Solaris 2.5.1 SPARC: Installation Notes

SunSoft
A Sun Microsystems, Inc. Business

Contents

Preface

Solaris 2.5.1 SPARC: Installation Notes contains installation problem details and other information that was not available until immediately before the release of Solaris 2.5.1 operating software.

Who Should Use These Notes

These notes are for users and system administrators who are installing and using Solaris 2.5.1 software.

How These Notes are Organized

Chapter 1, "Installation Issues," describes installation problems and installation news that arrived too late for publication in other documents.

Chapter 2, "Late-Breaking Solaris Product News," contains news and information about features (non-installation) that arrived too late for publication in the SUNWrdm/news file on the Solaris 2.5.1 CD.

Chapter 3, "Late-Breaking Solaris Product Bugs," describes problems (non-installation) that arrived too late for publication in the SUNWrdm/bugs file on the Solaris 2.5.1 CD.

Chapter 4, "Late-Breaking Solaris Patches," provides a list of patches that were not integrated into the Solaris 2.5.1 software and arrived too late for publication in the SUNWrdm/patches file on the Solaris 2.5.1 CD.

Chapter 5, "EOL Statements," provides information about features or products that are no longer supported by the Solaris 2.5.1 software and arrived too late for publication in the SUNWrdm/eol file on the Solaris 2.5.1 CD.

Related Books and Online Files

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

- *SPARC: Installing Solaris Software*
- *SPARC: Installing Solaris Software on the Desktop*

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.

Once you have installed the Solaris software, refer to the online Readme package (SUNWrdm) on your Solaris 2.5.1 CD for bugs, news, and patches not relating to installation, as well as end-of life (EOL) statements. The SUNWrdm package includes a:

- news file with product news and features that arrived too late to be included in the *Solaris Introduction* manual
- bugs file with late-breaking problems
- patches file with late-breaking information on current and non-integrated patches
- eol file with late-breaking EOL statements

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 `.login` file. Use `ls -a` to list all files. `machine_name% You have mail.`
`AaBbCc123`	What you type, contrasted with on-screen computer output	`machine_name%` **`su`** `Password:`
AaBbCc123	Command-line placeholder: replace with a real name or value	To delete a file, type `rm` *filename.*
AaBbCc123	Book titles, new words or terms, or words to be emphasized	Read Chapter 6 in *User's Guide.* These are called *class* options. You *must* 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	`#`

Installation Issues 1≡

This chapter describes known problems relating to the installation of the Solaris 2.5.1 software environment.

See the `SUNWrdm` package on the Solaris 2.5.1 CD for product bugs and product news not related to installation. The `SUNWrdm` package contains a:

- `news` file with product news and features that arrived too late to be included in the *Solaris Introduction* manual
- `bugs` file with late-breaking problems
- `patches` file with late-breaking information on current and non-integrated patches
- `eol` file with EOL statements

For further information about SunSoft support see `http://access1.sun.com`. To find out more about Sun Microsystems, see `http://www.sun.com`.

Contacting Customer Support

If you have any support issues, call your authorized service provider. If you do not know your service provider, please refer to the enclosed *Quick Reference for Technical Support and Training*.

Viewing Information in the Online Files

If you want to view information in the news, bugs, patches, and eol files located on the Solaris 2.5.1 CD, you must install the SUNWrdm package before you can display any information in these files.

1. Log into a system and become root.

2. Insert the CD into the CD-ROM drive.

Note – The Volume Management software automatically mounts CDs on /cdrom/cdrom0/s0.

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3. Type:

```
# /usr/sbin/pkgadd -d /cdrom/cdrom0/s0/Solaris_2.5.1 SUNWrdm
```

The files in the SUNWrdm package are now copied to the /usr/share/release_info/Solaris_2.5.1 directory on your hard disk.

Note – The SUNWrdm package is automatically copied to your hard disk when you select the Entire Distribution cluster. If you select any other clusters, you must copy the SUNWrdm package separately.

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4. Select Online Open Issues Readme.
You can now view the information in the news, bugs, patches, and eol files using an editor of your choice, such as vi.

Note – The size of the online SUNWrdm package is about 150 Kbytes.

Installation Requirements

Table 1-1 through Table 1-4 provide information about software and swap sizes that determine installation disk space requirements.

Table 1-1   Disk Size Requirements for Installation[1]

Product	Minimum Size (in Mbytes)[5]	Default Size (in Mbytes)
Default Software Groups[2] [3]		
Required System Support[3]		
/	12	14
/var[4]	1	2
/opt	1	2
/usr	20	24
/usr/openwin	1	2
End User System Support[3]		
/	12	15
/var[4]	3	4
/opt	9	10
/usr	45	53
/usr/openwin	54	64
Developer System Support[3]		
/	12	15
/var[4]	5	6
/opt	9	10
/usr	81	95
/usr/openwin	110	129

Table 1-1   Disk Size Requirements for Installation[1] *(Continued)*

Product	Minimum Size (in Mbytes)[5]	Default Size (in Mbytes)
Entire Distribution[3]		
/	14	16
/var[4]	6	7
/opt	49	57
/usr	93	109
/usr/openwin	124	145
Entire Distribution Plus OEM System Support[3]		
/	15	17
/var[4]	6	7
/opt	52	61
/usr	93	110
/usr/openwin	124	146

1. The Solaris product you purchased may include one or more of these products.

2. Base sizes by Software Groups do not account for co-packaged products. See the size requirements for these packages and add appropriate space to the relevant partition

3. The system installation software provides for automatic disk layout that only includes the sizes of the Solaris packages in this calculation. If you plan to install additional co-packaged products, you then need to allow for additional space in the appropriate partition.

