

Oracle® Solaris 10 9/10 Release Notes

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Preface

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This document describes the Oracle Solaris 10 9/10 operating system (OS). For information about the Solaris 10 3/05, Solaris 10 3/05 HW1, Solaris 10 3/05 HW2, Solaris 10 1/06, Solaris 10 6/06, Solaris 10 11/06, Solaris 10 8/07, Solaris 10 5/08, Solaris 10 10/08, and Solaris 10 5/09 releases, see *Solaris 10 5/09 Release Notes*, (Sun part number 820–7273).

Oracle Solaris 10 9/10 Release Notes contains installation and runtime problem details. Also included are end-of-software support statements for the Oracle Solaris 10 OS.

For the latest version of this document, search for “Oracle Solaris 10 9/10 Release Notes” on <http://docs.sun.com>.

Note – This release supports systems that use the SPARC and x86 families of processor architectures: UltraSPARC, SPARC64, AMD64, Pentium, and Xeon EM64T. The supported systems appear in the *Solaris 10 Hardware Compatibility List* at <http://www.sun.com/bigadmin/hcl>. This document cites any implementation differences between the platform types.

In this document the term “x86” refers to 64-bit and 32-bit systems manufactured using processors compatible with the AMD64 or Intel Xeon/Pentium product families. For supported systems, see the *Solaris 10 Hardware Compatibility List*.

Who Should Use This Book

These notes are for users and system administrators who install and use the Oracle Solaris 10 OS.

Related Books

You might need to refer to the following documentation when you install the Oracle Solaris 10 OS:

- *Java Desktop System Release 3 Solaris 10 Collection*
- *Oracle Solaris 10 9/10 What's New*
- *Oracle Solaris 10 9/10 Installation Guide: Basic Installations*
- *Oracle Solaris 10 9/10 Installation Guide: Planning for Installation and Upgrade*
- *Oracle Solaris 10 9/10 Installation Guide: Solaris Live Upgrade and Upgrade Planning*
- *Oracle Solaris 10 9/10 Installation Guide: Network-Based Installations*
- *Oracle Solaris 10 9/10 Installation Guide: Custom JumpStart and Advanced Installations*
- *Oracle Solaris 10 System Administrator Collection*
- *Oracle Solaris 10 9/10 Patch List*

For information about current CERT advisories, see the official CERT web site at <http://www.cert.org>.

For some hardware configurations, you might need supplemental hardware-specific instructions for installing the Oracle Solaris software. If your system requires hardware-specific actions at certain points, the manufacturer of your hardware has provided supplemental Oracle Solaris installation documentation.

Third-Party Web Site References

Third-party URLs are referenced in this document and provide additional, related information.

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Documentation, Support, and Training

See the following web sites for additional resources:

- [Documentation \(http://docs.sun.com\)](http://docs.sun.com)
- [Support \(http://www.oracle.com/us/support/systems/index.html\)](http://www.oracle.com/us/support/systems/index.html)
- [Training \(http://education.oracle.com\)](http://education.oracle.com) – Click the Sun link in the left navigation bar.

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[Oracle Technology Network \(http://www.oracle.com/technetwork/index.html\)](http://www.oracle.com/technetwork/index.html) offers a range of resources related to Oracle software:

- Discuss technical problems and solutions on the [Discussion Forums \(http://forums.oracle.com\)](http://forums.oracle.com).
- Get hands-on step-by-step tutorials with [Oracle By Example \(http://www.oracle.com/technology/obe/start/index.html\)](http://www.oracle.com/technology/obe/start/index.html).
- Download [Sample Code \(http://www.oracle.com/technology/sample_code/index.html\)](http://www.oracle.com/technology/sample_code/index.html).

Typographic Conventions

The following table describes the typographic conventions that are used in this book.

TABLE P-1 Typographic Conventions

Typeface	Meaning	Example
AaBbCc123	The names of commands, files, and directories, and onscreen computer output	Edit your <code>.login</code> file. Use <code>ls -a</code> to list all files. <code>machine_name%</code> you have mail.
AaBbCc123	What you type, contrasted with onscreen computer output	<code>machine_name% su</code> Password:
<i>aabbcc123</i>	Placeholder: replace with a real name or value	The command to remove a file is <code>rm filename</code> .

TABLE P-1 Typographic Conventions (Continued)

Typeface	Meaning	Example
<i>AaBbCc123</i>	Book titles, new terms, and terms to be emphasized	Read Chapter 6 in the <i>User's Guide</i> . <i>A cache</i> is a copy that is stored locally. Do <i>not</i> save the file. Note: Some emphasized items appear bold online.

Shell Prompts in Command Examples

The following table shows the default UNIX system prompt and superuser prompt for shells that are included in the Oracle Solaris OS. Note that the default system prompt that is displayed in command examples varies, depending on the Oracle Solaris release.

TABLE P-2 Shell Prompts

Shell	Prompt
Bash shell, Korn shell, and Bourne shell	\$
Bash shell, Korn shell, and Bourne shell for superuser	#
C shell	machine_name%
C shell for superuser	machine_name#

Installation Issues

This chapter provides information and describes issues related to the installation of the Oracle Solaris 10 9/10 release.

Note – To see previously documented bugs and issues that are fixed and no longer apply to the Oracle Solaris 10 9/10 release, refer to [Appendix A, “Previously Documented Bugs That Were Fixed in the Oracle Solaris 10 9/10 Release.”](#)

General Information

This section provides general information such as behavior changes in the Oracle Solaris 10 9/10 release.

Oracle Solaris Auto Registration

Oracle Solaris Auto Registration is new in the Oracle Solaris 10 9/10 release.

What Is Auto Registration?

A new Auto Registration screen has been added to the interactive installer to facilitate registering your system using your Oracle support credentials. Oracle Solaris JumpStart installations and network installations require a new `auto_reg` keyword in the `sysidcfg` file to control settings during the installation.

With Auto Registration, during the initial reboot after you install or upgrade your system, configuration data about your system is automatically communicated through the existing service tag technology to the Oracle Product Registration System. The service tag data about your system is used, for example, to help Oracle enhance customer support and services. You can learn about service tags at <http://wikis.sun.com/display/ServiceTag/Sun+Service+Tag+FAQ>.

By registering with your support credentials using one of the registration options, you can inventory your systems and the major software components installed on them. For instructions on tracking your registered products, see <https://inventory.sun.com/inventory>. See also, <http://wikis.sun.com/display/SunInventory/Sun+Inventory>.

You can choose to send your configuration data to the Oracle Product Registration System anonymously. An anonymous registration means that the configuration data sent to Oracle has no link to the name of a customer. You can also choose to disable Auto Registration.

How to Enable or Modify Auto Registration

Auto Registration is enabled by default. Auto Registration uses support credentials and proxy information that you provide before, during, or after an installation or upgrade of an SPARC or x86 based system.

Before or During an Installation or Upgrade

- You can add the new `auto_reg` keyword to your `sysidcfg` file prior to a hands-off installation or upgrade, such as network installations or Oracle Solaris JumpStart installations.
- During an interactive installation or upgrade, the installer asks you to provide your support credentials, or to register anonymously.
- You can use a new Oracle Solaris Live Upgrade command option to provide your support credentials and proxy information, or to register anonymously, during a Live Upgrade.

Note – If you are working with an Oracle Solaris Flash archive that is based on the Oracle Solaris 10 9/10 release or a later release, Auto Registration is enabled by default. The means of providing Auto Registration credential and proxy information depends on which installation or upgrade method is used with the archive.

After an Installation or Upgrade

After an installation or upgrade, a privileged system administrator can use the `regadm` command to administer Auto Registration and to manage a service tag inventory.

How to Disable Auto Registration

You have the following options for disabling Auto Registration on a SPARC based system or x86 based system, thus preventing data transmission to the Oracle Product Registration System.

For Hands-Off Installation

If you are performing a hands-off installation or upgrade, for example, if you are using the Oracle Solaris JumpStart program, you can disable Auto Registration prior to the installation or upgrade as follows:

1. Before you begin the installation or upgrade, edit the `sysidcfg` file to add the `auto_reg` keyword to the file.

`auto_reg=disable`
2. Proceed with the installation or upgrade.
3. (Optional) After the installation has completed and the system reboots, verify that the Auto Registration feature is disabled.

`# regadm status`
Solaris Auto-Registration is currently disabled

For Hands-On Installation

1. Begin an interactive installation or upgrade.
2. During the interactive installation or upgrade, the installer prompts you to select an automatic reboot. Do **not** select the option to automatically reboot after the installation or upgrade. You need to disable Auto Registration prior to rebooting the system.
3. After the installation is complete but before rebooting the system, open a terminal window as follows:
 - For a GUI installation, right-click to open a terminal window.
 - For a text installation, press the exclamation point (!) to open a terminal window.
4. At the command line, remove the `/a/var/tmp/autoreg_config` file.
5. Reboot the system.

`# reboot`

For Oracle Solaris Live Upgrades

1. Prior to performing an Oracle Solaris Live Upgrade, open a text editor and create a file that contains the following Auto Registration information:

`autoreg=disable`
2. Save this file.
3. Point to this file when you run the `luupgrade` command.

`luupgrade -k /path/filename`

Further Information

For further information about Auto Registration, see the following resources:

TABLE 1-1 Auto Registration Documentation

Question	Resource
Overview of Auto Registration	“Oracle Solaris Auto Registration” on page 17.

TABLE 1-1 Auto Registration Documentation (Continued)	
Question	Resource
How do I view and manage the inventory of my registered products?	Chapter 17, “Working With the Oracle Solaris Auto Registration regadm Command (Tasks),” in <i>System Administration Guide: Basic Administration</i>
How do I set up Auto Registration during an interactive installation?	<i>Oracle Solaris 10 9/10 Installation Guide: Basic Installations</i>
How do I set up the sysidcfg file to enable or disable Auto Registrations for hands-off installations?	“auto_reg Keyword” in <i>Oracle Solaris 10 9/10 Installation Guide: Network-Based Installations</i>
How do I set up Auto Registration for use with Live Upgrade?	<i>Oracle Solaris 10 9/10 Installation Guide: Solaris Live Upgrade and Upgrade Planning</i>
How do I use the regadm command to modify or enable Auto Registrations separate from an installation or upgrade?	Chapter 17, “Working With the Oracle Solaris Auto Registration regadm Command (Tasks),” in <i>System Administration Guide: Basic Administration</i>
Where can I find further information about My Oracle Support?	My Oracle Support FAQ for Sun Customers and Partners

Disaster Recovery Image

Starting with the Oracle Solaris 10 9/10 release, the *Oracle Solaris 10 9/10 Installation Guide: Solaris Flash Archives (Creation and Installation)* now includes instructions about how to create a Flash Archive recovery image that can be used to restore a system to “factory fresh” condition. See Chapter 5, “Creating and Using a Disaster Recovery Image,” in *Oracle Solaris 10 9/10 Installation Guide: Solaris Flash Archives (Creation and Installation)*. This chapter provides the simplest instructions to create a Flash Archive (FLAR) image that can be loaded onto the target system to recover from a failed disk drive.

BIOS and Firmware Upgrade

The Oracle Solaris 10 9/10 release is tested on all supported Oracle systems running the latest combinations of the following:

- BIOS and ILOM
- SPARC firmware, OBP, and Hypervisor

For best results using the Oracle Solaris 10 9/10 release, upgrade your BIOS/firmware to the latest release listed in the matrix at http://www.sun.com/bigadmin/patches/firmware/release_history.jsp.

New Memory Requirements

The following are the minimum and recommended memory requirements for the Oracle Solaris 10 9/10 release.

Memory Requirements for SPARC Based Systems

- For UFS root file systems:
 - Minimum: 384 Mbytes of memory
 - Recommended: 512 Mbytes of memory
- For ZFS root file systems:
 - Minimum: 768 Mbytes of memory
 - Recommended: 1 Gbyte of memory for overall ZFS performance

Memory Requirements for x86 Based Systems

- For UFS and ZFS root file systems:
 - Minimum: 768 Mbytes of memory
 - Recommended: 1 Gbyte of memory

Changes in Upgrade Support for Oracle Solaris Releases

SPARC: Starting with the Solaris 10 8/07 release, you can upgrade the Oracle Solaris OS on SPARC based systems from the following releases only:

- Solaris 8 OS
- Solaris 9 OS
- Oracle Solaris 10 OS

x86: You can upgrade the Oracle Solaris OS on x86 based systems from the following releases only:

- Solaris 9 OS
- Oracle Solaris 10 OS

To upgrade to the Oracle Solaris 10 9/10 release from a release earlier than the Solaris 8 OS, first upgrade to any of the releases in the preceding list. Then, upgrade to the Oracle Solaris 10 9/10 release.

Support for Products Not Part of the Oracle Solaris OS

The Oracle Solaris 10 9/10 release has been tested for compatibility with previous releases in line with Oracle Solaris's compatibility guarantee. This means that applications, including third party applications, which adhere to Oracle Solaris's published ABI will work without modification on the Oracle Solaris 10 9/10 release. For more information, see the Oracle Solaris Application Guarantee Program at <http://www.sun.com/software/solaris/guarantee.jsp>.

Your system might run both an Oracle Solaris OS and other products that are not part of the Oracle Solaris software. These products might be supplied by either Oracle or another company. If you upgrade this system to the Oracle Solaris 10 release, make sure that these other products are also supported on the Oracle Solaris 10 OS. Depending on the status of each of these products, you can perform one of the following options:

- Verify that the existing version of the product is supported on the Oracle Solaris 10 software.
- Install a new version of the product that is supported on the Oracle Solaris 10 release. You might need to remove the previous version of the product prior to upgrading to the Oracle Solaris software. See the product documentation for more details.
- Remove the product prior to upgrading to the Oracle Solaris 10 software.

Before You Begin

This section contains critical installation issues that you need to be aware of before installing or upgrading to Oracle Solaris 10 OS. These issues might have an impact that would prevent installation or upgrades from completing successfully. If bugs in this section apply to your system, you might need to perform the recommended workarounds before you install or upgrade.

Oracle Solaris Live Upgrade and Oracle Solaris Zones

Starting with the Solaris 10 8/07 release, using Oracle Solaris Live Upgrade with Oracle Solaris zones is supported. For more information about this, see InfoDoc 206844 at <http://sunsolve.sun.com/search/document.do?assetkey=1-61-206844-1>.

Oracle Solaris Live Upgrade Restrictions

For Oracle Solaris Live Upgrade to operate correctly, a limited set of patch revisions must be installed for a given OS version. Make sure you have the most recently updated patch list by consulting <http://sunsolve.sun.com>. The Oracle Solaris 10 9/10 release has the following Oracle Solaris Live Upgrade restrictions:

- To upgrade your current Solaris 8 OS to the Oracle Solaris 10 9/10 release using Oracle Solaris Live Upgrade, perform the following steps:

- For SPARC systems– Oracle Solaris Live Upgrade from the Solaris 8 release to the Oracle Solaris 10 9/10 release is supported. For step-by-step procedures on how to use Oracle Solaris Live Upgrade, see http://www.sun.com/bigadmin/features/articles/live_upgrade_patch.jsp.
- For x86 systems– Oracle Solaris Live Upgrade from the Solaris 8 release to the Oracle Solaris 10 9/10 release is not supported. Instead, use the standard upgrade procedure or perform an Oracle Solaris Live Upgrade from the Solaris 8 OS to the Solaris 9 OS or to the Oracle Solaris 10 OS. Then you can perform a Oracle Solaris Live Upgrade from the Solaris 9 release or the Oracle Solaris 10 release to the Oracle Solaris 10 9/10.

Note – Oracle Solaris Live Upgrade from Solaris 8 to the Solaris 10 5/08, Solaris 10 10/08, Solaris 10 5/09, and Solaris 10 10/09 releases is supported through <http://sunsolve.sun.com/search/document.do?assetkey=1-9-250526-1>.

- To upgrade your current Solaris 9 OS to the Solaris 10 10/09 release using Oracle Solaris Live Upgrade, apply the following patches:
 - For SPARC systems– 137477-01 or later
 - For x86 systems– 137478-01 or later
- To upgrade your current Oracle Solaris 10 OS to the Oracle Solaris 10 9/10 release by using Oracle Solaris Live Upgrade, apply the following patches:
 - For SPARC systems– 137321-01 or later
 - For x86 systems– 137322-01 or later

These patches provide the new p7zip functionality. Oracle Solaris Live Upgrade requires p7zip functionality in order to support upgrade to Oracle Solaris 10 9/10.

Note – The minimum required patch information for the live boot environment, prior to using Oracle Solaris Live Upgrade is provided in Infodoc 206844 at <http://sunsolve.sun.com/search/document.do?assetkey=1-61-206844-1>.

Using Oracle Solaris Live Upgrade With a Zone Root on a ZFS File System

The Oracle Solaris 10 9/10 release provides the ability to install a ZFS root file system and configure a zone root on ZFS. Typically, you can create and configure a zone root on ZFS as you wish. If you plan to use Oracle Solaris Live Upgrade with ZFS and zone configurations, review the following information:

- If you want to use Oracle Solaris Live Upgrade with zone configurations that are supported in the Oracle Solaris 10 9/10 release, you will need to first upgrade your system to the Oracle Solaris 10 9/10 release by using the standard upgrade program.
- Then, with Oracle Solaris Live Upgrade, you can either migrate your UFS root file system with zone roots to a ZFS root file system or you can upgrade or patch your ZFS root file system and zone roots.
- You cannot migrate unsupported zone configurations from a previous Oracle Solaris 10 release directly to the Oracle Solaris 10 9/10 release.

For a detailed description of supported zone configurations to be upgraded or patched in the Oracle Solaris 10 9/10 release, see [“Migrating a UFS Root File System to a ZFS Root File System \(Oracle Solaris Live Upgrade\)”](#) in *Oracle Solaris ZFS Administration Guide*.

For complete instructions on setting up these configurations, see [“Oracle Solaris Installation and Oracle Solaris Live Upgrade Requirements for ZFS Support”](#) in *Oracle Solaris ZFS Administration Guide*.

Review the information in this chapter before you begin your migration to a ZFS root file system or before setting up zones on a system with a ZFS root file system. Follow the recommended procedure exactly to set up zones on a system with ZFS root file system to ensure that you can use Oracle Solaris Live Upgrade on that system.

Upgrading an Oracle Solaris' Trusted Extensions Feature That Is Configured With Labeled Zones

Oracle Solaris systems that are configured with Trusted Extensions use non-global zones. Upgrading these systems is the same as upgrading an Oracle Solaris system that uses zones, and has the same issues.

- **ZFS Zones**– Oracle Solaris systems with ZFS zones cannot currently be upgraded. For Trusted Extensions systems with ZFS zones, the alternative is to recreate the zones. To recreate the zones, perform these steps:
 1. First, back up all the data using the `tar -T` command.
 2. Then delete the zones.
 3. Upgrade the system and reconfigure all the zones.
 4. After all the zones are configured, restore all the data.
- **NFSv4 domain**– After upgrade, when you bring up each labeled zone, you will be prompted for the NFSv4 domain. To avoid this prompt, before upgrade add the correct `NFSMAPID_DOMAIN` value in the `/etc/default/nfs` file in each labeled zone. For more information, see CR 5110062.
- **Live Upgrade**– The following bug affects Live Upgrade of Oracle Solaris systems with zones:
 - [“lucreate and lumake Commands Fail to Create a Copy of a Non-Global Zone That Is Not in the Running State \(6659451\)”](#) on page 42

These bugs will also affect the Live Upgrade of systems that are configured with Trusted Extensions. The workarounds are also the same.

- **Name Service**– If your system was configured at install time to use a name service that is different from the name service being used during upgrade, then the global zone may use the correct name service after boot.

For example, if you specified NIS as the name service to use during system install, but the system was later converted to be an LDAP client, the `luactivate boot` can revert to using NIS as the name service for the global zone. This is due to CR 6569407.

The workaround is to adjust the `name_service.xml` symbolic link in the `/var/svc/profile` directory to point to the correct xml file corresponding to the name service currently in use. For example, if NIS was specified as the name service during install, then `name_service.xml` will be a symbolic link to `ns_nis.xml`. If the system was subsequently converted to being an LDAP client, and LDAP was the name service in use during Live Upgrade, then run the following command:

```
# ln -fs ns_ldap.xml name_service.xml
```

This should be done before starting Live Upgrade or before running the `lucreate` command. However, if you did not run this command before `lucreate`, then perform the following steps after running the `luactivate` command:

1. `luumount` the new boot environment:

```
# luumount <BE_name>
```

2. Change to the `/var/svc/profile` directory of the boot environment:

```
# cd /.alt.<BE_name>/var/svc/profile
```

3. Link the `name_service.xml` link as appropriate. For example:

```
# ln -fs ns_ldap.xml name_sevice.xml
```

4. `luumount` the boot environment:

```
# luumount <BE_name>
```

Note – If the system is booted without performing the steps mentioned above, you will need to manually start the appropriate name service-related SMF client services.

Patching Miniroot on SPARC and x86 Compatible Machines

The procedures for using `patchadd` with the `-C` destination specifier to patch a miniroot on SPARC and x86 machines have changed. You must now unpack the miniroot, apply patches, then repack the miniroot.

See the following for the detailed steps:

- Chapter 5, “Installing From the Network With DVD Media (Tasks),” in *Oracle Solaris 10 9/10 Installation Guide: Network-Based Installations*
- Chapter 6, “Installing From the Network With CD Media (Tasks),” in *Oracle Solaris 10 9/10 Installation Guide: Network-Based Installations*
- Chapter 7, “Patching the Miniroot Image (Tasks),” in *Oracle Solaris 10 9/10 Installation Guide: Network-Based Installations*

Oracle Solaris Data Encryption Supplement on Oracle Solaris 10 Releases

Starting with the Solaris 10 8/07 release, the Oracle Solaris Data Encryption Supplement packages are included by default with the Oracle Solaris 10 OS software. You no longer need to install and download these packages.

Additional Procedures Required When Installing GNOME Display Manager Patches for the Oracle Solaris 10 9/10 Release

The following patches are applied to resolve problems that were reported in CR 6277164 and CR 6214222:

- Patch ID 119366-05 for SPARC based systems
- Patch ID 119367-05 for x86 based systems

The sections that follow provide further steps that you must perform to completely resolve the reported problems. For more information, read the Special Install Instructions section of the patch README for these patches.

x86: Systems With e1x or pce1x NICs Fail Network Configuration

Systems with an e1x or a pce1x network interface card (NIC) fail to install. During the configuration of the NIC, the following error message might be displayed:

```
WARNING: e1x: transmit or jabber underrun: d0<UNDER, INTR, CPLT>
```

See the [e1xl\(7D\)](#) or [pce1x\(7D\)](#) man page for more information.

Workaround: Install and run on systems that do not have e1x or pce1x NICs.

Default Size of /var File System Might Be Inadequate

The default size of the /var file system might be insufficient if the /var file system is located on a separate slice.

