer versions of Linux (Red Hat Enterprise Linux v5 and SUSE v10, or later) work correctly with the mouse mode setting configured to Absolute mouse mode.

Workaround: If you are running an older version of Linux with Absolute mouse mode enabled, follow these steps:

1. **In the ILOM web interface, select Remote Control --> Mouse Mode Settings.**

2. **In the Mouse Mode settings page, click Relative Mouse Mode.**

3. **Click Save.**

Diagnostics Tab Supports Manual Operation of Pc-Check on x64 Platforms

CR: 6657584

Description: For x64-based systems, from the Remote Control --> Diagnostics tab, you can now select to run Pc-Check diagnostic tests in Manual mode upon startup of the remote host server. Manual mode enables you to determine which Pc-Check tests to run.

ILOM 2.0.x Cross-Platform Issues From 03-2008 to 09-2008

TABLE 2 summarizes the ILOM issues that affect more than one platform. Refer to your platform ILOM Supplement, platform Product Notes, or other platform documentation to determine which of the issues applies to a specific platform.

The table also includes the Sun internal tracking number (CR) for each issue. Sun Service personnel should refer to the CR number for more information about the issue.

TABLE 2 ILOM 2.0.x Cross-Platform Issues

ILOM Issue	Sun Internal Tracking Number (CR)
"Remote Console Might Not Indicate That It Is Disconnected When the SP Is Reset" on page 18	6487885 6671252 6670721
"Internal Port Baud Rate Setting Might Not Be Preserved on Some x64 Platforms" on page 18	6647450
"When Hot-Swapping Power Supply, FRUID of Power Supply Is Not Updated on Some x64 Platforms" on page 19	6661109
"When Firefox Browser Displays Warning About SSL Certificate, Web Interface Might Hang for Other Users" on page 19	6681331
"SP Might Hang If Web Browser Has Cookies Turned Off" on page 19	6581097

TABLE 2 ILOM 2.0.x Cross-Platform Issues *(Continued)*

ILOM Issue	Sun Internal Tracking Number (CR)
"When Starting a Backup and Restore Operation, Do Not Change Network Information in Backup File" on page 19	6723697
"Need to Clear Browser Cache After Firmware Update" on page 20	6721947
"Documentation Updates and Errata" on page 20	N/A

Remote Console Might Not Indicate That It Is Disconnected When the SP Is Reset

CR: 6487885; 6671252; 6670721

Description: After you reboot the service processor (SP), the ILOM Remote Console (JavaRConsole) might indicate that it is still connected. Either of these error messages might be displayed:

- "An existing connection was forcibly closed by the remote host."
- "An established connection was aborted by the software in your host machine."

Workaround: Both of these error message windows are titled "Keyboard redirection error." After changing the ILOM network configuration or resetting the SP, exit from any browser or client applications, then manually restart the SP connections.

Internal Port Baud Rate Setting Might Not Be Preserved on Some x64 Platforms

CR: 6647450

Description: The ILOM service processor (SP) provides serial port baud rate settings on host and SP serial port interfaces. In certain circumstances, serial baud rate and flow control settings might not be saved across SP resets.

Workaround: Use 9600 baud, or set up the alternative baud rate, after each SP reset.

When Hot-Swapping Power Supply, FRUID of Power Supply Is Not Updated on Some x64 Platforms

CR: 6661109

Description: When you hot-swap a power supply on some x64 platforms, the FRUID of the power supply is not updated.

Workaround: Reset the service processor (SP), or disconnect then reconnect the power cable to restore the updated FRUID information.

When Firefox Browser Displays Warning About SSL Certificate, Web Interface Might Hang for Other Users

CR: 6681331

Description: When using the Mozilla Firefox browser, while displaying the confirmation dialog box asking the user whether the SSL certificate should be accepted, the TCP transaction is held open.

Workaround: Acknowledge and dismiss the dialog box in a timely manner.

SP Might Hang If Web Browser Has Cookies Turned Off

CR: 6581097

Description: The ILOM web interface requires that cookies be enabled in the browser. If you make login attempts with cookies disabled, system session resources could become depleted, which could prevent further logins from succeeding.

Workaround: Always enable cookies in the web browser. Alternatively, you could disable the web client to prevent login session resources from being consumed accidently, if you do not want to use the web client. If all login sessions are depleted, reset the service processor (SP) to clear the resource failure.

When Starting a Backup and Restore Operation, Do Not Change Network Information in Backup File

CR: 6723697

Description: When you start a backup and restore operation, the configuration is backed up to an XML file and the file is stored as plain text. If you edit the backup file and change any of the property values stored in the file, those new values will be

used on the service processor (SP) during the restore operation. If network values, such as the IP address, are modified in the backup file and the restore operation is initiated using a web interface or SSH session, you might not receive information that the restore operation was successful. In addition, the current ILOM session will be disconntected and you will be unable to connect to the SP using the previous IP address.

