

Solaris 7 Installation Supplement

Sun Microsystems, Inc. 901 San Antonio Road Palo Alto, CA 94303–4900 U.S.A.

> Part No: 806-1153-05 May 1999

Copyright 1999 Sun Microsystems, Inc. 901 San Antonio Road, Palo Alto, California 94303-4900 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, docs.sun.com, Java, JDK, Power Management, AnswerBook2, Solaris 7 Maintenance Update, Solstice AdminSuite, NFS, AnswerBook, 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<sup>TM</sup> 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 1999 Sun Microsystems, Inc. 901 San Antonio Road, Palo Alto, Californie 94303-4900 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 du système 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, docs.sun.com, Java, JDK, Power Management, AnswerBook2, Solaris 7 Maintenance Update, Solstice AdminSuite, NFS, AnswerBook, 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<sup>™</sup> 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.





# Contents

Preface v

1. What's New at a Glance 1

### 2. Installing the Solaris 7 8/99 Operating Environment 5

Reading Installation Documentation Online 5

DNS Configuration During System Identification 6

Preconfiguring With the sysidcfg File 6

Installing the Solaris 7 8/99 Operating Environment 7

▼ How to Use Solaris 7 as an Install Server 8

### 3. Upgrading to the Solaris 7 8/99 Operating Environment 9

Upgrading From the Solaris 2.5.1 or 2.6 Operating Environment 10

Upgrading From the Solaris 7, 3/99, or 5/99 Operating Environment: No Patches 10

Upgrading From the Solaris 7, 3/99, or 5/99 Operating Environment: Installed Patches 11

Analyzing the Patches 11

Identifying the Version of Your Solaris 7 8/99 Software 14

### 4. Adding Patches 15

AdminSuite Patch Required for Installation or Upgrade 15

Upgrading Clients After a Server Upgrade 16

### 5. Administering and Uninstalling Software 17

Contents iii

Using the Solaris Product Registry 17

What Is in the Product Registry? 18

Viewing Registered Software, Uninstalling, and Launching an Installer  $\ 20$ 

- ▼ How to View Registered Software 20
- ▼ How to Uninstall Software 21
- ▼ How to Launch an Installer From the Registry 21

# Preface

The *Solaris* 7 *Installation Supplement* provides instructions on how to install or upgrade to the Solaris<sup>TM</sup> 7 8/99 operating environment and how to use new installation features in the Solaris 7 8/99, 5/99, and 3/99 operating environments.

# **Related Books**

This supplement describes new or changed functionality in Solaris Update Releases. The information here supplements or supersedes information in the previous releases of Solaris 7 documentation sets.

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

- Solaris 7 Start Here
- Solaris 7 (SPARC or Intel Platform Edition) Installation Library
- Solaris Advanced Installation Guide
- Solaris 7 8/99 (SPARC or Intel Platform Edition) Release Notes

Solaris documentation is available on the Solaris 7 Documentation CD.

For some hardware configurations, you may need supplemental hardware-specific instructions for installing the Solaris operating environment. If your system requires hardware-specific actions at certain points, the manufacturer of your hardware has provided supplemental Solaris installation documentation. Refer to those materials for hardware-specific installation instructions.

Preface v

# **Ordering Sun Documents**

The Sun Software Shop stocks select manuals from Sun Microsystems, Inc. You can purchase individual printed manuals and AnswerBook2<sup>™</sup> CDs.

For a list of documents and how to order them, visit the Software Shop at http://www.sun.com/software/shop/.

# Accessing Sun Documentation Online

The docs.sun.com<sup>SM</sup> web site enables you to access Sun technical documentation online. You can browse the docs.sun.com archive or search for a specific book title or subject. The URL is http://docs.sun.com.

# What Typographic Conventions 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% <b>su</b> Password:

 TABLE P-1
 Typographic Conventions (continued)

Typeface or Symbol	Meaning	Example
AaBbCc123	Command-line placeholder: replace with a real name or value	To delete a file, type <b>rm</b> <i>filename</i> .
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 must be <i>root</i> 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	#

# What's New at a Glance

This chapter highlights new features added to the Solaris 7 operating environment in the 8/99, 5/99, and 3/99 releases.