You must manually specify a larger slice size for the /var file system.

Note – If the /var file system is not on a separate slice or partition, this problem does not occur.

Workaround: Choose one of the following workarounds.

- If you are using the Oracle Solaris installation program GUI, follow these steps.
 1. Begin the installation.
 2. From Select Type of Install, select Custom Install.

The Oracle Solaris installation program displays several screens that enable you to customize the software localizations, products, and disk layout that you want to install.
 3. From Lay Out File Systems, select Modify.

The disk layout screen is displayed.
 4. Type /var in the File System column for a specific slice, then click Apply.

The installation program suggests a default size for the /var file system.
 5. Edit the Size column entry for the /var file system to twice the disk space size.

For example, if the installation program assigns 40 Mbytes of space, change the Size value to 80.
 6. Complete the installation.
- If you are using the Oracle Solaris installation program's text installer, follow these steps.
 1. Begin the installation.
 2. From Select Type of Install, select Custom Install.

The Oracle Solaris installation program displays several screens that enable you to customize the software localizations, products, and disk layout that you want to install.
 3. From Lay Out File Systems, select Auto Layout.

The disk layout screen is displayed.
 4. Type /var in the File System column for a specific slice.

The installation program suggests a default size for the /var file system.
 5. Press F4_Customize to customize the size of the /var file system.
 6. Edit the Size column entry for the /var file system to twice the disk space size.

For example, if the installation program assigns 40 Mbytes of space, change the Size value to 80.

7. Complete the installation.

- If you are using the custom JumpStart program, use the `filesys` profile keyword to set the size of the `/var` file system. The following example sets the size of the `/var` file system on slice 5 to 256 Mbytes.

```
filesys c0t0d0s5 256 /var
```

x86: Do Not Upgrade Hewlett-Packard Vectra XU Series Systems With BIOS Version GG.06.13

The Oracle Solaris 10 software includes a feature that enables you to install large partitions. The system BIOS must support logical block addressing (LBA). BIOS Version GG.06.13 does not support LBA access. The Oracle Solaris boot programs cannot manage this conflict. This issue can also affect other HP Vectra systems.

If you perform this upgrade, your HP system can no longer boot. Only a blank black screen with a flashing underscore cursor is displayed.

Workaround: Do not upgrade HP Vectra XU Series systems with the latest BIOS Version GG.06.13 to the Oracle Solaris release. This version no longer supports these systems.

You can still boot your system by using the boot diskette or boot CD because the boot paths do not use the hard disk code. Then select the hard disk as your bootable device instead of the network or CD-ROM drive.

SPARC: Older Firmware Might Need Boot Flash PROM Upgrade

On SPARC based systems, Oracle Solaris 10 OS runs in 64-bit mode only. Some Sun4U systems might need to be updated to a higher level of OpenBoot firmware in the flash PROM to run the OS in 64-bit mode. The following systems might require a flash PROM update:

- Ultra 2
- Ultra 450 and Sun Enterprise 450
- Sun Enterprise 3000, 4000, 5000, and 6000 systems

The following table lists the UltraSPARC systems and the minimum firmware versions that are required to run the 64-bit Oracle Solaris 10 OS. *System type* is the equivalent of the output of the `uname -i` command. You can determine which firmware version you are running by using the `prtconf -V` command.

TABLE 1–2 Minimum Firmware Versions Required to Run 64–Bit Oracle Solaris Software on UltraSPARC Systems

System Type From <code>uname -i</code>	Minimum Firmware Version From <code>prtconf -V</code>
SUNW,Ultra-2	3.11.2
SUNW,Ultra-4	3.7.107
SUNW,Ultra-Enterprise	3.2.16

If a system is not listed in the previous table, the system does not need a flash PROM update. For instructions to perform a flash PROM update, see any edition of the Solaris 8 Sun Hardware Platform Guide at <http://docs.sun.com>.

Note – Upgrading firmware on both SPARC and x86 systems can lead to significant performance improvements. See the Firmware section on the BigAdmin Patching Hub at <http://www.sun.com/bigadmin/patches/overview.jsp>. See also, the FAQ at <http://www.sun.com/bigadmin/patches/firmware/faq.jsp>.

Oracle Solaris Management Console 2.1 Software Is Incompatible With Oracle Solaris Management Console 1.0, 1.0.1, and 1.0.2 Software

Oracle Solaris Management Console 2.1 software is not compatible with Oracle Solaris Management Console 1.0, 1.0.1, or 1.0.2 software. If you are upgrading to the Oracle Solaris 10 release, and you have Oracle Solaris Management Console 1.0, 1.0.1, or 1.0.2 software installed, you must first uninstall the Oracle Solaris Management Console software before you upgrade. Oracle Solaris Management Console software might exist on your system if you installed the SEAS 2.0 overbox, the SEAS 3.0 overbox, or the Solaris 8 Admin Pack.

Workaround: Choose one of the following workarounds:

- Before you upgrade, use the `/usr/bin/prodreg` command to perform a full uninstall of Oracle Solaris Management Console software.
- If you did not uninstall Oracle Solaris Management Console 1.0, 1.0.1, or 1.0.2 software before you upgraded to the Oracle Solaris 10 release, you must first remove all Oracle Solaris Management Console 1.0, 1.0.1, or 1.0.2 packages. Use the `pkgrm` command for package removal instead of the `prodreg` command. Carefully follow the order of package removal. Complete the following steps:

1. Become superuser.
2. Type the following command:

```
# pkginfo | grep "Solaris Management Console"
```

If the description does not start with “Solaris Management Console 2.1,” the package names in the output identify a Solaris Management Console 1.0 package.

3. Use the `pkgrm` command to remove all instances of Oracle Solaris Management Console 1.0 packages in the following order:

Note – Do not remove any package that has “Solaris Management Console 2.1” in its description. For example, `SUNWmc . 2` might indicate Oracle Solaris Management Console 2.1 software.

If the `pkginfo` output displays multiple versions of Oracle Solaris Management Console 1.0 packages, use the `pkgrm` command to remove both packages. Remove the original package. Then, remove the package that has been appended with a number. For example, if the `SUNWmcman` and `SUNWmcman . 2` packages appear in the `pkginfo` output, first remove the `SUNWmcman` package and then remove the `SUNWmcman . 2` package. Do not use the `prodreg` command.

```
# pkgrm SUNWmcman
# pkgrm SUNWmcapp
# pkgrm SUNWmcsvr
# pkgrm SUNWmcsvu
# pkgrm SUNWmc
# pkgrm SUNWmcc
# pkgrm SUNWmcsws
```

4. In a terminal window, type the following command:

```
# rm -rf /var/sadm/pkg/SUNWmcapp
```

The Oracle Solaris Management Console 2.1 software should now function properly. For future maintenance, or if the Oracle Solaris Management Console 2.1 software does not function properly, remove the Oracle Solaris Management Console 2.1 software. Reinstall the software by completing the following steps:

1. Use the `pkgrm` command to remove all Oracle Solaris Management Console 2.1 packages and dependent packages in the following order:

Note – If your installation has multiple instances of Oracle Solaris Management Console 2.1 packages, such as `SUNWmc` and `SUNWmc . 2`, first remove `SUNWmc`, and then `SUNWmc . 2`. Do not use the `prodreg` command.

```
# pkgrm SUNWpmgr
# pkgrm SUNWrmui
# pkgrm SUNWlvmg
# pkgrm SUNWlvma
# pkgrm SUNWlvmr
# pkgrm SUNWdcInt
# pkgrm SUNWmga
# pkgrm SUNWmgapp
# pkgrm SUNWmcdev
# pkgrm SUNWmcex
```

```
# pkgrm SUNWwbmc
# pkgrm SUNWmc
# pkgrm SUNWmcc
# pkgrm SUNWmccom
```

2. Insert the Solaris 10 Software - 4 CD into your CD-ROM drive. Type the following in a terminal window:

```
#
# cd /cdrom/cdrom0/Solaris_10/Product
# pkgadd -d . SUNWmccom SUNWmcc SUNWmc SUNWwbmc SUNWmcex SUNWmcdev \
SUNWmgapp SUNWmga SUNWdcInt SUNWlvmr SUNWlvma SUNWlvmg SUNWpmgr \
SUNWrmui
```

All previous Oracle Solaris Management Console versions are removed. The Oracle Solaris Management Console 2.1 software is now functional.

x86: Failure of BIOS Device Utility Prevents Installation or Upgrade From Succeeding (6362108)

On certain occasions, the utility for BIOS devices (/sbin/biosdev) might fail and prevent a successful installation or upgrade. The failure can occur under either of the following circumstances:

- Patch ID 117435-02 was applied, but the system was not rebooted.
- The system contains two or more identical disks that have identical fdisk partitions.

The following error message is displayed:

```
biosdev: Could not match any!!
```

Workaround: Make sure that you reboot the system after applying Patch ID 117435-02. Ensure that identical disks to be used in the installation or upgrade are configured with different fdisk-partition layouts.

The following example is based on a system that has two disks with identical fdisk-partition layouts. To change the layouts, perform the following steps.

1. Become superuser.
2. Start the disk maintenance utility.

```
# format
```

A list of available disks in the system is displayed.

3. To select the disk whose fdisk partition you want to change, type the disk's number.
4. From the list of Format options, select fdisk.

The disk's partition information and a list of fdisk options are displayed.

5. To change the disk's layout, choose one of the following:

- To specify a different active partition, press 2.
 - To add another disk partition, press 1.
 - To delete an unused partition, press 3.
6. To save your changes and exit the fdisk menu, press 5.
 7. To exit the disk maintenance utility, select Quit from the Format options.
 8. Reboot the system.
 9. After the system reboots, verify that the error message no longer appears. As superuser, type the following command:

/sbin/biosdev

If the error message is still generated, repeat the procedure but select a different option in Step 5.
 10. If the system contains other identical disks with identical fdisk partition layouts, repeat Steps 1–9 on these disks. Otherwise, proceed with your Oracle Solaris installation or upgrade.

Cannot Create an Oracle Solaris Flash Archive When a Non-global Zone Is Installed (6246943)

Starting with the current Oracle Solaris release, an Oracle Solaris flash archive cannot be properly created on a system when a non-global zone is already installed. The Oracle Solaris flash feature is currently incompatible with Oracle Solaris zones (also known as Oracle Solaris Containers).

Do not use the `flar create` command to create an Oracle Solaris flash archive in these instances:

- In any non-global zone
- In the global zone if there are any non-global zones installed on the system

If you create an Oracle Solaris flash archive in either instance, the resulting archive might not install properly when the archive is deployed.

Workaround: It might be possible to create an Oracle Solaris flash archive of a system that has installed zones if they are all halted. For more information, see http://opensolaris.org/os/community/zones/faq/flar_zones/.

x86: Sun Java Workstation 2100Z Might Panic When Booting From Oracle Solaris 10 DVD (6214356)

The DVD combo-drive firmware in a Sun Java Workstation 2100Z might cause a system panic. The panic occurs when you boot the workstation from the Oracle Solaris 10 Operating System DVD. After the kernel banner is displayed, the following message is very quickly flashed:

```
panic[cpu0]/thread=fec1be20: mod_hold_stub:
Couldn't load stub module sched/TS_DTB
fec25cb0 genunix:mod_hold_stub+139 (fec04088, 63, fea11)
fec25cc4 unix:stubs_common_code+9 (1, 8, fec026e4)
fec25ce4 unix:disp_add+3d (fec026dc)
fec25d00 genunix:mod_installsched+a4 (fef01530, fef01518)
fec25d20 genunix:mod_install+2f (fef01518, fec25d3c,)
fec25d2c TS:_init+d (0, d6d89c88, fec25d)
fec25d3c genunix:modinstall+d9 (d6d89c88)
fec25d50 genunix:mod_hold_installed_mod+2e (d6d77640, 1, fec25d)
fec25d7c genunix:modload+ac (fec026c4, fec26c4)
fec25d98 genunix:scheduler_load+3d (fec026c4, fec026dc)
fec25db4 genunix:getcid+50 (fec026c4, fec28514)
fec25dcc unix:dispinit+df (fec25ddc, fe814ba9)
fec25dd4 unix:startup_modules+d5 (fec25dec, fe8cac37)
fec25ddc unix:startup+19 (fe800000, 166130, 7)
fec25dec genunix:main+16 ( )
```

Then, the system automatically resets.

Workaround: Choose one of the following workarounds:

Workaround 1: Modify some BIOS configuration settings. This temporary workaround enables an Oracle Solaris 10 installation to be completed. However, this workaround might cause poor read-DVD performance. Follow these steps:

1. During system boot, press F2 at the prompt to enter the setup mode.

The screen displays attachment-type options similar to the following:

```
Primary Master [ ]
Primary Slave [ ]
Secondary Master [CD-ROM]
Secondary Slave [ ]
```

2. Choose the DVD drive's attachment type by selecting the CD-ROM attachment type.

Note – The screen might display more than one attachment type, for example, if your system has multiple optical drives. In such cases, you might need to open the system case to determine the DVD drive's point of attachment. Make sure that you select the correct attachment type that applies to the DVD drive.

3. After selecting the correct CD-ROM attachment type, press Enter.

The next screen appears with Type: [Auto] automatically selected.

4. Press the spacebar twice to change the selection to Type: [CD-ROM].
5. Use the arrow keys to select Transfer Mode.
6. Press Enter to display a list of other Transfer Mode options.
7. Use the arrow keys to select Standard, then press Enter to accept your selection.
8. Press F10 to save the configuration changes and exit the BIOS setup.

The system restarts.

Workaround 2: Update the DVD combo drive's firmware to version R1.12. This workaround requires your DVD combo drive to be attached to a system that is running Microsoft Windows. Follow these steps:

1. Remove your DVD combo drive from the Sun Java Workstation 2100Z.
See the workstation's user guide for steps to remove the drive properly.
2. Connect the drive to a system that is running Microsoft Windows and change the drive's master and slave jumper settings, if needed.
3. Go to AOpen's Download Center at <http://download.aopen.com.tw/default.aspx>.
4. Search for your DVD drive's firmware by using the following information:
 - Product: Combo drives
 - Model: COM5232/AAH
 - Categories: Firmware
5. Download and install the firmware version R1.12.
6. Reinstall the drive on the workstation. If needed, restore the original master and slave jumper settings.

Note – Newer versions of the firmware might already be available at Aopen's Download Center. Tests confirm that version R1.12 resolves the panic issue. It cannot be confirmed whether subsequent firmware revisions also resolve the problem.

x86: Serial Consoles on Some of Oracle's Sun Fire Systems Do Not Work (6208412)

The serial console (ttya) on the following Sun Fire systems from Oracle does not work by default:

- Sun Fire V20z
- Sun Fire V40z
- Sun Fire V60x
- Sun Fire V65x

To use the serial console, you must manually configure the system's BIOS.

Workaround: This workaround requires your system to have a Sun keyboard and a display monitor. Follow these steps:

1. Boot the system.
2. During system boot, press F2 at the prompt to access the Phoenix BIOS.
3. Under Peripherals, change the comm port from disabled to enabled.
4. Save the configuration and boot the system.
5. Use the `eeeprom` command to change input-device and output-device to `ttya`.

Note – Simultaneously pressing the Stop and N keys at system boot to reset the low-level firmware to default settings does not work on these systems.

x86: Oracle Solaris Installation GUI Might Fail on Systems With Existing x86 fdisk Boot Partitions (6186606)

The Oracle Solaris installation GUI might fail on a system with an existing x86 fdisk boot partition. The failure occurs if the existing x86 boot partition was created with the Oracle Solaris text installer. The following error message is displayed:

```
Default layout will not work on this system.
Error:
Error: ERROR: Could not create explicit fdisk partition on c0t0d0,
requested cylinders 14581 - 14597 in use by fdisk partition 1
Error:
Error: ERROR: System installation failed
Pfinstall failed. Exit stat= java.lang.UNIXProcess@a89ce3 2
artition on c0t0d0, requested cylinders 14581 - 14597 in use by fdisk
partition 1 ERROR: System installation failed
```

Workaround: Choose one of the following workarounds:

Workaround 1: When the installation program prompts you to select an installation type, select 3 Solaris Interactive Text (Desktop Session).

Workaround 2: If you use the Oracle Solaris installation GUI, follow these steps:

1. Begin the installation.
The prompt to select an installation type is displayed.
2. Select Custom Install.
The custom installation panels prompt you for information about the locales, software, and disks that you want to install.
3. Answer the prompts on the screens as appropriate for your system.
4. On the Fdisk Selection screen, check the disk that contains the x86 boot partition.

5. Remove the x86 boot partition by changing it to UNUSED in the pull-down menu.
6. Add the x86 boot partition back by changing UNUSED back to x86 boot.
7. Continue the installation.

Installation Bugs

The following bugs might occur during or after the installation of the Oracle Solaris 10 OS.

x86: GUI Installation Fails on Systems With Less Than 768 Mbytes of Memory

For a GUI-based installation of the Oracle Solaris 10 9/10 OS, the system must have a minimum 768 mbytes of memory. If the physical memory is less than 768 mbytes, an error message similar to the following is displayed and the installation switches to a text installation:

```
Not enough memory for graphical installation. Graphical installation
requires 768 MB of memory. Found 640 MB of memory.
Reverting to text-based installation.
```

Workaround: Make sure that you have at least 768 mbytes of memory for a GUI-based installation or upgrade.

Installation Fails if the /var File System Has Just the Minimum or Recommended Disk Space (6873975)

On systems with low memory, installation of the Oracle Solaris OS might fail if either the / or /var file system has just the minimum or recommended disk size. The following error message is displayed:

```
Creating boot_archive for /a
updating /a/platform/sun4u/boot_archive
15+0 records in
15+0 records out
cat: write error: No space left on device
```

Workaround: Increase the size of /var to at least 300 Mbytes on low memory systems.

DSR Upgrade Fails Due to Auto-Layout Problem (6858233)

A DSR upgrade fails on systems installed with an Oracle Solaris 10 release prior to the Oracle Solaris 10 9/10 release. This failure is due to an auto-layout problem. For example, assume you install the OS with the following profile:

```
install_type initial_install
  system_type standalone
  cluster cxall
  partitioning explicit
  filesys rootdisk.s0 auto / logging
  filesys rootdisk.s1 512 swap
  filesys rootdisk.s6 10240 /backup logging
  filesys rootdisk.s7 free
```

Then, perform a DSR upgrade to the Oracle Solaris 10 9/10 release with the following profile:

```
install_type upgrade
  root_device rootdisk.s0
  backup_media local_filesystem /backup
  layout_constraint rootdisk.s0 changeable
  layout_constraint rootdisk.s7 available
```

The DSR upgrade fails with the following error message:

Auto-layout could not determine how to reallocate space on the file systems with the constraints you specified. Try other constraints

Workaround: Label the rootdisk.s1 and rootdisk.s6 slices as “changeable.” If an extra disk is available in the system, and there is sufficient space on an unused slice for a backup, then modify the backup_media keyword, as shown in the following example:

```
backup_media local_filesystem /dev/dsk/c0t1d0s7
```

In this example, disk c0t1d0s7 is the second disk available, and the disk has sufficient space for a backup. Alternately, if only one rootdisk is available in the system, perform the backup on a remote system. Use the following syntax:

```
backup_media remote_filesystem hostname:/export/backup
```

In either case, DSR upgrade will now succeed.

Localized Installation Note

The localized Oracle Solaris installer always runs in the EUC or ISO8859 locales. Thus, the installation log is written in EUC or ISO8859 encoding.

Workaround: While performing a localized command-line interface (CLI) installation by using a terminal window, the locale on the terminal must be either the EUC or ISO8859 locale.

x86: Oracle Solaris Flash Archive Installation Fails on Releases Before the Solaris 10 10/08 Release (6735181)

If you are installing an Oracle Solaris flash archive from a system running a release before the Solaris 10 10/08 release, the archive fails to install. Starting with the Solaris 10 10/08 release, the archive can be installed. The following error message is displayed:

```
bootadm: biodev command failed for disk:
/dev/dsk/<c0t2d0s0>.
bootadm: ls_bootdisk(): cannot determine BIOS disk ID "hd?" for disk:
/dev/dsk/<c0t2d0s0>
bootadm: get_grubroot(): cannot get (hd?, ?,?) for menu. menu not on bootdisk:
/dev/rdsk/<c0t2d0s0>
```

Workaround: Choose one of the following workarounds:

- Install an Oracle Solaris flash archive from at least the Solaris 10 10/08 release.
- If you need to install an Oracle Solaris flash archive from a previous release, boot from the previous release and extract the archive.

Some Asian Locales Cannot Be Used for Custom JumpStart Installation (6681454)

The following Asian locales, th_TH.ISO8859-11, th_TH.TIS620, ko_KR.EUC, ko_KR.UTF-8, zh_TW.EUC, zh_CN.EUC, zh_CN.GBK, and zh_CN.UTF-8 cannot be used while installing the Oracle Solaris OS with Custom JumpStart. While setting locales in the sysidcfg file using the system_locale keyword, the following error message is displayed:

```
xx_xx.xxxxx is not a valid system locale
```

The custom JumpStart installation is stopped, and the interactive installation starts.

Workaround: Use shorter locale names such as th_TH, ko, ko.UTF-8, zh_TW, zh, zh.GBK, and zh.UTF-8, instead of longer locale names.

PRODRM Has Problems Deleting prodreg Entry for Trusted Extensions (6616592)

While upgrading Trusted Extensions from the Solaris 10 11/06 or Solaris 10 8/07 release to the Solaris 10 10/08, Solaris 10 5/09, or Solaris 10 10/09 release, the prodreg entry for Trusted Extensions is not removed. No error message is displayed.

Workaround: After upgrading Trusted Extensions to the current release, remove the prodreg entry manually as follows:

```
# prodreg unregister -f -r -u "Solaris Trusted Extensions" -i 1
```

Upgrade Detailed Patch Analysis Panel Not Scrollable (6597686)

During an Oracle Solaris upgrade, if you select Detailed Analysis to view which patches will be removed, the panel that displays the patches is not scrollable. The complete list of patches to be removed cannot be viewed.

Workaround: Run the analyze_patches scripts manually as follows:

```
# cd <cdrom>/Solaris_10/Misc
# ./analyze_patches -R rootdir -N netdir -D databasedir
```

The command options follow:

- R rootdir rootdir is the root of the installed system. The default root directory is /.
- N netdir netdir is the path to the root of the OS image to be installed and is also the path to the directory that contains the Solaris_10_606 directory. /cdrom/cdrom0 is the default path. You must use this option if you are running patch_analyzer from an NFS mount point.
- D databasedir If the script is called from a directory other than the /Misc directory in the OS image, the program cannot find the database it uses for patch analysis. Use the -D option to supply the path to the database. Without this database, which is located in the Solaris_10_606/Misc/database directory in the OS image, the script will not run correctly.

