



Solaris™ 2.6 Release Notes

SPARC™ Platform Edition

5/98

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Preface

Who Should Use These Notes

These notes are provided for both users and system administrators who are installing and using Solaris™ 2.6 (SPARC Platform Edition) 5/98 on their systems.

How These Notes Are Organized

Chapter 1 contains instructions on how to install or upgrade Solaris 2.6 5/98 on SPARC™ platforms.

Chapter 2 identifies additional installation requirements and provides installation news that arrived too late for publication in other documents.

Chapter 3 describes installation problems.

Chapter 4 describes problems that arrived too late for publication in other documents.

Chapter 5 describes new features included in this release.

Related Books and Online Files

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

- *Information Library for Solaris 2.6*
- *Solaris 2.6 Advanced Installation Guide*
- *Solaris 2.6 System Administration Guide*

Solaris documentation is available on the Solaris 2.6 Documentation CD included with this product.

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_2_6_598_sparc/s0/Solaris_2.6/Docs/release_info/C`
directory on the Solaris 2.6 5/98 CD.

The `/cdrom/sol_2_6_598_sparc/s0/Solaris_2.6/Docs/release_info/C` directory includes these files:

- `new_features` file with product news and features that arrived too late to be included in the “*What’s New in Solaris*” documentation on the Solaris 2.6 CD
- `runtime_bugs` file with late-breaking problems not related to installation
- `installation_bugs` file with known installation problems
- `integrated_patches` file with late-breaking information on current and non-integrated patches
- `eof` file with late-breaking EOF statements
- `driverupdate` file with late-breaking information on drivers

Ordering Sun Documents

The SunDocsSM program provides more than 250 manuals from Sun Microsystems, Inc. If you live in the United States, Canada, Europe, or Japan, you can purchase documentation sets or individual manuals using this program.

For a list of documents and how to order them, see the catalog section of the SunExpressTM Internet site at <http://www.sun.com/sunexpress>.

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 Changes

The following table describes the typographic conventions 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%</code> You have mail.
AaBbCc123	What you type, contrasted with on-screen computer output	<code>machine_name%</code> <code>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 <i>must</i> be root to do this.

Shell Prompts in Command Examples

The following table shows the default system and superuser prompts 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	#

Installing Solaris 2.6 5/98 Software

This chapter provides instructions on how to install or upgrade to Solaris 2.6 5/98 system software on SPARC platforms.

The Solaris 2.6 5/98 release provides these features:

- New and updated device drivers to support new SPARC hardware
- A Solaris 2.6 Maintenance Update™ (MU)

The new drivers and patches provide the enhanced functionality that is required for newly released hardware platforms and options.

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

Using the Solaris 2.6 5/98 CD or the Maintenance Update CD

Use the Solaris 2.6 5/98 CD if you are:

- Installing on newly released hardware
- Installing on previously released hardware running the Solaris 2.5.1 or earlier operating environment

Note - The Solaris 2.6 5/98 CD includes packages containing patches from the Solaris 2.6 MU. This creates a Solaris operating system that contains a known and tested level of patches. The patches will replace any previously installed Solaris 2.6 patches and cannot be backed out of the release.

Use only the Solaris 2.6 MU2 CD if you have a system already running the Solaris 2.6 operating environment.

The Solaris 2.6 MU2 CD contains the same set of patches as the ones pre-packaged on the Solaris 2.6 5/98 CD. These patches have been tested together and packaged for a one-step installation. When applied to a Solaris 2.6 system, the MU2 installation automatically updates your system without regressing any patches you have previously installed. Patches applied using the MU2 CD can be backed out, provided you have not requested otherwise.



Caution - If you are already running the Solaris 2.6 operating environment and have installed patches, you can:

- Use only the Solaris 2.6 MU2 CD to avoid replacing any previously installed Solaris 2.6 patches
 - Upgrade to Solaris 2.6 5/98 software if patch replacements and deletions in the Solaris 2.6 5/98 software are acceptable. To decide if upgrading to the Solaris 2.6 5/98 operating environment is acceptable, refer to "Analyzing the Patches" in the "Upgrading From the Solaris 2.6 Operating Environment" section in this chapter.
-

Backing Up Your System

Before you install the Solaris 2.6 5/98 software, make sure that you back up your files. For information on backing up your system, see the *System Administration Guide*.

