

**Oracle® Hardware Management Pack for
Oracle Solaris 11.3 Release Notes**

ORACLE®

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Using This Documentation

This section describes how to get the latest documentation and support for Oracle Hardware Management Pack for Oracle Solaris 11.3. It also provides feedback links and a document change history.

- [“Documentation and Feedback”](#) on page 9
- [“Support and Training”](#) on page 9
- [“Contributing Authors”](#) on page 10
- [“Change History”](#) on page 10

Documentation and Feedback

The following documentation is available related to the Oracle Hardware Management Pack for Oracle Solaris.

Documentation	Link
All Oracle products	http://docs.oracle.com
Oracle Hardware Management Pack for Oracle Solaris	http://www.oracle.com/goto/ohmp/solarisdocs
Oracle ILOM	http://www.oracle.com/goto/ilom/docs

Provide feedback on this documentation at:

<http://www.oracle.com/goto/docfeedback>.

Support and Training

These web sites provide additional resources:

- Support: <https://support.oracle.com>
- Training: <http://education.oracle.com>

Contributing Authors

The following authors contributed to this documentation: Cynthia Chin-Lee, Ralph Woodley, Michael Bechler.

Change History

The following changes have been made to the document.

- October 2015. Initial publication.
- November 2015. Updated *Release Notes* for Oracle Solaris 11.3 SRU 2 release.
- January 2016. Updated *Release Notes* for Oracle Solaris 11.3 SRU 4 release.
- February 2016. Updated *Release Notes* for Oracle Solaris 11.3 SRU 5 release.
- March 2016. Updated *Release Notes* for Oracle Solaris 11.3 SRU 6 release.
- April 2016. Updated *Release Notes* for Oracle Solaris 11.3 SRU 7 release.
- May 2016. Updated *Release Notes* for issue regarding invalid fwupdate target in man page.
- May 2016. Updated *Release Notes* for Oracle Solaris 11.3 SRU 8 release.
- June 2016. Updated *Release Notes* for Oracle Solaris 11.3 SRU 9 release.
- July 2016. Updated *Release Notes* for Oracle Solaris 11.3 SRU 10 release.
- July 2016. Updated *Release Notes* to remove `firmware-check` and `check` subcommand for `fwupdate` from Oracle Solaris 11.3 release support. Add issue about `ubiosconfig`.
- August 2016. Updated *Release Notes* for Oracle Solaris 11.3 SRU 11 release.
- December 2016. Updated *Release Notes* for Oracle Solaris 11.3 SRU 15 release.
- March 2017. Updated *Release Notes* for Oracle Solaris 11.3 SRU 18 release.
- June 2017. Updated *Release Notes* for Oracle Solaris 11.3 SRU 21 release. Documented issue with i40e driver (26163087, 26194426, 26280974).
- June 2017. Updated *Release Notes* to add accessibility statement and document Intel-based network controller issues with SPARC systems (25862628 and 25721570).
- August 2017. Updated *Release Notes* for Oracle Solaris 11.3 SRU 23 release. Documented issue for SPARC M and T series with hotplugging Intel network cards (25862628).
- September 2017. Updated *Release Notes* for Oracle Server X7, Oracle SPARC T8 and Oracle SPARC M8 support.

- October 2017. Updated *Release Notes* for Oracle Solaris 11.3 SRU 25 release. Documented memory leak issue with management agent service (26830196).
- January 2018. Updated *Release Notes* for Oracle Solaris 11.3 SRU 28 release. Documented fwupdate issue where the Host-to-ILOM interconnect fails during an update (26827865, 27133238).
- March 2018. Updated *Release Notes* for Oracle Solaris 11.3 SRU 30 release. Documented fwupdate issue where an update of a fallback image reports failed even though successful (27409466).
- June 2018. Updated *Release Notes* for Oracle Solaris 11.3 SRU 33 release.

Software Release Information

This section contains the following information:

- [“Oracle Hardware Management Pack for Oracle Solaris” on page 13](#)
- [“Updates in Oracle Hardware Management Pack for Oracle Solaris 11.3” on page 13](#)
- [“Oracle Hardware Management Pack for Oracle Solaris Product Accessibility” on page 22](#)

Oracle Hardware Management Pack for Oracle Solaris

This document applies to servers running Oracle Solaris 11.3. Oracle Hardware Management Pack for Oracle Solaris is a set of commands and agents to help you manage Oracle servers and is part of the Oracle Solaris 11.3 operating system.

Beginning with Oracle Solaris 11.2, Oracle Hardware Management Pack has become an integrated component of the operating system. Do not download and use other versions of Oracle Hardware Management Pack that are not specifically qualified for the Oracle Solaris 11.3 operating system. Updates to Oracle Hardware Management Pack for Solaris 11.3 are available with Oracle Solaris SRU releases.

If you have Oracle Solaris 11.1 or earlier or other operating systems, continue to use the standalone version of Oracle Hardware Management Pack, available as a separate download from <https://support.oracle.com>.

Updates in Oracle Hardware Management Pack for Oracle Solaris 11.3

This section describes changes in Oracle Hardware Management Pack (HMP) for Oracle Solaris 11.3 releases.

- [“New Features” on page 14](#)

- [“Platform and Component Support” on page 17](#)
- [“Issues Fixed” on page 17](#)

New Features

The following new features are part of the Oracle Solaris 11.3 SRU releases.

Release SRU 33 Features (HMP version 2.4.4.0)

- Added new log file (nvmupdatelog) for capturing issues when updating Intel NIC controllers. This file is saved in the /tmp/hmptemp directory.

Release SRU 28 Features (HMP version 2.4.2.2)

- Added support for Oracle Dual Port 25 Gb Ethernet Adapter. See [“Platform and Component Support” on page 17](#).

Note - Hot plug is not supported for this adapter.

Release SRU 25 Features (HMP version 2.4.2.1)

- A management agent daily restart parameter (hwmgmt_d_reset_hour) has been added to the /etc/ssh/hwmgmt.conf file. This parameter has been added to address a potential memory leak issue and is configured, by default, to restart the management agent service every night at 3AM local time. For details, see [“Hardware Management Agent Configuration File” in Oracle Server Management Agent for Oracle Solaris 11.3 User’s Guide](#).

Release SRU 23 Features (HMP version 2.4.2.0)

- Starting with Oracle ILOM 4.0, the `ilomconfig create snmp-community` command will no longer allow you to create an SNMP community with `rw` (read/write) permissions. Permissions for SNMP communities created for Oracle ILOM using `ilomconfig` will support `ro` (read only).

- Added support for Oracle Server X7 series platforms and components. See “[Platform and Component Support](#)” on page 17.
- Added support for Oracle SPARC M8 and T8 series platforms and components. See “[Platform and Component Support](#)” on page 17.

Release SRU 21 Features (HMP version 2.4.1.0)

- Added `--fail-without-interconnect` option to `fwupdate` update command to cancel a system firmware update if the Host-to-ILOM interconnect is not enabled or available. This prevents the default fallback use of the much slower KCS interface to perform the update.
- Oracle Hardware Management Pack 2.4.1 packages are installed by default when installing the SRU package.

Release SRU 18 Features (HMP version 2.4.0.0)

- Updated Oracle Hardware Management Pack 2.4 packages are included in Oracle Solaris 11.3.18. However, these packages **are not** installed by default, whether the system is installed using the `pkg` update command or by other installation methods such as Automated Installer or Text Installer. After the update to Oracle Solaris 11.3.18, execute the following commands to install the Oracle Hardware Management Pack 2.4 packages:

```
# pkg change-facet version-lock.consolidation/ssm/ssm-incorporation=false
# pkg update -vn (to see list of HMP 2.4 packages)
# pfexec pkg update
```

- Added new secure interface, ORCLTLS, to IPMItool and IPMIflash that provides additional security over the LANPLUS protocol used in IPMI 2.0. For more details, see the man page for each of these utilities.

Note - Although encrypted communication for IPMI over TLS is supported in Oracle Hardware Management Pack for Oracle Solaris 11.3 SRU 18, certificate verification is not currently supported. Support for full certificate verification is expected in a future release of Oracle Hardware Management Pack for Oracle Solaris 11.3.

- Added `--secure` option to `nvmeadm` `erase` command to securely erase NVMe storage devices.
- Added the `fallback-boot` target (automatic mode) and `fallback-boot-image` target (manual mode) to `fwupdate` update command.
- Added `--start-priority` and `--end-priority` options to `fwupdate` update (automatic mode) to allow updates based on metadata component priority.

- Added `-y` and `--yes` options to `fwupdate list` and `fwupdate update` to allow an overwrite process to complete without user confirmation.
- Added `-y` and `--yes` options to `hwmgmtcli export` to allow an overwrite process to complete without user confirmation.
- Added `-h` option to general options for all commands so that either `-?`, `-h` or `--help` will provide command line help.
- Changed functionality of `fwupdate list` to only display controller information for controllers that are updatable using the `fwupdate update` command.
- Changed functionality of the Hardware Management Agent (`hwmgmt`) to change the default polling time to every hour and provide configurable parameters in the `hwmgmt.conf` to enable, disable, or change the timing of certain types of SNMP polling requests.

Release SRU 10 Features (HMP version 2.3.6.0)

- Added `sysfw` target for SPARC systems for the `fwupdate` command (though the existing `sp_bios` target is still supported for both SPARC and x86 systems for scripting backwards compatibility).