### TABLE 1–1 Solaris 7 Features

Feature	First Released in	Description
Installation		
ab2cd script updates	8/99	Updates to the ab2cd script allow users to read AnswerBook2 documentation directly from the Solaris Documentation CD.
DNS configuration during system identification	5/99	Prior Solaris releases only allowed the configuration of a machine as a NIS or NIS+ client. With the Solaris 7 5/99 release, systems can be configured by the system identification utilities to be DNS clients.
Product Registry	3/99	<ul> <li>The Solaris Product Registry is a tool to manage installed software. It enables you to:</li> <li>View a list of installed and registered software and some software attributes</li> </ul>
		<ul> <li>Uninstall software</li> </ul>
		Browse for and launch an installer
Patch Analyzer	3/99	The Patch Analyzer performs an analysis on your system to determine which (if any) patches will be removed or downgraded by upgrading from a Solaris 7 release to the Solaris 7 8/99 operating environment. This analysis can be performed either at upgrade time, or while the system is in production mode.

1

Feature	First Released in	Description
(Intel Platform Edition only) Added support for PAE mode	3/99	With the release of Pentium Pro, Intel introduced a mode called Physical Address Extension (PAE) on its advanced processors. PAE mode enables you to run multiple instances of databases and memory-intensive applications, and to support large numbers of online users on your machine.
		This feature is described in the Solaris 7 8/99 Release Notes.
System and Network Adm <i>Supplement</i> .)	ninistration (These	e features are described in the Solaris 7 System Administration
Solaris Naming Setup and Configuration Guide and Solaris Naming Administration Guide update	8/99	This section updates the <i>Solaris Naming Setup and Configuration Guide</i> and the <i>Solaris Naming Administration Guide</i> .
AnswerBook2 server software updates	8/99	Updates in AnswerBook2 version 1.4.1 server software improve navigation and performance.
Remote console	5/99	New system console features, including the consadm command, enable system administrators and service providers to remotely troubleshoot systems by dialing in to a system using a modem connected to one of the serial ports and to redirect console messages to the auxiliary device.
(SPARC Platform Edition only) Dynamic reconfiguration	5/99	Dynamic reconfiguration allows the service provider to add or remove and replace hot-pluggable system boards in a running system, eliminating the time lost in rebooting. For more information, see your hardware manufacturer's documentation.
Deferred access time updates on UFS file systems	3/99	New mount options, dfratime and nodfratime, enable and disable deferred access time updates on UFS file systems.
Improved system boot and error message format	3/99	The system boot and error message format is improved by adding a numeric identifier, module name, and time stamp to messages generated by the syslog logging facility.
Improved handling of cron jobs on suspended systems	3/99	When you use Power Management <sup>TM</sup> software to suspend and resume a system, there is now a check on whether cron jobs were scheduled during the time the system was suspended. If there were, the first instance of a cron job is performed when the system resumes. (This improvement was available in the Solaris 7 release and first documented in the Solaris 7 3/99 release.)

### TABLE 1–1 Solaris 7 Features (continued)

Feature	First Released in	Description	
Developer (These features	are described in	the Solaris 7 Software Developer Supplement.)	
8-bit visual support	8/99	The 8-bit visual shared library enables device drivers with only 24-bit hardware to display 8-bit visual applications.	
<i>Solaris 7 64-bit Developer's Guide</i> updates	3/99	This is a list of updates in the <i>Solaris</i> 7 64-bit Developer's Guide.	
Updated DDI interfaces for cluster-aware device drivers	3/99	This overview introduces the concept of device classes and the necessary interface modifications and additions for device driver writers.	
Java <sup>™</sup> Development Kit (JDK <sup>™</sup> ) 1.1.7_06 (These features are described in the Solaris 7 Software Developer Supplement.)			
Enhanced Eurocurrency support	8/99	The JDK 1.1.7_06 release supports the new European Union currency, the euro.	
Java Runtime Environment (JRE) available	8/99	A JRE corresponding to the latest version of the JDK is available for download from the Web.	
Large file support	8/99	Beginning with JDK 1.1.6_03, the classes and methods that access files include support for large files (greater than or equal to 2 GBytes $[2^{31}$ bytes]).	
High-Performance JIT compiler	8/99	JDK 1.1.6_03 introduced the High-Performance JIT compiler.	
Release naming convention	8/99	The release name for this and future releases can be displayed using java -fullversion.	