Workaround: Do not change network values in the backup file and then start a restore operation using the web interface or SSH session.

Need to Clear Browser Cache After Firmware Update

CR: 6721947

Description: The ILOM web interface might not refresh properly after a firmware update. If the ILOM web page looks wrong, is missing information, or displays an error message, you might be viewing a cached version of the page from the version previous to the update.

Workaround: After the firmware update, clear your browser cache and refresh your browser.

Documentation Updates and Errata

This section describes errors that have been found in the *Sun Integrated Lights Out Manager 2.0 User's Guide* (820-1188). Specific change request (CR) identification numbers and workarounds for the issues are provided, where available.

Documentation Issue	Sun Internal Tracking Number (CR)
"Incorrect URL Is Listed for Sun xVM Ops Center" on page 20	none

Incorrect URL Is Listed for Sun xVM Ops Center

CR: None

Description: An incorrect URL is listed for Sun xVM Ops Center in the procedure "Update ILOM Firmware Using Sun xVM Ops Center" in the *Sun Integrated Lights Out Manager 2.0 User's Guide*.

Workaround: The correct URL to use for Sun xVM Ops Center information is:

`http://www.sun.com/software/products/xvmopscenter/specs.jsp`

CHAPTER 1

Features and Issues From 10-2008 to 02-2009

This chapter describes the new features that have been implemented and issues that have been addressed in the ILOM 2.0 releases between October 2008 and February 2009.

New Features and Issues

ILOM 2.0.x Cross-Platform Features From 10-2008 to 02-2009

TABLE 3-1 summarizes the ILOM features that were introduced into the firmware between October 2008 and February 2009. Refer to your platform ILOM Supplement, platform Product Notes, or other platform documentation to determine which of the features applies to a specific platform and specific ILOM firmware release.

The table also includes the Sun internal tracking number (CR) for each feature. Sun Service personnel should refer to the CR number for more information about the feature

TABLE 3-1 New ILOM 2.0.x Cross-Platform Feature

ILOM Features	Sun Internal Tracking Number (CR)
"Alt-Graph Key Functionality on International Keyboards" on page 22	None

Alt-Graph Key Functionality on International Keyboards

CR: None

Description: When running certain versions of the Sun Remote Console application (JavaRConsole) on a client, the Alt-Graph key works incorrectly on international keyboards.

This problem was addressed in two phases:

1. **Workaround**: A Workaround is provided that adds a short-cut key combination (`ALT-z`) for toggling on or off the "Right Alt" Keyboard menu item in Sun ILOM Remote Console. This Workaround does not depend on a specific version of the Java Development Kit (JDK). However, this Workaround is limited in that it is not possible to send the `ALT-GR` key directly. To use the Workaround, you must be running a version of Sun ILOM Remote Console that contains the supported short-cut key (`ALT-z`).

2. **Complete Solution**: This solution sends the `ALT-GR` key directly without any special Sun Remote Console menu options or intervention. However, it requires using a more recent version of the JDK. To use the Complete Solution, you must be running a version of Sun ILOM Remote Console that sends the `ALT-GR` key directly. The following JDK requirements also apply to the Complete Solution:
   - For Windows, use JDK 1.5 or higher.
   - For Solaris and Linux, use JDK 1.6 update 10 or higher.

You can use the ILOM `version` command to determine which version of ILOM is running on a platform.

Use the information in the following table to determine the ILOM versions for each platform, then associate the version with the Workaround Solution or the Complete Solution.

Platform	ILOM Revisions With Workaround	Release Vehicles With Workaround	ILOM Revisions With Complete Solution	Release Vehicles With Complete Solution
Sun Fire X2250	All versions	All	2.0.2.12 or later	Tools&Drivers CD 1.1.1 or later
Sun Fire X4100 M2/X4200 M2	2.0.2.1 r27740 or later	SW 1.4 or later	2.0.2.10 r35249 or later	SW 2.1 or later
Sun Fire X4600 M2	2.0.2.5 r29771 or later	SW 2.0 or later	2.0.2.10 r38791	SW 2.2 or later
Sun Fire X4500	2.0.2.1 r26849 or later	SW 1.5	No versions with fix	No release with fix

