



Solaris 9 12/02 Release Notes

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Preface

The *Solaris 9 12/02 Release Notes* contain installation problem details and other information that was not available until immediately before the release of the Solaris™ 9 12/02 operating environment.

Note – The Solaris operating environment runs on two platforms, SPARC® and x86. The Solaris environment also runs on 64-bit and 32-bit address spaces. The information in this document pertains to both platforms and address spaces unless otherwise specified in a special chapter, section, note, bulleted item, figure, table, or example.

Who Should Use This Book

These notes are for users and system administrators who install and use the Solaris 9 12/02 operating environment.

Related Books

You might need to refer to the following manuals when you install Solaris software:

- *Solaris 9 Start Here*
- *Solaris 9 Installation Guide*
- The *Solaris 9 12/02 Release Notes*, which are available through the following media:
 - The Solaris 9 12/02 Release and Installation Collection on the Solaris 9 12/02 Documentation CD
 - Print documentation that accompanies the product (installation issues and bugs only)
 - <http://docs.sun.com> (the most up-to-date information)
- *Solaris 9 System Administrator Collection*
- *What's New in the Solaris 9 12/02 Operating Environment*

For information on 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 Solaris operating environment. If your system requires hardware-specific actions at certain points, the manufacturer of your hardware has provided supplemental Solaris installation documentation. Refer to those materials, such as *Solaris 9 Sun Hardware Platform Guide*, for hardware-specific installation instructions.

Accessing Sun Documentation Online

The docs.sun.comSM Web site enables you to access Sun technical documentation online. You can browse the docs.sun.com archive or search for a specific book title or subject. The URL is <http://docs.sun.com>.

Typographic Conventions

The following table describes the typographic changes used in this book.

TABLE P-1 Typographic Conventions

Typeface or Symbol	Meaning	Example
AaBbCc123	The names of commands, files, and directories; on-screen computer output	Edit your <code>.login</code> file. Use <code>ls -a</code> to list all files. <code>machine_name% you have mail.</code>
AaBbCc123	What you type, contrasted with on-screen computer output	<code>machine_name% su</code> Password:
<i>AaBbCc123</i>	Command-line placeholder: replace with a real name or value	To delete a file, type <code>rm filename</code> .
<i>AaBbCc123</i>	Book titles, new words, or terms, or words to be emphasized.	Read Chapter 6 in <i>User's Guide</i> . These are called <i>class</i> options. You must be <i>root</i> to do this.

Shell Prompts in Command Examples

The following table shows the default system prompt and superuser prompt for the C shell, Bourne shell, and Korn shell.

TABLE P-2 Shell Prompts

Shell	Prompt
C shell prompt	machine_name%
C shell superuser prompt	machine_name#
Bourne shell and Korn shell prompt	\$
Bourne shell and Korn shell superuser prompt	#

Installation Issues

This chapter describes problems that relate to the installation of the Solaris 9 12/02 operating environment.

Bugs You Need to Know About Before Installing Solaris 9 12/02 Software

x86: PXE Network Boot Does Not Execute Successfully on Sun LX50 Systems (4725108)

If you use the Preboot Execution Environment (PXE) network boot to install the Solaris 9 12/02 operating environment on a Sun™ LX50 system, the network boot might fail. The following message is displayed.

```
error: Assertion failure: - "rp->flags & RESF_ALT", "ur.c" line 80
```

```
The root filesystem is not mounted and the configuration assistant  
has exited prematurely. Booting is unlikely to succeed.  
CTL-ALT-DEL may be used to reset the machine.
```

```
Failover to boot interpreter - type ctrl-d to resume boot
```

Workaround: Choose one of the following workarounds.

- If you do not need to use PXE network boot, follow these steps.
 1. Boot the system by using one of the following media.
 - Solaris 9 12/02 Installation CD
 - Solaris 9 12/02 Software 1 of 2 CD
 - Solaris Device Configuration Assistant (DCA) on a boot diskette
See the *Solaris 9 Installation Guide* for more information on booting from the Solaris DCA.
 2. When the DCA prompts you to choose a network device, select the appropriate network device to use to boot the system.

- If you want to use PXE network boot, disable the serial console in the system's BIOS during the installation. For instructions on how to modify the BIOS on Sun LX50 systems, see the *Sun LX50 Server Manual* at <http://www.sun.com/servers/entry/lx50/documentation2.html>.

x86: Invalid Error Messages Display During Command-Line Interface Installation (4734820)

If you use the Solaris Web Start software or `suninstall` command-line interface (CLI) to install Solaris 9 12/02 (x86 Platform Edition), the following error messages might be displayed. These error messages are displayed if you choose to install the software in the ExtraValue directory.

```
Could not find child archive
/cdrom/.install/../../Solaris_9/ExtraValue/EarlyAccess/Bonus_Languages
/components/Catalan/.install/install.class
Could not find child archive
/cdrom/.install/../../Solaris_9/ExtraValue/EarlyAccess/Bonus_Languages
/components/Polish/.install/install.class
Could not find child archive
/cdrom/.install/../../Solaris_9/ExtraValue/EarlyAccess/Bonus_Languages
/components/Russian/.install/install.class
```

Workaround: Ignore these invalid error messages. The Catalan, Russian, and Polish bonus languages are not included in Solaris 9 12/02 (x86 Platform Edition).

Boot From Solaris DVD Fails on Systems With Toshiba SD-M1401 DVD-ROM (4467424)

If your system has a Toshiba SD-M1401 DVD-ROM drive with firmware revision 1007, the system cannot boot from the Solaris 9 12/02 DVD.

Workaround: Apply patch 111649-03, or later version, to update the Toshiba SD-M1401 DVD-ROM drive's firmware. Patch 111649-03 is included on the Solaris 9 12/02 Supplement CD in the following directory.

```
DVD_Firmware/Patches
```

See the README file in this directory for instructions on how to install the patch. Be sure to read and follow all the cautions and warnings in this README file before you install the patch.

Cannot Access Data on Solaris 9 12/02 DVD in Solaris 2.6 and Solaris 7 Operating Environments (4511090)

If your system is running the Solaris 2.6 or Solaris 7 operating environment, Volume Management incorrectly mounts the Solaris 9 12/02 DVD. The Solaris 9 12/02 DVD can be mounted, but the data is inaccessible. As a result, you cannot set up an install server, perform a Live Upgrade, or access any data on the media.

Workaround: Choose one of the following workarounds.

- Apply the patches appropriate for your system.

TABLE 1-1 DVD Patches for the Solaris 2.6 and Solaris 7 Operating Environments

Release	Patch ID
Solaris 2.6 operating environment	107618-03
Solaris 7 operating environment	107259-03
Solaris 2.6 operating environment	107619-03
Solaris 7 operating environment	107260-03

- Manually mount the Solaris 9 12/02 DVD. Do not use Volume Management to mount the DVD. Follow these steps.

1. Become superuser.
2. Stop Volume Management.

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

3. Manually mount the DVD.

```
# mkdir /mnt1
# mount -F hsfs -o ro /dev/dsk/c0t6d0s0 /mnt1
```

4. Verify that the DVD is mounted and the data is accessible.

```
# cd /mnt1
# ls
```

The system returns the following information if the DVD is correctly mounted.

```
Copyright Solaris_9
```

Issues You Need to Know About Before Installing Solaris 9 12/02 Software

SPARC: Booting From the Solaris 9 12/02 DVD

The Solaris 9 12/02 operating environment is now available on DVD. To install or upgrade from DVD, insert the Solaris 9 12/02 DVD into the DVD-ROM drive and boot the system from the ok prompt with the following command.

```
ok boot cdrom
```

x86: Solaris 9 12/02 Installation CD Partition Issue

If the Solaris Web Start 3.0 program on the Solaris 9 12/02 Installation CD is unable to locate a Solaris `fdisk` partition on a system, you must create a Solaris `fdisk` partition on your root disk.



Caution – If you change the size of an existing `fdisk` partition, all data on that partition is automatically deleted. Back up your data before you create a Solaris `fdisk` partition.

The Solaris Web Start 3.0 program requires two `fdisk` partitions to perform an installation.

- Solaris `fdisk` partition
This is the typical Solaris `fdisk` partition.
- x86 boot `fdisk` partition
This is a 10-Mbyte `fdisk` partition that enables x86-based systems to boot the miniroot that is placed on the newly created swap slice. The swap slice is located on the Solaris `fdisk` partition.

Note – The installation program on the Solaris 9 12/02 Installation CD creates the x86 boot partition, removing 10 Mbytes from the Solaris `fdisk` partition. This removal prevents any existing `fdisk` partitions from being altered.

This partition should not be created manually.

This requirement also prevents you from using the Solaris 9 12/02 Installation CD to upgrade from the Solaris 2.6 or Solaris 7 releases to the Solaris 9 12/02 operating environment. For more information, refer to “Upgrade Issues” on page 24.

x86: Change in Default Boot-Disk Partition Layout

In the Solaris 9 12/02 operating environment, the Solaris Web Start installation program uses, by default, a new boot-disk partition layout to accommodate the Service partition on Sun LX50 systems. This installation program enables you to preserve an existing Service partition.

The new default includes the following partitions.

- First partition – Service partition (existing size on system)
- Second partition – x86 boot partition (approximately 11 Mbytes)
- Third partition – Solaris partition (remaining space on the boot disk)

If you want to use this default layout, select Default when the Solaris Web Start program asks you to choose a boot-disk layout.

Note – If you install the Solaris 9 12/02 (x86 Platform Edition) operating environment on a system that does not currently include a Service partition, the Solaris Web Start program does not create a new Service partition by default. If you want to create a Service partition on your system, first use the Sun LX50 Diagnostics CD to create the Service partition, then install the Solaris 9 12/02 operating environment. For information on how to create the Service partition, see the *Sun LX50 Server User's Manual* at <http://www.sun.com>.

You can also choose to manually edit the disk partition layout by using the `fdisk` utility. You might want to manually edit the boot-disk partitions under the following conditions.

- You want to preserve an existing Sun Linux partition on the system.
- You need to create a Solaris partition, but want to preserve other existing partitions on the disk.

Note – If your system contains an upgradable version of the Solaris operating environment, but does not contain an x86 boot partition, you might not be able to upgrade by using the Solaris Installation CD. To upgrade a system with no x86 boot partition to the Solaris 9 12/02 operating environment, use the `suninstall` installation program on the Solaris 9 12/02 Software 1 of 2 CD.

SPARC: Default Solaris JumpStart Profile Might Not Install Multiple Locales on Small Disks

If you use the default Solaris JumpStart™ profile on the Solaris 9 12/02 media to install multiple locales on a system with a small disk, the installation might fail. This problem might occur under the following conditions.

- You use the default Solaris JumpStart profile to install any locale other than the C locale on a system with a 2.1-Gbyte disk.
- You use the default Solaris JumpStart profile to install two or more locales on a system with a 4-Gbyte disk.

x86: Service Partition Not Created by Default on Systems With No Existing Service Partition

If you install the Solaris 9 12/02 operating environment on a system that does not currently include a Service partition, the installation program might not create a Service partition by default. If you are including a Service partition on the same disk as the Solaris partition, you must re-create the Service partition before you install the operating environment.

If you installed the Solaris 8 2/02 operating environment on a Sun LX50 system, the installation program might not have preserved the Service partition. If you did not manually edit the `fdisk` boot-partition layout to preserve the Service partition, the installation program deleted the Service partition during the installation.

Note – If you did not specifically preserve the Service partition when you installed the Solaris 8 2/02 operating environment, you cannot re-create the Service partition and upgrade to the Solaris 9 12/02 operating environment. You must perform an initial installation of the operating environment.

Workaround: If you are including a Service partition on the disk that contains the Solaris partition, choose one of the following workarounds.

- To use the Solaris Web Start installation program to install from the Solaris 9 12/02 Installation CD, follow these steps.

1. Delete the contents of the disk.
2. Before you install, create the Service partition by using the Sun LX50 Diagnostics CD.

For information on how to create the Service partition, see the *Sun LX50 Server User's Manual* and the Sun LX50 Knowledge Base at <http://cobalt-knowledge.sun.com>.

3. Insert the Solaris 9 12/02 Installation CD in the CD-ROM drive.
4. Begin installing the Solaris 9 12/02 operating environment.

When the installation program detects the Service partition, the following message is displayed.

```
The default layout for the bootdisk is one x86 Boot partition
and a Solaris partition on the remaining space. The Service fdisk
partition, if one exists, is also preserved by default.
```

```
Select one of the following to continue:
```

- ```
1) Use the default layout
2) Run fdisk to manually edit the disk
3) Exit
```

```
Please make a selection: [?]
```

5. Type 1 to use the default layout.

The installation program preserves the Service partition and creates the x86 boot partition and the Solaris partition.

---

**Note** – The Solaris Web Start installation program creates the x86 boot partition by removing 10 Mbytes from the Solaris `fdisk` partition. This utility prevents any existing `fdisk` partitions from being altered. Do not create this partition manually.

---

6. Complete the installation.
- To install from a network installation image or from the Solaris 9 12/02 DVD over the network, follow these steps.
    1. Delete the contents of the disk.
    2. Before you install, create the Service partition by using the Sun LX50 Diagnostics CD.

For information on how to create the Service partition, see the *Sun LX50 Server User's Manual* and the Sun LX50 Knowledge Base at <http://cobalt-knowledge.sun.com>.
    3. Boot the system from the network.

The Customize `fdisk` Partitions screen is displayed.
    4. To load the default boot-disk partition layout, click Default.

The installation program preserves the Service partition and creates the x86 boot partition and the Solaris partition.

For more information on booting from the network, see the *Solaris 9 Installation Guide*.
  - To use the `suninstall` program to install from the Solaris 9 12/02 Software 1 of 2 CD or from a network installation image on a boot server, follow these steps.
    1. Delete the contents of the disk.
    2. Before you install, create the Service partition by using the Sun LX50 Diagnostics CD.

For information on how to create the Service partition, see the *Sun LX50 Server User's Manual* and the Sun LX50 Knowledge Base at <http://cobalt-knowledge.sun.com>.
    3. Boot the system.

The installation program prompts you to choose a method for creating the Solaris partition.
    4. Select the `Use rest of disk for Solaris partition` option.

The installation program preserves the Service partition and creates the Solaris partition.
    5. Complete the installation.

For more information on booting from the network, see the *Solaris 9 Installation Guide*.

### **x86: Solaris Device Configuration Assistant Boot Diskette Is Not Available**

The Solaris 9 Device Configuration Assistant is not delivered as a boot diskette in the Solaris 9 12/02 release. To boot the Device Configuration Assistant, choose one of the following options.

- If your system's BIOS supports CD booting, boot from the Solaris 9 12/02 (x86 Platform Edition) Installation CD, the Solaris 9 12/02 Software (x86 Platform Edition) 1 of 2 CD, or the Solaris 9 12/02 Software (x86 Platform Edition) DVD.
- Create a boot diskette by copying the boot-diskette image to a diskette. The boot-diskette image is available at the following locations.
  - Solaris 9 12/02 Software (x86 Platform Edition) 2 of 2 CD
  - The Solaris Developer Connection Web site at [http://soldc.sun.com/support/drivers/dca\\_diskettes](http://soldc.sun.com/support/drivers/dca_diskettes)

Copy the image to a diskette, then boot the system from the diskette.

- If your system supports Preboot Execution Environment (PXE) booting and an install image is available on the network, boot from the network.

Enable the system to use PXE by using the system's BIOS setup tool or the network adapter's configuration setup tool.

For more information, see the *Solaris 9 Installation Guide*.

### **x86: Update the DPT PM2144UW Controller BIOS to the Latest Revision Before Upgrading to the Solaris 9 12/02 Operating Environment**

The Solaris 9 12/02 operating environment includes a feature that enables you to install large partitions. The DPT PM2144UW controller's BIOS must support logical block addressing (LBA). The latest revision of the BIOS fully supports LBA access. You might need to update other DPT controller models to support LBA.

**Workaround:** Prior to upgrading your system to the Solaris 9 12/02 operating environment, ensure that the DPT PM2144UW controller's BIOS is the latest available version from DPT.

To determine if your system has a DPT controller, perform the following steps:

1. Run the `prtconf -D`.
2. If the name `dpt` is displayed, run the card's configuration utility to obtain information about the model and BIOS revision.
3. Upgrade DPT PM2144UW controllers by flashing the BIOS or by installing the latest BIOS EPROM that you have obtained from DPT. See <http://www.dpt.com> for the latest BIOS images for all DPT controllers.