What's New at a Glance  $\ 3$ 

# Installing the Solaris 7 8/99 Operating Environment

This chapter provides information on these topics:

- "Reading Installation Documentation Online" on page 5
- "DNS Configuration During System Identification" on page 6
- "Installing the Solaris 7 8/99 Operating Environment" on page 7
- "How to Use Solaris 7 as an Install Server" on page 8

For complete Solaris 7 8/99 installation instructions, refer to the Solaris 7 (Intel Platform Edition) Installation Library or the Solaris 7 (SPARC Platform Edition) Installation Library, and the Solaris Advanced Installation Guide.

# Reading Installation Documentation Online

This functionality has been updated in the Solaris 7 8/99 software release.

The ab2cd script, located on the Solaris Documentation CD, allows users to read AnswerBook2 documentation directly from the CD. For more information about the ab2cd script, see the README\_en.html file located on the Solaris Documentation CD.

5

# **DNS Configuration During System** Identification

The system identification utilities were updated in the Solaris 7 5/99 software release. This section supplements installation information in the Solaris Advanced Installation Guide.

Prior to the Solaris 7 5/99 software release, the system identification utilities were only able to configure a system as either a NIS client or a NIS+ client. With the Solaris 7 5/99 and 8/99 releases, these utilities are now also able to configure a system as a DNS client. You may specify that the system is to be a DNS client interactively or through the sysidcfg file. At this time, you cannot specify DNS through the add\_install\_client command.

The system identification utilities attempt to automatically determine configuration information, using data from a variety of sources. They first look for a sysidcfg file. If they cannot find the needed information in the sysidcfg file, they attempt to automatically detect the data via the network. In the case of name service configuration, the system identification utilities attempt to automatically locate a name service, unless the name service type and configuration is specified in the sysidcfg file. The utilities first attempt to automatically detect a NIS+ server. If a NIS+ server is not found, they look for a NIS server. If a NIS server is not found, the utilities interactively query for the configuration information. It is not currently possible to automatically detect a DNS server.

### Preconfiguring With the sysidcfg File

The sysidcfq file preconfigures system identification information through a set of keywords (see Table 2–1) that specify the pieces of information you want to preconfigure. See the Solaris Advanced Installation Guide for more information about the use of the sysidcfg file, including a complete list of available keywords.

The name\_service keyword has been augmented to allow the specification of DNS as an available name service. This augmented keyword is described in Table 2–1.

Configuration Information	Platform	Keywords	Where to Find Values/Example
Name service, domain name, name server	All	name_service=NIS, NIS+, DNS, NONE	
		<pre>Options for NIS and NIS+: {domain_name=domain_name name_server=hostname(ip_address)}</pre>	<pre>name_service=NIS {domain_name=west.arp.com name_server=timber(129.221.2.1)}</pre>
			<pre>name_service=NIS+ {domain_name=west.arp.com. name_server=timber(129.221.2.1)}</pre>
		<pre>Options for DNS: {domain_name=domain_name name_server=ip_address,ip_address, ip_address (three maximum) search=domain_name.</pre>	<pre>name_service=DNS {domain_name=west.arp.com name_server=10.0.1.10,10.0.1.20 search=arp.com,east.arp.com}</pre>
		domain_name,domain_name, domain_name,domain_name, domain_name (six maximum, total length less than or equal to 250 characters)}	<b>Note</b> - Choose only one value for name_service. Include either, both, or neither of the domain_name and name_server keywords, as needed. If neither keyword is used, omit the curly braces {}.

#### TABLE 2-1 name\_service Keyword

\_

# Installing the Solaris 7 8/99 Operating Environment

To install the Solaris 7 8/99 operating environment, refer to the "Planning and Starting Your Installation" section of the *Solaris 7 (Intel Platform Edition) Installation Library* or the *Solaris 7 (SPARC Platform Edition) Installation Library*.

**Note** - If you want to add OS services to your server, you need to install Solstice<sup>TM</sup> AdminSuite<sup>TM</sup> 2.3 patch number 104468–06 or any subsequent revision of this patch. See "AdminSuite Patch Required for Installation or Upgrade" on page 15 for more information.

Installing the Solaris 7 8/99 Operating Environment 7

## How to Use Solaris 7 as an Install Server

If you use Solaris 7 as an install server, you need to modify the Solaris 7 /etc/nsswitch.conf file before you run add\_install\_client. The steps in the following procedure supplement the installation procedures in "Preparing to Install Solaris Software Over the Network" in the *Solaris Advanced Installation Guide*.

