

## SPARC T5-8 Server Product Notes

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## Using This Documentation

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- **Overview** – Contains late-breaking information for the server
- **Audience** – Technicians, system administrators, and authorized service providers
- **Required knowledge** – Advanced experience troubleshooting and replacing hardware

## Product Documentation Library

Late-breaking information and known issues for this product are included in the documentation library at <http://www.oracle.com/goto/T5-8/docs>.

## Feedback

Provide feedback about this documentation at <http://www.oracle.com/goto/docfeedback>.





## Late-Breaking Information

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These topics contain late-breaking information about the server.

- [“IMPORTANT - Install Latest OS Updates, Patches, and Firmware” on page 9](#)
- [“Preinstalled Software” on page 10](#)
- [“Minimum Supported Versions of the Firmware, OS, and Software” on page 11](#)
- [“Mandatory Oracle Solaris 11 OS Package Updates” on page 12](#)
- [“Mandatory Oracle Solaris 10 OS Patches” on page 12](#)
- [“Installing and Booting Oracle Solaris 11 From Devices Connected to a USB Port” on page 15](#)
- [“I/O Slot and Quantity Restrictions” on page 16](#)
- [“Known Issues” on page 17](#)
- [“Documentation Issues” on page 41](#)

### **IMPORTANT - Install Latest OS Updates, Patches, and Firmware**

Some product features are enabled only when the latest versions of patches or firmware are installed. In order to retain optimal performance, security, and stability, installing the latest available patches or firmware is required.

Verify that the server firmware version is at a minimum 9.5.1.b or higher.

1. Check the system firmware:

From the ILOM web interface, click System Information → Summary, then view the property value for the System Firmware Version in the General Information table.

From the command prompt, type:

```
-> show /HOST
```

2. Ensure the server firmware version is at the minimum required version, shown above, or a subsequent release, if available.
3. If required, download the latest available software release version from My Oracle Support at:

<https://support.oracle.com>

4. If required, update the server firmware.

Refer to the information about performing firmware updates in the *Oracle ILOM Administrator's Guide for Configuration and Maintenance*. Ensure that you perform the preparatory steps described in that document before updating the firmware.

## Preinstalled Software

Software	Location	Description
Oracle Solaris 11.1 OS	The OS is installed on drive 0, using a ZFS file system.	Host OS.
Oracle VM Server for SPARC <sup>†</sup>	/opt/SUNWldm	Manages logical domains.
Electronic Prognostics <sup>†</sup>	/usr/lib/ep	Provides early warning of the potential for specific FRU faults.
Oracle VTS <sup>†</sup>	/usr/sunvts	Provides hardware validation tests.

<sup>†</sup>These software components are part of the Oracle Solaris 11 OS distribution.

The preinstalled OS is ready to be configured at the appropriate point when you first apply power to the server.

Mandatory package updates might not be preinstalled. Ensure that you obtain and install all mandatory updates before you put the server into production. See [“Mandatory Oracle Solaris 11 OS Package Updates” on page 12](#).

Refer to the Oracle Solaris documentation for instructions on installing and configuring the Oracle Solaris OS.

You can reinstall the OS, along with mandatory package updates or patches, instead of using the preinstalled OS. See [“Minimum Supported Versions of the Firmware, OS, and Software” on page 11](#).

## Minimum Supported Versions of the Firmware, OS, and Software

If you configure the server with Oracle VM Server for SPARC, you can install various combinations of the minimum (or later) versions of the OS. For example, you can use Oracle Solaris 11.1.4.6 for the control domain, and Oracle Solaris 10 9/10 in guest domains.

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**Note** - Oracle Solaris 11 is the recommended OS for T5 servers. The advantages of Oracle Solaris 11 include simplified installation and maintenance, enhanced virtualization capabilities and performance enhancements. A more detailed list may be found at: <http://www.oracle.com/technetwork/server-storage/solaris11/overview/solaris-matrix-1549264.html>

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**Note** - Oracle VM Server for SPARC 3.1.1 requires firmware version 9.1.2.d. Oracle Solaris 11.1 SRU 17 contains Oracle VM Server for SPARC 3.1.1.

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Software	Minimum Supported Versions
Oracle System Firmware	<p>9.0.0.h for fully populated servers (two processor modules).</p> <p>9.1.0.b for half-populated servers (one processor module).</p> <p><b>Note</b> - Both versions include Oracle ILOM 3.2.1.</p> <p>9.2.1.x for installing directly from a USB device. See “<a href="#">Installing and Booting Oracle Solaris 11 From Devices Connected to a USB Port</a>” on page 15.</p> <p><b>Note</b> - The server might require more recent firmware to support Oracle Solaris Kernel Zones. For specific firmware requirements, refer to <i>Creating and Using Oracle Solaris Kernel Zones</i>.</p>
Oracle Solaris 11 OS	<p>For the control domain, guest domains, and nonvirtualized configurations:</p> <p>Oracle Solaris 11.1. 4.6</p> <p>Includes these software components:</p> <ul style="list-style-type: none"> <li>■ Oracle VM Server for SPARC 3.0.0.2</li> <li>■ Oracle Electronic Prognostics</li> <li>■ Oracle VTS 7.0 PS 15 (S11.1 SRU4)</li> </ul> <p>Also see “<a href="#">Mandatory Oracle Solaris 11 OS Package Updates</a>” on page 12.</p>
Oracle Solaris 10 OS	<p>For the control domain, guest domains, or for nonvirtualized configurations:</p> <ul style="list-style-type: none"> <li>■ Oracle Solaris 10 1/13 plus patches and and Oracle VM Server for SPARC (SUNWldm package)</li> </ul> <p>For guest domains only:</p> <ul style="list-style-type: none"> <li>■ Oracle Solaris 10 9/10 OS or Oracle Solaris 10 8/11 OS, plus Oracle Solaris 10 1/13 SPARC Bundle and patches.</li> </ul>

Software	Minimum Supported Versions
	<b>Note</b> - Oracle Electronic Prognostics 1.3 is not included, but you can install it separately. <b>Note</b> - The Oracle Solaris 10 OS includes Oracle VTS 7 PS15.  Also see <a href="#">“Mandatory Oracle Solaris 10 OS Patches”</a> on page 12.

## Mandatory Oracle Solaris 11 OS Package Updates

No package update is required at this time to use the preinstalled Oracle Solaris 11.1 OS with this server.

If you reinstall the OS, you might need to install certain package updates before you put the server and optional hardware or software components into production.

Install the most recent Oracle Solaris 11.2 Support Repository Update (SRU). Taking this action ensures that your server has the latest software for the best performance, security, and stability.

Use the `pkg info entire` command to display which version is currently installed on your server.

Use the `pkg` command or the package manager GUI to download any available SRUs from: <https://support.oracle.com>

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**Note** - To access the Oracle Solaris 11 package update repository, you must have an Oracle support agreement that enables you to install a required SSL certificate and support key. Refer to the article at: <http://www.oracle.com/technetwork/articles/servers-storage-admin/o11-018-howto-update-s11-1572261.html> Go to Oracle's certificate request web site at: <https://pkg-register.oracle.com>.

