

Solaris™ 2.6 (Intel Platform Edition) Release Notes



THE NETWORK IS THE COMPUTER™

SunSoft, Inc.

A Sun Microsystems, Inc. Business
2550 Garcia Avenue
Mountain View, CA 94043 USA
415 960-1300 fax 415 969-9131

Part No.: 802-5737-10
Revision A, August 1997

Copyright 1997 Sun Microsystems, Inc. 2550 Garcia Avenue, Mountain View, California 94043-1100 U.S.A. All rights reserved.

This product or document is protected by copyright and distributed under licenses restricting its use, copying, distribution, and decompilation. No part of this product or document may be reproduced in any form by any means without prior written authorization of Sun and its licensors, if any. Third-party software, including font technology, is copyrighted and licensed from Sun suppliers.

Parts of the product may be derived from Berkeley BSD systems, licensed from the University of California. UNIX is a registered trademark in the U.S. and other countries, exclusively licensed through X/Open Company, Ltd.

Sun, Sun Microsystems, the Sun logo, SunSoft, SunDocs, SunExpress, and Solaris are trademarks, registered trademarks, or service marks of Sun Microsystems, Inc. in the U.S. and other countries. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. in the U.S. and other countries. Products bearing SPARC trademarks are based upon an architecture developed by Sun Microsystems, Inc.

The OPEN LOOK and Sun™ Graphical User Interface was developed by Sun Microsystems, Inc. for its users and licensees. Sun acknowledges the pioneering efforts of Xerox in researching and developing the concept of visual or graphical user interfaces for the computer industry. Sun holds a non-exclusive license from Xerox to the Xerox Graphical User Interface, which license also covers Sun's licensees who implement OPEN LOOK GUIs and otherwise comply with Sun's written license agreements.

RESTRICTED RIGHTS: Use, duplication, or disclosure by the U.S. Government is subject to restrictions of FAR 52.227-14(g)(2)(6/87) and FAR 52.227-19(6/87), or DFAR 252.227-7015(b)(6/95) and DFAR 227.7202-3(a).

DOCUMENTATION IS PROVIDED "AS IS" AND ALL EXPRESS OR IMPLIED CONDITIONS, REPRESENTATIONS AND WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT, ARE DISCLAIMED, EXCEPT TO THE EXTENT THAT SUCH DISCLAIMERS ARE HELD TO BE LEGALLY INVALID.

Copyright 1997 Sun Microsystems, Inc., 2550 Garcia Avenue, Mountain View, California 94043-1100 Etats-Unis. Tous droits réservés.

Ce produit ou document est protégé par un copyright et distribué avec des licences qui en restreignent l'utilisation, la copie, la distribution, et la décompilation. Aucune partie de ce produit ou document ne peut être reproduite sous aucune forme, par quelque moyen que ce soit, sans l'autorisation préalable et écrite de Sun et de ses bailleurs de licence, s'il y en a. Le logiciel détenu par des tiers, et qui comprend la technologie relative aux polices de caractères, est protégé par un copyright et licencié par des fournisseurs de Sun.

Des parties de ce produit pourront être dérivées des systèmes Berkeley BSD licenciés par l'Université de Californie. UNIX est une marque déposée aux Etats-Unis et dans d'autres pays et licenciée exclusivement par X/Open Company, Ltd.

Sun, Sun Microsystems, le logo Sun, SunSoft, SunDocs, SunExpress, et Solaris sont des marques de fabrique ou des marques déposées, ou marques de service, de Sun Microsystems, Inc. aux Etats-Unis et dans d'autres pays. Toutes les marques SPARC sont utilisées sous licence et sont des marques de fabrique ou des marques déposées de SPARC International, Inc. aux Etats-Unis et dans d'autres pays. Les produits portant les marques SPARC sont basés sur une architecture développée par Sun Microsystems, Inc.

L'interface d'utilisation graphique OPEN LOOK et Sun™ a été développée par Sun Microsystems, Inc. pour ses utilisateurs et licenciés. Sun reconnaît les efforts de pionniers de Xerox pour la recherche et le développement du concept des interfaces d'utilisation visuelle ou graphique pour l'industrie de l'informatique. Sun détient une licence non exclusive de Xerox sur l'interface d'utilisation graphique Xerox, cette licence couvrant également les licenciés de Sun qui mettent en place l'interface d'utilisation graphique OPEN LOOK et qui en outre se conforment aux licences écrites de Sun.

