Solaris 8 Admin Pack Installation Guide

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

Part Number 806-3620
February 2000

Copyright 2000 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, AnswerBook, AnswerBook2, Java, Solstice, Solaris AdminSuite, Solaris Management Console, Sun Enterprise Authentication Mechanism, Solstice Internet Mail Server, Solstice DiskSuite, Sun WebServer, SunScreen, Solstice NFS Client, Solstice AutoClient, 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. Netscape is a trademark or registered trademark of Netscape Communications Corporation.

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

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

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

Copyright 2000 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, AnswerBook, AnswerBook2, Java, Solstice, Solaris AdminSuite, Solaris Management Console, Sun Enterprise Authentication Mechanism, Solstice Internet Mail Server, Solstice DiskSuite, Sun WebServer, SunScreen, Solstice NFS Client, Solstice AutoClient, 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.Netscape est une marque de Netscape Communications Corporation.

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

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

Contents

Preface 7

1. Introducing the Solaris 8 Admin Pack 11

Products in the Solaris 8 Admin Pack 11

Products In SEAS 3.0 12

Licensing 13

2. Preparing Your Solaris 8 Admin Pack Installation 15

Uninstall AdminSuite 3.0 15

Hardware and Software Requirements 15

Increasing Disk Space 16

Determining Current Disk Space Usage 17

Removing Unwanted Applications 17

3. Installing the Solaris 8 Admin Pack Products 19

Installing Admin Pack with the Installation Wizard 19

▼ How to Install Solaris 8 Admin Pack from the Product CD 20

▼ How to Install the Solaris 8 Admin Pack Over the Network 21

Restarting or Rebooting the System After Installation 22

▼ How to Reboot the System 22

Starting Applications From the SMC 23

Examining Log Files 23

Installation Log Files 23

Uninstallation Log Files 23

Performing Client Software Installations 24

Installing Admin Pack Clients Over Your Network 24

▼ How To Install Admin Pack Clients Over Your Network 24

Installing the AdminSuite Client 24

▼ How to Install the AdminSuite Client 25

▼ How to Run the AdminSuite Console 25

Alternative Installation Methods 25

Installing Admin Pack Products Without Web Start 26

▼ How to Install Admin Pack Products Without Web Start 26

4. Installing the Solaris 8 Admin Pack Documentation 27

The Solaris 8 Admin Pack Documentation 27

Installing the Answerbook2 Server 29

▼ How to Run the Answerbook2 Server From the Admin Pack Documentation CD 29

▼ How to Install the AnswerBook2 Documentation Server 30

▼ How to Install the Answerbook2 Documentation Server Using the `pkgadd` Command 31

Installing the Solaris 8 Admin Pack Collections 32

Registering an Answerbook2 Document Server 32

▼ How to Register an AnswerBook2 Document Server 33

Using the AnswerBook2 Server 33

5. Configuring the Solaris 8 Admin Products 35

Starting the Solaris Management Console 35

▼ How to Start the Solaris Management Console 35

Admin Pack Products in the Solaris Management Console 36

Starting Admin Pack Products from the SMC 37

Configuring Admin Pack Products 37

Configuring PPP 37

▼ How to Configure PPP 3.0.1 38

Configuring Sun Enterprise Authentication Mechanism 38

6. Troubleshooting 41

Contacting Customer Support 41

Troubleshooting AdminSuite 3.0.1 Client Installations 41

7. Managing Solaris 8 Admin Pack Products From the Registry 43

What Is in the Registry? 43

Starting the Registry 44

Installing Products From the Registry 44

▼ How to Install an Admin Pack Product From the Registry 44

Uninstalling Products From the Registry 45

▼ How to Uninstall a Product From the Registry 45

A. Available Solaris 8 Admin Pack Packages 47

Installing Admin Pack Products Using the `pkgadd` Command 47

Packages Available With Admin Pack Products 48

B. Solaris 8 Admin Pack Product Compatibility 49

Product Compatibility 49

Preface

The *Solaris 8 Admin Pack Installation Guide* provides you with information and instructions for installing and configuring the products consolidated in Solaris™ 8 Admin Pack. It is available in HTML format and as a PostScript™ and PDF file on the Solaris 8 Admin Pack product CD. On the Admin Pack Documentation CD, it is available as an AnswerBook2™ document.

Who Should Use This Book

This guide is for system administrators responsible for installing and managing the Solaris 8 Admin Pack products.

How This Book Is Organized

Chapter 1 provides a summary description of the products consolidated in the Admin Pack.

Chapter 2 provides information on pre-installation tasks and product updates.

Chapter 3 describes the installation of the Admin Pack products.

Chapter 4 describes the installation of the SEAS documentation set.

Chapter 5 provides configuration information for the SEAS products.

Chapter 6 provides troubleshooting information pertaining to installation.

Chapter 7 provides details for installing and uninstalling the Admin Pack using the Solaris Registry.

Appendix A lists the individual Admin Pack packages that can be installed using the `pkgadd` command.