Installing Solaris 2.6 5/98 System Software

You can use Solaris™ Web Start, JumpStart™, Custom JumpStart, or Interactive to install the Solaris 2.6 5/98 system software. For detailed instructions on installing Solaris software, see the publications *Information Library for Solaris 2.6* and *Solaris 2.6 Advanced Installation Guide* on the Solaris 2.6 Documentation CD included with this product.

Verifying the Installation

When the installation is complete, check the following files.

To view the `install_log` file:

```
# cd /var/sadm/install_data
```

To view the `begin.log` file and the `finish.log`:

```
# cd /var/sadm/system/logs
```

Then use an editor to check the files.

Using Solaris 2.6 as an Install Server

If you use Solaris 2.6 as an install server, you need to modify the Solaris 2.6 `/etc/nsswitch.conf` file before you run `add_install_client`.

1. Go to this line in the Solaris 2.6 `/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 2.6 5/98 CD.

Installing Solaris 2.6 5/98 System Software on Diskless Clients/AutoClients From a Server

You need to install Solstice™ AdminSuite™ 2.3 patch number 104468-06 or higher 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



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` file:

```
# cd /var/sadm/install_data
```

To view the `begin.log` file and the `finish.log` file:

```
# cd /var/sadm/system/logs
```

Then use an editor to check the files.

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Upgrading to Solaris 2.6 5/98 System Software



Caution - If you are already running the Solaris 2.6 operating environment and have installed patches, you can:

- Use only the Solaris 2.6 MU2 CD to avoid replacing any previously installed Solaris 2.6 patches
 - Upgrade to Solaris 2.6 5/98 software if patch replacements and deletions in the Solaris 2.6 5/98 software are acceptable. To decide if upgrading to the Solaris 2.6 5/98 operating environment is acceptable, refer to "Analyzing the Patches" in the "Upgrading From the Solaris 2.6 Operating Environment" section in this chapter.
-

Upgrading From the Solaris 2.5.1 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 *Information Library for Solaris 2.6* and *Solaris 2.6 Advanced Installation Guide* on the Solaris 2.6 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, SUNWolst, SUNWoliomt, and SUNWolnm). 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 2.6 Operating Environment

If you are already running the Solaris 2.6 operating environment, and have installed patches, upgrading to the Solaris 2.6 5/98 system software will cause:

- Any patches supplied as part of the Solaris 2.6 5/98 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 2.6 5/98 system software to be removed.

To see a list of patches that will be removed, use the `analyze_patches` script described below.

Analyzing the Patches

Note - To run the `analyze_patches` script, the installed system and the Solaris 2.6 5/98 CD (or net image) must be accessible by the script either through an NFS™ mount or using locally mounted media.

To analyze the patches:

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

```
# cd /cdrom/cdrom0/Solaris_2.6/Misc
```

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

```
# cd /NFS_mount_directory/Solaris_2.6/Misc
```

2. Run the `analyze_patches` script:

```
# ./analyze_patches -v
```

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>-v</code>	List patches that will be upgraded or downgraded in addition to listing patches that will be removed. It is best to use this option.
<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_2.6</code> directory.
<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_2.6/Misc/database</code> on the OS image, the script will not work properly.

3. Review the output of the `analyze_patches` script.

- The program without the `-v` option provides a list of patches that will be removed during the upgrade. Messages such as the following are shown:

```
Patch 105654-03 will be removed.  
Patch 105924-01 will be removed.
```

- The program with the `-v` option provides a list of patches that will be removed, upgraded, 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 105924 will be upgraded from -01 to -02.  
Patch 105925 will be downgraded from -02 to -01.  
Patch 105776-01 will be accumulated/obsoleted by patch 105181-05.
```

- If the program does not provide a list, no action will be taken against any patches previously installed on your system.
4. **Decide if patch replacements and deletions are acceptable.**
- If the patch replacements and deletions by the Solaris 2.6 5/98 system software are acceptable, continue to the section "Upgrading to Solaris 2.6 5/98 System Software From the Solaris 2.6 Operating Environment."
 - If the patch replacements and deletions by the Solaris 2.6 5/98 system software are not acceptable do not upgrade using the Solaris 2.6 5/98 CD. Use the Solaris 2.6 MU2 CD and Solaris 2.6 Maintenance Update 2 Release Notes to install the patches on your Solaris 2.6 system.

Upgrading to Solaris 2.6 5/98 System Software From the Solaris 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 *Information Library for Solaris 2.6* and *Solaris 2.6 Advanced Installation Guide* on the Solaris 2.6 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, SUNWolst, SUNWoliomt, and SUNWolnm). No action is required. An example of this message is:

```
Doing pkgadd of SUNWolrt 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/install_data
```

Then use an editor to check these files.

Updating Diskless Clients/AutoClients From a Server After an Upgrade

You need to install Solstice AdminSuite 2.3 patch number 104468-06 or higher 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



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 2.6 5/98 Software

To identify the version of your Solaris 2.6 5/98 software:

```
# cat /etc/release
```

Installing the Solaris 2.6 5/98 Documentation CD

If you used only the Solaris 2.6 MU2 CD to install, you should also install the Solaris 2.6 5/98 Documentation CD. For detailed instructions on installing the

Documentation CD, see the *Information Library for Solaris 2.6* on the Solaris 2.6 Documentation CD and shipped in printed form with Solaris 2.6.

Installation Issues

This chapter describes known problems relating to the installation of the Solaris 2.6 software environment. In addition to the existing Solaris Interactive Installation facility, Solaris 2.6 contains an installation method called Solaris Web Start. Solaris Web Start is a browser-based utility that facilitates installation of all products contained in each product box.

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 2.6 5/98 CD. If you boot from the Solaris 2.6 5/98 CD, the `installation_bugs` file is located in the `/cdrom/sol_2_6_598_sparc/s0/Solaris_2.6/Docs/release_info/C` directory. The default installed location for the `installation_bugs` file is the `/usr/share/release_info/Solaris_2.6/C` directory.

This chapter describes:

- Solaris Web Start news
- Installation requirements
- Installation issues
- Installation news

Contacting Customer Support

If you have any support issues, call your authorized service provider. For further information about SunSoft™ support, see <http://access1.sun.com>. To find out more about Sun Microsystems™, see <http://www.sun.com>.

Solaris Web Start News

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:

- Solaris 2.6 with the latest HotJava™ browser
- Microsoft Windows 95 with the Netscape Navigator™ 4.0 or Communicator 4.0 browser

Solaris Web Start may not run or display properly with some of the older versions of HotJava or with other software configurations.

No Software Upgrades

Because Solaris Web Start is designed to install software on a new system, it does not enable you to upgrade software on an installed system. If you want to perform an upgrade, use the Solaris Interactive Installation program instead of Solaris Web Start.

Minimum System Requirements

If you want to use Solaris Web Start, your computer must have:

- A boot disk with a capacity of 1 Gbyte; 2 Gbytes or greater is recommended for boot disk storage.

You need a system boot disk that has sufficient space to install the products you selected. If installing every item from the optional server software CD, a 4 Gbyte boot disk is recommended.

- At least 48 Mbytes of Random Access Memory (RAM); 64 Mbytes is recommended.

It is not generally possible to run Solaris Web Start with less than 48 Mbytes of RAM. However, if your system is SPARC based, has between 32 and 48 Mbytes of RAM, and meets disk space requirements, Solaris Web Start will attempt to run in client-server mode.

If your system does not meet these requirements, use the Solaris Interactive Installation program instead of Solaris Web Start.

No Customizing of Solaris Software Clusters

Solaris Web Start installs entire software clusters and does not afford the flexibility of installing particular packages within a cluster. If you need to select packages, use the Solaris Interactive Installation program instead of Solaris Web Start.

No Installations of “Nil” Versions

Solaris Web Start installs the full or “heavy” versions of all software packages. Use the `pkgadd` command to install “nil” versions where available.

No Support for Custom JumpStart

Solaris Web Start does not work with Custom JumpStart. If you have a Custom JumpStart profile located either on diskette or on the network, Solaris Web Start will ignore it.

Some Swap Space May Be Required

During the final part of the installation process, Solaris Web Start may require some swap space to store the software it reads from CDs. If your system has less than 96 Mbytes of RAM, then Solaris Web Start needs enough swap space to make available a total of 96 Mbytes of swap and RAM space. If you want to set up your system without any swap space, use the Solaris Interactive Installation program instead of Solaris Web Start.

Installation Requirements

Space Requirements for Installing European Versions

The following table lists the maximum space required for installing European versions of the Solaris 2.6 system software on the sun4u platform. Since Spanish is the largest single locale, it is used to indicate the maximum space required; the space required for other locales is slightly less. There is also a slight difference in space required for other platforms (sun4m and sun4c).

TABLE 2-1 Space Requirements for European Versions

Cluster	Spanish Only	One Locale Plus Spanish	Two Locales Plus Spanish	Three Locales Plus Spanish	All Locales
Entire distribution plus OEM support	646 Mbytes	682 Mbytes	705 Mbytes	735 Mbytes	763 Mbytes
Entire distribution	642 Mbytes	678 Mbytes	701 Mbytes	731 Mbytes	759 Mbytes
Developer system support	576 Mbytes	611 Mbytes	634 Mbytes	663 Mbytes	692 Mbytes
End user system support	316 Mbytes	351 Mbytes	374 Mbytes	403 Mbytes	432 Mbytes