You can now upgrade the system to the Solaris 9 12/02 operating environment.

### **x86: Do Not Upgrade Hewlett-Packard (HP) Vectra XU Series Systems With BIOS Version GG.06.13**

The Solaris 9 12/02 operating environment 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 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 Solaris 9 12/02 operating environment because it 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.

## **Installation Bugs**

### **SPARC: Systems With Multiple Interfaces Recognize All Interfaces as Usable After Installation or Upgrade (4640568)**

If you install or upgrade to the Solaris 9 12/02 operating environment on a system with multiple network interfaces, the system recognizes all system interfaces as usable. Interfaces that are not plugged in to the network or that are not intended for use appear in the output of the `ifconfig -a` command. Additionally, interfaces with identical Ethernet addresses might be assigned identical IP addresses. The following error message is displayed.

```
ifconfig: setifflags: SIOCSLIFFLAGS: qfe3: Cannot assign requested address
```

This problem also occurs on systems that have the `local-mac-address` PROM variable set to `false`. The problem occurs because all interfaces are configured with the same IP address.

**Workaround:** Choose one of the following workarounds.

- To plumb only the configured interface, reboot the system after the initial boot.
- To assign a different IP address to each network interface, set the `local-mac-address` PROM variable to `true` in one of the following ways.

- At the `ok` prompt, type the following command.

```
ok setenv local-mac-address? true
```

- In a terminal window, type the following command as superuser.

```
eeprom local-mac-address?=true
```

## Installation Bugs That Occur During an Installation From Solaris 9 12/02 Software 1 of 2 CD

### Warnings Might Occur When a File System Is Created (4189127)

When a file system is created during installation, one of the following warning messages might be displayed.

```
Warning: inode blocks/cyl group (87) >= data blocks (63) in last
cylinder group. This implies 1008 sector(s) cannot be allocated.
```

Or:

```
Warning: 1 sector(s) in last cylinder unallocated
```

The warning occurs when the size of the file system that you created does not equal the space on the disk that is being used. This discrepancy can result in unused space on the disk that is not incorporated into the indicated file system. This unused space is not available for use by other file systems.

**Workaround:** Ignore the warning message.

## Upgrade Issues

### Cannot Access Storage Area Networks Through SUNWsan With Solaris 9 12/02 Operating Environment

If your Solaris 8 system is connected to storage area networks (SANs), check with your support engineer before you upgrade to the Solaris 9 12/02 operating environment. Solaris 8 systems with the SUNWsan package installed might require special procedures to upgrade to the Solaris 9 12/02 operating environment. To find out if the SUNWsan package is installed on the system, type the following command in a terminal window.

```
pkginfo SUNWsan
```

If the SUNWsan package is installed, the following information is displayed.

```
system SUNWsan SAN Foundation Kit
```

### x86: Cannot Use Solaris 9 12/02 (x86 Platform Edition) Installation CD to Upgrade x86 Systems to the Solaris 9 12/02 Operating Environment

You cannot use Solaris 9 12/02 (x86 Platform Edition) Installation CD to upgrade x86-based systems from the Solaris 2.6 or Solaris 7 operating environment to the Solaris 9 12/02 operating environment because of the x86 boot-partition requirement. Use the Solaris 9 12/02 Software (x86 Platform Edition) 1 of 2 CD to upgrade from the Solaris 2.6 or Solaris 7 operating environment to the Solaris 9 12/02 operating environment on x86-based systems.



## Solaris Management Console 2.1 Software Is Not Compatible With Solaris Management Console 1.0, 1.0.1, or 1.0.2 Software

Solaris Management Console 2.1 software is not compatible with Solaris Management Console 1.0, 1.0.1, or 1.0.2 software. If you are upgrading to the Solaris 9 12/02 operating environment, and you have Solaris Management Console 1.0, 1.0.1, or 1.0.2 software installed, you must first uninstall the Solaris Management Console software. 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 Solaris Management Console software.
- If you did not uninstall Solaris Management Console 1.0, 1.0.1, or 1.0.2 software before you upgraded to the Solaris 9 12/02 operating environment, you must first remove all 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 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 Solaris Management Console 2.1 software.

If the `pkginfo` output displays multiple versions of Solaris Management Console 1.0 packages, use the `pkgrm` command to remove both packages. Remove the original package and 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 Solaris Management Console 2.1 software should now function properly. For future maintenance, or if the Solaris Management Console 2.1 software does not function properly, remove the Solaris Management Console 2.1 software. Reinstall the software by completing the following steps.

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

---

**Note** – If your installation has multiple instances of 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 SUNWdclnt
pkgrm SUNWmga
pkgrm SUNWmgapp
pkgrm SUNWmcdev
pkgrm SUNWmcex
pkgrm SUNWwbmc
pkgrm SUNWmc
pkgrm SUNWmcc
pkgrm SUNWmccom
```

2. Insert the Solaris 9 12/02 Software 1 of 2 CD into your CD-ROM drive. Type the following in a terminal window.

```
cd /cdrom/sol_9_1202_sparcia/s0/Solaris_9/Product
pkgadd -d . SUNWmccom SUNWmcc SUNWmc SUNWwbmc SUNWmcex SUNWmcdev \
SUNWmgapp SUNWmga SUNWdclnt SUNWlvmr SUNWlvma SUNWlvmg SUNWpmgr \
SUNWrmui
```

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

## Installation Bugs That Occur During an Upgrade

### Installer Text Display Problem When Using Solaris Live Upgrade (4736488)

When using the Solaris Live Upgrade `luupgrade (1M)` command with the `-i` option to complete an upgrade of an inactive boot environment, the text that the installers display might be unreadable in some languages. The text is corrupted when the installers request fonts that do not exist on the older release that is on the current boot environment.

**Workaround:** Choose one of the following workarounds.

- Use a combined network installation image to do the install.
- Enable the C locale by setting the environment variable on your system.
  - If you are using the Bourne shell or Korn shell, follow these steps.

1. Set the C locale.

```
LANG=C; export LANG
```

2. Begin the installation.

- If you are using the C shell, follow these steps.

1. Type the following.

```
csh
```

2. Set the C locale.

```
setenv LANG C
```

3. Begin the installation.

### SPARC: `luupgrade` Command Cannot Add Patches When a Patch List File Is Specified (4679511)

If you use the `-s` option with the `luupgrade` command to add patches with a directory and a patch list file, the patches are not added. A message similar to the following message is displayed:

```
/usr/sbin/luupgrade [52]: 3 patch-list-file: bad number
```

In the previous message, *patch-list-file* is the patch list file you specified for the `luupgrade` command to use to add patches.

**Workaround:** To add patches that specify a patch list file, perform the following steps.

1. Become superuser.
2. Mount the boot environment that you are patching.

```
lumount boot-envir-name mount-point
```

3. Add the patches to the boot environment.

```
/usr/sbin/patchadd -R mount-point -M patch-path patch-list-file-name
```

In the previous command, *patch-path* is the path name of a directory that contains patches to add. The *patch-list-file-name* is the file that contains the list of patches you are adding.

4. Unmount the boot environment.

```
luumount boot-envir-name
```

### **SPARC: Removal of SUNWjxcft Package Records Error During Upgrade (4525236)**

When you upgrade from the Solaris 8 operating environment to the Solaris 9 or the Solaris 9 12/02 operating environment, a problem is encountered when the SUNWjxcft package is removed. The following error message is recorded in the upgrade\_log file.

```
Removing package SUNWjxcft:
Can't open /a/usr/openwin/lib/locale/ja/X11/fonts/TTbitmaps/fonts.upr
Can't open /a/usr/openwin/lib/locale/ja/X11/fonts/TTbitmaps/fonts.scale
Can't open /a/usr/openwin/lib/locale/ja/X11/fonts/TTbitmaps/fonts.alias
Can't open /a/usr/openwin/lib/locale/ja/X11/fonts/TT/fonts.upr
Can't open /a/usr/openwin/lib/locale/ja/X11/fonts/TT/fonts.scale
Can't open /a/usr/openwin/lib/locale/ja/X11/fonts/TT/fonts.alias
```

```
Removal of <SUNWjxcft> was successful
```

**Workaround:** Ignore the error message.

### **Upgrading From Solaris 8 Operating Environment Might Create Redundant Kerberos Privacy Mechanisms (4672740)**

In the Solaris 9 12/02 operating environment, the Kerberos version 5 global mechanism includes privacy support. Therefore, the Kerberos domestic mechanism is not needed. If you installed the Kerberos domestic mechanism that is located in /usr/lib/gss/oc/mech\_krb.so.1 on a Solaris 8 system, remove the Kerberos domestic mechanism, then upgrade the system to the Solaris 9 12/02 operating environment.

**Workaround:** Follow these steps before you upgrade to the Solaris 9 12/02 operating environment.

1. Type the following command to determine if the Kerberos domestic mechanism is installed on the system.

```
% pkginfo | fgrep 'SUNWk5'
```

- If the output of this command includes any SUNWk5 package names, the Kerberos domestic mechanism is installed on the system. Go to step 2.
- If the output does not include any SUNWk5 package names, the Kerberos domestic mechanism is not installed on the system. Skip the rest of these steps. Upgrade the system.

2. Back up the `/etc/nfssec.conf` and `/etc/gss/qop` files by typing the following command.

```
% tar -cf /var/tmp/krb_config_files.tar /etc/nfssec.conf /etc/gss/qop
```

3. Verify that the files are backed up by typing the following command.

```
% tar -tf /var/tmp/krb_config_files.tar
```

4. Remove each package that is listed in the output of step 1.

```
% pkgrm package-name package-name package-name
```

5. Upgrade to the Solaris 9 12/02 operating environment.

The upgrade program updates the global Kerberos mechanism code and enables Kerberos privacy support.

6. In a text editor, change the following lines in the `/etc/gss/mech` file.

- Uncomment the following line.

```
kerberos_v5 1.2.840.113554.1.2.2 gl/mech_krb5.so gl_kmech_krb5
```

If necessary, add the previous line to the `/etc/gss/mech` file.

- Remove the following line.

```
kerberos_v5 1.2.840.113554.1.2.2 do/mech_krb5.so do_kmech_krb5
```

- Restore the `/etc/nfssec.conf` and `/etc/gss/qop` files by typing the following command.

```
% tar -xf /var/tmp/krb_config_files.tar
```

### Upgrading to Solaris 9 12/02 Operating Environment Might Disable Existing Secure Shell Daemon (sshd) (4626093)

If you upgrade to the Solaris 9 12/02 operating environment on a system that is running a third-party Secure Shell, such as OpenSSH, from the `/etc/init.d/sshd` daemon, the upgrade disables the existing Secure Shell daemon. During an upgrade, the Solaris 9 12/02 upgrade software overwrites the contents of `/etc/init.d/sshd`.

**Workaround:** Choose one of the following workarounds.

- If you do not want the Secure Shell protocol server program on your system, do not install the `SUNWsshdr` and `SUNWsshdu` packages during the upgrade.
- If you do not want the Secure Shell protocol server or client programs on your system, do not install the Secure Shell Cluster (`SUNWCssh`) during the upgrade.

### Upgrade Fails if /export Is Near Capacity (4409601)

If the `/export` directory is near full capacity and you upgrade to the Solaris 9 12/02 operating environment, space requirements for `/export` are miscalculated. The upgrade then fails. This problem commonly occurs if a diskless client is installed, or if third-party software is installed in the `/export` directory. The following message is displayed:

WARNING: Insufficient space for the upgrade.

**Workaround:** Before you upgrade, choose one of the following workarounds.

- Rename the `/export` directory temporarily, until the upgrade is completed.
- Temporarily comment out the `/export` line in the `/etc/vfstab` file until the upgrade is completed.
- If `/export` is a separate file system, then unmount `/export` before you perform the upgrade.

### Upgrading Diskless Client Servers and Clients (4363078)

If your system currently supports diskless clients that were installed with the Solstice AdminSuite™ 2.3 Diskless Client tool, you must perform two steps. First, delete all existing diskless clients that are the same Solaris version and architecture as the server. Then, install or upgrade to the Solaris 9 12/02 operating environment. For specific instructions, see the *System Administration Guide: Basic Administration*.

If you attempt to install the Solaris 9 12/02 operating environment over existing diskless clients, the following error message might be displayed:

```
The Solaris Version (Solaris version-number) on slice <xxxxxxx> cannot
be upgraded.
There is an unknown problem with the software configuration installed
on this disk.
```

In this error message, *version-number* refers to the Solaris version that is currently running on your system. `<xxxxxxx>` refers to the slice that is running this version of the Solaris operating environment.

### Upgrading the JavaSpaces Data Store to Prevent WBEM Data Loss (4365035)

If you upgrade from the Solaris 8 (Solaris WBEM Services 2.0) or the Solaris 8 6/00 (WBEM Services 2.1) operating environment to the Solaris 9 12/02 (Solaris WBEM Services 2.5) operating environment, your existing data is lost.

**Workaround:** Recompile the proprietary Managed Object Format (MOF) files after you perform an upgrade.

## 64-Bit Solaris Issues

### SPARC: Sun UltraSPARC System (Sun4U) Might Need Boot Flash PROM Update

---

**Note** – If your system is already running 64-bit ready firmware, then the flash PROM update is not required.

---

If you want to run the 64-bit Solaris operating environment on an UltraSPARC® system, you might need to update its flash PROM firmware. The Solaris 9 12/02 installation programs enable you to add 64-bit support. This 64-bit support is selected by default when you install on Sun UltraSPARC systems. A 64-bit system only boots in the 64-bit mode by default if it has a CPU speed of 200 MHz or greater.

---

**Note** – If you choose to run the 32-bit Solaris operating environment on any Sun™ or UltraSPARC system, the flash PROM update is not needed.

---

The following table lists the UltraSPARC (Sun4U™) systems that are affected and the minimum firmware versions that are needed. *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 Solaris Operating Environment on UltraSPARC Systems

| <b>System Type From</b> <code>uname -i</code> | <b>Minimum Firmware Version From</b> <code>prtconf -v</code> |
|-----------------------------------------------|--------------------------------------------------------------|
| SUNW,Ultra-1-Engine                           | 3.10.0                                                       |
| SUNW,Ultra-1                                  | 3.11.1                                                       |
| SUNW,Ultra-2                                  | 3.11.2                                                       |
| SUNW,Ultra-4                                  | 3.7.107                                                      |
| SUNW,Ultra-Enterprise                         | 3.2.16                                                       |

---

**Note** – If a system is not listed in the previous table, it does not need a flash PROM update.

---

For instructions on how to perform the flash PROM update by using the Solaris CD, refer to the *Solaris 9 on Sun Hardware Collection*. If you do not have this manual, you can obtain it at <http://docs.sun.com>.

## Documentation CD Issue

### Cannot Install Documentation Packages With Names Longer Than Nine Characters on Documentation Servers Running the Solaris 2.6, 7, and 8 Operating Environments

Some localized documentation collections in PDF format have package names that are longer than nine characters. To install these PDF collections on servers that are running the Solaris 7 or 8 operating environment, you must first install two patches.

---

**Note** – No patches exist at the time of this release for Solaris 2.6 servers.

---

**Workaround:** For instructions on how to install these patches, see the Solaris Documentation Important Information file on the documentation media, Solaris 9 12/02 Documentation CD 1 of 2, 2 of 2, or DVD. This file is located in the following directory:

```
mount-point/README/locale/install_locale.html
```

For example, the English file on the Solaris 9 12/02 Documentation CD 1 of 2 is located in the following directory:

```
sol_9_doc_1of2/README/C/install_C.html
```

## Documentation CD Installation Bugs

### **Uninstall Mode of Solaris 9 12/02 Documentation CD `uninstaller` Utility Does Not Work Properly (4675797)**

If you run the Solaris 9 12/02 Documentation CD `uninstaller` in Uninstall All mode, the `uninstaller` removes only those documentation packages that are installed by default.

**Workaround:** Run the `uninstaller` in Uninstall Partial mode. Select the specific packages you want to uninstall.

### **Documentation CD Verify Panel Might Not Page in Command-Line Interface Mode (4520352)**

If you use the Solaris 9 12/02 Documentation CD installer program with the `nodisplay` option, the verify panel might not page correctly.

**Workaround:** Do not specify the `nodisplay` option with the Solaris 9 12/02 Documentation CD installer program. Use the graphical user interface (GUI) mode to install the Solaris 9 12/02 Documentation CD.

## Localization Issue That Occurs During Installation

### **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 Solaris 9 12/02 operating environment 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.



## Localization Bugs That Occur During Installation

### **Solaris 9 Beta Refresh Chinese CDE Font Packages Do Not Upgrade to Solaris 9 12/02 Operating Environment (4653908)**

If you upgrade to the Solaris 9 12/02 operating environment on a system that runs the Solaris 9 Beta Refresh operating environment with Simplified Chinese or Traditional Chinese locale support, the upgrade is not completed successfully. The Simplified Chinese and Traditional Chinese CDE font localization packages (SUNWcdft or SUNWhdft) do not upgrade to the appropriate Solaris 9 12/02 packages. The following error message is displayed.