4. Additional space should be included in /var if printing or mail support is planned.

5. The sizes listed in this table are approximate. They only provide guidelines for sizes required for sample partitions. The recommended disk space allows for the addition of software packages in the future as well as future software release upgrades.

Minimum and default swap size is estimated based on the system's physical memory. Table 1-2 shows how the size of swap is determined during an installation. The Solaris installation program makes the size of swap no more than 20% of the disk where it resides unless there is remaining free space on the disk after layout of the other file systems.

Table 1-2   Solaris 2.5.1 Swap Size Requirements

Physical Memory (in Mbytes)	Minimum Size (in Mbytes)	Default Size (in Mbytes)
16 - 32	16	32
32 - 64	0	32
64 - 128	0	64
128 - 512	0	128
512 >	0	256

Table 1-3   Solaris 2.5.1 Desktop Product Software and Swap Size Requirements[1]

Product	Minimum Size (in Mbytes)[4]	Recommended Size (in Mbytes)
Common Desktop Environment (CDE) 1.0.2[2]		
Solaris Desktop Login and Runtime Environment		
/usr/dt[3]	10	
End User Desktop and Applications		
/usr/dt[3]	14	
Developer Tools and Manual Pages		
/usr/dt[3]	20	
AnswerBook Data Files		
/usr/dt[3]	110	

Table 1-3   Solaris 2.5.1 Desktop Product Software and
Swap Size Requirements[1] *(Continued)*

Product	Minimum Size (in Mbytes)[4]	Recommended Size (in Mbytes)
Wabi 2.2		
System Directory		
/opt[3]	15	
swap	20	40
Personal Wabi Files for MicroSoft Windows		
home directory	9 per user	
user specifies	Adequate disk space for installing applications and storing application data files	
swap	10 for each Windows application to be run concurrently	
AnswerBook Data Files		
/opt	3.5	
ODBC Driver Manager 2.11		
user specifies	1.5	

1. Desktop product only.

2. CDE run time /usr/dt increment is approximately 3.5 MB greater if the same CDE 1.0.2 disk is installed on a Solaris 2.4 system. The extra overhead is associated with upgrades to 2.4 native ToolTalk and Motif runtime support.

3. The default directory may be changed by the user at installation time.

4. The sizes listed in this table are approximate. They only provide guidelines for sizes required for sample partitions. The recommended disk space allows for the addition of software packages in the future as well as future software release upgrades.

Table 1-4   Solaris 2.5.1 Server Product Software and Swap Size Requirements

Product	Minimum Size (in Mbytes)[1]	Recommended Size (in Mbytes)
Solstice AdminSuite 2.2		
SPARC Binaries		
/opt	13	
x86 Binaries		
/opt	10	
PowerPC Binaries		
/opt	13	
Data Spooling Area		
/opt	33	
AnswerBook Data Files	9	
/opt		
Solstice DiskSuite 4.0		
Drivers and Commands		
/	0.5	
/usr	4.5	
Graphical User Interface		
/usr	3	
AnswerBook Data Files		
/opt	15	

Table 1-4 Solaris 2.5.1 Server Product Software and Swap Size Requirements

Product	Minimum Size (in Mbytes)[1]	Recommended Size (in Mbytes)
Solstice Backup 4.2		
Solstice Backup Client Software		
/usr	19	
Solstice Backup Manual Pages		
/usr	1	
Solstice Backup Server Software		
/usr	8	
Solstice Backup Device Drivers		
/	1	
/usr	21	
Solaris 2.5.1 Server Supplement		
PC Protocol Services	3 - 4	
Naming Service Translation Kit 1.2	0.5	
System Administrator AnswerBook	53	
Reference Manual AnswerBook	92	
Supplemental System Admin AnswerBook	3.1	

1. The sizes listed in this table are approximate. They only provide guidelines for sizes required for sample partitions. The recommended disk space allows for the addition of software packages in the future as well as future software release upgrades.

Installation News

INSTALLATION: Entering Incorrect Network Information 1238680

Entering incorrect network connection information can cause the system to hang. i. e., answering **yes** to being connected to a network when you are not on a network.

Workaround: You need to reboot the system and start the installation again. Make sure that your answers to network connectivity are accurate.

UPGRADE: If you are upgrading from the Solaris 2.1 release and have a European localization loaded on your system, you may not have sufficient space in the /opt directory. No Bug ID

Workaround: If any of the following packages are present,
- SUNWabede
- SUNWabefr
- SUNWabeit
- SUNWabesv

delete one of them using pkgrm(1M).

