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## Solaris 7 Installation Supplement

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Part No: 806-1649-10  
November 1999

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# Preface

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The *Solaris 7 Installation Supplement* provides instructions on how to install or upgrade to the Solaris™ 7 11/99 operating environment and how to use new installation features in the Solaris 7 11/99, 8/99, 5/99, and 3/99 operating environments.

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## Related Books

This document 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* (printed document)
- *Solaris 7 (SPARC™ Platform Edition) Installation Library* (in print and on the Solaris 7 Documentation CD)
- *Solaris 7 (Intel Platform Edition) Installation Library* (in print and on the Solaris 7 Documentation CD)
- *Solaris Advanced Installation Guide* (on the Solaris 7 Documentation CD)
- *Solaris 7 11/99 (SPARC or Intel Platform Edition) Release Notes* (printed document)
- Solaris 7 Release Notes (SUNWrdm) on the Solaris CD

Solaris documentation is available on the Solaris 7 Documentation CD for the 11/99 release.

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.

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## Ordering Sun Documents

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

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

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## 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>.

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## 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 <code>ls -a</code> to list all files. <code>machine_name%</code> you have mail.
<b>AaBbCc123</b>	What you type, contrasted with on-screen computer output	<code>machine_name%</code> <b>su</b> Password:

TABLE P-1 Typographic Conventions (continued)

Typeface or Symbol	Meaning	Example
<i>AaBbCc123</i>	Command-line placeholder: replace with a real name or value	To delete a file, type <b>rm</b> <i>filename</i> .
<i>AaBbCc123</i>	Book titles, new words, or terms, or words to be emphasized.	Read Chapter 6 in <i>User's Guide</i> .  These are called <i>class</i> options. You must be <i>root</i> to do this.

## 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 11/99, 8/99, 5/99, and 3/99 releases.

TABLE 1-1 Solaris 7 Features

Feature	First Released in . . .	Description
Installation (These features are described in the <i>Solaris 7 Installation Supplement</i> .)		
AnswerBook2 ab2cd script updates	8/99	Updates to the ab2cd script enable 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	The Solaris Product Registry is a tool to manage installed software. It enables you to: <ul style="list-style-type: none"><li>■ View a list of installed and registered software and some software attributes</li><li>■ Uninstall software</li><li>■ Browse for and launch an installer</li></ul>
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 operating environment to the Solaris 7 11/99 operating environment. This analysis can be performed either at upgrade time or while the system is in production mode.

TABLE 1-1 Solaris 7 Features (continued)

Feature	First Released in . . .	Description
(Intel Platform Edition only) Added support for PAE mode	3/99	<p>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.</p> <p>This feature is described in the <i>Solaris 7 11/99 Release Notes</i>.</p>
System and Network Administration		
Universal Disk Format (UDF) file system	11/99	The UDF file system is the industry-standard format for storing information on optical media called digital versatile disc or digital video disc (DVD) that is both readable and re-writable.
(Intel Platform Edition only) PCI hot-plugging with <code>cfgadm</code> command	11/99	The <code>cfgadm</code> command is updated to provide PCI hot-plugging for supported PCI controllers on x86 systems.
Improved device configuration ( <code>devfsadm</code> )	11/99	The <code>devfsadm</code> command manages the special device files in the <code>/dev</code> and <code>/devices</code> directories and is updated to detect device configuration changes by any reconfiguration event.
(SPARC Platform Edition only) Inter-Domain Network (IDN)	11/99	<p>Inter-Domain Network (IDN) supports high-speed networking between Dynamic System Domains (DSDs). This enables DSDs to communicate with each other using standard networking interfaces, such as TCP/IP, without the use of cabling or special hardware.</p> <p>See your hardware manufacturer's documentation for information about IDN and to see if IDN supports your server.</p>
<code>coreadm</code>	8/99	The <code>coreadm</code> command provides improved core file management for Solaris system administrators.
Enhanced SCSI hot-plugging with the <code>cfgadm</code>	8/99	The <code>cfgadm</code> command now supports SCSI hot-plugging for supported SCSI hardware.
Migrating to BIND 8.1	8/99	This section updates Bind 8.1 in 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.

