

Solaris 7 3/99 Release Notes (SPARC Platform Edition)

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Preface

The SolarisTM 7 (SPARCTM Platform Edition) 3/99 Release Notes contain installation problem details and other information that was not available until immediately before the release of the Solaris 7 3/99 operating environment, too late to be included in the SUNWrdm package that is resident on the Solaris 7 3/99 CD. This document complements the information in the SUNWrdm package, the online release notes, except for the information in Chapter 2.

Chapter 2 supersedes the information in the installation_bugs file that is part of the online release notes.

You can access the SUNWrdm package (the online release notes) as follows:

■ When reading from the Solaris 7 3/99 CD, information about this release can be found in the directory:

```
/cdrom/sol_7_399_sparc/s0/Solaris_2.7/Docs/release_info/C
```

■ The default installed location for information about this release can be found in the directory:

```
/usr/share/release_info/Solaris_2.7/C
```

Note - The name of this product is Solaris $7\,3/99$ but code and path or package path names may use Solaris 2.7 or SunOS 5.7. Always follow the code or path as it is written.

Who Should Use This Book

These notes are for users and system administrators who are installing and using the Solaris 7 3/99 operating environment.

Preface vii

Related Books

You may need to refer to the following manuals when installing Solaris software:

- Solaris 7 (SPARC Platform Edition) Start Here
- Solaris 7 (SPARC Platform Edition) Installation Library
- Solaris 7 Installation Supplement
- Solaris 7 System Administration Supplement
- Solaris 7 Software Developer Supplement

Solaris documentation is available on the Solaris 7 Documentation CD included with this product.

In this Solaris release you will find supplemental documentation describing new functionality. If a Solaris 7 AnswerBook 2^{TM} collection has been updated, you will find a *Solaris 7 Supplement* in that collection.

For some hardware configurations, you may 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 for hardware-specific installation instructions.

For known problems, new features, and patches not relating to installation, view the online files in the

/cdrom/sol_7_399_sparc/s0/Solaris_2.7/Docs/release_info/C directory on the Solaris 7 3/99 CD.

The /cdrom/sol_7_399_sparc/s0/Solaris_2.7/Docs/release_info/C directory includes these files:

- new_features product news and features that arrived too late to be included in the "What's New in Solaris" documentation on the Solaris 7 Documentation CD
- runtime_bugs late-breaking problems not related to installation
- installation_bugs known installation problems
- patches late-breaking information on current and non-integrated patches for Solaris 7
- eof late-breaking end of feature statements
- driverupdate late-breaking information on drivers
- documentation_issues late-breaking information about documentation errata and other documentation-related issues.

The installed location for the these files is the directory:

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What Typographic Changes Mean

TABLE P-1 Typographic Conventions

Typeface or Symbol	Meaning	Example
AaBbCc123	The names of commands, files, and directories; on-screen computer output	Edit your .login file. Use ls -a to list all files. machine_name% you have mail.
AaBbCc123	What you type, contrasted with on-screen computer output	machine_name% su Password:

 TABLE P-1
 Typographic Conventions (continued)

Typeface or Symbol	Meaning	Example
AaBbCc123	Command-line placeholder: replace with a real name or value	To delete a file, type rm filename.
AaBbCc123	Book titles, new words, or terms, or words to be emphasized.	Read Chapter 6 in <i>User's</i> Guide.
		These are called <i>class</i> options. You must be <i>root</i> to do this.

Installing Solaris 7 3/99 Software

This chapter provides instructions on how to install or upgrade to Solaris 7 3/99 system software on SPARC platforms.

The Solaris 7 3/99 release provides:

- New and updated device drivers to support new SPARC hardware
- New features as described in the supplemental documentation on the Solaris 7 documentation CD included with this product
- The Solaris 7 Maintenance Update TM (MU) patches integrated in to the Solaris system software

For more information about the hardware requirements for this installation, see the documentation provided by the hardware manufacturer.

For more information about installation and how to use the new Solaris Product Registry, see *Solaris 7 Installation Supplement*.

Backing Up Your System

Before you install or upgrade to the Solaris 7 3/99 software, make sure that you back up your files. For information on backing up your system, see the *System Administration Guide*.

Installing Solaris 7 3/99 System Software

You can use the SolarisTM Web Start, JumpStartTM, Custom JumpStart, or Interactive installation method to install the Solaris 7 3/99 system software. For detailed instructions on installing Solaris software, see the publications *Solaris 7 Installation Library* and *Solaris 7 Advanced Installation Guide* on the Solaris 7 Documentation CD included with this product.

Verifying the Installation

When the installation is complete, check the following files.

To view the install_log, begin.log, and finish.log files:

cd /var/sadm/system/logs

Use an editor to check the files.

Using Solaris 7 as an Install Server

If you use Solaris 7 as an install server, you need to modify the Solaris 7 /etc/nsswitch.conf file before you run add_install_client.

1. Go to this line in the Solaris 7 /etc/nsswitch.conf file:

hosts: xfn nis [NOTFOUND=return] files

2. Remove the xfn entry so that the line looks like this:

hosts: nis [NOTFOUND=return] files

3. Run add_install_client from the Solaris 7 3/99 CD.

Installing Solaris 7 3/99 System Software on Diskless Clients and AutoClients From a Server

You need to install Solstice™ AdminSuite™ 2.3 patch number 104468-06 or any subsequent revision of this patch before you add OS services to your server. You will find the patch and installation instructions at

http://access1.sun.com/private-cqi/patch2html?README.104468-06.