CETTE PUBLICATION EST FOURNIE "EN L'ETAT" ET AUCUNE GARANTIE, EXPRESSE OU IMPLICITE, N'EST ACCORDEE, Y COMPRIS DES GARANTIES CONCERNANT LA VALEUR MARCHANDE, L'APTITUDE DE LA PUBLICATION A REpondre A UNE UTILISATION PARTICULIERE, OU LE FAIT QU'ELLE NE SOIT PAS CONTREFAISANTE DE PRODUIT DE TIERS. CE DENI DE GARANTIE NE S'APPLIQUERAIT PAS, DANS LA MESURE OU IL SERAIT TENU JURIDIQUEMENT NUL ET NON AVENU.



Please
Recycle



Adobe PostScript

Contents

- 1. Installation Issues 1**
 - Contacting Customer Support 1
 - Installation News 2
 - Solaris Web Start News 2
 - Autofs Administration News 3
 - Solaris Installation News 4
 - Installation Bugs 8
 - Solaris Web Start Installation Bugs 8
 - Common Desktop Environment (CDE) Bugs 11
 - Solaris Installation Bugs 11
 - System Administration Installation Bugs 12
 - Upgrade Bugs 16
- 2. Late-Breaking Solaris Runtime Bugs 21**
 - Performance Note 21
 - Solaris Bugs 22
 - Common Desktop Environment (CDE) Bugs 23
 - Java Bugs 23
 - AnswerBook2 Notes 24
 - AnswerBook2 Bugs 24

AnswerBook2 Administration Bugs 26

Documentation Collection Bugs 26

Preface

Solaris 2.6 (Intel Platform Edition) Release Notes contain installation problem details and other information that was not available until immediately before the release of the Solaris™ 2.6 operating environment software.

Most of the information in the *Solaris 2.6 (Intel Platform Edition) Release Notes* that was formerly distributed in hard copy format is now available online for ease of use. This document complements the information that is available in the SUNWrdm package, the online release notes. The information in Chapter 1 “Installation Issues” supersedes the information in the `installation_bugs` file that is part of the online release notes. All other chapters in this document supplement the other files that are part of the online release notes.

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

- When booting from the Solaris 2.6 CD, information about this release can be found in the `/cdrom/sol_2.6_x86/s1/Solaris_2.6/Docs/release_info/C` directory
- The default installed location for information about this release can be found in the `/usr/share/release_info/Solaris_2.6/C` directory.

Who Should Use These Notes

These notes are for users and system administrators who are installing and using Solaris 2.6 software.

How This Book Is Organized

Chapter 1 “Installation Issues,” lists installation problems and installation news that arrived too late for publication in other documents. When booting from the Solaris 2.6 CD, the `installation_bugs` file is located in the `/cdrom/sol_2.6_x86/s1/Solaris_2.6/Docs/release_info/C` directory. The installed location for the `installation_bugs` file is the `/usr/share/release_info/Solaris_2.6/C` directory.

Chapter 2 “Late-Breaking Solaris Runtime Bugs,” describes problems (non-installation) that arrived too late for publication in other documents. When booting from the Solaris 2.6 CD, the `runtime_bugs` file is located in the `/cdrom/sol_2.6_x86/s1/Solaris_2.6/Docs/release_info/C` directory. The installed location for the `runtime_bugs` file is the `/usr/share/release_info/Solaris_2.6/C` directory.

“Late-Breaking Solaris Product News,” is not included in this document. This chapter is only included in the online release notes. When booting from the Solaris 2.6 CD, the `new_features` file is located in the `/cdrom/sol_2.6_x86/s1/Solaris_2.6/Docs/release_info/C` directory. The installed location for the `new_features` file is the `/usr/share/release_info/Solaris_2.6/C` directory.

“End of Software Support Statements,” is not included in this document. This chapter is only included in the online release notes. When booting from the Solaris 2.6 CD, the `eof` file is located in the `/cdrom/sol_2.6_x86/s1/Solaris_2.6/Docs/release_info/C` directory. The installed location for the `eof` file is the `/usr/share/release_info/Solaris_2.6/C` directory.