TABLE 1-1 Solaris 7 Features (continued)

Feature	First Released in . . .	Description
Remote console	5/99	New system console features, including the <code>consadm</code> 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, <code>dfratime</code> and <code>nodfratime</code> , 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 <code>syslog</code> logging facility.
(SPARC Platform Edition only) Improved handling of <code>cron</code> jobs on suspended systems	3/99	When you use Power Management™ software to suspend and resume a system, there is now a check on whether <code>cron</code> jobs were scheduled during the time the system was suspended. If there were, the first instance of a <code>cron</code> 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.)
Developer (These features are described in the <i>Solaris 7 Software Developer Supplement</i> .)		
(SPARC Platform Edition) Dynamic reconfiguration support for SCSI HBA drivers	11/99	In this release, dynamic reconfiguration (DR) support has been updated for SCSI devices.  See your hardware manufacturer's documentation to see if your server supports DR.
PCI hot-plugging	11/99	PCI hot-plugging is updated to include information on writing device drivers for x86 servers.
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 7 64-bit Developer's Guide</i> .

TABLE 1-1 Solaris 7 Features (continued)

Feature	First Released in . . .	Description
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 Development Kit (These features are described in the <i>Solaris 7 Software Developer Supplement</i> .)		
JDK 1.1.7_08	11/99	<p>The JDK™ 1.1.7_08 includes:</p> <ul style="list-style-type: none"> <li>■ Enhanced Eurocurrency support</li> <li>■ Large file support</li> <li>■ High-performance JIT compiler</li> </ul> <p>A Java™ Runtime Environment (JRE) corresponding to the latest version of the JDK is available for download from the Web.</p> <p><a href="http://www.sun.com/solaris/java">http://www.sun.com/solaris/java</a></p>
Java 2 SDK 1.2.1_03	11/99	<p>The Java 2 SDK 1.2.1_03 is the first Solaris release of Java technology based on Java 2. It includes:</p> <ul style="list-style-type: none"> <li>■ Substantially increased scalability and performance</li> <li>■ Improved class libraries, including the new Java 2 APIs</li> <li>■ Enhanced memory management system</li> <li>■ High-performing, scalable Java Virtual Machine (JVM)</li> <li>■ Fast Java thread synchronization</li> <li>■ Enhanced diagnostics with the heap inspection tool which finds memory leaks in programs</li> <li>■ Improved performance with JIT compiler</li> </ul>
Desktop User (These features are described in the <i>Solaris 7 User Supplement</i> .)		

**TABLE 1-1** Solaris 7 Features *(continued)*

<b>Feature</b>	<b>First Released in . . .</b>	<b>Description</b>
Personal Digital Assistant (PDA) synchronization	11/99	PDA synchronization enables data to be synchronized from Sun applications, such as Calendar Manager, with data in a similar application on your PDA. Also, applications and databases can be installed from your workstation or server to your PDA.
Netscape™ application launcher	11/99	<p>The Desktop-Apps folder window has four new icons:</p> <ul style="list-style-type: none"> <li>■ Netscape</li> <li>■ Netscape Composer</li> <li>■ Netscape Mail</li> <li>■ Netscape News</li> </ul> <p>.</p>



## Installing the Solaris 7 11/99 Operating Environment

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This chapter provides information on these topics:

- “Reading Installation Documentation Online” on page 8
- “DNS Configuration During System Identification” on page 8
- “Installing the Solaris 7 11/99 Operating Environment” on page 10
- “How to Use Solaris 7 as an Install Server” on page 10
- “Identifying the Version of Your Solaris 7 11/99 Software” on page 11

For complete Solaris 7 11/99 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*.

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

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**Note** - For the most up-to-date man pages, use the `man` command. The Solaris 7 11/99 man pages include new feature information not found in the *Solaris 7 Reference Manual Collection*.

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## Reading Installation Documentation Online

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

The `ab2cd` script, located on the Solaris 7 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 7 Documentation CD.

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## 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. 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 using 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 are 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 `sysidcfg` 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.