Platform	ILOM Revisions With Workaround	Release Vehicles With Workaround	ILOM Revisions With Complete Solution	Release Vehicles With Complete Solution
Sun Fire X4540	All versions	All	No versions with fix	No release with fix
Sun Fire X4150	All versions	All	2.0.2.5 r37049 or later	Tools&Drivers CD 2.2 or later
Sun Fire X4250	All versions	All	2.0.2.10 r39321 or later	Tools&Drivers CD 2.2 or later
Sun Fire X4450	All versions	All	2.0.2.10 r39321 or later	Tools&Drivers CD 2.3 or later
Sun Fire X4140	None	None	None	None
Sun Fire X4240	None	None	None	None
Sun Fire X4440	None	None	None	None
Sun Blade X6220	2.0.3.3 r34514 or later	SW 2.0 or later	2.0.3.10 r36968 or later	SW 2.1
Sun Blade X6240	All versions	All	2.0.3.11 or later	SW 1.2.0 or later
Sun Blade X6440	All versions	All	2.0.3.11 or later	SW 1.1.0 or later
Sun Blade X6250	All versions	All	2.0.3.6 or later	SW 2..0.2 or later
Sun Blade X6450	All versions	All	2.0.3.6 or later	SW 2..0.2 or later
Sun Fire X4170	All versions	All	All versions	All
Sun Fire X4270	All versions	All	All versions	All
Sun Fire X4275	All versions	All	All versions	All
Sun Blade X6270	All versions	All	All versions	All
Sun Fire X2270	All versions	All	All versions	All

Note – This table does not list platforms that have announced end-of-life plans or products that are not applicable, such as Sun Blade chassis systems.

ILOM 2.0.x Cross-Platform Issues From 10-2008 to 02-2009

TABLE 3-2 summarizes the ILOM issues reported between October 2008 and February 2009. The table also includes the Sun internal tracking number (CR) for each issue. Sun Service personnel should refer to the CR number for more information about the issue.

Refer to your platform ILOM Supplement, platform Product Notes, or other platform documentation to determine which of the issues applies to a specific platform and specific ILOM firmware release.

TABLE 3-2 ILOM 2.0.x Cross-Platform Issues

ILOM Issue	Sun Internal Tracking Number (CR)
"Timeout for IPMI LAN Session Is Too Long" on page 24	6756693
"Incorrect Traps Were Returned for Assertion/Deassertion of Power Sensors" on page 25	6580094
"Backslash and Double Quotation Mark (\") Required in `setfru -c` Command" on page 25	6538946
"ILOM 2.0 User's Guide Needs Update for Redirection of Console Input Using Solaris Operating Environment" on page 26	6770175
"Non-Alphanumeric Characters Are Not Allowed in SNMP Community Name String" on page 27	6698177
"After Editing an IP Address in Web Interface, Cannot Log In Again to ILOM Using New IP Address" on page 28	6745118
"`locate` LED Continues Blinking After LED Test" on page 28	6652152
"Serial Port Owner Is Blank for Operator and There Is No Save Button" on page 28	6794235

Timeout for IPMI LAN Session Is Too Long

CR: 6756993

Description: IPMI LAN sessions should time out after 3 minutes of inactivity. However, due to incorrect settings for the LAN timer interval, the IPMI LAN session was set to time out after 30 minutes of inactivity.

Resolution: The IPMI LAN idle session timeout has been corrected to time out after 3 minutes of inactivity.

Incorrect Traps Were Returned for Assertion/Deassertion of Power Sensors

CR: 6580094

Description: The following incorrect traps were returned during assertion and deassertion of power sensors:

`/SYS/PWRGOOD "State Asserted"` returned the following trap:
`sunHwTrapComponentError`

`/SYS/PWRGOOD "State Deasserted"` returned the following trap:
`sunHwTrapComponentOk`

Resolution: "State asserted" now returns an OK trap, and "State Deasserted" now returns an Error trap.

Backslash and Double Quotation Mark (\") Required in `setfru -c` Command

CR: 6538946

Description: If a double quotation mark is used in a string that is set with the `setfru -c` command, the double quote needs to be preceded by a backslash character. Note that **`\"`** counts as two characters.

Resolution: Strings with double quotes must include backslash characters. For example:

```
sc> setfru -c
\"12345678901234567890123456789012345678901234567890123456
7890123456789012345678\"
Updating Customer_DataR in /SYS/MB
Updating Customer_DataR in /SYS/PDB
Updating Customer_DataR in /SYS/SASBP
Updating Customer_DataR in /SYS/FANBD0
Updating Customer_DataR in /SYS/FANBD1

sc> showfru
...
     /Customer_DataR
     /Customer_DataR/UNIX_Timestamp32: Mon Mar 26 18:41:54 GMT
     2007
     /Customer_DataR/Cust_Data:
"12345678901234567890123456789012345678901234567890123456789012
3456789012345678"
     SEGMENT: PS
```

ILOM 2.0 User's Guide Needs Update for Redirection of Console Input Using Solaris Operating Environment

CR: 6770175

Description: The Sun ILOM Remote Console is a remote management graphical user interface tool that enables you to redirect devices on a remote host server from a local client. Remote Console supports two methods of redirection—video and serial console—enabling the devices on your local client to behave as if they were directly attached to the remote host server. Video redirection is supported on all Sun x64 servers and some SPARC servers. Serial console redirection is not supported on Sun x64 servers.