### 1. Back up your system.

Follow the instructions on backing up your system in "Preparing to Install Solaris Software Over the Network" in the *Solaris Advanced Installation Guide*.

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

hosts: xfn nis [NOTFOUND=return] files

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

```
hosts: nis [NOTFOUND=return] files
```

### 4. Install the Solaris 7 8/99 operating environment.

To install the Solaris 7 8/99 operating environment using Solaris 7 as an install server, see "Preparing to Install Solaris Software Over the Network" in the *Solaris Advanced Installation Guide* on the Solaris 7 Documentation CD.

# Upgrading to the Solaris 7 8/99 Operating Environment

This chapter provides additional information on how to upgrade to the Solaris 7 8/ 99 operating environment. For complete upgrade instructions, refer to the Solaris 7 (SPARC Platform Edition) Installation Library or the Solaris 7 (Intel Platform Edition) Installation Library.

Your current Solaris operating environment determines your upgrade procedure. Select from the following list the upgrade procedure that matches your current Solaris operating environment, then follow the upgrade procedures in that section.

- "Upgrading From the Solaris 2.5.1 or 2.6 Operating Environment" on page 10
- "Upgrading From the Solaris 7, 3/99, or 5/99 Operating Environment: No Patches" on page 10

Follow this upgrade procedure if you have not installed separate patches on your system.

 "Upgrading From the Solaris 7, 3/99, or 5/99 Operating Environment: Installed Patches" on page 11

Follow this upgrade procedure if you have installed separate patches on your system.

9

**Note -** Before upgrading to the Solaris 7 8/99 software release, read "DNS Configuration During System Identification" on page 6.

# Upgrading From the Solaris 2.5.1 or 2.6 Operating Environment

If you are running the Solaris 2.5.1 or 2.6 operating environment, see "Upgrading a System" in the *Solaris 7 (SPARC Platform Edition) Installation Library* or the *Solaris 7 (Intel Platform Edition) Installation Library* for instructions on how to upgrade to the Solaris 7 8/99 software release.

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

An example of this message is:

Doing pkgadd of SUNWolrte to /

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

Installation of SUNWolrte was successful...

**Note** - If you want to add OS services to your server, you need to install Solstice AdminSuite 2.3 patch number 104468–06 or any subsequent revision of this patch. See "AdminSuite Patch Required for Installation or Upgrade" on page 15 for more information.

# Upgrading From the Solaris 7, 3/99, or 5/99 Operating Environment: No Patches

If you are already running the Solaris 7, 3/99, or 5/99 operating environment and have not installed patches, refer to "Upgrading a System" in the *Solaris 7 (SPARC Platform Edition)* Installation Library or the Solaris 7 (Intel Platform Edition) Installation Library to upgrade to the Solaris 7 8/99 operating environment.

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

An example of this message is:

Doing pkgadd of SUNWolrte to /

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

Installation of SUNWolrte was successful...

**Note** - If you want to add OS services to your server, you need to install Solstice AdminSuite 2.3 patch number 104468–06 or any subsequent revision of this patch. See "AdminSuite Patch Required for Installation or Upgrade" on page 15 for more information.

# Upgrading From the Solaris 7, 3/99, or 5/99 Operating Environment: Installed Patches

If you are already running the Solaris 7, 3/99, or 5/99 operating environment and have installed patches, upgrading to the Solaris 7 8/99 operating environment will cause:

- Any patches supplied as part of the Solaris 7 8/99 operating environment to be reapplied to your system. You will not be able to back out these patches.
- Any patches previously installed on your system that are not included in the Solaris 7 8/99 operating environment to be removed.

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

If you have not installed patches on your Solaris 7, 3/99, or 5/99 system, see "Upgrading From the Solaris 7, 3/99, or 5/99 Operating Environment: No Patches" on page 10.

Upgrading to the Solaris 7 8/99 Operating Environment 11

# Analyzing the Patches

The Patch Analyzer performs an analysis on your system to determine which (if any) patches will be removed by upgrading to the Solaris 7 8/99 software release. The Patch Analyzer is available as a script to run manually and as part of the Interactive installation method.

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

After performing the analysis, refer to "Reviewing the Patch Analyzer Output" on page 13 for detailed information about the patch analysis results.