```
Removing package SUNWcdft:
/a/var/sadm/pkg/SUNWcdft/install/postremove:
 /a/usr/dt/config/xfonts/zh_CN.EUC: does not exist
/a/var/sadm/pkg/SUNWcdft/install/postremove:
 /a/usr/dt/config/xfonts/zh_CN.GBK: does not exist
/a/var/sadm/pkg/SUNWcdft/install/postremove:
 /a/usr/dt/config/xfonts/zh_CN.UTF-8: does not exist
pkgm: ERROR: postremove script did not complete successfully
```

**Workaround:** Before you upgrade to the Solaris 9 12/02 operating environment, remove the appropriate Solaris 9 Beta Refresh postremove files.

```
rm /var/sadm/pkg/SUNWcdft/install/postremove
rm /var/sadm/pkg/SUNWhdft/install/postremove
```

### **Upgrading Systems Running Solaris 8 Operating Environment With Full Thai/Russian/Polish/Catalan Support Leaves Invalid Packages on System (4650059)**

An upgrade to the Solaris 9 12/02 operating environment on a system that runs the Solaris 8 operating environment with the Solaris 8 Language Supplement CD installed, results in several invalid packages. Thai, Russian, Polish, and Catalan locale packages remain on the system. These locale packages have an ARCH=sparcall value and are not removed during the upgrade to the Solaris 9 12/02 operating environment.

**Workaround:** Before you upgrade to the Solaris 9 12/02 operating environment, use the Solaris Product Registry application to remove the Solaris 8 Languages Supplement CD packages.



## Solaris Runtime Issues

---

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

The following runtime bug descriptions have been added to this chapter since this document was published on the Solaris 9 12/02 Documentation CD and in the Installation Kiosk on the Solaris 9 12/02 Installation CD.

- “x86: Pressing the F4 Key During BIOS Bootup Fails to Boot the Service Partition (4782757)” on page 38
- “x86: CDE Startup Applications Might Display in the root -window Input Method Style (4770994)” on page 36
- “The Application Server Starts All Instances as Root Allowing Nonroot Users Root Access (4780076)” on page 54
- “x86: Crashes Occur When Using the Arabic and Hebrew Locales (4770382)” on page 47
- “External Certificate Nickname Does Not Display in Administration Interface Nickname List (4725473)” on page 50
- “Permission Problems Occur During Dynamic Reloading and Invocation of Applications (4756981)” on page 53
- “Modified Samples Are Not Updated Until Redeployed (4726161)” on page 52
- “SPARC: Application Server Fails to Restart When Converting to an SSL-Enabled Environment (4723776)” on page 49
- “Oracle JDBC Driver Optimizations Not Being Initiated (4732684)” on page 53

### Smart Card Bugs

#### **System Does Not Respond to Smart Card (4415094)**

If `ocfserv` terminates and the display is locked, the system remains locked even when a smart card is inserted or removed.

**Workaround:** Perform the following steps to unlock your system.

1. Perform a remote login to the machine on which the `ocfserv` process terminated.
2. Become superuser.

3. Kill the `dtsession` process by typing the following in a terminal window.

```
pkill dtsession
```

`ocfserv` restarts and smart card login and capability are restored.

### **Edit Config File Menu Item in Smartcards Management Console Does Not Work (4447632)**

The Edit Config File menu item in the Smartcards Management Console does not edit smart card configuration files that are located in `/etc/smartcard/opencard.properties`. If the menu item is selected, a warning is displayed that indicates not to continue unless requested by technical support.

**Workaround:** Do not use the Edit Config File menu item in the Smartcards Management Console. For information on smart card configuration, see the *Solaris Smartcard Administration Guide*.

## **Common Desktop Environment (CDE) Bugs**

### **x86: CDE Startup Applications Might Display in the `root-window` Input Method Style (4770994)**

If you start a Common Desktop Environment (CDE) desktop session on a Sun™ LX50 in a Chinese locale, CDE applications that execute at startup might come up with the `root-window` input method style, instead of the expected `over-the-spot` input method style.

**Workaround:** Add the line, `sleep 1`, at the end of the `/usr/dt/config/Xsession.d/0020.dtims` script and start a new CDE desktop session.

### **CDE Removable Media Auto Run Capability Removed (4634260)**

The Removable Media auto run capability in the CDE desktop environment has been temporarily removed from the Solaris 9 12/02 operating environment.

**Workaround:** To use the auto run function for a CD-ROM or another removable media volume, you must do one of the following:

- Run the `volstart` program from the top level of the removable media file system.
- Follow the instructions that are included with the CD for access from outside of CDE.

### **SPARC: `dtmail` Crashes When Launched From the Command Line if `FontList` Option Is Specified (4677329)**

`dtmail` crashes after connecting with the IMAP server if the `FontList` option is specified when `dtmail` is launched from the command line. See the following example.

```
/usr/dt/bin/dtmail -xrm "Dtmail*FontList: -*-r-normal-*:"
```

The following error message is displayed.

```
Segmentation Fault
```

This problem occurs in both the C and ja locales.

**Workaround:** Do not specify the `FontList` option when you launch `dtmail` from the command line.

### **CDE Mailer Appears to Hang While Displaying Email With Long Lines (4418793)**

If you try to read an email message with many long lines in any of the Solaris 9 12/02 Unicode or UTF-8 locales, CDE Mailer (`dtmail`) appears to hang. The message does not display immediately.

**Workaround:** Choose one of the following workarounds.

- Enlarge the `dtmail` Mailbox window to accommodate 132 columns.
- Disable the Complex Text Layout feature by following these steps.
  1. Become superuser.
  2. Change directories to your system's locale directory.

```
cd /usr/lib/locale/locale-name
```

In the previous example, *locale-name* refers to the name of your system's Solaris 9 12/02 Unicode or UTF-8 locale.

3. Rename the locale layout engine category.

```
mv LO_LTYPE LO_LTYPE-
```

---

**Note** – Rename the category for the locale layout engine to the original name (`LO_LTYPE`) before you apply any patches to the locale layout engine.

---

### **Solaris PDASync Cannot Delete Last Entry From the Desktop (4260435)**

After you delete the last item from the desktop, the item is restored from the handheld device to the desktop when you synchronize your handheld device. Examples of items that you might delete, and then have restored, are the last appointment in your Calendar or the last address in the Address Manager.

**Workaround:** Manually delete the last entry from the handheld device prior to synchronization.

### **Solaris PDASync Does Not Support Data Exchange With the Multibyte Internationalized PDA Device (4263814)**

If you exchange multibyte data between a PDA device and Solaris CDE, the data might be corrupted in both environments.

**Workaround:** Back up your data on your personal computer with the PDA backup utility before you run the Solaris™ PDASync application. If you accidentally exchange multibyte data and corrupt that data, restore your data from the backup.

## **System Administration Bugs**

### **x86: Pressing the F4 Key During BIOS Bootup Fails to Boot the Service Partition (4782757)**

You are booting a Sun LX50 which has a Service partition and the Solaris 9 12/02 (x86 Platform Edition) operating environment is installed. You are given the option of pressing the F4 function key to boot the Service partition. However, pressing F4 causes the screen to go blank and the system fails to boot the Service partition.

**Workaround:** Do not press the F4 key when the BIOS Bootup Screen is displayed. After a time-out period, the Current Disk Partition Information screen is displayed. Select the number in the Part# column that corresponds to `type=DIAGNOSTIC` and press the Return key. The system boots the Service partition.

### **UltraSPARC II CP Event Message in Solaris 9 12/02 Operating Environment Not Always Produced (4732403)**

In the Solaris 9 12/02 operating environment, on UltraSPARC II based systems, the CP Event message that accompanies some Uncorrectable Memory Error messages is not always produced. These systems include the Sun Enterprise™ 10000 and Sun Enterprise 6500/6000/5500/5000/ 4500/4000/3500/3000 systems. The result is that some information needed to identify a failing CPU might not always be present.

**Workaround:** For the latest information regarding this issue, check the SunSolve Web site at <http://sunsolve.sun.com>.

### **Solaris WBEM Services 2.5 Daemon Cannot Locate `com.sun` Application Programming Interface Providers (4619576)**

The Solaris WBEM Services 2.5 daemon cannot locate providers that are written to the `com.sun.wbem.provider` interface or to the `com.sun.wbem.provider20` interface. Even if you create a `Solaris_ProviderPath` instance for a provider that is written to these interfaces, the Solaris WBEM Services 2.5 daemon does not locate the provider.

**Workaround:** To enable the daemon to locate such a provider, stop and restart the Solaris WBEM Services 2.5 daemon.

```
/etc/init.d/init.wbem stop
```

```
/etc/init.d/init.wbem start
```

---

**Note** – If you use the javax API to develop your provider, you do not need to stop and restart the Solaris WBEM Services 2.5 daemon. The Solaris WBEM Services 2.5 daemon dynamically recognizes javax providers.

---

### **Some com.sun Application Programming Interface Method Invocations Fail Under XML/HTTP Transport Protocol (4497393, 4497399, 4497406, 4497411)**

If you choose to use the com.sun application programming interface rather than the javax application programming interface to develop your WBEM software, only CIM remote method invocation (RMI) is fully supported. Other protocols, such as XML/HTTP, are not guaranteed to work completely with the com.sun application programming interface.

The following table lists examples of invocations that execute successfully under RMI but fail under XML/HTTP.

---

| <b>Method Invocation</b> | <b>Error Message</b>                 |
|--------------------------|--------------------------------------|
| CIMClient.close()        | NullPointerException                 |
| CIMClient.execQuery()    | CIM_ERR_QUERY_LANGUAGE_NOT_SUPPORTED |
| CIMClient.getInstance()  | CIM_ERR_FAILED                       |
| CIMClient.invokeMethod() | XMLERROR: ClassCastException         |

---

### **Cannot Modify File-System Mount Properties With Solaris Management Console Mounts and Shares Tool (4466829)**

The Solaris Management Console Mounts and Shares tool cannot modify mount options on system-critical file systems such as / (root), /usr, and /var.

**Workaround:** Choose one of the following workarounds.

- Use the remount option with the mount command.

```
mount -F file-system-type -o remount,additional-mount-options \
device-to-mount mount-point
```

---

**Note** – Mount property modifications that are made by using the -remount option with the mount command are not persistent. In addition, all mount options that are not specified in the *additional-mount-options* portion of the previous command inherit the default values that are specified by the system. See the man page mount\_ufs(1M) for more information.

---

- Edit the appropriate entry in the `/etc/vfstab` file to modify the file-system mount properties, then reboot the system.

### **CIM\_ERR\_LOW\_ON\_MEMORY Error Occurs When Trying to Add Data With WBEM (4312409)**

The following error message is displayed when memory is low:

```
CIM_ERR_LOW_ON_MEMORY
```

You cannot add more entries when the Common Information Model (CIM) Object Manager is low on memory. You must reset the CIM Object Manager Repository.

**Workaround:** To reset the CIM Object Manager Repository, follow these steps.

1. Become superuser.
2. Stop the CIM Object Manager.  

```
/etc/init.d/init.wbem stop
```
3. Remove the JavaSpaces™ log directory.  

```
/bin/rm -rf /var/sadm/wbem/log
```
4. Restart the CIM Object Manager.  

```
/etc/init.d/init.wbem start
```

---

**Note** – When you reset the CIM Object Manager Repository, you lose any proprietary definitions in your data store. You must recompile the MOF files that contain those definitions by using the `mofcomp` command. See the following example.

```
/usr/sadm/bin/mofcomp -u root -p root-password your-mof-file
```

---

## **Solaris Volume Manager Issue**

### **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 Solaris installation programs, see the *Solaris 9 Installation Guide*.

---

## Solaris Volume Manager Bugs

### **Detaching Submirror With `metadetach` Command Automatically Resizes Mirror (4678627)**

If you use the `metadetach` command to remove a submirror from a mirror, you might not be able to reattach the submirror. This problem occurs because the mirror is automatically resized after you detach the submirror.

**Workaround:** Before you use the `metadetach` command to detach a submirror, attach a submirror of equal size to the submirror you want to detach.

### **Solaris Volume Manager `metareplace -e` Command Fails to Enable Soft Partitions When Disks Are Removed and Then Replaced (4645781)**

If you physically remove a soft partitioned disk from a system and then replace it with a new disk, the `metareplace -e` command fails to enable the soft partitions. This failure might occur whether or not you used the `metarecover` command prior to issuing the `metareplace -e` command to enable the soft partitions.

**Workaround:** Re-create the soft partitions on the new disk.

---

**Note** – If the soft partitions are a part of a mirror or RAID 5, use the `metareplace` command without the `-e` option to replace the old soft partition with the new soft partition.

```
metareplace dx mirror or RAID 5 old_soft_partition new_soft_partition
```

---

### **Solaris Volume Manager `metahs -e` Command Fails on Copper Cable Storage Boxes When Failed Hot Spare Disk Has Been Swapped Out (4644106)**

The `metahs -e` command might fail if you encounter the following circumstances.

1. A hot-spare device encounters a problem, such as an induced error, when using the `metaverify` test utility.
2. Solaris Volume Manager software attempts to activate the hot spare when an error occurs on a metadevice. The hot spare is marked `broken`.
3. The system is brought down. The failed disk that contains the hot spare is replaced with a new disk at the same location.
4. When the system is booted, Solaris Volume Manager software does not recognize the new hot spare.
5. The `metahs -e` command is used to enable the hot spare on the new disk.

The following message is displayed.

```
WARNING: md: d0: open error of hotspare (Unavailable)
```

The failure occurs because the Solaris Volume Manager software does not internally recognize the new hot-spare disk that was swapped into the same physical location. The Solaris Volume Manager software continues to display the device ID of the disk that is no longer in the system.

---

**Note** – This failure is not known to occur on a Photon or storage enclosures where the device number changes when a disk is replaced.

---

**Workaround:** Choose one of the following workarounds.

- Follow these steps to update the device ID for the hot-spare disk in the Solaris Volume Manager state database.
  1. Become superuser.
  2. Type the following command to update the device ID for the hot-spare disk.
 

```
metadevadm -u logical-device-name
```
  3. Type the following command to make the new hot-spare disk available.
 

```
metareplace -e logical-device-name
```
- Follow these steps to manage hot spares and hot-spare pools on the system.
  1. Become superuser.
  2. Type the following command to delete the entry for the hot-spare slice.
 

```
metahs -d hsphot-spare-pool-number logical-device-name
```
  3. Type the following command to create a new entry for the hot-spare slice at the same location with the correct device ID.
 

```
metahs -a hsphot-spare-pool-number logical-device-name
```

### **Solaris Volume Manager `metadevadm` Command Fails if Logical Device Name No Longer Exists (4645721)**

You cannot replace a failed drive with a drive that has been configured with the Solaris Volume Manager software. The replacement drive must be new to Solaris Volume Manager software. If you physically move a disk from one slot to another slot on a Photon, the `metadevadm` command fails. This failure occurs when the logical device name for the slice no longer exists. However, the device ID for the disk remains present in the metadevice replica. The following message is displayed.

```
Unnamed device detected. Please run 'devfsadm && metadevadm -r to resolve.
```

---

**Note** – You can access the disk at the new location during this time. However, you might need to use the old logical device name to access the slice.

---

**Workaround:** Physically move the drive back to its original slot.

### **Solaris Volume Manager `metarecover` Command Fails to Update `metadb` Namespace (4645776)**

If you remove and replace a physical disk from the system, and then use the `metarecover -p -d` command to write the appropriate soft partition specific information to the disk, an open failure results. The command does not update the metadevice database namespace to reflect the change in disk device identification. This condition causes an open failure for each such soft partition that is built on top of the disk. The following message is displayed.