Appendix B charts the compatibility among the Admin Pack products.

Related Books

See Table 4–1 for a complete list of books that are supplied with Solaris 8 Admin Pack.

Ordering Sun Documents

Fatbrain.com, an Internet professional bookstore, stocks select product documentation from Sun Microsystems, Inc.

For a list of documents and how to order them, visit the Sun Documentation Center on Fatbrain.com at `http://www1.fatbrain.com/documentation/sun`.

Accessing Sun Documentation Online

The docs.sun.com[SM] 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%` **`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 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	`#`

CHAPTER 1

Introducing the Solaris 8 Admin Pack

The products in the Solaris 8 Admin Pack are compatible with the Solaris 8 operating environment. The Solaris Easy Access Server (SEAS) 3.0 product includes versions of these products that run in the Solaris 2.6 and Solaris 7 operating environments. The Solaris 8 Admin Pack consolidates separately released products to provide a complete set of application services. All Admin Pack components are managed by the Solaris Management Console (SMC). The Admin Pack extends the Solaris operating environment by including networking software that connects PC networks to the Solaris environment and software that makes it easier for administrators familiar with PC systems to manage the Solaris environment.

This chapter briefly describes the following.

- "Products in the Solaris 8 Admin Pack" on page 11
- "Products In SEAS 3.0" on page 12
- "Licensing" on page 13

Products in the Solaris 8 Admin Pack

The Solaris 8 Admin Pack is a consolidation of the individual products described in the following table.

TABLE 1–1 Solaris 8 Admin Pack Products

Product	Product Description
Solaris™ AdminSuite™ 3.0.1	A software product that enables you to perform user and host management tasks.
Solstice™ PPP 3.0.1	A communications protocol providing extended Internet connectivity for Solaris and Microsoft Windows systems. With Point-to-Point Protocol (PPP), a Solaris system acts as an Internet router and supports all IP applications transparently over both leased lines and dial-up connections.
Solaris Management Console™ 1.0.1 (SMC)	A Java™-based management tool for the administration of Solaris servers.
SMC Administration Wizards	Configuration wizards for routing, changing the root password, DNS client and DNS server configurations, and network configuration shutdown.
Sun™ Enterprise Authentication Mechanism™ 1.0.1 (SEAM)	A client/server architecture that provides secure transactions over networks. In addition to strong authentication, it provides data privacy and integrity, as well as single sign-on capabilities. SEAM is based on the Kerberos V5 network authentication protocol.
AnswerBook2 1.4.2	Sun's online documentation system. It uses a Web browser interface that lets you view and print a variety of Solaris Answerbook™ book collections and man pages.

Products In SEAS 3.0

The following products are part of SEAS 3.0 but are not included in the Solaris 8 Admin Pack.

- Solaris Print Manager (Integrated into Solaris 8)
- Solaris WBEM Services (Integrated into Solaris 8)
- Sun WBEM SDK (Integrated into Sun Developer Connection - Developer Essentials)
- Netscape Communicator™ (Integrated into Solaris 8)
- Java Development Kit (Integrated into Solaris 8)
- SolsticeDiskSuite™ (In Early Access directory on Solaris 8 CD)
- Sun Directory Services (Not supported on Solaris 8)

- Sun WebServer™ (Not supported on Solaris 8)
- Solaris PC NetLink (SunLink Server) (Not supported on Solaris 8)
- Solstice Internet Mail Server™ (Not supported on Solaris 8)

The following products were included in earlier Solaris Easy Access Server collections but are not part of the SEAS 3.0 collection. Like SEAS 3.0, the earlier versions of SEAS are not supported in the Solaris 8 operating environment.

- SunScreen™ SKIP
- Solstice NFS™ Client
- Java IDL
- Solstice AutoClient™.
- Solaris Data Backup Utility

Licensing

The Solaris 8 Admin Pack products are subject to the terms of the Binary Code License included in the Solaris 8 Admin Pack package.

CHAPTER 2

Preparing Your Solaris 8 Admin Pack Installation

This chapter describes the system requirements, and how to prepare for installing the Solaris 8 Admin Pack products.

- "Uninstall AdminSuite 3.0" on page 15
- "Hardware and Software Requirements" on page 15
- "Increasing Disk Space" on page 16

Uninstall AdminSuite 3.0

Before installing AdminSuite 3.0.1 from the Solaris 8 Admin Pack CD, you must remove the previous version, AdminSuite 3.0. See "Removing Unwanted Applications" on page 17.

Hardware and Software Requirements

The following lists the system requirements necessary for you to install the Solaris 8 Admin Pack and the AdminSuite client.

- A CD-ROM drive attached to the system where you plan to install the Admin Pack products.
- The system on which you install the Solaris 8 Admin Pack products must run the Solaris 8 operating environment. Many of the products also run on earlier versions

of the Solaris environment (as mentioned in their online product documentation) but this capability is not supported as part of the Solaris 8 Admin Pack. Solaris Easy Access Server 3.0 supports the Solaris 2.6 and Solaris 7 operating environments.