If you are using Solstice AdminSuite with a patched Solaris release in which it is inadvisable or impossible to remove all the patches, then you will need to have the following file to add OS services:

/var/sadm/patch/.mu_applied

This file is automatically created by the following MU releases:

- 2.5.1: MU3, MU4, and MU5
- 2.6: MU1 and MU2
- 7: MU1



Caution - With this workaround, Solstice AdminSuite is unable to track all the patches in a system. Use admclientpatch to add or remove patches to or from the system.

Note - For a list of new platforms and the options that are available for this release, see the hardware manufacturer's documentation.

If you are unable to obtain the patch from access1.sun.com, go through your normal support channel.

Verifying the Installation

When the installation is complete, check the following files.

To view the install_log, begin.log, and finish.log files:

cd /var/sadm/system/logs

Use an editor to check the files.

Upgrading to Solaris 7 3/99 System Software

Before upgrading, refer to the "Installation Bugs That May Occur During an Upgrade" on page 14 for important upgrade information.

Upgrading From the Solaris 2.5.1 or 2.6 Operating Environment

To upgrade, use the JumpStart, Custom JumpStart, or Interactive installation method with the Upgrade option. For detailed instructions on installing Solaris software, see the publications *Solaris 7 Installation Library* and *Solaris 7 Advanced Installation Guide* on the Solaris 7 Documentation CD included with this product.

Note - During an upgrade, you may receive an informational message regarding some of the packages (including SUNWolrte, SUNWoldev, SUNWoldte, SUNWolaud). No action is required.

An example of this message is:

Doing pkgadd of SUNWolrte to /

This message indicates an attempt to install the same architecture and version of a package that is already installed.

Installation of SUNWolrte was successful...

Upgrading From the Solaris 7 Operating Environment

If you are already running the Solaris 7 operating environment and have installed patches, upgrading to the Solaris 7 3/99 system software will cause:

- Any patches supplied as part of the Solaris 7 3/99 system software to be reapplied to your system. You will not be able to back out these patches.
- Any patches previously installed on your system that are not included in the Solaris 7 3/99 system software to be removed.

To see a list of patches that will be removed, use the Patch Analyzer as described below

If you have not installed patches on your Solaris 7 system, go to "Upgrading to Solaris 7 3/99 System Software From the Solaris 7 Operating Environment" on page 7.

Analyzing the Patches

The Patch Analyzer performs an analysis on your system to determine which (if any) patches will be removed by upgrading to the Solaris 7 3/99 operating environment. The Patch Analyzer is available as a script to run manually and as part of the Interactive installation method.

- If you are using the Interactive installation method to upgrade, choose the Analyze option to perform the analysis.
- If you are not using the Interactive installation method to upgrade, use the steps below to perform the analysis using the analyze_patches script.

After performing the analysis, refer to "Reviewing the Patch Analyzer Output" on page 6 for detailed information about the patch analysis results.

Running the analyze patches Script

To run the analyze_patches script:

Note - To run the analyze_patches script, the installed system and the Solaris 7 3/99 CD (or net image) must be accessible by the script either through an NFS™ mount or using locally mounted media.

- 1. Change directories to the Misc directory on the OS image.
 - If the image is on locally mounted media, type:

```
# cd /cdrom/sol_7_399_sparc/s0/Solaris_2.7/Misc
```

■ If the image is available through an NFS mount, type:

```
# cd /NFS_mount_directory/Solaris_2.7/Misc
```

2. Run the analyze_patches script:

```
# ./analyze_patches
```

The options listed in Table 1–1 can be used on the command line.

TABLE 1-1 Command-Line Options for analyze_patches

Option	Description
−R <i>rootdir</i>	$\verb"rootdir" is the root of the installed system. It defaults to \verb /.$
−N <i>netdir</i>	netdir is the path to the root of the OS image to be installed. It defaults to /cdrom/cdrom0. It should point to the directory containing the Solaris_2.7 directory. You must use this option if running the patch_analyzer from an NFS mount.
−D databasedir	If the script is invoked from a directory other than the <code>/Misc</code> directory on the OS image, the program will not find the database it uses for patch analysis. Use the <code>-D</code> option to supply the path to the database. Without this database, contained in the <code>/Solaris_2.7/Misc/database</code> on the OS image, the script will not work properly.

Reviewing the Patch Analyzer Output

After performing the analysis, use these steps to review the output.

1. Review the output of the analyze_patches script.

■ The Patch Analyzer provides a list of patches that will be removed, downgraded, accumulated, or obsoleted by other patches. Patch accumulations are similar to patch upgrades. The accumulated patch is removed and its fixes are delivered by a new patch. Messages such as the following are shown:

```
Patch 105644-03 will be removed.

Patch 105925 will be downgraded from -02 to -01.

Patch 105776-01 will be accumulated/obsoleted by patch 105181-05.
```

■ If the Patch Analyzer program does not provide a list, no action will be taken against any patches previously installed on your system.

2. Decide if patch replacements and deletions are acceptable.

- If the patch replacements and deletions by the Solaris 7 3/99 system software are acceptable, continue to the section "Upgrading to Solaris 7 3/99 System Software From the Solaris 7 Operating Environment."
- If the patch replacements and deletions by the Solaris 7 3/99 system software are not acceptable, do not upgrade using the Solaris 7 3/99 CD. You may use

the Solaris 7 MU1 CD and Solaris 7 Maintenance Update 1 Release Notes to install the patches on your Solaris 7 system.

Upgrading to Solaris 7 3/99 System Software From the Solaris 7 Operating Environment

To upgrade, use the JumpStart, Custom JumpStart, or Interactive installation method with the Upgrade option. For detailed instructions on installing Solaris software, see the publications *Solaris 7 Installation Library* and *Solaris 7 Advanced Installation Guide* on the Solaris 7 Documentation CD included with this product.