```
Open Error
```

**Workaround:** Create a soft partition on the new disk instead of using the `metarecover` command to recover the soft partition.

---

**Note** – If the soft partition is part of a mirror or RAID 5, use the `metareplace` command without the `-e` option to replace the old soft partition with the new soft partition.

```
metareplace dx mirror or RAID 5 old_soft_partition new_soft_partition
```

---

## **Networking Bugs**

### **Configuring Multiple Tunnels Between Two IP Nodes With Filtering Enabled Might Result in Packet Loss (4152864)**

If you configure multiple IP tunnels between two IP nodes, and enable `ip_strict_dst_multihoming` or other IP filters, packet loss might result.

**Workaround:** Choose one of the following workarounds.

- First, configure a single tunnel between the two IP nodes. Add addresses to the tunnel by using the `ifconfig` command with the `addif` option.
- Do not enable `ip_strict_dst_multihoming` on tunnels between two IP nodes.

## Security Bugs

### Unlocking CDE Screenlock Removes Kerberos Version 5 Credentials (4674474)

If you unlock a locked CDE session, all your cached Kerberos version 5 (krb5) credentials might be removed. The result is you might not be able to access various system utilities. This problem occurs under the following conditions.

- In the `/etc/pam.conf` file, the `dtsession` services for your system are configured to use the `krb5` module by default.
- You lock your CDE session, and then try to unlock the session.

If this problem occurs, the following error message is displayed.

```
lock screen: PAM-KRB5 (auth): Error verifying TGT with host/host-name:
Permission denied in replay cache code
```

**Workaround:** Add the following non-`pam_krb5 dtsession` entries to the `/etc/pam.conf` file.

```
dtsession auth requisite pam_authtok_get.so.1
dtsession auth required pam_unix_auth.so.1
```

With these entries in the `/etc/pam.conf` file, the `pam_krb5` module does not run by default.

### `cron`, `at`, and `batch` Cannot Schedule Jobs for Locked Accounts (4622431)

In the Solaris 9 12/02 operating environment, locked accounts are treated in the same way as expired or nonexistent accounts. As a result, the `cron`, `at`, and `batch` utilities cannot schedule jobs on locked accounts.

**Workaround:** To enable locked accounts to accept `cron`, `at`, or `batch` jobs, replace the password field of a locked account (`*LK*`) with the string `NP`, for no password.

## Additional Software Bug

### SPARC: Veritas Volume Manager Might Fail on Systems Running Solaris 9 12/02 Operating Environment (4642114)

If you try to perform various tasks with Veritas Volume Manager on a system that is running the Solaris 9 12/02 operating environment, the `vxddladm addjob` or `vxddladm addsupport` utilities might produce a core dump.

**Workaround:** Follow these steps.

1. Become superuser.
2. Verify that the `/var/ld/ld.config` file and `/usr/bin/crle` utility exist on the system.
3. Type the following commands in a terminal window.

```
/usr/bin/cp /var/ld/ld.config /var/ld/ld.config.save
/usr/bin/crle -E LD_LIBRARY_PATH=/usr/lib
appropriate-vxddladm-command
/usr/bin/mv /var/ld/ld.config.save /var/ld/ld.config
```

## Documentation CD Issues

### iPlanet Directory Server 5.1 Documentation Links Do Not Work Properly

In the iPlanet™ Directory Server 5.1 Collection (Solaris Edition), links titled DocHome and links between separate books do not work. If you select these links, your browser displays a Not Found error.

**Workaround:** To navigate between iPlanet Directory Server 5.1 documents on your system, go to the iPlanet Directory Server 5.1 Collection (Solaris Edition) page at <http://docs.sun.com>. Click the link to the document you want to view.

### SUNWsdocs Package Necessary to Remove Other Documentation Packages

If you remove the `SUNWsdocs` package, then try to remove other documentation packages, the removal fails. This problem occurs because the `SUNWsdocs` package is installed with any collection and provides the browser entry point.

**Workaround:** If you removed the `SUNWsdocs` package, reinstall the `SUNWsdocs` package from the documentation media and then remove the other documentation packages.

## Documentation CD Bugs

### European Locale PDF Documents Available Only Through C Locale (4674475)

In the Solaris 9 12/02 operating environment, and other UNIX-based systems, PDF documents on the Solaris 9 12/02 Documentation 1 of 2 CD are not accessible in the following European locales.

- `de` (German)
- `es` (Spanish)
- `fr` (French)
- `it` (Italian)
- `sv` (Swedish)

This problem occurs because of a limitation with Adobe Acrobat Reader. For more information on this problem, see the Adobe Technote site at <http://www.adobe.com:80/support/techdocs/294de.htm>.

**Workaround:** Choose one of the following workarounds.

- In the Solaris 9 12/02 operating environment, and other UNIX-based systems, set the environment variable `LC_ALL` to `C` `acroread`. For example, in the C shell, type the following command in a terminal window.

```
% env LC_ALL=C acroread
```

- Upgrade to Adobe Acrobat Reader 5.0 or later version.

### **Removing Solaris 9 12/02 Documentation Packages Might Unexpectedly Uninstall Some Solaris 9 12/02 Documentation Collections (4641961)**

Some Solaris 9 12/02 documentation collections might be unexpectedly removed from your system if the following occurs.

1. You install both the Solaris 9 12/02 Documentation 1 of 2 and 2 of 2 CDs on your system.
2. You then use the `prodreg` utility or the Solaris 9 12/02 Documentation CD installer program to remove certain documentation packages.

The Solaris 9 12/02 Documentation CD 1 of 2 and 2 of 2 have three collections in common. If you remove the packages that contain these collections from either of the Solaris 9 12/02 Documentation 1 of 2 or 2 of 2 CD installations, the package is removed for both installations.

The following table lists the packages that might be removed unexpectedly.

**TABLE 2-1** Solaris 9 12/02 Documentation Packages Contained on Both Solaris 9 12/02 Documentation CDs

| <b>HTML Package Names</b> | <b>PDF Package Names</b> | <b>Collection Description</b>             |
|---------------------------|--------------------------|-------------------------------------------|
| SUNWadm                   | SUNWpaadm                | Solaris 9 System Administrator Collection |
| SUNWdev                   | SUNWpdev                 | Solaris 9 Developer Collection            |
| SUNWids                   | SUNWpids                 | iPlanet Directory Server 5.1 Collection   |

**Workaround:** Choose one of the following workarounds.

- If the uninstall process unexpectedly removed these documentation packages, and you want these packages on your system, reinstall the packages from the Solaris 9 12/02 Documentation 1 of 2 or 2 of 2 CDs.
- To avoid this problem, use the `pkgrm` utility to remove the packages that you want to eliminate from your system.

## Localization Bugs

### **x86: Crashes Occur When Using the Arabic and Hebrew Locales (4770382)**

If you try to log in to the Arabic or Hebrew locales using the Solaris 9 12/02 (x86 Platform Edition) operating environment, dtlogin will crash, restart, and display the login prompt. The following error message is displayed.

```
The X server cannot be started on display :0...
```

If you attempt to launch an application after setting the locale to ar or he at the command line, the application might crash with a core dump.

**Workaround:** To avoid this problem, apply patch 114034-01. This patch is available at <http://sunsolve.sun.com>.

### **AltGraph-E Does Not Produce Euro Character in en\_US.UTF-8 Locale (4633549)**

In the en\_US.UTF-8 locale, you cannot type the Euro character by simultaneously pressing the AltGraph and E keys.

**Workaround:** Choose one of the following workarounds.

- Press and release the Compose key, then press and release the C key, then press and release the = key (Compose+C+=).

---

**Note** – If your keyboard does not include the Compose key, then press the Control key while you press the Shift and T keys (Ctrl-Shift-T).

---

- Press the Alt key while you press the 4 key (Alt-4).

### **SPARC: Shift-U Does Not Work as Expected in Arabic Locales (4303879)**

To generate the diacritic character in Arabic locales, type the Arabic character, then Shift-U.

### **Sorting in the European UTF-8 Locales Does Not Function Correctly (4307314)**

Sorting in the European UTF-8 locales does not work properly.

**Workaround:** Before you attempt to sort in a FIGGS UTF-8 locale, set the LC\_COLLATE variable to the ISO-1 equivalent.

```
echo $LC_COLLATE
> es_ES.UTF-8
LC_COLLATE=es_ES.ISO8859-1
export LC_COLLATE
```

Then start sorting.

## Sun ONE Application Server Bugs

### **Default Browser Is Incompatible With Sun ONE Application Server 7 (4741123)**

When you try to use the Sun ONE Application Server Administrative UI with the Solaris 9 12/02 operating environment default browser, the following error message is displayed.

```
Unsupported Browser: Netscape 4.78
```

It is recommended that you upgrade your browser to Netscape 4.79 or Netscape 6.2 (or later) to run the Sun One Application Server Administrative UI. Those who choose to continue and not upgrade may notice degraded performance or unexpected behavior.

**Workaround:** Use `/usr/dt/bin/netscape6`, instead of `/usr/dt/bin/netscape`.

### **SPARC: Access Control List Editing Not Supported on Some Versions of Netscape Navigator (4750616)**

Sun ONE Application Server Access Control List (ACL) editing is not supported on some versions of Netscape Navigator™. If you attempt to edit ACL entries while using either Netscape Navigator version 6.x or Netscape Navigator version 7.x, you might encounter intermittent problems.

For example:

- The browser window disappears.
- The ACL edit screen does not display when launched.

**Workaround:** Choose one of the following workarounds.

- Use the supported 4.79 version of Netscape Navigator or Microsoft Internet Explorer, version 6.0.
- Manually edit the ACL file. For details on ACL file formatting, see the *Sun ONE Application Server 7, Standard Edition Administrator's Guide*.

### **Accessing an Oracle 9.1 Database With an Oracle 9.2 Client Might Cause Data Corruption (4707531)**

If you use an Oracle 9.2 client to access an Oracle 9.1 database, data corruption might occur when a number column follows a timestamp column.

The problem might be caused by using the `ojdbc14.jar` file with an Oracle 9.1 database. Applying the patch might assist in addressing the situation on Solaris 32-bit machines, that run an Oracle 9.1 database. This JDBC™ driver is for Oracle working with JDK™ 1.4.



**Workaround:** Obtain the patch that Oracle might make available from the Oracle Web site for Bug 2199718 and apply it to your server.

**SPARC: Administration Interface Reports Verifier Error When Viewing Persistence Manager Factory Resource Created From the Command Line (4733109)**

A verifier error is reported for a Persistence Manager Factory resource that was created by using the command-line interface. The following error is displayed when the resource is viewed in the Sun ONE Application Server Administration interface.

```
ArgChecker Failure: Validation failed for jndiName: object must be non-null
```

**Workaround:** Perform the following steps to create a new Persistence Management Factory resource.

1. Create a jdbc-connection pool with data source information to connect to a database.
2. Create a jdbc-resource to make the connection pool available via a Java Naming and Directory Interface™ (J.N.D.I.) lookup.
3. Create a persistence-management resource with the jdbc-resource that was created in step 2.

**SPARC: any Value in Address Attribute of iiop-listener Element in server.xml File Is Not Supported (4743366)**

The any value in the address attribute of the iiop-listener element in the `server.xml` file allows for listening on all interfaces that are available on a system. This support includes both IPv4 and IPv6 interfaces. However, the Sun ONE Application Server default configuration uses an address value of `0.0.0.0` in the iiop-listener element. This default configuration does not listen on IPv6 interfaces. The configuration only listens on all IPv4 interfaces on a system.

**Workaround:** Use the `::` value in the address attribute of the iiop-listener element in the `server.xml` file to listen on all IPv4 and IPv6 interfaces on a system.

**SPARC: Application Server Fails to Restart When Converting to an SSL-Enabled Environment (4723776)**

If you attempt to restart the Sun ONE Application Server after installing a certificate and enabling security, the restart fails. A message indicates that the server failed to receive a password.

When SSL is not enabled, passwords are not cached, which results in the failure of restart. The `restart` command does not support the transition from non-SSL to SSL enabled mode.

---

**Note** – This problem only occurs the first time the server is restarted. Subsequent restarts work fine.

---

**Workaround:** Choose one of the following workarounds.

- If you have encountered this problem, click the Start button.
- To avoid this problem, perform the following steps instead of clicking the Restart button.
  1. Click the Stop button.
  2. Click the Start button.

### **SPARC: Application Server Might Crash During Dynamic Reloading (4750461)**

If an application has many Enterprise JavaBeans™ components, the server might crash during dynamic reloading of the application. The dynamic reloading feature is used in the development environment to quickly test minor changes to an application. The crash is caused by attempting to use more file descriptors than are available.

**Workaround:** Follow these steps.

1. Increase the file descriptors limit by adding lines, in this format, to the `/etc/system` file.
  - `set rlim_fd_max=8192`
  - `set rlim_fd_cur=2048`

Depending on the size of the application, the values can be set higher or lower.

2. Reboot the system.

### **Console Output Is Corrupted if the System's Default Encoding Is Not UTF-8 (4757859)**

If the system's default encoding is not UTF-8, the Application Server's output might cause multibyte characters to display incorrectly.

**Workaround:** Open the `server.log` file in your browser.

### **External Certificate Nickname Does Not Display in Administration Interface Nickname List (4725473)**

If you install an external certificate through the Sun ONE Application Administration interface, a problem is encountered when you attempt to enable SSL for the http-listener by using the certificate that is installed on the external cryptographic module. Although the installation of the certificate is successful, the certificate nickname does not display in the Administration interface.

**Workaround:** Complete the following steps.

1. Log in to the system where the Sun ONE Application Server software is installed as an Administrative User.
2. Link the http-listener to the certificate that is installed on the external cryptographic module by using the `asadmin` command. For more information on the `asadmin` command, see the `asadmin(1AS)` man page.

```
asadmin create-ssl --user admin user --password password --host host name \
--port port --type http-listener --certname nobody@apprealm:Server-Cert \
--instance instance --ssl3enabled=true \
--ssl3tlsciphers +rsa_rc4_128_md5 http-listener-1
```

The previous command establishes the link between the certificate and the server instance. The command does not install the certificate. The certificate was installed through the Administration interface.

---

**Note** – Although the certificate is linked with http-listener, the http-listener will be listening in non SSL mode.

---

3. Enable the http-listener to listen in SSL mode. Use the following command.

```
asadmin set --user admin user --password password --host host name \
--port port server1.http-listener.http-listener-1.securityEnabled=true
```

The previous command switches the server instance listening state from non-SSL to SSL. After you complete the previous steps, the certificate is displayed in the Administration interface.

You can now use the Administration interface to edit the http-listener as needed.

### **SPARC: flexanlg Command Might Cause Open Failure Error (4742993)**

If you are running the Sun ONE Application Server software in the Solaris 9 12/02 operating environment, and you use the `flexanlg` command from `/usr/appserver/bin`, an open failure error is displayed.

```
ld.so.1: /usr/appserver/bin/flexanlg: fatal: libplc4.so:open failed:
No such file or directory
killed
```

**Workaround:** Complete these steps.

1. Add the following entry to the `LD_LIBRARY_PATH` file.

```
/usr/lib/mps
```

2. Run the `flexanlg` command.

```
% /usr/appserver/bin/flexanlg
```

## IPv6-only Clients Cannot Connect to the Application Server (4742559)

---

**Note** – If IPv6 is not used in your network, this problem does not apply to you.

---

By default, the Sun ONE Application Server 7 instances and Admin Server instances use IPv4. IPv4 is supported by all operating environments on which the Sun ONE Application Server is available. On platforms where IPv6 is supported, the Sun ONE Application Server configuration changes are required for conformance.

---

**Note** – If these configuration changes are to be made, you must be absolutely sure of IPv6 support. If the IPv6 related configuration is applied to a system that has only IPv4 support, Application Server instances might not start.

---

**Workaround:** Perform the following configuration changes:

1. Start the Admin Server.
2. Start the Admin Console by connecting to the Admin Server HTTP host or port in a browser.
3. Select the server instance to configure for IPv6, for example, server1.
4. Expand the HTTP Listeners node in the tree view.
5. Select the HTTP Listener to configure for IPv6, for example, http-listener1.
6. Change the value of the IP Address field to **ANY** in the General section.
7. In the Advanced section, change the value of the Family field to **INET6**.  
Setting the Family field to INET6 does not disable IPv4 functionality unless an IPv6 address is selected for IP address. Selecting an IP address of ANY matches any IPv4 or IPv6 address.
8. Click Save.
9. Select your server instance from the left pane.
10. Click Apply Changes.
11. Click Stop.
12. Click Start.

The server restarts and implements your changes.

## Modified Samples Are Not Updated Until Redeployed (4726161)

If users attempt to deploy a sample more than once after making small changes and repackaging the application, the following error message is displayed.

Already Deployed

This issue affects most of the samples because they use the Ant utility and the `common.xml` file, which have the `deploy` target. Thus, this combined use mixes deployment of applications with registration of resources.

**Workaround:** Choose one of the following workarounds.

- For the majority of the sample applications that use the Ant utility `build.xml` files, which include the `common.xml` file, type the following command.