Note - If you attempt to install either the product CD or the Documentation CD on a non-Solaris 8 system using Web Start, a message will indicate that the installation is not valid. You will not be able to proceed. If you use the `pkgadd` command to install, the installation will be completed but the software will not operate properly.

- PCs running Microsoft Windows 95, Windows 98, or Windows NT for installing SEAS client software.

Table 2–1 lists the disk space the Solaris 8 Admin Pack requires in each disk partition. Note that disk space requirements are approximate and may vary. The requirements in Table 2–1 include the space needed to install the components on both the product CD and the Documentation CD.

TABLE 2–1 Disk Space Requirements by Directory

Directory	Total Required Disk Space (in megabytes)
`/`	6.85
`/opt`	6.63
`/usr`	51.93
`/etc`	0.1
Minimum Total disk space	65.51

Increasing Disk Space

Although the Solaris Web Start wizard checks the available disk space based on your installation selections, make sure you have sufficient disk space available before you install the Admin Pack products. Use Table 2–1 to determine your disk space needs.

Determining Current Disk Space Usage

When you suspect insufficient disk space in the directories in which Admin Pack product files are installed, you may find the following commands useful in determining the current disk space usage.

- Display Filesystem Statistics: `df -k` *directory*

  The command `df -k` *directory* displays the amount of used and available disk space for each of the mounted file systems. The example indicates that 101061 kilobytes are available in `/opt`.

  For example, `df -k /opt` could display something like the following:

```
Filesystem            kbytes    used   avail capacity  Mounted on
/dev/dsk/c0t0d0s5     123455   10049  101061    10%    /opt
```

- Report on Disk Usage: `du` *directory*

  The command `du` *directory* reports the amount of disk space used by all files and subdirectories underneath one or more specified directories, listed on a per subdirectory basis. Disk usage is reported in blocks. The numbers on the left indicate the number of blocks of disk space occupied by the directory. In our example, the `/opt/SUNWits` directory occupies 18456 blocks of disk space.

  For example, `du /opt` could display something like the following:

```
18456   /opt/SUNWits
2       /opt/SUNWleo/include
4       /opt/SUNWleo
```

Removing Unwanted Applications

Admin Pack products can be removed using one of the following methods:

- The Product Registry. See "Uninstalling Using the Product Registry" on page 18 for more information.
- The `jre` command. See "Uninstalling Using the `jre` Command" on page 18 for more information.
- The `pkgrm` command. See "Uninstalling Using the `pkgrm` Command" on page 18 for more information.

Uninstalling Using the Product Registry

Use the Solaris Product Registry to uninstall applications you no longer need or use to free necessary disk space. See "Uninstalling Products From the Registry" on page 45 for step-by-step instructions. You will find the name of the uninstall program in the right panel of the Product Registry after selecting the application to be removed in the left panel.

Uninstalling Using the `jre` Command

To remove an Admin Pack application using the `jre` command, you can run the uninstall program from the application.

For example, to remove AdminSuite, you would type the following command at the superuser system prompt:

```
jre ---cp /var/sadm/prod/com.sun.AdminSuite_3_0/607900099
uninstall_AdminSuite_3.0.class
```

Uninstalling Using the `pkgrm` Command

You must be logged in as root and you must know the name of the packages that make up the application. For example, to remove AdminSuite, which consists of the packages `SUNWseamj` and `SUNWseams`, using the `pkgrm` command, you would type the following command:

```
pkgrm SUNWseamj SUNWseams
```

To find the name of the application packages, use the following command and then use the `pkgrm` command as indicated above.

`pkginfo | grep` *application_name*

CHAPTER 3

Installing the Solaris 8 Admin Pack Products

This chapter contains instructions for installing the Solaris 8 Admin Pack.

- "Installing Admin Pack with the Installation Wizard" on page 19 guides you in installing the Admin Pack using Solaris Web Start.
- "Performing Client Software Installations" on page 24 provides instructions for installing the client portion of Solaris AdminSuite on PCs running on the Microsoft Windows 95, Windows 98, and Windows NT 4.0 platforms.
- "Alternative Installation Methods" on page 25 and "Installing Admin Pack Products Without Web Start" on page 26 provide information on alternative methods for installing the Solaris 8 Admin Pack.

Note - Before installing the Admin Pack, carefully read Chapter 2 and this chapter to ensure that all installation requirements, including pre-install product updates, have been met and that you have collected the information you may need to supply during the installation.

Installing Admin Pack with the Installation Wizard

The easiest way to install the Solaris 8 Admin Pack products is to use the Solaris Web Start wizard, available on the product CD. You need the root password to proceed with Web Start installation.

Note - When you install the SMC with the Admin Pack, you will be able to launch any of the Admin Pack products and special configuration wizards. If you do not install the SMC during the Admin Pack installation and change your mind during the current installation, you must first complete the current installation. Then restart the Web Start installation wizard and choose Custom installation, which will give you the option to select the SMC.