Redirection of video and serial console for users of the Solaris operating environment is not adequately described in the *Sun Integrated Lights Out Manager 2.0 User's Guide* (820-1188).

Resolution: Use the following instructions to redirect the console input/output to the video and serial ports using the Solaris operating environment.

▼ Redirect Console Input/Output to Video Port Using the Solaris Operating Environment

---

Note – This procedure is supported on Sun x64 systems running the Solaris operating environment. Refer to your platform documentation for more information.

---

1. **Log in to Solaris as** `root`**.**

2. **To redirect the console input/output to video, type the following:**

```
# eeprom   console=text
```

3. **To reboot Solaris, type:**

```
# reboot
```

▼ Redirect Console Input/Output to Serial Console Using Solaris Operating Environment

1. **Log in to Solaris as** `root`**.**

2. **To redirect the console input/output to the serial console, type the following:**

```
# eeprom  console=ttya
```

Note – This procedure is only supported on Sun x64 systems running the Solaris operating environment. After the console is configured in this manner, the only way to access the Solaris console will be from the ILOM command line interface.

---

3. **To reboot Solaris, type:**

```
# reboot
```

Non-Alphanumeric Characters Are Not Allowed in SNMP Community Name String

CR: 6698177

Description: ILOM did not allow community strings containing non-alphanumeric characters (underscore and hyphen).

Resolution: You can now use a hyphen or an underscore character to create an SNMP community name. If you use the ILOM web interface to create the community name or to specify the community name for SNMP traps, you can start the community name with a hyphen. However, you cannot use a hyphen as the first character when creating a community name using the ILOM command-line interface (CLI). The CLI shell interprets the hyphen character as the start of a parameter.

After Editing an IP Address in Web Interface, Cannot Log In Again to ILOM Using New IP Address

CR: 6745118

Description: If you change the chassis monitoring module (CMM) static IP address to a new static IP address using the ILOM web interface, you might be unable to log in again to the ILOM web interface using the new IP address.

Resolution: This is the expected behavior of changing the static IP address while logged in. Wait approximately 1 to 2 minutes after changing the IP address, then reconnect to ILOM with the new IP address.

`locate` LED Continues Blinking After LED Test

CR: 6652152

Description: At the conclusion of a system-wide LED test (Push-to-Test), all LEDs are restored to pre-LED-test state, except the `Locate` LED. The `Locate` LED continues to fast blink.

Resolution: The behavior of the `Locate` LED before initiating the Push-to-Test procedure is a fast blink, so the `Locate` LED will continue to fast blink after the Push-to-Test process is complete.

Serial Port Owner Is Blank for Operator and There Is No Save Button

CR: 6794235

Description: When logging in to a host server with Operator permissions using the ILOM web interface (`Configuration --> Serial Port`), you might experience the following errors:

- A drop-down menu appeared and allowed a user with Operator permissions to select different baud rate speeds.
- The serial port owner was blank.
- There was no Save button.

Because of these errors, a user with Operator permissions might assume incorrectly that changes can be made to the serial settings on the web.

Resolution: Only users with Administrator privileges can change the serial port settings.

Documentation Updates and Errata

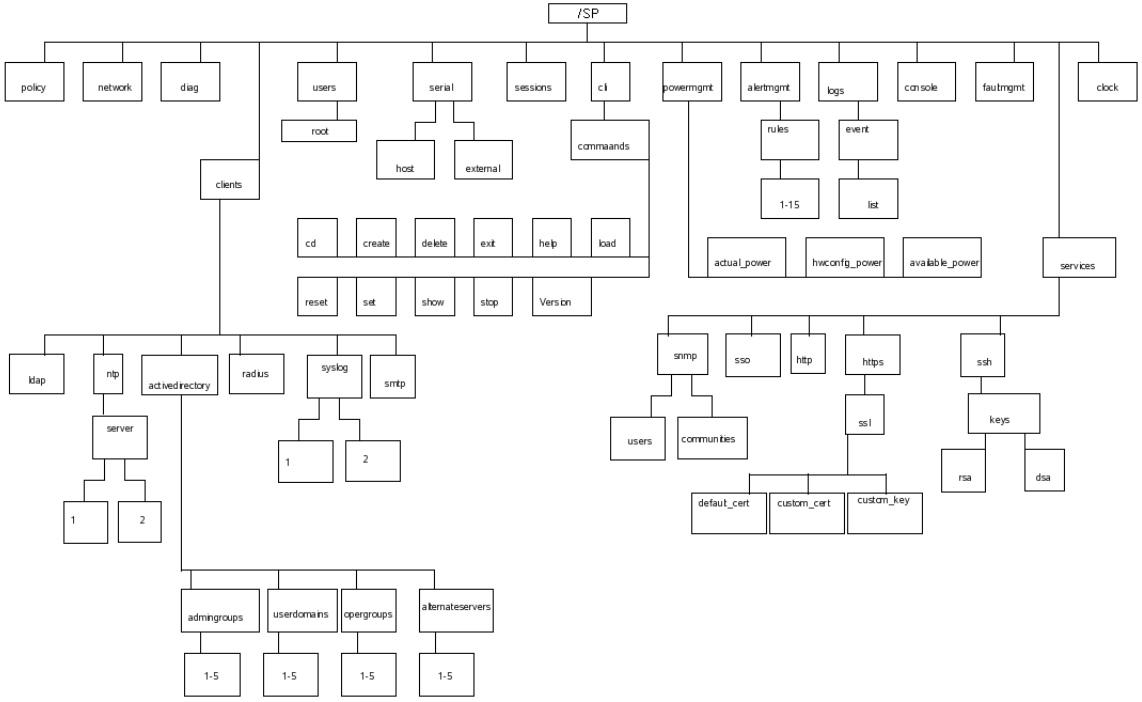
This section describes errors that have been found in the *Sun Integrated Lights Out Manager 2.0 User's Guide* (820-1188). Specific change request (CR) identification numbers and workarounds for the issues are provided, where available.