UPGRADE: If you are upgrading from the Solaris 2.3 release and have Solstice AdminSuite 2.1 loaded, you must add again the SUNWfns and SUNWfnspr packages after the upgrade. No Bug ID

Workaround: To install the correct version of this software, you must remove the installed software packages and replace them with correct versions found on the Solaris 2.5.1 CD. Follow the steps below

1. Remove the FNS software.

```
# pkgrm SUNWfns SUNWfnspr
```

2. **This step assumes that your system is running Volume Management. Insert the Solaris 2.5.1 CD into your CD-ROM drive and install the correct version of the FNS software.**

```
# pkgadd -d /cdrom/cdrom0/s0/Solaris_2.5.1 SUNWfns SUNWfnspr
```

UPGRADE: If you have /usr/openwin NFS mounted and try to do an upgrade, you must deselect specific packages and clusters or upgrade will fail.
1220648

Workaround: On the Customize Software screen, you must deselect the following packages and clusters for upgrade to work:

* OpenWindows Version 3

Note – When you deselect the OpenWindows Version 3 cluster, it will be displayed as partially selected because there are required core packages within it.

---

* Core (CDE)
* FFB Window System Support (in the FFB Device Drivers cluster)
* SunPEX Run
* SX Window System Support (in the SX End User cluster)
* ToolTalk End User
* ToolTalk Programmer
* X Windows I18N Common Package
* XIL Deskset Loadable Pipeline Libraries (in the XIL Runtime Environment cluster)
* Font Server cluster
* DPS Motif Library
* Sun4u-platform specific X server auxiliary filter modules
* Graphics Headers

When upgrading your operating environment, the following error messages may be displayed in the upgrade log:

```
Doing pkgadd of SUNWcsd to /.
ERROR: attribute verification of </a/devices/pseudo/clone@0:be> failed
major/minor device <11, 106> expected <0, 105> actual

Installation of <SUNWcsd> partially failed.
pkgadd return code = 2
The minor number in the "actual" field may differ from 105.
```

Workaround: Check to see whether be is the correct device # by entering:

```
# grep be /etc/name_to_major
be 37
# ls -lia /devices/pse*/*be
3830 crw-------   1 root      sys         11,105 Apr 10 10:17 /devices/pseudo/clone@0:be
#
(wrong major # 106)
```

If it is incorrect, delete it from the system as follows:

```
# rm /devices/pseudo/clone@0:be
#
```

Recreate the be node by entering:

```
# grep be /etc/name_to_major
be 37
# mknod /devices/pseudo/clone@0:be c 11 37
# chown root /devices/pseudo/clone@0:be
# chgrp sys /devices/pseudo/clone@0:be
# chmod 0600 /devices/pseudo/clone@0:be
# ls -lia  /devices/pseudo/clone@0:be
6384 crw-------   1 root      sys         11, 37 Apr 18 11:51 /devices/pseudo/clone@0:be
#
```

INSTALLATION: `AdminTools` *and Localization*   *1246940*

If the Solstice Admintools software is used to install localized software products in which there are packages that localize multiple locales (that is, the value assigned to the `SUNW_LOC` macro in the package's `pkginfo` file is a comma-separated list of locales instead of a single locale), the localization packages will not be installed.

Workaround: Install patch ID 103443-01.

UPGRADE: Disk Space Requirements   *1247012*

During a heterogenous server upgrade, you may see the following error messages displayed:

```
Generating upgrade script
Finding modified files.  This may take several minutes.
Calculating space requirements.
Package instance "SUNWxglh.2" appears in /var/sadm/install/contents,
but is not installed.
Package instance "SUNWxglh.2" appears in /var/sadm/install/contents,
but is not installed.
Package instance "SUNWxglh.2" appears in /var/sadm/install/contents,
but is not installed.
Package instance "SUNWxglh.2" appears in /var/sadm/install/contents,
but is not installed.
Package instance "SUNWxglh.2" appears in /var/sadm/install/contents,
but is not installed.
Package instance "SUNWxglh.2" appears in /var/sadm/install/contents,
but is not installed.
Package instance "SUNWxilh.2" appears in /var/sadm/install/contents,
but is not installed.
Package instance "SUNWxilh.2" appears in /var/sadm/install/contents,
but is not installed.
```

Workaround: Ignore the error messages. The files, `SUNWxglh.2` and `SUNWxilh.2` were installed. These error messages were displayed as a result of the `SUNWxglh.2` and `SUNWxilh.2` files not having been included in the `SUNW_PKGTYPE` package. Upgrade disk space requirements may be higher than initially estimated.

UPGRADE: *sun4m Clients May Fail to Boot*   *1248447*

After upgrading the server software from Solaris 2.4 to Solaris 2.5.1, sun4m diskless clients may fail to boot. If you have the `FSUNpdir` package installed, the sun4m client will display the following message:

```
WARNING: Cannot load drv/rootnex
Can't load the root filesystem
```

Note – The workaround below may be completed before or after the server is upgraded; however, if you perform the workaround after the upgrade it must be done on the server.

Workaround: Edit the `/etc/system` file in each sun4m diskless client's root directory and remove the following line:

```
moddir: /platform/PFU,S-4_Leia/kernel /kernel /usr/kernel
```

The entry above is only needed for PFU S-4 Leia systems and may be safely removed on all other systems even if they continue to run Solaris 2.4. For more information, contact your authorized Sun support provider.