▼ How to Install Solaris 8 Admin Pack from the Product CD

Note - If you plan to install AdminSuite, be prepared to enter the user name of a primary administrator.

1. **Insert the Solaris 8 Admin Pack product CD in the CD-ROM drive.**
   A File Manager window opens, listing folders and files included on the CD.

2. **Double-click the `README.html` file to display installation guidelines and access to online versions of this *Installation Guide*.**

3. **Double-click the `installer` file to open the Web Start installation window.**
   If an Action: Run window opens, click OK to continue. An Installer Console window opens and displays installation events and the location of installation log files.

4. **If prompted, enter the system's root password and click Log in.**
   The Web Start Welcome screen opens.

5. **Click Next in the Welcome screen and choose either Default or Custom Installation.**
   A default installation installs all the Admin Pack products.
   Click Next to move to the next page or Previous to return to the previous page.
   The Web Start wizard detects any previous versions of the selected products and automatically sets the installation option to "No install" which you can override.

6. **Verify that the selected products will be installed in the desired directories.**
   The Web Start wizard displays the directories in which the selected products will be installed. If you do not have sufficient disk space, the wizard informs you of which directory has insufficient space. Your immediate option is to install fewer

products now. Alternatively, you can free disk space and continue the installation. See the `README` for guidelines on determining and freeing disk space.

7. **At the end of the installation, a message indicates the success or failure to install any of the products.**

   See "Examining Log Files" on page 23 for information on locating and examining the installation log files. See also Chapter 6 for more troubleshooting information.

8. **(Optional) Install the Solaris 8 Admin Pack documentation set.**

   See Chapter 4 for step-by-step instructions.

9. **(Optional) Install the client portions on PCs running the Microsoft Windows 95, Windows 98, and Windows NT 4.0 platforms.**

   See "Performing Client Software Installations" on page 24 for step-by-step instructions.

If you chose to install SEAM 1.0, you will be prompted to reboot your system. See "Restarting or Rebooting the System After Installation" on page 22 for step-by-step instructions.

▼ How to Install the Solaris 8 Admin Pack Over the Network

1. **Open the File Manager window.**

2. **From the File menu, select Go To.**

3. **Enter the path to where the Admin Pack files have been copied.**

   For example: `/net/bigmountain/files1/AdminPack8`

4. **Double-click the `installer` file to open the Web Start installation window.**

5. **Follow the on-screen installation instructions.**

   See also "How to Install Solaris 8 Admin Pack from the Product CD" on page 20 for further instructions.

   For instructions on installing the AdminSuite client software on PCs, see "Installing Admin Pack Clients Over Your Network" on page 24.

When you have completed the installation of the Admin Pack, see the sections listed below for further instructions.

- If you want to perform user and host management tasks from the AdminSuite console on a PC running Windows NT or Windows 95, you must install the client portion on the PC. See "Installing the AdminSuite Client" on page 24 for step-by-step instructions.
- To learn if the products you have installed have any recommended or required post-installation patches, see the *Solaris 8 Admin Pack Release Notes*.
- If you choose to install Solaris Enterprise Authentication Mechanism 1.0.1 (SEAM), you will need to reboot your system after installing the Admin Pack.

Restarting or Rebooting the System After Installation

At the end of the Admin Pack installation, you may be prompted to reboot if you installed SEAM 1.0.1. When you reboot now, the system closes all open files and then reboots the system automatically. If you reboot later, use the following rebooting procedure. The rebooting commands are typed at the `ok` SPARC™ system prompt. If the prompt is **>**, type `n` to display `ok`. You must be root to execute a reboot. If necessary, in a terminal window at the system prompt, type `su` and then enter the root password.

▼ How to Reboot the System

1. **In a terminal window, type the following command:**

```
halt
```

2. **At the `ok` prompt, type the following command:**

```
boot
```

   When the reboot is complete, the login screen opens.

3. **Log in as usual.**

Starting Applications From the SMC

If you installed the Solaris Management Console (SMC), the Web Start installation wizard adds the SMC icon to the Sys_Admin folder, accessible from the Applications Manager window.

After launching the SMC, the Solaris Management Console window opens. The default display shows the available application folders in the left window pane. Double-click a folder to reveal the applications in the right window pane.

To start an application, double-click its icon in the right window pane.

Examining Log Files

Installation and uninstallation process information is recorded in log files. There is a log file for the Solaris 8 Admin Pack and for each individual product consolidated under the Admin Pack.

The Admin Pack installation log file, `Solaris_8_Admin_Pack_install.XMMDDHHMM`, provides feedback on the installation of the Admin Pack packages. The individual product log files provide information on the installation of the individual products.

Use your favorite text editor to read the Admin Pack log files.

Installation Log Files

Consult the individual installation log files located in `/var/sadm/install/logs/`.

The installation log files follow this naming convention: *product_name*`_install.`*BMMDDHHMM*.

For example, `AdminSuite_3.0_install.B12210145` points to the AdminSuite log file pertaining to an installation that took place on December 21 at 1:45 P.M.