“Late-Breaking Patches,” is not included in this document. This chapter is only included in the online release notes. When booting from the Solaris 2.6 CD, the `integrated_patches` file is located in the `/cdrom/sol_2.6_x86/s1/Solaris_2.6/Docs/release_info/C` directory. The installed location for the `integrated_patches` file is the `/usr/share/release_info/Solaris_2.6/C` directory.

“Driver Update Information,” is not included in this document. This chapter is only included in the online release notes. When booting from the Solaris 2.6 CD, the `driverupdate` file is located in the `/cdrom/sol_2.6_x86/s1/Solaris_2.6/Docs/release_info/C` directory. The installed location for the `driverupdate` file is the `/usr/share/release_info/Solaris_2.6/C` directory.

Related Books

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

- *Solaris 2.6 Intel Installation Instructions*
- *Information Library for Solaris 2.6 (Intel Platform Edition)*

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 documents for hardware-specific installation instructions.

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>.

What Typographic Changes Mean

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

TABLE P-1 Typographic Conventions

Typeface or Symbol	Meaning	Example
AaBbCc123	The names of commands, files, and directories; on-screen computer output	Edit your <code>.login</code> file. Use <code>ls -a</code> to list all files. machine_name% You have mail.
AaBbCc123	What you type, contrasted with on-screen computer output	<pre>machine_name% su Password:</pre>
AaBbCc123	Command-line placeholder: replace with a real name or value	To delete a file, type <code>rm filename</code> .
AaBbCc123	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 prompt and superuser prompt for the C shell, Bourne shell, and Korn shell.

TABLE P-2 Shell Prompts

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

Installation Issues

This chapter describes 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 a new 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 CD. If you boot from the Solaris 2.6 CD, the `installation_bugs` file is located in the `/cdrom/sol_2.6_x86/s1/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.

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>.

Installation News

This section describes:

- Solaris Web Start news
- Autofs Administration news
- Solaris Installation news

Solaris Web Start News

No Software Upgrades

Because Solaris Web Start is designed to install software on a new system, it does not at present enable you to upgrade software on an installed system. 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 1.05 Gbyte or higher

You need a 1.05 Gbyte boot disk (formatted and labeled) to run Solaris Web Start, after which the program determines whether your system has sufficient disk space to install the products you selected. A 2.1 Gbytes boot disk is recommended for installing server software.

- At least 48 Mbytes of Random Access Memory (RAM)

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. 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.

Cannot Use Custom JumpStart to Control Solaris Web Start

You cannot control the behavior of Solaris Web Start by using a Custom JumpStart™ profile. If you have a Custom JumpStart profile located either on a diskette or on the network, Solaris Web Start ignores 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 random access memory (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.

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 the `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 which 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, freshly 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 Installation News

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* (provided with the AnswerBook2 documentation CD-ROM).

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 superuser 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, enter:

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

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

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

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

```
/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 1-1 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*.

AnswerBook2 Software Browser Requirements

If your browser does not support saving cookies or you turn 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.

Use a browser that supports persistent cookies and/or turn cookies on or re-enter preferences with each session.

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.

System With a Micro Channel Architecture

The Solaris 2.6 (Intel Platform Edition) distribution CD is accompanied by a boot diskette supporting most systems, including those with ISA, EISA, VLB, and PCI buses. If you have a system with a Micro Channel Architecture (MCA), you may download a boot diskette from Sun's Solaris 2.6 Web site:

■ <http://access1.sun.com/solaris/distrib2.6>

Full instructions for downloading and creating the MCA diskette are on the Web site. You may also obtain the diskette through your Sun Software Support Provider.

You must make certain that the boot diskette is not write-protected because configuration information is saved to the diskette during the initial boot.

Installation Bugs

This section 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 new 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. 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.

Solaris Web Start May Provide Less Than the Recommended Swap Space 4059174, 4066142

By default, Solaris Web Start usually provides the recommended amount of swap space for your system's configuration. However, on systems with minimal disk space, Solaris Web Start may provide less swap space if doing so is the only way to

accommodate your software selections. Under no circumstances does Solaris Web Start provide less swap space than is required to ensure that the total of swap and system memory is equal to 96 Mbytes.

Solaris Web Start is most likely to provide less than recommended swap space when you elect to install the Entire Software Group and all the Solaris 2.6 documentation on systems with 1.05 Gbyte disks.

On systems with 96 Mbytes or more of physical memory, Solaris Web Start may eliminate the swap partition altogether, even when you request a swap partition by selecting the manual option from the Layout File Systems menu.

Workaround: If you experience trouble starting applications and the following error message is displayed after completing an installation with less than recommended swap space, you can select from one of two possible solutions:

```
Cannot fork process: not enough space
```

- Deselect a software component in Solaris Web Start to make additional space available;

or

- If you experience trouble starting applications and see the above-listed error message displayed after completing an installation with less than the recommended swap space, create a swap file to augment your system's swap space. See the `swap` reference manual page for more information.

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 1-2 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 popup that appears.
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 popup that appears.

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
```

Common Desktop Environment (CDE) Bugs

CDE Mailer Needs Additional Free Memory to Open a Mailbox

The CDE Mailer needs twice the size 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

Memory Mapping Problems

1235353

Because some systems do not report installed memory accurately and because of the need to work around hardware bugs in other systems, the Solaris operating system probes for the existence of memory. This can sometimes cause problems with memory mapped devices. The symptoms include a system that cannot be booted or one that exhibits device failure.

Workaround: To avoid problems, use the appropriate shared-memory configuration software, which may be an ECU (Eisa Configuration Utility), ICU (Isa Configuration Utility), Bios Setup Interface, Flash Setup Interface, and/or specific manufacturer's setup software, to configure memory mapped device addresses within the following legal boundaries:

- Set the address between 640 KB and 1 Mbyte.

or

- Set the address above memory with at least 4K separating it from the end of physical memory.

Do not configure the devices at exactly 1 Mbyte above physical memory.

Note – Very few systems experience the shared-memory problem; only some of the Bios/Setup software attempts to configure shared-memory mapping in physical memory address ranges.

The / Partition Extends Beyond HBA Cylinder 1023 4062008

If a manual file system layout is used in Solaris Web Start on IDE systems, then the above-listed error message may display after the start of an installation because too much space has been allocated in the `root (/)` partition.

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

Non-US Locale Keyboard Not Recognized Correctly if the Keyboard Configuration Is Bypassed 4065064

When performing an installation using a non-US Locale Keyboard, bypassing both the `Device_Tasks` step of Device Configuration Assistant and the keyboard set up in the system identification phase of Install causes the keyboard not to be recognized properly. In such a case, the US keyboard mapping is used even though a non-US keyboard is attached. Therefore, the characters being typed are not displayed correctly on the screen.

Workaround: The type of keyboard is not detected by the software. It must be specified during the installation. Make sure that either the `Device_Tasks` step of Device Configuration Assistant of Install or the keyboard specification set up in the system identification phase are not skipped. This process correctly produces the correct keyboard map for the Solaris software to operate with the intended non-US keyboard layout.

System Administration Installation Bugs

The following bugs only occur 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.

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.

Invalid Intel Boot Partition

4040547

An error message is displayed stating that the root partition does not fit inside the 1023-cylinder DOS boot partition limit.

You can create a Solaris `fdisk` partition on an x86 system that starts in the 1023-cylinder DOS boot partition limit, but this does not provide sufficient space inside the limit for the files that are located in the root file system and are therefore required to boot your system.

Workaround: Locate the root file system at the beginning of a partition in the first data sector of your drive.

`/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, if needed.

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,

```
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 a diskless or autoclient, back up the `/etc/dfs/dfstab` file for the clients.

Installation Sometimes Hangs With PCATA Disk Drive 4047154

```
ERROR: Could not process the alternate sector slice
ERROR: Could not label disks
ERROR: Could not update disks with new configuration
```

You cannot boot the PCATA removable disk drive because the Solaris operating environment software does not support any bootable devices for PCMCIA. In addition, the Solaris Interactive Installation process does not support any disks that do not have an alternate sector. For further information on how to create and mount

file systems on a PCATA disk drive, refer to the `pcata(7D)` man page as well as the Configuring Devices module of the *Information Library for Solaris 2.6 (Intel Platform Edition)*.

Some File System Names Are Not Displayed on the Preserve or Customizing Disks Screen 4060672

File system names, except for root (`/`), swap, and overlap, are not displayed in the Preserve Data screen or for the loading existing Volume Table of Contents (VTOC) labels section of the Customizing Disks screen on some x86 platforms.

Workaround: This workaround should be applied only to those systems that display this behavior and only if you attempt to preserve existing file systems on your disk during an initial install or when you re-load your existing disk configuration during manual disk customization.

Only the name itself is missing for the file systems for which no name is displayed. If you attempt to preserve file systems or reload existing disk configuration and notice that there are some file systems with no names, perform the following steps:

1. **Exit the installation.**
2. **Reboot your system from disk.**
3. **Type the following command at the system console:**