Release SRU 9 Features (HMP version 2.3.5.6)

- Support added for new SPARC S7-2 series platforms. See [“Platform and Component Support” on page 17](#)

Release SRU 8 Features (HMP version 2.3.5.5)

- Added `--vendor_specific` option to `nvmeadm list` command to display vendor information for the Oracle Flash Accelerator F160 and F320 PCIe Cards and the 1.6 TB and 3.2 TB NVMe SSDs.
- Added support to `nvmeadm getlog` command to output crashdump and memory dump files for the Oracle Flash Accelerator F320 PCIe Card and 3.2 TB NVMe SSD.
- Added support for the Oracle Quad 10 Gb or Dual 40 Gb Ethernet Adapter. See [“Platform and Component Support” on page 17](#)

Release SRU 4 Features (HMP version 2.3.5.0)

- Added Oracle Storage 12 Gb/s SAS PCIe RAID HBA backup battery status to `raidconfig list` output (21077324)

- Support added for new X6 series platforms. See “[Platform and Component Support](#)” on page 17

Oracle Solaris 11.3 Initial Release with SRU 1 (HMP version 2.3.3.0)

- Support added for new SPARC T and M series platforms. See “[Platform and Component Support](#)” on page 17

Platform and Component Support

For information on support for new platforms and components per Oracle Hardware Management Pack for Oracle Solaris release, refer to the system management support matrix web page. New platforms and components are added periodically. As they are added, a release-specific support matrix link will be added to the main page which will include a superset of all products and components supported in the release.

A link to the support matrices for all versions is available at:

<http://www.oracle.com/goto/ohmp>

Issues Fixed

The following are issues for Oracle Hardware Management Pack that were fixed in Oracle Solaris 11.3 SRU releases. Oracle recommends that you always use the latest SRU.

Issues Fixed in Release SRU 33 (HMP version 2.4.4.0)

- Oracle Hardware Management Pack commands might list the wrong slot number for NVMe devices on an Oracle X7-2L (27504346)
- The `nvmeadm namespace -v` command shows incomplete information (27447511)
- The `raidconfig` command in Oracle Hardware Management Pack 2.4.2.0 reports HBA BBU (battery backup unit) as OK after battery failed (25995867)
- NIC cards hotplugged in SPARC M/T servers are not seen by `fwupdate` command (25830688)
- The `fwupdate` command does not list or update the Oracle Server X7-2 LAN-on-Motherboard (LOM) component (27559641)

Issues Fixed in Release SRU 30 (HMP version 2.4.3.0)

- Unable to format NVMe storage device with 4096 block size (27370903)
- The `fwupdate` command does not list or update the Oracle Server X7-2 LAN-on-Motherboard (LOM) component (27411070)
- The `nvmeadm getlog -s` command fails to retrieve memory dump (26525253)
- The `ilomconfig modify interconnect` command does not reject duplicate SP and Host addresses (26973913)
- Error "Cannot connect to BMC" when disabling trap forwarding (26545093)
- The `fwupdate list all` command returns truncated values for the Intel SSDs (26738264)
- The `fwupdate` command using a fallback image reports failure but is successful (27315226, 27409466)

Issues Fixed in Release SRU 28 (HMP version 2.4.2.2)

- Document a workaround for ERROR: Cannot connect to BMC message after a system firmware update that includes an SP reset.
See [“Host-to-ILOM Interconnect Might Fail After SP Reset During Firmware Update \(26827865, 27133238\)”](#) on page 41.
- Management agent (`hwmgmt`) consuming too many file descriptors (26812995)
- Updating system firmware using `fwupdate` intermittently fails verification on Oracle SPARC T8-1 systems (26986764)

Issues Fixed in Release SRU 25 (HMP version 2.4.2.1)

- Document a workaround for a potential management agent service memory leak issue (26830196)
See [“Management Agent Service Memory Leak Issue \(26830196\)”](#) on page 56.
- A required power cycle might fail after updating firmware using `fwupdate` on Oracle SPARC T8 systems (26613165)
- Updating system firmware using `fwupdate` intermittently fails on Oracle SPARC M8 systems (26559255)
- The `nvmeadm erase` command might time out when erasing namespaces on an Oracle Flash Accelerator F640 PCIe card or NVMe 6.4 TB SSD (26401503)
- The management agent can fail to create the host storage tree and go into maintenance mode (24787294)

Issues Fixed in Release SRU 23 (HMP version 2.4.2.0)

- The `fwupdate list all` command does not show Intel NIC cards in systems with large numbers of NICs (25721570)
- The `raidconfig` command should support `raid0` & `raid1` with different size disks (25812962)
- `fwupdate` command error: Entered name is too long (26420434)
- In Oracle SPARC M7/M8 series systems, sometimes HOST1 interconnect is lost after issuing `reset /SP` command in Oracle ILOM (25905919)

Issues Fixed in Release SRU 21 (HMP version 2.4.1.0)

- The `fwupdate` command fails to update SPARC `sysfw` 9.7.3 and earlier releases to `sysfw` 9.7.5 (25758581)
- The `hwmgmt` management agent does not detect if it is being run in an Oracle Solaris 11.3 kernel zone (25603771)
- The `fwupdate` command has problems when using the `powercycle_metadata.xml` file (25831123)
- The `nvmeadm` command does not properly enumerate NVMe devices with multiple namespaces (25766882)
- Controller locations in Oracle ILOM appear Incorrect after NVMe card is installed (25444537)

Issues Fixed in Release SRU 18 (HMP version 2.4.0.0)

- Running IPMItool commands to a remote service processor with the `-H` and `-U` options from a Zone or LDOM produces "ERROR: Platform not supported" (23547668)
- SNMP queries to `hwmgmt` are rejected when `snmpd` is run as non-root (22305376). Fix will add error to `snmpd.log` that permissions are incorrect.
- `fwupdate` might time out and not display Intel card information (21669346)
- `fwupdate list controller` output shows Oracle SPARC S7-2 Server LAN-On-Motherboard information for an installed Emulex Fibre Channel adapter (24335058)
- Component firmware version information reported by `fwupdate` command does not match information in Oracle ILOM (23602467)
- When performing an operation on a remote service processor using the `-H` and `-U` options, `fwupdate` incorrectly prompts the user for a password length between 8 and 16 characters (23183413)

- `raidconfig` exported configuration to an XML file has dedicated spares in the wrong order (16789059)
- `ubiosconfig` exports invalid XML if the CLI prompt customization feature of Oracle ILOM is used to set a non-empty string (24508209)
- Running the `ilomconfig import config` command on a remote service processor using the `-H` and `-U` options fails when using a passphrase (25246929)
- Hardware Management Agent reporting transient "Unrecoverable error during rebuild" events to Oracle ILOM SEL (25075936)
- In the Oracle ILOM BUI, the Storage Controller Model does not match what is displayed on the host when using `fwupdate list controller` (24965291)
- When updating Oracle ILOM using `fwupdate update`, delay in waiting for Oracle ILOM to reset after the update causes the update to fail (18735442)
- Various Oracle Hardware Management Pack commands display "version" information in different formats (23238876)
- Inconsistent configuration information about HDD6 and HDD7 with Oracle ILOM and Oracle Hardware Management Pack for Oracle SPARC T7 Server (22256022)
- Updated `sunStorageMIB` to include NVMe controllers (21656689)

Issues Fixed in Release SRU 15 (HMP version 2.3.7.2)

- After SP failover on a SPARC M7 system, `ilomconfig` is unable to communicate with the failover SP (23528479)

Issues Fixed in Release SRU 11 (HMP version 2.3.7.0)

- `fwupdate` cannot update SPARC S7 LAN-On-Motherboard controller firmware (21616063)
- `ubiosconfig` cannot connect to BMC on systems with Oracle ILOM 3.2.6 (24356013)

Issues Fixed in Release SRU 10 (HMP version 2.3.6.0)

- `ilomconfig list system-summary` does not include BIOS version for X5-8 (22875818)
- `raidconfig add disk` command outputs wrong return code (23214158)
- `raidconfig start task` command outputs wrong return code (23214036)
- `hwmgmtcli` crashing on systems with Oracle ILOM 3.0 (23278407)
- NVMe Flash Accelerator PCIe Cards are not classified as add-on disks in SPARC systems (23253880, 23253984)

- "Error: Power Control option is not supported for pre-application" might be seen during SPARC sysfw update (23704957)
- `ipmitool` occasionally dumps core on SPARC M6-32 during reboot (22263208)
- `fwupdate list all` output on SPARC systems refers to "BIOS" (21692008)
- `raidconfig list all` shows incorrect disk slot info for SPARC system with two LSI-based HBA cards (23330458)

Issues Fixed in Release SRU 9 (HMP version 2.3.5.6)

- `ilomconfig` says Host-to-ILOM interconnect enabled successfully even when `hostmanaged` setting in Oracle ILOM is set to `false` (23321066)
- `ilomconfig` dumps core SIGSEGV (Segmentation Fault) during system boot (23226087)

Issues Fixed in Release SRU 8 (HMP version 2.3.5.5)

- `fwupdate` fails to identify the Oracle Quad 10 Gb or Dual 40 Gb Ethernet Adapter (23230293)
- Inappropriate error when trying to create a user account that already exists using `ilomconfig create user` command (22739057)
- Performance issue with hardware management agent and storage polling plug-in in Oracle Engineered Systems Hardware Manager (23229659, 23205753)

Issues Fixed in Release SRU 6 (HMP version 2.3.5.3)

- `fwupdate` cannot be performed through local Host-to-ILOM interconnect if `hostmanaged` attribute in Oracle ILOM is not set to `"true"` (22822620)
- Hardware Management Agent might not properly update entity LDOM information in Oracle Engineered Systems Hardware Manager due to UUIDs that contain extra content (22686172)
- Hardware Management Agent log entry starts with `raidconfig` version information instead of `hwmgmtd` (22674966)

Issues Fixed in Release SRU 5 (HMP version 2.3.5.1)

- `fwrxmldiff` core dump is generated periodically on x86 systems (22205245)
- `ilomconfig` service logs 'Permission denied' on immutable global zones (19912946)

- Oracle Hardware Management Pack fishwrap XML has duplicate sun-ids in multipath configuration (22456828)
- System panic can occur when running multiple nvmeadm commands at once (22301202)
- fwupdate cannot update Sun Dual 10 GbE Fabric Expansion Module on X4-2B blade (22552898)

Issues Fixed in Release SRU 4 (HMP version 2.3.5.0)

- Using `ilomconfig` to modify the Host-to-ILOM Interconnect SP address causes a core file to be generated (22012637)
- After disconnecting and reconnecting a storage chassis to the system, the `hwmgmt` agent might crash (21903729)
- `fwupdate list controller` command displays duplicate Emulex controller (22155186)
- Description of `-H` option in `fwupdate(1m)` man page is not correct (21889911)

Issues Fixed in Release SRU 2 (HMP version 2.3.3.1)

- Type IO domain LDOM is not propagated to Oracle Engineered Systems Hardware Manager BUI (22020926)

Oracle Hardware Management Pack for Oracle Solaris Product Accessibility

This section describes the accessibility features that are part of Oracle Hardware Management Pack and related documentation.