Graphical User Interface (GUI) Installations Are Not Supported on Systems That Have Only 16 Mbytes of Memory

If you are installing the Solaris 2.6 operating environment on systems that have only 16 Mbytes of system memory, then GUI installations are not supported.

Workaround: If you want to install the Solaris 2.6 operating environment on systems with 16 Mbytes of memory, you can use the Curses User Interface (CUI). GUI operations are supported on 16 Mbytes systems after the installed system has been booted with the Solaris 2.6 operating system.

Centralized Calendar Access Swap Requirement

If you deploy centralized calendar services where users have access to their Calendar from a remote centralized server, then each Calendar requires about ten times the total size of Calendar files in swap space to work reliably.

For example, if users want to have access to a Calendar from the same server and the Calendar files' size totals 50 Mbytes, then Calendar requires 500 Mbytes of swap space to work reliably.

If these space limitations are not considered during the installation of Solaris, users may have unreliable access to the Calendar.

Workaround: Increase swap space to enable the Calendar to work reliably.

AnswerBook2 Software Browser Requirements

If your browser does not support saving cookies or you turned off support for cookies in your browser, you cannot access AnswerBook2™ functions for defining your personal library or setting your language preferences.

However, if your browser supports the HTTP 1.1 protocol for sending language preferences to the server (ACCEPT-LANGUAGE, ACCEPT-CHARSET), then the AnswerBook2 software uses the browser language preferences. Otherwise, the AnswerBook2 language preference defaults to the language environment of the documentation server.

If your browser does not support saving persistent cookies, your personal library and language preferences apply only to the current browser session and your preferences may be lost when you exit the browser. You have to reset your preferences if you exit and restart the browser for any reason.

Workaround: Use a browser that supports persistent cookies, turns cookies on, or re-enters preferences with each session.

Installation Issues

New JumpStart Behavior in Solaris 2.6

In Solaris 2.6, when you turn on a system with the JumpStart software installed on it (this includes new systems and re-preinstalled systems), Solaris Web Start's intro screen is displayed. From this screen, you can exit Solaris Web Start and perform a JumpStart installation.

Installation News

autofs Administration News

autofs in the Solaris 2.6 release was enhanced to include support for browsing. This makes it possible to view the contents of a particular autofs mount point without causing the file systems to be mounted. Standard tools, such as `ls(1)`, `filemgr(1)`, and `dtfile(1X)`, can be used to traverse autofs mount points.

The support for the new browsing functionality works well for small autofs maps but can cause problems with larger maps. In previous releases, it was safe to browse autofs mount points such as /home and /net because there were only a few entries displayed in the directory. With the new browsing functionality, there can be many entries displayed, depending on the local site configuration. Some applications have been found that made unsafe assumptions about the numbers of entries found in these directories. These applications need to be modified to eliminate this assumption. It is advisable to temporarily disable browsing on larger autofs maps such as /home and /net until these applications can be modified.

To manage browsing, two new autofs map options have been introduced, browse and nobrowse. The browse option is used to enable browsing and the nobrowse option disables browsing. The default option is browse. These options work on a per entry basis. Therefore, browsing can be disabled for an entire map or for individual map entries.

The options for the /home and /net entries in the default /etc/auto_master file that is shipped with the Solaris 2.6 software have been updated to include the nobrowse option. Therefore, newly installed systems have browsing disabled for the /home and /net autofs mount points.

The upgrade procedure has been enhanced to include the nobrowse option on the /home and /net entries in /etc/auto_master, provided that those entries have not been previously modified. If those entries have been modified, possibly to add other options, then these modifications must be made manually.

If the local name space includes other large site-specific autofs maps, then browsing may need to be disabled for each of those maps.

The directions for disabling autofs browsing are contained in the *NFS Administration Guide* in the section, "Disabling autofs Browsable."

Solaris Default Login Screen

Solaris 2.6 defaults 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. Upon authentication of your name and password, your desktop displays. For more information about the login screen, see the `DtLogin` man page (provided with the Solaris CDE man pages) or the *Solaris CDE Advanced User's and System Administrator's Guide* on the Solaris 2.6 documentation CD included with this product.

Using boot version 8 expected 4

The internal version information in the boot code has changed in the Solaris 2.6 operating environment.

If the following message is displayed when net booting, the wrong version of inetboot has been used to start the net boot process.