```
% asant deploy_common
```

- For all other sample applications, type the following commands.

```
% asant undeploy
```

```
% asant deploy
```

### **SPARC: Nonzero Transaction Setting Causes Slow Local Transactions (4700241)**

The Local Transaction Manager does not support transactions with definite timeouts. If you set the `timeout-in-seconds` attribute in the `transaction-service` element to a value greater than 0, all local transactions are processed as global transactions. A timeout value of 0 means that the transaction manager waits indefinitely if it does not hear from a participating data source.

---

**Note** – If the Data source driver does not support global transactions, a local transaction might fail.

---

**Workaround:** Reset the `timeout-in-seconds` value to its default of 0.

### **Oracle JDBC Driver Optimizations Not Being Initiated (4732684)**

To utilize Oracle JDBC optimizations with Container-Managed Persistence (CMP) beans, the `classes12.zip` must be specified in the `classpath-suffix` attribute of the `server.xml` file. Do not place the `classes12.zip` file in the `instance/lib/` directory, the default for third-party libraries.

**Workaround:** Add the `classes12.zip` file to the `classpath-suffix` attribute of the `server.xml` file.

### **Permission Problems Occur During Dynamic Reloading and Invocation of Applications (4756981)**

If the Admin Server is owned by root and the server instance is owned by a nonroot user, permission problems might occur during dynamic reloading and invocation of applications.

**Workaround:** After deploying and redeploying the module or application (with or without the precompile option), change the directory owner from root to the nonroot user for the following directories. The nonroot user is the same as the instance owner.

The directory ownership change should be applied recursively to each of the directories, based on application type, in the following list:

- *domain-root/server-instance/applications/j2ee-apps/application-name*
- *domain-root/server-instance/applications/j2ee-modules/module-name*
- *domain-root/server-instance/generated/ejb/j2ee-apps/application-name*
- *domain-root/server-instance/generated/jsp/j2ee-apps/application-name*
- *domain-root/server-instance/generated/jsp/j2ee-modules/module-name*

1. Become superuser.
2. Type the following command for each of the directories that apply to your situation.

```
chown -R non-root-instance-owner directory-name
```

### **RMI-IIOP Clients Do Not Work for IPv6 Addresses Where DNS Address Lookups Fail for the IPv6 Address (4743419)**

If a DNS lookup for an IPv6 address fails, clients of Remote Method Invocation-Internet Inter-ORB Protocol (RMI-IIOP) do not work for IPv6 addresses.

**Workaround:** Domain Name Service (DNS) should be set up at the deployment site, in order to look up an IPv6 address.

### **Value in the Only show entries with Field in the View Event Log Becomes Corrupted If the Application or System Is Not Using UTF-8 Encoding (4763655)**

If the user types multibyte characters in the Only show entries with field and searches the event log, the value in the Only show entries with field becomes corrupted when the search result is displayed. The problem is caused by the conversion of the message format from UTF-16 to UTF-8.

**Workaround:** None.

## **Sun ONE Application Server Security Bug**

### **The Application Server Starts All Instances as Root Allowing Nonroot Users Root Access (4780076)**

Several issues are associated with Application Server startup when the Sun ONE Application Server is installed as part of a Solaris installation:

- All application server and administrative server instances are started automatically during Solaris system startup. In many environments, not all the instances are expected to be started automatically during Solaris system startup. Starting every defined instance can adversely impact the memory available on a system.

- When application server instances and administrative server instances are started automatically, the startup script for each instance is executed as root. Execution of nonroot-owned instance startup scripts can give nonroot user's access to the root user through modification of the instance-level startup scripts.

During the installation of the Sun ONE Application Server, the `/etc/init.d/appserv` script and symbolic links to the `S84appserv` and `K05appserv` scripts in the `/etc/rc*.d/` directories are installed. These scripts cause all application server instances and administrative server instances, defined as part of the application server installation, to be started and stopped automatically during Solaris system startup and shutdown.

The `/etc/init.d/appserv` script contains the following section of code.

```
case "$1" in
'start')
 /usr/sbin/asadmin start-appserv
 ;;
'stop')
 /usr/sbin/asadmin stop-appserv
 ;;
```

Execution of the `asadmin start-appserv` command causes the administration server instance and all application server instances, defined in all administrative domains, to be started during Solaris system startup. Because the system startup and shutdown scripts are executed as root, the startup script for each application server and administrative server instance is also executed as root. The instance-level startup script is named `startserv` and is located at `instance-dir/bin/startserv`. Because instances can be owned by users other than root, the `startserv` scripts could be modified by the nonroot user to execute commands as the root user.

If an instance is using a privileged network port, the instance's `startserv` script must be executed as root. However, `run as user` is typically set in the instance's configuration to force the instance to run as the specified user after the instance has been initially started by the root user.

**Workaround:** Perform one of the following workarounds, depending on your environment.

- If your environment does not require all application server and administrative server instances to be started as root, then comment out execution of the `asadmin start-appserv` and `asadmin stop-appserv` commands in the `/etc/init.d/appserv` script.
- If your environment requires starting either specific administrative domains or specific instances within one or more administrative domains, you can modify or create a script to automate that process. Note that "specific administrative domains" include the administrative server instance and all application server instances of each domain.

Perform one of the following steps.

- Modify the `/etc/init.d/appserv` script to start the domains or instances of interest.
- Define new `/etc/rc*.d/` scripts that conform to the needs of your environment.

**Startup Considerations:** When modifying the Solaris operating environment startup scripts to automatically start either specific application server administrative domains or specific application server instances, consider the following.

- **Starting a specific domain** – If you want to start the administrative server instance and all application server instances of a specific administrative domain as the root user, modify the `/etc/rc*.d/` scripts as follows.

```
case "$1" in
'start')
 /usr/sbin/asadmin start-domain --domain production-domain
 ;;
'stop')
 /usr/sbin/asadmin stop-domain --domain production-domain
 ;;
```

- **Starting a specific application server instance as a nonroot user** – Modify the `/etc/rc*.d/` scripts to use the `su` command with the `-c` option.

```
case "$1" in
'start')
 su - usera -c "/usr/sbin/asadmin start-instance --domain test-domain
instance-a"
 su - userb -c "/usr/sbin/asadmin start-instance --domain test-domain
instance-b"
 ;;
'stop')
 su - usera -c "/usr/sbin/asadmin stop-instance --domain test-domain
instance-a"
 su - userb -c "/usr/sbin/asadmin stop-instance --domain test-domain
instance-b"
 ;;
```

See the *Sun ONE Application Server 7 Administrator's Guide* for more information on the startup and shutdown commands that are available through the `asadmin` command-line interface.

## Sun ONE Directory Server (Formerly iPlanet Directory Server) Issues

### Setup Issue

When typing Distinguished Names during installation, use the UTF-8 character set encoding. Other encodings are not supported. Installation operations do not convert data from local character set encoding to UTF-8 character set encoding. LDIF files that are used to import data must also use UTF-8 character set encoding. Import operations do not convert data from local character set encoding to UTF-8 character set encoding.



## Schema Issues

The schema provided with the Sun Open Net Environment (Sun ONE) Directory Server (formerly iPlanet Directory Server) 5.1 differs from the schema that is specified in RFC 2256 for the `groupOfNames` and `groupOfUniqueNames` object classes. In the schema provided, the `member` and `uniqueMember` attribute types are optional. RFC 2256 specifies that at least one value for these types must be present in the respective object class.

The `aci` attribute is an operational attribute that is not returned in a search unless you explicitly request the attribute.

## Replication Issue

Multimaster replication over WAN is currently not supported.

## Server Plug-in Issues

Sun ONE Directory Server 5.1 provides the UID Uniqueness plug-in. By default, the plug-in is not activated. To ensure attribute uniqueness for specific attributes, create a new instance of the Attribute Uniqueness plug-in for each attribute. For more information on the Attribute Uniqueness plug-in, refer to the *iPlanet Directory Server 5.1 Administrator's Guide* at <http://docs.sun.com>.

The Referential Integrity plug-in is now off by default. To avoid conflict resolution loops, the Referential Integrity plug-in should only be enabled on one master replica in a multimaster replication environment. Before enabling the Referential Integrity plug-in on servers that issue chaining requests, analyze your performance resource, time, and integrity needs. Integrity checks can consume significant memory and CPU resources.

## Roles and Class of Service Issue

The `nsRoleDN` attribute is used to define a role. This attribute should not be used for evaluating role membership in a user's entry. When evaluating role membership, look at the `nsrole` attribute.

## Indexing Issue

If VLV indexes encompass more than one database, the VLV indexes do not work correctly.

## Sun ONE Directory Server Bugs

### Cannot Inactivate Users Through Console (4521017)

If you launch the Sun ONE Directory Server 5.1 Console and create a new user or new role as inactive, the newly created user or newly created role is not inactivated. Users and roles cannot be created through the Console as inactive.

**Workaround:** To create an inactive user or inactive role, follow these steps:

1. Create the new user or new role.
2. Double-click the newly created user or newly created role, or select the newly created user or newly created role. Click the Properties item from the Object menu.
3. Click the Account tab.
4. Click the Inactivate button.
5. Click OK.

The newly created user or newly created role is inactivated.

### **Cannot Configure Directory With a Root Suffix That Contains Spaces (4526501)**

If you specify a base DN that contains a space, for example, `o=U.S. Government, C=US` at Sun ONE Directory Server 5.1 configuration time, the resulting DN is truncated to `Government, C=US`. At configuration time, the DN should be typed as `o=U.S. %20Government, C=US`.

**Workaround:** To correct the base DN entry, follow these steps.

1. Select the top directory entry in the left side of the navigation pane of the Servers and Applications tab on the Console.
2. Edit the suffix in the User directory subtree field.
3. Click OK.

### **Password Policy Information Is Not Synchronized Between Servers (4527608)**

If you update a nonmaster directory server with password policy information, the information is not replicated to all other servers. This information includes account lockouts.

**Workaround:** Manage password policy information manually on each server.

### **Account Lockout Remains Effective After the User Password Is Changed (4527623)**

If Account Lockout is effective and the user password is changed, Account Lockout remains effective.

**Workaround:** Reset the `accountUnlockTime`, `passwordRetryCount`, and `retryCountResetTime` lockout attributes to unlock the account.

### **Console Backup Immediately After Installation Fails (4531022)**

If you install the Sun ONE Directory Server 5.1, start the console, initialize the directory with an LDIF file, and then back up the server, the Console reports the backup was successful. However, the backup has actually failed.

**Workaround:** Perform the following tasks from the Console after you initialize the database:

1. Stop the server.
2. Restart the server.
3. Perform the backup.

### **Server Ignores Case-Sensitive Syntax When Normalizing DN Attributes (4630941)**

You cannot use the LDAP naming services to create automount path names that are identical, except for case results in nonunique path names. The directory server does not allow creation of entries if the naming attribute is defined with case-sensitive syntax and an entry already exists with the same name but a different case.

---

**Note** – /home/foo and /home/Foo paths cannot coexist.

---

For example, if entry `attr=foo,dc=mycompany,dc=com` exists, the server does not allow the creation of `attr=Foo,dc=mycompany,dc=com`. A corollary of this problem is that when LDAP naming services are used, automount path names have to be unique, regardless of their case.

**Workaround:** None.

### **Stopping the Server During Export, Backup, Restore, or Index Creation Crashes the Server (4678334)**

If the server is stopped during export, backup, restore or index creation, the server crashes.

**Workaround:** Do not stop the server during these types of operations.

### **Replication Unable to Use Self-Signed Certificate (4679442)**

If you attempt to configure replication over Secure Socket Layer (SSL) with certificate-based authentication, replication does not work if either of the following conditions exist.

- The supplier's certificate is self-signed.
- The supplier's certificate is only capable of behaving as an SSL server certificate that is unable to "play" the role of the client during an SSL handshake.

**Workaround:** None.



## Late-Breaking News

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This chapter includes information on new features that arrived too late to be included in the Solaris 9 12/02 documentation set. For information on new features in the Solaris 9 12/02 operating environment, refer to the *What's New in the Solaris 9 12/02 Operating Environment* at <http://docs.sun.com>.

The following feature description has been added to this chapter since this document was published on the Solaris 9 Documentation CD and in the Installation Kiosk on the Solaris 9 Installation CD.

### **Solaris 9 12/02 (x86 Platform Edition) and Sun LX50**

The Solaris 9 12/02 operating environment ships with the Sun LX50 entry server. This is currently the only Sun x86 system that is offered with this software.



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## End-of-Software Support Statements

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This chapter lists end-of-support statements.

The following end-of-software support statements have been added since this document was published on the Solaris 9 12/02 Documentation CD and in the Installation Kiosk on the Solaris 9 12/02 Installation CD.

- “`sendmailvars` and the L and G `sendmail.cf` commands” on page 71
- “Solaris Volume Manager Transactional Volume” on page 72
- “SPARC: Support for Graphic Drivers” on page 73

### Features Removed From the Solaris 9 Operating Environment

#### **adb Map Modifiers and Watchpoint Syntax**

The `adb` utility is implemented as a link to the new `mdb` utility in this release of the Solaris operating environment.

The `mdb(1)` man page describes the features of the new debugger, including its `adb` compatibility mode. Even in this compatibility mode, differences between `adb(1)` and `mdb` exist. These differences include the following:

- The text output format of some subcommands is different in `mdb`. Macro files are formatted by using the same rules, but scripts that depend on the output of other subcommands might need to be modified.
- The watchpoint-length specifier syntax in `mdb` is different from the syntax that is described in `adb`. The `adb` watchpoint commands `:w`, `:a`, and `:p` enable an integer length (in bytes) to be inserted between the colon and the command character. In the `mdb(1)` man page, the count should be specified after the initial address as a repeat count.

The `adb` command `123:456w` is specified in the `mdb` man page as `123,456:w`.

- The `/m`, `/*m`, `?m`, and `?*m` format specifiers are not recognized or supported by `mdb`.

## **AnswerBook2 Server**

The AnswerBook2™ server is no longer included in this release. Existing AnswerBook2 servers can run on the Solaris 9 operating environment. Solaris documentation is available on the Solaris Documentation CD in online formats. All Solaris documentation is also always available at <http://docs.sun.com>.

## **aspppd Utility**

The aspppd utility is no longer included in this release. Instead, use the pppd(1M) utility with Solaris PPP 4.0 utility that is included in the Solaris 9 operating environment.

## **ATOK8 Japanese Input Method**

The ATOK8 Japanese input method is no longer supported in this release. The ATOK12 Japanese input method is included in the Solaris 9 operating environment. The ATOK12 Japanese input method provides a similar range of operations to the ATOK8 with the addition of several enhancements.

## **crash Utility**

The crash utility is no longer supported in this release. In the Solaris 9 operating environment, the mdb(1) utility provides a function that is similar to the function of the crash utility. The mdb utility also examines system crash dump files. The crash utility's interface has been structured around implementation details, such as slots, that have no relation to the Solaris operating system implementation.

“Transition From” in *Solaris Modular Debugger Guide* provides information for users who are making the transition from using crash to using mdb.

## **Crash Dump Options for Solaris ipcs Command**

The capability of applying the ipcs(1) command to system crash dumps by using the -C and -N command-line options is no longer supported in this release. Equivalent capability is now provided by the mdb(1) ::ipcs debugger command.

## **cs00 Japanese Input Method**

The cs00 Japanese input method is no longer supported in the Solaris 9 operating environment. Related interfaces, such as the xci interface, the Japanese Feature Package (JFP) libmle API, and the mle command, are also no longer supported in the Solaris 9 operating environment.

If you upgrade to the Solaris 9 operating environment from a previous release, the existing public user dictionary `/var/mle/ja/cs00/cs00_u.dic` is removed.

Two Japanese input methods, ATOK12 and Wnn6, are supported in the Solaris 9 operating environment. For more information on the ATOK12 and Wnn6 input methods, see the *International Language Environments Guide*.



## devconfig

devconfig is no longer supported in this release.

## Device Support and Driver Software

The following table lists devices and driver software that are no longer supported in this release.

**TABLE 4-1** Device Support and Driver Software

| Name of Physical Device                                                                                                                                                  | Name of Driver | Type of Card |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|--------------|
| Mylex/Buslogic FlashPoint Ultra PCI SCSI                                                                                                                                 | flashpt        | SCSI HBA     |
| Madge Token Ring Smart 16/4, Madge Token Ring Smart 16/4 PCI BM Mk2, Madge Token Ring Smart 16/4 PCI BM Mk1, and Madge Token Ring PCI Presto                             | mtok           | Network      |
| Compaq Integrated NetFlex-3 10/100 T PCI, Compaq NetFlex-3/P, Compaq NetFlex-3 DualPort 10/100 TX PCI, Compaq Netelligent 10 T PCI, and Compaq Netelligent 10/100 TX PCI | cnft           | Network      |

## Early Access (EA) Directory

The name of the EA directory has been changed to `ExtraValue` in the Solaris 9 operating environment.

## Emulex MD21 Disk Controller for ESDI Drives

The MD21 disk controller for ESDI drives is no longer supported in the Solaris 9 operating environment.

## enable\_mixed\_bcp Tunable

The `enable_mixed_bcp` tunable is no longer supported in this release. In Solaris releases prior to the Solaris 9 operating environment, the `/etc/system` variable `enable_mixed_bcp` could be set to 0 to disable dynamic linking of partially statically linked SunOS™ 4.0 and compatible executables. The system used dynamic linking for these executables by default. In the Solaris 9 operating environment, dynamic linking is always used for these executables, and the `enable_mixed_bcp` tunable has been removed from the system. This change does not affect binary compatibility for SunOS 4.0 and compatible executables in any way.

## Intel 486-Based Systems

The Solaris operating environment is no longer supported on Intel 486-based systems.

### japanese **Locale Name Alternate**

The japanese locale name alternate of the ja Japanese Extended UNIX Code (EUC) locale is no longer supported in this release. This locale name facilitated migration from the Solaris 1.0 release and compatible releases. You can use ja or ja\_JP.eucJP as the Japanese EUC locale with the Solaris 9 operating environment. The Solaris 1.0 BCP (JLE) application and compatible versions can still run in the Solaris 9 operating environment without any changes.

### **Java Software Developer's Kit (SDK) 1.2.2**

Version 1.2.2 of the Java™ SDK (SUNwj2dev) is no longer included in the Solaris 9 release. Near-equivalent capability is supported by Java 2 Standard Edition, versions 1.4 and compatible versions. Current and previous versions of JDK and Java runtime environment (JRE) are available for download from <http://java.sun.com>.

### **JDK 1.1.8 and JRE 1.1.8**

Version 1.1.8 of the JDK and version 1.1.8 of the JRE are no longer supported in this release. Near-equivalent capability is supported by Java 2 Standard Edition, versions 1.4 and compatible versions. Current and previous versions of JDK and JRE are available for download from <http://java.sun.com>.

### **OpenWindows Toolkits for Developers**

Development in the OpenWindows™ XView™ and OLIT toolkits is no longer supported in this release. Developers are encouraged to migrate to the Motif toolkit. Applications that were developed with the OpenWindows XView and OLIT toolkits can still run on the Solaris 9 operating environment.

### **OpenWindows Environment for Users**

The OpenWindows environment is no longer supported in this release. The Common Desktop Environment (CDE) is the default desktop environment that is included in the Solaris 9 operating environment. Applications that use the OpenWindows XView and OLIT toolkits can still run on the Solaris 9 operating environment in CDE.

### **Priority Paging and Related Kernel Tunables**

(`priority_paging/cachefree`)

The `priority_paging` and `cachefree` tunable parameters are not supported in the Solaris 9 release. These parameters have been replaced with an enhanced file-system caching architecture that implements paging policies that are similar to `priority_paging`, but always enabled. Attempts to set these parameters in the `/etc/system` file result in boot-time warnings such as the following:

```
sorry, variable 'priority_paging' is not defined in the 'kernel'
sorry, variable 'cachefree' is not defined in the 'kernel'
```

If you upgrade to the Solaris 9 release or `pkgadd` the `SUNwcsr` packages, and your `/etc/system` file includes the `priority_paging` or `cachefree` parameters, the following occurs:

1. The following message is displayed if the `priority_paging` or `cachefree` parameters are set in the `/etc/system` file:

```
NOTE: /etc/system has been modified since it contains references to
priority paging tunables. Please review the changed file.
```

2. Comments are inserted in the `/etc/system` file before any line that sets `priority_paging` or `cachefree`. For example, if `priority_paging` is set to 1, this line is replaced with the following lines:

```
* NOTE: As of Solaris 9, priority paging is unnecessary and
* has been removed. Since references to priority paging-related tunables
* will now result in boot-time warnings, the assignment below has been
* commented out. For more details, see the Solaris 9 Release Notes, or
* the "Solaris Tunable Parameters Reference Manual".

* set priority_paging=1
```

### **s5fs File System**

The `s5fs` file system is no longer supported in this release. The `s5fs` file system supports the installation of Interactive UNIX applications, which is no longer required in the Solaris operating environment.

### **sendmail Utility Features**

Some features of the `sendmail` utility are no longer supported in this release. The affected features are modifications that are mostly nonstandard and specific to Sun. These features include special syntax and special semantics for V1/Sun configuration files, the remote mode feature, the `AutoRebuildAliases` option, and the three `sun-reverse-alias` features.

More information about these features and migration issues is located at <http://www.sendmail.org/vendor/sun/solaris9.html>.

### **SUNWebnfs**

The `SUNWebnfs` package is no longer included on the Solaris operating environment media.

The library and documentation are available for download from <http://www.sun.com/webnfs>.

### **sun4d-Based Servers**

The following servers that are based on the `sun4d` architecture are no longer supported in this release.

- SPARCserver™ 1000
- SPARCcenter 2000

Hardware options that are dependent on the `sun4d` architecture are no longer supported in this release.

## **SUNWrdm**

The SUNWrdm package, which formerly contained text release notes, is no longer included on the Solaris Software CD in this release.

For release notes, refer to the Release Notes on the Solaris Documentation CD, the printed Installation Release Notes, or the most current release notes that are available on <http://docs.sun.com>.

## **Features That Might Be Removed in a Future Release**

### **AdminTool**

AdminTool (admintool), including swmtool, might not be supported in a future release.

### **Asian Short dtlogin Names**

The following Asian short locale names might not be listed in the dtlogin language list in a future release.

- zh
- zh.GBK
- zh.UTF-8
- ko
- ko.UTF-8
- zh\_TW

The Solaris 8, Solaris 9, and Solaris 9 12/02 releases provide new ISO-standard locale names, including:

- zh\_CN.EUC
- zh\_CN.GBK
- zh\_CN.UTF-8
- ko\_KR.EUC
- ko\_KR.UTF-8
- zh\_TW.EUC

### **Device Management Entries in power.conf**

The Device Management entries in power.conf(4) might not be supported in a future release. Similar capability is provided by the Automatic Device Power Management entries in the Solaris 9 operating environment.

### **Device Support and Driver Software**

The following table lists devices and driver software that might not be supported in a future release.

**TABLE 4-2** Device Support 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 |

### **Federated Naming Service XFN Libraries and Commands**

The Federated Naming Service (FNS), which is based on the X/Open XFN standard, might not be supported in a future release.

### **GMT Zoneinfo Time Zones**

The `/usr/share/lib/zoneinfo/GMT[+-]*` time zones might not be supported in a future release. These files might be removed from `/usr/share/lib/zoneinfo`. Replace usage of the zoneinfo time zones with the equivalent `etc/GMT[-+]*` file. See the man pages `zoneinfo(4)` and `environ(5)` for more information.

### **JRE 1.2.2**

Version 1.2.2 of the Java runtime environment (JRE) might not be supported in a future release. Similar capability is supported by Java 2 Standard Edition, version 1.4 and compatible versions. Current and previous versions of JRE are available for download from <http://java.sun.com>.

### **Kerberos Version 4 Client**

The Kerberos version 4 client might be removed from a future release. This client includes the Kerberos version 4 support in the `kinit(1)`, `kdestroy(1)`, `klist(1)`, `mount_nfs(1M)`, `mount_nfs(1M)`, and `kerbd` commands. The Kerberos version 4 client also includes support in the `kerberos (3KRB)` library, and in the ONC RPC programming API `kerberos_rpc (3KRB)`.

### **Korean CID Fonts**

Korean CID fonts might not be supported in a future release. You can use the Korean TrueType fonts that are included in the Solaris operating environment as a replacement for Korean CID fonts.

### **Lightweight Directory Access Protocol (LDAP) Client Library**

LDAP client library, `libldap.so.3`, might not be included in a future release. The current version of this library, `libldap.so.5`, is compliant with the `draft-ietf-ldapext-ldap-c-api-05.txt` revision of the `ldap-c-api` draft from the Internet Engineering Task Force (IETF).

## Netstat -k Option

The unsupported `-k` option of `netstat`, which reports on all named `kstats` on the running OS instance, might be removed in a future release. Use the supported `kstat(1M)` command, which provides the same facility. The `kstat` command was introduced in the Solaris 8 operating environment.

## NIS+

Network Information Service Plus (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 operating environment. For more information, visit <http://www.sun.com/directory/nisplus/transition.html>.

## pam\_unix Module

The `pam_unix(5)` module might not be supported in a future release. A similar range of operations is provided by `pam_authok_check(5)`, `pam_authok_get(5)`, `pam_authok_store(5)`, `pam_dhkeys(5)`, `pam_passwd_auth(5)`, `pam_unix_account(5)`, `pam_unix_auth(5)`, and `pam_unix_session(5)`.

## Perl Version 5.005\_03

Perl version 5.005\_03 might not be supported in a future release. In the Solaris 9 operating environment, the default version of Perl has been changed to a version that is not binary compatible with the earlier version (5.005\_03). However, the earlier version of Perl is still retained for compatibility. Customer-installed modules need to be rebuilt and reinstalled against the new version. Modify any scripts that require the use of version 5.005\_03 to explicitly use the 5.005\_03 version of the interpreter (`/usr/perl5/5.005_03/bin/perl`) instead of the default version (`/bin/perl`, `/usr/bin/perl`, or `/usr/perl5/bin/perl`).

## Power Management I/O Control Commands

The following power management I/O control (`ioctl`s) commands might not be supported in a future release.

- `PM_DISABLE_AUTOPM`
- `PM_REENABLE_AUTOPM`
- `PM_SET_CUR_PWR`
- `PM_GET_CUR_PWR`
- `PM_GET_NORM_PWR`

The following alternative `ioctl`s are supported in the Solaris 9 12/02 operating environment.

- `PM_DIRECT_PM`
- `PM_RELEASE_DIRECT_PM`
- `PM_GET_CURRENT_POWER`
- `PM_SET_CURRENT_POWER`
- `PM_GET_FULL_POWER`

For more information on these alternative `ioctl`s, see the `ioctl(2)` man page.

### **64-bit: `ptrace(2)` Interface in `libc`**

The 64-bit version of the `ptrace(2)` interface that is included in `libc` might not be supported in a future release. The `proc()` interface replaces this functionality. For more information, see the `proc(4)` man page.

### **`sendmailvars` and the `L` and `G` `sendmail.cf` commands**

The `sendmailvars` database that is listed in `nsswitch.conf(4)` might not be supported in a future release. This feature could not be enabled without using the `L` or `G` `sendmail.cf` commands. This change brings the Sun version of `sendmail` into closer compliance with the version from `sendmail.org`.

### **Solaris 32-bit Sun4U Kernel**

Many installations of the Solaris 7, 8, and 9 software use the default 64-bit kernel to support 32-bit and 64-bit applications. Customers who use the 32-bit kernel on UltraSPARC systems should read this notice.

In the Solaris 7, 8 and 9 operating environments, all systems that are based on the UltraSPARC I and UltraSPARC II processors provide administrators the choice of booting a 32-bit kernel or a 64-bit kernel. The UltraSPARC III and later systems support only the 64-bit kernel.

In a future release of the Solaris operating environment, the 32-bit kernel might not be available for the UltraSPARC I and UltraSPARC II systems.

The primary impact of these changes is to systems that rely on third-party, 32-bit kernel modules: firewalls, kernel-resident drivers, and replacement file systems, for example. These systems must be updated to use 64-bit versions of those modules.

Another impact of these changes is that UltraSPARC systems that contain UltraSPARC I processors with clocks that run at 200 MHz or lower frequencies might not be supported in a future release.

To identify the system's kernel type, use the `isainfo(1)` command.

```
% isainfo -kv
```

To identify the system's processor clock rate, use the `psrinfo(1M)` command.

```
% psrinfo -v | grep MHz
```

### **Solaris Static System Libraries**

This announcement applies only to 32-bit static-system libraries and statically linked utilities. 64-bit static system libraries and utilities have never been provided.

Support for 32-bit Solaris static-system libraries and statically linked utilities might not be provided in a future release. Of particular note, support for the static C library (`/usr/lib/libc.a`) might not be provided in a future release.

Applications that are linked with existing static system libraries might not work in a future release. Only applications that are dynamically linked with the system libraries that provide the Solaris application binary interface (ABI) are designed for future compatibility.

Applications that depend on the behavior of system traps might not work in a future release. Applications that link with libraries that depend on the behavior of system traps (typically libraries providing substitute ABI functions) also might not work in a future release.

### **Solaris Volume Manager Transactional Volume**

Solaris Volume Manager's Transactional Volumes (trans metadevices) might not be supported in a future release to reduce redundancy on the Solaris feature set. Similar functionality is provided by UFS Logging, included in the Solaris 8 operating environment, and compatible versions.

### **Solstice Enterprise Agents**

Solstice Enterprise Agents might not be supported in a future release.

### **Ultra AX and SPARCengine Ultra AXmp Graphics Card**

Support for the Ultra™ AX and the SPARCengine Ultra AXmp graphics card might not be provided in a future release of the Solaris operating environment.

### **SPC Driver**

The SPC driver might not be supported in a future release.

### **Standalone 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 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.

### **sun4m Hardware**

sun4m hardware might not be supported in a future release of the Solaris operating environment.



## SPARC: Support for Graphic Drivers

Software support for the following graphic devices might not be supported in a future release of the Solaris operating environment.

| Device   | Driver         |
|----------|----------------|
| MG1, MG2 | bwtwo          |
| CG3      | cgthree        |
| SX/ CG14 | sx, cgfourteen |
| TC       | cgeight        |
| TCX      | tcx            |

## XIL

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."
```

## xutops Print Filter

The xutops print filter might not be supported in a future release. A similar range of operations is provided by the mp(1) print filter in the Solaris 9 12/02 operating environment.



## Documentation Issues

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This chapter describes known documentation problems.

The following documentation issues have been added to this chapter since this document was published on the Solaris 9 Documentation CD and in the Installation Kiosk on the Solaris 9 Installation CD.

### Documentation Errata

**Document Affected:** *Solaris 9 Package List*

The LDAP package `SUNWlldap` is not included in “Solaris 9 Operating Environment Package List” in *Solaris 9 Package List*. The `SUNWlldap` package is included in the Solaris 9 operating environment, and is included in the Core, End User, Developer, Entire, and Entire+OEM metaclusters.

**Document Affected:** `sysidcfg` Man Page and *Solaris 9 12/02 Installation Guide*

The `sysidcfg(4)` man page and Solaris 9 12/02 Release and Installation Collection instruct you to use only an IPv4 address as a value for the `default_route` keyword in the `sysidcfg` file. However, you can also use `NONE` as a value for the `default_route` keyword.

**Document Affected:** *Solaris WBEM SDK Developer’s Guide*

In the Solaris CIM schema, the following classes and properties are tagged with the `Deprecated` qualifier.

- `Solaris_LogRecord` class
- `Solaris_LogService` class
- `Solaris_LogServiceSetting` class
- `Solaris_LogServiceSetting` class
- `OptionsEnabled` property in `Solaris_IPProtocolEndpoint` class

Use suitable alternatives to these deprecated classes and properties. Refer to the class description qualifiers to determine the correct class and the correct property alternatives.