UPGRADE: *Non-Native Clients Fail to Boot*   *1248433*

After upgrading the server software from Solaris 2.4 to Solaris 2.5.1, exporting two or more non-native clients (server architecture differs from that of the client), with the `SUNWkvm` packages patched, results in non-native clients failing to boot.

There are two possible workarounds (see below).

▼ **Workaround before upgrading to Solaris 2.5.1:**

1. **List the** SUNWkvm **packages installed on the server.**
Take note of all the SUNWkvm.* packages that have the string PATCH= in their
VERSION string.

```
# pkginfo -l 'SUNWkvm.*'
```

2. **Use** pkgrm **to remove each** SUNWkvm **package that has the string** PATCH= **in
the** VERSION **string.**

3. **Upgrade your server software to Solaris 2.5.1.**

▼ **Workaround after upgrading to Solaris 2.5.1:**

1. **Add the** SUNWkvm **packages on all systems.**

```
# pkgadd -d <directory where packages reside> SUNWkvm.*
```

2. **Copy the inetboot image to the** /tftpboot **directory.**
The instructions below apply to sun4c architectures that are not booting.

```
# cd /usr/platform/sun4c/lib/fs/nfs
# cp inetboot /tftpboot/inetboot.sun4c.Solaris_2.5.1
```

Note – Repeat these instructions for every architecture that is not booting by
substituting sun4d, sun4m, or sun4u in place of sun4c in the instructions
above. If your system is still having problems booting, contact your authorized
Sun support provider.

UPGRADE: Non-Native Clients and Adding the SUNWkvm Package
1249343

If a server having more than one non-native client (server architecture differs from that of the clients) is upgraded to Solaris 2.5.1, one or more of the SUNWkvm packages installed on the system will not be patchable.

Workaround: Manually add all of the SUNWkvm packages before applying any patches that contain the SUNWkvm package.

```
#  pkgadd  -d  <directory where packages reside>  SUNWkvm.*
```

Solaris 2.5.1 Installation — Time Zone Designation Menu Missing Horizontal Scroll Bar
1249106

When installing Solaris 2.5.1 (on a SPARC, x86, or PPC platform using the graphical user interface), a time zone screen may be displayed requiring the user to select a particular time zone. If you select to specify a time zone file (third option), the window displaying all the available time zone files does not provide a horizontal scroll bar; therefore, not allowing you to view the entire time zone file names from the list.

Workaround: Use the geographic time zone option or the GMT offset option to select your time zone.

If you must use the time zone file screen, selecting an entry in the files list (single click) displays the entire time zone file name in the selection text field at the bottom of the file selection box.

Converting to MT Safe Mode for STREAMS Modules

Warning – Solaris 2.5.1 allows an MT unsafe mode for STREAMS modules as an aid to porting modules from SVR3. This support will be removed in a future release of the operating system. All STREAMS modules and drivers must be converted to be MT safe.

Upgrading Hardware and Software

The upgrade option does not upgrade the system software to a new hardware platform (for example, from a SPARCstation 2 to a SPARCstation 5). If you change your hardware, you *must* reinstall the Solaris software. Other hardware upgrade paths, for instance, adding new devices or changing CPU modules, usually do not require the Solaris software to be reinstalled.

Note – If you are using any third party device drivers and are using the Weitek SPARC Power µP™, contact Weitek for Technical Note 24DD.

Note – The A.7 version of the Ross Technology Cypress, CY605 CPU is not supported in Solaris 2.5.1. The A.8 version is supported. If you attempt to install or upgrade a system that has A.7 parts, the system prints: The ROSS 605 CPU modules installed in this system are not fully compatible with this version of Solaris. If this version of Solaris software is installed, this system will run only in uni-processor mode, which will affect performance. Please upgrade your CPU module(s) in order to run in multi-processor mode.

Upgrades of SPARC servers will also upgrade only SPARC clients and upgrades of x86 servers will also upgrade only x86 clients

For example, if you upgrade a SPARC server using the SPARC Solaris CD, only SPARC clients that share the platform group on the CD are upgraded.

Workaround: Use the server_upgrade command and the platform-specific Solaris CD to upgrade clients of different platforms and platform groups.

See server_upgrade(1M) for examples.

Installing from a CD   *1238094*

If your system has two different network connections, such as hme0 and le0, and if the first network connection that the system probes is not connected, and if you are installing from the CD, then your system is unable to identify the network. As a result, the system does configure your system automatically because it cannot locate the network.

The system (sysidtool) prompts you to answer questions regarding your system configuration. In addition, the user needs to configure the network interfaces as described in the workaround. The same problem occurs after executing sys-unconfig.

Note – The "first" network connection that the system probes for is determined alphabetically by the name of the network interface; for example, hme0 is probed before le0.

Workaround: Need to create a file in the /etc directory called hostname. *network interface,* such as hostname.le0. The contents of that file is the name (hostname) of the system.

Service Setup for Clients

The Solaris installation program (interactive and Custom JumpStart) no longer sets up services for clients. During installation, selecting the system type OS server only allocates space for clients.