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## Mandatory Oracle Solaris 10 OS Patches

If you choose to install the Oracle Solaris 10 OS, you must also install additional patches, and in some cases, a patch bundle.

### Oracle Solaris 10 1/13 Mandatory Patches

This version of the OS is supported in the control domain, guest domains, or for nonvirtualized configurations:

Installation Order	OS or Patch
1	Oracle Solaris 10 1/13 OS
2	Mandatory patches: <ul style="list-style-type: none"> <li>■ 148322-07 (or higher)</li> <li>■ 148324-06 (or higher)</li> <li>■ 148888-03 (or higher)</li> <li>■ 149638-01 (or higher)</li> <li>■ 149644-01 (or higher)</li> <li>■ 150011-02 (or higher)</li> <li>■ 150025-01 (or higher)</li> <li>■ 150027-01 (or higher)</li> <li>■ 150107-01 (or higher)</li> </ul>

## Oracle Solaris 10 8/11 Mandatory Patches

This version of the OS is supported only in guest domains.

Installation Order	OS or Patch
1	Oracle Solaris 10 8/11 OS
2	Oracle Solaris 10 1/13 SPARC Bundle
3	All of the Oracle Solaris 10 1/13 mandatory patches. See <a href="#">“Oracle Solaris 10 1/13 Mandatory Patches” on page 12.</a>

**Note** - Until the Oracle Solaris 10 1/13 SPARC Bundle is installed, the Oracle Solaris 10 8/11 OS supports only 512 CPUs and 3840 Gbytes of memory. For servers exceeding those resources, reduce the resources until the Oracle Solaris 10 1/13 SPARC Bundle is installed, or install a later version of the Oracle Solaris OS.

**Note** - Until the Oracle Solaris 10 1/13 SPARC Bundle is installed, you might encounter these Oracle Solaris bugs—15712380, 15704520, 15665037. The first two bugs are resolved when these Oracle Solaris 10 1/13 SPARC bundle is installed. These bugs do not impact the patch installations.

## Oracle Solaris 10 9/10 Mandatory Patches

This version of the OS is supported only in guest domains.

Installation Order	OS or Patch
1	Oracle Solaris 10 9/10 OS
2	Oracle Solaris 10 1/13 SPARC Bundle
3	All of the Oracle Solaris 10 1/13 mandatory patches. See <a href="#">“Oracle Solaris 10 1/13 Mandatory Patches” on page 12.</a>

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**Note** - Until the Oracle Solaris 10 1/13 SPARC Bundle is installed, the Oracle Solaris 10 9/10 OS supports only 512 CPUs and 3840 Gbytes of memory. For servers exceeding those resources, reduce the resources until the Oracle Solaris 10 1/13 SPARC Bundle is installed, or install a later version of the Oracle Solaris OS.

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**Note** - Until the Oracle Solaris 10 1/13 SPARC Bundle is installed, you might encounter bugs 15712380, 15704520, and 15665037. The first two bugs are resolved when the Oracle Solaris 10 1/13 SPARC Bundle is installed. These bugs do not impact the patch installations.

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## ▼ Obtain Patches

Perform these steps to obtain patches for the Oracle Solaris 10 OS.

**1. Sign in to My Oracle Support:**

<https://support.oracle.com>

**2. Select the Patches & Updates tab.**

**3. Search for a patch using the Patch Search panel.**

When searching for a patch using the Patch Name or Number field, you must specify the complete name or number of the patch. For example:

- Solaris 10 1/13 SPARC Bundle
- 13058415
- 147159-03

To search using a patch number without the revision number (last two digits), type % in place of the revision number. For example: 147159-%.

**4. After you locate the patch, access the README, and download the patch from the site.**

The patch README provides the patch installation instructions.

## Installing and Booting Oracle Solaris 11 From Devices Connected to a USB Port

To install Oracle Solaris 11 without using an IPS AutoInstall server on the network, you can use Oracle Solaris media in a DVD drive, either built into the server or attached to a USB port. You also can boot from an ISO image copied to a DVD disk, hard disk, or SSD.

Starting with Oracle Solaris 11.2, you can install the OS on this server from an image copied to a USB flash drive. That USB image is available for download at the same location as the ISO images:

<http://www.oracle.com/technetwork/server-storage/solaris11/downloads/index.html>

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**Note** - Installing directly from a USB device requires System Firmware 9.2.1.x or later.

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You also can create a persistent device alias for a device connected to a USB port.

For more information see "Installing Oracle Solaris 11.2 Systems" at: [http://docs.oracle.com/cd/E36784\\_01](http://docs.oracle.com/cd/E36784_01)

You can boot Oracle Solaris 11 from drives installed in the server (hard disk, SDD, or DVD) or from devices connected to a USB port.

For the path to identify a USB port in a boot command, refer to this table:

USB Connector	Path
USB 0 (Rear top)	/pci@6c0/pci@1/pci@0/pci@c/pci@0/pci@6/usb@0/storage@3/
USB 1 (Rear bottom)	/pci@6c0/pci@1/pci@0/pci@c/pci@0/pci@6/usb@0/storage@2/
USB 2 (Front left)	/pci@300/pci@1/pci@0/pci@4/pci@0/pci@6/usb@0/storage@4/
USB 3 (Front right)	/pci@300/pci@1/pci@0/pci@4/pci@0/pci@6/usb@0/storage@3/

These paths appear in the list of devices that is output by the show-dev OpenBoot command.

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**Note** - All four USB ports support the USB 3.0 protocol.

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## I/O Slot and Quantity Restrictions

Some optional I/O cards are restricted to specific I/O slots to meet system cooling requirements. In addition, some I/O cards are restricted to certain maximum quantities. Other I/O cards provide better performance when installed in particular slots.

**Note** - This table lists only the I/O cards that have specific slot or quantity restrictions or other requirements. It does not list I/O cards that are supported by the server but are not subject to slot or quantity restrictions.

**TABLE 1** I/O Slot and Quantity Restrictions

Description	Part Number	Maximum	Restrictions
<b>Network Interface Card</b>			
Sun Dual 10GbE SFP+ PCIe Low Profile Adapter	X1109A-Z	10	
<b>FCoE 10Gb/s Converged Network Adapter</b>			
Sun Storage 10 GbE FCoE PCIe Converged Network Adapter (Qlogic, low profile, dual port, SR optics)	7105381	14	
Sun Storage 10 GbE FCoE PCIe Converged Network Adapter (Qlogic, low profile, dual port, Twin-Ax)	7105382	14	
<b>InfiniBand</b>			
Sun InfiniBand Dual Port 4x QDR PCIe Low Profile Host Channel Adapter	X4242A	4 (multiple processor module configurations only)	
Oracle Dual Port QDR InfiniBand Adapter M3	7104074	8	
<b>Miscellaneous</b>			
Sun Flash Accelerator F40 PCIe	7104482	8	Requires PCIe Hot Plug Carrier Extension. Cannot be installed in slot 16.
Sun Flash Accelerator F80 PCIe	7107092	8	Requires PCIe Hot Plug Carrier Extension. Cannot be installed in slot 16.
Sun Crypto Accelerator 6000 Board	X6000A-N	2	

**Note** - Some PCIe cards and devices have other minimum requirements. For details, including what is required for a device to be bootable, refer to the product notes and other documentation for that device.