Documentation Issue	Sun Internal Tracking Number (CR)
"Corrections to ILOM Target Tree Illustration" on page 29	none
"Targets, Properties, and Values for `set` and `show` Commands" on page 30	none

Corrections to ILOM Target Tree Illustration

Issue: In the *Sun Integrated Lights Out Manager 2.0 User's Guide* (820-1188), Figure 3-1 incorrectly illustrates the target structure of ILOM 2.0.

Resolution: The following figure is correct.



Targets, Properties, and Values for `set` and `show` Commands

Issue: In the *Sun Integrated Lights Out Manager 2.0 User's Guide* (820-1188), there are incorrect entries for properties, values, and default values that correspond with valid targets in the `set` and `show` commands. The following information is correct.

Valid Targets	Properties	Values	Default
`/SP/clients/activedirectory`	logdetail	none | high | medium | low | trace	none

Update: This information will be included in a future release of the User's Guide.

APPENDIX **A**

Power Consumption Monitoring

This appendix describes how to use power consumption monitoring interfaces to monitor power consumption and power usage. Power consumption monitoring terms are also defined here.

Note – The power consumption monitoring interfaces described in this appendix may or may not be implemented on the platform that you are using. See your platform-specific ILOM Supplement for implementation details. You can find the ILOM Supplement within the documentation set for your system.

The following sections are included in this appendix:

Power Monitoring Interfaces

Power Monitoring interfaces enable monitoring of real-time power consumption. The service processor (SP) or individual power supply can be polled at any instance to retrieve and report data with accuracy to within one minute of the time the power usage occurred.

You can monitor available power, actual power, and permitted power. *Available power* is the maximum power that a system is capable of consuming. By default, this is a sum of the maximum power that each processor, I/O module, memory module, and other components is capable of consuming or the maximum power that the power supplies in the system can draw. Some systems may be able to guarantee a lower maximum consumption than the available power at any instant in time. This guaranteed maximum is referred to as *permitted power*.

Actual power consumption can be monitored for individual power supplies or for all power supplies in a chassis or rack. Actual power consumption can be measured on rackmounted servers, server modules (blade servers), and chassis monitoring modules (CMMs).

Power Monitoring interfaces enable you to perform the following tasks:

- View the total power that is pulled into the system's power supplies from an external source (actual power).
- View any raw sensors that measure voltage or current drawn by an individual power supply.
- View the maximum input power the power supplies are capable of consuming (available power).
- View maximum power consumption permitted by the system (permitted power).

Power Monitoring Terminology

TABLE A-1 defines the terminology used in power monitoring.

TABLE A-1 Power Monitoring Terms

Term	Definition	Applies to CMM	Applies to SP
Actual Power	The input power measured in watts. This is the actual power consumed by all the power supplies in the system.	Yes	Yes
Permitted Power	The maximum power that the server will permit to be used at any time.	Yes	Yes
Available Power	The input power capacity in watts. The definition of this term differs depending on whether you are using these interfaces with a rackmounted server or a server module. This is because rackmounted servers have their own power supplies; server modules do not. • On a rackmounted server, available power is defined as the sum of all the power that the power supplies can provide. • On a server module, available power is defined as the amount of power the chassis is willing to provide to the server module.	Yes	Yes

Using the Power Monitoring Interfaces

This section comprises the following sections, with subsections that provide the procedures you can follow to monitor power consumption:

Monitoring System Total Power Consumption

This interface enables you to view the total power that is pulled into the system's power supplies from an external source. This is the power that the customer pays for. The power source can be either AC or DC.

- On a rackmounted server, this is the input power consumed by the server.
- On a server module, this is the input power consumed by the server module. It does not include the power consumed by the shared components.
- On a chassis monitoring module (CMM), this is the input power consumed by the entire chassis or shelf—all server modules, network express modules (NEMs), fans, and other components.