Keyboard Layout Needs to Be Selected Even Without a Keyboard Attached (6593071)

During an Oracle Solaris serial installation, the system does not have an attached keyboard, but a prompt for selecting the keyboard layout is still displayed.

Workaround: Select the keyboard layout. You can change the keyboard layout by using the kbd command with -s option, if needed, when a keyboard is attached.

Linux Partition Does Not Display on the GRUB Menu After Installation of the Oracle Solaris OS (6508647)

If Linux is installed on your system and you installed the Oracle Solaris OS in a separate partition, the Linux partition does not display in the GRUB menu. No error message is displayed.

Workaround: Edit the GRUB menu's `menu.lst` file to add Linux to the GRUB menu. Perform the following steps:

1. Boot the Oracle Solaris OS.
2. Edit the `menu.lst` file at `/boot/grub/menu.lst`. For more information, see the [System Administration Guide: Basic Administration](#).

x86: Invalid `/sbin/dhclient` Error During Installation (6332044)

If you install the Solaris 10 10/09 OS on an x86 based system, the following error message is displayed:

```
/sbin/dhclient: primary interface requested but no primary interface is set
```

The error does not affect the installation, and the installation succeeds.

Workaround: Ignore the error message.

x86: System Fails to Boot After Custom JumpStart Installation (6205478)

If you use the Custom JumpStart installation method to install the Oracle Solaris OS on an x86 based system, and you explicitly configure slice 2 as the overlap slice in the profile, an error occurs. The system does not reboot successfully after the installation is completed. The following error message is displayed:

```
Cannot find Solaris partition
```

This failure occurs because the overlap slice 2 (`c0t0d0s2`, for example) is set to begin at cylinder 1 rather than cylinder 0.

Workaround: In the Custom JumpStart profile, remove the `filesystem` keyword entry which configures slice 2 as the overlap slice. For example, you would remove a keyword entry that is similar to the following:

```
filesystem c0t0d0s2 all overlap
```

After you remove the entry, perform the Custom JumpStart installation.

Upgrade Issues and Bugs

Note – For the latest information about upgrade support starting with the Solaris 10 10/09 release, see [“Changes in Upgrade Support for Oracle Solaris Releases” on page 21](#).

This section describes upgrade bugs. Some bugs might occur while you are upgrading to the Oracle Solaris 10 OS. Other bugs might occur after you have completed the upgrade.

shutdown Command Might Cause the System to Hang After an Upgrade (6751843)

The shutdown command might cause the system to hang after it is upgraded to the Solaris 10 10/09 release. The hang occurs while the `svc.startd` daemon halts system services.

The Sun Java Web Console debug log file at `/var/log/webconsole/console/console_debug_log` displays if the web console service is cycling, starting and stopping.

Workaround: Type the following commands:

```
/usr/share/webconsole/private/bin/wcremove -i console  
svcadm clear system/webconsole:console  
smcwebserver start
```

Note – The `wcremove` command removes the server domain instance that was created for that specific console. When the console is restarted, a new domain instance is created.

lucreate and lumake Commands Fail to Create a Copy of a Non-Global Zone That Is Not in the Running State (6659451)

When the `lucreate` and `lumake` commands are used on non-global zones that are not in the running state, the commands might not execute successfully. The contents of the original non-global zone and the copy might differ. You might be unable to log in to the zone's console by using the `zlogin` command. The following error message is displayed while you use the `zlogin` command:

```
zlogin: makeutx failed
```

The diagnostic output of the `lucreate` and `lumake` commands does not display any errors.

Workaround: Make sure that all non-global zones are in the running state before using the `lucreate` and `lumake` commands.

SPARC: Upgrading With Oracle Solaris Live Upgrade From Solaris 8 and Solaris 9 Releases Fails (6638175)

When you use Oracle Solaris Live Upgrade to upgrade to the Solaris 10 10/09 release from a Solaris 8 or Solaris 9 release, the upgrade fails. The installation images compression file is now unzipped by using the `7za` utility. The `SUNWp7zip` package is not included in the Solaris 8 and 9 releases. As a result, Oracle Solaris Live Upgrade fails.

Workaround: To use Oracle Solaris Live Upgrade to upgrade your system to a Solaris 10 10/09 release from a Solaris 8 or a Solaris 9 release, perform the steps listed under [“Oracle Solaris Live Upgrade Restrictions”](#) on page 22.

Issues With a DSR Upgrade With Zones (6616788)

A disk space reallocation (DSR) upgrade with zones fails if any zones are installed in the `/opt` directory. The upgrade might fail during the restoration of the DSR archive. In some cases, the upgrade might be successful, but the system cannot be rebooted.

Workaround: Make sure that the root file system is not 100 percent full before the upgrade. If necessary, remove some files before the upgrade so that the root slice is less than 90 percent full.

Trusted Extensions Upgrade Issues (6616585)

When you upgrade Trusted Extensions from the Solaris 10 11/06 or Solaris 10 8/07 release to the Solaris 10 10/08, Solaris 10 5/09, or Solaris 10 10/09 release, unwanted localized Trusted Extensions packages are installed on your system. This bug occurs because the Trusted Extensions installer in the Solaris 10 11/06 and Solaris 10 8/07 releases installs localized packages by default. No error message is displayed.

Workaround: Before upgrading Trusted Extensions to the current release, remove the following localized Trusted Extensions packages.

SUNWjdtts	SUNWkdtts
SUNWjmgts	SUNWkmgts
SUNWjtsman	SUNWktsu
SUNWjtsu	SUNWodtts
SUNWtgnome-l10n-doc-ja	SUNWtgnome-l10n-ui-ko
SUNWtgnome-l10n-ui-it	SUNWtgnome-l10n-ui-zhHK
SUNWtgnome-l10n-ui-sv	SUNWtgnome-l10n-ui-es
SUNWtgnome-l10n-doc-ko	SUNWtgnome-l10n-ui-ptBR
SUNWtgnome-l10n-ui-ja	SUNWtgnome-l10n-ui-zhTW
SUNWtgnome-l10n-ui-zhCN	SUNWtgnome-l10n-ui-fr
SUNWtgnome-l10n-ui-de	SUNWtgnome-l10n-ui-ru

System Cannot Communicate With ypbind After an Upgrade (6488549)

This bug occurs during an upgrade from the Solaris 10 Hardware 2 (HW2) release to the current Solaris 10 10/09 release.

In the Solaris 10 HW2 release, the `name_service.xml` file for any name service, such as NIS, NIS+, FILES, or LDAP is as follows:

```
# ls -l name_service.xml
lrwxrwxrwx  1 root    root      10 Apr 10 16:26 name_service.xml -> ns_files.xml
```

If the name service is NIS, the `name_service.xml` file links to `ns_files.xml`. However, the contents of the `ns_files.xml` file are the same as `ns_nis.xml`.

```
# cat /etc/release
        Solaris 10 3/05 HW2 s10s_hw2wos_05 SPARC
        Copyright 2005 Sun Microsystems, Inc. All Rights Reserved.
        Use is subject to license terms.
        Assembled 26 September 2005

# cd /var/svc/profile
# ls -l name_service.xml ns_files.xml ns_nis.xml
lrwxrwxrwx  1 root  other   12 May 21 04:06 name_service.xml -> ns_files.xml
-r--r--r--  1 root  sys     779 May 21 04:25 ns_files.xml
-r--r--r--  1 root  sys     779 Jan 21 2005 ns_nis.xml
#
# diff ns_files.xml ns_nis.xml
# diff name_service.xml ns_nis.xml
```

In the preceding output, the `ns_nis.xml` and `ns_files.xml` files are the same. This means that the `name_service.xml` file symbolically links to the wrong name service file. The `name_service.xml` file links to `ns_files.xml`. Instead, the `name_service.xml` file should link to the `ns_nis.xml`.

Note – The fix for CR 6411084, the SUNWcsr installation or postinstallation script, creates the correct link only if `name_service.xml` is not a link file. If `name_service.xml` is already a symbolic link file, as in the Solaris 10 Hardware 2 release, the fix for CR 6411084 will not work.

After an upgrade from Solaris 10 Hardware 2 to the current Solaris 10 10/09 release, the following message is displayed on the console or logged in the messages file:

```
Oct 23 12:18:45 vt2000a automount[301]: [ID 366266 daemon.error]
can't read nis map auto_master: can't communicate with ypbind - retrying
```

Also, the `/network/nis/client:default` service is offline.

Workaround: Choose one of the following workarounds:

- **Workaround 1:** Before an upgrade, remove the `/var/svc/profile/name_service.xml` file.
- **Workaround 2:** After an upgrade, change the `/var/svc/profile/name_service.xml` link to the correct `ns_<xxx>.xml` file, based on the name service.

Upgrade Fails on Systems With Zones That Have Been Installed but Not Booted

A non-global zone that has been installed but never booted or made ready prevents a system from being upgraded correctly. No error message is displayed.

Workaround: If such a zone is found, the zone should be made ready and then halted prior to starting the upgrade. For example:

```
global# zoneadm -z myzone ready ; zoneadm -z myzone halt
```

Upgrading an Oracle Solaris 10 System With Non-Global Zones to the Solaris 10 10/09 Release Might Cause the Local File System Service to Fail (6428258)

Upgrading a Solaris 10 3/05 or Solaris 10 1/06 system with non-global zones to the Solaris 10 10/09 release might cause the SMF service that mounts local file systems to fail in the non-global zones. As a result, other services in the non-global zones might fail to start.

After upgrading an Oracle Solaris 10 system with non-global zones to the Solaris 10 10/09 release, services might be in the maintenance state. For example:

```
# zlogin myzone svcs -x
svc:/system/filesystem/local:default (local file system mounts)
State: maintenance since Wed May 24 13:18:06 2006
Reason: Start method exited with $SMF_EXIT_ERR_FATAL.
See: http://sun.com/msg/SMF-8000-KS
See: /var/svc/log/system-filesystem-local:default.log
Impact: 18 dependent services are not running. (Use -v for list.)
```

Workaround:

Reboot the non-global zone from the global zone. For example:

```
global# zoneadm -z myzone reboot
```

Device ID Discrepancies After an Upgrade From the Solaris 9 9/04 OS

In this Oracle Solaris release, Solaris Volume Manager displays device ID output in a new format. The Solaris 9 9/04 OS, which introduced device ID support in disk sets, does not recognize the new format. When you upgrade to the Oracle Solaris 10 OS from the Solaris 9 9/04 release, device IDs that are associated with existing disk sets are not updated in the Solaris Volume Manager configuration. If you need to revert to the Solaris 9 9/04 OS, configuration changes made to disk sets after the upgrade might not be available to the Solaris 9 9/04 OS. For more information, see [Chapter 25, “Troubleshooting Solaris Volume Manager \(Tasks\)”](#), in *Solaris Volume Manager Administration Guide*.

Obsolete Uninstallers Not Removed When Oracle Solaris Live Upgrade Is Used to Upgrade From Previous Releases (6198380)

If you use Oracle Solaris Live Upgrade to upgrade from a Solaris 8 or Solaris 9 release to the Oracle Solaris 10 OS, obsolete uninstaller programs are not removed. These uninstaller programs from previous releases remain in the system's `/var/sadm/prod` directory.

The following obsolete uninstallers are not removed:

```
uninstall_Alternate_Pathing_2_3_1.class
uninstall_CDRW_1_1.class o uninstall_CDRW_1_0.class
uninstall_Bonus_Localization_-_Catalan_CDE_Desktop.class
uninstall_Bonus_Localization_-_Polish_CDE_Desktop.class
uninstall_Bonus_Localizations_-_Russian_CDE_Desktop.class
uninstall_Capacity_on_Demand_1_0.class
uninstall_Java3D_1_3_1.class
uninstall_Java3D_1_3.class
uninstall_Java3D_1_2_1_04.class
uninstall_Java3D_1_2_1_03.class
uninstall_Lights_Out_Management_2_0.class
uninstall_Man_Page_Supplement.class
uninstall_OpenGL_1_3.class
uninstall_OpenGL_1_2_3.class
uninstall_Netra_ct_Platform_1_0.class
uninstall_Netra_t11xx_Alarms_2_0.class
uninstall_Netscape_6_2_3.class
uninstall_Netscape_6_2_1_Beta.class
uninstall_PC_launcher_1_0_2.class
uninstall_PC_launcher_1_0_1_PCfileviewer_1_0_1.class
uninstall_RSC_2_2_2.class
uninstall_RSC_2_2_1.class
uninstall_RSC_2_2.class
uninstall_ShowMeTV_1_3.class
uninstall_Solaris_9_French_Localization.class
uninstall_Solaris_9_German_Localization.class
uninstall_Solaris_9_Hong_Kong_Traditional_Chinese_Localization.class
uninstall_Solaris_9_Italian_Localization.class
uninstall_Solaris_9_Japanese_Localization.class
uninstall_Solaris_9_Korean_Localization.class
uninstall_Solaris_9_Simplified_Chinese_Localization.class
uninstall_Solaris_9_Spanish_Localization.class
uninstall_Solaris_9_Swedish_Localization.class
uninstall_Solaris_9_Traditional_Chinese_Localization.class
uninstall_Solaris_On_Sun_Hardware_Documentation.class
uninstall_Sun_Hardware_AnswerBook.class
uninstall_SunATM_5_0.class
uninstall_SunATM_5_1.class
uninstall_SunFDDI_PCI_3_0.class
uninstall_SunFDDI_SBus_7_0.class
uninstall_Sun_Fire_880_FC-AL_Backplane_Firmware_1_0.class
uninstall_Sun_Fire_B10n_Load_Balancing_Blade_1_1.class
uninstall_SunForum_3_1.class
uninstall_SunForum_3_2.class
```

```

uninstall_SunHSI_PCI_3_0.class
uninstall_SunHSI_SBus_3_0.class
uninstall_SunScreen_3_2.class
uninstall_SunVTS_5_1_PS6.class
uninstall_SunVTS_5_1_PS5.class
uninstall_SunVTS_5_1_PS4.class
uninstall_SunVTS_5_1_PS3.class
uninstall_SunVTS_5_1_PS2.class
uninstall_SunVTS_5_1_PS1.class
uninstall_SunVTS_5_0.class
uninstall_System_Management_Services_1_4.class
uninstall_System_Management_Services_1_3.class
uninstall_System_Management_Services_1_2.class
uninstall_System_Service_Processor_3_5.class
uninstall_WBEM_DR_1_0.class
uninstall_Web_Start_Wizards_SDK_3_0_2.class
uninstall_Web_Start_Wizards_SDK_3_0_1.class
uninstall_Web_Start_Wizards_SDK.class
uninstall_XML_Libraries_2_4_12.class

```

Workaround: After you upgrade the system, manually remove the obsolete uninstallers in the `/var/sadm/prod` directory.

Additional Related Locales Might Be Installed

When you select a locale for your installation, additional related locales might also be installed. This change in behavior occurs in the Oracle Solaris 10 release because all full locales, with message translations, and the Asian and Japanese partial locales, locale enabler, have been repackaged based on language support for locales. Other partial locales are still packaged and installed based on geographic region, such as Central Europe.

Oracle Solaris Runtime Issues

This chapter describes runtime issues that are known to be problems.

Note – To see previously documented bugs and issues that are fixed and no longer apply to the Oracle Solaris 10 9/10 release, refer to [Appendix A, “Previously Documented Bugs That Were Fixed in the Oracle Solaris 10 9/10 Release.”](#)

General Information

This section provides general information and recommendations while running the Oracle Solaris 10 9/10 OS.

Recommended Adoption of SHA–256 and SHA–512 crypt(3C) Plug-ins for Password Encryption

An additional pair of crypt(3C) plug-ins, based on the SHA–256 and SHA–512 digest algorithms, has been available in the Oracle Solaris 10 OS since the Oracle Solaris 10 10/08 release. These plug-ins provide a crypt(3C) hash that uses FIPS 140-2 approved algorithms and discontinues using MD5–based hashes.

It is recommended that you adopt the SHA–256 or SHA–512 password hashing algorithms whenever all your systems in the LDAP domain are running the Oracle Solaris 10 10/08 OS or later releases. These algorithms should not be used in an LDAP domain if your systems are running on Oracle Solaris releases prior to the Oracle Solaris 10 10/08 release.

For information about how to change the password algorithm, see “[Changing the Password Algorithm \(Task Map\)](#)” in *System Administration Guide: Security Services* “[Changing the Password Algorithm \(Task Map\)](#)” in *System Administration Guide: Security Services*.

Common Desktop Environment

The following bugs in the Oracle Solaris 10 release apply to the Common Desktop Environment (CDE).

Problem When Printing to a Local Printer With Thunderbird 3 (6978760)

Thunderbird may crash when you attempt to print the address book or while entering page setup when you have the local printer configured.

Workaround: Add the following entry to your user's profile, and then log out and log back in.

```
export LD_PRELOAD_32=/usr/lib/firefox/libjemalloc.so
```

Trusted Stripe Disappears From the Screen After a Resolution Change (6460624)

When you type the `/usr/X11/bin/xrandr -s` command to set a smaller screen resolution, trusted stripe is no longer displayed. This affects the Trusted CDE Desktop but not the Trusted Java DS Desktop. No error message is displayed.

Workaround: Use one of the following workarounds:

- After the resolution change, restart the Workspace Manager. Select **windows -> Restart Workspace Manager** from the CDE workspace menu and click OK.
- You can disable the RANDR extension by adding extension RANDR to the `TrustedExtensionsPolicy` file.

Note – The `xdpyinfo` command might still list this extension, but the extension is disabled.

For more information, see the [TrustedExtensionsPolicy\(4\)](#) man page.

x86: kdmconfig Command Does Not Create System Identification Configuration File for Xorg X Server (6217442)

If you use the JumpStart installation method, the process might use a system identification configuration (`sysidcfg`) file. This file is used to generate a specific Xsun configuration file for a system. The Xsun configuration portion of a `sysidcfg` file is created by the command

`kdmconfig -d filename`. However, on systems that use the default Xorg server, the command does not create a file with any Xorg configuration information. Consequently, you cannot use the JumpStart method on these systems without some additional preparatory steps.

Workaround: Before using the JumpStart installation method on a system that uses the Xorg server, perform the following steps.

1. Prepare a specific `xorg.conf` file to be used on the system. Store this file in the JumpStart directory of the JumpStart server.

Create an `xorg.conf` file with one of these commands:

- `/usr/X11/bin/Xorg -configure`
- `/usr/X11/bin/xorgconfig`
- `/usr/X11/bin/xorgcfg`

2. Create a finish script that copies the `xorg.conf` file to the `/etc/X11` directory in the system that you want to install. For example, the script might include the following line:

```
cp ${SI_CONFIG_DIR}/xorg.conf /etc/X11/Xorg.conf
```

3. In the custom JumpStart rules file, include the finish script in the rules entry for systems of the type that you want to install.
4. Perform the custom JumpStart installation.

For instructions about how to perform a custom JumpStart installation, see the [Oracle Solaris 10 9/10 Installation Guide: Custom JumpStart and Advanced Installations](#). Chapter 4 includes information about the JumpStart rules file, while Chapter 5 contains a section about finish scripts.

File Systems

The following file system bugs apply to the Oracle Solaris 10 release.

The `config/local_only` Property in `sendmail` Must Not Be Set to `true` (6970172)

The `sendmail` patch 142436-03 and its revisions 04 to 08, modifies the `config/local_only` property to `true`.

```
$ svcprop -p config/local_only smtp:sendmail
true
```

This modification allows `sendmail` to accept requests only from the local host.

Workaround: After adding patch 142436-03 or its revisions 04 to 08, in order for `sendmail` to accept requests from other hosts, make the following changes:

- Reset config/local_only property to false.

```
# svccfg -s svc:/network/smtp:sendmail setprop config/local_only=false
```
- Refresh and restart the sendmail service.

```
# svcadm refresh smtp:sendmail  
# svcadm restart smtp:sendmail
```

SPARC: Console sync Command Can Hang While Attempting a Crash Dump (6967825)

When you run the `mdb` command with the `-K` option, quit with `$q`, and then issue the `sync` command, the system may hang.

You may encounter the same problem when you issue the `sync` command at the `ok` prompt from OpenBoot.

The following error message may be displayed:

```
panic dump timeout ... dump aborted
```

Workaround: Add `dump_plat_mincpu=0` to the `/etc/system` file. Or use the `reboot -d` command instead of the `mdb -K ... $q` command.

32-bit x86: Unable to Use reboot Command to Boot Kernel (6741682)

The `bootadm` command fails to construct a properly formatted GRUB menu entry when you boot a system in the 32-bit mode by using the following commands:

- `reboot kernel/unix`
- `reboot -- -r`

As a result, the system boots in the 64-bit mode. The faulty `menu.lst` file might appear as follows:

```
findroot rootfs0  
kernel /platform/i86pc/kernel/unix  
module /platform/i86pc/boot_archive
```

In the previous example, the kernel line does not contain the multiboot information and is therefore incorrect. No error message is displayed.

Workaround: Edit the `/boot/grub/menu.lst` file manually and add the following information:

```
title Solaris 10 10/08
findroot rootfs0
kernel /platform/i86pc/multiboot kernel/unix
module /platform/i86pc/boot_archive
```

After making these changes, the system boots in the 32-bit mode.

Note – The changes you make to the `menu.lst` file persist over system reboots.

Alternately, you can edit the GRUB menu at boot time, adding the `kernel/unix` boot argument, as shown in the following example:

```
grub edit> kernel /platform/i86pc/multiboot kernel/unix
```

Note – Changes made by editing the GRUB menu at boot time do not persist over system reboots.

For more information, see “[Modifying Boot Behavior on x86 Based Systems](#)” in *System Administration Guide: Basic Administration*.

zpool attach Command Does Not Copy bootblock Information (6668666)

If you use the `zpool attach` command to add a disk to a ZFS root pool, the bootblock information is not copied to the newly added disk. This problem does not affect mirrored ZFS root pools that are created with an initial installation. System does not boot from alternate disk in the mirrored root pool.