## Known Issues

These topics detail the known issues at the time of this release.

- “Security Updates for System Firmware and Oracle Solaris OS” on page 18
- “When You Create Logical Domains, Some Memory Is Reserved by the Server” on page 18
- “sas2ircu Might Fail to Create a RAID Volume (15788910)” on page 18
- “rKVMS Does Not Support Redirecting Storage From a SPARC Client (15795058)” on page 20
- “Mouse Pointer Is Not Aligned With the Cursor in a Remote Window (15798251)” on page 20
- “xhci Device Failed During Boot on USB Ports (15809582)” on page 22
- “/System/Cooling Target Lists Power Supply Fans as Not Supported (15809846)” on page 22
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- “Oracle Solaris 10 OS Does Not Display Some Fault Information (16456603)” on page 33
- “Management of SP Does Not Display a Table as Expected (16607793)” on page 34
- “Drive Controller Not Ready When the Driver Tries to Attach (16608475)” on page 36
- “Disable Debug UARTS on LSI 2308 Controllers (16802420)” on page 37
- “OPS Failing fault.ops.chassis.voltage.fail on FRU /SYS/MB at Component /SYS/MB (18070361)” on page 38
- “POST Abort When Retiring Multiple Memory Pages (18091447)” on page 39
- “RAID 10 Volumes Created Instead of RAID 1e on an Even Number of Target Disks (18335578)” on page 39
- “Europa-Based 10 GbE PCIe Cards Generate Device Training Errors (18647589)” on page 40

- [“Server Cannot Be Shipped in a Rack” on page 40](#)
- [“Processor Module Bezel Labels Are Incorrect” on page 40](#)

## Security Updates for System Firmware and Oracle Solaris OS

The following include critical security updates for your server:

- System Firmware 9.3.0 or later
- Oracle Solaris 11.2 OS SRU 3.5 or later

## When You Create Logical Domains, Some Memory Is Reserved by the Server

When you use Oracle VM Server for SPARC, you can assign most of the memory in a SPARC T5 server to logical domains. However, a small portion of the server's memory is preassigned to software components, the hypervisor, and certain I/O devices. To determine which portions of memory are unavailable for logical domains, type this command:

```
# ldm ls-devices -a mem
```

In the output, look for rows that include `_sys_` in the Bound column. Each of those portions of memory is not available for logical domains.

## sas2ircu Might Fail to Create a RAID Volume (15788910)

When you use the `sas2ircu` command within Oracle Solaris to create a RAID volume, the command might report that volume creation has failed. For example:

```
# ./sas2ircu 0 create raid0 max 1:0 1:1 1:2 my-RAID0
LSI Corporation SAS2 IR Configuration Utility.
Version 14.00.00.00 (2012.07.04)
Copyright (c) 2009-2012 LSI Corporation. All rights reserved.
```

You are about to create an IR volume.

WARNING: Proceeding with this operation may cause data loss or data

corruption. Are you sure you want to proceed (YES/NO)? yes

```
WARNING: This is your last chance to abort this operation. Do you wish
to abort (YES/NO)? no
Please wait, may take up to a minute...
@ Nov 6 09:46:47 sys-33 scsi: /pci@300/pci@1/pci@0/pci@2/scsi@0 (mpt_sas0):
Nov 6 09:46:47 sys-33      Volume 0 is now , enabled, inactive
@ Nov 6 09:47:45 sys-33 scsi: WARNING: /pci@300/pci@1/pci@0/pci@2/scsi@0
(mpt_sas0):
Nov 6 09:47:45 sys-33      passthrough command timeout
@ SAS2IRCU: IocStatus = 0 IocLogInfo = 0
SAS2IRCU: Volume creation failed.
SAS2IRCU: Error executing command CREATE
#
```

If you retype the `sas2ircu` command at the Oracle Solaris prompt, the command will fail. The `sas2ircu` command will state that the wrong number of disks have been provided, since they had already been committed to a volume. For example:

```
# ./sas2ircu 0 create raid0 max 1:0 1:1 1:2 my-RAID0
LSI Corporation SAS2 IR Configuration Utility.
Version 14.00.00.00 (2012.07.04)
Copyright (c) 2009-2012 LSI Corporation. All rights reserved.
```

```
SAS2IRCU: Number of drives specified is higher than number of drives
available to create a RAID volume!
SAS2IRCU: Error executing command CREATE.
#
```

After the initial failure of the `sas2ircu` command, other disk utility commands, such as `format`, might show disk members of the volume marked as `drive not available`. The `format` command might appear to hang and will require that you type `Ctrl-C` to abort the command. For example:

```
# format
Searching for disks...done

AVAILABLE DISK SELECTIONS:
    0. c0t500151795955C40Ed0 <drive not available>
@      /scsi_vhci/disk@g500151795955c40e
      /dev/chassis/unknown.1222BDC067//SYS/SASBP/HDD0/disk
    1. c0t500151795955C19Ed0 <drive not available>
@      /scsi_vhci/disk@g500151795955c19e
      /dev/chassis/unknown.1222BDC067//SYS/SASBP/HDD1/disk
    2. c0t5001517959567D4Dd0 <drive not available>
@      /scsi_vhci/disk@g5001517959567d4d
      /dev/chassis/unknown.1222BDC067//SYS/SASBP/HDD2/disk

Ctrl-C
```

#

**Workaround:** Reboot the system to restore the volume to a working state.

# **reboot**

Alternatively, you can use one of the other available methods to create the volume, instead of the `sas2ircu` command.

- Create a volume under Oracle Solaris with the `raidconfig` command. The Oracle Hardware Management Pack includes the `raidconfig` command.

You can download the Oracle Hardware Management Pack software at:

<https://support.oracle.com>

You can read and download documentation for the version of Oracle Hardware Management Pack you are using at:

<http://www.oracle.com/goto/OHMP/docs>

- Create a volume at the OpenBoot prompt with the Fcode-based RAID utility commands. For instructions on using the FCode-based RAID utility commands, refer to the *SPARC T5 Series Servers Administration Guide*.

## rKVMS Does Not Support Redirecting Storage From a SPARC Client (15795058)

Starting the Storage feature of Java Remote Console Plus on an Oracle Solaris system is not supported.

**Workaround:** Start the Storage feature of Java Remote Console Plus on a Linux or Windows system. For a complete list of supported browsers, operating systems, and platforms, refer to the *Oracle ILOM Administrator's Guide for Configuration and Maintenance*.