```
Warning: Using boot version 8 expected 4
```

Workaround: Perform an `rm_install_client` and `add_install_client` on the net boot server that you are using. Make sure that you are net booting from a correctly configured net boot server. Refer to `install_scripts(1M)` for more details on using `rm_install_client` and `add_install_client`.

DtLogin Notes for System Administrators

System Administrators should find the following DtLogin notes useful:

- DtLogin starts the X server at boot time. If your system requires non-default X server options, you can add them to the last line of the `/etc/dt/config/Xservers` configuration file. This file is not automatically created. However, you can create the file by becoming root and then typing:

```
# mkdir /etc/dt/config
# cp /usr/dt/config/Xservers /etc/dt/config
```

For example, if your system has two frame buffers, `fb0` and `fb1`, add the following Xsun options to the end of the last line of the `/etc/dt/config/Xservers` file:

```
-dev /dev/fb0 -dev /dev/fb1
```

- Choose Command Line Login from the Options menu on the DtLogin screen to display the command line login prompt.
- Xserver startup errors are found in the DtLogin error log file in:

```
/var/dt/Xerrors
```

- Errors occurring during a user's login are logged in the following file:

```
$HOME/.dt/startlog
```

- To kill the DtLogin screen for any one-time system administration work, as root, type:

```
# /usr/dt/bin/dtconfig -kill
```

- To disable the DtLogin screen for the next system boot, type:

```
# /usr/dt/bin/dtconfig -d
```

- To re-enable the DtLogin screen for the next system boot, type:

```
# /usr/dt/bin/dtconfig -e
```

New Locales in the Base Installation

The installation window in the base Solaris 2.6 CD offers several English language locales. If you want to use 8-bit characters, you should install through one of the en_XX options. The locale used in the installation will become the default system locale.

Note - The C locale was installed by default in the base English releases prior to Solaris 2.6.

TABLE 2-2 New Locales Offered in Installation

Locale Name	Language/Territory	Code Set
c	American English	7-bit
en_AU	Australian English	8-bit
en_CA	Canadian English	8-bit
en_UK	UK English	8-bit
en_US	American English	8-bit

To enable JumpStart for the new 8-bit locales, add the line locale xx (substituting the appropriate 8-bit locale for xx, for example, en_US) to the JumpStart profile file. For detailed information about the locale profile keyword, see "Preparing Custom JumpStart Installations" in the *Solaris Advanced Installation Guide*.

Installation Bugs

This chapter describes known problems relating to the installation of the Solaris 2.6 software environment. In addition to the existing Solaris Interactive Installation facility, Solaris 2.6 contains an installation method called Solaris Web Start. Solaris Web Start is a browser-based utility that facilitates installation of all products contained in each product box.

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 2.6 5/98 CD. If you boot from the Solaris 2.6 5/98 CD, the `installation_bugs` file is located in the `/cdrom/sol_2_6_598_sparc/s0/Solaris_2.6/Docs/release_info/C` directory. The default installed location for the `installation_bugs` file is the `/usr/share/release_info/Solaris_2.6/C` directory.

This chapter describes:

- Solaris Web Start installation bugs
- Common Desktop Environment (CDE) bugs
- Solaris installation bugs
- System administration bugs
- Upgrade bugs

Solaris Web Start Installation Bugs

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

Solaris software and co-packaged software. These problems do not occur when using the Solaris Interactive Installation program.

Cannot Move the Root Partition 4046659

Solaris Web Start lets you choose a system disk, but it does not let you move the root partition off the system disk afterwards.

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

Colors May Display Incorrectly in Netscape Browser 4056980

Different parts of the Solaris Web Start interface occasionally display the wrong color when viewed through the Netscape Communicator 4.0 for Windows browser. This occurs only when the system is set to display 256 colors. To avoid this problem, set the system to display a different number of colors.

Workaround: To avoid this problem, set the system to display a different number of colors.

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.

Your Web Browser May Hang or Crash With Solaris Web Start 4061657

In some instances, your web browser may hang or crash while running Solaris Web Start. If this occurs, you need to restart your Solaris Web Start session.

Workaround: To Resume Using Solaris Web Start:

What you do depends on the type of failure, and on where you were accessing Solaris Web Start from. Select the appropriate option below.

TABLE 3-1 Resuming Solaris Web Start

	Access From a Remote System	Access From a System Being Installed
Browser vanishes	Restart the browser and reconnect to the URL originally provided.	Choose Continue from the menu.
Browser hangs	Kill the browser process (see below), and then restart the browser and reconnect to the URL originally provided.	Kill the browser process (see below), and then choose Continue from the menu.

To kill the browser process (HotJava is used here as an example), open a console window and type the command:

```
# ps -ef | grep java
```

You should see two lines appear that look something like this:

```
myname 11892  410  0 hh:mm:ss pts/x    0:00 grep java
myname 11878 11877 23 hh:mm:ss pts/x    X:XX /usr/java/bin/java ...
```

The first number in the second line is the process ID of the browser. To kill the process, type `kill -9` followed by the process ID. In this example:

```
# kill -9 11878
```

Web Start Will Not Install Supplemental Software From Non-Default CD-ROM Drive 4128882

Web Start installs supplemental software (software not included on the operating system CD) from the default CD-ROM drive. If the system is booted from the default CD-ROM drive with a target other than `cdrom`, Web Start only installs the operating system.

Workaround: If you want to use Web Start to install supplemental software, use `cdrom` as the target drive. If you want to use a non-default CD-ROM drive, such as `cdrom1`, manually install the supplemental software after using Web Start to install the operating system.

Common Desktop Environment (CDE) Bugs

CDE Mailer Needs Additional Free Memory to Open a Mailbox

The CDE Mailer needs twice the space of a mailbox in free memory to open the mailbox. For example, if you have a 150 Mbytes mailbox, you need at least 300 Mbytes of free memory to open the mailbox.

Workaround: Increase your swap space to enable your mailbox to be opened.

Solaris Installation Bugs

Read-only File System Errors Upgrading Some Configurations 4051667

When upgrading SUNWCxa11 (Entire Distribution plus OEM support) or Ultra 450/ Ultra Enterprise 450 systems from Solaris 2.5.1 Hardware 4/97 to the Solaris 2.6 operating environment, the following error messages may be displayed in the upgrade log:

```
Removing package SUNWevc:  
Permission denied Cannot access file (/etc/name_to_major).  
Permission denied Cannot access file (/etc/minor_perm).  
Permission denied Cannot access file (/etc/driver_aliases).  
Removal of <SUNWevc> was successful
```

Workaround: Ignore error messages.

Specification of NIS Server Name or Address in sysidcfg File Generates Incorrect /etc/hosts Entry 4096687

If you specify the NIS server name or address in the `sysidcfg` file, the installer generates an incorrect entry in the `/etc/hosts` file. The entry will have the correct IP address of the nameserver in the IP address column, but will have an incorrect value in the name column.

Workaround: The following workarounds are available:

- Do not specify the server name or address in the `sysidcfg` file.
- After the install and before the system reboots, use an editor to remove the incorrect entry from the name column in the `/etc/hosts` file.

Root Password does not Decrypt the System's Secret Key 4111273

When a system is reconfigured using the `sys-unconfig` command, it requests a new root password. If you enter a root password with more than eight characters, the system does not truncate the newly entered password to eight characters.

If the host is part of a NIS+ domain, the non-truncated password does not decrypt the system's secret key. After entering the new root password with more than eight characters, you will see the following error:

The root password does not decrypt this system's secret key

Workaround: To avoid this error message, when prompted during the `sys-unconfig` process, enter a root password that contains only eight characters.

If you see the error message, after the system reboots, perform the following steps:

1. Login as root.
2. Use the following command to enter the host's network password:

```
# /usr/bin/keylogin -r
```

System Administration Installation Bugs

The following bugs occur only during an installation.

Erroneous Messages Indicating Packages Added a Second Time 1235464

This appears to be an attempt to install the same architecture and version of a package which is already installed. This installation will attempt to overwrite 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

Workaround: You can ignore this message if you try to add a package that has already been installed on a system. The installed package is simply overwritten.

Installation Progress Bar May be Inaccurate 1266156

The "Installing Solaris Software - Progress" bar sometimes indicates that an installation is complete when still in progress. The install program may add packages for several minutes after the progress bar has indicated that the installation is complete.

Workaround: 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.

`/export/exec/` Selection Is Missing for Auto-Layout in Curses User Interface 4052574

During an initial install of an OS Server with a Curses User Interface, the `/export/exec/` file system entry is missing from the auto-layout display. Therefore, it is not possible to select the file system.

Installation of Diskless Client Does Not Preserve Changes in `dfstab` File on 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 had entered the following in the `dfstab` file on a SPARC system,

```
share -F nfs -o rw /export/exec/Solaris_2.6_sparc.all/usr
```

then this entry would be automatically replaced with the following entry during the upgrade:

```
share -F nfs -o ro /export/exec/Solaris_2.6_sparc.all/usr
```

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

Cannot Install With JumpStart on Second System That Shares a SPARCstorage Array 4055230

If one system reserves some of the disks in a SPARCstorage™ Array using the `ssaadm reserve` command, then the second system that attempts to share the remaining disks in the same SPARCstorage Array cannot be installed using JumpStart.

Workaround: The following two workarounds are available:

- Install the second system using the Solaris Interactive Installation facility instead of JumpStart.
- The alternative workaround is as follows:
 1. Release the reservation on the disks of the SPARCstorage Array on the first system by using the `ssaadm release` command.
 2. Install the second system using JumpStart.

The JumpStart profile must not include the disks that the first system attempts to reserve.
 3. Reserve the disks on the first system again after you complete the installation.

Upgrade Bugs

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 directory-where-packages-reside SUNWkvm.*
```

A System That Can Be Upgraded Has Incorrectly Been Declared as a System That Cannot Be Upgraded Because of Disk Space 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 that can be upgraded 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.

SUNWlibc (C++ Library) May be Upgraded Improperly If Previously Patched 4046326

If the SUNWlibc (C++ compiler) package has previously been patched by installing patch ID 101242-XX using `pkgadd` rather than `installpatch`, then the SUNWlibc package may have left the system in an unacceptable state. After you complete the installation, even though it may appear to have succeeded, the SUNWlibc package may not have been correctly updated. Your system may appear to contain both old and new versions of this package, SUNWlibc and SUNWlibc.2, neither package, or the original Solaris 2.6 package.

Some ways to determine if the SUNWlibc package upgraded improperly are:

- Compile a C++ program that is known to include new features of changes found with C++ in the Solaris 2.6 operating environment, to see if they are present.
- Examine the patch directory for the presence of the SUNWlibc.2 package or the SUNWlibc package followed by a number extension.

If either package is present, you need to correct the problem.

- Compile any C++ program to determine whether or not it compiles and links correctly.
- C++ compiles yield unexpected behavior.

Workaround: If you discover a problem, delete patch ID 101242-XX and install SUNWlibc.

SUNWsolnm Upgrade Problem 4066153

When upgrading from any Solaris 2.5.1 hardware release to this Solaris 2.6 release, the following error is displayed in the `upgrade_log` file:

```
Doing pkgadd of SUNWsolnm to /.
```

Current administration does not enable you to create a new instance of this existing package. However, the installation service could not determine which package instance to overwrite.

```
No changes were made to the system.  
pkgadd return code = 4
```

Workaround: Perform the following steps after you have completed the upgrade:

1. Become superuser.
2. Remove the SUNWsolnm packages:

```
# pkgrm SUNWsolnm*
```

If the system supports diskless clients or autoklients, perform the following for each client:

```
# pkgrm -R /export/root/clientname SUNWsolnm*
```

3. Add the SUNWsolnm package from the 2.6 media:

```
# cd /cdrom/cdrom0/s0/Solaris_2.6/Product  
# pkgadd -d `pwd` SUNWsolnm
```

If the system supports diskless clients or autoklients, perform the following for each client:

```
# cd /cdrom/cdrom0/s0/Solaris_2.6/Product  
# pkgadd -d `pwd` -R /export/root/clientname SUNWsolnm
```

Runtime Bugs

This chapter describes known runtime problems relating to the installation of the Solaris 2.6 software environment. You may also want to refer to the online `runtime_bugs` file in the `SUNWrdm` package on the Solaris CD for additional runtime problems.

