



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

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Preface

The *Solaris™ 7 (Intel 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_x86/s2/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.

Note - The term “x86” refers to the Intel 8086 family of microprocessor chips, including the Pentium, Pentium Pro, and Pentium II, Pentium II Xeon, and Celeron processors and compatible microprocessor chips made by AMD and Cyrix. In this document the term “x86” refers to the overall platform architecture, whereas “*Intel Platform Edition*” appears in the product name.

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.

Related Books

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

- *Solaris 7 (Intel Platform Edition) Start Here*
- *Solaris 7 (Intel 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 AnswerBook2™ collection has been updated, you will find a *Solaris 7 Supplement* in that collection.

Note - The *Solaris 7 (Intel Platform Edition) Hardware Compatibility List* has changed since publication. The changes are included in Appendix B of these Release Notes.

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_x86/s2/Solaris_2.7/Docs/release_info/C` directory on the Solaris 7 3/99 CD.

The `/cdrom/sol_7_399_x86/s2/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 these files is the directory:

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

Solaris Certification Program

Information about the Solaris hardware certification program can be found on the Internet at <http://access1.sun.com/certify>. Occasionally, updated Hardware Compatibility Lists are produced between releases. If a newer version of this document exists, it will be available at the certification web site.

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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 <code>.login</code> file. Use <code>ls -a</code> to list all files. machine_name% you have mail.
AaBbCc123	What you type, contrasted with on-screen computer output	machine_name% su Password:
<i>AaBbCc123</i>	Command-line placeholder: replace with a real name or value	To delete a file, type rm <i>filename</i> .
<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.

Installing Solaris 7 3/99 Software

This chapter provides instructions on how to install or upgrade to Solaris 7 3/99 system software on x86 platforms.

The Solaris 7 3/99 release provides:

- New and updated device drivers to support new x86 hardware
- New features as described in the supplemental documentation on the Solaris 7 documentation CD included with this product
- The Solaris 7 Maintenance Update™ (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*.

Note - The *Solaris 7 (Intel Platform Edition) Hardware Compatibility List* has changed since publication. The changes are included in Appendix B of these Release Notes.

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 Solaris™ Web Start, JumpStart™, 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-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:

```
/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 You Need to Know About Before the Start of 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, SUNWoldcv, 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_x86/s2/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
<code>-R rootdir</code>	<code>rootdir</code> is the root of the installed system. It defaults to <code>/</code> .
<code>-N netdir</code>	<code>netdir</code> is the path to the root of the OS image to be installed. It defaults to <code>/cdrom/cdrom0</code> . It should point to the directory containing the <code>Solaris_2.7</code> directory. You must use this option if running the <code>patch_analyzer</code> from an NFS mount.
<code>-D databasedir</code>	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, SUNWoldcv, 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:

`/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.

If you are unable to obtain the patch from `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 `installation_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 `installation_bugs` file is located in the directory:

```
/cdrom/sol_7_399_x86/s2/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 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.

The Root (/) File System Extends Beyond HBA Cylinder 1023 (4062008)

If a manual file system layout is used in Solaris Web Start, an error message may display after the start of an installation because too much space has been allocated in the root (/) file system.

Workaround: Restart Solaris Web Start and use the Automatic File System Layout.

Interactive Installation Issues

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™ 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™) 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 Before the Start of an Interactive Installation



Caution - Be sure to read bug description ID 4121281 before you start upgrading your x86 based system to the Solaris 7 3/99 operating environment.

DiskSuite May Cause Data Loss (4121281)

If you are running DiskSuite™ and upgrading to Solaris 7, you must also upgrade to DiskSuite 4.2. The DiskSuite 4.2 distribution includes a script called `metacvt` that automates removal and replacement of the `metadb` replicas. You can use that script to change the SCSI driver name stored in the replicas from `cmdk` to `sd` when you upgrade to Solaris 7 and DiskSuite 4.2.

Workaround: To avoid potential data loss during upgrades to the Solaris 7 operating environment, you must save the system's meta device configurations in text files and remove their `metadb` replicas before upgrading any x86 based system that is running DiskSuite. After you finish upgrading your x86 based system, you must restore the meta device configurations by using the DiskSuite command line interface.

The *DiskSuite Version 4.2 Release Notes* contain a procedure for saving `metadb` configurations, removing `metadb` replicas, upgrading x86 based systems to the Solaris 7 operating environment, upgrading DiskSuite to version 4.2, and restoring meta device configurations. Bourne shell scripts that automate the procedure are available for the Solaris 7 operating environment.