## Mouse Pointer Is Not Aligned With the Cursor in a Remote Window (15798251)

---

**Note** - This issue has been fixed in SRU11.1.9.5.1.

---

The mouse pointer in the Oracle ILOM video remote console might not track well. The cursor position might be out of sync with the Xorg server on the Oracle Solaris host, a condition that makes mouse navigation and selection difficult.

**Workaround A:** This procedure does not make a permanent change. However, it does immediately make it easier for you to navigate with the mouse, and it enables you to perform steps that result in a more permanent change.

1. Log in to the Gnome desktop.  
If you have problems obtaining a terminal window, try one of the following methods:
  - Click the right mouse button. When the desktop pop up is displayed, type: **e**
  - Use the keyboard to obtain a terminal window by typing Alt-F2. Then type: **gnome-terminal**
  - Select the desired terminal window as active by typing Alt-Tab.
2. Type this command in a terminal window:  
  
**xset m 1 1**
3. Select Mouse Sync in the upper left corner of the Oracle ILOM Remote System Console Plus window.

Now you can make a more permanent fix by changing the mouse preferences values of acceleration, sensitivity, and threshold to the smallest values.

1. From the Gnome desktop, access the mouse preferences window. Depending on the version of the Gnome desktop installed, select one of the following:
  - System > Preferences > Mouse.
  - Launch > System > Preferences > Mouse.
2. Obtain the menu of mouse preferences.  
Depending on the version of the Gnome desktop, select one of the following:
  - System > Preferences > Mouse
  - Launch > System > Preferences > Mouse

---

**Tip** - You also can reach this point by typing Alt-F2 and then typing: **gnome-mouse-properties**

---

3. Change the mouse preferences values:
  - Pointer Speed Acceleration = Slow
  - Pointer Speed Sensitivity = Low
  - Drag and Drop Threshold = Small

If you are using the keyboard, navigate by pressing Tab until the desired item is highlighted. For each value, press the left arrow key to move the slides all the way to the left.

These changes will be permanent and persist after screenlock and logout.

**Workaround B:** In Oracle Solaris 11, you can use this procedure to initially disable problematic mouse acceleration. However, subsequent changes to the mouse acceleration during the Xorg session will override the changes made by this method.

1. Open this file for editing:

```
/etc/hal/fdi/preprobe/10osvendor/10-x11-input.fdi
```

Ensure that you do not leave any other copies of the file in this directory.

2. Locate the following lines:

```
<merge key="input.x11_options.StreamsModule" type="string">usbms</merge>  
<merge key="input.x11_options.Protocol" type="string">VUID</merge>
```

3. Following those lines, add these lines and save the file:

```
<merge key="input.x11_options.AccelerationScheme" type="string">none</merge>  
<merge key="input.x11_options.AccelerationNumerator" type="string">1</merge>  
<merge key="input.x11_options.AccelerationDenominator"  
type="string">1</merge>  
<merge key="input.x11_options.AccelerationThreshold" type="string">1</merge>
```

4. Type these Oracle Solaris commands:

```
# svcadm restart hal  
# svcadm restart gdm
```

## xhci Device Failed During Boot on USB Ports (15809582)

When you boot the Oracle Solaris OS with a USB 3.0 device installed in one of the front or rear USB ports, the following message might be displayed:

```
WARNING /pci@300/pci@1/pci@0/pci@4/pci@0/pci@6/usb@0  
(xhci0): Connecting device on port 7 failed
```

**Workaround:** You can safely ignore this message.

## /System/Cooling Target Lists Power Supply Fans as Not Supported (15809846)

---

**Note** - This bug has been fixed in Oracle ILOM 3.2.1.

---

When you type this Oracle ILOM command:

```
-> show /System/Cooling
```

the output under Properties includes the following lines:

```
installed_power_supply_fans = Not Supported
max_power_supply_fans = Not Supported
```

**Workaround:** To display accurate information about installed power supply fans, type this Oracle ILOM command, which includes the /SYS target:

```
-> show /SYS -l all type=='Fan' value
```

## File Descriptor Leakage in libldom/ ldom\_xmpp\_client.c (15811297)

---

**Note** - This issue has been fixed in SRU11.1.5.5.

---

The Oracle Solaris Predictive Self-Healing (PSH) fault manager daemon (fmd) can become nonoperational when the Logical Domains Manager (ldmd) is down for a period of time. On SPARC T5 series servers, I/O faults, including disk faults, are diagnosed by the Oracle Solaris fmd. Other faults are diagnosed by Oracle ILOM on the SP, and are not affected by this bug.

As soon as a patch with the fix becomes available, you should install the patch. See [“Obtain Patches” on page 14](#).

**Workaround:** If you suspect that I/O faults are not being reported, execute these steps:

1. Determine whether or not the ldmd is online.
  - If ldmd is online, then this bug is not the issue. Refer to the fault management procedures in the service manual.
  - If ldmd is offline, go to Step 2.
2. Restart ldmd.
3. Restart fmd.
  - An I/O fault might have occurred, but it was not diagnosed by PSH. View the system logs, as described in the service manual, to isolate the problem.

## ilomconfig Might Report Internal Error (15823485)

---

**Note** - This issue was fixed in Oracle Solaris 11.2.

---

The Oracle Solaris `ilomconfig` command that enables the communication channel between the OS and the SP might occasionally fail with an `Internal Error` message.

This communication channel is enabled by default and is not usually disabled in the normal course of operation. However, the channel can be disabled by superuser with this Oracle Solaris command:

```
# ilomconfig disable interconnect
Host-to-ILOM interconnect disabled.
```

Occasionally, the command to enable the interconnect might fail again with this error message:

```
# ilomconfig enable interconnect
ERROR: Internal error
```

If this situation happens, follow the workaround to reenable the link, because the link is used for transferring diagnostic data between the Oracle Solaris instance and the SP and must be reenabled promptly.

**Workaround:** Retype the command to enable the interconnect.

```
# ilomconfig enable interconnect
Host-to-ILOM interconnect successfully configured.
```

If the failure persists, contact your authorized Oracle Service Provider for assistance.

## High-Speed PCIe I/O Cards Sometimes Downtrain to Gen1 I/O Speed (15825866)

On rare occasions, some PCIe option cards that are capable of data transfer rates of 5.0 GT/s and above might fail to train at the maximum supported target speed. Instead, they train at the minimum speed of 2.5 GT/s, which might lead to poor I/O performance.