Workaround: Choose one of the following workarounds:

- On a SPARC system, identify the alternate disk device and install the boot information. For example:


```
# installboot -F zfs /usr/platform/`uname -i`/lib/fs/zfs/bootblk /dev/rdisk/c0t1d0s0
```
- On an x86 system, identify the alternate disk device and install the boot information. For example:


```
# installgrub /boot/grub/stage1 /boot/grub/stage2 /dev/rdisk/c0t1d0s0
```

x86: ata Driver Timeouts During Boot (6586621)

ata driver timeouts might occur during system boot on Intel multiprocessor systems. These timeouts occur when the root device is on a drive with the HBA controller bound to the legacy ata driver. These timeouts lead to a momentary hang, hard hang, or a panic during system boot with console messages similar to the following:

```
scsi: [ID 107833 kern.warning] WARNING: /pci@0,0/pci-ide@1f,2/ide@0 (ata0):
        timeout: reset bus, target=0 lun=0
scsi: [ID 107833 kern.warning] WARNING: /pci@0,0/pci-ide@1f,2/ide@0 (ata0):
        timeout: early timeout, target=0 lun=0
gda: [ID 107833 kern.warning] WARNING: /pci@0,0/pci-ide@1f,2/ide@0/cmdk@0,0 (Disk0):
        Error for command 'read sector'   Error Level: Informational
gda: [ID 107833 kern.notice]             Sense Key: aborted command
gda: [ID 107833 kern.notice]             Vendor 'Gen-ATA ' error code: 0x3
gda: [ID 107833 kern.warning] WARNING: /pci@0,0/pci-ide@1f,2/ide@0/cmdk@0,0 (Disk0):
        Error for command 'read sector'   Error Level: Informational
gda: [ID 107833 kern.notice]             Sense Key: aborted command
gda: [ID 107833 kern.notice]             Vendor 'Gen-ATA ' error code: 0x3
scsi: [ID 107833 kern.warning] WARNING: /pci@0,0/pci-ide@1f,2/ide@0 (ata0):
        timeout: abort request, target=0 lun=0
scsi: [ID 107833 kern.warning] WARNING: /pci@0,0/pci-ide@1f,2/ide@0 (ata0):
        timeout: abort device, target=0 lun=0
scsi: [ID 107833 kern.warning] WARNING: /pci@0,0/pci-ide@1f,2/ide@0 (ata0):
        timeout: reset target, target=0 lun=0
scsi: [ID 107833 kern.warning] WARNING: /pci@0,0/pci-ide@1f,2/ide@0 (ata0):
        timeout: reset bus, target=0 lun=0
scsi: [ID 107833 kern.warning] WARNING: /pci@0,0/pci-ide@1f,2/ide@0 (ata0):
        timeout: early timeout, target=0 lun=0
gda: [ID 107833 kern.warning] WARNING: /pci@0,0/pci-ide@1f,2/ide@0/cmdk@0,0 (Disk0):
        Error for command 'read sector'   Error Level: Informational
gda: [ID 107833 kern.notice]             Sense Key: aborted command
gda: [ID 107833 kern.notice]             Vendor 'Gen-ATA ' error code: 0x3
gda: [ID 107833 kern.warning] WARNING: /pci@0,0/pci-ide@1f,2/ide@0/cmdk@0,0 (Disk0):
```

Workaround: Choose one of the following workarounds:

Note – To avoid performance degradation, workaround 3 or workaround 4 should only be used temporarily until workaround 5 can be used .

- **Workaround 1:** Enable AHCI in BIOS if available on the system. Enabling this setting requires a reinstall of the Oracle Solaris OS.
- **Workaround 2:** Install Oracle Solaris OS on a disk on a controller which does not use the ata driver.
- **Workaround 3:** Disable MP in the BIOS setup so that a single processor is active.
- **Workaround 4:** Disable MP in the Oracle Solaris OS so that a single processor is active. Perform the following steps from the Grand Unified Bootloader (GRUB) menu:
 1. Type e to edit your selected entry.
 2. Navigate to the line that begins with kernel.

3. Type `e` to switch to the GRUB edit mode.
4. Append `-kd` to the line.
5. Press Enter to accept the change.
6. Type `b` to boot the selected entry.
7. At the `kbmd` prompt, type the following command:

```
use_mp/W 0 :c
```
8. If you are performing a system boot, proceed to Step 10, otherwise install the Solaris 10 10/09 software.
9. At the end of the installation, reboot the system. Repeat steps 1 through 7.
10. To make this change permanent so that the above steps do not need to be repeated for subsequent boots, do the following:
 Become the super user, when the system boot is completed.
11. Open the `/etc/system` file.
12. Add the following line:

```
set use_mp = 0
```

- **Workaround 5:** Disable microcode update. Type the following command:

```
# mv /platform/i86pc/ucode /platform/i86pc/ucode.disabled
```

Microcode update can be invoked manually after the system is up:

```
# ucodeadm -u /platform/i86pc/ucode.disabled/intel-ucode.txt
```

zoneadm install Command Fails With a ZFS Legacy Mount (6449301)

If a non-global zone is initially configured with a ZFS file system to be mounted with the `add fs` subcommand and specifies `mountpoint=legacy`, the subsequent zone installation fails. The following error message is displayed.

```
ERROR: No such file or directory:
cannot mount </zones/path/root/usr/local> in non-global zone to install:
the source block device or directory </path/local> cannot be accessed
```

Workaround: Add access to a ZFS file system after installing the non-global zone.

ZFS and UNIX/POSIX Compliance Issues

ZFS is designed to be a POSIX compliant file system and in most situations, ZFS is POSIX compliant. However, two edge case conditions exist when ZFS does not meet the POSIX compliance tests:

1. Updating ZFS files system capacity statistics.
2. Modifying existing data with a 100 percent full file system.

Related CRs:

- 6362314
- 6362156
- 6361650
- 6343113
- 6343039
- 6742203

fdisk -E Command Can Sweep Disk Used by ZFS Without Warning (6412771)

If you use the `fdisk -E` command to modify a disk that is used by a ZFS storage pool, the pool becomes unusable and might cause an I/O failure or system panic.

Workaround:

Do not use the `fdisk` command to modify a disk that is used by a ZFS storage pool. If you need to access a disk that is used by a ZFS storage pool, use the `format` utility. In general, disks that are in use by file systems should not be modified.

ZFS and Third-Party Backup Product Issues

The following are the issues with Brightstor ARCserve Backup products.

BrightStor ARCserve Backup Client Agent for UNIX (Solaris) and ZFS Support

The BrightStor ARCserve Backup (BAB) Client Agent for UNIX (Solaris) can be used to backup and restore ZFS files.

However, ZFS NFSv4-style ACLs are not preserved during backup. Traditional UNIX file permissions and attributes are preserved.

Workaround: If you want to preserve ZFS files with NFSv4-style ACLs, use the `tar` command with the `-p` option or the `cpio` command with the `-P` option to write the ZFS files to a file. Then, use BAB to backup the `tar` or `cpio` archive.

ZFS GUI Should Check for `/usr/lib/embedded_su` Patch at the Beginning of Each Wizard (6326334)

If you add the `SUNWzfs` package from a Solaris 10 10/09 release to a system that runs a pre-Solaris 10 6/06 release, which does not have the `embedded_su` patch, the ZFS Administration application wizards are not fully functional.

If you attempt to run the ZFS Administration application on a system without the `embedded_su` patch, you will only be able to browse your ZFS configuration. The following error message is displayed:

```
/usr/lib/embedded_su: not found
```

Workaround:

Add the `embedded_su` patch (119574-02) to the system that runs a pre-Solaris 10 6/06 release.

Failure to Synchronize File System on Panic (6250422)

If a host panics with file system I/O occurring to a target, which is connected by using the Oracle Solaris iSCSI software initiator, the I/O might not be able to flush or sync to the target device. This inability to flush or sync might cause file system corruption. No error message is displayed.

Workaround:

Use the journaling file system like UFS. Starting with Oracle Solaris 10, UFS logging is enabled by default. For more information about UFS, see [“What’s New in File Systems?” in *System Administration Guide: Devices and File Systems*](#).

Upgrading From Some Oracle Solaris 10 Releases Requires Remounting of File Systems

After you upgrade an NFSv4 server on all Oracle Solaris 10 updates, your programs might encounter EACCES errors. Furthermore, directories might erroneously appear to be empty.

To prevent these errors, unmount and then remount the client file systems. In case unmounting fails, you might need to forcibly unmount the file system by using `umount -f`. Alternatively, you can also reboot the client.

NFSv4 Access Control List Functions Might Work Incorrectly

NFSv4 Access Control List (ACL) functions might work improperly if clients and servers in the network are installed with different previous Oracle Solaris 10 releases. The affected ACL functions and command-line utilities that use these functions are the following:

- `acl()`
- `facl()`
- `getfacl`
- `setfacl`

For more information about these functions and utilities, see their respective man pages.

For example, errors might be observed in a network that includes the following configuration:

- A client that is running Solaris 10 Beta software
- A server that is running Solaris 10 software

The following table illustrates the results of the ACL functions in client-server configurations with different Solaris 10 releases.

Operation	Client S10 OS	Server S10 OS	Result
get ACL	S10 Beta	S10 OS	fabricated ACL *
get ACL	S10 OS	S10 Beta	works ok
set ACL	S10 Beta	S10 OS	works ok
set ACL	S10 OS	S10 Beta	Error: EOPNOTSUP

Workaround: For the NFSv4 ACL functionality to work properly, perform a full installation of the Oracle Solaris 10 OS on both the server and the client.

System Crash Dump Fails on Devices Greater Than 1 TByte in Size (6214480)

The system cannot generate a dump on a partition that is equal to or greater than 1 Tbyte in size. If such a device is on a system, the following might occur after the system boots subsequent to a system panic:

- The system does not save the dump.
- The following message is displayed:

0% done: 0 pages dumped, compression ratio 0.00, dump failed: error 6

Workaround: Configure the size of your system's dump device to less than 1 Tbyte.

Hardware–Related Issues and Bugs

The following hardware–related issues and bugs apply to the Oracle Solaris 10 release.

SPARC: Issuing XIR on Oracle Solaris 10 9/10 OS Causes a Failure to complete trap processing Error (6962156)

The Oracle Solaris 10 9/10 release includes a new feature that provides enhanced observability of CPU performance data through `kstats`. This feature is disabled by default, and enabled by adding the `set cu_flags=1` entry to the `/etc/system` file and rebooting the system. Before enabling this feature on any Mx000 SPARC OPL platform, update the OBP platform firmware to XCP1093 or later. Failure to update the OBP platform firmware before enabling the feature can result in a subsequent failure of an externally initiated reset (XIR), cause OBP to hang, or the `kmdb` command to fail.

For further information, refer to the README that accompanies the XCP1093 firmware at the download site.

x64: PCI Subsystem ID Changes in ConnectX Firmware 2.6.0 From Mellanox (6810093)

Upgrading the ConnectX firmware to version 2.6.000 or higher on a running system might cause problems in some HCAs and x64 platforms. This issue affects only Mellanox-branded HCAs. Sun-branded PCIe HCAs, EMs, NEMs, and SPARC platforms are not affected.

You might be unable to boot the system or the system might hang during boot. `ibd` (IPoverIB) instance numbers might change and prevent the system from booting and plumb `ibd` devices.

Workaround 1: Before rebooting the system after updating the firmware using `cxflash`, remove the `ibd<x>` instances from the `/etc/path_to_inst` file and `/dev` directory. Perform the following steps:

1. Log in as the root user. The device tree information might look like this:

```
# ls -R /devices | grep 15b3
/devices/pci@0,0/pci10de,5d@e/pci15b3,634a@0
/devices/pci@0,0/pci10de,5d@e/pci15b3,634a@0/ibport@1,ffff,ipib
/devices/pci@0,0/pci10de,5d@e/pci15b3,634a@0/ibport@1,ffff,ipib:ibd0
/devices/pci@0,0/pci10de,5d@e/pci15b3,634a@0/ibport@2,ffff,ipib
```

```
/devices/pci@0,0/pci10de,5d@e/pci15b3,634a@0/ibport@2,ffff,ipib:ibd1  
/devices/pci@0,0/pci10de,5d@e/pci15b3,634a@0:devctl
```

Note – Device specifics vary depending on the Mellanox-branded card installed.

2. Edit the `path_to_inst` file. Perform the following steps:

- a. Make a backup copy of the existing `path_to_inst` file.

```
# cp /etc/path_to_inst /etc/path_to_inst.backup
```

- b. Open the `path_to_inst` file:

```
# vi /etc/path_to_inst
```

- c. Search for lines that contain `ibd` and `hermon`, and delete those lines.
- d. Save the changes and close the file.

3. Remove the entries in the `/dev` directory:

```
rm /dev/ibd?*
```

4. Reboot the system. The system boots normally, and the corresponding device tree looks like this:

```
# ls -R /devices | grep 15b3  
/devices/pci@0,0/pci10de,5d@e/pci15b3,5@0  
/devices/pci@0,0/pci10de,5d@e/pci15b3,5@0/ibport@1,ffff,ipib  
/devices/pci@0,0/pci10de,5d@e/pci15b3,5@0/ibport@1,ffff,ipib:ibd0  
/devices/pci@0,0/pci10de,5d@e/pci15b3,5@0/ibport@2,ffff,ipib  
/devices/pci@0,0/pci10de,5d@e/pci15b3,5@0/ibport@2,ffff,ipib:ibd1  
/devices/pci@0,0/pci10de,5d@e/pci15b3,5@0:devctl
```

Workaround 2: If you reboot the system before updating the `path_to_inst` file and `/dev` directory, the system might hang. In such a case, perform the following steps:

1. Power off the system and remove the HCA from the bus.
2. Reboot the system without the HCA installed.
3. When system is back on, follow steps 2 through 3 listed in Workaround 1.
4. Power off the system.
5. Re-intsall the HCA. Reboot the system.
6. If the system reboots, but `ibd` interfaces do not automatically plumb, the `/etc/hostname.ib<?>` files might not be appropriate for the current device configuration. Manually rename the files to reflect the correct configuration.

The ZFS ARC Allocates Memory Inside the Kernel Cage Preventing DR (6522017)

ZFS can potentially allocate kernel memory across all system boards on systems with very large memory configurations. One free system board is required for dynamic memory reconfiguration so that the memory from the board to be dynamically reconfigured can be copied to the free board. The dynamic memory reconfiguration means that you cannot dynamically reconfigure memory on systems with very large memory configurations that have ZFS running. High-end SunFire servers can relocate kernel pages so that this issue is avoided. These servers must have kernel page relocation (KPR) enabled for domains with more than 32 cores. No error message is displayed

Workaround: Reduce the amount of kernel memory that ZFS can allocate by setting the `zfs_arc_max` parameter in the `/etc/system` file. The following example sets the maximum size to 512 Mbytes.

```
set zfs_arc_max = 0x20000000
```

mpathadm Command Does Not Display Load-Balance Setting Specific to Device

The `mpathadm show logical-unit` subcommand lists the load balancing global configuration value for the Current Load Balance property. However, entries in the `csi_vhci.conf` that change the load-balance type for a specific product are not reflected in the `mpathadm` output even when the setting is active.

Registration Tool Prevents Power Management on Some Frame Buffers (6321362)

If the background processes for the registration tool are left running, the Elite3D and Creator3D framebuffer stop power management. This failure reduces the power savings when the system is in a power-managed state. Under certain conditions, `sys-suspend` might also hang. No error message is displayed. The system might hang during a system suspend or resume operation.

Workaround:

Run the following command approximately 60 seconds after each login:

```
# pkill -f basicreg.jar
# pkill -f swupna.jar
```

SPARC: Sun Crypto Accelerator 4000 Board Versions 1.0 and 1.1 Not Supported in the Oracle Solaris 10 OS

A new cryptographic framework is provided in Oracle Solaris 10 OS. However, versions 1.0 and 1.1 of the Sun Crypto Accelerator 4000 board's software and firmware do not utilize this framework. Consequently, these versions are not supported in the Oracle Solaris 10 OS.

The 2.0 release uses the new framework. This release is available as a free upgrade to current Sun Crypto Accelerator 4000 users who plan to use Oracle Solaris 10 OS. Because the Sun Crypto Accelerator 4000 is an export-controlled product, you must contact Sun Enterprise Services or your local sales channel to obtain the free upgrade. Additional information is available on the Sun Crypto Accelerator 4000 web page at Sun's [products site](#).

Certain USB 2.0 Controllers Are Disabled

Support for certain USB 2.0 controllers has been disabled because of incompatibilities between these devices and the EHCI driver. The following message is displayed:

Due to recently discovered incompatibilities with this USB controller, USB2.x transfer support has been disabled. This device will continue to function as a USB1.x controller. If you are interested in enabling USB2.x support please refer to the ehci(7D) man page. Please refer to www.sun.com/io for Solaris Ready products and to www.sun.com/bigadmin/hcl for additional compatible USB products.

For the latest information about USB devices, see http://www.sun.com/io_technologies/USB-Faq.html.

Supported USB Devices and Corresponding Hub Configurations

This release supports both USB 1.1 and USB 2.0 devices. The following table is a summary of USB devices that work in specific configurations. Connection types can either be direct to the computer or through a USB hub. Note that USB 1.1 devices and hubs are low speed or full speed. USB 2.0 devices and hubs are high speed. For details about ports and speeds of operation, see the *System Administration Guide: Devices and File Systems*.

TABLE 2-1 USB Devices and Configurations

USB Devices	Connection Types
USB 2.0 storage devices	Direct, USB 1.1 hub, USB 2.0 hub

TABLE 2–1 USB Devices and Configurations (Continued)

USB Devices	Connection Types
USB 1.1 devices except audio	Direct, USB 1.1 hub, USB 2.0 hub
USB 1.1 audio devices	Direct, USB 1.1 hub
USB 2.0 audio devices	Not supported

x86: Limitations Exist With Certain Device Drivers in the Oracle Solaris 10 OS

The following list describes limitations with certain drivers and interfaces in this release of Oracle Solaris 10 for x86 platforms:

- Checkpoint Resume This functionality is turned off for all device types. In the `DDI_SUSPEND` code in your `detach()` function, you should return `DDI_FAILURE`.
- Power Management This functionality is unavailable to USB devices. Do not create power management components. Write your driver so that `pm_raise_power()` and `pm_lower_power()` are called only when power management components are created.

DVD-ROM/CD-ROM Drives on Headless Systems

Power management of interactive devices such as removable media is linked with power management of your monitor and the graphics card that drives your monitor. If your screen is active, devices such as the CD-ROM drive and diskette remain at full-power mode. These devices might switch to low-power mode on a system without a monitor. To restore power to the CD or diskette, type **volcheck** to obtain the latest status from each removable device.

Alternatively, you can disable power management on your system by using the Dtpower GUI. By disabling power management, these devices are constantly at full power.

x86: Manual Configuration Required to Specify Non-U.S. English Keyboards

By default, the `kdmconfig` program specifies Generic US-English(104-Key) as the keyboard type that is connected to the system. If the system's keyboard is not a US-English keyboard, you must manually specify the keyboard type during installation. Otherwise, installation continues by using the default keyboard specification that is inconsistent with the system's actual keyboard type.

Workaround 1: If the system's keyboard is not a US-English keyboard, perform the following steps during installation:

1. When the Proposed Window System Configuration For Installation is displayed, press Esc.

Note – The information on the Proposed Window System Configuration For Installation, which includes the keyboard type, is displayed only for 30 seconds. If you want to change configuration settings, you must press Esc before the 30 seconds lapse. Otherwise, the installation continues by using the displayed settings.

2. Change the keyboard type to the type that corresponds to your system's keyboard.
3. Press Enter to accept the changes and continue with the installation.

Workaround 2: If you want to change the keyboard type in a system that is already running Oracle Solaris 10 OS, use the `kdmconfig` program. Choose the option that applies to the type of X server your system is running.

- If your system is running the Xsun server, follow these steps:
 1. Run `kdmconfig`.
 2. Use the Change Keyboard option to change the keyboard type.
 3. Save the configuration.
- If your system is running the default Xorg server, follow these steps:
 1. Run `kdmconfig`.
 2. Select the Xsun server.
 3. Use the Change Keyboard option to change the keyboard type.
 4. Save the configuration.
 5. Run `kdmconfig` again to switch to the Xorg server.

SPARC: jfca Driver for Certain Host Bus Adapters That Are Connected to Tape Devices Might Cause Errors (6210240)

The `jfca` driver for the following host bus adapters (HBAs) might cause system panics or I/O failures when these HBAs are connected to tape devices:

- SG-PCI1FC-JF2
- SG-PCI2FC-JF2

The `jfca` driver for these HBAs is prone to race conditions when certain operations are being run, and thus causes the errors. The operations are the following:

- Link reset
- Loop reset
- Switch reset
- Repeated link failures

Error messages similar to the following examples might be displayed:

- I/O failure messages

```
jfca: [ID 277337 kern.info] jfca4: Sequencer-detected error. Recover
immediately.
last message repeated 18376 times
  jfca: [ID 716917 kern.notice] jfca4: ExgWarning:  SendVerify(1): SHOULD
ABORT THE ORIG I/O PKG=30007520bd8!
scsi: [ID 107833 kern.warning] WARNING:
/pci@1e,600000/SUNW,jfca@3,1/fp@0,0/st@w2100001086108
628,1 (st3):
  SCSI transport failed: reason 'timeout': giving up
```

- System panic message

```
panic[cpu1]/thread=2a100497cc0:
BAD TRAP: type=31 rp=2a1004978d0 addr=a8 mmu_fsr=0 occurred in module
"jfca" due to a NULL pointer dereference
```

Workaround: Do not connect tape devices to either the SG-PCI1FC-JF2 or SG-PCI2FC-JF2 HBA.

Contention Exists Between Certain Devices That Share the Same Bus (6196994)

A bus contention occurs if Quad Fast-Ethernet (QFE) cards share the same bus with any of the following adapters:

- Sun GigaSwift adapter
- Sun Dual Gigabit Ethernet and Dual SCSI/P adapter
- Sun Quad Gigaswift Ethernet adapter

The infinite-burst parameter of the ce driver that is used by these adapters is enabled by default. Consequently, little or no bus time is available for the QFE ports that share the same bus.

Workaround: Do not place QFE cards on the same bus as the network adapters in the list.

Some DVD and CD-ROM Drives Fail to Boot the Oracle Solaris 10 OS (4397457)

The default timeout value for the SCSI portion of the SunSwift PCI Ethernet/SCSI host adapter (X1032A) card does not meet the timeout requirements of Sun's SCSI DVD-ROM drive (X6168A). With marginal media, the DVD-ROM occasionally experiences timeout errors. The only exceptions are Oracle Sun Fire 6800, 4810, 4800, and 3800 systems. These systems overwrite the SCSI timeout value by means of OpenBoot PROM.

Workaround: For other platforms, use the on-board SCSI interfaces or DVD-ROM compatible SCSI adapters, such as the following examples:

- X1018A (SBus: F501-2739-xx)
- X6540A (PCI: F375-0005-xx)

iPlanet Directory Server 5.1 Issues

This section provides important information for users of iPlanet Directory Server 5.1 who are upgrading to the new Oracle Solaris 10 release.

Installing Directory Server 5.1

Sun Java System Directory Server 5 2005Q1 replaces iPlanet Directory Server 5.1 that was integrated in the Solaris 9 Operating System. In Oracle Solaris 10 OS, this new Directory Server can be installed as part of the Sun Java Enterprise System.

Note – For information about the Sun Java System Directory Server 5 2005Q1, refer to the documentation for the Sun Java System at <http://docs.sun.com>.