Oracle strives to make its products, services, and supporting documentation usable and accessible to the disabled community. To that end, products, services, and documentation include features that make the product accessible to users of assistive technology.

For more information about Oracle's commitment to accessibility, go to:

- <http://www.oracle.com/accessibility>

Oracle Hardware Management Pack Software Accessibility

Oracle Hardware Management Pack software is a set of command-line interface (CLI) tools. Oracle Hardware Management Pack software does not include product-specific accessibility features. Using a keyboard, you can run the CLI tools as text commands from the operating system of a supported Oracle server. All output is text-based.

Additionally, most Oracle Hardware Management Pack tools support command output to a text log file or XML file, which can be used for text-to-speech conversion. Accessible manual pages (man pages) are available that describe the Hardware Management Pack tools on the system on which those tools are installed.

Installation and uninstallation of Oracle Hardware Management Pack can be performed manually, using text commands entered from the CLI. Assistive technology products such as screen readers, digital speech synthesizers, or magnifiers can be used to read the content of the screen.

Refer to the assistive technology product documentation for information about operating system and command-line interface support.

The CLI tools for using the software are described in the accessible HTML documentation for Hardware Management Pack at:

- <http://www.oracle.com/goto/ohmp/solarisdocs>

Oracle Hardware Management Pack Documentation Accessibility

Documentation for Oracle hardware is provided in HTML and PDF formats. The HTML documents are accessible using standard operating system controls and assistive technology. PDF documents are also provided; however, PDF is not an accessible format. PDF documents are considered support documents because the PDF content is available in accessible HTML format.

Product documentation provides figures, other types of images, and screenshots that do not rely on color for interpretation. Within the figures, callouts indicate the referenced component information. The callouts are mapped within a table to provide text descriptions of the referenced parts of the figures. In addition, alternative text is provided for all tables and images that provides the context of the information and images.

Note that screen readers might not always correctly read the code examples in the documentation. The conventions for writing code require that closing braces should appear on an otherwise empty line. However, some screen readers might not always read a line of text that consists solely of a bracket or brace.

The documentation might contain links to web sites of other companies and organizations that Oracle does not own or control. Oracle neither evaluates nor makes any representations regarding the accessibility of these web sites.

You can access the accessible HTML documentation for Oracle Hardware Management Pack for Oracle Solaris at:

- <http://www.oracle.com/goto/ohmp/solarisdocs>

Installation Notes and Issues

Issue	Workaround
“Updating from Oracle Solaris 11/11.1 to Oracle Solaris 11.3 Requires Setting Repository” on page 25	Yes
“Installing in Oracle Solaris Zones” on page 25	No

Updating from Oracle Solaris 11/11.1 to Oracle Solaris 11.3 Requires Setting Repository

If you have Oracle Solaris 11 or Oracle Solaris 11.1 with Oracle Hardware Management Pack installed and you want to update to Oracle Solaris 11.3, set the Oracle Hardware Management Pack repository *before* updating to Oracle Solaris 11.3. This is because the Oracle Hardware Management Pack packages were formerly in a repository called `mp-re` and are now in a repository called `SSM` (Single Server Management consolidation).

Workaround

Before updating to Oracle Solaris 11.3, type the following command:

```
#pkg set-publisher --non-sticky mp-re
```

Installing in Oracle Solaris Zones

Oracle Hardware Management Pack packages will install in all Oracle Solaris zones.

The Oracle Hardware Management Pack utilities have limited or no functionality in non-global zones.

The following Oracle Hardware Management Pack utilities do not work in a non-global zone:

- `biosconfig`

- fwupdate
- ilomconfig
- itpconfig
- nvmeadm
- raidconfig
- ubiosconfig
- hwmgmtcli
- svc:/system/sp/management:default (hardware management agent, also known as hwmgmt)

This utility works only if the LAN interface is used in the non-global zone:

- ipmitool

Known Issues and Notes

- [“Common Oracle Hardware Management Pack Known Issues” on page 27](#)
- [“fwupdate Known Issues ” on page 29](#)
- [“hwmgmtcli Known Issues” on page 43](#)
- [“ilomconfig Known Issues” on page 45](#)
- [“ipmitool Known Issues ” on page 46](#)
- [“raidconfig Known Issues ” on page 47](#)
- [“ubiosconfig Known Issues” on page 50](#)
- [“Hardware Management Agent and SNMP Known Issues” on page 50](#)
- [“Storage Poller Known Issues” on page 57](#)
- [“Using Oracle Hardware Management Pack With Oracle SPARC M Series Servers” on page 58](#)

Common Oracle Hardware Management Pack Known Issues

The issues shown in the following table are related to all Oracle Hardware Management Pack tools.

Issue	Workaround
“Some Utilities Run Slowly on SPARC T3 Systems (15720486, 15705545)” on page 28	Yes
“firmware-check Feature Not Supported In Oracle Solaris 11.3 (24341488, 24348414)” on page 28	No
“No Disk Details Listed in Oracle ILOM for Oracle Sun Server X3-2L and X4-2L (25590843)” on page 29	No

Some Utilities Run Slowly on SPARC T3 Systems (15720486, 15705545)

The `hwmgmt` utility might not provide accurate results when run on a SPARC T3 system.

Some other Oracle Hardware Management Pack utilities (such as `raidconfig` and `hwmgmtcli`) can also run very slowly on a SPARC T3 system.

These problems are due to a Oracle Solaris issue documented in issue 15631390.

Workaround

1. Disable the affected utility.
2. Read the `mdb` documentation and then enter the following commands:

```
# mdb -kw  
> ddi_aliases_present/W 0
```

3. Re-enable the utility.

firmware-check Feature Not Supported In Oracle Solaris 11.3 (24341488, 24348414)

The `firmware-check` feature has been removed as of Oracle Solaris 11.3 SRU 10 (release version later than 11.3.10.5.0).

If you have installed Oracle Solaris 11.3 SRU 10 (version 11.3.10.5.0), there is an Oracle Hardware Management Pack command called `firmware-check` included that is not supported for Oracle Solaris 11.3. If Oracle Solaris 11.3 SRU 10 (version 11.3.10.5.0) is installed, the `svc:/system/management/firmware-check:default` service that performs a firmware check at system startup will exit and generate a fault in FMA. This fault will not affect system applications and the service itself will stop running and go into maintenance mode. As the `firmware-check` service is not supported in this version of the operating system, the service can be permanently disabled.

In addition, attempting to manually run the `firmware-check` command will generate a "command not supported" error.

No Disk Details Listed in Oracle ILOM for Oracle Sun Server X3-2L and X4-2L (25590843)

On an Oracle Sun Server X3-2L or X4-2L running Oracle Solaris 11.3 with SRU versions 15 through 18, Oracle ILOM does not show disk details for installed storage. For example, when run from the Oracle ILOM CLI you might see output similar to this:

```
-> show /System/Storage/Disks/Disk_0/
```

```
/System/Storage/Disks/Disk_0
  Targets:

  Properties:
    health = OK
    health_details = -
    location = HDD0 (Disk 0)
    type = HDD

  Commands:
    cd
    show
```

The Oracle Hardware Management Pack for Oracle Solaris component, which runs from the host operating system, would normally collect and provide storage information to Oracle ILOM. This issue has only been seen in Oracle Solaris 11.3 with SRU versions 15 through 18 running Oracle Hardware Management Pack for Oracle Solaris. This issue is not an Oracle ILOM issue.