Uninstallation Log Files

The uninstallation log files are located with the installation log files. The uninstallation log files follow this naming convention: *product_name*`_uninstall.`*BMMDDHHMM*. For example:

`AdminSuite_3.0_uninstall.B12210245` points to the AdminSuite log file pertaining to an uninstallation that took place on December 21 at 2:45 P.M.

Performing Client Software Installations

AdminSuite 3.0.1 provides client software that can be installed on PCs running Microsoft Windows 95, Windows 98, and Windows NT 4.0. Instructions for installing AdminSuite 3.0.1 client software are provided in "Installing the AdminSuite Client" on page 24.

Installing Admin Pack Clients Over Your Network

When the contents of the Solaris 8 Admin Pack software has been copied to a Solaris server, you can perform AdminSuite client installations over your network rather than from the Admin Pack product CD.

▼ How To Install Admin Pack Clients Over Your Network

1. **On the PC desktop, double-click Network Neighborhood.**
2. **Select the server on which the Admin Pack software is available.**
3. **Find the folder that contains the Installer icon.**
4. **Double-click the Installer icon to start the installation wizard.**

Installing the AdminSuite Client

The AdminSuite Client is that portion of the AdminSuite 3.0.1 software that enables you to run the AdminSuite console on a PC running Microsoft Windows NT 4.0 or Windows 95 and Windows 98. The AdminSuite Client enables you to perform user and host management tasks, such as adding users and groups, and managing NIS and NIS+ domains.

You can install the AdminSuite Client from a CD or over the network. Before starting the AdminSuite Client installation, you need to know the name of the AdminSuite server as you will be prompted for it. Currently, the AdminSuite Client will not run

from the CD directly. It must be installed so that various property files can be created and adjusted.

▼ How to Install the AdminSuite Client

1. **Insert the Solaris 8 Admin Pack product CD in the CD-ROM drive of the PC.**
   The Admin Pack installation screen opens automatically. If it does not open, run the `Setup.exe` file, which is located in the `components/AdminSuite_3.0/win32` directory on the Admin Pack product CD.

2. **Follow the instructions on the installation screens.**

▼ How to Run the AdminSuite Console

1. **Use the Microsoft Windows Start button to open the Sun program group, and select AdminSuite.**

2. **When prompted, type the name of the AdminSuite server, an existing user name and password, and press Return.**

Alternative Installation Methods

The easiest way to install the Admin Pack products is to use Solaris Web Start on the product CD. However, if you are familiar with the UNIX® operating system environment, you may want to use one of the following alternative installation methods.

- Using the `installer -nodisplay` command to install the Admin Pack or individual products without the Web Start wizard. See "Installing Admin Pack Products Without Web Start" on page 26 for step-by-step instructions.
- Using Solaris Web Start on the Solaris 8 product CD.
- Launching an installer using the Registry. See "Installing Products From the Registry" on page 44 for step-by-step instructions.
- Using the `pkgadd` command (for experienced UNIX administrators only.) See "Installing Admin Pack Products Using the `pkgadd` Command" on page 47 for more information on available packages.

Be sure to install any recommended or required patches. Refer to the *Solaris 8 Admin Pack Release Notes* for patches you may need to install.

Installing Admin Pack Products Without Web Start

The installation program at the top level of the Admin Pack product CD installs all the Admin Pack products. In addition, each product has its own directory on the CD from which you can install individual products. Running one of the installer programs as `installer -nodisplay` in a terminal window installs the corresponding product without asking questions, using all default choices. See "Packages Available With Admin Pack Products" on page 48 for a list of the available product packages.

Be sure to install any recommended or required patches listed in the *Solaris 8 Admin Pack Release Notes*.

▼ How to Install Admin Pack Products Without Web Start

1. **Insert the Admin Pack product CD in the CD-ROM drive.**

   A File Manager window opens to display files included on the CD. One of these files is named `installer`. There is an installer file for installing the Admin Pack and one for installing each individual Admin Pack product.

2. **Open a terminal window and, if necessary, become root.**

3. **In the terminal window, change directory to point to the directory on the Admin Pack product CD that contains the installer program for the product you want to install.**

4. **In the terminal window, type the command:**

   ```
   installer -nodisplay
   ```

   This will install the product with its default values.

CHAPTER 4

Installing the Solaris 8 Admin Pack Documentation

This chapter provides information on the documentation collections provided with the Solaris 8 Admin Pack and instructions for installing the AnswerBook2™ documentation server.

- "The Solaris 8 Admin Pack Documentation" on page 27
- "Installing the Answerbook2 Server" on page 29
- "Installing the Solaris 8 Admin Pack Collections" on page 32
- "Registering an Answerbook2 Document Server" on page 32
- "Using the AnswerBook2 Server" on page 33

Note - See the *Solaris 8 Admin Pack Release Notes* for late-breaking information related to the Admin Pack documentation.