Note - During an upgrade, you may receive an informational message regarding some of the packages (including SUNWolrte, SUNWoldev, SUNWoldte, SUNWolaud). No action is required.

An example of this message is:

Doing pkgadd of SUNWolrte to /

This message indicates an attempt to install the same architecture and version of a package that is already installed.

Installation of SUNWolrte was successful...

Verifying the Upgrade

When the upgrade is complete, check the upgrade_log file to verify the installation:

cd /var/sadm/system/logs

Use an editor to check these files.

Updating Diskless Clients and AutoClients From a Server After an Upgrade

You need to install Solstice AdminSuite 2.3 patch number 104468-06 or any subsequent revision of this patch before you add OS services to your server. You will find the patch and installation instructions at

http://access1.sun.com/private-cgi/patch2html?README.104468-06.

If you are using Solstice AdminSuite with a patched Solaris release in which it is inadvisable or impossible to remove all the patches, then you will need to have the following file to add OS services:

This file is automatically created by the following MU releases:

- 2.5.1: MU3, MU4, and MU5
- 2.6: MU1 and MU2
- 7: MU1



Caution - With this workaround, Solstice AdminSuite is unable to track all the patches in a system. Use admclientpatch to add or remove patches to or from the system.

If you are unable to obtain the patch from ${\tt access1.sun.com}$, go through your normal support channel.

Identifying the Version of Your Solaris 7 3/99 Software

To identify the version of your Solaris 7 3/99 software:

cat /etc/release

Installation Issues

This chapter describes problems relating to the installation of the Solaris $7\,3/99$ software environment.

Note - The information in this chapter supersedes any information listed in the <code>installation_bugs</code> file that is part of the <code>SUNWrdm</code> package on the Solaris 7 3/99 CD. If you boot from the Solaris 7 3/99 CD, the <code>installation_bugs</code> file is located in the directory:

/cdrom/sol_7_399_sparc/s0/Solaris_2.7/Docs/release_info/C

The default installed location for the installation_bugs file is located in the directory:

/usr/share/release_info/Solaris_2.7/C

Note - The name of this product is Solaris 7 3/99 but code and path or package path names may use Solaris 2.7 or SunOS 5.7. Always follow the code or path as it is written.

Solaris Web Start Issues

This section only describes known installation issues that may occur when using Solaris Web Start, the browser-based program that enables you to install both the Solaris software and co-packaged software.

Limited Browser Support In Client-Server Mode

To use the client-server mode of Solaris Web Start, you must have one of the following software configurations installed on the client:

- The Solaris 2.6 or Solaris 7 operating environment with its accompanying version of the HotJava[™], Netscape Navigator[™] 4.0, or Netscape Navigator[™] 4.5 browser
- Windows 95 with the HotJava, Netscape Navigator 4.0, or Netscape Navigator 4.5 browser

Solaris Web Start may not run or display properly with older versions of HotJava, older versions of the Navigator browser, or with Internet Explorer.

Solaris Web Start Bugs

This section only describes known installation bugs that may occur when using Solaris Web Start, the browser-based program that enables you to install both the Solaris software and copackaged software.

Cannot Move the Root File System (4046659)

You can choose a system disk in Solaris Web Start but you cannot move the root file system off the system disk afterwards.

Workaround: If you need to do this, use the Solaris Interactive Installation program instead of Solaris Web Start.

Products May Not Use All Reserved Space (4059182)

Solaris Web Start reserves disk space based on the total requirements of all the products that you install. If you check disk space allocation after installing but before using the products, you may find a substantial amount of apparently unused space. Some of this space may be taken up when you run the software; some of it may remain unused.

Workaround: If you want to allocate less total disk space than Solaris Web Start requires, use the Solaris Interactive Installation program instead.

Interactive Installation Issues

New JumpStart Behavior

When you turn on a system with the JumpStart[™] software already installed (this includes new systems and preinstalled systems on which another installation has been performed) in the Solaris 7 as well as the Solaris 2.6 operating environments, Solaris Web Start's introductory screen is displayed. You can now exit Solaris Web Start and perform a JumpStart installation.

Solaris dtlogin Screen

The Solaris 7 as well as the Solaris 2.6 operating environments default to a login screen when you initially boot your workstation, regardless of which desktop you are using. You can select your desktop from the login screen. The login screen requires the user's name and password. Your desktop is displayed upon authentication of your login name and password. For more information about the login screen, see the dtlogin man page (provided with the Solaris Common Desktop Environment (CDE) man pages) or the Common Desktop Environment: Advanced User's and System Administrator's Guide.

dtlogin Notes for System Administrators

A system administrator who is new to CDE needs to know about CDE's graphical login program, dtlogin. Review the dtconfig man pages.

Interactive Installation Bugs

Installation Fails With a False Non-Mountable File **System Error (4164303)**

The following message may be displayed:

The Solaris operating environment on slice c0t0d0s0 cannot be upgraded. A file system listed in the file system table (vfstab) could not be mounted. The installation software may interpret inodes that are stored on striped DiskSuite TM meta devices for root inodes and attempt to mount the meta devices as upgradable slices. When this problem occurs, the mounts fail and the installation aborts.

TotalNET Advanced Server (SunLink) Drivers Cause Panic After a Reboot (4121961)

Warning: mod_install: MT-unsafe driver 'tnatp' rejected panic[cpu0] / thread=7051e040:mutex-enter:bad_mutex lp=1046aa20 owner=7051e040 thread=7051e040

An upgrade to TotalNET Advanced Server (SunLink $^{\text{\tiny TM}}$) version 5.2 is required with the Solaris 7 operating environment because of a driver conflict. Version 5.0 and version 5.1 for the TotalNET Advanced Server cause the Solaris 7 operating environment to not boot correctly.