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™ 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:

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

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 You Need to Know About Before the Start of an Upgrade

Be sure to read bug description ID 4121281 mentioned in “Installation Bugs That Occur Before the Start of an Interactive Installation” on page 12 earlier in this chapter as well as any other bug description listed in this section before you start upgrading your x86 based system to the Solaris 7 3/99 operating environment. This problem may cause data loss.

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.

elx1: elx: After Upgrading, the Ethernet Controller Does Not Work (4193228)

After upgrading an x86 machine with the Etherlink XL Ethernet chip to the Solaris 7 3/99 operating environment, the machine may lose network connectivity and display the following error message when booting:

```
configuring network interfaces: elx10: No such device or address
```

Workaround: Remove the following duplicate entries from the `/etc/driver_aliases` file:

```
elx "pci10b7,9000"  
elx "pci10b7,9050"
```

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 unused 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 metacluster. 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

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)

TABLE 2-1 Entire (continued)

Language	Description
cz	Czech Republic
da	Denmark
da.ISO8859-15	Denmark (ISO8859-15)
de	German
de.ISO8859-15	Euro German (ISO8859-15)
de.UTF-8	German (UTF-8)
de_AT	Austria
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.ISO8859-15	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.ISO8859-15	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)

TABLE 2-1 Entire *(continued)*

Language	Description
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
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

TABLE 2-1 Entire (continued)

Language	Description
fr_BE.ISO8859-15	Belgium (ISO8859-15)
fr_CA	Canada
fr_CH	Switzerland
hr_HR	Croatian (ISO 8859-2)
hu	Hungary
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.ISO8859-15	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)

TABLE 2-1 Entire *(continued)*

Language	Description
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.ISO8859-15	Euro Swedish (ISO8859-15)
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.ISO8859-15	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)

TABLE 2-2 Developer *(continued)*

Language	Description
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
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.ISO8859-15	Euro Italian (ISO8859-15)

TABLE 2-2 Developer *(continued)*

Language	Description
sv	Swedish
sv.ISO8859-15	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.ISO8859-15	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_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

TABLE 2-3 End User *(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
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)

TABLE 2-4 Core *(continued)*

Language	Description
he_IL	Israel - English (ISO-8859-8)
bg_BG	Bulgarian (ISO 8859-5)
cz	Czech Republic
da	Denmark
da.ISO8859-15	Denmark (ISO8859-15)
de	German
de.ISO8859-15	Euro German (ISO8859-15)
de.UTF-8	German (UTF-8)
de_AT	Austria
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.ISO8859-15	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.ISO8859-15	Ireland (ISO8859-15)
en_NZ	New Zealand - English (8 bit)
en_US	USA - English (ISO-8859-1)
es	Spanish

TABLE 2-4 Core *(continued)*

Language	Description
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
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)

TABLE 2-4 Core *(continued)*

Language	Description
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.ISO8859-15	Euro Italian (ISO8859-15)
it.UTF-8	Euro Italian (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.ISO8859-15	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

TABLE 2-4 Core (continued)

Language	Description
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.ISO8859-15	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
```

(continued)

(Continuation)

```
(/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 SUNWp1ow package failed with the following message:

```
Doing pkgadd of SUNWp1ow to /.  
ERROR: attribute verification of <export/exec/Solaris_2.7_i386.all/etc/default/  
init> failed  
pathname does not exist
```

Workaround: Ignore the error message.

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_x86/s2/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.

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_x86/s2/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

106542-02 : SunOS 5.7_x86 kernel update patch
4115711 4115715 4138467 4139770 4147402 4152055 4165983 4168739 4170410 4170500
4174167 4174331 4175558 4177496 4179407 4179883 4181570 4182043 4182047 4182227
4182234 4182240 4182970 4184015 4184430 4184852 4184877 4185366 4190083 4190138
4190405 4190796 4190807 4190812 4193467

106734-05 : SunOS 5.7_x86 Create a patch analyzer
4170691 4175875 4178977 4132282 4186583 4186586 4186587 4186588

106794-01 : SunOS 5.7_x86 ufsdump and ufsrestore patch
4077276 4132365 4145883 4169853 4184189

106821-03 : SunOS 5.7_x86 ctl print utility patch
4172142 4173334

106833-02 : SunOS 5.7_x86 auditreduce/c2audit/praudit patch
4166626 4167174 4168892 4172111 4172702 4174308 4182072 4187811