This is currently no workaround for this issue.

fwupdate Known Issues

Issue	Workaround
“Firmware Versions Do Not Display With 16Gb Fibre Channel or Dual 10 GbE Card (Emulex) (17037795)” on page 30	No
“Power Cycle Required to Update Oracle ILOM Version on Sun Fire X4170 M2 Server (16562687)” on page 31	No
“Error Messages Can Be Disregarded When Updating Firmware for an Emulex Fiber Channel Card (15762571)” on page 31	No
“fwupdate Cannot Downgrade Firmware (15663490)” on page 31	Yes
“fwupdate Cannot Be Used to Update Firmware on Some SPARC Onboard Intel-Based Ethernet Controllers (21616063, 21622963)” on page 32	No

Issue	Workaround
“fwupdate Might Fail When Updating Firmware on the Oracle Quad 10Gb Ethernet Adapter (21446307)” on page 32	Yes
“fwupdate Might Fail or Take a Long Time Listing or Updating Four or More Intel Network Controllers (21920385)” on page 33	Yes
“fwupdate Displays Failed Message When Updating a SPARC M7 Service Processor (21843467)” on page 33	No
“Misleading Information About sysfw and sp_bios Targets Listed in fwupdate Man Page” on page 35	Yes
“The check Subcommand for fwupdate Is Not Supported In Oracle Solaris 11.3 (24348414)” on page 35	Yes
“Automatic Credentials Might Not Work With fwupdate When Updating System Firmware and Fallback Boot Images (25683463)” on page 35	Yes
“Intel-Based Ethernet Adapters Using the i40e Driver Output Messages to Syslog When fwupdate is Run (26163087, 26194426, 26280974)” on page 36	No
“On Some Oracle SPARC Systems fwupdate Might Take a Long Time or Not List Details of Intel Network Controllers (25721570)” on page 37	Yes
“On Some Oracle SPARC Systems fwupdate Might Not List Details of Intel Network Controllers After a Hot Plug Event (25862628)” on page 38	Yes
“After Updating an Intel Network Controller On an Oracle SPARC System FMA Might Report a Fault (26566589)” on page 38	No
“A Required Power Cycle Might Fail After Updating Firmware Using fwupdate On Oracle SPARC T8 Systems (26613165)” on page 40	Yes
“Host-to-ILOM Interconnect Might Fail After SP Reset During Firmware Update (26827865, 27133238)” on page 41	Yes
“fwupdate of Fallback Image Reports Failure But is Successful (27315226, 27409466)” on page 42	NA

Firmware Versions Do Not Display With 16Gb Fibre Channel or Dual 10 GbE Card (Emulex) (17037795)

When 16Gb Fibre Channel or Dual 10 GbE Card (Emulex) cards are in NIC or CNA mode, the `fwupdate list` command does not display the EFI, FCODE and BIOS versions.

This occurs regardless of the operating system on the server.

Power Cycle Required to Update Oracle ILOM Version on Sun Fire X4170 M2 Server (16562687)

When upgrading Oracle ILOM from a lower version than 3.1.2.20 to a version 3.1.2.20 or later on the Sun Fire X4170 M2 server, the server must be power-cycled. If the server is not set up to power cycle automatically after the firmware update, power off the host and power it back on again after a few minutes.

Error Messages Can Be Disregarded When Updating Firmware for an Emulex Fiber Channel Card (15762571)

When doing a firmware upgrade for a Emulex Fibre Channel Card, you might see the following error messages. These messages can be disregarded:

```
Updating c3: lpfc 0000:b0:00.0: 0:1306 Link Up Event in loop back
>>>> mode x1 received Data: x1 x1 x20 x1
>>>> lpfc 0000:b0:00.0: 0:1309 Link Up Event npiv not supported in loop
>>>> topology
>>>> lpfc 0000:b0:00.0: 0:(0):2858 FLOGI failure Status:x3/x18 TMO:x0
>>>> lpfc 0000:b0:00.0: 0:(0):2858 FLOGI failure Status:x3/x18 TMO:x0
>>>> lpfc 0000:b0:00.0: 0:(0):2858 FLOGI failure Status:x3/x18 TMO:x0
>>>> lpfc 0000:b0:00.0: 0:(0):2858 FLOGI failure Status:x3/x18 TMO:x0
>>>> Success
```

fwupdate Cannot Downgrade Firmware (15663490)

If you attempt to downgrade firmware for a Hitachi H101414SC 146 GB disk driver using fwupdate, you might receive a message stating that the update was successful; however, fwupdate does not support firmware downgrades on this device.

Workaround

Compare the current firmware version with the version to which you want to update. If the current version is newer, do not update the firmware.

fwupdate Cannot Be Used to Update Firmware on Some SPARC Onboard Intel-Based Ethernet Controllers (21616063, 21622963)

On some SPARC systems with an onboard Ethernet controller (also called "LAN-On-Motherboard", or "LOM"), fwupdate is unable to obtain details about the controller. Without this information, fwupdate cannot be used to update the firmware of the controller.

Before attempting to update firmware on a SPARC system, display information using `fwupdate list`. If the output does not show device information (such as the current firmware version) for the system's onboard network controller, you cannot use fwupdate to update the controller firmware.

The fwupdate command can still be run successfully on other devices including PCIe Ethernet network adapter cards. For a list of systems and controllers supported for use with fwupdate, refer to the Support Matrices at: <http://www.oracle.com/goto/ohmp>.

If the onboard network controller firmware for these systems needs to be updated, contact Oracle Support.

fwupdate Might Fail When Updating Firmware on the Oracle Quad 10Gb Ethernet Adapter (21446307)

In rare instances, updating firmware on an Oracle Quad 10Gb Ethernet Adapter using the fwupdate command might fail. This problem might also occur when attempting to update the adapter's firmware using the Oracle System Assistant.

Workaround

If you encounter this problem, retry updating the adapter's firmware using the fwupdate command. If the failure persists, contact Oracle Support.

fwupdate Might Fail or Take a Long Time Listing or Updating Four or More Intel Network Controllers (21920385)

When four or more Intel network controllers are installed in a system, the `fwupdate list controller` command might fail or take up to 20 minutes to successfully list information about them. If you have more than sixteen Intel network controllers installed, the amount of time to list information will be longer. This issue can also affect firmware updates of Intel network controllers using the `fwupdate` command.

Workaround

If you encounter a failure when attempting to list or update Intel network controllers using `fwupdate`, retry the command and allow extra time for the command to succeed. If the failure persists, contact Oracle Support.

fwupdate Displays Failed Message When Updating a SPARC M7 Service Processor (21843467)

When updating service processor firmware using the `fwupdate` command on an Oracle SPARC M7 series server, you see an "updating sp_bios: failed" message from the host and in the `fwupdate` log file. After seeing this message, the service processor will reset after some time. Although the `fwupdate` command will display a failed message upon completion, the update process actually succeeds.

From the host, after entering the `fwupdate` command, you might see output similar to the following:

```
# fwupdate update sp-bios-firmware -f
Sun_System_Firmware-9_4_3-SPARC_M7-Systems.pkg -n sp_bios -H sp_ip_address -U
username
@ Enter password (8 to 16 characters):
*****
```

The following components will be upgraded as shown:

```
=====
ID          Priority Action      Status      Old Firmware Ver.  Proposed Ver.
      New Firmware Ver.  System Reboot
-----
-----
```

```

sp_bios 1      Check FW  Success  3.2.5.5.bld_24  N/A
      N/A          N/A
REMOTE HOST MAY SHUT DOWN DURING SP FIRMWARE UPDATE!
Do you wish to process all of the above component upgrades? [y/n]? y
Updating sp_bios: Failed

```

Execution Summary

```

=====
ID          Priority Action      Status      Old Firmware Ver.  Proposed Ver.
  New Firmware Ver.  System Reboot
-----
sp_bios 1      Update      Failure     3.2.5.5.bld_24    N/A
      N/A          N/A
      Error: Firmware download failed for component
ERROR: Firmware download failed for component

```

If you look in the `/var/log/ssm/fwupdate.log` file, you might see logged output similar to the following:

```

# tail fwupdate.log
ipmiflash[stdout] :Sending upgrade command
ipmiflash[stdout] :
ipmiflash[stdout] :Waiting for upgrade to start.....
ipmiflash[stdout] :Waiting for upgrade to
complete.....
.....XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
xx
ipmiflash[stderr]: More robust algorithm supported.
ipmiflash[stderr]:
ipmiflash[stderr]: Upgrade failed (lost contact with host).
ipmiflash[stderr]: DO NOT RESET THE SP! Just try again.
ipmiflash[stderr]: Close Session command failed

```

There is no workaround for this issue. If you encounter this failure during a firmware update, wait for the `fwupdate` command to complete, and then power cycle the system. After that you can use the `fwupdate list sp_bios` command from the host to determine if the update was successful (the version listed should be later than the old version).

Note - The `sp_bios` target was deprecated in Oracle Solaris 11.3 SRU 10 for both SPARC and x86 systems. Use the `sysfw` target instead.

If the service processor firmware did not get updated, even after a second attempt, contact Oracle Support.

Misleading Information About `sysfw` and `sp_bios` Targets Listed in `fwupdate` Man Page

With the release of Oracle Hardware Management Pack for Oracle Solaris 11.3 (SRU10), the man page for the `fwupdate` states that the new `sysfw` target replaces the `sp_bios` target going forward. For Oracle Solaris 11.3 SRU10, both targets continue to exist; `sysfw` for SPARC systems and `sp_bios` for x86 systems (and can also be used for SPARC for backward compatibility with existing scripts).

The `check` Subcommand for `fwupdate` Is Not Supported In Oracle Solaris 11.3 (24348414)

If you have installed Oracle Solaris 11.3 SRU 10 (version 11.3.10.5.0), a subcommand called "check" was added to the Oracle Hardware Management Pack `fwupdate` command. This subcommand is not supported for Oracle Solaris 11.3. If you attempt to run the `fwupdate check` command, you will receive a "command not supported" error.

Workaround

To see the currently installed system firmware (including Oracle ILOM), type the following command from the host:

```
# fwupdate list sysfw
```

To confirm that your installed firmware is at the minimum required version for features, fixes and security, refer to your platform *Product Notes*.

Automatic Credentials Might Not Work With `fwupdate` When Updating System Firmware and Fallback Boot Images (25683463)

When performing firmware updates of the local service processor using `fwupdate` in automatic mode, `fwupdate` will automatically use the Host-to-ILOM interconnect, if enabled. However, due to an issue with Oracle ILOM (fixed in bug 25042438), using the `fwupdate` command to update x86 or SPARC system firmware (including Oracle ILOM, OBP, BIOS, SYSFW, etc.) or a SPARC fallback boot image might take a long time or fail. This is because the Host-to-ILOM interconnect (the fastest connection) might not work reliability due to the Oracle ILOM issue.