The Power Consumption sensor supports the `show` command.

Syntax

`show` *target property*

▼ Monitor System Total Power Consumption Using the CLI

To view total power consumption using the CLI, follow these steps:

1. **Log in to the ILOM CLI as Administrator.**

2. **Type the `show` command to display the total power consumption.**

   For example:

   -> **`show /SYS/VPS`**

   -> **`show /SYS/VPS`** *property*

TABLE A-2 lists and describes the properties of the Total Power Consumption sensor for the CLI.

Note – All platforms support the `/SYS/VPS` sensor to report power consumption. However, the threshold properties are platform specific. Your platform might not support all the thresholds listed in TABLE A-2 for this sensor. Therefore, some platforms might not receive an event if an unsupported threshold is crossed. Refer to your platform ILOM Supplement for your platform-specific informaiton.

TABLE A-2 Power Consumption Sensor Properties for CLI

Property	Value
`type`	Power Unit
`class`	Threshold Sensor
`value`	Total consumed power in watts
`upper_nonrecov_threshold`	100% of `/SP/powermgmt available_power`
`upper_critical_threshold`	90% of `/SP/powermgmt available_power`
`upper_noncritical_threshold`	80% of `/SP/powermgmt available_power`
`lower_noncritical_threshold`	NA
`lower_critical_threshold`	NA
`lower_nonrecov_threshold`	NA

In addition to the properties listed in TABLE A-2, the total power consumption property `actual_power` can be accessed using the `/SP/powermgmt` target using the `show` command. The `actual_power` property is the same as `/SYS/VPS` in that `/SYS/VPS` is a sensor that has a threshold and `actual_power` is just the value returned by the sensor.

Monitoring Actual Power Consumption

This interface enables you to monitor actual power for individual power supplies or for all power supplies in a chassis or rack.

▼ Monitor Actual Power Using the CLI

To view actual power consumption using the CLI, follow these steps:

1. **Log in to the ILOM CLI as Administrator.**
2. **Type the** `show` **command to display the total power consumption.**
   For example:
   -> **`show /SP/powermgmt actual_power`**

Monitoring Individual Power Supply Consumption

This interface enables you to access any raw sensors that measure voltage or current drawn by an individual power supply. In addition, virtual sensors that represent the power supply "input power" (power consumed from an external AC or DC source) and "output power" (power drawn by the system's components) can be accessed.

For the CLI, each power supply contains the following sensors:

- INPUT_POWER
- OUTPUT_POWER

All sensors support the `show` command.

Syntax

`show` *target property*

▼ Monitor Individual Power Supply Consumption Using the CLI

To monitor power consumption per power supply using the CLI, follow these steps:

1. **Log in to the ILOM CLI as Administrator.**
2. **Type the** `show` **command to display the power consumption per power supply.**
   For example:
   -> **`show /SYS/PS1/INPUT_POWER|OUTPUT_POWER`** (for rackmounted systems)
   -> **`show /CH/PS1/INPUT_POWER|OUTPUT_POWER`** (for CMM)

TABLE A-3 lists and describes the properties of the CLI sensors. Both sensors, INPUT_POWER and OUTPUT_POWER, have the same properties.

TABLE A-3 Individual Power Supply Consumption Sensor Properties

Property	Value
`type`	Power Unit
`class`	Threshold Sensor
`value`	<total consumed power in watts, for example, "1400">
`upper_nonrecov_threshold`	N/A
`upper_critical_threshold`	N/A
`upper_noncritical_threshold`	N/A
`lower_noncritical_threshold`	N/A
`lower_critical_threshold`	N/A
`lower_nonrecov_threshold`	N/A

Monitoring Available Power

This interface enables you to view available power. On a server module, this is the amount of power guaranteed available to the server module by the chassis.

The system contains one property: `available_power`. The property supports the `show` command and returns the value `<input available power in watts>`.

Syntax

`show` *target property*

▼ Monitor Available Power Using the CLI

To view available power using the CLI, follow these steps:

1. **Log in to the ILOM CLI as Administrator.**
2. **Type the `show` command to display the available power.**

   For example:

   -> **`show /SP/powermgmt available_power`** (for rackmounted systems)

   -> **`show /CMM/powermgmt available_power`** (for CMM)

Monitoring Permitted Power Consumption

This interface enables you to view permitted power consumption. The permitted power consumption is the maximum input power that the server guarantees it will consume at any instant. This value cannot be changed directly, but can change based on the power policy and budget, and chassis available power.

The system contains one property: `permitted_power`. This property supports the `show` command and returns the value `<maximum permitted power consumption in watts>`.