**TABLE 2-1** `name_service` Keyword

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

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# Installing the Solaris 7 11/99 Operating Environment

To install the Solaris 7 11/99 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*.

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**Note** - If you are running Solstice™ AdminSuite™ 2.3 software and you want to add OS services to your server, you need to install Solstice AdminSuite 2.3 patch number 104468-11 (SPARC) or 104469-11 (Intel) or any subsequent revision of this patch. See “AdminSuite Patch Required for Installation or Upgrade” on page 19 for more information.

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## ▼ 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 *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 *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 11/99 operating environment.**

To install the Solaris 7 11/99 operating environment using Solaris 7 as an install server, see “Preparing to Install Solaris Software Over the Network” in *Solaris Advanced Installation Guide*.

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# Identifying the Version of Your Solaris 7 11/99 Software

To identify the version of your Solaris 7 11/99 software:

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



## Upgrading to the Solaris 7 11/99 Operating Environment

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This chapter provides additional information on how to upgrade to the Solaris 7 11/99 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.

- “Upgrading From the Solaris 2.5.1 or 2.6 Operating Environment” on page 14
- “Upgrading From the Solaris 7, 3/99, 5/99 or 8/99 Operating Environment: No Patches” on page 14

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

- “Upgrading From the Solaris 7, 3/99, 5/99, 8/99 Operating Environment: Installed Patches” on page 15

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

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**Note** - Before upgrading to the Solaris 7 11/99 software release, read “DNS Configuration During System Identification” on page 8.

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

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## 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 11/99 software release.

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**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 are running Solstice AdminSuite 2.3 software and you want to add OS services to your server, you need to install Solstice AdminSuite 2.3 patch: number 104468-11 (SPARC) or 104469-11 (Intel) or any subsequent revision of this patch. See “AdminSuite Patch Required for Installation or Upgrade” on page 19 for more information.

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## Upgrading From the Solaris 7, 3/99, 5/99 or 8/99 Operating Environment: No Patches

If you are already running the Solaris 7, 3/99, 5/99, or 8/99 operating environment and have not installed individual 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 11/99 operating environment.

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**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 are running Solstice AdminSuite 2.3 software and you want to add OS services to your server, you need to install Solstice AdminSuite 2.3 patch: number 104468-11 (SPARC) or 104469-11 (Intel) or any subsequent revision of this patch. See “AdminSuite Patch Required for Installation or Upgrade” on page 19 for more information.

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## Upgrading From the Solaris 7, 3/99, 5/99, 8/99 Operating Environment: Installed Patches

If you are already running the Solaris 7, 3/99, 5/99, or 8/99 operating environment and have installed individual patches, upgrading to the Solaris 7 11/99 operating environment will cause:

- Any patches supplied as part of the Solaris 7 11/99 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 11/99 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, 5/99, 8/99 system, see “Upgrading From the Solaris 7, 3/99, 5/99 or 8/99 Operating Environment: No Patches” on page 14.

# 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 11/99 operating environment. The Patch Analyzer is available as a script to run manually and as part of the Interactive installation method.

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

After performing the analysis, refer to “Reviewing the Patch Analyzer Output” on page 17 for detailed information about the patch analysis results.

## Running the `analyze_patches` Script

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**Note** - To run the `analyze_patches` script, the installed system and the Solaris 7 11/99 CD (or net image) must be accessible by the script either through an NFS™ mount or by using locally mounted media.

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### 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_1199_sparc/s0/Solaris_2.7/Misc
```

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

```
# cd /cdrom/sol_7_1199_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.



TABLE 3-1 Command-Line Options for analyze\_patches

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

## Reviewing the Patch Analyzer Output

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

### 1. Review the output of the `analyze_patches` script.

- The Patch Analyzer provides a list of patches that will be removed, downgraded, accumulated, or obsoleted by other patches. Patch accumulations are similar to patch upgrades. The accumulated patch is removed and its fixes are delivered by a new patch. Messages like 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 11/99 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 11/99 operating environment.

- If the patch replacements and deletions by the Solaris 7 11/99 operating environment are not acceptable, do not upgrade using the Solaris 7 11/99 CD. You may use the Solaris 7 MU4 CD and Solaris 7 Maintenance Update 4 Release Notes to install the patches on your Solaris 7 system.