As a result, the update process might fall back to the slower KCS/BMC interface when trying to update x86 system firmware (including Oracle ILOM and BIOS). Or, it might fail when trying to update SPARC system firmware (including Oracle ILOM, OBP, SYSPW, etc.) and fallback boot images, as slower KCS/BMC is not supported.

This issue can be seen on systems with versions of Oracle ILOM 3.2.8 and earlier. This behavior is intermittent and does not affect the reliability of the transfer, only which path is used to access Oracle ILOM.

If you are using Oracle Hardware Management Pack version 2.4.0.0 or later with a version of Oracle ILOM that has the fix for bug 25042438, you will not see this issue. Prior versions of Oracle Hardware Management Pack might still exhibit this intermittent behavior even if Oracle ILOM has the fix.

Workaround

To work around this issue and use the faster interface, you can target the Host-to-ILOM interconnect directly using the `-H` and `-U` options in `fwupdate`. For example, to update system firmware on an x86 or SPARC system:

```
# fwupdate update sysfw -x metadata.xml -H 169.254.182.76 -U root
```

Where `169.254.182.76` is the IP address for the Oracle ILOM port of the Host-to-ILOM interconnect and `root` is the root user.

Intel-Based Ethernet Adapters Using the i40e Driver Output Messages to Syslog When fwupdate is Run (26163087, 26194426, 26280974)

If the system has an Intel-based Ethernet network interface card that uses the `i40e` driver (for example the Oracle Quad 10 Gb or Dual 40 Gb Ethernet Adapter, or the Oracle Quad 10 Gb Ethernet Adapter), output notice messages are captured in syslog when the `fwupdate` command is run. This affects system running Oracle Solaris 11.3 SRU 21 and later. For example:

```
Mon May 29 12:45:02 PDT 2017
May 29 12:44:58 sca05-0a818b90 i40e: [ID 611667 kern.info] NOTICE:
i40e0: i40e_nvmpd command status: 0 errno; 0
May 29 12:44:58 sca05-0a818b90 i40e: [ID 611667 kern.info] NOTICE:
i40e0: i40e_nvmpd command status: 0 errno; 0
...
May 29 12:44:58 sca05-0a818b90 i40e: [ID 611667 kern.info] NOTICE:
```

```
i40e0: i40e_nvmpud command status: 0  errno; 0  
May 29 12:44:58 sca05-0a818b90 i40e: [ID 611667 kern.info] NOTICE:  
i40e0: i40e_nvmpud command status: 0  errno; 0
```

These messages are from the i40e driver and are benign. You can safely ignore these messages.

On Some Oracle SPARC Systems fwupdate Might Take a Long Time or Not List Details of Intel Network Controllers (25721570)

Fixed in Oracle Solaris SRU 23 (Hardware Management Pack for Oracle Solaris version 2.4.2.0).

For some Oracle SPARC systems, such as the T series and M series, the fwupdate list and update commands might not list all installed network controllers or be excessively slow on systems with large numbers of network controllers installed (more than six), as follows:

- If the system has six or fewer controllers installed, running the fwupdate list command might appear slow or hung (taking up to 600 seconds to complete).
- If the system has more than six network controllers installed, running the fwupdate list command might appear slow or hung (taking up to 600 seconds to complete) and not list any Intel-based network controllers (either add-in PCIe cards or LAN-On-Motherboard controllers) upon completion. If the fwupdate command cannot list the details of a device, it cannot update that device.

Workaround

If you encounter this issue and you have six or fewer controllers installed, you will need to allow fwupdate list or update commands additional time to complete. A rule-of-thumb would be to allow around 1.5 minutes per installed network controller.

If you have more than six network controllers installed, you will not be able to list or update the firmware of the installed Intel network controllers. In this case, you need to temporarily reduce the number of network controllers in the system until the fwupdate list command can see them. Then you will be able to update the installed Intel-based network controllers. Repeat the process for the Intel-based network controllers you temporarily removed until all have been updated.

On Some Oracle SPARC Systems fwupdate Might Not List Details of Intel Network Controllers After a Hot Plug Event (25862628)

Fixed in Oracle Solaris SRU 33 (Hardware Management Pack for Oracle Solaris version 2.4.4.0).

For some Oracle SPARC systems, such as the T series and M series, the fwupdate list and update commands might not work with Intel-based network controllers after performing a hot plug of a controller device. For example, after a hot plug of an Intel-based network controller, if you run the fwupdate list command you might not see any Intel-based network controllers listed. If the fwupdate command cannot list the details of a device, it cannot update that device.

Workaround

If you encounter this issue, you need to reboot the server in order for the fwupdate command to see and list details of Intel-based network controllers in the system.

After Updating an Intel Network Controller On an Oracle SPARC System FMA Might Report a Fault (26566589)

For some Oracle SPARC systems, such as the T series and M series, Oracle Solaris FMA might report a fault after the update of an Intel network controller using the fwupdate command. If you use FMA commands to list faults, you might see:

```
# fmadm list-fault
-----
TIME EVENT-ID MSG-ID SEVERITY
-----
Jun 06 10:57:09 36153b84-0650-4751-8092-c7eb4c936c71 NIC-8000-1C Critical

Problem Status : open
Diag Engine : eft / 1.16
System Manufacturer : Oracle Corporation
Name : SPARC M7-8
Part_Number : 7325712
Serial_Number : AK00383556
Host_ID : 8647c249
```

```
-----  
Suspect 1 of 2 :  
Problem class : defect.io.nic.config  
Certainty : 95%  
Affects : mod:///mod-name=i40e/  
Status : faulted but still in service  
  
FRU  
Status : faulty  
FMRI :  
"pkg://solaris/driver/network/ethernet/i40e@0.5.11,5.11-0.175.3.20.0.2.0:20170  
422T000939Z  
"  
-----  
Suspect 2 of 2 :  
Problem class : fault.io.nic.config  
Certainty : 5%  
Affects : dev:///pci@31e/pci@1/network@0  
Status : ok and in service  
  
FRU  
Status : repaired  
Location : "/SYS/CMI0U6/PCIE2"  
Manufacturer : unknown  
Name : unknown  
Part_Number : unknown  
Revision : unknown  
Serial_Number : unknown  
Chassis  
Manufacturer : Oracle Corporation  
Name : SPARC M7-8  
Part_Number : 7325712  
Serial_Number : AK00383556  
  
Description : The network device failed to configure a feature. A(n)  
invalid_state error has been detected during driver's runtime  
context causing a(n) config service impact.  
  
Firmware: FW 5.1.42098 API 1.5 eetrack 0x80002559 NVM 0x1  
  
Response : One or more device instances may be disabled.  
  
Impact : Loss of services provided by the device instances associated  
with this fault.  
  
Action : Use 'fmadm faulty' to provide a more detailed view of this
```

event.

Please refer to the associated reference document at <http://support.oracle.com/msg/NIC-8000-1C> for the latest service procedures and policies regarding this diagnosis.

There is currently no workaround for this issue. Despite the fault, the update process should still complete. A system power cycle is required to use the new firmware.

A Required Power Cycle Might Fail After Updating Firmware Using fwupdate On Oracle SPARC T8 Systems (26613165)

Fixed in Oracle Solaris SRU 25 (Hardware Management Pack for Oracle Solaris version 2.4.2.1).

On SPARC T8 systems running Oracle Solaris 11.3 SRU 23 or SRU 24, the fwupdate command is unable to perform automated host power cycles required after some firmware updates. This can happen even if the firmware metadata supports an automated power cycle. If your system is affected by this issue, you might see a message similar to the following during an update:

```
System Power Cycle required for some applied firmware
Do you wish to automatically initiate system power cycle now? [y/n]? y
IPMI TLS Authentication Failed: 0xf
WARNING: File transfer to SP will go through the KCS interface.
This may take a long time ( > 60 min).
A PowerCycle was attempted and is not currently supported on this platform.
You will need to perform a manual power cycle. Please reference your
firmware documentation for more information.
Automatic system power action failed.
Terminating fwupdate. Please reset system manually and then proceed.
```

Note - This message will not appear if host reboots are suppressed using fwupdate command line options.

Workaround

If you encounter this issue, you need to power cycle the host manually in order to complete the update process. To view the new firmware version after the host has been power cycled, run the fwupdate list command on the updated device.

Host-to-ILOM Interconnect Might Fail After SP Reset During Firmware Update (26827865, 27133238)

Occasionally, when using the `fwupdate` command to update system firmware that includes an SP reset as part of the update process, the Host-to-ILOM interconnect might fail to come back online after the SP reset. Even though the firmware update might have successfully completed, you will not be able to confirm it from the host due to the Host-to-ILOM interconnect failure.

The following example output shows what you might see with this issue:

```
# fwupdate update all -x metadata.xml
```

The following components will be upgraded as shown:

```
=====
ID          Priority Action      Status      Old Firmware Ver.  Proposed Ver.
  New Firmware Ver.  System Reboot
-----
sp          1          Check FW    Success          9.5.4.c          9.7.1.c
  N/A                N/A
```

Please set 'Credential' and enable 'Host Interconnect' - the LAN over USB path to SP then try again.

Execution Summary

```
=====
ID          Priority Action      Status      Old Firmware Ver.  Proposed Ver.
  New Firmware Ver.  System Reboot
-----
sp          1          Update     Aborted          9.5.4.c          9.7.1.c
  N/A                N/A
```

ERROR: Cannot connect to BMC

Note that running the `ilomconfig list interconnect` command at this point might show the interconnect status as 'enabled', even though the connection is lost.