Oracle Solaris 10 OS continues to support Directory Server 5.1. You might need to install Directory Server 5.1 under the following circumstances:

- You need to recover Directory Server 5.1 data.
- You want to migrate your data to Directory Server 5 2005Q1.

In the Oracle Solaris 10 release, you install the Directory Server 5.1 manually. Follow these steps:

1. Insert the Oracle Solaris 10 OS – 5 CD into your CD-ROM drive.
2. Become superuser.

3. In a terminal window, install the Directory Server.

```
# cd /cdrom/cdrom0/Solaris_10/Product/
# pkgadd -d . IPLTnls IPLTnspr IPLTnss IPLTjss IPLTpldap \
IPLTdsr IPLTdsu IPLTadmin IPLTcons IPLTadcon IPLTdscon \
IPLTadman IPLTdsman
```

To install Simplified Chinese localization packages, issue the following additional command:

```
# pkgadd -d . IPLTcdsu IPLTcadmin IPLTccons IPLTcadcon \
IPLTcdscon IPLTcadman IPLTcdsman
```

To install Japanese localization packages, issue the following additional command:

```
# pkgadd -d . IPLTjdsu IPLTjadmin IPLTjcons IPLTjadcon \
IPLTjdscon IPLTjadman IPLTjdsman
```

4. After installation is complete, configure iPlanet Directory Server 5.1. Refer to [Chapter 11](#), “Sun ONE Directory Server Configuration,” in *System Administration Guide: Naming and Directory Services (DNS, NIS, and LDAP)*.

Migrating to the Sun Java System Directory Server 5 2005Q1



Caution – The database formats of the two Directory Server versions are incompatible. Thus, if you are a Directory Server 5.1 user, Sun recommends that you migrate your database to a database that is formatted for the Sun Java System Directory Server 5 2005Q1.

To perform a migration, both versions of the Directory Server must exist in the system that has been upgraded to the Oracle Solaris 10 OS. If you are a DS 5.1 user, but are using the compressed archive (.tar.gz) delivery format, you can skip immediately to the migration instructions in Step 2.

1. On a terminal window, check whether iPlanet Directory Server 5.1 packages are present in your system.

```
$ pkginfo | grep IPLT
```

If the following packages appear as output, then you can go to Step 2 to proceed with the migration. The output indicates that the iPlanet Directory Server 5.1 packages are in the system.

```
system IPLTadcon Administration Server Console
system IPLTadman Administration Server Documentation
system IPLTadmin Administration Server
system IPLTcons Console Client Base
system IPLTdscon Directory Server Console
```

```
system IPLTdsman Directory Server Documentation
system IPLTdsr   Directory Server (root)
system IPLTdsu   Directory Server (usr)
system IPLTjss   Network Security Services for Java
system IPLTnls   Nationalization Languages and Localization Support
system IPLTnspr  Portable Runtime Interface
system IPLTnss   Network Security Services
system IPLTldap  PerLDAP
$
```

If the packages do not exist, then install the iPlanet Directory Server 5.1 packages first. Refer to the 4-step procedure in the preceding section “[Installing Directory Server 5.1](#)” on page 66. After installation is complete, go to Step 2 to proceed with the migration.

2. Migrate your iPlanet Directory Server 5.1 database to the current version. For instructions, refer to the documentation collection for the Sun Java System Directory Server at http://docs.sun.com/coll/DirectoryServer_05q1.

After migrating your data, make sure you continue to back up directory data in the same way as you backed up directory data before migration. Future disaster recovery might require the migrated database.

Localization Issues

This section describes localization issues that apply to Oracle Solaris 10 OS.

Swedish Software Translations Note

Swedish software translations are no longer updated since the Solaris 10 8/07 release except the ones translated by communities. Thus, updated messages are displayed in English.

Workaround: None.

Multiple Input Method Switcher Applications Appear in Trusted Java DS

When you log in to the Trusted Java DS with UTF-8 or Asian locales, the Input Method Switcher application, `iiim-panel`, appears per label by default. Thus in multiple label environment, multiple `iiim-panel` appears, which could be confusing to the user.

No error message is displayed.

Workaround: Stop using the `iiim-panel`. Perform the following steps:

- Right-click on `iiim-panel` and select Preference. The Input Method Preference Editor, `iiim-properties`, is displayed.
- Select None or Attach to Each Application from the Input Method Status and Switcher Placement list in the General tab.
- Press Apply or Click the OK button.

To switch the input language, you can also use Hotkey. To enable Hotkey, perform the following steps:

- Go to Misc tab in the `iiim-properties`.
- Select the Enable Language/Script choice window using Hotkey option.
- Press Apply or Click the OK button.

Note – When Attach to each application is selected, the language switcher list will not be displayed for GTK applications. You can switch input language by using Hotkey.

Wnn8 Japanese Input Method

Wnn8 Japanese Input method cannot be used if the Wnn8 servers are not enabled.

Workaround: Enable the Wnn8 servers:

```
# svcadm enable wnn8/server
```

In addition, select Wnn8 as the Japanese Language engine by running the `iiim-properties` command.

New ChuYin Input Method Not Supported in Upgrade to IIIMF rev.12 (6492129)

When you upgrade the OS to the Solaris 10 6/06 or Solaris 10 11/06 release, the input method framework and individual input methods get upgraded from rev.10 to rev.12. However, ChuYin is not in the list of supported input methods. Also, you cannot use the function keys F2 and F3 to switch methods

Workaround: Use PinYin to type traditional Chinese characters with Hanyu PinYin. Use `Ctrl+Shift` to switch input methods.

AltGr Key Does Not Work As a Mode Switcher in Some Russian Locales (6487712)

The AltGr key does not work as a mode switcher for the Russian Xsun layout in ru_RU.KOI8-R and ru_RU.ANSI1251 locales.

Workaround 1: Switch to the ru_RU.UTF-8 or the ru_RU.ISO8859-5 locale.

Workaround 2: Use IIIMF instead of the Russian keyboard layout.

Arabic Text Not Appearing in ar Locales

If your x86 system is using Xorg as the default Xserver, the Arabic font (iso7759-6) does not appear in the ar locale. This error does not occur if you are using XSun instead of XOrg.

Workaround: Follow these steps.

1. As superuser, edit /usr/dt/config/Xservers.

- Uncomment or add the following line:

```
:0 Local local_uid@console root /usr/openwin/bin/Xsun :0
-nobanner -defdepth 24
```

- Comment out the following line:

```
:0 Local local_uid@console root /usr/X11/bin/Xorg :0
```

2. Reboot the system.

Alternatively, you can log in to ar_EG.UTF-8 or other UTF-8 locales.

Several Arabic Fonts Do Not Work in GNOME Desktop (6384024)

In GNOME when you select certain Arabic fonts, the characters do not display. This problem appears when you select fonts for applications, the desktop, or the window title using the GNOME font properties menu. The affected fonts include:

- Akhbar MT (Regular, Bold)
- Shayyal MT (Regular, Bold)
- Naskh MT (Regular, Bold)

No error message is displayed.

Workaround:

Use any of the newly delivered Kacst family of fonts to display Arabic characters in GNOME applications.

Unable to Switch Input Language on Session-Saved Applications (6360759)

Multiple language input is supported in UTF-8 locales, but the language switch is not working with session-saved applications where mouse button 1 is clicked first after login. This problem occurs with the Java Desktop System (Java DS). No error message is displayed.

Workaround:

Click mouse button 1 on the background workspace or Launch Menu before clicking any application.

Keyboard Shortcuts in Mozilla 1.7 in ES Locale Are Unusual and Ambiguous (6288620)

The keyboard shortcuts in Mozilla 1.7 are unusual, especially in Spanish locale. For example, Ctrl-S is being used for copying as well as for saving. No error message is displayed.

Workaround:

Identify the shortcut keys assigned to user actions from menu in the product.

Migration Note for UTF-8 Locales

When migrating to UTF-8 locales, the files affect the method that you use to import or export data.

Microsoft Office Files

Microsoft Office files are encoded in Unicode. StarOffice applications can read and write the Unicode encoded files.

HTML Files

HTML files authored using HTML editors such as Mozilla Composer, or HTML files saved by a web browser, usually contain a charset encoding tag. After exporting or importing, you can

browse such HTML files with the Mozilla Navigator web browser, or edit the files with Mozilla Composer, according to the encoding tag in the HTML file.

Fixing Broken HTML File

Some HTML files might be displayed in garbage characters. This problem is typically due to the following reasons:

- The charset encoding tag is incorrect.
- The charset encoding tag is missing.

To find the charset encoding tag in the HTML file, perform the following actions:

1. Open the file with Mozilla.
2. Press Ctrl-i, or click View to open the View menu.
3. Click Page Info.

The charset information is in the bottom of the General tab, for example:

```
Content-Type text/html; charset=us-ascii
```

If the string `charset=us-ascii` does not match the actual encoding of the file, the file might appear broken. To edit the encodings of the HTML file, perform the following actions:

1. Open the file with Mozilla Composer.
2. Open the File menu.
3. Select Save as Charset.
4. Choose the correct encoding. Mozilla Composer automatically converts the encoding and the charset tag as appropriate.

Emails Saved As Portable Format

Modern mails are tagged with the MIME charset tag. The Email and Calendar application accepts MIME charset tags. You do not need to perform any encoding conversion.

Plain Text Files

Plain text files do not have a charset tag. If the files are not in UTF-8 encoding, encoding conversion is needed. For example, to convert a plain text file encoded in Traditional Chinese big5 to UTF-8, execute the following command:

```
iconv -f big5 -t UTF-8 inputfilename
```

```
> outputfilename
```


You can also use the File System Examiner for the encoding conversion.

You can use the Text Editor to read and write character encoding text automatically or by specifying an encoding explicitly when opening or saving a file.

To start Text Editor, click Launch, then choose Applications->Accessories->Text Editor.

File Names and Directory Names

If file names and directory names using multibyte characters are not in UTF-8 encoding, encoding conversion is needed. You can use File System Examiner to convert file and directory names and the contents of plain text files from legacy character encodings to UTF-8 encoding. Refer to the online Help for File System Examiner for more information.

To start File Systems Examiner, click Launch, then choose Applications->Utilities->File System Examiner.

When you access non-UTF-8 file or directory names on Microsoft Windows via SMB using File Manager, you can access the non-UTF-8 file or directory names without encoding conversion.

Launching Legacy Locale Applications

For applications that are not ready to migrate to Unicode UTF-8, you can create a launcher on a front panel to start the application in legacy locales. You can also launch the applications directly from the command line. Perform the following steps to create a launcher for an application.

1. Right-click on the panel where you want to place the launcher.
2. Choose Add to Panel->Launcher.
3. Use the following format to type the entry in the Command field in the Create Launcher dialog:

```
env LANG=locale LC_ALL=  
locale application name
```

For example, if you want to launch an application called `motif-app` from `/usr/dt/bin` in the Chinese Big5 locale, enter the following text in the Command field of the Create Launcher:

```
env LANG=zh_TW.BIG5 LC_ALL=zh_TW.BIG5 /usr/dt/bin/motif-app
```

4. Click OK to create the launcher on the panel.

When you need to run CLI (command line interface) applications which are specific to a legacy locale, open a Terminal window in the legacy locale first and then run the CLI applications in the same Terminal window. To open a Terminal window in a legacy locale, enter the following command:

```
eng LANG=locale LC_ALL=locale GNOME-TERMINAL --disable-factory.
```

Instead of opening a new Terminal window in a legacy locale, you can switch the locale setting from UTF-8 to a legacy locale in the current Terminal window by changing the encoding the Set Character Encoding menu in the Terminal window. Then you must also set the LANG and LANG environment variables to the current shell.

Hardware for Some Keyboard Layouts Type 6 and 7 Not Available

Software support for some keyboard layouts has been added to the Oracle Solaris OS. This software gives users greater flexibility for keyboard input by modifying standard U.S. keyboard layouts to their own language needs.

Currently, no hardware is available for the following keyboard layout types:

Albania	Belarus
Belarus	French Canadian
Croatia	Czech
Denmark	Estonia
Hungary	Iceland
Latvia	Lithuania
Malta UK	Malta US
Poland	Brazil Portuguese
Romania	Serbia and Montenegro
Slovakia	Slovenia

Workaround: Choose one of the following workarounds:

- **Workaround 1:** To take advantage of this keyboard software, set up keyboard input using the `kbd -s` command line utility. For desktop sessions with the UTF-8 locale environment, use Input Method Preference Editor. If the required keyboard layout is not included in the `kbd -s` utility, use Workaround 2.
- **Workaround 2:** Modify the `/usr/openwin/share/etc/keytables/keytable.map` file. For example, for the Canadian Type 6 keyboard, make the following changes:
 1. Change the `US6.kt` entry to `Canada6.kt` in the `/usr/openwin/share/etc/keytables/keytable.map` file. The modified entry should read as follows:

Canada6.kt

- ## Networking Issues

```
rpcib: WARNING: rib rbuf alloc: No free buffers!
```

- Configure the NFS server to enable TCP. In the `/etc/default/nfs` file, change `(NFSD_PROTOCOL=tcp)`.
- Mount the NFS file system from the client side with the `proto=tcp` mount option.

Workaround: Set the DOI to **1** using the Solaris Management Console.

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Workaround: The command `routeadm` enables IP forwarding. The configuration changes that are the result of `routeadm` usage persist across system reboots.

- To enable IPv4 forwarding, type **`routeadm -e ipv4-forwarding`**.
- To enable IPv6 forwarding, type **`routeadm -e ipv6-forwarding`**.
- To apply the enabled IP-forwarding configuration to the currently running system, type **`routeadm -u`**.

For more information about IP forwarding, see the [routeadm\(1M\)](#) man page.

Zone Not Booting When IP Address Belongs to a Failed IP Network Multipathing Group (6184000)

A zone can be configured so that the zone's IP address becomes part of an IP Network Multipathing (IPMP) group. The configuration process is documented in “[How to Extend IP Network Multipathing Functionality to Shared-IP Non-Global Zones](#)” in *System Administration Guide: Oracle Solaris Containers-Resource Management and Oracle Solaris Zones*.

If all the network interfaces in the IPMP group fail, a zone does not boot if it has an IP address that is part of the IPMP group.

The following example illustrates the result if you attempt to boot the zone.

```
# zoneadm -z my-zone boot
zoneadm: zone 'my-zone': bge0:1:
could not set default interface for multicast: Invalid argument
zoneadm: zone 'my-zone': call to zoneadmd failed
```

Workaround: Repair at least one network interface in the group.

Security Issues

The following security issues applies to the Oracle Solaris 10 release.

Nonpassword Logins Fail With `pam_ldap` Enabled (6365896)

After the account management PAM module for LDAP (`pam_ldap`) is enabled, users must have passwords to log in to the system. Consequently, nonpassword-based logins fail, including those logins that use the following tools:

- Remote shell (`rsh`)

- Remote login (rlogin)
- Secure shell (ssh)

Workaround: None.

Oracle Solaris Commands and Standards

The following section describes behavior changes in certain commands and standards in the Oracle Solaris 10 OS.

winbind Command Fetches Only the First 1000 Active Directory Users

This bug occurs while using the Samba server with winbind in an Active Directory environment. The Solaris 10 10/09 release includes the Samba 3.0.28 software version. When querying all the users or more than 1000 users from the Active Directory server, winbind fetches only the first 1000 results.

Workaround: None.

Changed Man Pages for Trusted Extensions Are in Reference Manual Only

The following Trusted Extensions man pages are revised for this release:

- add_allocatable(1M)
- remove_allocatable(1M)
- label_to_str(3TSOL)
- tsol_getrhtype(3TSOL)
- tnzonecfg(4)

The revised man pages cannot be viewed using the man command. To view the revised man pages, see the [Solaris Trusted Extensions Reference Manual](#).

Bash 3.00 No Longer Sets Some Environment Variables

Oracle Solaris 10 OS includes Bash 3.00. This shell no longer automatically exports the following variables to the environment:

- HOME

- PATH
- SHELL
- TERM
- HOSTNAME
- HOSTTYPE
- MACHTYPE
- OSTYPE

This new behavior applies even if the shell assigns default values to these variables.

Workaround: Export these variables manually.

New `ln` Utility Requires `-f` Option

The behavior of `/usr/bin/ln` has changed to adhere to all of the standards from SVID3 through XCU6. If you use the `ln` command without the `-f` option to link to an existing target file, the link is not established. Instead, a diagnostic message is written to standard error, and the command proceeds to link any remaining source files. Finally, the `ln` command exits with an error value.

For example, if file `b` exists, the syntax `ln a b` generates the following message:

```
ln: b: File exists
```

This behavior change affects existing shell scripts or programs that include the `ln` command without the `-f` option. Scripts that used to work might now fail in Oracle Solaris 10 OS.

Workaround: Use the `-f` option with the `ln` command. If you have existing scripts that execute the link utility, make sure to modify these scripts to comply with the command's new behavior.

New `tcsh` Version Rejects `setenv` Variable Names That Use a Dash or an Equal Sign

In the Oracle Solaris 10 OS, `tcsh` has been upgraded to version 6.12. This version no longer accepts environment variables whose names use a dash or an equals sign. Scripts that contain `setenv` lines and that work in earlier Oracle Solaris versions might generate errors in the current release. The following error message is displayed:

```
setenv: Syntax error
```

For more information, refer to the `tcsh` man page for the Oracle Solaris 10 OS.

Workaround: Do not use the dash or equals sign in names for environment variables.

STDIO `getc` Family EOF Condition Behavior Change

Applications that were built in strict standard C conformance mode are affected by the behavior changes of certain library functions. An example is applications that were compiled by using the `cc -Xc` or `c89` compilation mode. The behavior has changed for the following library functions:

- `fgetc()`
- `fgets()`
- `fgetwc()`
- `fgetws()`
- `getc()`
- `getchar()`
- `gets()`
- `getwc()`
- `getwchar()`
- `getws()`

A formal interpretation of the 1990 C Standard requires that after an end-of-file condition is set, no more data is returned from the file on subsequent input operations. The exception is if the file pointer is repositioned or the error and end-of-file flags are explicitly cleared by the application.

The behavior for all other compilation modes remains unchanged. Specifically, the interfaces can read additional newly written data from the stream after the end-of-file indicator has been set.

Workaround: Call `fseek()` or `clearerr()` on the stream to read additional data after the EOF condition has been reported on the stream.

Output Columns of the `ps` Command Have Been Widened

Due to larger UIDs, processor ids, and cumulative execution time, the columns of the `ps` command output have been widened. Customer scripts should not assume fixed output columns.

Workaround: Scripts should use the `-o` option of the `ps` command.

For more information, see the [ps\(1\)](#) man page.

Solaris Volume Manager Bugs

The following Solaris Volume Manager bugs apply to the Oracle Solaris 10 9/10 release.

Solaris Volume Manager Does Not Remove Devices Correctly If `fdisk` Does Not Have Valid Entries

`bcm_sata` SATA HBA driver supports SATA disks and SATA ATAPI devices. The driver supports RD1000, which is a removable SATA ATAPI device. The volume manager (`vold`) does not create a node when the media in RD1000 does not have valid entries in `fdisk`. Hence, the `rmformat` command does not perform as expected.

Workaround: Use the following workaround:

1. Turn off the volume manager (`vold`).

```
# /etc/init.d/volmgt stop
```

2. Run the following commands as needed:

- `fdisk`
- `rmformat`
- `format`
- `newfs`
- `mound`

3. Restart volume manager.

```
# /etc/init.d/volmgt start
```

Solaris Volume Manager `metattach` Command Might Fail

If you have a Solaris Volume Manager mirrored root (`/`) file system in which the file system does not start on cylinder 0, all submirrors you attach must also not start on cylinder 0.

If you attempt to attach a submirror starting on cylinder 0 to a mirror in which the original submirror does not start on cylinder 0, the following error message is displayed:

```
can't attach labeled submirror to an unlabeled mirror
```

Workaround: Choose one of the following workarounds:

- Ensure that both the root file system and the volume for the other submirror start on cylinder 0.
- Ensure that both the root file system and the volume for the other submirror do not start on cylinder 0.

Note – By default, the JumpStart installation process starts swap at cylinder 0 and the root (/) file system somewhere else on the disk. Common system administration practice is to start slice 0 at cylinder 0. Mirroring a default JumpStart installation with root on slice 0, but not cylinder 0, to a typical secondary disk with slice 0 that starts at cylinder 0, can cause problems. This mirroring results in an error message when you attempt to attach the second submirror. For more information about the default behavior of the Oracle Solaris installation programs, see the Oracle Solaris 10 Installation Guides.

Java Desktop System Bugs

This section describes issues that apply to the Sun Java Desktop System (Java DS) in the Oracle Solaris 10 OS.

Email and Calendar

This section describes issues related to Email and Calendars.

Problem With Changing Authentication Type (6246543)

After you change the authentication type for the incoming mail server, Email and Calendar might not work correctly.

Workaround: Restart Email and Calendar.

Login Issues

This section describes login issues.

Login Error Message

You might encounter the following error message when you log in to a Java Desktop System session:

```
Could not look up internet address for hostname.  
This will prevent GNOME from operating correctly.  
It may be possible to correct the problem by adding  
hostname to the file /etc/hosts
```

Workaround: Ensure that your hostname is set up correctly in the `/etc/hosts` file. Perform the following steps:

1. Set the hostname in the `/etc/hosts` file as follows:

```
127.0.0.1 localhost loghost hostname  
localhost.localdomain
```

hostname is the name of your system.

2. Ensure that your hostname is listed in the `/etc/nodename` file. This file must also contain the following line:

```
127.0.0.1 localhost loghost hostname  
localhost.localdomain
```

Help System

Wrong Help Window Opened For Volume Control (6253210)

If you use the Yelp browser to open the online help for Volume Control, the help file for the Keyboard Accessibility panel application is opened instead.

Workaround: None.

Mozilla Browser

Cannot Print Certain Documents From the Mozilla Browser

You cannot print documents from the Mozilla browser if the documents contain Unicode characters that are not in the Basic Multilingual Plane (BMP).

Workaround: None.

System-Level Issues

User Preferences Not Fully Compatible

User preferences in your home account for an earlier version of the GNOME Desktop might be partly incompatible with the version on the Java DS Release 3.

Workaround: Reset your preferences. Perform the following steps:

1. Log out of the Java Desktop System.
2. Click Session and choose Failsafe terminal.
3. Log in.
4. In the failsafe terminal window, enter the following commands:

```
% gnome-cleanup exit
```

5. Log in again.

Your GNOME preferences are now reset.

Problem With Sound Recorder

The slide bar and the side counter do not work when the Sound Recorder is recording a new .wav file.

Workaround: None.

Nautilus ACL MASK Is Not Synchronized With Group Permissions (6464485)

The Group permissions in the Permissions tab should be the same as the Mask permissions in the Access Tab, but on some occasions they appear out of sync.