To complete client setup, you must use the Solstice AdminSuite Host Manager after Solaris software is installed locally. (Host Manager is part of Solstice AdminSuite which may be packaged with Solaris, depending on the product you have purchased.)

For more information, see the *System Administration Guide, Volume I.*

PCMCIA Memory Card and Volume Management Installation Notes

PCMCIA memory cards are currently supported by the Volume Management software. If a system is installed with an End User, Developer, or Entire Distribution software group, then PCMCIA memory cards are automatically managed by the Volume Management software.

If a system has been installed with a Core software group, which does not include the Volume Management packages, then PCMCIA memory cards will not be managed by the Volume Management software.

To manage the PCMCIA Memory card with Volume Management:

1. **Install all needed Volume Management packages:**

Table 1-5   Needed Volume Packages

Name of Package	Description
SUNWvolg	Volume Management Graphical User Interface
SUNWvolr	Volume Management (Root)
SUNWvolu	Volume Management (Usr)

2. **Remove the PCMCIA Memory Card Driver package (**SUNWpcmem**).**

3. **Re-install the** SUNWpcmem **package.**
   This package is on the Solaris 2.5.1 CD.

4. **Reboot the system.**
   The SUNWpcmem package has to be removed and reinstalled because it needs to modify the Volume Management configuration file in /etc/vold.conf and /etc/rmmount.conf.

PCMCIA Software Installation Notes

Install the Solaris software including the PCMCIA packages in the SUNWCpcmc cluster. If you choose to install the Entire Distribution, the PCMCIA packages are automatically included.

If you choose any other distribution, such as End User, Developer, or the Core System Support Distribution, select Customize from the choices at the bottom of the Software Selection screen; then choose PCMCIA Support from the scrolling list on the Customize Software screen.

After completing the installation, the next time you reboot your system, it will automatically perform the necessary reconfiguration.

Support Changes for `swmtool`

The `add/remove` software functionality of `swmtool` has been moved to `admintool` under the software manager selection. In Solaris 2.5.1, a symbolic link has been created so users starting `swmtool` will automatically execute `admintool`.

The add services functionality of `swmtool` has been moved to the Solstice™ AdminSuite™ Host Manager product.

Threads and Signals

The following change occurred in the delivery of signals `SIGPIPE`, `SIGSYS`, and `SIGXFSZ` in a multithreaded program in releases 2.5 and 2.5.1.

When generated each of these signals is delivered to the process instead of being delivered synchronously, as is the case in the Solaris 2.4 version of the operating system. This change in behavior should not affect any "correctly written" applications because the synchronous nature of signal delivery in the case of these three signals is not part of the exported interface.

For example, if a threaded program calls `write(2)` on a pipe descriptor that is open only for reading, an `EPIPE` error is returned and a `SIGPIPE` signal is generated. In the Solaris 2.4 release, the `SIGPIPE` signal was sent to the thread that called `write()` before the call to `write()` returned, i.e., the call to `write()` was interrupted.

In the Solaris 2.5 and 2.5.1 releases, `SIGPIPE` is sent to the process and any thread in the process with this signal unmasked receives the signal. The thread that called `write()` cannot be interrupted. If there is a handler installed for `SIGPIPE`, it can run on some other thread. Any program that uses the synchronous delivery of `SIGPIPE` as a substitute for having to check the error code `EPIPE`, in a threaded program, may no longer work. Such reliance is considered to be a programming bug for threaded applications.

This behavior is in conformance with POSIX 1003.1c (threads extension to POSIX 1003.1), which defines `SIGPIPE` as a signal that is sent to the process. It is not necessarily directed to the thread that caused the signal to be generated.

Ergonomics Standards - Compliance with ZH/618 and EN29241-3

For your Sun workstation to comply with ergonomics standards ZH/618 and EN29241-3 (ISO 9241-3), add or modify the following lines in the .OWdefaults file located in your home directory as follows:

```
Text.LineSpacing: 15
OpenWindows.Scale: large
```

These characteristics will take effect the next time you restart your OpenWindows environment.

Adobe Photoshop 3.0.1 — Motif Patch

This patch (103461-01) corrects Adobe Photoshop problems, such as menu items being grayed out in a menu list that has a toggle button in it and system crashes caused by the toggle button in Motif not using the correct graphics context for switching. To obtain this patch, contact your authorized Sun support provider.

Installation Bugs

Configuration Upgrade Bugs

Upgrade does not remove the SUNWgs package   1196805

When upgrading to Solaris 2.5.1, the SUNWgs (GS cg12 Device Driver) package will fail package removal during the system upgrade operation.

The install log displays the following package removal error:

```
Removing package SUNWgs:
rem_minor: data file \'/a/etc/minor_perm\' is
missing/inacessible.
pkgrm: ERROR: postremove script did not complete successfully
Removal of <SUNWgs> failed.
pkgrm return code = 1
```

Workaround: After system reboot, log in as superuser and execute `pkgrm` to manually remove `SUNWgs`:

```
# pkgrm SUNWgs
```

Upgrade does not remove all references to the gt device   *1196814*

When upgrading to Solaris 2.5.1, the GT device entries within `/etc/name_to_major` and `/etc/devlink.tab` are not removed.