Workaround: Before you install the Solaris 7 operating environment, you must upgrade all installations to version 5.2 for the TotalNET Advanced Server, which is available on the Solaris Easy Access Server 2.0 CD. Follow the instructions provided to upgrade existing TotalNET Advanced Server installations.

Installation Bugs That Occur During an Interactive Installation

Erroneous Messages Indicating Packages Added a Second Time (1235464)

This appears as an attempt to install the same architecture and version of a package that is already installed. This installation overwrites this package.

When upgrading a system with the Entire Distribution plus OEM Cluster, the following packages seem to be added twice:

- SUNWolinc
- SUNWxwdim
- SUNWxwinc
- SUNWxwman
- SUNWxwpmn

- SUNWxwsrc
- SUNWolbk
- SUNWoldim
- SUNWolman
- SUNWolsrc

Installation Progress Bar May Be Inaccurate (1266156)

The "Installing Solaris Software - Progress" bar sometimes indicates that an installation is complete when it is still in progress. The install program may add packages for several minutes after the progress bar has indicated that the installation is complete. Do not rely on the progress bar to indicate that the installation is complete. The installation displays the following message when the program has completed all installation operations:

Installation complete

JumpStart Installs on Wrong Default Boot Disk (4027156)

JumpStart does not install the default boot on the current default boot disk under some conditions. A condition under which the problem has been observed involves using a fully automated install on a SPARCstation $^{\text{TM}}$ 5 with two hard disk drives. Therefore, the previous version of the Solaris operating environment is booted instead of the current one when you reboot.

Workaround: Install the Solaris operating environment without JumpStart.

Installation of Diskless Client Does Not Preserve Changes in the dfstab File on a Server (4045544)

When you upgrade the Solaris operating environment on a server with diskless clients, the options on the dfstab line are not preserved for /usr. For example, if you entered the following in the dfstab file:

share -F nfs -o rw /export/exec/Solaris_2.7_sparc.all/usr

then this entry is automatically replaced with the following entry during the upgrade:

Workaround: Before you attempt to upgrade the Solaris operating environment on an OS server that has a diskless client or Solstice AutoClient, back up the /etc/dfs/dfstab file for the clients.

Installation Bugs That May Occur During an Upgrade

Multiple Architecture Server Cannot Be Patched (1249343)

After upgrading a server with diskless clients of more than one SPARC kernel architecture, such as a sun4u server with diskless sun4c, sun4d, and sun4m clients, the SUNWkvm packages for clients whose kernel architectures differ from that of the server cannot be patched.

Workaround: Manually add all of the *SUNWkvm* packages before applying any patches that affect them.

pkgadd -d SUNWkvm.*

Disk Space Requirements Can Be Exaggerated By the Upgrade Process (4041733)

The upgrade program can exaggerate by as much as 30 percent the amount of space required for upgrades to systems with the Solaris software. Therefore, it prevents many systems from being upgraded without deselecting packages or finding more space.

Workaround: You can manually reallocate disk space among file systems or use the Software Customization menu to remove software packages that are not needed.

sun4m Solstice AutoClients Fail to Mount Cache After an Upgrade From the Solaris 2.6 Hardware: 3/98 Release (4121951)

The Solstice AutoClients display the following message when rebooting:

```
fsck -F cachefs: Cache directory /.cache/rootcache does not exist.
mount -F cachefs: cache fsck mount failed
fsck -F cachefs: Cache directory /.cache/rootcache does not exist.
mount -F cachefs: cache fsck mount failed
```

This directive indicates to the kernel that the root file system is of type cachefs. To determine whether or not a specific Solstice AutoClient can be affected by this problem before you attempt an upgrade, examine the directory /export/root/client-name/var/sadm/pkg on the server (this is the Solstice AutoClient's /var/sadm/pkg directory). If this directory contains a subdirectory called TADcar, the Solstice AutoClients may be affected.

Workaround: Edit the /etc/system file for the Solstice AutoClients after the upgrade by appending the following line:

```
rootfs:cachefs
```

The Solstice AutoClients' /etc/system file is stored on the server as /etc/root/client-name/etc/system.

Solaris Installation Bugs

Warnings May Occur When Creating a File System (4189127)