The Solaris 8 Admin Pack Documentation

All Admin Pack documentation is available on the Solaris 8 Admin Pack Documentation CD, except for online help that is integrated into the application software, the *Release Notes*, which are available on the Solaris 8 Admin Pack product CD, and the Start Here card and Product List, both of which are printed. The documentation on the Documentation CD is in AnswerBook2 format. Documentation can be installed using Solaris Web Start or the `pkgadd` command.

Table 4–1 lists the AnswerBook2 collections on the Documentation CD.

TABLE 4–1 Admin Pack Documentation Set

Collections	Book Title
Solaris 8 Admin Pack	Installation Guide
Solstice PPP 3.0.1	Installing Solstice PPP 3.0.1
	PPP Administration Guide
	PPP User's Guide
Sun Enterprise Authentication Mechanism 1.0.1	Sun Enterprise Authentication Mechanism Guide
	Installation and Release Notes
AnswerBook2	Administration Guide
	Reference Manual

Table 4–2 lists other documentation and where it is located.

TABLE 4–2 Other Admin Pack Documentation

Documentation	Format
README for product CD	HTML on product CD
README for Documentation CD	HTML on Documentation CD
Solaris 8 Admin Pack Release Notes	HTML on product CD
Solaris 8 Admin Pack Installation Guide	HTML, PostScript, PDF on product CD
Solaris Web Start 2.0.2	Online help and `man` pages
Solaris Management Console 1.0.1	Online help and `man` pages
Solaris AdminSuite 3.0.1	Online help
Solaris AdminSuite 3.0.1 Release Notes	HTML on product CD
Sun Enterprise Authentication Mechanism 1.0.1 Installation and Release Notes	PostScript™ on product CD

Installing the Answerbook2 Server

The AnswerBook2 product is Sun Microsystems' online documentation system. It uses a Web browser interface to view, print, and search the documentation.

To view the Admin Pack online documentation, you must have access to an Answerbook2 documentation server. The AnswerBook2 documentation server enables you to view Sun documentation using your favorite browser. It renders documentation in 3.2–compliant HTML, sending it to a browser for display; it also supports the previous AnswerBook documentation format. The AnswerBook2 documentation server software is included on the Solaris 8 Admin Pack Documentation CD and on the Solaris 8 Documentation CD.

For occasional viewing of the Admin Pack document collections, you need not install the AnswerBook2 documentation server software. Instead, you can run it directly off the Admin Pack Documentation CD using the `ab2cd` script. For detailed information about this feature, see the README on the Admin Pack Documentation CD. For this, you must have root access to the system on which the CD is connected.

However, to provide your users with access to the documentation of the Admin Pack products, it is necessary to install the AnswerBook2 documentation server software. Once you have installed the Admin Pack server software, you must install the Admin Pack documentation on that server. For information on installing the server software and documentation included on the Admin Pack Documentation CD, see the README file on that CD. For general information about using the AnswerBook2 product, see the module "Accessing Online Documentation" in the *Solaris 8 (SPARC Platform Edition) Installation Guide* or the *Solaris 8 (Intel Platform Edition) Installation Guide*.

If you do not have access to an AnswerBook2 document server or do not want to install it locally, you can view all released Solaris documentation at the `http://docs.sun.com` Web site.

▼ How to Run the Answerbook2 Server From the Admin Pack Documentation CD

Note - Be aware that running the document server directly from the CD is slow. You should use another approach if you expect other users to access the Admin Pack document collections.

---

1. **Log in as root.**

2. **Insert the Admin Pack Documentation CD in the CD-ROM drive.**

A File Manager window opens to display files included on the CD. One of these files is named `ab2cd`.

3. **Double-click the `ab2cd` icon.**

4. **To view the documentation, launch any HTML 3.2–compliant Web browser and go to the following URL:**

   `http://`*`localhost`*`:8888`

   where *localhost* is the name of the machine to which the CD is attached.

5. **To stop running the server from the CD, run the following command from a terminal window:**

   /cdrom-mount-point`/ab2cd stop`

   where *cdrom-mount-point* is the mount point, including volume name, for the CD-ROM device.

▼ How to Install the AnswerBook2 Documentation Server

1. **Insert the Admin Pack Documentation CD in the CD-ROM drive.**

   A File Manager window opens, listing folders and files included on the CD.

2. **Double-click the `Installer` file to open the Web Start installation window.**

   If an Action: Run window opens, click OK to continue. An Installer Console window opens and displays installation events and the location of installation log files.

3. **If prompted, enter the system's root password and click Log in.**

   The Web Start Welcome screen opens.

4. **Click Next in the Welcome screen and choose either Default or Custom Install.**

   Default Install installs the documentation server software and all document collections on the CD. Custom Install enables you to select to install the documentation server software and specific collections. See Table 4–1 for the list of Admin Pack collections.

5. **Upon completion of the installation, a script automatically starts the server software. To verify the server has started, use one of the following methods.**

   - Launch an HTML 3.2–compliant Web browser and go to the URL `http://`*`localhost`*`:8888`, where *localhost* is the name of the server on which you have just installed the AnswerBook2 software.