Workaround: After system reboot, log in as superuser and use `vi` to remove all GT entries manually from the above system files. Below is an example of what the GT entries would look like from each file:

```
/etc/name_to_major:
    gt 109

/etc/devlink.tab:

    type=ddi_display;name=gt;minor=gt1      fbs/\M0 gt\N0
```

Upgrade does not preserve SX configuration information   *1202150*

If you use `sxconfig` to modify your SX configuration, your modifications are not preserved when upgrading to Solaris 2.5.1. You are required to reconfigure your SX graphics system again upon completion of the system upgrade.

During an interactive installation, the upgrade option is not presented.
1170953, 1175033

The upgrade option is not presented if one or both of the following conditions are true:

- `var/sadm` is a symlink or is mounted from another file system
- `var/sadm/softinfo/INST_RELEASE` file is missing

Workaround: Move the var/sadm sub tree into either the / or /var file system. If var/sadm/softinfo/INST_RELEASE file is missing, create one using the following template:

```
OS=Solaris
VERSION=2.4
REV=0
```

During an interactive installation the error message "No upgradable disks" is displayed or when attempting an upgrade using custom JumpStart, the message "Cannot add swap device" is displayed.   *1191792*

These messages indicate that there is an incorrect swap entry in /etc/vfstab file.

Workaround: Comment out the following in the /etc/vfstab file:

- All swap files or partitions on disks not being upgraded
- Swap files that are no longer present
- Any unused swap partitions

During an interactive installation, an error message is displayed stating that a specific disk is not upgradable, or there are no upgradable disks, or the console displays the message "Can't mount this file system."
1169594, 1210910

These errors occur because one of the entries in the /etc/vfstab file cannot be mounted.

Workaround: Comment out all unneeded file systems before attempting the upgrade. Leave only /, /var, /usr, /opt and any file systems where packages are installed; for servers, leave /export, /export/swap, and /export/root.

Symbolic Links and Upgrade Options   *1225304*

Suninstall fails with upgrade option and symbolic links on /opt.

Workaround: You need to replace symbolic links to absolute paths with symbolic links to relative paths.

Streams debugging (STREAMS log driver log(7D)) does not work   *1247155*

strace does not display STREAMS logging when no arguments are used or the keyword all is used for the level argument. If tracing is desired for all levels, the value 127 should be used for the level argument instead of all, i.e., strace all all 127 to trace all mids, all sids, and all levels.

Solaris 2.5 NFS V3   *1234858*

If you are mounting or exporting a filesystem from or to a Solaris 2.5 system, files sizes may appear to be off by a factor of 16.

A file that is located on a Sun Solaris 2.5 file system is 16 x larger on the Solaris 2.5 or Solaris 2.5.1 NFS client which mounts this file system. A file that is located on a Sun Solaris 2.5.1 file system will be 1/16 smaller on the Solaris 2.5 NFS client.

Workaround: Install patch 103226-06 or higher on the Solaris 2.5 SPARC NFS server and the Solaris 2.5 SPARC NFS client.

Partial Locale Links are Incorrect   *1248134*

The following partial locale links are incorrect:

```
/usr/openwin/lib/locale/*/XLIBI18N/xlibi18n.so.2=../../common/XLIBI18N/xlibi18n.so.2
```

where:

* can be any of the following:

en_IE, en_NZ, da, nl, su, fr_CA, nl_BE, fr_BE, fr_CH, de_CH, no, pt, pt_BR

These are the partial locales installed with the package `SUNWplow1`. The file `xlibi18n.so.2` does not exist.

The correct file and link should be as follows ::

```
/usr/openwin/lib/locale/*/XLIBI18N/xlibi18n.so.1=../../iso_8859_1/XLIBI18N/xlibi18n.so.1
```

where:

* can be any of the following:

en_IE, en_NZ, da, nl, su, fr_CA, nl_BE, fr_BE, fr_CH, de_CH, no, pt, pt_BR

These are the partial locales installed with the package `SUNWplow1`.

Workaround : Follow these steps:

1. **Become superuser.**

2. **Type:**

```
# cd /usr/openwin/lib/locale
```

If only one partial locale from the `SUNWplow1` package requires changing (of the 13 mentioned above), then change the directory to this partial locale, e.g., **cd fr_CH.**

3. **Type:**

```
# cd XLIBI18N
# rm xlibi18n.so.2
# ln -s ../../iso_8859_1/XLIBI18N/xlibi18n.so.1 xlibi18n.so.1
```

This links the partial locale file `xlibi18n.so.1` file symbolically to the correct `xlibi18n.so.1` file under `iso_8859_1/XLIBI18N`.

Vital tty *flags are set to zero when you* rlogin *or* rsh.   *1101256*

A bug in the rlogin program was exposed by the high speed of some new UltraSPARC systems. If you are using an UltraSPARC system as a server, a terminal's window size does not get set when you rlogin to a server from a 5.x client. If this is the case, you need to upgrade the client to the Solaris 2.5.1 release to have correct functionality.

Late-Breaking Solaris Product News 2 ≡

See the `SUNWrdm` package on the Solaris 2.5.1 CD for product news and features not relating to installation.

ODBC Driver Manager Support

ODBC Driver Manager is a product of INTERSOLV. For all technical questions or support please contact INTERSOLV.