One of the following error messages may be displayed when creating a file system during installation:

```
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 being created does not map exactly to the space on the disk being used. This can result in unused space on the disk that is not incorporated into the indicated file system. This usnused space is not available for use by other file systems.

Workaround: Ignore the error message.

Not All Locales Supported Outside of Entire Metacluster (4181942)

All locales are supported only in the Entire Distribution and Entire Distribution plus OEM metaclusters. Subsets of these locales are supported in the Developer, End User, and Core metaclusters.

If you select a locale at the beginning of the installation that is not supported by the metacluster that you choose to install later in the installation on the metacluster selection screen, the following occur:

- Web Start installation of co-packaged products fails without installing the co-packaged products.
- You cannot open terminal windows in CDE.

For Desktop editions of the Solaris $7\,3/99$ operating environment, the Web Start installer installs the End User metacluster. For Server editions of the Solaris $7\,3/99$ operating environment, Web Start installs the Entire metacluster. You can change the defaults by selecting a Custom installation.

The following is the list of locales supported by each metacluster:

TABLE 2-1 Entire and Entire plus OEM

Language	Description
ar	Egypt - English (ISO-8859-6)
he	Israel - English (ISO-8859-8)
he_IL	Israel - English (ISO-8859-8)
th_TH	Thailand - English (TIS 620.2533)
bg_BG	Bulgarian (ISO 8859-5)
CZ	Czech Republic
da	Denmark
da.IS08859-15	Denmark (ISO8859-15)
de	German
de.ISO8859-15	Euro German (ISO8859-15)
de.UTF-8	German (UTF-8)
de_AT	Austria

 TABLE 2-1
 Entire and Entire plus OEM (continued)

Language	Description
de_AT.ISO8859-15	Austria (ISO8859-15)
de_CH	Switzerland
el	Greece
en_AU	Australia - English (ISO-8859-1)
en_CA	Canada - English (ISO-8859-1)
en_EU.IS08859-15	Euro English (ISO8859-15)
en_EU.UTF-8	Euro English (UTF-8)
en_GB	GB - English (ISO-8859-1)
en_GB.IS08859-15	GB - English (ISO-8859-15)
en_IE	Ireland - English (8 bit)
en_IE.IS08859-15	Ireland (ISO8859-15)
en_NZ	New Zealand - English (8 bit)
en_US	USA - English (ISO-8859-1)
en_US.UTF-8	USA - English (UTF-8)
es	Spanish
es.ISO8859-15	Euro Spanish (ISO8859-15)
es.UTF-8	Spanish (UTF-8)
es_AR	Argentina
es_BO	Bolivia
es_CL	Chile
es_CO	Colombia
es_CR	Costa Rica
es_EC	Ecuador

 TABLE 2-1
 Entire and Entire plus OEM (continued)

Language	Description
es_GT	Guatemala
es_MX	Mexico
es_NI	Nicaragua
es_PA	Panama
es_PE	Peru
es_PY	Paraguay
es_SV	El Salvador
es_UY	Uruguay
es_VE	Venezuela
et	Estonia
fi	Finland
fi.ISO8859-15	Finland (ISO8859-15)
fr	French
fr.ISO8859-15	Euro French (ISO8859-15)
fr.UTF-8	French (UTF-8)
fr_BE	Belgium
fr_BE.ISO8859-15	Belgium (ISO8859-15)
fr_CA	Canada
fr_CH	Switzerland
hr_HR	Croatian (ISO 8859-2)
hu	Hungary
it	Italian
it.IS08859-15	Euro Italian (ISO8859-15)

 TABLE 2-1
 Entire and Entire plus OEM (continued)

Language	Description
it.UTF-8	Euro Italion (UTF-8)
lt	Lithuania
lv	Latvia
mk_MK	Macedonian (ISO 8859-5)
nl	Netherlands
nl.ISO8859-15	Netherlands (ISO8859-15)
nl_BE	Netherlands/Belgium
nl_BE.IS08859-15	Netherlands/Belgium (ISO8859-15)
no	Norway
no_NY	Nynorsk
nr	Bosnian (ISO 8859-2)
pl	Poland
pt	Portugal
pt.ISO8859-15	Portugal (ISO8859-15)
pt_BR	Portugal/Brazil
ro_RO	Romanian (ISO 8859-2)
ru	Russia
sk_SK	Slovak (ISO 8859-2)
sl_SI	Slovene (ISO 8859-2)
sq_AL	Albanian (ISO 8859-2)
sr_SP	Serbian (ISO 8859-5)
sv	Swedish
sv.IS08859-15	Euro Swedish (ISO8859-15)

 TABLE 2-1
 Entire and Entire plus OEM (continued)

Language	Description
sv.UTF-8	Swedish (UTF-8)
tr	Turkey

TABLE 2-2 Developer

Language	Description
th_TH	Thailand - English (TIS 620.2533)
da	Denmark
de	German
de.ISO8859-15	Euro German (ISO8859-15)
el	Greece
en_AU	Australia - English (ISO-8859-1)
en_CA	Canada - English (ISO-8859-1)
en_EU.IS08859-15	Euro English (ISO8859-15)
en_EU.UTF-8	Euro English (UTF-8)
en_GB	GB - English (ISO-8859-1)