You should see an AnswerBook2 Library page with at least one document collection (the AnswerBook2 Help Collection), depending on the collections you installed.

- Look for the server process using the following command:

  `ps -eaf | grep dwhttpd`

  If the server is not running, type the following command as superuser:

  `/usr/lib/ab2/bin/ab2admin -o start`

6. **When the installation is finished, your server starts up using default configuration information. For information about changing your server's configuration, see the README on the Admin Pack Documentation CD.**

▼ How to Install the Answerbook2 Documentation Server Using the `pkgadd` Command

1. **Insert the Admin Pack Documentation CD in the CD-ROM drive.**

2. **Log in as root on the documentation server machine and change directory to the location of the installation packages.**

3. **Type the command:**

```
pkgadd -d .
```

4. **Select these server software packages to install.**
   - `SUNWab2r` (0.40 Megabytes) installs in root partition and provides configuration and startup files.
   - `SUNWab2s` (1.36 Megabytes) provides shared files for performing document processing. Do not relocate this package.
   - `SUNWab2u` (33.85 Megabytes) provides executable and back-end processing files for server and administration functions.

5. **Start the server, if needed.**

   Installing the packages should start the server on the default port of 8888. If it does not start, type the following command to start it:

```
# /usr/lib/ab2/bin/ab2admin -o start
```

Installing the Solaris 8 Admin Pack Collections

Before the AnswerBook2 documentation server can do its job, you must install the documentation collections. See Table 4–1 for a list of the Admin Pack documentation collections.

Use the `pkgadd` utility to install the new book collections onto your server. If you are adding the Admin Pack document collections to an existing AnswerBook database, use either the `Add Collection to List` function or the `ad2admin -o add_coll` command to add the collections.

If collection packages are already installed on the documentation server, you can use the server's `Scan for Locally Installed Collections` function or the `ab2admin -o scan` command to have them automatically found and added to the server's documentation database. This function only works for locally installed packages.

To serve documentation collections located on another documentation server, use the `Add Collection to List` function or the `ab2admin -o add_coll` command and provide the full path name to the `ab_cardcatalog` or `collinfo` file. For example, if the document server is `ab2docserver` and you want it to serve the PPP 3.0.1 document collections on the system named bingo, you might type the following command:

```
ab2admin -o
add_coll -d /net/bingo/opt/answerbooks/english/PPP_3.0.1/SUNWdsab
```

Registering an Answerbook2 Document Server

If you want other users to automatically find your document server through Federated Naming Services (FNS), you need to register the server. Registration will include your server in a pool of servers for a site, and give users the ability to choose from document servers.

▼ How to Register an AnswerBook2 Document Server

1. **Type the following command:**

```
# /usr/lib/ab2/bin/ab2regsvr server_url
```

where *server_url* is the fully qualified URL to get to this server.
For example: `ab2docserver.eng.com:8888`

Using the AnswerBook2 Server

AnswerBook2 can be started in one of the following ways.

- Open the Help menu from the CDE Front Panel, select AnswerBook2.
- From the Open Windows Programs menu, choose AnswerBook2.
- From the UNIX command line, type `answerbook2`.
- From a Web browser, enter the name of the AnswerBook2 server and the port, following this syntax:

```
http://document_server:port.
```

For example: `http://ab2docserver:8888`

CHAPTER 5

Configuring the Solaris 8 Admin Products

The installation process installs all the Solaris 8 Admin Pack products with the minimum default values. Further configuration may be required to meet your needs.

- "Configuring PPP" on page 37
- "Configuring Sun Enterprise Authentication Mechanism" on page 38

Starting the Solaris Management Console

The Solaris Management Console (SMC) is the environment where you can configure, manage, and start the Admin Pack products.

▼ How to Start the Solaris Management Console

1. **In the Sys_Admin folder, located in the Applications Manager window, click the Solaris Management Console icon.**

Note - To run the SMC application you must have SMC client software installed on your machine. Any machine you want to manage with SMC must also have the SMC server software installed.

---

2. **If necessary, replace the current server name with the name of another server.**

3. **Type your user name and press Tab or Return.**
   If you start an application from the SMC that requires root or administrator's password, you will be prompted to enter it.

4. **Type your password and press Return or click Login.**
   The SMC window opens.

Admin Pack Products in the Solaris Management Console

The default installation of the Admin Pack adds the Admin Pack components listed in Table 5–1 to the Solaris Management Console. Refer to Table 1–1 for a description of the Admin Pack products.

TABLE 5–1 Admin Pack Products in the Solaris Management Console

Category	Admin Pack Component
Connectivity	Basic Routing Configuration
	DNS Client Configuration
	Network Configuration
	PPP Configuration
	Point-to-Point Protocol
Documentation	AnswerBook
Infrastructure	AdminSuite
	Admintool
	Performance Meter
	Shutdown/Restart Computer
	Terminal
	Workstation Information
Jobs	Process Manager

TABLE 5–1 Admin Pack Products in the Solaris Management Console *(continued)*

Category	Admin Pack Component
Software	DNS Server Configuration
	Software Manager
	Solaris Product Registry
User and Group	Change Root Password

Starting Admin Pack Products from the SMC

To start any of the Admin Pack products, double-click the category in the left pane of the Solaris Management Console window, and double-click the product's icon in the right pane of the window.