Workaround: Click the Close button, and then click Reload. View the file properties again. The Group permissions and the Mask permissions will now be in sync again. The permissions are set to what you changed the Mask to in the previous step.

strftime(3c) Should Support GNU Extension in %-m And %-d (6448815)

The Java DS menu bar and some applications, like Evolution, incorrectly display Chinese date. The incorrect date is displayed in the %-m M %-d D format where M and D are the month and date in Chinese respectively.

Workaround: Perform the following steps:

1. Backup the /usr/share/locale/LC_MESSAGES/gnome-panel*.mo file.
2. Download gnome-panel.gnome-2-16.zh_CN.po from http://l10n.gnome.org/POT/gnome-panel.gnome-2-16/gnome-panel.gnome-2-16.zh_CN.po and save it under the /tmp directory.
3. Edit the file gnome-panel.gnome-2-16.zh_CN.po and replace all occurrences of %-m with %Om, and %-d with %e.

4. Generate a new gnome-panel.gnome-2-16.zh_CN.po file.

```
msgfmt -v -o gnome-panel.gnome-2-16.zh_CN.mo /tmp/gnome-panel.gnome-2-16.zh_CN.po
```

Copy the file back to the /usr/share/locale/LC_MESSAGES/ directory.

5. Log out of the system and re-login.

x86: Cannot Configure Full-Screen Magnification on Systems With One Video Card

If your Oracle Solaris 10 system has a single physical video card, you cannot configure the system for full-screen magnification. For such a configuration, you must use a separate configuration file in which you define settings for a dummy driver. First, make sure that the Xserver is not running. Then perform the following steps:

1. Log in to a command-line session.
 - If you are using the GNOME Display Manager, follow these steps:
 - a. Log in to a session as superuser.
 - b. At the prompt, type **svcadm disable application/gdm2-login**.
 - c. Log in again as superuser.
 - If you are using dtlogin, follow these steps:
 - a. In the dtlogin window, click Options and select Command Line Login.
 - b. Log in as superuser.

2. Create a new `xorg.conf` file.

```
# /usr/X11/bin/Xorg -configure
```

The command creates the file `xorg.conf.new` in the root (`/`) directory.

3. Copy the new configuration file to the `/etc/x11` directory and rename the file `xorg.conf`.

```
# cp /xorg.conf.new /etc/X11/xorg.conf
```

4. Modify the configurations in the file by using the following sample configurations:

- Add a new monitor section.

```
Section "Monitor"
    Identifier      "monitor_dummy"
    ModelName       "dummy"
    HorizSync       10-200
    VertRefresh     20-90
EndSection
```

- Add a new device section.

```
Section "Device"
    BoardName       "dummy"
    Driver           "dummy"
    Identifier       "device_dummy"
    VendorName       "dummy"
    videoram        10000
EndSection
```

Note – You might need to adjust the `videoram` value, depending on the screen width, height, and color depth of your particular graphics card. The value in Kbytes must be large enough for the intended screen. For example, you can compute the value by using the formula `width * height * bpp/8`.

- Add a new screen section.

```
Section "Screen"
    DefaultDepth 24
    SubSection "Display"
        Depth 24
        Modes "1280x1024"
    EndSubSection
    Device "device_dummy"
    Identifier "screen_dummy"
    Monitor "monitor_dummy"
EndSection
```

Note – You might need to adjust the resolution value for your particular system setup.

5. Look for the following line under the `ServerLayout` section:

```
Screen 0 "Screen0" 0 0
```

6. Insert the following line below the line in the previous step:

```
Screen 1 "screen_dummy" RightOf "Screen0"
```

This new line defines `Screen1`, a second dummy screen that is notionally to the right of `Screen0`, the physical and primary screen.

7. Save the changes.
8. Reboot the system from the appropriate command-line session:
 - If you are using GDM, perform the following:
 - a. Type **`svcadm enable application/gdm2-login`**.
 - b. Reboot the system.
 - If you are using dtlogin, reboot the system and log in.
9. Start the Gnopernicus screen reader.
10. Change the Startup Mode to Magnifier.
11. Click Preferences, then select Magnifier.
12. Click Add/Modify.
13. Assign the following values for Magnifier preferences:
 - For Source: 0.1
 - For Zoomer Placement:

- Left and Top: 0
- Bottom and Right: maximum

14. Click Apply.

Because of the overlaying full-screen magnification zoomer, the Gnopernicus windows become invisible. However, full-screen magnification is now available.

Certain View Options Might Cause File Manager to Fail (6233643)

The File Manager might fail if you use the following View options:

- View as Catalog
- View as Image Collection

Depending on the View options that you use, the following error messages might be displayed:

- Error:

The application nautilus has quit unexpectedly

- Error:

The Catalog view encountered an error while starting up

- Error:

The Image Collection view encountered an error while starting up

Workaround: None. Every time these problems occur, restart File Manager or click the Restart Application button on the crash dialog box.

System Administration

This section describes system administration bugs in the Oracle Solaris 10 OS.

The Availability Suite Module sdbc Fails to Load During Boot (6952222)

In this release, the sdbc module fails to load during boot and gives the following error message:

```
[ID 819705 kern.notice]/usr/kernel/drv/sparcv9/sdbc: undefined symbol
WARNING: mod_load: cannot load module 'sdbc'
```

Workaround: Install patch 123246-07 for SPARC systems and patch 123247-07 for x86 systems.

Oracle Solaris 10 9/10 Clock Stops on Oracle VM 2.2 (6952499)

Virtual machines (VMs) that are running Oracle Solaris 10 9/10 guests can be subject to the following problems:

- The time of day clock can stop moving forward.
- Sleep can hang.
- The guest VM can hang entirely.

Workaround: The workaround is to require Oracle Solaris guests to be pinned to physical CPUs. Pin the domain's virtual CPUs to the host's physical CPUs as follows:

```
# xm vcpu-pin domain vcpu cpus
```

See the `xm(1)` man page for more information.

SPARC: FKU 137137-xx Patch Does Not Support Third-Party Volume Manager Software

The FKU 137137-xx patch does not support third-party Volume Manager software, with some exceptions. This lack of support is due to prepatch, postpatch, and postbackout implementation. If you use unsupported third-party Volume Manager software, you cannot apply the FKU patch. The following error message is displayed during patch installation:

```
unsupported root slice type xxxxx
```

However, the Fujitsu and Veritas Volume Manager software is supported.

Workaround: None.

Solaris 10 10/09 DVD Media Might Not Be Automatically Mounted by vold (6712352)

Note – This bug is applicable if you are mounting the Solaris 10 10/09 or a later release DVD media on systems running on earlier Oracle Solaris releases. Use the following vold patches to mount the DVD media on systems running on older Oracle Solaris releases:

- 138130–01 for Oracle Solaris 10 (SPARC systems)
- 138131–01 for Oracle Solaris 10 (x86 systems)
- 112966–07 for Solaris 9 (SPARC systems)
- 115021–05 for Solaris 9 (x86 systems)
- 108968–12 for Solaris 8 (SPARC systems)
- 108969–12 for Solaris 8 (x86 systems)

The Solaris 10 10/09 DVD does not mount by default during runtime. No error message is displayed.

Workaround: Perform the following steps:

1. Become superuser.
2. Disable vold:
 - On Oracle Solaris 10 Systems:


```
# svcadm disable -t volfs
```
 - On Solaris 8 and Solaris 9 systems:


```
/etc/init.d/volmgt stop
```
3. Mount the media manually by using the `# mount -F hsfs path to block device path to mount point` command. For example:


```
# mount -F hsfs /dev/rdsd/c0t2d0s2 /mnt
```

Oracle Solaris Is Unable to Handle Mode Switches Between Legacy and AHCI Modes for the SATA Controller (6520224)

In systems which have an AHCI compliant SATA controller, the BIOS setup typically enables the controller to be set in either AHCI, legacy, or RAID modes. Oracle Solaris OS supports AHCI and legacy modes.

The SATA mode setting in BIOS must not be changed after an initial Oracle Solaris installation. The SATA mode setting must also not be changed before or after an Oracle Solaris upgrade. If

the SATA mode BIOS setting is modified after installing Oracle Solaris 10, the system will reset and fail to boot without indicating what led to the failure.

Workaround: If boot failure is encountered as a result of changing the BIOS setting, revert back to the original setting in order to boot the Oracle Solaris OS.

32-bit: Possible Error With Applications When Obtaining the File System State on Large File Systems (6468905)

When run on large file systems, for example ZFS, applications using `statvfs(2)` or `statfs(2)` to get information about the state of the file system exhibit an error. The following error message is displayed:

```
Value too large for defined data type
```

Workaround: Applications should use `statvfs64()` instead.

Using `patchadd` Command With the `-R` Option to Specify an Alternative Root Path From Systems That Are Not Zones Aware Should Be Restricted (6464969)

On systems running an Oracle Solaris release that is not zones aware, using `patchadd -R`, or any command that accepts the `-R` option to specify an alternate root path for a global zone that has non-global zones installed, will not work.

In contrast with the error message that is displayed by using the `luupgrade [-t, -T, -p, -P]` command, no error message regarding the use of appropriate command-level restrictions is displayed in this instance.

There is no indication that the `-R` option did not work. As a result of the failure of the command, Oracle Solaris 10 packages or patches are not installed on any of the installed non-global zones.

This problem occurs while installing and uninstalling packages or patches.

Note – The -R option works if the alternate boot environment has configured non-global zones, but no installed non-global zones. However, to avoid a potential problem, or if you are not sure whether there are any installed non-global zones used as the alternate root path, restrict the use of the -R option in all instances.

For more information, see the following man pages :

- [patchadd\(1M\)](#)
- [patchrm\(1M\)](#)
- [pkgadd\(1M\)](#)
- [pkgrm\(1M\)](#)

Workaround 1: Upgrade the OS to at least the Solaris 10 1/06 release.

If you are running the Solaris 10 3/05 release, install the following patches to enable the use of commands that accept the -R option to create an alternate root path:

- Patch ID 119254-19 for SPARC based systems
- Patch ID 119255-19 for x86 based systems

Workaround 2: Restrict the use of the patchadd -R command or any command that accepts the -R option to create an alternate root path.

Instead, boot the alternate root, for example, the Oracle Solaris 10 release, as the active OS. Then install and uninstall the Oracle Solaris 10 packages and patches without using the -R option.

Sun Patch Manager Tool 2.0 Incompatible With Previous Versions of the Tool

A system that runs the Sun Patch Manager Tool 2.0 can manage remote systems that run Patch Manager Tool, including Sun Patch Manager Tool 1.0.

However, a system with an earlier version of Patch Manager Tool cannot manage remote systems that run Patch Manager Tool 2.0. Earlier versions include the following:

- Sun Patch Manager Base Software 1.x
- Sun Patch Manager Tool 1.0

Note – Common Information Model/Web Based Enterprise Management (CIM/WBEM) support for Patch Manager Tool does not exist in the Solaris 8 OS. Consequently, remote management with Patch Manager does not apply to Solaris 8 systems.

Cannot Delete Existing Diskless Clients From the System (6205746)

If you use the `smdiskless` command to delete a diskless client, the command fails. The diskless client is not removed from the system databases. The following error message is displayed:

Failing with error EXM_BMS.

Workaround: Unshare the `/export` partition before adding the client.

SPARC: smosservice delete Command Does Not Successfully Remove All Service Directories (6192105)

If you use the `smosservice delete` command to remove a diskless client service, the command does not successfully remove all the service directories.

Workaround: Follow these steps.

1. Make sure that no clients exist that use the service.

```
# unshare /export/exec/Solaris_10_sparc.all
# rm -rf /export/exec/Solaris_10_sparc.all
# rm -rf /export/exec/.copyofSolaris_10_sparc.all
# rm -rf /export/.copyofSolaris_10
# rm -rf /export/Solaris_10
# rm -rf /export/share
# rm -rf /export/root/templates/Solaris_10
# rm -rf /export/root/clone/Solaris_10
# rm -rf /tftpboot/inetboot.sun4u.Solaris_10
```

2. Remove the following entry from the `/etc/bootparams` file.

```
fs1-24 boottype=:os
```

Note – Remove this entry only if this file server does not provide functions or resources for any other services.

3. Remove the following entry from the `/etc/dfs/dfstab` file.

```
share -F nfs -o ro /export/exec/Solaris_8_sparc.all/usr
```

4. Modify the `/var/sadm/system/admin/services/Solaris_10` file.

- If the file server is not Oracle Solaris 10, delete the file.
- If the file server is Oracle Solaris 10, remove all entries after the first three lines. The deleted lines indicate the service `USR_PATH` and `SPOOLED ROOT` packages in `/export/root/templates/Solaris_10` and the supported platforms.

System-Specific Issues

This chapter describes issues specific to Sun midrange and high-end servers. Current Sun servers are part of the Sun Fire system family. Older servers are part of the Sun Enterprise system family.

Note – The Sun Validation Test Suite release notes are now a separate document and can be found at <http://www.sun.com/>.

Dynamic Reconfiguration on Oracle's Sun Fire High-End Systems

This section describes major domain-side DR bugs on the following Sun Fire high-end systems that run the Oracle Solaris 10 software:

- Sun Fire 25K
- Sun Fire 20K
- Sun Fire 15K
- Sun Fire 12K

For information about DR bugs on Sun Management Services, see the *SMS Release Notes* for the SMS version that is running on your system.

Note – This information applies only to DR as it runs on the servers listed in this section. For information about DR on other servers, see the Release Notes or Product Notes documents or sections that describe those servers.

Known Software and Hardware Bugs

The following software and hardware bugs apply to Sun Fire high-end systems.

GigaSwift Ethernet MMF Link Fails With CISCO 4003 Switch After DR Attach

The link fails between a system with a Sun GigaSwift Ethernet MMF Option X1151A and certain CISCO switches. The failure occurs when you attempt to run a DR operation on such a system that is attached to one of the following switches:

- CISCO WS-c4003 switch (f/w: WS-C4003 Software, Version NmpSW: 4.4(1))
- CISCO WS-c4003 switch (f/w: WS-C4003 Software, Version NmpSW: 7.1(2))
- CISCO WS-c5500 switch (f/w: WS-C5500 Software, Version McpSW: 4.2(1) and NmpSW: 4.2(1))

This problem is not seen on a CISCO 6509 switch.

Workaround: Use another switch. Alternatively, you can consult Cisco for a patch for the listed switches.

Dynamic Reconfiguration on Oracle's Sun Fire Midrange Systems

This section describes major issues that are related to DR on the following Sun Fire midrange systems:

- Sun Fire E6900
- Sun Fire E4900
- Sun Fire E6800
- Sun Fire E4810
- Sun Fire E4800
- Sun Fire E3800

Note – This information applies only to DR as it runs on the servers listed in this section. For information about DR on other servers, see the Release Notes or Product Notes documents or sections that describe those servers.

Minimum System Controller Firmware

[Table 3–1](#) shows acceptable combinations of Oracle Solaris software and System Controller (SC) firmware for each Sun Fire midrange system to run DR.

Note – To best utilize the latest firmware features and bug fixes, run the most recent SC firmware on your Sun Fire midrange system. For the latest patch information, see <http://sunsolve.sun.com>.

TABLE 3-1 Minimum SC Firmware for Each Platform and Oracle Solaris Release

Platform	Oracle Solaris Release	Minimum SC Firmware
Sun Fire E6900/E4900 with UltraSPARC IV+	Solaris 10 3/05 HW1 (a limited release) or Solaris 10 1/06	5.19.0
E6900/E4900 without UltraSPARC IV+	Solaris 9 4/04	5.16.0
Sun Fire 6800/4810/4800/3800	Solaris 9 4/04	5.16.0
Sun Fire 6800/4810/4800/3800	Solaris 9	5.13.0

You can upgrade the system firmware for your Sun Fire midrange system by connecting to an FTP or HTTP server where the firmware images are stored. For more information, refer to the README and Install.info files. These files are included in the firmware releases that are running on your domains. You can download Sun patches from <http://sunsolve.sun.com>.

Known DR Software Bugs

This section lists important DR bugs.

Network Device Removal Fails When a Program Is Holding the Device Open (5054195)

If a process is holding open a network device, any DR operation that would involve that device fails. Daemons and processes that hold reference counts stop DR operations from completing.

Workaround: As superuser, perform the following steps:

1. Remove or rename the /rplboot directory.
2. Shut down NFS services.

```
# sh /etc/init.d/nfs.server stop
```

3. Shut down Boot Server services.

```
# sh /etc/init.d/boot.server stop
```

4. Perform the DR detach operation.

5. Restart NFS services.

```
# sh /etc/init.d/nfs.server start
```

6. Restart Boot Server services.

```
# sh /etc/init.d/boot.server start
```

Sun Enterprise 10000 Release Notes

This section describes issues that involve the following features on the Sun Enterprise 10000 server:

- System Service Processor requirement
- Dynamic reconfiguration (DR)
- InterDomain Networks (IDNs)
- Oracle Solaris Operating System on Sun Enterprise 10000 domains

Note – The Oracle Solaris 10 software can be run on individual domains within a Sun Enterprise 10000 system. However, the Sun Enterprise 10000 System Service Processor is not supported by this release.

System Service Processor Requirement

The SSP 3.5 software is required on your System Service Processor (SSP) to support the Oracle Solaris 10 software. Install the SSP 3.5 on your SSP first. Then you can install or upgrade to the Oracle Solaris 10 OS on a Sun Enterprise 10000 domain.

The SSP 3.5 software is also required so that the domain can be properly configured for DR Model 3.0.

Dynamic Reconfiguration Issues

This section describes different issues that involve dynamic reconfiguration on Sun Enterprise 10000 domains.

DR Model 3.0

You must use DR 3.0 on Sun Enterprise 10000 domains that run the Oracle Solaris OS beginning with the Solaris 9 12/03 release. DR model 3.0 refers to the functionality that uses the following commands on the SSP to perform domain DR operations:

- addboard
- moveboard
- deleteboard
- showdevices

- `rcfgadm`

You can run the `cfgadm` command on domains to obtain board status information. DR model 3.0 also interfaces with the Reconfiguration Coordination Manager (RCM) to coordinate the DR operations with other applications that are running on a domain.

For details about DR model 3.0, refer to the *Sun Enterprise 10000 Dynamic Reconfiguration User Guide*.

DR and Bound User Processes

For this Oracle Solaris release, DR no longer automatically unbinds user processes from CPUs that are being detached. You must perform this operation before initiating a detach sequence. The drain operation fails if CPUs are found with bound processes.

Network Device Removal Fails When a Program Is Holding the Device Open (5054195)

If a process is holding open a network device, any DR operation that would involve that device fails. Daemons and processes that hold reference counts stop DR operations from completing.

Workaround: As superuser, perform the following steps:

1. Remove or rename the `/rplboot` directory.
2. Shut down NFS services.

```
# sh /etc/init.d/nfs.server stop
```

3. Shut down Boot Server services.

```
# sh /etc/init.d/boot.server stop
```

4. Perform the DR detach operation.

5. Restart NFS services.

```
# sh /etc/init.d/nfs.server start
```

6. Restart Boot Server services.

```
# sh /etc/init.d/boot.server start
```

InterDomain Networks

For a domain to become part of an InterDomain Network, all boards with active memory in that domain must have at least one active CPU.

OpenBoot PROM Variables

Before you issue the boot net command from the OpenBoot PROM prompt (OK), verify that the `local-mac-address?` variable is set to `false`. This setting is the factory default setting. If the variable is set to `true`, you must ensure that this value is an appropriate local configuration.



Caution – A `local-mac-address?` that is set to `true` might prevent the domain from successfully booting over the network.

In a net con window, you can use the following command at the OpenBoot PROM prompt to display the values of the OpenBoot PROM variables:

OK **printenv**

To reset the `local-mac-address?` variable to the default setting, use the `setenv` command:

OK **setenv local-mac-address? false**

Dynamic Reconfiguration on Oracle's Sun Enterprise Midrange Systems

This section contains the latest information about dynamic reconfiguration (DR) functionality for the following midrange servers that are running the Oracle Solaris 10 software:

- Sun Enterprise 6x00
- Sun Enterprise 5x00
- Sun Enterprise 4x00
- Sun Enterprise 3x00

For more information about Sun Enterprise Server Dynamic Reconfiguration, refer to the *Dynamic Reconfiguration User's Guide for Sun Enterprise 3x00/4x00/5x00/6x00 Systems*. The Oracle Solaris 10 release includes support for all CPU/memory boards and most I/O boards in the systems that are mentioned in the preceding list.

Supported Hardware

Before proceeding, make sure that the system supports dynamic reconfiguration. If your system is of an older design, the following message appears on your console or in your console logs. Such a system is not suitable for dynamic reconfiguration.

Hot Plug not supported in this system

The following I/O boards are not currently supported:

- Type 2 (graphics)
- Type 3 (PCI)
- Type 5 (graphics and SOC+)

Software Notes

This section provides general software information about DR.

Enabling Dynamic Reconfiguration

To enable dynamic reconfiguration, you must set two variables in the `/etc/system` file. You must also set an additional variable to enable the removal of CPU/memory boards. Perform the following steps:

1. Log in as superuser.
2. Edit the `/etc/system` file by adding the following lines:

```
set pln:pln_enable_detach_suspend=1
set soc:soc_enable_detach_suspend=1
```

3. To enable the removal of a CPU/memory board, add this line to the file:

```
set kernel_cage_enable=1
```

Setting this variable enables the memory unconfiguration operation.

4. Reboot the system to apply the changes.

Quiesce Test

You start the quiesce test with the following command:

```
# cfgadm -x quiesce-test sysctrl0:slot number
```

On a large system, the quiesce test might run for up to a minute. During this time no messages are displayed if `cfgadm` does not find incompatible drivers.

Disabled Board List

Attempting to connect a board that is on the disabled board list might produce an error message:

```
# cfgadm -c connect sysctrl0:slotnumber
```

```
cfgadm: Hardware specific failure: connect failed:
board is disabled: must override with [-f][-o enable-at-boot]
```

To override the disabled condition, two options are available:

- Using the force flag (-f)

```
# cfgadm -f -c connect sysctrl0:slot number
```
- Using the enable option (-o enable-at-boot)

```
# cfgadm -o enable-at-boot -c connect sysctrl0:slot
number
```

To remove all boards from the disabled board list, choose one of two options depending on the prompt from which you issue the command:

- From the superuser prompt, type:

```
# eeprom disabled-board-list=
```
- From the OpenBoot PROM prompt, type:

```
OK set-default disabled-board-list
```

For further information about the disabled-board-list setting, refer to the “Specific NVRAM Variables” section in the *Platform Notes: Sun Enterprise 3x00, 4x00, 5x00, and 6x00 Systems* manual. This manual is part of the documentation set in this release.

Disabled Memory List

Information about the OpenBoot PROM disabled-memory-list setting is published in this release. See “Specific NVRAM Variables” in the *Platform Notes: Sun Enterprise 3x00, 4x00, 5x00, and 6x00 Systems* in the Oracle Solaris on Sun Hardware documentation.