Syntax

`show` *target property*

▼ Monitor Permitted Power Consumption Using the CLI

To monitor permitted power consumption using the CLI, follow these steps:

1. **Log in to the ILOM CLI as Administrator.**
2. **Type the `show` command to display the permitted power consumption.**

   For example:

   -> **`show /SP/powermgmt permitted_power`** (for rackmounted systems)

   -> **`show /CMM/powermgmt permitted_power`** (for CMM)

APPENDIX **A**

Methods to Automate ILOM Configuration Changes and Firmware Updates

ILOM provides multiple interfaces to change and monitor the service processor configuration, and to update ILOM firmware. This appendix provides an overview of the methods you can use to change ILOM confguration and perform a firmware update. For detailed information about some of these methods, see the *Sun Integrated Lights Out Manager 2.0 User's Guid*e (820-1188).

Caution – Updating ILOM firmware results in an ILOM-initiated server shutdown for many Sun servers. Plan ILOM firmware upgrades accordingly.

See the following sections for information about the methods you can use to change the ILOM configuration or to update the ILOM firmware:

Using Sun xVM OPS Center

You can use Sun xVM Ops Center software to update the ILOM firmware. Sun xVM OPS Center manages firmware updates of multiple Sun servers.

- **Follow the instructions for Sun xVM Ops center at:**

http://www.sun.com/software/products/xvmopscenter/specs.jsp

Using the Sun Installation Assistant

The Sun Installation Assistant (SIA) tool, which is provided with many Sun servers, provides a bootable CD-ROM that supports ILOM firmware updates.

1. **For a complete list of the supported Sun server platforms, go to the SIA information page at:**

   http://www.sun.com/systemmanagement/sia.jsp

2. **To find the latest release of the SIA CD-ROM images, go to the Sun download site at:**

   http://www.sun.com/download/index.jsp

Using the ILOM CLI

The ILOM command-line interface (CLI) provides direct methods to change ILOM configuration and to perform a firmware update.

Note – CLI commands can be scripted by using open-source tools such as Expect, which can automate processes sucfh as logging in to ILOM.

▼ Change ILOM Configuration Using the ILOM CLI

To disable `http` or `https` services using the CLI, follow these steps:

1. **Connect to the ILOM serial management port or to a network SSH session.**
2. **To disable the `http` or `https` service, type one of the following commands:**

   -> **`set /SP/services/http servicestate=disabled`**

   -> **`set /SP/services/https servicestate=disabled`**

▼ Update ILOM Firmware Using the ILOM CLI

To update the ILOM firmware using the CLI, follow these steps:

- **To perform a firmware upgrade, type:**

  -> **`load -source tftp://`**<*tftpserver*>/<**`ilom`***.firmware.xxx*>

  Where `tftpserver` is the TFTP server on which you downloaded the ILOM firmware update and `ilom`*.firmware.xxx* is the firmware image file. For example:

  `ilom.x6220-2.0.3.2-r26980.ima`

  For a complete description of the ILOM 2.0 firmware update process, see the *Sun Integrated Lights Out Manager 2.0 User's Guide* (820-1188).

Using IPMI

The procedures in this section are supported on x64 systems only.

ILOM provides access to network-based ILOM CLI configuration changes and firmware updates. Newer versions of the open-source IPMItool utility (1.8.9.4 and later), which is provided on Tools & Drivers CD-ROM for many Sun servers, provides the ability to initiate configuration changes.

To download the latest version of IPMItool, go to the Sun download site from which you download your platform firmware upgrades. Choose the Tools & Drivers selection. The page that appears will have links to the OS-specific files for the Tools & Drivers CD. The IPMItool utiltiy is included as one of those links.

Note – The ILOM CLI and and the IPMItool `sunoem cli` can be used to change any configuration, of which the web interface is only one example.

▼ Change ILOM Configuration Using IPMI

- **To disable the** `http` **or** `https` **service, type:**

  # **ipmitool -U root -P** *<root_password>* **-H** *<sp_ipaddress>* **sunoem cli set /SP/services/http servicestate=disabled**

  # **ipmitool -U root -P** *<root_password>* **-H** *<sp_ipaddress>* **sunoem cli set /SP/services/https servicestate=disabled**

Note – Many older, and some current ILOM releases, may not provide support for the IPMItool `sunoem cli` subcommand. If this applies to your ILOM release, use an alternative method to change the ILOM configuration.

▼ Update ILOM Firmware Using IPMI

The IPMIflash utility, bundled with Sun xVM Ops Center, and provided on Tools & Drivers CD-ROM for many Sun servers, provides the ability to initiate firmware updates. Refer to the IPMIflash manual page for details.

Caution – The server might be powered off during the final stages of firmware update, when the BIOS is updated.

- **To upgrade ILOM firmware using IPMI, type:**

  # **ipmiflash -U root -P** *<root_password>* **-H <***sp_ipaddress***> write** *<ilom.file>*

Note – Some current ILOM releases might not provide support for the `ipmiflash` command. If this applies to your ILOM release, use an alternative method to update the ILOM firmware.