```
# more /etc/vfstab
```

4. **Write down the output regarding the partition names and partitions (`cxtxdxsx`).**
The names that are displayed replace the “missing” file system names. The displayed names may include any characters or numbers except for root (`/`), swap, or overlap.
5. **Restart the installation for the second time.**

If you want to preserve an existing file systems or re-load an existing configuration again, type the missing names for the appropriate partitions.

Upgrade Bugs

All bugs described in this section occur only if you perform an upgrade.

Note – Before you start to upgrade your system, you may want to read bug ID 4030749.

Upgrade Can Remove Patch Backout Data 4030749

An upgrade removes all files in the `/var/sadm/patch/` directory and thus deletes all backout data for unbundled products.

Workaround: Protect any unbundled product backout files in the `/var/sadm/patch/` directory by backing them up before performing an upgrade and restoring them afterwards.

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.*
```

upgrade_script Terminates Abnormally During Upgrade With Disk Space Reallocation 4010183

During an upgrade, a warning may be displayed indicating that the `/usr` directory has insufficient space. After you attempt to use auto-layout, the following error message is displayed:

```
Error: upgrade_script terminated abnormally.
```


Workaround: Perform the following steps:

- 1. Look at the end of the `/a/var/sadm/system/logs/upgrade_log` file for an error that is similar to the one listed below:**

```
/a/var/sadm/system/admin/upgrade_script: syntax error at line 3519:  
`fi' unexpected
```

Note – The line number listed in this example is different from the one that is displayed on your screen.

- 2. Write down the number that is displayed on your terminal.**

Change the directory as follows:

```
# cd /a/var/sadm/system
```

- 3. Make a backup copy of the `upgrade_script` script before making any modifications.**

```
# cp upgrade_script upgrade_script.bak
```

- 4. Edit the `upgrade_script` script with an editor of your choice by performing the following steps:**

- a. Locate the line number noted in step 1 above.**

If you are using the `vi` editor to locate the line number, turn line numbering on by using the `set number` command; you can use another `vi` command so that you can identify the line number.

- b. Position your cursor on the line and make sure that it contains `fi`.**
- c. Delete the line.**
- d. Save the file and exit the editor.**

5. **Resume the upgrade process by executing the `upgrade_script` script after you have completed the modifications by entering the following at the command line prompt:**

```
# /a/var/sadm/system/logs/upgrade_log/upgrade_script
```

The upgrade process now continues at the proper place.

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 possibly 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 something is wrong are:

1. **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.**
2. **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.
3. **Compile any C++ program to determine whether or not it compiles and links correctly.**

4. C++ compiles yield unexpected behavior.

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

UPGRADE: ERROR During pkgadd of SUNWcsd 4066486

When you upgrade the Solaris operating environment, the following error messages may be displayed in the upgrade log:

```
pkgadd: ERROR: unable to create package object </a/devices/pseudo/tl@0:tictlts>.
    major/minor device <105, 2> expected <99, 2> actual
pkgadd: ERROR: unable to create package object
</a/devices/pseudo/tl@0:ticotords>.
    major/minor device <105, 1> expected <99, 1> actual
ERROR: attribute verification of </a/devices/pseudo/tl@0:tictlts> failed
    major/minor device <105, 2> expected <99, 2> actual
ERROR: attribute verification of </a/devices/pseudo/tl@0:ticotords> failed
    major/minor device <105, 1> expected <99, 1> actual
Installation of <SUNWcsd> partially failed.
pkgadd return code = 2
```

Workaround: Perform the following steps:

1. Verify that tl has the correct device number by entering:

```
# grep tl /etc/name_to_major
tl 105
# ls -lia /devices/pseudo/tl*
 8131 crw-rw-rw-  1 root  sys 105, 2 Jul 23 16:05 /devices/pseudo/tl@0:tictlts
 8129 crw-rw-rw-  1 root  sys 105, 0 Jul 23 16:05 /devices/pseudo/tl@0:ticotrs
 8130 crw-rw-rw-  1 root  sys 105, 1 Jul 23 16:05 /devices/pseudo/tl@0:ticotords
#
```

The correct major number is 105.