Unloading Detach-Unsafe Drivers

If you need to unload detach-unsafe drivers, use the `modinfo` line command to find the module IDs of the drivers. You can then use the module IDs in the `modunload` command to unload detach-unsafe drivers.

Self-Test Failure During a Connect Sequence

Remove the board from the system as soon as possible if the following error message is displayed during a DR connect sequence:

```
cfgadm: Hardware specific failure: connect failed: firmware operation error
```

The board has failed self-test, and removing the board avoids possible reconfiguration errors that can occur during the next reboot.

The failed self-test status does not allow further operations. Therefore, if you want to retry the failed operation immediately, you must first remove and then reinsert the board.

Known Bugs

The following list is subject to change at any time.

Network Device Removal Fails When a Program Is Holding the Device Open (5054195)

If a process is holding open a network device, any DR operation that would involve that device fails. Daemons and processes that hold reference counts stop DR operations from completing.

Workaround: As superuser, perform the following steps:

1. Remove or rename the `/rplboot` directory.
2. Shut down NFS services.

```
# sh /etc/init.d/nfs.server stop
```

3. Shut down Boot Server services.

```
# sh /etc/init.d/boot.server stop
```

4. Perform the DR detach operation.
5. Restart NFS services.

```
# sh /etc/init.d/nfs.server start
```

6. Restart Boot Server services.

```
# sh /etc/init.d/boot.server start
```


End-of-Software Support Statements

This chapter lists end-of-software support statements.

Note – The Oracle Solaris OS media kit contains not only the Oracle Solaris 10 OS software, but also developer tools for the Oracle Solaris OS and the Oracle Solaris Companion CD (useful and popular technologies offered as unsupported, value-add, free software). The information provided on <http://www.sun.com/service/serviceplans/solaris/10/> lists the components of the Oracle Solaris 10 OS media kit. It also shows the support provided for these components under the SunSpectrum program and Sun Software Support contracts.

Features Removed in This Release

The following features have been removed in the current Oracle Solaris release.

StarOffice

The StarOffice productivity suite is not available in this release. You can migrate to the OpenOffice.org productivity suite by downloading it from <http://www.openoffice.org>.

EOL RealPlayer

RealPlayer is no longer included in this release. You may download it from <http://www.real.com/solaris>.

MySQL 5.0

MySQL has ended the active development and support for MySQL Database Server version 5.0. Extended support is available for paid customers with MySQL subscription only. For more information, see <http://www.mysql.com/about/legal/lifecycle/#calendar>. According to the MySQL Lifecycle Policy, only security and severity level 1 issues will still be fixed for MySQL 5.0. For more information about MySQL lifecycle policy, see <http://www.mysql.com/about/legal/lifecycle/#policy>.

Features That Might Be Removed in a Future Release

The following features might not be supported in a future release of the Oracle Solaris software.

SYSV3 SCO Compatibility Environment Variable

Support for the SYSV3 SCO compatibility environment variable might be removed in a future Oracle Solaris release. The following commands may be affected:

- df
- echo
- expr
- sh
- tar
- uname

passmgmt Command

The passmgmt command might be removed in a future Oracle Solaris release. You can use the following commands which provide the same functionality:

- [useradd\(1M\)](#)
- [userdel\(1M\)](#)
- [usermod\(1M\)](#)
- [roleadd\(1M\)](#)
- [roledel\(1M\)](#)
- [rolemod\(1M\)](#)

Locale Administrator

The [localedm\(1M\)](#) command might not be available in a future Oracle Solaris release.

SIP Express Router (SER)

SER and SERWeb might not be included in a future Oracle Solaris release.

Jakarta Tomcat 4 Interfaces in the Oracle Solaris 10 OS

Jakarta Tomcat 4 might not be included in a future release. You can migrate to either Jakarta Tomcat 5.5 or Jakarta Tomcat 6 which provides the same functionality.

x86: 1x Branded Zone

Support for the 1x branded zone might be removed in a future Oracle Solaris Zones release.

SPARC Workstations

The following SPARC workstations might not be supported in a future Oracle Solaris release:

- Ultra 2, 3, 5, 10, 30, 60, 80
- Sun Blade 100, 500, 1000, 1500, 2000, 2500

Continue on the Oracle Solaris 10 OS for the remaining life of the hardware, and then migrate to either an x64 workstation or a Sunray desktop.

Plotting Commands

The following plotting commands might not be supported in a future release:

- plot
- aedplot
- atoplot
- bgplot
- crtplot
- dumbplot
- gigipplot
- hpplot
- implot
- plottoa
- t300
- t300s
- t4013
- t450

- tek
- vplot
- hp7221plot

In addition, the -g option in LPR might no longer be supported in a future release.

MySQL 4

MySQL 4 RDBMS might not be supported in a future release. You can migrate to MySQL 5.1 which provides the same functionality.

Apache httpd 1.3

Apache httpd 1.3 might not be supported in a future release. You can migrate to Apache httpd 2 which provides the same functionality.

audit_user(4) Database

The audit_user(4) database and the getuusernam(3BSM) accessor functions might be removed in a future Oracle Solaris release. The per-user audit preselection flags might be specified differently.

Drivers for Various SPARC Compatible Graphics Cards

The following drivers for the graphics cards on the SPARC platform might not be included in a future release of the Oracle Solaris OS:

Card/Device	Driver Name
GX, GXplus, TurboGX, TurboGXplus	cg6
Creator, Creator3D	ffb
Elite3D	afb
Expert3D, Expert3D Lite	ifb
PGX	m64
PGX32	gfxp
PGX64	m64
Ultra 5/10 onboard graphics	m64

Card/Device	Driver Name
SunBlade 100/150 onboard graphics	m64
Ultra 3 laptop onboard graphics	m64
XVR-200	mko
XVR-500	ifb
XVR-600	jfb
XVR-1000	gfb
XVR-1200	jfb
XVR-4000	zulu

Short Form Locales

The following table lists locales that might be removed in a future Oracle Solaris release. The table also lists the corresponding locales that provide the same locale data and must be used instead:

Locales to be Obsoleted	Replacement Locales
ar	ar_EG.ISO8859-6
bg_BG	bg_BG.ISO8859-5
ca	ca_ES.ISO8859-1
ca_ES	ca_ES.ISO8859-1
cs	cs_CZ.ISO8859-2
cs_CZ	cs_CZ.ISO8859-2
da	da_DK.ISO8859-1
da_DK	da_DK.ISO8859-1
da.ISO8859-15	da_DK.ISO8859-15
de	de_DE.ISO8859-1
de_AT	de_AT.ISO8859-1
de_CH	de_CH.ISO8859-1
de_DE	de_DE.ISO8859-1
de.ISO8859-15	de_DE.ISO8859-15

Locales to be Obsoleted	Replacement Locales
de.UTF-8	de_DE.UTF-8
el	el_GR.ISO8859-7
el_GR	el_GR.ISO8859-7
el.sun_eu_greek	el_GR.ISO8859-7
el.UTF-8	el_CY.UTF-8
en_AU	en_AU.ISO8859-1
en_CA	en_CA.ISO8859-1
en_GB	en_GB.ISO8859-1
en_IE	en_IE.ISO8859-1
en_NZ	en_NZ.ISO8859-1
en_US	en_US.ISO8859-1
es	es_ES.ISO8859-1
es_AR	es_AR.ISO8859-1
es_BO	es_BO.ISO8859-1
es_CL	es_CL.ISO8859-1
es_CO	es_CO.ISO8859-1
es_CR	es_CR.ISO8859-1
es_EC	es_EC.ISO8859-1
es_ES	es_ES.ISO8859-1
es_GT	es_GT.ISO8859-1
es.ISO8859-15	es_ES.ISO8859-15
es_MX	es_MX.ISO8859-1
es_NI	es_NI.ISO8859-1
es_PA	es_PA.ISO8859-1
es_PE	es_PE.ISO8859-1
es_PY	es_PY.ISO8859-1
es_SV	es_SV.ISO8859-1
es.UTF-8	es_ES.UTF-8

Locales to be Obsoleted	Replacement Locales
es_UY	es_UY.ISO8859-1
es_VE	es_VE.ISO8859-1
et	et_EE.ISO8859-15
et_EE	et_EE.ISO8859-15
fi	fi_FI.ISO8859-1
fi_FI	fi_FI.ISO8859-1
fi.ISO8859-15	fi_FI.ISO8859-15
fr	fr_FR.ISO8859-1
fr_BE	fr_BE.ISO8859-1
fr_CA	fr_CA.ISO8859-1
fr_CH	fr_CH.ISO8859-1
fr_FR	fr_FR.ISO8859-1
fr.ISO8859-15	fr_FR.ISO8859-15
fr.UTF-8	fr_FR.UTF-8
he	he_IL.ISO8859-8
he_IL	he_IL.ISO8859-8
hr_HR	hr_HR.ISO8859-2
hu	hu_HU.ISO8859-2
hu_HU	hu_HU.ISO8859-2
is_IS	is_IS.ISO8859-1
it	it_IT.ISO8859-1
it.ISO8859-15	it_IT.ISO8859-15
it_IT	it_IT.ISO8859-1
it.UTF-8	it_IT.UTF-8
ja	ja_JPeucJP
ko	ko_KR.EUC
ko.UTF-8	ko_KR.UTF-8
lt	lt_LT.ISO8859-13

Locales to be Obsoleted	Replacement Locales
lt_LT	lt_LT.ISO8859-13
lv	lv_LV.ISO8859-13
lv_LV	lv_LV.ISO8859-13
mk_MK	mk_MK.ISO8859-5
nl	nl_NL.ISO8859-1
nl_BE	nl_BE.ISO8859-1
nl.ISO8859-15	nl_NL.ISO8859-15
nl_NL	nl_NL.ISO8859-1
no	nb_NO.ISO8859-1
no_NO	nb_NO.ISO8859-1
no_NO.ISO8859-1@bokmal	nb_NO.ISO8859-1
no_NO.ISO8859-1@nynorsk	nn_NO.ISO8859-1
no_NY	nn_NO.ISO8859-1
pl	pl_PL.ISO8859-2
pl_PL	pl_PL.ISO8859-2
pl.UTF-8	pl_PL.UTF-8
pt	pt_PT.ISO8859-1
pt_BR	pt_BR.ISO8859-1
pt.ISO8859-15	pt_PT.ISO8859-15
pt_PT	pt_PT.ISO8859-1
ro_RO	ro_RO.ISO8859-2
ru	ru_RU.ISO8859-5
ru.koi8-r	ru_RU.KOI8-R
ru_RU	ru_RU.ISO8859-5
ru.UTF-8	ru_RU.UTF-8
sh	bs_BA.ISO8859-2
sh_BA	bs_BA.ISO8859-2
sh_BA.ISO8859-2@bosnia	bs_BA.ISO8859-2

Locales to be Obsoleted	Replacement Locales
sh_BA.UTF-8	bs_BA.UTF-8
sk_SK	sk_SK.ISO8859-2
sl_SI	sl_SI.ISO8859-2
sq_AL	sq_AL.ISO8859-2
sr_CS	sr_ME.UTF-8 or sr_RS.UTF-8
sr_CS.UTF-8	sr_ME.UTF-8 or sr_RS.UTF-8
sr_SP	sr_ME.ISO8859-5 or sr_RS.ISO8859-5
sr_YU	sr_ME.ISO8859-5 or sr_RS.ISO8859-5
sr_YU.ISO8859-5	sr_ME.ISO8859-5 or sr_RS.ISO8859-5
sv	sv_SE.ISO8859-1
sv_SE	sv_SE.ISO8859-1
sv.ISO8859-15	sv_SE.ISO8859-15
sv.UTF-8	sv_SE.UTF-8
th	th_TH.TIS620
th_TH	th_TH.TIS620
th_TH.ISO8859-11	th_TH.TIS620
tr	tr_TR.ISO8859-9
tr_TR	tr_TR.ISO8859-9
zh	zh_CN.EUC
zh.GBK	zh_CN.GBK
zh_TW	zh_TW.EUC
zh.UTF-8	zh_CN.UTF-8

Support for Java SE 1.4.2

Support for Java SE 1.4.2 might be removed in a future release of Oracle Solaris 10. To receive critical fixes, consider the following options:

- Migrate to Java SE for Business 1.4.2.
- Migrate to the latest Java SE release.

For information about technology support and EOL policy, see <http://java.sun.com/products/archive/eol.policy.html>.

Support for Java SE 5.0

Support for Java SE 5.0 might be removed in a future release of Oracle Solaris 10. To receive critical fixes, consider the following options:

- Migrate to Java SE for Business 5.0.
- Migrate to the latest Java SE release.

For information about technology support and EOL policy, see <http://java.sun.com/products/archive/eol.policy.html>.

@euro Locale Variants

The following @euro locale variants might be removed in a future Oracle Solaris release:

ca_ES.ISO8859-15@euro	de_AT.ISO8859-15@euro
de_DE.ISO8859-15@euro	de_DE.UTF-8@euro
el_GR.ISO8859-7@euro	en_IE.ISO8859-15@euro
es_ES.ISO8859-15@euro	es_ES.UTF-8@euro
fi_FI.ISO8859-15@euro	fr_BE.ISO8859-15@euro
fr_BE.UTF-8@euro	fr_FR.ISO8859-15@euro
fr_FR.UTF-8@euro	it_IT.ISO8859-15@euro
it_IT.UTF-8@euro	nl_BE.ISO8859-15@euro
nl_NL.ISO8859-15@euro	pt_PT.ISO8859-15@euro

Users should use the corresponding non-variant locales.

ucblinks Command

The ucblinks feature that created SunOS 4.x device name links in the /dev directory might not be supported in a future Oracle Solaris 10 release. The current release uses SunOS 5.x device names.

The following table lists the SunOS 4.x device name links that might be removed:

SunOS 4.x device name	Device type
/dev/[r]fd%d	fd floppy
/dev/[r]sr%d	sd/atapi cdrom
/dev/[r]sd%d	sd disk
/dev/[r]n%d	st tape

The following table lists the current SunOS 5.x device name links:

SunOS 5.x device name	Device type
/dev/[r]diskette	fd floppy
/dev/[r]dsk/*	sd/atapi cdrom
/dev/[r]dsk/*	sd disk
/dev/rmt/*	st tape

Xprt Server and Xprint Extension

The Xprt server and Xprint extension to the X Window System might no longer be included in a future Oracle Solaris release. The libXp library will remain for binary compatibility. This enables existing users of this software to continue printing over the network to Xprt servers running on Oracle Solaris 10 and prior releases, or Xprint implementations on other platforms.

xmh Command

The xmh command might no longer be included in a future Oracle Solaris release. Thunderbird and Evolution are the supported email GUIs.

XIE Libraries

XIE libraries might no longer be included in a future Oracle Solaris release.

bdf tosnf and showsnf Commands

The bdf tosnf and showsnf commands might no longer be included in a future Oracle Solaris release.

PostgreSQL 8.1 and 8.2

PostgreSQL versions 8.1 and 8.2 might not be supported in a future Oracle Solaris release.

Note – PostgreSQL 8.1 and all its interfaces are obsoleted in the Oracle Solaris 10 OS. You must migrate your applications to the higher PostgreSQL versions available in the Oracle Solaris OS.

Locale Variant cz

The `cz` short variant for the Czech locale might be removed in a future Oracle Solaris release. Users should use the following Czech locales instead:

- `cs_CZ`
- `cs_CZ.ISO8859-2`
- `cs_CZ.UTF-8`
- `cs_CZ.UTF-8@euro`

Oracle Solaris Audit Commands

The following Oracle Solaris Audit interfaces might be replaced with equivalent functionality in a future release of Oracle Solaris:

- `audit_startup(1M)`
- `bsmconv(1M)`
- `bsmrecord(1M)`
- `bsmunconv(1M)`
- `audit_control(4)`

xorgcfg and xorgconfig Utilities

The `xorgcfg` and `xorgconfig` utilities for generating `xorg.conf` files might no longer be available in a future Oracle Solaris release.

The `Xorg(1)` server does not require an `xorg.conf(4)` file in many cases and will autoconfigure itself if the file is not present. Users should use one of the following alternative methods to generate an `xorg.conf` file for customization if the default configuration does not meet their needs:

- When the server is not already running, `/usr/X11/bin/Xorg -configure`, provides a sample configuration file for the currently detected hardware in the system.
- When `Xorg` is started without a configuration file, the `xorg.conf` data that `Xorg` automatically generates is logged in the `/var/log/Xorg.0.log` log file. The `xorg.conf` data might also be copied to an `xorg.conf` file for customization.

- Users of NVidia graphics devices should use the provided `nvidia-settings(1)` and `nvidia-xconfig(1)` utilities to generate or update device-specific configurations.
- Users of Sun graphics devices for the SPARC platform should use the `fbconfig(1)` utility to generate or update device-specific configurations.

Auditing File Size Statistics and File Size Restriction Interfaces

The auditing file size statistics and file size restriction interfaces `getfsize` and `setfsize`, consisting of the similarly named sub-commands within the `auditon(2)` system call and the options to the `auditconfig(1M)` command, might not be supported in a future Oracle Solaris release.

Oracle Berkeley DB 4.2

Oracle Berkeley DB (BDB) 4.2 might not be supported in a future Oracle Solaris release.

Some `audiorecord` and `audioplay` Application Switches

The `-p` and `-b` switches to both the `audiorecord` and `audioplay` applications, as well as the `-m` switch to `audiorecord` might be removed in a future Oracle Solaris release.

If a filename is not specified on the command line and standard input and output is not a tty, both these applications will exit with an error. Any changes to audio volume settings made by these applications are not persistent from one instance to the next. Users wishing to adjust the settings of their audio devices should migrate to the `mixerctl(1)` and `gnome-volume-control(1)` applications.

CD Media

The Oracle Solaris 10 OS might no longer be available on CDs in future Oracle Solaris releases.

Policy Change for Inbound Open Source and Third-Party, Vendor-Supplied Open Source Components

When the Open Source Community stops the development of inbound Open Source components like Mozilla, Sun will also stop all the development and support activities of this product version. Sun will publish a Managed Products End-of-Software Support List (EOSL) at <http://www.sun.com/service/index.jsp> and update the list monthly with the components that will no longer be supported.

Mozilla 1.X Support

Starting from the Solaris 10 10/08 release, the Mozilla 1.X software is no longer supported as a result of the new Inbound Open Source components policy change. Users should upgrade to Firefox.

x86: sbpro Driver

The Sound Blaster Pro device driver (sbpro) for SoundBlaster Pro, SoundBlaster 16, and SoundBlaster AWE32 ISA devices might not be supported in a future release.

CacheFS File System

The CacheFS file system feature might not be supported in a future Oracle Solaris release.

sdtudctool Command

sdtudctool Command might not be available in a future Oracle Solaris release. For more information, see User Defined Characters Migration Guide for the migration at http://developers.sun.com/global/products_platforms/solaris/reference/techart/UDCGuide.html

SPARC: cg6 Driver for SBus Graphics Cards

The cg6 driver for the following SBus graphics cards might not be included in a future release:

- GX
- GXplus

- TurboGX
- TurboGXplus

ctlmp and ctlconvert_txt Utilities

The `/usr/openwin/bin/ctlmp` and `/usr/openwin/bin/ctlconvert_txt` utilities might not be supported in a future Oracle Solaris release. Users should use `mp(1)` print filter or another suitable printing mechanism instead.

genlayouttbl Utility

The `genlayouttbl(1)` utility which provides complex text layout data to the CDE/Motif GUI toolkit might not be available in a future release.

Mobile IPv4

The Mobile IPv4 feature described in the `mipagent(1M)` man page, might not be available in a future Oracle Solaris release.

Gnopernicus

Gnopernicus, the Java DS Screen Reader might not be available in a future Oracle Solaris release. Users should use the Orca Screen Reader instead.

Xsun Server

The Xsun server for the X Window System might not be available in a future Oracle Solaris release. Users should migrate to the Xorg server.

Features such as Display Postscript (DPS) and X Image Extension (XIE) that are available in Xsun but not in Xorg might no longer be included.

Common Desktop Environment

The Common Desktop Environment (CDE) might not be available in a future Oracle Solaris release. Users should migrate to the Java Desktop System.

CDE's Image Viewer

CDE's Image Viewer `sdtimage` might not be available in a future Oracle Solaris release. Users should migrate to GNOME `Open gnome - open`, to open image files.

Sun Java System Calendar Server Client Applet

The Sun Java System Calendar Server client applet, `Now applet`, might not be available in a future Oracle Solaris release.

DARPA Trivial Name Server

The DARPA trivial name server, `in . tnamed(1M)`, might not be available in a future Oracle Solaris release. The Internet domain name server `named(1M)` provides similar functionality.

I2O Intelligent I/O

The I2O intelligent I/O driver framework and all corresponding drivers might not be supported in a future Oracle Solaris release. This includes the `i2o_bs(7D)`, and `i2o_scsi(7D)` drivers and all I2O related functionality.

GNOME Viewer for PDF and PostScript Files

The GNOME viewer for PDF and PostScript files, might not be available in a future Oracle Solaris release. A replacement application is expected to enable viewing of PDF and PostScript files.

Smartcard Administrative Interface

The graphical Smartcard admin interface `sdtsmartcardadmin(1M)` may not be available in future Oracle Solaris releases. The same functionality is available in the `smartcard(1M)` command.

iButton Smartcard

The Dallas Semiconductor `iButton` Java Card Smartcard and OpenCard Framework (OCF) terminal driver, as described in `ocf_ibutton(7d)` might not be supported in future Oracle Solaris releases. Users should migrate to other Smartcard devices that are supported by `libpcscLite(3lib)`.

Cyberflex Smartcard

The Cyberflex Smartcard might not be supported by the `pam_smartcard(5)` and `smartcard(1m)` commands in future Oracle Solaris releases. Users should migrate to other Smartcard devices and cards that are supported by `libpcsc-lite(3lib)`.

PAM Smartcard

The PAM Smartcard module `pam_smartcard(5)` might not be available in future Oracle Solaris releases.

OCF/SCF Smartcard Framework

The OCF/SCF Smartcard framework may not be available in a future Oracle Solaris releases. The functionality of `ocfserv(1M)` will be provided by `pcscd(1M)`. The card provisioning functionality of `smartcard(1M)` will be provided by `muscletool(1M)`. The driver configuration functionality provided by `smartcard(1M)` is generally not necessary with `pcscd(1M)`, however, when required system administrators can edit the `reader.conf(4)` file.

SCF Smartcard APIs

The SmartCard Framework (SCF) interfaces exported by `libsmartcard` and `smartcard.jar` may not be available in future Oracle Solaris releases. These interfaces are now obsolete. New C applications should be written to use the PS/SC interfaces exported from `libpcsc-lite(3lib)`. There is no planned replacement for the SCF Java interfaces at this time.