**Document Affected:** “Writing a Client Program” in *Solaris WBEM SDK Developer’s Guide*

“Writing a Client Program” provides information about creating WBEM clients that use the RMI protocol with the `javax.com.sun.client` API. If you want to connect to a server that is running the Solaris 8 operating environment, you must include the `/usr/sadm/lib/wbem/cimapi.jar` file in the client’s CLASSPATH. The `cimapi.jar` file includes the `com.sun.wbem` classes that are required to communicate with a server that is running the Solaris 8 operating environment.

**Document Affected:** *Sun ONE Application Server 7, Standard Edition Developer’s Guide*

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**Note** – This documentation pertains to the use of indexed deployment directories.

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The numbering scheme part of a deployed application’s directory name has been implemented as an indexing mechanism. This mechanism enables a developer to modify a JAR or class file associated with the deployed application. This mechanism is significant to the Windows platform because of a sharing violation error that occurs during an attempt to overwrite a loaded file, Windows places a file lock on the loaded file. The file is loaded into the server instance or the IDE during session startup. With the sharing violation error, two options are possible:

- Compile the updated class file (originally part of that JAR file) and place it first in the classpath in order to be loaded before the older classes. Then allow for the Sun ONE Application Server to reload this application (as long as reload is active).
- Update the JAR file, create a new EAR file, and redeploy the application.

---

**Note** – Redeployment of the application on the Solaris platform is not necessary because no file-locking constraints exist.

---

When changing an already deployed application on the Windows platform for IDE setup, ANT file copy, or compile or other operations, be aware of another change. A new directory is created with an incremented index number as the workaround for the file-locking constraint. For example, on the Solaris platform the J2EE application, `helloworld`, is deployed to the Sun ONE Application Server with the following directory structure:

```
appserv/domains/domain1/server1/applications/j2ee-
apps/helloworld_1
```

A change is then to be made to a servlet that is part of this deployed application (for example, `HelloServlet.java`). The Sun ONE Studio IDE is started, the source file for this servlet is changed and compiled with the `javac` target set to the previously mentioned directory. With the source compiled in the proper location, a reload file exists for this application. The reload flag in `server.xml` is set to true, and with the server instance running, the changes become effective without reassembly of the application and redeployment.

For the Windows platform, the JAR or class file cannot be altered and updated because of the file-locking issue. Therefore, you can resolve this issue on Windows in one of two ways:

- Compile the changed source file and prepend the class file or JAR in the classpath in order to make the source changes effective.
- Make the changes to the helloworld source, assemble it, and redeploy it without undeploying the previous deployment of helloworld.

The second option is the preferred method because this option results in the use of the incremented index number appended to the deployed application's directory name. After a second deployment of helloworld, the directory structures would resemble the following:

```
appserv/domains/domain1/server1/applications/j2ee-
apps/helloworld_1
```

```
appserv/domains/domain1/server1/applications/j2ee-
apps/helloworld_2
```

The second deployment of helloworld would be deployed under `helloworld_2`.



## Solaris 9 12/02 Operating Environment Patch List

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The patches that are listed in this appendix have been applied to the Solaris 9 12/02 operating environment in one of the following ways:

- SolStart

These patches are located in the `/var/sadm/patch` directory on an installed system.

- Freshbits technology

These patches were applied when the Solaris 9 12/02 operating environment was created. Therefore, these patches are not located in the `/var/sadm/patch` directory.

The `showrev -p` command provides a list of all patches that were applied to the installed system, regardless of how they were applied. The Solaris 9 12/02 operating environment includes a known and tested level of patches. However, patches cannot be backed out of the Solaris 9 12/02 operating environment.

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**Note** – The Solaris 9 12/02 operating environment contains special patches that perform tasks that are specific to the Solaris update release installation images. These patches are specific to each Solaris operating environment update release and do not apply to other systems or releases of the Solaris operating environment. Do not attempt to download or install these patches on other systems or installations of the Solaris operating environment.

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### **uname -v output for Solaris 9 12/02 (x86 Platform Edition)**

For the sake of consistency with the Solaris™ 9 12/02 (SPARC Platform Edition), the `uname -v` output string for the Solaris 9 12/02 (x86 Platform Edition) displays `Generic_XXXXXX-XX`. This display occurs despite the fact that no x86 KU currently exists. For example, the system was not patched with KU `XXXXXX-XX`.

Customers see no change in behavior. The Solaris 9 12/02 (x86 Platform Edition) functions as if it were patched with KU xxxxxx-xx. The reason for this behavior is that all appropriate bug fixes and features were delivered through the installation packages.

## Patch List

### ■ 111703-02 – SunOS 5.9: /usr/ccs/bin/sccs and /usr/ccs/bin/make patch

4654328 4222874 4514485 4483221 4504348 4631517 4654957

### ■ 111711-01 – SunOS 5.9: 32-bit Shared library patch for C++

4618537

### ■ 111712-01 – SunOS 5.9: 64-Bit Shared library patch for C++

4618537

### ■ 111722-01 – SunOS 5.9: Math Library (libm) patch

4652341 4664522

### ■ 112233-03 – SunOS 5.9: Kernel Jumbo Patch

4114317 4360843 4382913 4462509 4466085 4484338 4496935 4498831 4500536 4511634 4521521  
4521525 4522402 4525533 4527648 4532512 4533078 4533108 4533270 4618812 4619870 4623395  
4627510 4629569 4630754 4633008 4633015 4636049 4637031 4638346 4638608 4638981 4642754  
4643857 4644123 4644346 4644731 4647361 4648171 4649851 4650210 4651201 4655634 4659588  
4666799 4669486 4672677 4672730 4674788 4675827 4676707 4677620 4682258 4682918 4686943  
4687362 4691127 4691670 4693350 4693574 4698325 4701854 4702559 4707874 4709147 4709805  
4711133 4712247 4714245 4717581 4718366 4719361 4719365 4720790 4729479 4731198 4745795  
4757023

### ■ 112540-06 – SunOS 5.9: Expert3D IFB Graphics Patch

4652111 4645735 4650501 4316968 4515693 4494062 4497748 4649811 4652804 4654897 4659006  
4663042 4624812 4663732 4664981 4651919 4697564 4703423 4668373 4655393 4675933 4698167  
4691212 4617170 4720843 4731406 4733511

### ■ 112565-08 – SunOS 5.9: XVR-1000 GFB Graphics Patch

4636225 4640002 4629777 4638125 4635704 4643375 4587680 4636721 4639155 4643767 4637546  
4636748 4641167 4641177 4636866 4636788 4636846 4637796 4652512 4669035 4668381 4670095  
4674533 4679353 4685579 4708069 4664996 4671387 4675252 4679830 4699753 4703545 4730199  
4717529 4676118 4739840 4734313

### ■ 112601-04 – SunOS 5.9: PGX32 Graphics

4502887 4633850 4688024 4728662

### ■ 112617-01 – CDE 1.5: rpc.cmsd patch

4641721

### ■ 112620-01 – SunOS 5.9: Elite3D AFB Graphics Patch

4651358 4714683

### ■ 112621-02 – SunOS 5.9: Creator 9 FFB Graphics Patch

4649465 4651358 4714683



- **112622-05 – SunOS 5.9: M64 Graphics Patch**  
 4531901 4632595 4668719 4672129 4682681 4452851 4633941 4684877 4692693
- **112661-02 – SunOS 5.9: IIIM and X Input & Output Method patch**  
 4645171 4643078 4664772 4604634 4617694 4617691 4629783 4471922 4691871 4686165 4515546
- **112764-02 – SunOS 5.9: Sun Quad FastEthernet qfe driver**  
 4411205 4664588 4655451 4292608 4645631
- **112771-05 – Motif 1.2.7 and 2.1.1: Runtime library patch for Solaris 9**  
 4512887 4663311 4664492 4679034 4615922 4661767 4699202
- **112783-01 – X11 6.6.1: xterm patch**  
 4636452 4657934
- **112785-09 – X11 6.6.1: Xsun patch**  
 4649617 4651949 4642632 4644622 4531892 4692623 4700844 4712590 4710958 4710402 4703884  
 4638864 4729267 4675755 4677235 4729905 4763009
- **112787-01 – X11 6.6.1: twm patch**  
 4659947
- **112804-01 – CDE 1.5: sdtname patch**  
 4666081
- **112805-01 – CDE 1.5: Help volume patch**  
 4666089
- **112806-01 – CDE 1.5: sdtaudiocontrol patch**  
 4666089
- **112807-02 – CDE 1.5: dtlogin patch**  
 4667119 4648724
- **112808-03 – OpenWindows 3.6.3: Tooltalk patch**  
 4668701 4707187 4713445
- **112809-01 – CDE:1.5 Media Player (sdtjmplay) patch**  
 4663628
- **112810-01 – CDE 1.5: dtmail patch**  
 4712584
- **112811-01 – OpenWindows 3.7.0: Xview Patch**  
 4690979
- **112812-01 – CDE 1.5: dtlp patch**  
 4646929
- **112817-06 – SunOS 5.9: Sun GigaSwift Ethernet 1.0 driver patch**

4658962 4651090 4648346 4647988 4645885 4637950 4629291 4675241 4640855 4686107 4686121  
4686126 4704372 4696480 4703803 4699088 4698533 4687821 4678583 4704413 4703839 4707612  
4702980 4690650 4690643 4730696 4728208 4724811 4717637 4717385 4681554 4708816 4678908  
4710796 4735212 4708099 4735224 4735240 4746230 4739846 4738499 4753634 4754360 4753629  
4763533 4762837

■ **112834-02 – SunOS 5.9: patch scsi**

4628764 4656322 4656416

■ **112835-01 – SunOS 5.9: patch /usr/sbin/clinfo**

4638788

■ **112836-02 – SunOS 5.9: patch scsa2usb**

4660516 4756231

■ **112837-01 – SunOS 5.9: patch /usr/lib/inet/in.dhcpd**

4621740

■ **112838-02 – SunOS 5.9: pcicfg Patch**

4407705 4716448

■ **112839-02 – SunOS 5.9: patch libthread.so.1**

4647410 4647927 4663077

■ **112840-02 – SunOS 5.9: patch platform/SUNW,Sun-Fire-15000/kernel/drv/sparcv9/axq**

4652995 4756231

■ **112841-04 – SunOS 5.9: drmach patch**

4652995 4659588 4664749 4696700

■ **112854-02 – SunOS 5.9: icmp should be QNEXTLESS icmp Patch**

4511634 4647983

■ **112868-05 – SunOS 5.9: ON Localization message patch**

4658681 4685336 4706059 4681374 4733193 4734495

■ **112874-09 – SunOS 5.9: patch libc**

1258570 4192824 4248430 4318178 4390053 4444569 4503048 4510326 4635556 4661997 4669963  
4683320 4700602 4704190 4756113 4770160

■ **112875-01 – SunOS 5.9: patch /usr/lib/netsvc/rwall/rpc.rwalld**

4664537

■ **112902-07 – SunOS 5.9: kernel/drv/ip Patch**

4396697 4417647 4425786 4479794 4488694 4502640 4592876 4639079 4644731 4645471 4647361  
4648388 4649557 4656795 4658216 4662169 4673676 4682913 4691577 4712511 4724336

■ **112903-02 – SunOS 5.9: tun Patch**

4396697 4417647 4425786 4479794 4592876 4648388 4667724

■ **112904-01 – SunOS 5.9: tcp Patch**

4645471

- **112905-02 – SunOS 5.9: ippctl Patch**

4644731 4647361 4712511

- **112906-01 – SunOS 5.9: ipgpc Patch**

4644731 4647361

- **112907-01 – SunOS 5.9: libgss Patch**

4197937 4220042 4642879

- **112908-04 – SunOS 5.9: gl\_kmech\_krb5 Patch**

4197937 4220042 4521000 4642879 4657596 4666887 4671577 4690212 4691352

- **112911-02 – SunOS 5.9: ifconfig Patch**

4396697 4417647 4425786 4479794 4488694 4592876 4648388 4661975 4676731

- **112912-01 – SunOS 5.9: libinetcfg Patch**

4396697 4417647 4425786 4479794 4592876 4648388

- **112913-01 – SunOS 5.9: fruadm Patch**

4505850

- **112914-04 – SunOS 5.9: in.routed in.mpathd Patch**

1148813 1240645 4075054 4327168 4341344 4475921 4532805 4532808 4532860 4559001 4587434  
4635766 4637330 4637788 4648299 4661975 4676731 4690565 4701276

- **112915-01 – SunOS 5.9: snoop Patch**

1148813 1240645 4075054 4327168 4341344 4396697 4417647 4425786 4475921 4479794 4532805  
4532808 4532860 4559001 4587434 4592876 4635766 4637330 4637788 4648299 4648388

- **112916-01 – SunOS 5.9: rtquery Patch**

1148813 1240645 4075054 4327168 4341344 4475921 4532805 4532808 4532860 4559001 4587434  
4635766 4637330 4637788 4648299

- **112917-01 – SunOS 5.9: ifrt Patch**

4645471

- **112918-01 – SunOS 5.9: route Patch**

1148813 1240645 4075054 4327168 4341344 4475921 4532805 4532808 4532860 4559001 4587434  
4635766 4637330 4637788 4645471 4648299

- **112919-01 – SunOS 5.9: netstat Patch**

4645471

- **112920-02 – SunOS 5.9: libipp Patch**

4644731 4647361 4712511

- **112921-01 – SunOS 5.9: libkadm5 Patch**

4197937 4220042 4642879

■ **112922-01 – SunOS 5.9: krb5 lib Patch**

4197937 4220042 4642879

■ **112923-02 – SunOS 5.9: krb5 usr/lib Patch**

4197937 4220042 4642879 4703622

■ **112924-01 – SunOS 5.9: kdestroy kinit klist kpasswd Patch**

4197937 4220042 4642879

■ **112925-02 – SunOS 5.9: ktutil kdb5\_util kadmin kadmin.local kadmind Patch**

4197937 4220042 4642879 4646370

■ **112926-03 – SunOS 5.9: smartcard Patch**

4366894 4524620 4629775 4635010 4635082 4635106 4636389 4639842 4642726 4646472 4646476  
4646497 4647454 4647542 4649161 4655166 4676018 4682730 4683241

■ **112927-01 – SunOS 5.9: IPQos Header Patch**

4644731 4647361

■ **112928-01 – SunOS 5.9: in.ndpd Patch**

4396697 4417647 4425786 4479794 4592876 4648388

■ **112929-01 – SunOS 5.9: RIPv2 Header Patch**

1148813 1240645 4075054 4327168 4341344 4475921 4532805 4532808 4532860 4559001 4587434  
4635766 4637330 4637788 4648299

■ **112941-03 – SunOS 5.9: sysidnet Utility Patch**

4519228 4678406 4698391 4698500 4704974 4711830 4719195

■ **112943-04 – SunOS 5.9: Volume Management Patch**

4429002 4508734 4516578 4632847 4637525 4645142 4648750 4656914 4656931 4660125 4664713  
4704081

■ **112945-05 – SunOS 5.9: wbem Patch**

4626762 4639638 4641801 4641818 4641851 4643267 4644880 4645051 4645080 4645105 4645146  
4645581 4645811 4647508 4648811 4649058 4654765 4655882 4656941 4674537 4686244 4699585  
4700539 4701067 4754758

■ **112951-04 – SunOS 5.9: patchadd and patchrm Patch**

4421583 4529289 4623249 4625879 4639323 4678605 4706994 4723617 4725419 4728892 4731056  
4737767 4744964 4750803 4759158

■ **112954-02 – SunOS 5.9: uata Driver Patch**

4506478 4643720

■ **112955-01 – SunOS 5.9: patch kernel/fs/autofs kernel/fs/sparcv9/autofs**

4471199 4631449

■ **112958-01 – SunOS 5.9: patch pci.so**

4657365

- 4643255 4661738

  - **112959-01 – SunOS 5.9: patch libfru**
- 4357827 4614945 4630226 4645604 4648140 4648146 4658625 4660019 4677591 4682120 4683522

  - **112960-03 – SunOS 5.9: patch libsldap ldap\_cachemgr**
- 4638234

  - **112961-01 – SunOS 5.9: patch platform/SUNW,Ultra-Enterprise/kernel/drv/sysctrl**
- 4667173

  - **112962-01 – SunOS 5.9: patch libthread\_db.so.1**
- 4526752 4529912 4533195 4546416 4616944 4621479 4622472 4624658 4630224 4633860 4638070  
4642829 4651493 4651709 4654406 4655066 4662575 4664855 4668517 4669582 4671493 4696204  
4701749 4706503 4707808 4710814 4716929