2. If the major number is incorrect, delete it from the system by typing:

```
# rm /devices/pseudo/tl@0:tictlts
# rm /devices/pseudo/tl@0:ticotords
# rm /devices/pseudo/tl@0:ticotrs
```

3. Recreate the `tl` nodes by entering:

```
# grep tl /etc/name_to_majortl 105
# mknod /devices/pseudo/tl@0:tictlts c 105 2
# chown root /devices/pseudo/tl@0:tictlts
# chgrp sys /devices/pseudo/tl@0:tictlts
# chmod 0666 /devices/pseudo/tl@0:tictlts

# mknod /devices/pseudo/tl@0:ticotsord c 105 1
# chown root /devices/pseudo/tl@0:ticotsord
# chgrp sys /devices/pseudo/tl@0:ticotsord
# chmod 0666 /devices/pseudo/tl@0:ticotsord

# mknod /devices/pseudo/tl@0:ticots c 105 0
# chown root /devices/pseudo/tl@0:ticots
# chgrp sys /devices/pseudo/tl@0:ticots
# chmod 0666 /devices/pseudo/tl@0:ticots

# ls -lia /devices/pseudo/tl*
8131 crw-rw-rw- 1 root  sys  105, 2 Jul 23 16:05 /devices/pseudo/tl@0:tictlts
8129 crw-rw-rw- 1 root  sys  105, 0 Jul 23 16:05 /devices/pseudo/tl@0:ticots
8130 crw-rw-rw- 1 root  sys  105, 1 Jul 23 16:05 /devices/pseudo/tl@0:ticotsord
#
```

Late-Breaking Solaris Runtime Bugs

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 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 2.6 CD. If you boot from the Solaris 2.6 CD, the `runtime_bugs` file is located in the `/cdrom/sol_2.6_x86/s1/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.

Performance Note

TCP Slow-start Initial Value Can Be Changed

4054780 4057676

Non-Solaris clients may experience somewhat slower network performance on short-lived connections, such as `http` connections, when served by Solaris servers. This problem occurs because of Solaris' strict adherence to the TCP Slow-start specification (RFC2001). You can now modify the initial value that TCP Slow-start uses by tuning an `ndd` variable. For detailed information on how to modify this variable and an explanation of this behavior, go to the section titled "Sun Performance Information" under "Sun On the Net" at <http://www.sun.com>.

Solaris Bugs

x_{dm} Does Not Have Executable Permissions

The execute bit for `/usr/openwin/bin/xdm` has been turned off.

Workaround: Become superuser and then type:

```
# chmod a+x /usr/openwin/bin/xdm
```

POSIX `readdir_r` Returns `EINVAL` When All Entries Have Been Read 4062296

```
int readdir_r(DIR *dirp, struct dirent *entry, struct dirent  
**result);
```

The POSIX specification for `readdir_r()` does not clearly specify whether an end-of-file condition (EOF) should be treated as an error or as a successful operation.

The Solaris 2.6 implementation of `readdir_r()` in the POSIX environment handles EOF as an error condition. On EOF, `readdir_r()` returns `EINVAL` and sets `*result` to `NULL`.

A subsequent release of Solaris may change this behavior to be more consistent with other POSIX interfaces, such that on EOF, `readdir_r()` would return 0 and would set `*result` to `NULL`.

Workaround: Developers should write their applications to detect EOF by first checking whether `*result` is equal to `NULL` and then checking whether the return value is 0 or `EINVAL`. Applications written this way work in both cases.

Common Desktop Environment (CDE) Bugs

Displaying the `dtfile` Pop-Up Menu May Cause a Core Dump 4049745

If you display the `dtfile` pop-up menu, then the `dtfile` “File Select View” menu bar menus no longer function and may cause a core dump.

Workaround: Do not display the `dtfile` pop-up menu by clicking the mouse menu button over a file or folder icon. Also, do not display the `dtfile` pop-up menu by clicking the menu button over any part of the `dtfile` file and folder Viewing Area.

No Error or Warning Messages Are Generated if You Make an Illogical Selection in the CDE Calendar’s Date Field 4060832

If you make an illogical selection in a CDE Calendar's data field, such as selecting Leap Year 2/29 for a recurring yearly Calendar appointment, CDE ignores this information. In this example, the appointment is only scheduled in leap years (years that have a 2/29 date) on your Calendar.