Note - The information in this chapter supersedes any information listed in the `runtime_bugs` file that is part of the `SUNWrdm` package on the Solaris 2.6 5/98 CD. If you boot from the Solaris 2.6 5/98 CD, the `runtime_bugs` file is located in the `/cdrom/sol_2_6_598_sparc/s0/Solaris_2.6/Docs/release_info/C` directory. The default installed location for the `runtime_bugs` file is the `/usr/share/release_info/Solaris_2.6/C` directory.

Solaris Bugs

`tftpd` Should Return an Error Message When a Nonexistent File is Passed 4061625

`tftpd` fails to send negative replies (NAKS) to file requests that cannot be satisfied. This causes boot clients that use a trial-and-error approach to finding the right boot image to take unexpectedly long to boot. The following message is logged in the `syslog` file:

`tftpd: nak: Transport endpoint is already connected`

Workaround: You may ignore the error message. If you would like to eliminate the delay for diskless boots, an `in.tftpd` executable from Solaris 2.5 or Solaris 2.5.1 can be used as a replacement.

Diskless Clients or Autoclients on Ultra Platforms Unable to Perform System Crash Dump Across Network 4115951

When panics happen on Ultra platforms configured with diskless clients or autoclients, the systems timeout and abort with the following message:

```
panic [cpu0]/thread=0x3003ec0: zero
syncing file systems ... 4 done
1981 static and sysmap kernal pages
  53 dynamic kernal data pages
  101 kernal-pageable pages
    0 segkmap kernal pages
    0 segvn kernal pages
    0 current user process pages
2135 total pages (2135 chunks)
dumping to vp 60324354, offset 586336
panic [cpu0]/thread=0x30037ec0: panic dump timeout
Dump aborted.
```

Workaround: None.

Ultra 450 Displays SCSI Error Messages When Installing the sg Driver 4117104

On SPARC-PCI machines, when installing Sun™ Enterprise NetBackup™ 3.x software from Veritas, the system may display the following error messages after the sg SCSI driver is installed:

```
WARNING: /pci@1f,4000/scsi@3 (glm0)
  Connected command timeout for Target 0.0
WARNING: /pci@1f,4000/scsi@3 (glm0)
  Target 0 reducing sync. transfer rate
WARNING: /pci@1f,4000/scsi@3/sd@0,0 (sd0)
  SCSI transport failed: reason 'reset': retrying command
```

Workaround: Install Solaris 2.6 patch 105580-06.

Cvm Utilities Unable to Reattach Disks and Displays Device Busy Too Long Message 4116283

On SPARC-PCI machines, when a multipack combo box connected to a Symbios disk controller is power cycled down and then back on, the system may display the following error message:

```
WARNING:  /pci@6.4000/scsi@2,1/sd@4,0 (sd79)
          device busy too long
```

Workaround: Install Solaris 2.6 patch 105580-06.

Dtmail Trunkates Message Body 4133964

Dtmail may truncate the message body of an email if non-printable characters are included in the message body .

Workaround: Include the message body as an attachment.

Swedish only: Incorrect Swedish Translation in SUNW_PATCH_SCRIPTS Locale File 4074111

When a non-root user tries to execute a script which requires root permission, the following error message appears in Swedish:

```
Du måste starta om för att kunna köra den här kommandofilen.
```

This is misleading as it implies a reboot is required. The correct text should read:

```
Du måste ha root-privilegier om du vill köra den här kommandofilen.
```

AnswerBook2 Bugs

AnswerBook2 HTML Viewed with Netscape 4.x is Corrupted for Asian Locales 4108278

If you have not specified a language preference in AnswerBook2, but you have set your browser to a locale that does not use an 8859-1 encoding, the HTML will be corrupted. This happens because the Accept-Charset value that Netscape 4.x passes does not specify an encoding that matches this language.

Workaround:

1. Access the following URL:

`http://hostname:8888/ab2/@StoreLang`

AnswerBook2 sets internal data and returns to the library page.

2. Access the following URL:

`http://hostname:8888/ab2/@Ab2LangPrefs`

3. Select the locale.

Cookies will be set to identify the language and encoding.

New Features

This chapter contains descriptions of new features included in the Solaris 2.6 5/98 release.

New Features

The man Utility Now Displays SGML Code

The man utility is now able to display man pages that are coded with SGML, as well as the traditional `nroff`. For more information on SGML man pages, see the `man(1)` man page.