**Workaround:** If the PCIe card fails, perform these steps.

1. If you suspect poor I/O performance, use the `prtdiag` command to view PCIe card I/O performance.

The current link data rate for each slot is displayed under the `Speed` heading.

```
# prtdiag
System Configuration: Oracle Corporation sun4v
Memory size: 523008 Megabytes
...
===== IO Devices =====
Slot +          Bus  Name +                               Model          Speed
```



Status	Type	Path	
/SYS/MB/USB_CTLR	PCIE	usb-pciexclass,0c0330	5.0GTx1
		/pci@300/pci@1/pci@0/pci@4/pci@0/pci@6/usb@0	
/SYS/RIO/NET0	PCIE	network-pciex8086,1528	5.0GTx8
		/pci@300/pci@1/pci@0/pci@4/pci@0/pci@8/network@0	
/SYS/RIO/NET1	PCIE	network-pciex8086,1528	5.0GTx8
		/pci@300/pci@1/pci@0/pci@4/pci@0/pci@8/network@0,1	
/SYS/RCSA/PCIE2	PCIE	SUNW,qlc-pciex1077,2532	QLE2562 5.0GTx4
		/pci@400/pci@1/pci@0/pci@c/SUNW,qlc@0	
/SYS/RCSA/PCIE2	PCIE	SUNW,qlc-pciex1077,2532	QLE2562 5.0GTx4
		/pci@400/pci@1/pci@0/pci@c/SUNW,qlc@0,1	
/SYS/RCSA/PCIE4	PCIE	SUNW,qlc-pciex1077,2532	QLE2562 5.0GTx4
		/pci@440/pci@1/pci@0/pci@c/SUNW,qlc@0	
/SYS/RCSA/PCIE4	PCIE	SUNW,qlc-pciex1077,2532	QLE2562 5.0GTx4
		/pci@440/pci@1/pci@0/pci@c/SUNW,qlc@0,1	
/SYS/RCSA/PCIE10	PCIE	SUNW,qlc-pciex1077,2532	QLE2562 5.0GTx4
		/pci@480/pci@1/pci@0/pci@4/SUNW,qlc@0	
/SYS/RCSA/PCIE10	PCIE	SUNW,qlc-pciex1077,2532	QLE2562 5.0GTx4
		/pci@480/pci@1/pci@0/pci@4/SUNW,qlc@0,1	
/SYS/RCSA/PCIE6	PCIE	SUNW,qlc-pciex1077,2532	QLE2562 5.0GTx4
		/pci@600/pci@1/pci@0/pci@8/SUNW,qlc@0	
/SYS/RCSA/PCIE6	PCIE	SUNW,qlc-pciex1077,2532	QLE2562 5.0GTx4
		/pci@600/pci@1/pci@0/pci@8/SUNW,qlc@0,1	
/SYS/RCSA/PCIE8	PCIE	SUNW,qlc-pciex1077,2532	QLE2562 5.0GTx4
		/pci@640/pci@1/pci@0/pci@8/SUNW,qlc@0	
/SYS/RCSA/PCIE8	PCIE	SUNW,qlc-pciex1077,2532	QLE2562 5.0GTx4
		/pci@6c0/pci@1/pci@0/pci@c/pci@0/pci@4/network@0	
/SYS/RIO/NET2	PCIE	network-pciex8086,1528	5.0GTx8
		/pci@6c0/pci@1/pci@0/pci@c/pci@0/pci@4/network@0	
/SYS/RIO/NET3	PCIE	network-pciex8086,1528	5.0GTx8
		/pci@6c0/pci@1/pci@0/pci@c/pci@0/pci@4/network@0,1	
/SYS/RIO/USB_CTLR	PCIE	usb-pciexclass,0c0330	5.0GTx1
		/pci@6c0/pci@1/pci@0/pci@c/pci@0/pci@6/usb@0	
/SYS/RIO/VIDEO	PCIE	display-pciex102b,522	2.5GTx1
		/pci@6c0/pci@1/pci@0/pci@c/pci@0/pci@7/display@0	
/SYS/MB/SASHBA1	PCIE	scsi-pciex1000,87	LSI,2308_2 5.0GTx8
		/pci@6c0/pci@1/pci@0/pci@c/pci@0/pci@c/scsi@0	

Refer to the documentation for your specific option cards to determine their target transfer rate.

2. If a PCIe card does not match the maximum target speed supported by the system, then remove and reinstall the PCIe card using the hot-serviceable method, as described in the service manual.

---

**Note** - You do not need to physically remove and install the PCIe card.

---

## PCIe Fabric Error Panic or eReport Occurs on Slots Populated With the StorageTek 8 Gb FC PCI-Express HBA (15894188)

The SPARC T5-8 server does not support some older versions of the StorageTek 8 Gb FC PCI-Express HBA that run at 5 Gbytes with a x4 channel. The SPARC T5-8 server supports cards that run at 2.5 Gbytes with a x8 channel. Note that the bandwidth and performance are the same for both types of HBAs.

---

**Note** - Only factory installed versions of the older HBA (371-4325) are supported. They can be identified by a sticker with the printed code of NCAT-4891.

---

If you have already installed the StorageTek 8 Gb FC PCI-Express HBA, you can check the version by using the `fcinfo(1M)` command. Or, if the `fcinfo(1M)` command does not return data about the HBA, you can use the `prtconf(1M)` command to check the speed and channel width of the HBA.

### Check the HBA (fcinfo Command)

If the older version of the HBA is installed, the output will look like this:

```
# fcinfo hba-port
HBA Port WWN: 21000024ff56bce8
  Port Mode: Initiator
  Port ID: 0
  OS Device Name: /dev/cfg/c28
  Manufacturer: QLogic Corp.
  Model: 371-4325-02
...
```

If the new version of the HBA is installed, the output will look like this:

```
# fcinfo hba-port
HBA Port WWN: 21000024ff56bce8
  Port Mode: Initiator
  Port ID: 0
  OS Device Name: /dev/cfg/c28
  Manufacturer: QLogic Corp.
  Model: 7076907
...
```

## Check the HBA (prtdiag Command)

If the older version is installed, and if the fcinfo(1M) command did not return data about the HBA, use the prtdiag(1M) command to obtain the data.

If the old version is installed, the output will look like this:

```
# prtdiag
...
/SYS/RCSA/PCIE7    PCIE    SUNW,qlc-pciex1077,2532          QLE2562    5.0GTx4
                 /pci@540/pci@1/pci@0/pci@e/SUNW,qlc@0
/SYS/RCSA/PCIE7    PCIE    SUNW,qlc-pciex1077,2532          QLE2562    5.0GTx4
                 /pci@540/pci@1/pci@0/pci@e/SUNW,qlc@0,1
...
```

If the new version is installed, the output will look like this:

```
# prtdiag
...
/SYS/RCSA/PCIE3    PCIE    SUNW,qlc-pciex1077,2532          QLE2562    2.5GTx8
                 /pci@340/pci@1/pci@0/pci@6/SUNW,qlc@0
/SYS/RCSA/PCIE3    PCIE    SUNW,qlc-pciex1077,2532          QLE2562    2.5GTx8
                 /pci@340/pci@1/pci@0/pci@6/SUNW,qlc@0,1
...
```

**Workaround:** There is no workaround for this issue. You must replace the older version with the newer version of the HBA.