Java Bugs

Applets That Export Java RMI Objects May Fail 4064085

Applets that export Java RMI objects may fail with a `java.io.FileNotFoundException` exception raised while loading the RMI skeleton class. This is due to an interaction between the Java RMI runtime and the use of RMI in HotJava for the Solaris operating environment which causes the wrong class loader to be used.

Workaround: Install the applets RMI skeleton class files locally and set the `CLASSPATH` environment variable to include them before starting HotJava.

AnswerBook2 Notes

Viewing Documents From a CD Is Not Available

The `ab2_cd` script, as documented in the “Installing Document Server Software” section of the AnswerBook2 Help, is not available in the `Solaris_2.6_Doc` directory on the Solaris 2.6 Documentation CD. The option to view the AnswerBook2 documents from the CD is not available.

Searching Japanese AnswerBook1 Documents

The `SUNWjeuc` and `SUNWjiu8` packages located on the Japanese Solaris 2.6 CD are required to be installed on the server in order to search Japanese AnswerBook1 documents.

AnswerBook2 Bugs

ko Messages Display in English (En_US) 4065721

There is no support for Korean locale messages in the AnswerBook2 command line output or browser. When the AnswerBook2 language preference is set to Korean, the messages display as for the C locale.

Very Long Tables Are Slow To Display 4064641

Some books, such as the *MultiThreaded Programmers Guide*, have tables that span over one hundred pages. These pages take longer than expected to load. You see a stalled message in the browser status bar until the page finally loads.

Workaround: Wait for the entire table to load. Do not interrupt the loading of a very long table.

Search Syntax Defaults to Literal Search

4065793

A default search that includes more than one word, such as the search does not have quotes, or the words AND and OR between search words, performs an exact search in some cases.

Workaround: Always specify the words AND or OR between search words to achieve this specific type of search.

Interbook Links Are Not Resolved Locally

4066516

When following links to some book titles, the link is resolved to the `http://docs.sun.com/` server rather than the local server. If `http://docs.sun.com/` is not available or if the book does not exist there, an error is generated, even if the book is available on the local server.

Workaround: As root on the document server, edit the `/var/log/ab2/catalog/local.socat` file and replace the entries containing the string `dummy` with the book identifier, as described in the following steps. As soon as you have edited the file, all links work locally. Therefore, there is no need to restart the server.

1. Find an entry containing the word `dummy` in the second field.
2. Find the book name in that entry.
It is the string following the `book=` string.
3. Replace the `dummy` string (the word `dummy`) with the following text, substituting the book name for `BOOKNAME` below. Be sure to keep the entire entry on one line, and preserve capitalization, special characters, and spacing exactly as shown here:

```
"-//Sun::SunSoft//DOCUMENT BOOKNAME Version 1//EN"
```

Example of a corrected line:

```
PUBLIC "-//Sun::SunSoft//DOCUMENT BINARY Version 1//EN" "<dweb  
coll='coll.47.4' book='BINARY'/>/opt/answerbooks/english/solaris_2.6/SUNWadm/  
books/BINARY</dweb>"
```

4. Repeat for all entries containing `dummy` in the second field.
5. Save the file.

AnswerBook2 Administration Bugs

answerbook2_admin Script Requires SUNWab2(r,s,u) Packages 4063836

If the AnswerBook2 software packages are not installed, running the answerbook2_admin script or selecting answerbook2_admin in the CDE system_admin panel fails.

Workaround: Install the SUNWab2(r,s,u) packages.

Documentation Collection Bugs

Solaris Internationalization Guide for Developers does not appear in the AnswerBook2 Library 4066791

The *Solaris Internationalization Guide for Developers* does not appear in the Solaris 2.6 Software Developer AnswerBook Vol 2 collection.

Workaround: To browse the book locally, enter the following URL, substituting the name of your documentation server for *doc-server-name*:

```
http://doc-server-name:8888/ab2/  
@LegacyTocView?toc=SUNWab_124_1%3A%2Fopt%2Fanswerbooks%2Fenglish%2Fsolaris_2.6  
%2FSUNWabdev%2Ftoc%2FI18N%3AI18N
```

You can also view and search this document at <http://docs.sun.com>.