Workaround

If you encounter this issue, disable and then re-enable the Host-to-ILOM interconnect using the `ilomconfig` command. For example:

```
# ilomconfig disable interconnect
Host-to-ILOM interconnect disabled.
Set 'state' to 'disabled'
```

```
# ilomconfig enable interconnect
Set 'state' to 'enabled'
Host-to-ILOM interconnect successfully configured.
```

This should reset the interconnect and allow you to check to see if the new firmware is installed. For example:

```
# fwupdate list sysfw -v
=====
SP
=====
ID: sp
  Product Name: SPARC T7-1
  ILOM Version: v3.2.6.2.c
  BIOS/OBP Version: 9.7.1.c
  XML Support: YES
```

fwupdate of Fallback Image Reports Failure But is Successful (27315226, 27409466)

Fixed in Oracle Solaris SRU 30 (Hardware Management Pack for Oracle Solaris version 2.4.3.0).

After an update using the `fwupdate update` command where only the fallback image is updated, you might see an error that states that the update was aborted or unverified. An example of output is shown below:

```
# fwupdate update all -x metadata.xml
```

The following components will be upgraded as shown:

```
=====
ID          Priority Action      Status      Old Firmware Ver.  Proposed Ver.
New Firmware Ver.  System Reboot
-----
```

```
-----
sp          1          Check FW    Success        5.11-0.175.3.9.0.4.011.3.27.4.0
```

```
N/A          N/A
```

HOST MAY SHUT DOWN DURING SP FIRMWARE UPDATE!

Do you wish to process all of the above component upgrades? [y/n]? y

Updating sp: Success

Waiting for service processor to reset and recover

SP has not recovered after update.

Execution Summary

```
=====
ID          Priority Action      Status      Old Firmware Ver.   Proposed Ver.
          New Firmware Ver.   System Reboot
-----
```

```
-----
sp          1          Update      Aborted      5.11-0.175.3.9.0.4.011.3.27.4.0
```

```
          N/A          N/A
ERROR: Error could not be determined
```

This issue can occur when updating SPARC system firmware if only the fallback mini-root image needs updating. Typically, when service processor (SP) firmware is updated an SP reset is required. This is something fwupdate looks for and expects after an SP update. However, if the SP does not need updating, for example if only the fallback image is updated, then no SP reset will occur.

If you encounter this issue when updating Oracle SPARC system firmware where only the fallback image is updated, you can safely ignore it. The update will have been successful even if fwupdate cannot verify it.

hwmgmtcli Known Issues

Issue	Workaround
"Running hwmgmtcli on a Sun Blade X6270 M2 Server Might Return Error Messages for Chassis Information (15762248)" on page 43	Yes
"Sun Blade X6270 M2 Shows Incorrect Chassis Data (15732926,15737206,15737199)" on page 44	Yes
"Running hwmgmtcli list open_problems Might Show Incomplete Open Problems Report (21787319)" on page 44	No

Running hwmgmtcli on a Sun Blade X6270 M2 Server Might Return Error Messages for Chassis Information (15762248)

When running hwmgmtcli commands, errors are returned for chassis information as follows:

Chassis Model: ERROR
Chassis Address: ERROR

Workaround

To avoid this error, upgrade to Oracle ILOM 3.1.

Sun Blade X6270 M2 Shows Incorrect Chassis Data (15732926,15737206,15737199)

When using the `hwmgmtcli` command to view chassis information on a Sun Blade X6270 M2 server module, some information about the chassis is missing.

Workaround

Use Oracle ILOM CMM to view the chassis information.

Running `hwmgmtcli list open_problems` Might Show Incomplete Open Problems Report (21787319)

When running Oracle Solaris 11.2 with SRU 14, under certain rare conditions the `hwmgmtcli list open_problems` command might not show open problems the host has detected for storage devices. Or the host-detected storage problems shown might be incomplete and might even over-write other existing non-storage open problems. For this issue to be seen, the following conditions must exist:

1. Oracle ILOM reports that `/System/Storage/health` is OK.
2. The host has diagnosed storage issues which Oracle ILOM is not capable of diagnosing.

Under these conditions, the `hwmgmtcli list open_problems` output might be corrupted in the following ways:

- If Oracle ILOM has no open problems, then no open problems of any kind will be listed.
- If host-detected storage problems are found, only those that can replace existing Oracle ILOM problems in the `hwmgmtcli` output will be listed. For example, if two Oracle ILOM problems exist and the host detects three storage problems, `hwmgmtcli` will only list two of the storage problems (replacing the two Oracle ILOM problems).

There is no workaround for this issue. When assessing possible storage problems, use Oracle ILOM first to gather as much information as possible on storage issues it can diagnose. Then

use `hwmgmtcli` to see if you can obtain any additional information on storage issues Oracle ILOM cannot diagnose. You can also use host logs and available OS and vendor storage controller tools to further investigate the issue.

ilomconfig Known Issues

Issue	Workaround
“ilomconfig Commands Might Fail When Using Oracle ILOM 3.0.9 (15650623)” on page 45	Yes
“ilomconfig Host Credential Cache Feature Has Been Disabled (21563538)” on page 45	Yes

ilomconfig Commands Might Fail When Using Oracle ILOM 3.0.9 (15650623)

Oracle ILOM versions 3.0.9 and earlier have limitations that might cause the `ilomconfig` command to fail with the error `Cannot connect to BMC`. These errors can occur when multiple programs attempt to access the IPMI interface of Oracle ILOM.

If such errors do occur, Oracle ILOM must recover from this error. This recovery could mean a one or two minute disruption in the services provided by Oracle ILOM.

Workaround

To help avoid this error, disable the Hardware Management Agent and Storage Monitoring Agent before using `ilomconfig`. Also, avoid any other IPMI access to Oracle ILOM, such as using `ipmitool`, when running `ilomconfig`.

ilomconfig Host Credential Cache Feature Has Been Disabled (21563538)

The host credential cache feature used to facilitate access to the Oracle ILOM service processor (SP) through the Host-to-ILOM Interconnect has been disabled. The `ilomconfig create credential` command will no longer create a credential cache file on the host to store Oracle ILOM username and password information. Nor will an existing credential cache be used for Oracle Hardware Management Pack commands accessing the Oracle ILOM SP.

This change affects the way some Oracle Hardware Management Pack commands are issued that access the system's local SP (like `fwupdate`, `ilomconfig` and `ubiosconfig`) and only on systems with an Oracle ILOM version earlier than 3.2.4. For these systems, if you want to use a LAN interface (for either the local Host-to-ILOM interconnect or a remote Ethernet network connection) you must manually include credentials using the `-H` and `-U` options for commands that access an SP. If credentials are not provided, these commands will default to the slower local KCS interface to access the local Oracle ILOM SP.

For systems with Oracle ILOM version 3.2.4 or later, credentials do not need to be included when running commands that access the local SP through the Host-to-ILOM interconnect. You still need to manually include credentials (using the `-H` and `-U` options) when running commands that access an SP using a network connection.

The capability to delete a previously saved host credential cache is still supported using the `ilomconfig delete credential` command.

Workaround

Oracle Hardware Management Pack commands that access the Oracle ILOM SP (versions earlier than 3.2.4) and require user credentials must be entered manually from the command line. The required password can also be piped in on stdin for scripting use.

Examples:

- `ilomconfig list system-summary --remote-hostname=sp_ip --remote-username=username`
- `cat passwd.file | fwupdate list all --remote-hostname=sp_ip --remote-username=username`

Where `sp_ip` is the IP address of the Oracle ILOM SP, `username` is the Oracle ILOM user account with root privileges, and `passwd.file` is a file you create that contains the Oracle ILOM user account password.

Note - In the example above, to use the local Host-to-ILOM interconnect instead of a network port to access the SP, obtain its IP address using the `ilomconfig list interconnect` command.

ipmitool Known Issues

Issue	Workaround
“ipmitool Error Might Occur When SP Is Booted and SPARC T3-4 Host Is On (15719015, 15691003)” on page 47	Yes

ipmitool Error Might Occur When SP Is Booted and SPARC T3-4 Host Is On (15719015, 15691003)

When the SPARC T3-4 host is powered on and the SP is booted, you might receive the following error:

```
SP communication failure....Please start IPMI
```

```
ipmitool will not function in this state.
```

Workaround

If you encounter this error, reboot the host to clear the error.

raidconfig Known Issues

Issue	Workaround
“User Warning: raidconfig Shows the System Boot Disk as Available (20992189)” on page 47	NA
“RAID Volume Might Not Be Visible in Oracle ILOM on SPARC Systems (15782246)” on page 48	Yes
“RAID 1 Volume With More Than Two Disks Is Not Handled Correctly (15747500)” on page 48	No
“When Running init Task on RAID Volume clear Tasks on Disks Always Show 0% Complete (15742034)” on page 48	No
“Mounted Property for RAID Volumes Is Not Visible When Using SGX-SAS6-R-REM-Z or SGX-SAS6-R-INT-Z (15666684)” on page 49	Yes
“After Creating a RAID Volume With --name Option With LSI REM, Volume's Name Is Still Null (15675209)” on page 49	No
“RAID 10 Listed as Not Supported When Creating RAID Volume With raidconfig (22129034)” on page 49	Yes

User Warning: raidconfig Shows the System Boot Disk as Available (20992189)

raidconfig can scan your controllers and connected disks and list disks that are either already in a RAID volume, or available to be included in a RAID volume. However, raidconfig cannot

tell if an available disk has data on it, or if a disk is otherwise used as either a boot disk or logical disk for an application.