▼ Update ILOM Firmware Using IPMI KCS Interface

Caution – The server might be powered off during the final stages of firmware update, when the BIOS is updated.

The IPMIflash utility also provides methods to update ILOM firmware over the IPMI keyboard controller style (KCS) interface. Refer to the IPMIflash manual page for details.

Perform the following procedure from the server, not from a remote location.

- **To update the ILOM firmware using IPMI KCS, type:**

  # **service start ipmi**

  # **ipmiflash write** <*ilom.file*>

Note – Some current ILOM releases might not provide support for the `ipmiflash` command. If this applies to your ILOM release, use an alternative method to update the ILOM firmware.

▼ Update ILOM Firmware Using IPMI USB Interface

Caution – The server might be powered off during the final stages of firmware update, when the BIOS is updated.

Perform the following procedure from the server, not from a remote location.

- **To update the ILOM firmware using IPMI USB, type:**

  # **modprobe sg**

  # **ipmiflash startcd**

  # **ipmiflash -I usb write** <*ilom.file*>

Note – Some current ILOM releases might not provide support for the `ipmiflash` command. If this applies to your ILOM release, use an alternative method to update the ILOM firmware.

Using SNMP

ILOM provides an SUN-ILOM-CONTROL-MIB, which allows configuration changes and firmware updates. For information about this MIB, refer to the *Sun Integrated Lights Out Manager 2.0 User's Guide* (820-1188) at:

http://docs.sun.com/source/820-1188-12/core_ilom_snmp.html

Note – Some Sun servers do not support ILOM firmware updates using SNMP. If this applies to your platform, use an alternative method to update the ILOM firmware.

▼ Change ILOM Configuration Using SNMP

ILOM SNMP MIBs are included on the Tools & Drivers CD-ROM provided with each server, and can be downloaded from sun.com at your specific platform download site.

Note – Certain older ILOM releases might not provide complete support for the SUN-ILOM-CONTROL-MIB.

- **Use the following properties to disable `http` and `https` services:**

```
ilomCtrlHttpEnabled OBJECT-TYPE

      SYNTAX TruthValue

      MAX-ACCESS read-write

      STATUS current

      DESCRIPTION

           "Specifies whether or not the embedded web server
should be running

and listening on the HTTP port."

      ::= { ilomCtrlHttp 1 }


ilomCtrlHttpsEnabled OBJECT-TYPE
```

```
        SYNTAX TruthValue

        MAX-ACCESS read-write

        STATUS current

        DESCRIPTION

            "Specifies whether or not the embedded web server
    should be running and listening on the HTTPS port."

        ::= { ilomCtrlHttps 1 }
```

▼ Update ILOM Firmware Using SNMP

- **Use the SNMP-CONTROL-MIB to update the ILOM firmware.**

```
ilomCtrlFirmwareTFTPServerIP OBJECT-TYPE
     SYNTAX IpAddress
     MAX-ACCESS read-write
     STATUS current
     DESCRIPTION
         "The IP address of the TFTP server which will be used to download the
          the firmware image."
     ::= { ilomCtrlFirmwareMgmt 4 }


ilomCtrlFirmwareTFTPFileName OBJECT-TYPE
     SYNTAX SnmpAdminString
     MAX-ACCESS read-write
     STATUS current
     DESCRIPTION
         "The relative path of the new firmware image file on the TFTP server."
     ::= { ilomCtrlFirmwareMgmt 5 }


ilomCtrlFirmwarePreserveConfig OBJECT-TYPE
     SYNTAX TruthValue
     MAX-ACCESS read-write
     STATUS current
     DESCRIPTION
        "This property determines whether the previous configuration of the device
          should be preserved after a firmware update.  The configuration data
includes all users information, configuration of clients and services, and any logs.
The default value of this property is true."
     ::= { ilomCtrlFirmwareMgmt 6 }


ilomCtrlFirmwareMgmtAction OBJECT-TYPE
```

```
      SYNTAX ILOMCtrlFirmwareUpdateAction
      MAX-ACCESS read-write
      STATUS current
      DESCRIPTION
          "This property is used to initiate a firmware update using the values of
the other firmware management properties as parameters.  It can also clear the
values of those parameters.   To initiate a firmware update, set the value of this
property to initate(2).  To clear the values of the writeable firmware management
properties, set thispropery to clearProperties(1).  Before initiating a firmware
update, the ilomCtrlFirmwareTFTPServerIP, ilomCtrlFirmwareTFTPFileName, and
ilomCtrlFirmwarePreserveConfig properties must be set.  After intiating a firmware
update, the ilomCtrlFirmwareMgmtStatus property can be used to determine if the
operation was successful. This is effectively a write-only property."
      ::= { ilomCtrlFirmwareMgmt 8 }
```