## Active mempm Should Balance Cage Assignment Across All Nodes (Bug ID15944881)

---

**Note** - This issue was fixed in SRU11.1.6.4.0.

---

On large SPARC T5 series server domains, certain workloads might exhibit unexpected poor performance or negative performance scaling. In addition, on large SPARC T5 servers with a high number of network adapters, aggregate network throughput might be limited to no more than ~12 GB/second.

The Oracle Solaris kernel manages its data structures inside of a *cage*, which defines the limits of kernel memory. The cage is allowed to grow over time if needed. Ideally, the cage is distributed across all memory in the domain, so that the kernel does not exhaust the memory within any one locality group (*lgrp*). Distributing the cage across *lgrps* is desirable because user-level code running on processors within the *lgrp* performs better if local memory is available, rather than using remote memory in another *lgrp*.

**Workaround:** The tunable `mempm` parameter defines how the kernel manages cage growth and distribution. For most workloads, the `mempm` parameter can be left at its default value (0), which allows the power management code to affect cage allocation. However, for some workloads a more even distribution of kernel memory might be obtained using a non-power-aware, traditional cage allocation algorithm.

Set the `mempm` parameter if you observe unexpected poor performance or negative scaling at the application level on large domains with a high number of CPUs. Setting the `mempm` parameter to 1 disables the power management cage allocation algorithm, and the kernel reverts to its traditional cage allocation algorithm.

To set the `mempm` parameter:

1. Add the following to the `/etc/system` file:

```
set plat_disable_mempm=1
```

2. Reboot the server and observe memory usage (for example, using the `lgrpinfo` tool) to see whether memory is more balanced across *lgrps*.

---

**Note** - If this issue persists, contact your Oracle service provider for further assistance.

---

## POST Does Not Work After a Reconfiguration Call From HC (15968276)

If POST runs as part of the boot sequence, and if the system experiences hardware faults, you might see a POST ERROR message, followed by an INFO message. The boot sequence continues,

but the system might contain untested hardware. The untested hardware will be available to the operating system after the boot.

For these cases, POST stalls for several minutes, then it sends an e-report, as in the following example:

```
2013-01-23 15:30:55:990 0:0:0>ERROR:
  ereport.chassis.post.io.test-fail@/SYS/MB/CM0/CMP/PCIE_LINK1
  reporting PCPU ID=0
  TestTitle=IO Trap Handler
  Operation=Data Access Error (Type: 32)
  Trap PC=0x00000000000560b8c
  Trap Level=0x01
  NPESR=0x0000000000000001
  NPEAR=0x0000805100700000
END_ERROR
```

```
2013-01-23 15:30:56:054 0:0:0>INFO: Link Down Recovery Not
Supported
```

```
2013-01-23 15:31:02 0:0:0> ERROR: POST Timed out. Not all
components tested
```

1. Use the `cfgadm` command to identify the drive's WWID that you plan to unconfigure.

In this example, the fifth drive will be unconfigured. The fifth drive has a WWID of `w5000c50033278c09,0`.

```
# cfgadm -al | grep disk
c7::w5000cca016065039,0      disk-path  connected  configured  unknown
c8::w5000cca0257b4999,0      disk-path  connected  configured  unknown
c9::w5000cca0257ca335,0      disk-path  connected  configured  unknown
c10::w5000cca03c252999,0     disk-path  connected  configured  unknown
c13::w5000c50033278c09,0     disk-path  connected  configured  unknown
```

2. Unconfigure the drive.

```
# cfgadm -c unconfigure c13::w5000c50033278c09,0
```

3. Verify that the drive is unconfigured.

```
# cfgadm -al | grep disk
c7::w5000cca016065039,0      disk-path  connected  configured  unknown
c8::w5000cca0257b4999,0      disk-path  connected  configured  unknown
c9::w5000cca0257ca335,0      disk-path  connected  configured  unknown
c10::w5000cca03c252999,0     disk-path  connected  configured  unknown
c13::w5000c50033278c09,0     disk-path  connected  unconfigured  unknown <<==
```

If the drive Ok to Remove LED does not illuminate perform the remaining steps.

4. Send the output of the `prtconf -v` command to a file.

```
# prtconf -v > /tmp/prtconf.out
```

5. Open the file with an editor and search for the WWID of the unconfigured drive (5000c50033278c09 in this procedure's example).
6. In the output, confirm the drive location and that the drive is offline.

Look two lines above the WWID to identify the drive's location (HDD4 in this example)  
 Look at the line after the line with the WWID. The word `offline` indicates the drive is unconfigured.

```
disk, instance #13 (driver not attached)
  System software properties:
    name='ddi-devid-registrant' type=int items=1
    value=00000001
  Hardware properties:
    name='class' type=string items=1
    value='scsi'
    name='inquiry-revision-id' type=string items=1
    value='0B70'
    name='inquiry-product-id' type=string items=1
    value='ST930003SSUN300G'
    name='inquiry-vendor-id' type=string items=1
    value='SEAGATE'
    name='inquiry-device-type' type=int items=1
    value=00000000
    name='compatible' type=string items=4
    value='scsiclass,00.vSEAGATE.pST930003SSUN300G.r0B70' +
'scsiclass,00.vSEAGATE.pST930003SSUN300G' + 'scsiclass,00' + 'scsiclass'
    name='client-guid' type=string items=1
    value='5000c50033278c0b'
  location: /dev/chassis/SPARC_T5-2.1144BD5ZZZ//SYS/SASBP/HDD4/disk <== Location
  Paths from multipath bus adapters:
    Path 5:
    /pci@3c0/pci@1/pci@0/pci@2/scsi@0/iport@1/disk@w5000c50033278c09,0
    mpt_sas#7 (offline) <==Driver offline means drive is unconfigured.
    name='wn' type=string items=1
    value='5000c50033278c0b'
    name='lun' type=int items=1
    value=00000000
    name='lun64' type=int64 items=1
    value=0000000000000000
    name='target-port' type=string items=1
    value='w5000c50033278c09'
    name='attached-port' type=string items=1
```

```

        value='w508002000147f5b1'
    name='attached-port-pm' type=string items=1
        value='1'
    name='target-port-pm' type=string items=1
        value='1'
    name='phy-num' type=int items=1
        value=00000000
    name='obp-path' type=string items=1
        value=
'/pci@3c0/pci@1/pci@0/pci@2/scsi@0/disk@w5000c50033278c09,0'

```

## FPGA iPOST power-on-reset, error-reset, and hw-change Triggers Do Not Work (16192025)

---

**Note** - This bug has been fixed in Oracle ILOM 3.2.1.

---

From within the Oracle ILOM software on the SP, the control of when FPGA iPOST (Oracle ILOM POST) is executed during the boot sequence of the SP is managed by the following properties:

- /SP/diag mode
- /SP/diag trigger

By default, these properties are defined so that the execution of FPGA iPOST is disabled. For example:

```

...
/SP/diag mode=off
/SP/diag trigger=all-resets
...