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Late-Breaking Solaris Product Bugs 3 ≡

This chapter describes known problems that arrived too late to be documented on the Solaris 2.5.1 CD. See the `SUNWrdm` package on the Solaris 2.5.1 CD for additional bugs, news, patches not relating to installation as well as end-of-life statements and information on driver updates.

X Windows: Multiple Hardware Colormap Framebuffers 1249475 1249485

If windows are created in different depths with non-default software colormaps on a framebuffer with multiple hardware colormaps, the windows are destroyed and the X server core dumps or displays a non-recoverable error.

Workaround: Install patch ID 103508-01

Late-Breaking Solaris Patches 4 ≡

This chapter lists:

- Unbundled product patches
- Information about SolarNet LAN Client 1.1

Unbundled Product Patches

▼ To install an individual unbundled patch from the Solaris CD:

```
# cd /cdrom/cdrom0/s0/Patches
# cd patch ID number
# ./installpatch .
```

Table 4-1 lists all unbundled product patches delivered on the Solaris 2.5.1 CD and provides pointers to README files for the Solaris 2.5.1 patches that are resident on the Solaris CD.

Table 4-1   Unbundled Product Patches for Solaris 2.5.1

Patch ID Number	Name/Category	Description
100974-02	2.0.1 Debugger patch (dbx)	Libraries that are shared by Motif and Tooltalk are built with the latest Solaris loader technology to optimize their interfaces and performance. This loader technology conflicts with debuggers released before SPARCworks version 3.0.1. A patch has been provided for the SPARCworks version 2.0.1 debugger to enable developers to compile, run, and debug a CDE application with the SPARCWorks 2.0.1 compiler. You can compile and run a Solaris/Motif application with the SparcWorks 3.0.1 compiler. This patch is needed to debug applications built with Solaris Motif and Tooltalk libraries on SPARC systems. However, you can run Solaris without this patch. Refer to the README.100974-02 file for further information on how to install this patch.
1159421	NeWSprint patch	This patch is not part of the automatic installation procedure. You need to install this patch if you are installing the NeWSprinter CL+ 1.0 or the SPARCprinter II 1.0 software. Refer to the NeWSprint/NeWSprint_fix.README file for further information on how to install this patch.
102113-03	NeWSprint patch	NeWSprint 2.5.1 Rev. B hangs when printing. After the first job prints, the np_filter process will go into an infinite loop (the CPU perfmeter will remain high) and the job remains in the queue. Refer to the NeWSprint_fix.README file for further information on how to install this patch.
102114-04	NeWSprint patch	NeWSprint's postreverse filter does not recognize the correct /tmp directory. Any postscript jobs that have been created by PCs cannot be reversed due to any ^M' character strings in a document. Refer to the README.102114-04 file for further information on how to install this patch.

Table 4-1 Unbundled Product Patches for Solaris 2.5.1 *(Continued)*

Patch ID Number	Name/Category	Description
101821-01	NeWSprint patch	NeWSprint is unable to use NeWSprint-supplied troff width files because any document width set by troff macros are not correctly interpreted. Refer to the `README.101821-01` file for further information on how to install this patch.
101655-04	NeWSprint 2.0 jumbo patch	This patch corrects a number of NeWSprint 2.0-related problems that are documented in the `README.101655-04` file. This patch also includes an updated `spd` driver. If you do not install this patch, a panic message is displayed on your fusion system. Refer to the `README.101655-04` file for further information on how to install this patch.
101656-08	NeWSprint patch	This NeWSprint 2.5B "xnews server Jumbo Patch" is one of those required to fix problems with existing SPARCprinter II and/or NeWSprinter 20 installations. Refer to the `NeWSprint/NeWSprint_install_fix.README` file for further information on how to install this patch.
101690-03	NeWSprint patch	This NeWSprint 2.5B "SPARCprinter II greyscale Patch" is one of those required to fix problems with existing SPARCprinter II and/or NeWSprinter 20 installations. Refer to the `NeWSprint/NeWSprint_install_fix.README` file for further information on how to install this patch.
101719-02	NeWSprint patch	This NeWSprint 2.5B "thick lines Patch" is one of those required to fix problems with existing SPARCprinter II and/or NeWSprinter 20 installations. Refer to the `NeWSprint/NeWSprint_install_fix.README` file for further information on how to install this patch.
101941-02	NeWSprint patch	This NeWSprint 2.5B "status report Patch" is one of those required to fix problems with existing SPARCprinter II and/or NeWSprinter 20 installations. Refer to the `NeWSprint/NeWSprint_install_fix.README` file for further information on how to install this patch.
102211-03	SPARCprinter jumbo patch	This patch corrects a number of SPARCprinter-related problems. It also updates the `lpvi` driver. Refer to the `README.102211-03` file for further information on how to install this patch.
102055-01	NeWSprint CL+ patch	This patch enables you to print any Macintosh PowerPoint files as well as any Sun raster files. Refer to the `README.102055-01` file for further information on how to install this patch.
101850-01	NeWSprint CL+ Balancetool patch	Balancetool does not display on a SPARCstation SX. This patch corrects this problem. Refer to the `README.101850-01` file for further information on how to install this patch.