Before using `raidconfig` to create volumes (which will overwrite any existing data), use operating system tools to take an inventory of attached disks, their enumeration, and whether they contain data that you want to preserve.

RAID Volume Might Not Be Visible in Oracle ILOM on SPARC Systems (15782246)

A RAID volume created using `raidconfig` might not be visible under the `/STORAGE` target in Oracle ILOM.

Workaround

Use the `raidconfig list all` command to view the newly created volume.

RAID 1 Volume With More Than Two Disks Is Not Handled Correctly (15747500)

For the SGX-SAS6-R-INT-Z HBA, no more than two disks can be used for creating a RAID 1 volume.

When Running `init` Task on RAID Volume `clear` Tasks on Disks Always Show 0% Complete (15742034)

When an `init` task is running on a RAID volume, the disks in that RAID volume have a `clear` task started on them. The percentage complete for the `clear` task always shows zero until the `init` task has finished.

A workaround is not required.

Mounted Property for RAID Volumes Is Not Visible When Using SGX-SAS6-R-REM-Z or SGX-SAS6-R-INT-Z (15666684)

The Mounted property is missing from RAID volumes created when using the SGX-SAS6-R-INT-Z HBA or SGX-SAS6-R-REM-Z. `raidconfig` will not prevent you from deleting a mounted volume.

Workaround

1. Using the `raidconfig` command, retrieve the Device Name for the RAID volume.
2. Check the output of the `mount` command for an instance of the Device Name retrieved in Step 1.
3. If the Device Name is present in the output of the `mount` command, the RAID volume is currently mounted and should not be deleted using `raidconfig`.
4. Unmount the RAID volume first, then use `raidconfig` to delete the volume.

After Creating a RAID Volume With --name Option With LSI REM, Volume's Name Is Still Null (15675209)

After you create a RAID volume on the RAID 0/1 Expansion Module (X4607A) using `raidconfig` with the `--name` option, the RAID volume name is still null, though the RAID volume is successfully created.

RAID 10 Listed as Not Supported When Creating RAID Volume With `raidconfig` (22129034)

On a system with the Sun Storage 6 Gb/s SAS PCIe HBA (internal or external), attempting to create a RAID 10 volume using `raidconfig` with the `--level=10` option will yield the following message: "ERROR: RAID level not supported by controller."

Workaround

The FCODE version 1.00.65 on the Sun Storage 6 Gb/s SAS PCIe HBA (internal or external) does not support RAID 10. It does support an even (four or more) or odd (3 or more) number of disks used in a RAID level 1e. Use RAID level 1e in place of RAID level 10.

For example, to create a RAID 1e volume on four disks in the system, type:

```
raidconfig create raid --level=1e -d c0d0,c0d1,c0d2,c0d3
```

This RAID volume will be seen as RAID 1e by `raidconfig`, but seen as RAID 10 by the HBA's configuration utility (`sas2ircu`).

This is expected behavior with the Sun Storage 6 Gb/s SAS PCIe HBA using FCODE version 1.00.65.

ubiosconfig Known Issues

Issue	Workaround
“ubiosconfig Cannot Connect to BMC On Systems With Oracle ILOM 3.2.6 (24356013)” on page 50	Yes

ubiosconfig Cannot Connect to BMC On Systems With Oracle ILOM 3.2.6 (24356013)

Fixed in Oracle Solaris SRU 11 (Hardware Management Pack for Oracle Solaris version 2.3.7.0).

On systems with Oracle ILOM version 3.2.6, attempting to run the `ubiosconfig` command to change system UEFI BIOS settings will fail with an error message about being unable to connect to the BMC. This issue has not been seen in other versions of Oracle ILOM.

Workaround

To make changes to UEFI BIOS settings for these systems, you must run the system's BIOS Setup Utility either at the local server console or from a remote console. Refer to your platform documentation for additional information on accessing the BIOS Setup Utility.

Hardware Management Agent and SNMP Known Issues

Issue	Workaround
“Some SNMP Traps Available in Oracle ILOM Are Not Generated (15686011)” on page 51	Yes

Issue	Workaround
“snmpwalk of the Storage MIB Results in a Timeout or Error Message (15694465)” on page 52	No
“SNMP Trap Issues” on page 52	Yes
“Sun Blade X6250 Server Module Reports Wrong Service Processor Version Number” on page 52	Yes
“Parent FRU Name for Sensors on Shared Components in a Blade Chassis Is Incorrect (15728111, 15688172)” on page 53	Yes
“Discrete Current Sensors Are Miscategorized on SPARC T3-Series Servers (15687547)” on page 53	Yes
“sunHwMonFruStatus Does Not Reflect the Fault State of A Component (15687574)” on page 53	Yes
“SunHwMonInventoryTable Shows Incorrect Number of DIMMs (15566455)” on page 53	Yes
“SunHwMonDiscreteHardDriveSensorTable Incorrect Sensors” on page 54	No
“Host Agent Might Generate Incorrect Notification (15675490)” on page 54	Yes
“sunStorageVolumeOSMountPoint Not Showing Mount Point (15666684)” on page 54	No
“Incorrect DiskOSDeviceName on SPARC T3-2 System (15668518)” on page 54	Yes
“Storage MIB Does Not Expose Dual Path Disks (15673745)” on page 55	Yes
“NVMe Flash Accelerator PCIe Cards Are Not Classified as Add-On Disks in SPARC Systems (23253880, 23253984)” on page 55	Yes
“Management Agent Service Memory Leak Issue (26830196)” on page 56	Yes

Some SNMP Traps Available in Oracle ILOM Are Not Generated (15686011)

The following types of SNMP traps in Oracle ILOM are not generated:

- Events that get reported for host state changes
- Events related to fault handling
- Events related to presence state changes of components on the platform

Workaround

You can access this information through Oracle ILOM or SNMP interfaces.

snmpwalk of the Storage MIB Results in a Timeout or Error Message (15694465)

When you use the `snmpwalk` command with a Storage MIB on a SPARC system, the storage information appears, but you might receive an error message or timeout at the end of the output.

This error message can safely be ignored.

SNMP Trap Issues

- `sunHwTrapProductName` can be empty on some platforms.
- `sunHwTrapSystemIdentifier` is empty when the service processor is running Oracle ILOM 2.0.
- `sunHwTrapAssocObjectId` is always set to `SNMPv2-SMI::zeroDotZero`.
- `sunHwTrapComponentName` is set to the IPMI name of the component rather than the name used by Oracle ILOM.
- On Sun Fire X4200 M2 servers, Hardware Management Agent sends `sunHwTrapComponentOK` or `sunHwTrapComponentError` instead of `sunHwTrapSlotOrConnectorOk` or `sunHwTrapSlotOrConnectorError`, which are sent by Oracle ILOM.

Workaround

You can access this information through Oracle ILOM or SNMP interfaces.

Sun Blade X6250 Server Module Reports Wrong Service Processor Version Number

When you run the Hardware Management Agent on Sun Blade X6250 server modules with older service processor firmware, the wrong version of service processor is reported.

Workaround

Oracle recommends that you upgrade to the latest firmware.

Parent FRU Name for Sensors on Shared Components in a Blade Chassis Is Incorrect (15728111, 15688172)

`sunHwMon...SensorParentFruName` is incorrectly set to `/SYS` for sensors on shared field replaceable units (FRUs) in a blade chassis.

Workaround

Use Oracle ILOM to determine the correct parent name for these sensors.

Discrete Current Sensors Are Miscategorized on SPARC T3-Series Servers (15687547)

On SPARC T3-Series servers, discrete current sensors are miscategorized and listed in `sunHwMonDiscreateOtherSensorTable` instead of in `sunHwMonDiscreteCurrentSensorTable`.

Workaround

Use the `sunHwMonDiscreateOtherSensorTable` to view discrete current sensors.

sunHwMonFruStatus Does Not Reflect the Fault State of A Component (15687574)

A component's status, as represented by `sunHwMonFruStatus`, is a cumulative status of sensors on that component. This status can differ from the component status in Oracle ILOM.

Workaround

Check Oracle ILOM to determine whether or not a components is faulted.

SunHwMonInventoryTable Shows Incorrect Number of DIMMs (15566455)

On some platforms, DIMMs which are not present in the system are shown in `sunHwMonInvetoryTable`.

Workaround

View the `FruDescr`, `FruPartNumber`, `FruSerialNumber` and `FruManufacturer` objects. If these values are filled in, the DIMMs are present in the system. If the values are not filled in, it indicates DIMMs that are not present and can be safely ignored.

SunHwMonDiscreteHardDriveSensorTable Incorrect Sensors

Due to platform limitations, `sunHwMonDiscreteHardDriveSensorTable` can contain sensors for disks not physically present on the host. These sensors have a `ParentFruIndex` of -1 and end with `STATE-HIDDEN`. These sensors can be safely ignored.

Host Agent Might Generate Incorrect Notification (15675490)

Not all device types defined in recent releases of Oracle ILOM are recognized by the host agent, resulting in cases where the host agent generates a generic `sunHwTrapComponent` notification rather than a device specific notification (for example, `sunHwTrapSlotOrConnector`). This is due to a component error rather than a slot or connector.

Workaround

Use the NAC name from the MIB to determine the specific device for the notification.

sunStorageVolumeOSMountPoint Not Showing Mount Point (15666684)

`sunStorageVolumeOSMountPoint` reports a device name instead of a mount point.

Incorrect DiskOSDeviceName on SPARC T3-2 System (15668518)

`DiskOSDeviceName` on a SPARC T3-2 server reports `02000000:0` and `02000000:2` as `OSDeviceName`. No such names can be found on the host OS.