```

If you change /SP/diag mode to normal to enable iPOST, and if you change /SP/diag trigger from all-resets to any other value (power-on-reset, error-reset, or hw-change), then iPOST will not be executed. In addition, the following message displays on the SER MGT port during the boot sequence to indicate that iPOST has not been executed:

```

...
Starting IPMI Stack: . Done
Starting BBR daemon...
bbrd started after 0 seconds.
Starting SP fishwrap cache daemon: fishwrapd . Done
FPGA iPOST skipped
Starting Host daemon: hostd . Done

```

```
Starting Network Controller Sideband Interface Daemon: ncsid . Done
Starting Physical Domain Manager: pdm . Done
Starting Platform Obfuscation Daemon: pod . Done
Starting vbsc daemon: vbsc . Done
...
```

**Workaround A:** To have iPOST execute when the SP boots, ensure that the trigger property is set to all-resets when it is enabled.

1. With the host not running, log in to the SP.
2. Set the /SP/diag trigger to all-resets.
  - a. At the Oracle ILOM CLI, type:

```
-> set /SP/diag trigger=all-resets
```
  - b. In the Oracle ILOM BUI, left click System Management, and then the Diagnostics entry in the left pane. Then, select all three boxes under the label trigger in the right pane.
3. Reboot the SP.

The following output should display on the system console:

```
...
Starting IPMI Stack: . Done
Starting BBR daemon...
bbrd started after 0 seconds.
Starting SP fishwrap cache daemon: fishwrapd . Done
Running FPGA iPOST
Starting Host daemon: hostd . Done
Starting Network Controller Sideband Interface Daemon: ncsid . Done
Starting Physical Domain Manager: pdm . Done
Starting Platform Obfuscation Daemon: pod . Done
Starting vbsc daemon: vbsc . Done
...
```

## Oracle ILOM Gets Confused When Multiple LDOM Configuration Files Exist With the Same Name (16239544)

---

**Note** - This bug has been fixed in Oracle ILOM 3.2.1.

---

You can have multiple `ldmd` configuration files with various names. The names are case-sensitive (that is, "Alpha" and "alpha" are different names), so you can have configuration files



that use the same word. The Oracle ILOM UI names are case-insensitive, but they are case-preserving. Thus, multiple configuration file names like "Alpha" and "alpha" cause confusion in the Oracle ILOM UI.

For example, if you type the following when there are multiple configuration file names, the UI will hang:

```
-> show /HOSTx/domain/configs
```

**Workaround:** Remove one of the case-matching `ldmd` configuration files. Then, wait for the Oracle ILOM infrastructure to auto-restart the UI process.

## ldm unbind of an SDIO or SRIOV Domain Hangs (16426940)

---

**Note** - This issue has been fixed in SRU11.1.9.5.1.

---

If IOV technologies such as SDIO or SRIOV are utilized, the `ldm` command might hang when removing assigned I/O devices from guest domains, or when unbinding those guest domains, if the assigned devices are in use. Aborting the hung command with the Ctrl-C keys might also fail.

Some command examples:

- `ldm unbind ldg1`
- `ldm rm-io /SYS/RIO/NET0/IOVNET.PF0.VF10 ldg1`
- `ldm rm-io /SYS/IOU2/PCIE2 ldg1`

**Recovery:** Reboot Oracle Solaris on the primary domain. If any guest domains share I/O resources with the primary domain, you must also reboot Oracle Solaris on those guest domains.

**Workaround:** No workaround is available at this time. Check for the availability of a patch with your authorized Oracle Service Provider.

## Oracle Solaris 10 OS Does Not Display Some Fault Information (16456603)

---

**Note** - This bug has been fixed in Oracle Solaris 10.

---

This issue only applies to the Oracle Solaris 10 OS. This issue does not apply to the Oracle Solaris 11.1 OS.

The SPARC T5 Series servers introduce the ability to display SP (Oracle ILOM) faults within the Oracle Solaris OS. However, several fields of information, such as the affected FRU, FRU location, and platform serial number, are not properly interpreted by the Oracle Solaris 10 OS.

As in previous platform releases, significant failures detected by the SP illuminate the chassis fault LED, indicating that the SP status should be investigated.

**Workaround:** If you encounter proxy faults that contain missing or incomplete information, gather the required information from the SP. Refer to the *SPARC T5-8 Server Service Manual* for instructions.

## Management of SP Does Not Display a Table as Expected (16607793)

When you use the Oracle ILOM web interface to manage the SP, clicking System Log displays the system log in a table. At the bottom of the table are icons that allow you to page through the system log or display all the pages of the system log as a single page:



However, when you click any one of the icons, the web interface displays this error message instead of the system log:

---

## System Log

Displays the system log for the SP. Click the *Clear*

## Access Error

Site or Page Not Found

Cannot open URL

Click on System Log to display the system log again.

**Workaround:** There are two workarounds to view the system log:

- To display multiple pages as one page, see [“Set the Number of Displayed Rows to a Maximum of 999” on page 35](#).
- To display sequential pages, see [“Display the System Log With Page Breaks” on page 36](#).

## Set the Number of Displayed Rows to a Maximum of 999

---

**Note** - This workaround allows you to display only the most recent system log entries, up to 999 of them. It is not possible to display any entries older than this limit in the web interface. To view log entries older than the latest 999, use the second workaround, [“Display the System Log With Page Breaks” on page 36](#).

---

1. Click this icon on the System Log page.



The Table Preferences pane opens.

2. Set the Rows Per Page value to 999.
3. Click OK.

The system log table is redisplayed to a maximum of 999 rows long.

## Display the System Log With Page Breaks

1. At the Oracle ILOM CLI interface, display the system log.

```
-> show /System/Log/list/
Log
ID      Date/Time                Event Type                Subsystem
-----
211     Tue Apr  9 07:12:13 2013  Disk Removed             Storage
      Component:HDD2 (Disk 2)
      Disk Removed at location HDD2 (Disk 2)
210     Tue Apr  9 07:11:42 2013  Disk Removed             Storage
      Component:HDD1 (Disk 1)
      Disk Removed at location HDD1 (Disk 1)
.
.
.
Paused: press any key to continue, or 'q' to quit
```

---

**Note** - The width of the output and number of log entries displayed per page is dependent upon the geometry of the terminal window when the command is typed.

---

2. Press the space bar to display the next page of the system log, or press the Q key to stop the output.

## Drive Controller Not Ready When the Driver Tries to Attach (16608475)

Occasionally, when you boot the server, a drive controller might not be ready at the time the driver tries to attach.

- If this problem occurs on the disk controller that serves the boot drive, you see these OpenBoot messages on the host console:

```
failed in wait-for-doorbell
send-message / issue-ioc-facts failed
issue-ioc-facts failed
Can't open adapter
ok
```

In this situation, use **Workaround A**.