en_GB.IS08859-15	GB - English (ISO-8859-15)
en_US	USA - English (ISO-8859-1)
en_US.UTF-8	USA - English (UTF-8)
es	Spanish
es.ISO8859-15	Euro Spanish (ISO8859-15)
es_AR	Argentina
es_BO	Bolivia
es_CL	Chile

TABLE 2-2 Developer (continued)

Language	Description
es_CO	Colombia
es_CR	Costa Rica
es_EC	Ecuador
es_GT	Guatemala
es_MX	Mexico
es_NI	Nicaragua
es_PA	Panama
es_PE	Peru
es_PY	Paraguay
es_SV	El Salvador
es_UY	Uruguay
es_VE	Venezuela
fr	French
fr.ISO8859-15	Euro French (ISO8859-15)
it	Italian
it.IS08859-15	Euro Italian (ISO8859-15)
sv	Swedish
sv.IS08859-15	Euro Swedish (ISO8859-15)
tr	Turkey

TABLE 2-3 End User

Language	Description
da	Denmark
de	German
de.ISO8859-15	Euro German (ISO8859-15)
el	Greece
en_AU	Australia - English (ISO-8859-1)
en_CA	Canada - English (ISO-8859-1)
en_EU.IS08859-15	Euro English (ISO8859-15)
en_EU.UTF-8	Euro English (UTF-8)
en_GB	GB - English (ISO-8859-1)
en_GB.IS08859-15	GB - English (ISO-8859-15)
en_US	USA - English (ISO-8859-1)
es	Spanish
es.ISO8859-15	Euro Spanish (ISO8859-15)
es_AR	Argentina
es_BO	Bolivia
es_CL	Chile
es_CO	Colombia
es_CR	Costa Rica
es_EC	Ecuador
es_GT	Guatemala
es_MX	Mexico
es_NI	Nicaragua
es_PA	Panama

TABLE 2-3 End User (continued)

Language	Description
es_PE	Peru
es_PY	Paraguay
es_SV	El Salvador
es_UY	Uruguay
es_VE	Venezuela
fr	French
fr.ISO8859-15	Euro French (ISO8859-15)
it	Italian
it.ISO8859-15	Euro Italian (ISO8859-15)
sv	Swedish
sv.ISO8859-15	Euro Swedish (ISO8859-15)
tr	Turkey

TABLE 2-4 Core

Language	Description
ar	Egypt - English (ISO-8859-6)
he	Israel - English (ISO-8859-8)
he_IL	Israel - English (ISO-8859-8)
bg_BG	Bulgarian (ISO 8859-5)
CZ	Czech Republic
da	Denmark
da.IS08859-15	Denmark (ISO8859-15)
de	German

 TABLE 2-4
 Core (continued)

Language	Description
de.ISO8859-15	Euro German (ISO8859-15)
de.UTF-8	German (UTF-8)
de_AT	Austria
de_AT.IS08859-15	Austria (ISO8859-15)
de_CH	Switzerland
el	Greece
en_AU	Australia - English (ISO-8859-1)
en_CA	Canada - English (ISO-8859-1)
en_EU.IS08859-15	Euro English (ISO8859-15)
en_EU.UTF-8	Euro English (UTF-8)
en_GB	GB - English (ISO-8859-1)
en_GB.ISO8859-15	GB - English (ISO-8859-15)
en_IE	Ireland - English (8 bit)
en_IE.IS08859-15	Ireland (ISO8859-15)
en_NZ	New Zealand - English (8 bit)
en_US	USA - English (ISO-8859-1)
es	Spanish
es.ISO8859-15	Euro Spanish (ISO8859-15)
es.UTF-8	Spanish (UTF-8)
es_AR	Argentina
es_BO	Bolivia
es_CL	Chile
es_CO	Colombia

 TABLE 2-4
 Core (continued)

Language	Description
es_CR	Costa Rica
es_EC	Ecuador
es_GT	Guatemala
es_MX	Mexico
es_NI	Nicaragua
es_PA	Panama
es_PE	Peru
es_PY	Paraguay
es_SV	El Salvador
es_UY	Uruguay
es_VE	Venezuela
et	Estonia
fi	Finland
fi.ISO8859-15	Finland (ISO8859-15)
fr	French
fr.IS08859-15	Euro French (ISO8859-15)
fr.UTF-8	French (UTF-8)
fr_BE	Belgium
fr_BE.ISO8859-15	Belgium (ISO8859-15)
fr_CA	Canada
fr_CH	Switzerland
hr_HR	Croatian (ISO 8859-2)
hu	Hungary

TABLE 2-4 Core (continued)

Language	Description
it	Italian
it.ISO8859-15	Euro Italian (ISO8859-15)
it.UTF-8	Euro Italion (UTF-8)
lt	Lithuania
lv	Latvia
mk_MK	Macedonian (ISO 8859-5)
nl	Netherlands
nl.ISO8859-15	Netherlands (ISO8859-15)
nl_BE	Netherlands/Belgium
nl_BE.IS08859-15	Netherlands/Belgium (ISO8859-15)
no	Norway
no_NY	Nynorsk
nr	Bosnian (ISO 8859-2)
pl	Poland
pt	Portugal
pt.ISO8859-15	Portugal (ISO8859-15)
pt_BR	Portugal/Brazil
ro_RO	Romanian (ISO 8859-2)
ru	Russia
sk_SK	Slovak (ISO 8859-2)
sl_SI	Slovene (ISO 8859-2)
sq_AL	Albanian (ISO 8859-2)
sr_SP	Serbian (ISO 8859-5)

TABLE 2-4 Core (continued)

Language	Description
sv	Swedish
sv.IS08859-15	Euro Swedish (ISO8859-15)
sv.UTF-8	Swedish (UTF-8)
tr	Turkey

Workaround: To prevent the problem, install the metacluster that contains the desired locale.

To repair an existing installation, in the /etc/default/init file change the references to the unsupported locale to reference a supported locale for the installed metacluster.

System Administration Installation Bugs

Addition of Solaris 7 Service to an OS Server Results in an Upgrade Failure Message (4171470)

When the Solaris 7 system software is added to an OS server as a service, the following error message is displayed:

```
celebris: Error: Error adding OS service Solaris 2.7 i386 i86pc:
service modification failed.
See /var/sadm/system/logs/upgrade_log for more information
(/var/sadm/install_data/upgrade_log on Solaris 2.3 or 2.4).
```

Where *celebris* is the name of the OS server.

If you review the indicated log file, you will see that the addition of the SUNWplow package failed with the following message:

```
Doing pkgadd of SUNWplow to /.
ERROR: attribute verification of <export/exec/Solaris_2.7_i386.all/etc/default/
init> failed
pathname does not exist
```

64-Bit Solaris Issues

This section describes installation-related 64-bit Solaris issues.

Sun UltraSPARC System (sun4u) May Need Flash PROM (Open Boot) Upgrade

If you want to run the 64-bit Solaris operating environment on an UltraSPARC system, you may need to upgrade its Flash PROM firmware. The Solaris 7 installation programs have a new checkbox for adding 64-bit support. This new 64-bit support is selected by default when installing on Sun UltraSPARC systems.

Note - If you choose to run the 32-bit Solaris operating environment on any Sun or UltraSPARC system, the Flash PROM upgrade is not needed.

The following table lists the UltraSPARC (sun4u) systems that are affected and the minimum firmware versions needed. If the system is not listed in the table, it does not need a Boot PROM upgrade. Use uname <code>-i</code> to check the system type. Use <code>prtconf -V</code> to identify the firmware version.

System Type from uname -i	Minimum Fimware Version from prtconf -V
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 - For instructions on performing the Flash PROM update using the Solaris CD, refer to the *Solaris 7 Sun Hardware Platform Guide*. If you do not have this manual, it can be obtained at http://docs.sun.com.

Late-Breaking Solaris Runtime Issues

This chapter describes known runtime problems. You may also want to refer to the online runtime_bugs file in the SUNWrdm package on the Solaris 7 3/99 CD for additional runtime problems.

Note - The information in this chapter supplements any information listed in the runtime_bugs file that is part of the SUNWrdm package on the Solaris 7 3/99 CD. If you boot from the Solaris 7 3/99 CD, the runtime_bugs file is located in the directory:

/cdrom/sol_7_399_sparc/s0/Solaris_2.7/Docs/release_info/C

The default installed location for the runtime_bugs file is the directory:

/usr/share/release_info/Solaris_2.7/C

Note - The name of this product is Solaris 7 but code and path or package path names may use Solaris 2.7 or SunOS 5.7. Always follow the code or path as it is written.

64-Bit Solaris Bugs

krtld Does Not Recognize sparcv9 Register Symbols (4203394)

When loading an unbundled device driver, STREAMS module, file system, or other kernel module, you may see the following error message:

```
kernel_module_path: undefined symbol
WARNING: mod_load: cannot load module 'kernel_module_path'
```

The kernel runtime linker does not recognize the new register symbol type introduced in the SC5.0 FCS compilers and assemblers for 64-bit SPARC binaries.

Workaround: You must verify that the error message was generated because the kernel runtime linker does not recognize the new register symbol type. To do this, type:

```
# nm kernel_module_path | grep REGI
```

If this is the problem, the output from this command is a table that shows one row with 2 in the Value column and REGI in the Type column and another row with 3 in the Value column and REGI in the Type column. An example is:

[154]	2	0 REGI GLOB 0	UNDEF
[155]	3	0 REGI GLOB 0	UNDEF

To correct the problem:

- If you have the source code for the kernel module, recompile the kernel module with -xregs=no%appl option, or, if it is written in assembly language, assemble it with -xregsym=no option.
- If you do not have the source code, contact the provider of the kernel module to report the problem.

Debugging

dbx 4.0 Cannot Dump the Stack Trace When Debugging a Multi-Threaded Program (4207409)

When debugging a multi-threaded program with a signal handler on a given thread stack, dbx 4.0 cannot successfully dump the thread's stack.

Workaround: Use dbx 5.0.

End-of-Support Statements

This chapter lists late-breaking end-of—support statements that arrived too late to be included in the online eof file in the SUNWrdm package on the Solaris CD.

Note - The information in this chapter supplements any information listed in the eof file that is part of the SUNWrdm package on the Solaris 7 3/99 CD. If you boot from the Solaris 7 3/99 CD, the eof file is located in the directory:

/cdrom/sol_7_399_sparc/s0/Solaris_2.7/Docs/release_info/C

The default installed location for the eof file is the directory:

/usr/share/release_info/Solaris_2.7/C

End of Software Support Statements for Future Releases of the Solaris Operating Environment

The sysidnis(1M) System Identification Program

sysidnis(1M) may be removed in a future release. sysidnis(1m) is the System Identification program responsible for configuring name services during installation, upgrade, and after unconfiguration via sys-unconfig(1M).

sysidnis(1M) will be replaced by sysidns(1M).

Maintenance Update Patch List

This appendix lists patches and the bug numbers associated with each patch. The patches in the Solaris 7 Maintenance Update 1 are integrated into the Solaris packages before the CD is created. This creates a Solaris operating environment that contains a known and tested level of patches; however, the patches can not be backed out of the release.

Patch List

106146-01: PGX 7 M64 Graphics Patch

4147781 4166676

106147-01: SunOS 5.7 VIS/XIL Graphics Patch

4163883 4172620

106541-02 : SunOS 5.7 kernel update patch

4104625 4115711 4115715 4138467 4139770 4140352 4147402 4152055 4159337 4165983 4168739 4170410 4170500 4174167 4174331 4175558 4177334 4177496 4179407 4179883 4181570 4182043 4182047 4182227 4182234 4182240 4182970 4184015 4184430 4184852

4184877 4185366 4190083 4190138 4190405 4190796 4190807 4190812 4193467

106733-05 : SunOS 5.7 Create a patch analyzer

4170691 4175875 4178977 4132282 4186583 4186586 4186587 4186588

106793-01: SunOS 5.7 ufsdump and ufsrestore patch

4077276 4132365 4145883 4169853 4184189

106812-04 : SunOS 5.7 ctl print utility patch

4172142 4173334

106832-02 : SunOS 5.7 auditreduce/c2audit/praudit patch

4166626 4167174 4168892 4172111 4172702 4174308 4182072 4187811

106843-01 : OpenWindows 3.6.1 (japanese) fixed OW ws menu bug for sparc

4177882

106851-04 : SunOS 5.7 Manual Pages for Solaris 7 update

4173822 4186746 1070678 4136939 4153439 4162004 4171658 4170933 4169829 4146611

4147612 4165502 4166848 4178133 4179296 4181039 4181145

106879-01: Power_Mgmt-SW 7 sys-suspend patch

4174133

106915-01 : SunOS 5.7 dtmail in zh.GBK can't read 2.5.1 Chinese email by default.

4182320

106917-01~:~SunOS~5.7~ when view mails change charset, dtmail dump core.

4175029

106924-01 : SunOS 5.7 /kernel/drv/isp and /kernel/drv/sparcv9/isp patch

4166035

106925-01 : SunOS 5.7 /kernel/drv/glm and /kernel/drv/sparcv9/glm patch

4162302 4176924

106926-02 : sdtudctool, sdtudc_register and sdtudc_extract patch for sparc

4178971 4183926 4178952 4178964 4162315 4176705 4179808 4192450

106934-01 : CDE 1.3 libDtSvc Patch

4181281 4167347

106936-01 : SunOS 5.7 /etc/cron.d/logchecker patch

4094591

106938-01: SunOS 5.7 libresolv patch

4134616

106940-01 : SunOS 5.7 /usr/sbin/makedbm patch

4144726

106942-01 : SunOS 5.7 libnsl patch

4157559 4161969

106944-01 : SunOS 5.7 /kernel/fs/fifofs and /kernel/fs/sparcv9/fifofs patch

4166116

106946-01 : SunOS 5.7 /usr/sbin/sar patch

4175435

106948-01 : SunOS 5.7 /kernel/drv/qe and /kernel/drv/sparcv9/qe patch

4154455

106949-01: SunOS 5.7 BCP (binary compatibility) patch

4169198

106950-01 : SunOS 5.7 linker patch

4176579

106952-01 : SunOS 5.7 /usr/bin/uux patch

4179980

106960-01 : SunOS 5.7 Manual Pages for patchadd.1m and patchrm.1m

4178212

106963-01 : SunOS 5.7 /kernel/drv/esp and /kernel/drv/sparcv9/esp patch

4176942

106967-01: SunOS Release 5.7 htt server unexpectedly restart

4172429

106969-01: SunOS 5.7 zh.GBK, Input Method, Alt+1 sometimes can not work properly

4183054

106971-01 : xetops of zh.GBK locale doesn't process TAB character

4187748

106973-01: SunOS 5.7 Correct translation error.

4176030

106978-01: SunOS 5.7 fix for /var/log/sysidconfig.log permission

4166260

106980-03: SunOS 5.7 libthread patch

4157739 4173285 4173422

106982-01 : SunOS 5.7 /kernel/drv/fas and /kernel/drv/sparcv9/fas patch

4172361

106985-01: SunOS 5.7 /usr/sbin/uadmin and /sbin/uadmin patch

4167438

106987-01 : SunOS 5.7 /usr/sbin/tar and /usr/sbin/static/tar patch

4159872

106999-01 : SunOS 5.7 /usr/lib/adb/sparcv9/adbsub.o patch

4164583

107001-01 : CDE 1.3 Actions patch

4157154

107011-01: CDE 1.3 sdtwebclient patch

4110777 4164680 4185288

107014-01 : XIL 1.4 Deskset Loadable Pipeline Libraries

4177176 4174709

107018-01: SunOS 5.7 /usr/sbin/in.named patch

4134616

107022-01 : CDE 1.3 sdtcm_convert patch

4184188

107029-01 : SunOS 5.7 /usr/platform/sun4u/sbin/prtdiag patch

4184305

107030-01 : SunOS 5.7 sysctrl.so.1 patch

4184305

107031-01: SunOS 5.7 /usr/ucb/ucblinks patch

4161576

107038-01 : SunOS 5.7 apropos/catman/man/whatis patch

4107178 4154565

107042-01 : SunOS 5.7 Messages of Patch Analysis update for install

107044-01 : SunOS 5.7 Russian and Polish print failure on some printers

4190105

107059-01 : SunOS 5.7 /usr/bin/sort and /usr/xpg4/bin/sort patch

4181185

107063-01 : Solaris 7 Thai engine crashes in 64bit mode

4186151

107072-01: CDE 1.3 Spell Checker patch

4185079

107074-01 : SunOS 5.7 SUNWultratest doesn't support sun4us platform

4190729

107076-01 : SunOS 5.7 /usr/kernel/drv/vol and /usr/kernel/drv/sparcv9/vol patch

4181968

107081-01: Motif 1.2.7 Runtime library patch

4159034 4149711 4171291 4170491 4162369 4165677 4171723 4174322 4183749 4186734

4186826

107094-01 : CDE 1.3 dtterm libDtTerm.so.2 Patch

4177487

107117-01 : SunOS 5.7 libbsm patch

4188193

107119-01: SunOS 5.7 JFP manpages patch

 $4185342\ 4190255\ 4195644$

107121-01 : SunOS 5.7 uata and dad driver patch

4179264 4186223

107124-01: SunOS 5.7 JFP message files patch

4195663

107127-02 : SunOS 5.7 /usr/lib/autofs/automountd patch

4188020

 $\begin{array}{cccc} 107147\text{-}01 & : & SunOS \ 5.7 & pci \ driver \ patch \\ & 4177530 \ 4180438 \end{array}$

 $107148\text{-}01 \ : \ SunOS \ 5.7 \ / kernel/fs/cachefs \ and \ / kernel/fs/sparcv9/cachefs \ patch$

4170190

107171-01 : SunOS 5.7 Fixes for patchadd and patchrm 4186941 4176890 4190866 4150762 4193454 4194281 4194308

107178-01 : CDE 1.3 libDtHelp.so.1 patch

4193245

107185-01 : SunOS 5.7 Miscellaneous Russian KOI8-R problems

4195697 4189003 4194495

107187-01 : SunOS 5.7 Miscellaneous Eastern European locale problems

4174452 4179411 4138017

107209-01 : Solaris 7 Add/Change some messages from s399