106852-04 : SunOS 5.7_x86 Manual Pages for Solaris 7 update
4173822 4186746 1070678 4136939 4153439 4162004 4171658 4170933 4169829 4146611
4147612 4165502 4166848 4178133 4179296 4181039 4181145

(continued)

- 106914-03 : SunOS 5.7_x86 boot.bin, mmu36 and rootnex patch
4122009 4163335 4170602 4194509
- 106916-01 : SunOS 5.7_x86 dtmail in zh.GBK can't read 2.5.1 Chinese email.
4182320
- 106918-01 : SunOS 5.7_x86 when view mails change charset, dtmail dump core.
4175029
- 106927-02 : SunOS 5.7_x86 sdtudctool, sdtudc_register and sdtudc_extract patch
4178971 4183926 4178952 4178964 4162315 4176705 4179808 4192450
- 106928-01 : OpenWindows 3.6.1 (japanese) OW ws menu bug for _x86
4177882
- 106935-01 : CDE 1.3_x86 libDtSvc Patch
4181281 4167347
- 106937-01 : SunOS 5.7_x86 /etc/cron.d/logchecker patch
4094591
- 106939-01 : SunOS 5.7_x86 libresolv patch
4134616
- 106941-01 : SunOS 5.7_x86 /usr/sbin/makedbm patch
4144726
- 106943-01 : SunOS 5.7_x86 libnsl patch
4157559 4161969
- 106945-01 : SunOS 5.7_x86 /kernel/fs/fifofs patch
4166116
- 106947-01 : SunOS 5.7_x86 /usr/sbin/sar patch
4175435
- 106951-01 : SunOS 5.7_x86 linker patch
4176579 4176796
- 106953-01 : SunOS 5.7_x86 /usr/bin/uux patch
4179980
- 106961-01 : SunOS 5.7_x86 Manual Pages for patchadd.1m and patchrm.1m
4178212
- 106968-01 : SunOS 5.7_x86 htt server unexpectedly restart
4172429
- 106970-01 : SunOS 5.7_x86 zh.GBK, Input Method, Alt+1 sometimes work improperly
4183054
- 106972-02 : SunOS 5.7_x86 xetops of zh.GBK locale doesn't process TAB character
4187748

(continued)

- 106979-01 : SunOS 5.7_x86 fix for /var/log/sysidconfig.log permission
4166260
- 106981-03 : SunOS 5.7_x86 libthread patch
4157739 4173285 4173422
- 106986-01 : SunOS 5.7_x86 /usr/sbin/uadmin and /sbin/uadmin patch
4167438
- 106988-01 : SunOS 5.7_x86 /usr/sbin/tar and /usr/sbin/static/tar patch
4159872
- 107002-01 : CDE 1.3_x86 Actions patch
4157154
- 107012-01 : CDE 1.3_x86 sdtwebclient patch
4110777 4164680 4185288
- 107015-01 : SunOS 5.7_x86 sd bug fixes.
4170911 4165914
- 107016-01 : SunOS 5.7_x86 NCR pcplusmp patch
4181438
- 107017-01 : SunOS 5.7_x86 SPWR Patch
4155766 4183567
- 107019-01 : SunOS 5.7_x86 /usr/sbin/in.named patch
4134616
- 107023-01 : CDE 1.3_x86 sdtcm_convert patch
4184188
- 107025-01 : SunOS 5.7_x86 ata bug fixes.
4183194
- 107032-01 : SunOS 5.7_x86 /usr/ucb/ucblinks patch
4161576
- 107039-01 : SunOS 5.7_x86 apropos/catman/man/whatis patch
4107178 4154565
- 107043-01 : SunOS 5.7_x86 Messages of Patch Analysis update for install
- 107045-01 : SunOS 5.7_x86 Russian and Polish print failure on some printers
4190105
- 107060-01 : SunOS 5.7_x86 /usr/bin/sort and /usr/xpg4/bin/sort patch
4181185
- 107073-01 : CDE 1.3_x86 Spell Checker patch

(continued)

4185079

107075-01 : SunOS 5.7_x86 SUNWultratest doesn't support sun4us platform
4190729

107077-01 : SunOS 5.7_x86 /usr/kernel/drv/vol patch
4181968

107082-01 : Motif 1.2.7_x86 Runtime library patch
4159034 4149711 4171291 4170491 4162369 4165677 4171723 4174322 4183749 4186734
4186826