- If this problem occurs on the disk controller that does not serve the boot drive, you see these messages from the Oracle Solaris driver on the host console and in `/var/adm/messages`:

```
Probing for device nodes...
@WARNING: /pci@3c0/pci@1/pci@0/pci@2/scsi@0 (mpt_sas1):
          mptsas_ioc_get_facts failed
@WARNING: /pci@3c0/pci@1/pci@0/pci@2/scsi@0 (mpt_sas1):
          mptsas chip initialization failed
@WARNING: /pci@3c0/pci@1/pci@0/pci@2/scsi@0 (mpt_sas1):
          attach failed
```

In this situation, use **Workaround B**.

#### Workaround A:

1. Log in to the SP, and disable autoboot.
 

```
-> set /HOST/bootmode script="setenv auto-boot? false"
```
2. Power off the host, and then power on to reach the OpenBoot prompt.
3. Probe the drives in the system.

```
ok probe-scsi-all
```

4. Examine the output to verify that you see all of the drives.
5. Type the boot command to boot the server.

#### Workaround B:

1. In Oracle Solaris, log in as root, and bring the drives online.

```
# devfsadm -C
```

2. Determine if any services did not start because the service depends on drives to be online during boot.

In this case, manually restart any of these services. Or, if you are not sure how to restart a service, reboot the server to restart all services.

## Disable Debug UARTS on LSI 2308 Controllers (16802420)

On rare occasions, these warning messages might be displayed on the host console:

```
WARNING: /pci@300/pci@1/pci@0/pci@4/scsi@0 (mpt_sas0):
Disconnected command timeout for Target 9
WARNING: mptsas_ioc_task_management failed try to reset ioc to
```

```
recovery!  
WARNING: Target 9 reset for command timeout recovery failed!
```

The warning messages indicate that the SAS controller (`mpt_sas`), which is used to access the internal hard and solid state devices, had trouble communicating. As a result, the SAS controller is reset and the I/O command is reissued.

In most cases, the SAS controller successfully reconnects, and the I/O command completes as normal, as indicated by these messages:

```
mptsas0 Firmware version v14.0.0.0 (?)  
mptsas0: IOC Operational.
```

**Fix:** Update the SAS controller firmware:

---

**Note** - Perform these steps only if your server experiences the SAS disconnect timeout issue.

---

1. Obtain the SAS controller patch for this server.  
SPARC T5-8 server SAS patch ID: 16801179  
See [“Obtain Patches” on page 14](#).
2. Follow the instructions in the patch README file.

---

**Note** - To update the SAS controller firmware, you must first obtain and install the Oracle Hardware Management Pack (HMP) software. Instructions in the README file describe how to obtain and install HMP.

---

## OPS Failing `fault.ops.chassis.voltage.fail` on FRU `/SYS/MB` at Component `/SYS/MB (18070361)`

If you have upgraded the system firmware to version 9.1.1, you might see error messages like the following in the SP log, especially after you power cycle the server.

```
2014-01-08/23:20:03 ereport.chassis.voltage-unc-ghi@SYS/MB  
detector = /SYS/MB/V_+12V_3V3_STBY_OBPS  
hidden = true  
reading = 11.9141  
threshold = 11.844
```

Additionally, if you use `fmddump -eV`, you might see an ereport titled `ereport.chassis.voltage-unc-ghi@SYS/MB` for detector `/SYS/MB/V_+12V_3V3_STBY_OBPS`.



---

**Caution** - Do not power cycle the server if you have removed the power supply in PS0 or if you have removed the power cord from PS0. The server will not boot under these conditions.

---

**Workaround:** You can safely ignore these messages and ereports. However, the messages are retained in the SP log.

**Fix:** Upgrade to system firmware version 9.1.2, or later, as soon as it is available on MOS. You can also reinstall system firmware version 9.1.0.f.

## POST Abort When Retiring Multiple Memory Pages (18091447)

---

**Note** - This issue was fixed in firmware version 9.2.0.

---

After an AC power cycle, the server might crash during the normal POST process due to POST not being able to retire one or more DIMMs. This issue exists in POST since the release of system firmware version 9.0.0.i.

**Workaround:** Press and release the Power button on the front of the server to retry the power cycle. If the server continues to crash, contact your authorized Oracle Service Provider for assistance.

**Fix:** There is no fix for this issue.

## RAID 10 Volumes Created Instead of RAID 1e on an Even Number of Target Disks (18335578)

RAID 10 is supported on T5-series servers with four or more disks. For an even number of target disks (four or more), RAID 10 is the functional equivalent of RAID 1e on an odd number of target disks (three or more).

With the FCode-based RAID utility, a RAID 10 volume is created when you enter this `create-raid1e-volume` command that includes four target disks:

```
ok 9 a b c create-raid1e-volume
```

This is expected behavior.

Refer to the *SPARC T5 Series Servers Administration Guide* for more information about creating RAID volumes.

## Europa-Based 10 GbE PCIe Cards Generate Device Training Errors (18647589)

Europa-based 10 GbE PCIe cards exhibit inconsistent training behavior on startup, resulting in PCIe fabric errors and other stability issues. As a result, the following network adapters are no longer supported:

- Sun Storage 10 GbE PCIe FCoE Converged Network Adapter: Qlogic low profile, dual port and SR optics (ATO SG-PCIEFCOE2-Q-SR 7015322; X-option 7105381, 7053940)
- Sun Storage 10 GbE PCIe FCoE Converged Network Adapter: Qlogic low profile, dual port and Twin-AX (ATO SG-PCIEFCOE2-Q-TA 7054018; X-option 7105382)

## Server Cannot Be Shipped in a Rack

There are two rack rail kits for the SPARC T5-8 server. If you have installed the server with the old rack rail kit (P.N. 350-1662-02) without the shipping braces, you cannot ship the server while it is in the rack. If you installed the server with the new rack rail kit (P.N. 7069640) with the shipping braces, there is no restriction on shipping the server inside the rack.

## Processor Module Bezel Labels Are Incorrect

On some servers, the labels for the processor modules are incorrect. The processor modules are cold-service components. You must shut down the processor module before you remove it from the server.

## Server Cannot Be Shipped in a Rack

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## Processor Module Bezel Labels Are Incorrect

On some servers, the labels for the processor module are incorrect. The processor modules are cold-service components. You must shut down the processor module before you remove it from the server.



## Documentation Issues

These topics describe the known issues with the product documentation.

- [“Processor Module Label Shows Incorrect DIMM Configurations” on page 41](#)
- [“Processor Module Label Shows Support for Filler Panels” on page 41](#)

### **Processor Module Label Shows Incorrect DIMM Configurations**

The label on the processor module shows that half-populations of DIMMs are supported. Half-population of DIMMs is not a supported configuration. The processor modules must be fully populated with either 16-Gbyte or 32-Gbyte DIMMs.

### **Processor Module Label Shows Support for Filler Panels**

The label on the processor module shows that filler panels for DIMMs are supported. As of this release, filler panels for DIMMs are not supported.