Remote Program Load Server Functionality

The Remote Program Load (RPL) server functionality available through `rpld(1M)` and `rpld.conf(4)` may not be available in a future release of Oracle Solaris.

Transition From `ipge` to `e1000g` NIC Driver as the Default Ethernet Driver for sun4V Systems

The `ipge` driver and all its SUNWipge packages for sun4V systems might not be available in a future release of Oracle Solaris. Starting with the Solaris 10 8/07 release, Ontario and other SPARC based platforms transition from `ipge` to `e1000g` drivers. The `e1000g` driver will be the default Ethernet driver for all Sun platforms that use Intel 1G chipsets.

Solstice Enterprise Agents Support

The following Solstice Enterprise Agents (SEA) agents, libraries, and packages might not be supported in a future Oracle Solaris release:

- SEA-based SNMP master agent and sub agents
- `libssagent` and `libssasnm` libraries
- `SUNWsacom`, `SUNWsasnm`, `SUNWmibii` packages

The System Management Agent (SMA) provides similar functionality for the aforementioned sources.

32-bit x86: Extended Memory File System Support

The extended memory file system (`xmemfs`) might not be supported in a future Oracle Solaris release.

For more information, see the `xmemfs(7FS)` man page.

Standard Type Services Framework Support

Standard Type Service Framework (STSF) might not be available in a future Oracle Solaris release.

This includes the following:

- `libST` and `libXst` libraries
- `xstls` command
- `stfsloader` service
- XST extension to Xsun and Xorg servers

You can find this functionality in one of the following alternative sources:

- `libX11`
- `libXft2`

SPARC: jfca Driver Support

The JNI Fibre Channel Adapter (`jfca`) driver might not be available in a future Oracle Solaris release.

For more information, see the `jfca(7D)` man page.

zic -s Option Support

The `-s` option in the `zic` command might not be available in a future Oracle Solaris release.

For more information, see the `zic(1M)` man page.

Removable Volume Management Support

The volume management daemon (`vold`), volume management file system (`volfs`), and the associated volume management commands might not be included in a future Oracle Solaris release.

Automatic mounting and unmounting of removable media will continue to be supported.

For more information, see the `vold(1M)` and `volfs(7FS)` man pages.

32-bit x86: Controller Devices and Drivers

The following devices might not be supported in a future Oracle Solaris release:

- IBM PC ServeRAID SCSI
- IBM ServeRAID II Ultra SCSI
- IBM ServeRAID-3 Ultra2 SCSI

In addition, device drivers written for these controllers might not be supported.

64-bit SPARC: Dual Basic Rate ISDN Interface and Multimedia Codec Chips

T5900FC Dual Basic Rate ISDN Interface (DBRI) and associated multimedia codec chips might not be supported in a future Oracle Solaris release. In addition, device drivers written for these devices might not be supported.

SPARC: Certain Drivers Might Not Be Supported in a Future Oracle Solaris Release

The following drivers might not be supported in a future Oracle Solaris release:

- `SUNWrtvc`: Device driver for the SunVideo real-time video capture and compression card
- `SUNWdial`: Streams module for the Dials and Buttons devices
- `SUNWdialh`: Header files for the Dials and Buttons devices

Automated Security Enhancement Tool Support

The checksum functionality provided by Automated Security Enhancement Tool (ASET) in the `/usr/aset` directory might not be available in a future Oracle Solaris release.

You can find this functionality in one of the following alternative sources:

- The basic audit reporting tool, `bart`, in the Oracle Solaris 10 OS
- The Solaris Security Toolkit found at <http://www.sun.com/software/security/jass/>
- The Solaris Fingerprint Database found at <http://sunsolve.sun.com/pub-cgi/show.pl?target=content/content7>

Asian Short dtlogin Names

The following Asian short locale names might not be listed in the `dtlogin` language list in a future release:

- `zh`
- `ko`
- `zh_TW`

Beginning with Solaris 8 release, new ISO-standard locale names have been provided, including the following locale names:

- `zh_CN.EUC`
- `zh_CN.GBK`
- `zh_CN.UTF-8`
- `ko_KR.EUC`
- `ko_KR.UTF-8`
- `zh_TW.EUC`

Audit Daemon Interfaces

The following interfaces that are used by the Solaris audit daemon might not be supported in a future release:

- `auditsvc(2)`
- `audit_data(4)`

Cfront Runtime Support Library

The library `libc.so.3` is the runtime support library for programs that are compiled by the Cfront C++ compiler C++ 3.0. Neither the compiler nor programs that are created by the compiler run on Oracle Solaris 10 OS. The library might not be supported in a future release of Oracle Solaris.

Configuration Administrations's fp Plug-In Hardware Options

The following options of the configuration administration's (cfgadm) fp plug-in might not be supported in a future Oracle Solaris release:

- show_FCP_dev
- unusable_FCP_dev

Device Allocation Interfaces for the Basic Security Module

The following components of the device allocation mechanism of the Basic Security Module might not be included in a future release of the Oracle Solaris software:

- mkdevalloc(1M)
- mkdevmaps(1M)
- /etc/security/dev

Obsolete Device Driver Interfaces

Some device driver interfaces (DDI) might not be supported in a future release.

The following table lists the DDI interfaces that might not be supported, along with the preferred DDI interface alternatives.

Obsolete Interface	Preferred Interface
mmap	devmap
identify	set to nulldev
copyin	ddi_copyin
copyout	ddi_copyout
ddi_dma_addr_setup	ddi_dma_addr_bind_handle
ddi_dma_buf_setup(9F)	ddi_dma_buf_bind_handle
ddi_dma_curwin	ddi_dma_getwin
ddi_dma_free	ddi_dma_free_handle
ddi_dma_htoc	ddi_dma_addr[buf]_bind-handle
ddi_dma_movwin	ddi_dma_getwin

Obsolete Interface	Preferred Interface
<code>ddi_dma_nextseg</code>	<code>ddi_dma_nextcookie</code>
<code>ddi_dma_nextwin</code>	<code>ddi_dma_nextcookie</code>
<code>ddi_dma_segtocookie</code>	<code>ddi_dma_nextcookie</code>
<code>ddi_dma_setup</code>	<code>ddi_dma_*_handle</code>
<code>ddi_dmae_getlim</code>	<code>ddi_dmae_getattr</code>
<code>ddi_getlongprop</code>	<code>ddi_prop_lookup</code>
<code>ddi_getlongprop_buf</code>	<code>ddi_prop_lookup</code>
<code>ddi_getprop</code>	<code>ddi_prop_get_in</code>
<code>ddi_getproplen</code>	<code>ddi_prop_lookup</code>
<code>ddi_iopb_alloc</code>	<code>ddi_dma_mem_alloc</code>
<code>ddi_iopb_free</code>	<code>ddi_dma_mem_free</code>
<code>ddi_mem_alloc</code>	<code>ddi_dma_mem_alloc</code>
<code>ddi_mem_free</code>	<code>ddi_dma_mem_free</code>
<code>ddi_map_regs</code>	<code>ddi_regs_map_setup</code>
<code>ddi_prop_create</code>	<code>ddi_prop_update</code>
<code>ddi_prop_modify</code>	<code>ddi_prop_update</code>
<code>ddi_segmap</code>	see <code>devmap</code>
<code>ddi_segmap_setup</code>	<code>devmap_setup</code>
<code>ddi_unmap_regs</code>	<code>ddi_regs_map_free</code>
<code>free_pktiopb</code>	<code>scsi_free_consistent_buf</code>
<code>get_pktiopb</code>	<code>scsi_alloc_consistent_buf</code>
<code>makecom_g0</code>	<code>scsi_setup_cdb</code>
<code>makecom_g0_s</code>	<code>scsi_setup_cdb</code>
<code>makecom_g1</code>	<code>scsi_setup_cdb</code>
<code>makecom_g5</code>	<code>scsi_setup_cdb</code>
<code>scsi_dmafree</code>	<code>scsi_destroy_pkt</code>
<code>scsi_dmaget</code>	<code>scsi_init_pkt</code>
<code>scsi_pktalloc</code>	<code>scsi_init_pkt</code>

Obsolete Interface	Preferred Interface
scsi_pktfree	scsi_destroy_pkt
scsi_realloc	scsi_init_pkt
scsi_resfree	scsi_destroy_pkt
scsi_slave	scsi_probe
scsi_unslave	scsi_unprobe
ddi_peek{c,s,l,d}	ddi_peek{8,16,32,64}
ddi_poke{c,s,l,d}	ddi_poke{8,16,32,64}
in{b,w,l}	ddi_get{8,16,32}
out{b,w,l}	ddi_put{8,16,32}
repins{b,w,l}	ddi_rep_get{8,16,32}
repouts{b,w,l}	ddi_rep_put{8,16,32}

Device Management Entries in the power.conf File

The Device Management entries in the power.conf file might not be supported in a future release. Similar capability is provided by the Automatic Device Power Management entries in the Oracle Solaris software.

For more information, see the [power.conf\(4\)](#) man page.

Device Support and Driver Software

The following table lists devices and driver software that might not be supported in a future release.

TABLE 4-1 Device and Driver Software

Name of Physical Device	Name of Driver	Type of Card
AMI MegaRAID host bus adapter, first generation	mega	SCSI RAID
Compaq 53C8x5 PCI SCSI, and Compaq 53C876 PCI SCSI	cpqncr	SCSI HBA
Compaq SMART-2/P Array Controller and Compaq SMART-2SL Array Controller	smartii	SCSI RAID controller

Form and Menu Language Interpreter

The Form and Menu Language Interpreter (FMLI) commands are obsolete and might not be supported in a future Oracle Solaris release. The obsolete commands include the following:

- `/usr/bin/fmli`
- `/usr/bin/vsig`

Host Files in `/etc/net/ti*`

The host files in `/etc/net/ti*` are no longer consulted in the Oracle Solaris OS, though these files remain in the software. In a future Oracle Solaris release, these host files might be entirely removed.

Kerberos Ticket Lifetime Parameters in `krb5.conf`

The Kerberos Ticket Lifetime parameters, `max_life` and `max_renewable_life`, might no longer be supported in a future release of the Oracle Solaris OS. These parameters are in the `appdefaults` section of the `/etc/krb5/krb5.conf` file. Instead of these parameters, use `max_lifetime` and `renew_lifetime` in the `libdefaults` section of `/etc/krb5/krb5.conf`.

Korean CID Fonts

Korean CID fonts will not be supported in a future release. You can use the Korean TrueType fonts that are included in the Oracle Solaris software as a replacement for Korean CID fonts.

Legacy or Traditional Non-UTF-8 Locales

Sun is adopting Unicode for character encoding. Therefore, except for `zh_CN.GB18030` and `C` locales, non-UTF-8 locales might be removed as the Java Desktop System login locale in a future Oracle Solaris release.

Functions in the CPU Performance Counters Library (`libcpc`)

Hardware performance counters enable the measurement of many different hardware events that are related to CPU behavior. The following functions in the CPU Performance Counters library (`libcpc`) might not be supported in a future Oracle Solaris OS release:

cpc_access	cpc_bind_event
cpc_count_sys_events	cpc_count_usr_events
cpc_event_accum	cpc_event_diff
cpc_eventtostr	cpc_getcciname
cpc_getcpuref	cpc_getcpuver
cpc_getnpic	cpc_getusage
cpc_pctx_bind_event	cpc_pctx_invalidate
cpc_pctx_rele	cpc_pctx_take_sample
cpc_rele	cpc_seterrfn
cpc_shared_bind_event	cpc_shared_close
cpc_shared_open	cpc_shared_rele
cpc_shared_take_sample	cpc_strtoevent
cpc_take_sample	cpc_version
cpc_walk_names	

New functions have been added to the library in the Oracle Solaris 10 OS. Developers who have code that utilizes the interfaces in the preceding list should instead use the following corresponding new functions:

cpc_open	cpc_close
cpc_set_create	cpc_set_destroy
cpc_set_add_request	cpc_set_request_preset
cpc_buf_create	cpc_buf_destroy
cpc_bind_curlwp	cpc_bind_pctx
cpc_bind_cpu	cpc_unbind
cpc_set_sample	cpc_buf_sub
cpc_buf_add	cpc_buf_copy
cpc_buf_zero	cpc_buf_get
cpc_buf_set	cpc_buf_hrttime
cpc_buf_tick	cpc_walk_requests

<code>cpc_walk_events_all</code>	<code>cpc_walk_events_pic</code>
<code>cpc_walk_attrs</code>	<code>cpc_enable</code>
<code>cpc_disable</code>	<code>cpc_caps</code>
<code>cpc_npics</code>	<code>cpc_cpures</code>
<code>cpc_cciname</code>	<code>cpc_seterrhdlr</code>

See the `cpc(3CPC)` man page for details.

libXinput Library

The `libXinput.so.0` library might not be provided in a future release of the Oracle Solaris software. The `libXinput.so.0` library was provided for backward compatibility with X11R4 applications that were built by using the draft standard X Input API of Solaris 2.1 and Solaris 2.2. The X11 standard X Input Extension library, `libXi`, was integrated in Solaris 2.3.

All applications that rely on the `libXi` API should be built by using the `libXi` shared library for future compatibility and standards conformance.

NIS+ Name Service Type

NIS+ might not be supported in a future release. Tools to aid in the migration from NIS+ to LDAP are available in the Solaris 9 software. For more information, visit <http://www.sun.com/directory/nisplus/transition.html>.

nsctest Test Program

The `nsctest` is an interactive DNS test program to construct and send DNS queries. This program might no longer be supported in a future Oracle Solaris OS release. The same functionality that is provided by this test program is available by using the `dig` and `nslookup` commands.

Perl Version 5.6.1

Perl version 5.6.1 might not be supported in a future Oracle Solaris OS release. Perl version 5.8.4, the default version in the Oracle Solaris 10 OS, is not binary compatible with Perl version 5.6.1. However, the earlier version is still retained in this release. Customized modules that are installed by the customer must be rebuilt and reinstalled to use Perl version 5.8.4. Modify any scripts that require the use of version 5.6.1 to specifically use version 5.6.1 of the interpreter instead of version 5.8.4. The interpreters of the respective Perl versions are located in the following directories:

Perl 5.6.1 `/usr/perl5/5.6.1/bin/perl`

Perl 5.8.4 `/bin/perl, /usr/bin/perl, or /usr/perl5/bin/perl`

Solaris Management Console Patch Tool (Patch Manager)

The Oracle Solaris Management Console patch tool, Patch Manager, might not be available in a future release.

Solstice Enterprise Agents

Solstice Enterprise Agents might not be supported in a future release.

Stand Alone Router Discovery

The `/usr/sbin/in.rdisc` implementation of the IPv4 ICMP Router Discovery protocol might not be supported in a future release of the Oracle Solaris software. A near-equivalent version of this protocol, which is implemented as a component of `/usr/sbin/in.routed`, supports an enhanced administrative interface. The `/usr/sbin/in.routed` component supports the implementation of Routing Information Protocol (RIP) version 2. The `/usr/sbin/in.routed` component also has the ability to distinguish Mobile IP advertisements from Router Discovery messages.

Oracle's Sun Fire Link Interfaces

The Oracle Sun Fire Link Interfaces might no longer be supported in a future Oracle Solaris release.

Java Desktop System Applications

The following applications in the Java DS, Release 3, might be removed from a future release.

- Sun Java Calendar Preview
- GNOME Keyboard Layout Switcher
- Java DS Diagram Editor
- Java DS Java Text Editor
- Java DS Java Dictionary

- Java DS Disk Analyzer
- Java DS Mr. Project

Token Ring and Fiber Distributed Data Interface Device Types

Support for token ring (DL_TPR) and Fiber Distributed Data Interface (FDDI) device types in generic LAN driver (GLD) might be removed in a future Oracle Solaris release. After the removal is implemented, drivers for token ring or FDDI that rely on this support in GLD cease to function. However, other drivers or applications that do not use this support are not affected. To test whether a driver relies on GLD, run the following script:

```
#!/bin/sh
#
# Test a driver binary for use of GLD
#
for file
do
    /usr/ccs/bin/nm $file | /bin/awk '
    /\|gld_register$/      { isgld=1; }
    END {
        if (isgld)
            print file, "uses GLD";
        else
            print file, "does not use GLD";
    }' file=$file
done
```

For more information about generic LAN driver, see the [gld\(7D\)](#) man page as well as “Writing Device Drivers”.

WBEM Dynamic Reconfiguration

The feature known as WDR - Web-Based Enterprise Management Dynamic Reconfiguration - might not be supported in a future release of the Oracle Solaris OS. WDR is currently supported on Sun Fire midrange and high-end systems.

XIL Interface

The XIL interface might not be supported in a future release. An application that uses XIL causes the following warning message to be displayed:

```
WARNING: XIL OBSOLESCENCE
This application uses the Solaris XIL interface
```

which has been declared obsolete and may not be present in version of Solaris beyond Solaris 9. Please notify your application supplier. The message can be suppressed by setting the environment variable `_XIL_SUPPRESS_OBSOLETE_MSG`.

xetops Utility

The `xetops` utility might not be supported in a future release. The `xetops` utility converts an Asian text file to a PostScript file. This conversion enables Asian characters to be printed on PostScript printers that do not have resident Asian fonts.

Similar capability is provided in the `mp` command, which has been enhanced to support all of the native Asian encodings with more options and functionality.

x86: Xsun DDX Modules, Library, and Related Files

Certain DDX modules for Xsun might be removed from a future Oracle Solaris release. These modules are used when you configure the Xsun X server on the `kdmconfig` screen, Video Device Selection, by selecting an entry that is not prefixed with “XF86.” The files affected by this notice include the following:

- Files in the `/usr/openwin/server/modules` directory whose names do not have the `ddxSUNWxf86` prefix
- The `/usr/openwin/server/lib/libaccel.so.1` library
- Files with the `.xga` suffix under the `/usr/openwin/share/etc/devdata/SUNWaccel/boards` directory

It is recommended that for your preferred X server, use the Xorg X server whose DDX modules provide comparable functionality to the Xsun X server. However, if you use the Xsun X server, you can still use the XFree86 DDX modules. These are modules with the prefix `ddxSUNWxf86` and whose entries in the `kdmconfig` screen, Video Device Selection, begin with “XF86.” These modules provide comparable functionality to the Xsun DDX modules that might be removed.

Documentation Issues

This chapter describes known issues that are related to documentation.

Determining the Working Set Size of a Project

In the section, “[Determining the Working Set Size of a Project](#)” in *System Administration Guide: Oracle Solaris Containers-Resource Management and Oracle Solaris Zones*, there is a typographical error in the following sentence:

While the cap on user1 is 6 s, in every 5-second sample interval the RSS decreases and I/O increases as rcapd pag

It should read as follows:

While the cap on user1 is 6 gigabytes, in every 5-second sample interval the RSS decreases and I/O increases as r

luupgrade Command Man Page Has an Incorrect Cross-Reference

The `luupgrade(1M)` command man page has an incorrect cross-reference.

In the description about how to use the `-k` option with the `luupgrade` command, the man page incorrectly states that valid keywords for `autoreg_file` can be found in the `sysidcfg(4)` man page.

`autoreg_file` file does not use the same keywords that the `sysidcfg` file uses.

For correct information about the valid keywords for use in the `autoreg_file` file, see “[Oracle Solaris Auto Registration](#)” on page 17.

Oracle Solaris Patch List

Oracle Solaris patch lists are not documented in the release notes. For information about the patch list for the Oracle Solaris 10 9/10 release, see [Oracle Solaris 10 9/10 Patch List](#).

System Administration Guide: Naming and Directory Services (NIS+)

Starting with the Solaris 10 8/07 release, the Oracle Solaris OS does not have two separate hosts files. The `/etc/inet/hosts` file is now a single hosts file that contains both IPv4 and IPv6 entries. You need not maintain IPv4 entries in two hosts files that always require synchronization. For backward compatibility, the `/etc/inet/ipnodes` file is replaced with a symbolic link of the same name to the `/etc/inet/hosts` file. For more information, see the `hosts(4)` man page. NIS clients and servers can communicate by using either IPv4 or IPv6 RPC transports.

Discontinuation of Swedish Documentation

Starting with the Solaris 10 8/07 release, documents will not be translated into Swedish. For all the latest information, see the English documents at <http://docs.sun.com/>.

Application Server Documentation Refers to Derby Database Instead of Java DB

Application Server documentation refers to the Java DB database as “Derby.” All references to “Derby” must now state as Java DB. The database is installed in `/usr/appserver/javadb`.

Documents on the Software Supplement CD

Starting with the Oracle Solaris 10 OS, the Supplement CD no longer exists. The documents that were formerly supplied on the Supplement CD can now be found at <http://docs.sun.com>. The remaining contents reside elsewhere in the Oracle Solaris kit.

Oracle Solaris 10 Documentation and Man Pages

The company S2io has changed its name to Neterion. All references to S2io in the Oracle Solaris 10 documentation and man pages should instead state Neterion.

Previously Documented Bugs That Were Fixed in the Oracle Solaris 10 9/10 Release

Several bugs that were documented in the release notes of previous Oracle Solaris releases have been fixed in the Oracle Solaris 10 9/10 release. The fixed bugs have been removed from this document. The following table lists these bugs:

Previously Documented Bugs Fixed in This Release

CR Number	Title
6423854	Install Hangs on Systems With 512 Mbytes of Memory
6734066	Using WAN Boot Program to Directly Boot From Installation Media Fails
6595488	NVIDIA SATA Controllers Do Not Support ATAPI Devices
6270371	Installation From CD Media Appears to Hang After Reboot Selection
6517798	Panic in PCIe as dev_info Node Has No Parent Data
6756546	SUNWsmbar Removes the /etc/services and /etc/inet/services Files During Upgrade
6239850	Oracle Solaris Live Upgrade luupgrade Command Missing the Progress Bar (6239850)
6822680	System Fails to Plumb and Panics While Plumbing the Fourth 5709 Interface with 1 Gbyte RAM
6855964	e1000g Driver Generates Corrupted LSO Packets
6824695	Mozilla Crashes After Printing

CR Number	Title
6800618	zoneadm attach Command Fails and Mount Operation Is Invalid for Branded Zones
6671736	Solaris Volume Manager GUI Fails to Start
6720107	::findleaks Command Fails
6550154	zoneadm attach Command Might Fail
6637053	bnx Driver Does Not Support Broadcom NetXtreme II 5709 Chipset
6834743	System Panic Due to lggrp_* Functions During OS Installation
6883262	DSR Upgrade Might Cause System Failure
6866818	Audio Devices Unavailable After Upgrade on Trusted Extensions Systems
6736444	i86_mwait Work Does Not Function as Designed
6731804	fwflash Does Not Support ConnectX and hermon HCAs
6650724	USB Floppy Drive Fails to Mount
6838180	TCP Corruption Seen With Northstar Cards
	Do Not Use patchadd -M Command to Install Patches on a System With Non-Global Zones