---

**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 are running Solstice AdminSuite 2.3 software and you want to add OS services to your server, you need to install Solstice AdminSuite 2.3 patch: number 104468-11 (SPARC) or 104469-11 (Intel) or any subsequent revision of this patch. See “AdminSuite Patch Required for Installation or Upgrade” on page 19 for more information.

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## Adding Patches

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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 “Adding Server and Client Support Task Map” in *System Administration Guide, Volume I* on the Solaris 7 Documentation CD.

When you install diskless clients or Solstice AutoClient™ systems from a server running Solstice AdminSuite 2.3 software, you need to install Solstice AdminSuite 2.3 patch number 104468-11 (SPARC) or 104469-11 (Intel) or any subsequent revision of this patch. You will find the patch and installation instructions

- For SPARC:  
`http://access1.sun.com/private-cgi/patch2html?README.104468-11`
- For Intel:  
`http://access1.sun.com/private-cgi/patch2html?README.104469-11`

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

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

```
/var/sadm/patch/.mu_applied
```

This file is automatically created by the following Maintenance Update releases:

- Solaris 2.5.1: MU3, MU4, and MU5
- Solaris 2.6: MU1 and MU2
- Solaris 7: MU1, MU2, MU3, and MU4



---

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

---

---

## Upgrading Clients After a Server Upgrade

This section supplements “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 11/99 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

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This chapter describes the Solaris Product Registry tool.

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**Note** - For the most up-to-date man pages, use the `man` command. The Solaris 7 11/99 man pages include new feature information not found in the *Solaris 7 Reference Manual AnswerBook™*.

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## 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*.

# 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.



*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.

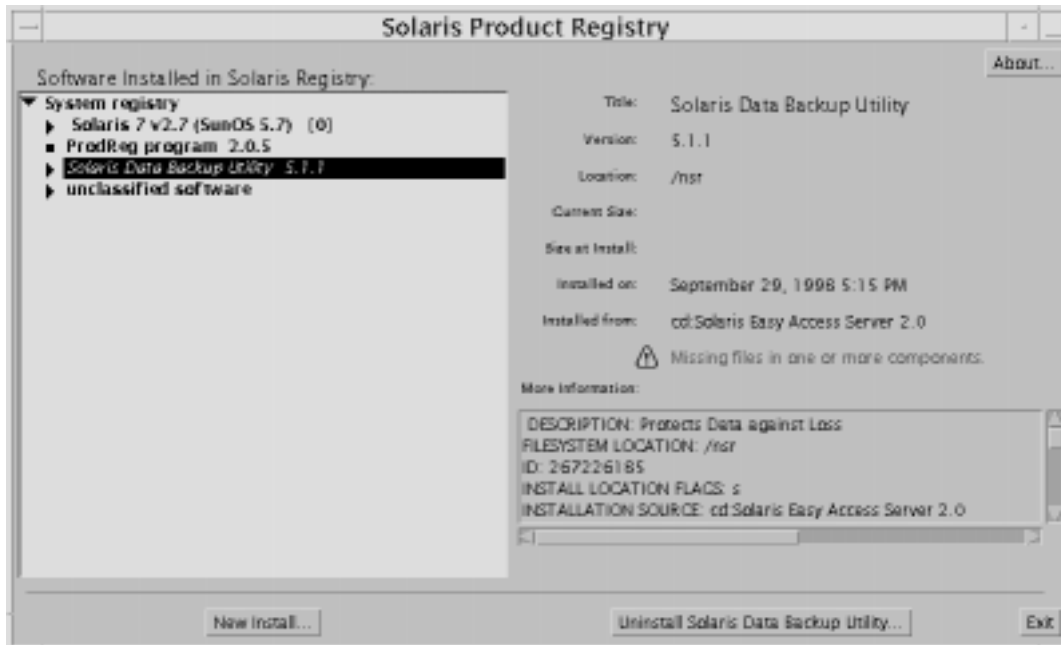


Figure 5-3 Missing Files Message in Solaris Product Registry

## 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.**