### Running the analyze\_patches Script

**Note** - To run the analyze\_patches script, the installed system and the Solaris 7 8/99 CD (or net image) must be accessible by the script either through an NFS<sup>TM</sup> mount or using locally mounted media.

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

# cd /cdrom/sol\_7\_899\_sparc/s0/Solaris\_2.7/Misc

• If the image is on locally mounted media on an x86-based system, type:

# cd /cdrom/sol\_7\_899\_x86/s2/Solaris\_2.7/Misc

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

# cd /NFS\_mount\_directory/Solaris\_2.7/Misc

2. Run the analyze\_patches script:

# ./analyze\_patches

The options listed in Table 3-1 can be used on the command line.

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

### **Reviewing the Patch Analyzer Output**

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

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

```
Patch 105644-03 will be removed.
Patch 105925 will be downgraded from -02 to -01.
Patch 105776-01 will be accumulated/obsoleted by patch 105181-05.
```

- If the Patch Analyzer program does not provide a list, no action will be taken against any patches previously installed on your system.
- 2. Decide if patch replacements and deletions are acceptable.
  - If the patch replacements and deletions by the Solaris 7 8/99 operating environment are acceptable, refer to "Upgrading a System" in the Solaris 7 (SPARC Platform Edition) Installation Library or the Solaris 7 (Intel Platform Edition) Installation Library to upgrade to the Solaris 7 8/99 operating environment.

Upgrading to the Solaris 7 8/99 Operating Environment 13

 If the patch replacements and deletions by the Solaris 7 8/99 operating environment are not acceptable, do not upgrade using the Solaris 7 8/99 Beta CD.

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

An example of this message is:

Doing pkgadd of SUNWolrte to /

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

Installation of SUNWolrte was successful...

**Note -** If you want to add OS services to your server, you need to install Solstice AdminSuite 2.3 patch number 104468–06 or any subsequent revision of this patch. See "AdminSuite Patch Required for Installation or Upgrade" on page 15 for more information.

# Identifying the Version of Your Solaris 7 8/99 Software

To identify the version of your Solaris 7 8/99 software:

# cat /etc/release

# **Adding Patches**

This chapter provides information on how to install the patch necessary for adding OS services to your server and how to upgrade clients after a server upgrade.

# AdminSuite Patch Required for Installation or Upgrade

This section supplements information in "Adding Server and Client Support Task Map" in the *System Administration Guide, Volume I* on the Solaris 7 Documentation CD.

When you install diskless clients from a server, you need to install Solstice AdminSuite 2.3 patch number 104468-06 or any subsequent revision of this patch. You will find the patch and installation instructions at http://access1.sun.com/private-cgi/patch2html?README.104468-11. If

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

If you are using a previously installed version of AutoClient to install autoclients, you must also install this patch.

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

/var/sadm/patch/.mu\_applied

This file is automatically created by the following MU releases:

■ Solaris 2.5.1: MU3, MU4, and MU5

15

- Solaris 2.6: MU1 and MU2
- Solaris 7: MU1 and MU2



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

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

# Upgrading Clients After a Server Upgrade

This section supplements information in "Upgrading a System" in the Solaris 7 (SPARC Platform Edition) Installation Library and the Solaris 7 (Intel Platform Edition) Installation Library.

After you upgrade a server, you need to apply the patches in the Patches directory on the Solaris 7 8/99 CD to the clients connected to that server.

For more information on adding patches to clients, see the man page patchadd(1M). For more information on server upgrades, see the man page server\_upgrade(1M).

# Administering and Uninstalling Software

This chapter describes the Solaris Product Registry tool.

**Note** - For the most up-to-date man pages, use the man command. The Solaris 7 8/99 man pages include new feature information not found in the *Solaris* 7 *Reference Manual AnswerBook*<sup>TM</sup>.

# Using the Solaris Product Registry

The Product Registry tool was new in the Solaris 7 3/99 software release.

This section supplements the contents of the *Solaris* 7 (Intel Platform Edition) Installation Library and the Solaris 7 (SPARC Platform Edition) Installation Library.

The Solaris Product Registry is a tool to help users manage installed software. Once Solaris is installed, Product Registry provides a list of all software installed using Solaris Web Start 2.0 or the Solaris package management commands. To view the Product Registry, type /usr/bin/prodreg at the command line.