Workaround

For multipath disks, `raidconfig` returns only the WWN for the device instead of the full path name. The `format` command returns the full path name of this device with the WWN embedded in it. You can correlate the device by using the WWN.

For example:

- This is the information that you get on a device using `raidconfig`: Device:
5000CCA00A49BC1C
- This is the information that you get on a device using the `format` command: Device:
c0t5000CCA00A49BC1Cd0

Storage MIB Does Not Expose Dual Path Disks (15673745)

`sunStorageDiskTable` shows only a single disk instance when a physical disk is dual-pathed to two controllers.

Workaround

Use Oracle ILOM to determine the correct information about the disk.

NVMe Flash Accelerator PCIe Cards Are Not Classified as Add-On Disks in SPARC Systems (23253880, 23253984)

Fixed in Oracle Solaris SRU 10 (Hardware Management Pack for Oracle Solaris version 2.3.6.0).

When viewed from Oracle ILOM, the flash storage on NVMe flash accelerator PCIe cards in SPARC systems is not listed as add-on disks under the `System/Storage/Disks` component hierarchy. This has to do with the way the hardware management agent, which is used to provide storage information to Oracle ILOM, currently classifies storage on NVMe flash accelerator PCIe cards.

Workaround

To obtain basic information about installed NVMe flash accelerator PCIe cards in Oracle ILOM, look under `System/PCI_Devices/Add-on`. For example:

```
show /System/PCI_Devices/Add-on/Device_6
Targets:

Properties:
  part_number = 7110865
  description = Oracle Flash Accelerator F160 PCIe Card: 1.6TB, NVMe PCIe 3.0
  location = PCIE6 (PCIe Slot 6)
  pci_vendor_id = 0x8086
  pci_device_id = 0x0953
  pci_subvendor_id = 0x8086
  pci_subdevice_id = 0x370b

Commands:
  cd
  show
```

For additional information about, and configuration of, installed NVMe flash accelerator PCIe cards, use the Oracle Hardware Management Pack `nvmeadm` command.

Management Agent Service Memory Leak Issue (26830196)

Due to a memory resource issue in one of the components of the Oracle Hardware Management Pack management agent service (`svc:/system/sp/management`) memory usage can grow over time. This is only an issue with Oracle Hardware Management Pack for Oracle Solaris 11.3 with SRU 21 through SRU 24.

As of Oracle Solaris 11.3 SRU 25 (Hardware Management Pack for Oracle Solaris version 2.4.2.1), the management agent service has been configured by default to restart each night at 3:00AM local time.

For earlier versions of Oracle Solaris S11.3, the management agent will need to be reset regularly to prevent the memory leak issue. You can create a cron job to reset the service nightly. For example, the following will reset the management agent service each night at 3:00AM local time.

1. Open the current crontab in the default editor to add the new job. Type:

```
# crontab -e
```

2. Add the following job command lines:

```
#The following will restart the management agent at 3:00AM local time:
0 3 * * * /usr/sbin/svcadm restart svc:/system/sp/management
```

3. Save and exit the editor.

Disabling the agent is also an option, but doing so will cause the loss of some host storage inventory in the Oracle ILOM storage pages.

Storage Poller Known Issues

Issue	Workaround
“Global Hot Spare for RAID 1 Volume Displayed as a Dedicated Hot Spare on Oracle Solaris (15586295)” on page 57	No
“The max_disks Property Is Incorrect When Using Adaptec Disk Controller (SGXPCIESAS-R-INT-Z) (15584958)” on page 57	No
“The write_cache_enabled Property Not Available for Adaptec Controllers (SGXPCIESAS-R-INT-Z) (15583722)” on page 58	No
“M.2 SATA SSD Storage Not Always Reported Correctly in Oracle ILOM (26534520, 26149555)” on page 58	No

Global Hot Spare for RAID 1 Volume Displayed as a Dedicated Hot Spare on Oracle Solaris (15586295)

The Oracle Hardware Management Pack storage poller running on an Oracle Solaris system configured with a global hot spare for a RAID 1 (Mirrored) RAID with a Sun Storagetek PCI-E SAS RAID HBA (SGXPCIESAS-R-INT-Z) might show the details of the disk as a dedicated hot spare.

The max_disks Property Is Incorrect When Using Adaptec Disk Controller (SGXPCIESAS-R-INT-Z) (15584958)

The Oracle Hardware Management Pack storage poller might incorrectly display the max_disks property for a Sun Storagetek PCI-E SAS RAID HBA (SGXPCIESAS-R-INT-Z) as 0.

The `write_cache_enabled` Property Not Available for Adaptec Controllers (SGXPCIESAS-R-INT-Z) (15583722)

The `write_cache_enabled` property is not available for Adaptec controllers (SGXPCIESAS-R-INT-Z).

M.2 SATA SSD Storage Not Always Reported Correctly in Oracle ILOM (26534520, 26149555)

Systems that include M.2 SATA SSDs might have their details show incorrectly in Oracle ILOM. This could include:

- The device type being mis-categorized as an "add on" disk instead of an M.2 SSD installed on a riser card.
- Details about the device listed incorrectly (such as the device target or NAC name) or missing.
- Duplicates of the device are listed with no detailed information.

In addition, device details could change after a system reboot.

This is due to an issue with the Oracle Hardware Management Pack storage poller that supplies host storage information to Oracle ILOM.

As this issue does not affect other Oracle Hardware Management Pack tools, you can use them to obtain information on M.2 SSDs in the system.

Using Oracle Hardware Management Pack With Oracle SPARC M Series Servers

The following sections cover specific information for using Oracle Hardware Management tools with Oracle SPARC M series servers:

- [“`ilomconfig` \(16369886\)” on page 59](#)
- [“`fwupdate` \(26088403\)” on page 60](#)
- [“`hwmgmtcli` \(16507559\)” on page 60](#)
- [“`itpconfig` \(16508501, 16507898\)” on page 61](#)
- [“Hardware Management Agent \(15824059, 15824037\)” on page 61](#)

ilomconfig (16369886)

The Oracle SPARC M series servers have a pair of dual-redundant SPs (SP0 and SP1) in the chassis. These systems might also have 4 SP proxies (SPP0, SPP1, SPP2, SPP3).

The host OS does not have direct access to all Oracle ILOM properties from the SPs, so you need to use Oracle ILOM to access Oracle ILOM properties from the SP, rather than `ilomconfig`.

For Oracle SPARC M series servers, the Oracle Solaris host OS runs on the SPPs. `ilomconfig` accesses the Oracle ILOM SPP from the Oracle Solaris host OS.

The following table describes the properties of the SPs and SPPs.

Service Processor Type	Description	Tool to access SP
SP0, SP1 (redundant service processors)	For the Oracle SPARC M series, these are the main service processors with all the standard Oracle ILOM properties. The SPs manage the SPPs.	Oracle ILOM
SPP0, SPP1, SPP2, SPP3 (service processor proxies)	Each SPP monitors a domain configurable unit (DCU). The host OS runs on the SPPs.	<code>ilomconfig</code>

See also:

- [“Oracle ILOM Properties Not Available From the SPARC Server M5-32 and M6-32 SPPs” on page 59](#)
- [“ilomconfig Commands Supported on SPARC M Series Server Platforms” on page 60](#)

Oracle ILOM Properties Not Available From the SPARC Server M5-32 and M6-32 SPPs

The following table lists the Oracle ILOM properties that are not available from SPARC M5-32 and M6-32 server SPPs.

Oracle ILOM Properties	ilomconfig Features
<code>/SP/config</code>	export, import
<code>/SP/users</code>	user
<code>/SP/services/snmp/communities</code>	snmp-community
<code>/SP/network/pending</code>	network mgmt (read-only)

ilomconfig Commands Supported on SPARC M Series Server Platforms

For Oracle SPARC M series servers, the following `ilomconfig` subcommands and targets are supported:

- `list` subcommand targets:
 - `system-summary`
 - `network`
 - `network-ipv6`
 - `interconnect`
 - `identification`
- `enable` subcommand target:
 - `interconnect`
- `disable` subcommand target:
 - `interconnect`
- `modify` subcommand targets:
 - `interconnect`
 - `identification`

fwupdate (26088403)

When using `fwupdate` with Oracle SPARC M series platforms, you can only update the main SP and must use the `--remote-hostname` and `--remote-username` options to in the command line. Attempts to run `fwupdate` against the local SP will result in an error and cancel the update.

Always refer to the specific README instructions included with firmware released for the Oracle SPARC M series platforms as this issue might not be applicable to all versions of M-series firmware.

hwmgmtcli (16507559)

A new subsystem has been added for multi-domained systems, such as the Oracle SPARC M series platforms:

`dcu` - Show details of `dcu` subsystem.

For Oracle SPARC M series servers, `open_problems` diagnosed by Oracle ILOM are not reported by `hwmgmtcli` on PDOM hosts. In addition, `health`, and `health_details` information might be missing or not reliable.

On multi-domain systems `hwmgmtcli` can only see the devices (such as controllers and storage) that are dedicated to the host domain where `hwmgmtcli` is being run. In contrast, Oracle ILOM obtains reports from all domains and therefore can report on all devices in the system.

itpconfig (16508501, 16507898)

The fault proxy is not supported for use on the Oracle SPARC M series servers.

Hardware Management Agent (15824059, 15824037)

The hardware management agent `svc:/system/sp/management:default` (also known as `hwmgmt`) can be used on Oracle SPARC M series servers to provide storage information to Oracle ILOM, but the SNMP component will not function correctly and provide erroneous data in non-physical domains in these systems.