  - **112963-03 – SunOS 5.9: linker patch**
- 4223444 4702798

  - **112964-02 – SunOS 5.9: ksh using control Z under ksh does not work well with vi**
- 4467555 4467562 4479894 4496082 4518457 4528597 4546894 4599774 4637678

  - **112965-01 – SunOS 5.9: patch /kernel/drv/sparcv9/eri**
- 4638163

  - **112966-01 – SunOS 5.9: patch /usr/sbin/vold**
- 4487572 4629396 4631903 4650210 4681040

  - **112967-04 – SunOS 5.9: patch /kernel/drv/nca nca Patch**
- 4502191

  - **112968-01 – SunOS 5.9: patch /usr/bin/renice**
- 4592827 4715363

  - **112969-02 – SunOS 5.9: vold slows down the boot process**
- 4646349 4708913

  - **112970-02 – SunOS 5.9: patch libresolv.so.2**
- 4398885 4493561 4615194

  - **112971-02 – SunOS 5.9: patch kernel/fs/cacheefs**
- 4395096 4633918 4643121

  - **112972-01 – SunOS 5.9: patch /usr/lib/libssagent.so.1 /usr/lib/libssasmp.so.1**
- 4682197

  - **112975-01 – SunOS 5.9: patch /kernel/sys/kaio**
- 4692900

  - **112985-01 – SunOS 5.9: Volume Management Localization message patch**

- 4618950

  - **112987-01 – SunOS 5.9: patch /platform/sun4u/kernel/tod/sparcv9/todsg**
- 4243984 4424387 4558909 4665297 4670382 4670414 4670468 4674435 4705713

  - **112998-02 – SunOS 5.9: patch /usr/sbin/syslogd**
- 4674651 4683429

  - **113020-01 – SunOS 5.9: SUNW\_LOC changes needed and Thai date format updated**
- 4660271

  - **113021-01 – SunOS 5.9: yesstr, nostr nl\_langinfo() strings incorrect**
- 4707449

  - **113023-01 – SunOS 5.9: Broken preremove scripts in S9 ALC packages**
- 4114317 4699257

  - **113024-02 – SunOS 5.9: wrsm Driver Patch**
- 4640559

  - **113025-01 – SunOS 5.9: libpsvcpolicy\_psr.so.1 Patch**
- 4615383 4662172

  - **113026-02 – SunOS 5.9: /kernel/drv/md Patch**
- 4687199

  - **113027-01 – SunOS 5.9: libfrureg.so.1 Patch**
- 4645622 4658416

  - **113028-01 – SunOS 5.9: patch /kernel/ipp/flowacct**
- 4222093 4491712 4529739 4529831 4529893 4635940 4635945 4665847

  - **113029-02 – SunOS 5.9: libaio.so.1 librt.so.1 and abi\_libaio.so.1 Patch**
- 4659950

  - **113030-01 – SunOS 5.9: /kernel/sys/doorfs Patch**
- 4635504

  - **113031-01 – SunOS 5.9: /usr/bin/edit Patch**
- 4503048

  - **113032-01 – SunOS 5.9: /usr/sbin/init Patch**
- 4521066 4657311 4661696 4672156 4682951

  - **113033-02 – SunOS 5.9: patch /kernel/drv/isp and /kernel/drv/sparcv9/isp**
- 4695070 4742031 4688476 4710452 4717366

  - **113038-02 – SunOS 5.9: JFP manpages patch**
- **113061-01 – SunOS 5.9: UTF-8 locale UMLE patch**

4614828 4668356 4668371

- **113068-01 – SunOS 5.9: hpc3130 patch**

4672995

- **113069-03 – SunOS 5.9: metadisk patch**

4615387 4653481 4665951 4683907

- **113070-01 – SunOS 5.9: ftp patch**

4658282

- **113071-01 – SunOS 5.9: patch /usr/sbin/acctadm**

4696138

- **113072-01 – SunOS 5.9: patch /usr/sbin/format**

4670999

- **113073-02 – SunOS 5.9: ufs\_log patch**

1101554 4409244 4651323

- **113074-03 – SunOS 5.9: ngdr.conf patch**

4654448 4712441

- **113075-01 – SunOS 5.9: pmap patch**

4660871

- **113076-01 – SunOS 5.9: dhcprmgr.jar Patch**

4643257 4673713 4687991

- **113077-02 – SunOS 5.9: patch su driver**

4666211 4709299

- **113085-01 – SunOS 5.9: Thai font enhancement**

4688066 4708093

- **113086-01 – SunOS 5.9: iconv modules between zh\_CN.euc and UTF-8 are incompatible**

4672806

- **113087-01 – SunOS 5.9: Cannot use other fonts to display Asian characters in xterm**

4692528

- **113088-01 – SunOS 5.9: SPECIAL PATCH: Safe default permission violations**

4671052

- **113089-01 – SunOS 5.9: SPECIAL PATCH: Bad postremove script of SUNWkuxft**

4706829

- **113090-01 – SunOS 5.9: SPECIAL PATCH: Bad postinstall script of SUNWcdft**

4714477

- **113096-02 – X11 6.6.1: OWconfig patch**

4684184 4682788 4707897
- **113098-03 – X11 6.6.1: X RENDER extension patch**

4684184 4737595 4750162
- **113100-01 – X11 6.6.1: VFB loadable DDX module patch**

4682788
- **113113-01 – SunOS 5.9: SPECIAL PATCH: Problem with depend file of SUNWhdcl with HK locales in S9**

4670820
- **113125-01 – SunOS 5.9: missing libc\_psr.so.1 symlink**

4704023
- **113145-02 – SunOS 5.9: Naturetech /platform links are not exist**

4707235
- **113146-01 – SunOS 5.9: Apache Security Patch**

4705227
- **113167-01 – SunOS 5.9: JFP manpages patch**

4700173
- **113168-02 – SunOS 5.9: SPECIAL PATCH: JFP Japanese TrueType Font**

4674655 4704720
- **113218-04 – SunOS 5.9: patch pcipsy**

4114317 4640542 4669486 4674788 4678396 4682258 4697219 4704996
- **113219-01 – SunOS 5.9: patch /platform/SUNW,Ultra-Enterprise/kernel/drv/fhc**

4114317
- **113220-01 – SunOS 5.9: patch /platform/sun4u/kernel/drv/sparcv9/upa64s**

4114317
- **113221-02 – SunOS 5.9: libprtdiag\_psr.so.1 Patch**

4664349 4665239 4697505
- **113222-02 – SunOS 5.9: patch /kernel/misc/nfssrv and /kernel/misc/sparcv9/nfssrv**

4531662 4658316 4683308
- **113223-01 – SunOS 5.9: idn Patch**

4524236
- **113224-01 – SunOS 5.9: efdaemon Patch**

4633009
- **113225-01 – SunOS 5.9: 2002c Timezone Patch**



4649654 4683487

- **113226-01 – SunOS 5.9: hme Driver Patch**

4364929

- **113228-01 – SunOS 5.9: 64 bit locale links missing in Solaris 9**

4664306

- **113273-01 – SunOS 5.9: /usr/lib/ssh/sshd Patch**

4708590

- **113274-01 – SunOS 5.9: libdhcputil Patch**

4118738

- **113275-01 – SunOS 5.9: procfs Patch**

4664249

- **113276-02 – SunOS 5.9: md\_trans Patch**

1101554 4409244 4696312

- **113277-03 – SunOS 5.9: sd and ssd Patch**

4500536 4651386 4655315 4656322 4656416

- **113278-01 – SunOS 5.9: NFS Daemon Patch**

4492876

- **113279-01 – SunOS 5.9: klmmod Patch**

4492876

- **113280-01 – SunOS 5.9: patch /usr/bin/cpio**

4646589 4661824 4674849 4677773 4679533 4679805 4688928

- **113281-01 – SunOS 5.9: patch /usr/lib/netshvc/yp/ypbind**

4515621

- **113282-01 – SunOS 5.9: patch /usr/sbin/metaset**

4640578

- **113313-01 – SunOS 5.9: /usr/sbin/install.d/pfinstall Patch**

4724529

- **113318-01 – SunOS 5.9: patch /kernel/fs/nfs and /kernel/fs/sparcv9/nfs**

4427971 4658316

- **113319-04 – SunOS 5.9: patch /usr/lib/libnsl.so.1**

1226166 4517003 4648085 4680691 4690775 4691127

- **113320-01 – SunOS 5.9: patch se driver**

4655495

- **113321-02 – SunOS 5.9: patch sf and social**

4451550 4589401 4643768 4657427

- **113322-01 – SunOS 5.9: patch uucp**

4686442

- **113323-01 – SunOS 5.9: patch /usr/sbin/passmgmt**

4687515

- **113324-02 – SunOS 5.9: patch st driver**

4313732 4358054 4360365 4375499 4527668 4624524 4645691 4651339 4651679 4654850 4672504  
4673243 4722426

- **113325-01 – SunOS 5.9: patch powerd**

4678303 4697189 4697205

- **113326-01 – SunOS 5.9: tar Patch**

4662552

- **113327-01 – SunOS 5.9: pppd Patch**

4684948

- **113328-01 – SunOS 5.9: tmpfs Patch**

4682537

- **113329-01 – SunOS 5.9: lp Patch**

4640166

- **113330-01 – SunOS 5.9: rpcbind Patch**

1226166 4690775

- **113331-01 – SunOS 5.9: usr/lib/nfs/rquotad Patch**

4683311

- **113332-03 – SunOS 5.9: libc\_psr.so.1 Patch**

4666069

- **113333-01 – SunOS 5.9: libmeta Patch**

4718706

- **113334-01 – SunOS 5.9: udfs Patch**

4548887 4651869 4655796 4714259

- **113335-01 – SunOS 5.9: devinfo Patch**

4522638

- **113361-02 – SunOS 5.9: Sun Gigabit Ethernet 3.0 driver patch**

4671573 4527681 4759414 4656013 4718277 4650055 4707744

- **113374-01 – X11 6.6.1: xpr patch**

- 4704388
- **113390-01 – SunOS 5.9 : CTYPE errors in "ar" locale**
- 4728460
- **113391-01 – SunOS 5.9 : S9 : CTYPE errors in "He\_IL"/"he" locales**
- 4728469
- **113424-01 – CDE 1.5: message patch to add IM title in the workspace menu**
- 4731995
- **113432-03 – SunOS 5.9: Introducing Fujitsu FJSV,GPUSC-M platform support patch**
  - **113434-02 – SunOS 5.9: libspmiapp.so.1 Patch**
- 4642585 4707022 4761562
- **113445-01 – SunOS 5.9: schpc Patch**
- 4640542 4697219 4704996
- **113446-01 – SunOS 5.9: dman Patch**
- 4640542 4697219 4704996
- **113447-01 – SunOS 5.9: libprtdiag\_psr Patch**
- 4640542 4697219 4704996
- **113449-01 – SunOS 5.9: gld Patch**
- 4667724
- **113451-02 – SunOS 5.9: IKE Patch**
- 4508547 4628774 4628901 4653051 4741543
- **113453-02 – SunOS 5.9: sockfs Patch**
- 4653919 4681040
- **113454-04 – SunOS 5.9: ufs Patch**
- 1101554 4409244 4507281 4512855 4640210 4662795 4663287 4714988 4734635 4764514 4766103
- **113456-01 – SunOS 5.9: adb modules**
- 1101554 4409244
- **113457-01 – SunOS 5.9: ufs headers**
- 1101554 4409244
- **113459-01 – SunOS 5.9: udp patch**
- 4511634
- **113464-01 – SunOS 5.9: IPMP Headers Patch**
- 4661975 4676731
- **113467-01 – SunOS 5.9: seg\_drv & seg\_mapdev Patch**

- 4533078 4533108 4630754 4638608 4644346 4648171
- **113470-01 – SunOS 5.9: winlock Patch**
- 4533078 4533108 4630754 4638608 4644346 4648171
- **113471-01 – SunOS 5.9: truss Patch**
- 4533078 4533108 4630754 4638608 4644346 4648171
- **113472-01 – SunOS 5.9: madv & mpss lib Patch**
- 4533078 4533108 4630754 4638608 4644346 4648171
- **113475-02 – SunOS 5.9: usr/lib/security crypt Patch**
- 4192824 4248430 4390053 4700602 4715561
- **113476-04 – SunOS 5.9: usr/lib/passwdutil.so.1 pam\_ldap Patch**
- 4192824 4248430 4357827 4390053 4658625 4660019 4670947 4677591 4682120 4683522 4700602  
4709300 4756113
- **113477-02 – SunOS 5.9: SPECIAL PATCH: class action replacement scripts**
- 4712441
- **113480-02 – SunOS 5.9: usr/lib/security/pam\_unix.so.1 Patch**
- 4192824 4248430 4390053 4700602 4756113
- **113481-03 – SunOS 5.9: usr/sbin/sprc.nispasswd Patch**
- 4192824 4248430 4390053 4700602 4753610 4756113
- **113482-01 – SunOS 5.9: sbin/sulogin Patch**
- 4192824 4248430 4390053 4700602
- **113483-01 – SunOS 5.9: usr/lib/netshvc/yp/rpc.yppasswd Patch**
- 4192824 4248430 4390053 4700602
- **113484-02 – SunOS 5.9: WBEM SDK Localization message patch**
- 4733195
- **113488-01 – SunOS 5.9: Field Replacement Unit ID (FRU ID) Platform and Access Library Patch**
- 4703981 4715000
- **113489-02 – SunOS 5.9: sbd & sbdp Patch**
- 4641546 4696700
- **113490-01 – SunOS 5.9: Audio Device Driver Patch**
- 4660099 4670245 4701098
- **113491-01 – SunOS 5.9: rpc Library Patch**
- 4525396 4643091
- **113492-01 – SunOS 5.9: fsck Patch**

4640210 4693730 4714988 4734635

- **113493-01 – SunOS 5.9: libproc.so.1 Patch**

4725696

- **113494-01 – SunOS 5.9: iostat Patch**

4511098 4679590

- **113495-01 – SunOS 5.9: cfgadm Library Patch**

4433415 4672974

- **113496-01 – SunOS 5.9: inetd Patch**

4383820

- **113503-01 – SunOS 5.9: SPECIAL PATCH: GigaSwift Ethernet 1.0 special postinstall script patch**

4735162

- **113504-01 – SunOS 5.9: flarcreate Patch**

4501772

- **113513-01 – X11 6.6.1: platform support for new hardware**

4731970

- **113538-03 – SunOS 5.9: ngdr Patch**

4696700 4756231

- **113539-01 – SunOS 5.9: Introducing Fujitsu FJSV,GPUSC-M platform support patch**
- **113541-01 – X11 6.6.1: XKB patch**

4689365

- **113543-01 – SunOS 5.9: Introducing Fujitsu FJSV,GPUSC-M platform support patch**
- **113571-01 – SunOS 5.9: eFCode Patch**

4495650

- **113572-01 – SunOS 5.9: docbook-to-man.ts Patch**

4649171

- **113573-01 – SunOS 5.9: libpsvc Patch**

4487110 4718737

- **113574-01 – SunOS 5.9: SUNW,Sun-Fire-880 libpsvc Patch**

4487110 4718737

- **113575-01 – SunOS 5.9: sendmail Patch**

4678365 4704672 4704675 4720281 4725387

- **113576-01 – SunOS 5.9: /usr/bin/dd Patch**

4632818

- **113577-01 – SunOS 5.9: /usr/kernel/sched/FX Patch**  
4701391
- **113578-01 – SunOS 5.9: inetboot Patch**  
4670609
- **113579-01 – SunOS 5.9: ypserv/ypxfrd Patch**  
4737417
- **113580-01 – SunOS 5.9: mount Patch**  
4715028
- **113581-01 – CDE 1.5: message patch to add to /usr/dt/bin/dtlp**  
4646929
- **113584-01 – SunOS 5.9: yesstr, nostr nl\_langinfo() strings incorrect in S9**  
4745109
- **113628-01 – SunOS 5.9: System Administration Core Libraries Patch**  
4660835
- **113713-01 – SunOS 5.9: pkginstall Patch**  
4720211
- **113742-01 – SunOS 5.9: smcpreconfig.sh Patch**  
4704611
- **113799-01 – SunOS 5.9: solregis Patch**  
4762680
- **113965-01 – SunOS 5.9: usr/sbin/ttinstall Patch**  
4763919
- **113971-01 – SunOS 5.9: ATOK12 patch**  
4770994