The Product Registry enables you to:

- View a list of installed and registered software and some software attributes
- Uninstall software
- Browse for and launch an installer

For more information about Web Start installation, see the *Solaris* 7 (*Intel Platform Edition*) *Installation Library* or the *Solaris* 7 (*SPARC Platform Edition*) *Installation Library*.

17

## What Is in the Product Registry?

The Solaris Product Registry lists all software installed using Solaris Web Start 2.0 or the Solaris package management commands.

The main window, Figure 5–1, consists of three areas of information: installed, registered and removed software, standard attributes of the currently selected software, and customized attributes and attributes internal to the registered software.

-	Solaris Product Registry
Software Installed in So	alaris Registry:
System registry	Title:
	Version:
	Location
	Current Size:
	Since at Install:
	installed on:
	Installed from:
	More information:
	The Solaris Product Registry shows software installed on the system. To expand an area, dick on the arrow beside the title. To see more information about an item, dick on the item. Details about it will appear in this More Information box. To install software, click on New Install To uninstall software, select an item then click Uninstall
Naw	install

Figure 5-1 Solaris Product Registry Initial Configuration

To view the items in the Product Registry, click the triangle to the left of "System registry." Notice that the triangle changes from pointing to the right to pointing down. You can expand any item in the Registry whose triangle points to the right in this manner. You can collapse any item whose triangle is pointing down by clicking on the triangle. An item with a square to its left cannot be expanded or collapsed.

"Solaris 7 v2.7 (SunOS 5.7) [0]" under "Software Installed in Solaris Registry (see Figure 5–2) always contains two items: the configuration cluster you chose when installing Solaris and "additional system software." The configuration cluster is one of Core, End User, Developer, or Entire Distribution (on SPARC systems, you will also see Entire Distribution plus OEM support). The "additional system software" item contains Solaris products that are not part of the configuration cluster you chose. Additionally, "unclassified software" contains any package that you installed using the pkgadd command that is not a Solaris product or part of the configuration cluster.



Figure 5–2 Solaris Product Registry Expanded

### Product Registry Attributes Section

Product attributes appear above the "More Information:" box in the Product Registry window. For Web Start-installed product items, the Registry contains values for at least Title, Version, Location, and Installed on. Items in an expanded list under a product or cluster inherit the version information of the product. Click on an item to view its attribute values.

### Products That Have Been Removed

Sometimes an item appears in the Product Registry window but the corresponding software has been removed by using the pkgrm command. In this case, the message "Missing files in one or more components" appears under the "Installed from:" attribute (see Figure 5–3). You can either re-install the software using the pkgadd command or, using the Registry, you can remove it.

Administering and Uninstalling Software 19



Figure 5-3 Missing Files Message in Solaris Product Registry

# Viewing Registered Software, Uninstalling, and Launching an Installer

This section explains how to perform the following tasks:

- View a list of installed and registered software and some software attributes
- Uninstall software
- Browse for and launch an installer

## ▼ How to View Registered Software

You can use the Solaris Product Registry to view a list of installed and registered software. You can also view attributes of software items in the list.

# 1. If the Registry is not already running, start it by entering the following command:

/usr/bin/prodreg

The Registry main window appears, displaying the System Registry item. Click on the triangle to its left to view the list of installed and registered software. 2. If you wish to view software attributes, select the software by clicking its name in the software list.

The Registry displays attribute information for the selected software.

### ▼ How to Uninstall Software

1. If the Registry is not already running, start it by entering the following command:

/usr/bin/prodreg

The Registry main window appears, displaying the System Registry item. Click on the triangle to its left to view the list of installed and registered software. Most users need only enter the prodreg command to start the Registry.

- 2. On the Registry main window, select the software to uninstall by clicking its name in the software list.
- **3.** Read the software attributes to make sure this is the software you want to uninstall.
- 4. Click the Uninstall button at the bottom of the Registry main window.

## ▼ How to Launch an Installer From the Registry

**1.** If the Registry is not already running, start it by entering the following command:

/usr/bin/prodreg

Most users need only enter the prodreg command to start the Registry.

- 2. Click the New Install button at the bottom of the Registry main window. The Registry displays the Select Installer File Selection Box, which initially points to the /cdrom directory.
- 3. Use the Select Installer dialog to browse for the installer you want to launch.
- 4. When you find the installer you want to launch, click its name in the Files list.
- 5. To launch the installer, click OK.

Administering and Uninstalling Software 21