107095-01 : CDE 1.3_x86 dtterm libDtTerm.so.2 Patch
4177487

107118-01 : SunOS 5.7_x86 libbsm patch
4188193

107120-01 : SunOS 5.7_x86 JFP manpages patch
4185342 4190255 4195644

107125-01 : SunOS 5.7_x86 JFP message files patch
4195663

107128-01 : SunOS 5.7_x86 /usr/lib/autofs/automountd patch
4188020

107129-01 : SunOS 5.7_x86 /usr/sbin/i86/sysdef patch
4187740

107149-01 : SunOS 5.7_x86 /kernel/fs/cachefs patch
4170190

107172-01 : SunOS 5.7_x86 Fixes for patchadd and patchrm
4186941 4176890 4190866 4150762 4193454 4194281 4194308

107179-01 : CDE 1.3_x86 libDtHelp.so.1 patch
4193245

107188-02 : SunOS 5.7_x86 Miscellaneous Eastern European locale problems
4174452 4179411 4138017

107210-01 : Solaris 7_x86 Add/Change some messages from s399

Hardware Compatibility List for Solaris 7 (Intel Platform Edition) 3/99

This appendix provides information about new and enhanced peripheral and system platform support in the Solaris 7 (Intel Platform Edition) 3/99 computing environment.

Note - The information in this appendix supplements the *Solaris 7 (Intel Platform Edition) Hardware Compatibility List*.

Added Support for Video Devices

Support for the following video devices has been added.

TABLE B-1 Video Display Devices

Vendor	Model	Bus	Video Chip	Resolution and Color Depth									
				800x 600		1024x 768		1152x 900		1280x 1024		1600x 1200	
				8	24	8	24	8	24	8	24	8	24
Cirrus Logic	5465 ¹	PCI/ AGP	Cirrus Logic GD5465	✓	✓	✓	✓	✓		✓		✓	
S3	Trio3D ¹	PCI/ AGP	S3 Trio3D (86E366)	✓	✓	✓	✓	✓		✓		✓	

1. Sun does not guarantee that every video device with this chip will work, but it is possible that your model can be used successfully.

Added Support for Physical Address Extension (PAE) Mode

With the release of Pentium Pro, Intel introduced a mode called PAE (Physical Address Extension) on its advanced processors. By using PAE, Solaris (Intel Platform Edition) can address up to 32 Gbytes of physical memory. Individual processes are still limited to a maximum of 3.5 Gbytes of virtual address space.

PAE mode enables you to run multiple instances of databases and memory-intensive applications, and to support large numbers of online users on your machine.

It is best to use PCI disk controllers that support Dual Address Cycle (DAC) in your machine because they can transfer data to and from any physical location. Other cards are limited to 4 Gbytes of physical memory, and as a result performance may slow down because the system needs to copy additional memory to transfer data.



Caution - Some device drivers are not yet able to take advantage of PAE mode. Sun has tested PCI device drivers written by Sun on x86 based machines with more than 4 Gbytes of memory. Sun's OEM partners intend to test their machines with devices they supply on x86 based machines with more than 4 Gbytes of memory. In some cases however, if you add a third-party device driver to your system, it may become unstable, and panics and data corruption may result. If your system becomes unstable and you need that driver, you must disable PAE mode support.

Disabling PAE Mode Support

To disable support for PAE mode, follow these steps:

- 1. Reboot your machine.**
- 2. Interrupt autoboot by pressing the Esc key.**
The Solaris Device Configuration Assistant starts.
- 3. Press F2_Continue until the Boot Solaris screen is displayed.**
- 4. Press F4_Boot Tasks.**
The Boot Tasks screen is displayed.
- 5. Select View/Edit Property Settings.**
The View/Edit Property Settings screen is displayed.
- 6. Press F4_Create.**
The Create Property screen is displayed.
- 7. In the Specify Property Name field, type `mmu-modlist` and press Enter.**
- 8. In the Specify Value field, type `mmu32` and press Enter.**
The message "Updating Saved Configuration information..." is displayed on the Updating screen. When the property and value are saved successfully, the View/Edit Property Settings screen is displayed.
- 9. Press F2_Back.**
The Boot Tasks screen is displayed.
- 10. Press F3_Back.**
After drivers on your machine are loaded, the Boot Solaris screen is displayed.
- 11. Continue booting your machine as you normally would.**