Table 4-1 Unbundled Product Patches for Solaris 2.5.1 *(Continued)*

Patch ID Number	Name/Category	Description
102141-01	SPARCprinter II XRAM patch	This patch corrects problems, such as printer failure, XRAM error messages, and failure to print large documents. Refer to the `README.102141-01` file for further information on how to install this patch.
102537-02	SUNWprint jumbo patch	This patch corrects a number of problems, such as SUNprint's inability to manage 8-bit characters or input streams. Refer to the `README.102537-02` file for further information on how to install this patch.
102580-08	Solstice DiskSuite 4.0 jumbo patch	This patch fixes several critical problems with the Solstice DiskSuite 4.0 jumbo patch; it adds KAIO support for the Solaris 2.5.1 release and provides significant DBMS performance improvement. A new version of the DiskSuite upgrade script is included to help upgrade earlier versions of DiskSuite to DiskSuite 4.0. Refer to the `DiskSuite_patch.README` file for further information on how to install this patch.
102610-02	FDDI 3.0.1 patch	This patch is required for FDDI 3.0.1 on the Solaris 2.5.1 operating environment. Refer to the `README.102610-02` file for further information on how to install this patch.
102802-01	Solstice Backup (NetWorker) 4.1.2 patch	This patch updates 4.1.2 so that the Solaris 2.5.1 file system ACLs can be backed up and recovered. Refer to the `README.102802-01` file for further information on how to install this patch.

SolarNet LAN Client 1.1

SolarNet LAN Client 1.1 does not currently work with Solaris 2.5.1. A patch will be made available. Contact SunService for the availability of this patch.

EOL Statements 5≡

This chapter describes additional end-of-life (EOL) statements to those listed in the online `eol` file in the `SUNWrdm` package on the Solaris 2.5.1 CD. See the `SUNWrdm` package on the Solaris 2.5.1 CD for end-of-life statements.

Format of OS man pages Source Files

In releases of Solaris after June 1997 the `nroff/troff` formatted reference manual pages (man pages) in `/usr/share/man` may not be available. Support for man pages will be provided with SGML (Standard Generalized Markup Language) formatted man pages. Users of the `man` command will not be affected.

It will no longer be possible to format the Solaris man page source files directly using `nroff(1)` or `troff(1)`.

Support for `nroff/troff` formatted man pages will continue for the `man` command.

Dataless Clients

In releases of Solaris after March, 1997, support for the dataless client system type will no longer be available. Customers currently using this system type are advised to convert existing dataless systems to the diskless, standalone, server, or AutoClient system type.

In past releases, SunSoft supported five system types: OS server, standalone system, diskless client, AutoClient system, and dataless client.

- *OS server* - is configured with the entire Solaris service stored locally and sufficient local storage space to support Solaris software, "/", and swap services for remote systems (clients)

- *Standalone* system - is configured with the entire Solaris service stored locally

- *Diskless* client - is configured with all file system data stored remotely

- *AutoClient system* - is configured with all file data stored remotely, with the exception of the "/.cache" caching file system, which is automatically configured upon initial boot

- *Dataless client* - is configured with the "/" component of the Solaris service, and the primary swap slice stored locally, and the /usr component of the Solaris service stored remotely

All of these system types are administered from a single system, except for the dataless type. The /usr component of the Solaris service must be administered from a remote server, whereas all the remaining components of the Solaris service must be administered from the dataless client.

The dataless client system type was originally designed to achieve the data sharing features of the diskless system type, while avoiding many of the corresponding network throughput delays. At that time, the benefits of the system type outweighed the administrative costs, given the absence of a superior alternative. With the advent of AutoClient systems, this is no longer the case.

SPARCserver 600 Series

SMCC announces end-of-life for the SPARCserver 630MP, 670MP, and 690MP systems. The SPARCserver 600 Series systems will no longer be supported in releases of Solaris shipped after March 1997.

Note – All hardware options and supported configurations dependent upon the SPARCserver 600 Series architecture will no longer be supported in releases of Solaris shipped after March 1997.

All references to the SPARCserver 600 Series in the *SMCC SPARC Hardware Platform Guide* will no longer be supported in releases of Solaris shipped after March 1997.

For more information, contact your authorized Sun support provider.

Direct Xlib

Direct Xlib is obsolete and will no longer be included in releases of Solaris shipped after March 1997.

Use the Sun Shared Memory Transport Extension (SUN_SME) with Standard Xlib for comparable Xlib performance (refer to the Xsun manual page for details). SUN_SME does not use Direct Graphics Access (DGA); therefore, it does not generate the overhead and limitations as compared to using Direct Xlib. SUN_SME is supported on all SPARC platforms.

For more information on using SUN_SME, contact your authorized Sun support provider.

SPARCstorage Array — ssacli(1M) Command Obsolete

The ssacli(1M) command is obsolete and will no longer be included in releases of Solaris shipped after March 1997.

Use the ssaadm(1M) command for SPARCstorage Array administrative management. For more information on using ssaadm(1M), see *Platform Notes: Using the Standard SPARCstorage Array Software* manual in the Solaris 2.5.1 on Sun Hardware AnswerBook set.

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