Configuring Admin Pack Products

Configuration information is available for the following products. Also refer to the individual product's documentation set for more in-depth details. The entire Admin Pack documentation collection is available from the Documentation CD. Refer to "The Solaris 8 Admin Pack Documentation" on page 27 for information on the available books for the Admin Pack and for instructions on installing the documentation.

- "Configuring PPP" on page 37
- "Configuring Sun Enterprise Authentication Mechanism" on page 38

Configuring PPP

Gather the information listed in this section before starting the PPP configuration script. Refer to chapter "Configuring Solstice PPP using pppinit" and chapter "Editing the Configuration Files" in the *Solstice PPP 3.0.1 Administration Guide* for full details.

- Determine the communications mode. You will need to choose from asynchronous client, asynchronous client/server, or synchronous.

- The type of modem used.
- List of available devices.
- Line speed.
- Name of remote host(s), and phone numbers.
- The file name for the data script.
- The login ID sent to the remote host and password.
- Whether you want to set a specific pool or modem for the host(s).
- Whether you want to use dynamic IP allocation or not.
- The IP netmask address.

Run the PPP configuration tool only once to set the initial PPP configuration interface. If you make a mistake during the configuration, at the end of the script, you have the option to exit without saving. To manage the PPP connection, run `pptool`.

▼ How to Configure PPP 3.0.1

1. **Click the Applications tab in the SMC window to display the applications.**
2. **Double-click the Connectivity folder in the left window pane.**
3. **Double-click Configuration.**
4. **In the right window pane, double-click PPP Configuration to start the `pppinit` configuration script.**

Configuring Sun Enterprise Authentication Mechanism

Setting up Sun Enterprise Authentication Mechanism (SEAM) involves many tasks. Refer to the following documentation before installing SEAM. The *SEAM Installation and Release Notes* gives instructions for the tasks which may require the use of the Solaris 8 Admin Pack product CD, such as:

- Preconfiguring SEAM installations
- Installing SEAM software

Tasks that can be completed after the software is preconfigured or installed are covered in the *Sun Enterprise Authentication Mechanism Guide*. These tasks include:

- Planning for SEAM
- Configuring master and slave KDCs

- Configuring SEAM clients
- Configuring SEAM NFS servers

CHAPTER 6

Troubleshooting

This chapter covers known installation issues and provides solutions and workarounds.

For late-breaking troubleshooting information, see the *Solaris 8 Admin Pack Release Notes*.

Contacting Customer Support

If you have any support issues, call your authorized service provider. See `http://access1.sun.com` for further information about support. To learn more about Sun Microsystems™, Inc. see `http://www.sun.com`.

Troubleshooting AdminSuite 3.0.1 Client Installations

The following may help resolve issues you may encounter when running AdminSuite 3.0.1 on Microsoft Windows platforms.

- *Problem*: After trying to start the `admapp.bat` file, a DOS window appears temporarily but disappears without starting anything.

  Solution #1: It is likely that one of the environment variables in the `addmapp.bat` file is incorrect. Make sure the following environment variables are set as indicated here:

- *WS* should be set to the directory where AdminSuite is installed. For example: `WS=C:\AdminSuite`
- *JAVA_HOME* should be set to the Java JRE or Java JDK install path. For example: `set JAVA_HOME=C:\java`
- *CLASSPATH* should be set to point to at least the following: .;%WS%\opt\classes;%JAVA_HOME%;<swingpath>\swingall.jar. For example: `set CLASSPATH=.;C:\AdminSuite\opt\classes; C:\java;C:\AdminSuite\opt\swingall.jar`.

Solution #2: The correct version of Java must be running. The entire JDK is not needed, just the JRE, but it must be version 1.1.7 or compatible. Using a JFC Swingset other than what is shipped with AdminSuite may cause problems. JFC Swingset version 1.0.3 should be used for now. There are problems with running version 1.1. If you encounter problems and error messages with "JFrame" appear, you may have to use the JFC Swingset supplied with the AdminSuite installation.

- *Problem*: After starting the AdminSuite Client for Microsoft Windows, and attempting to log in, an error comes back stating that the RMI registry could not be connected.

  Solution #1: The AdminSuite Server is not running on the machine you specified. Enter the name of a valid AdminSuite Server and restart the AdminSuite Client.

  Solution #2: Make sure the user name and password exist within the context of the machine name you specified for your default AdminSuite Server.

CHAPTER 7

Managing Solaris 8 Admin Pack Products From the Registry

The Solaris Product Registry is a tool for managing software installed using Solaris Web Start 2.0 or the `svr4` package management commands. The Registry provides the following capabilities:

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

What Is in the Registry?

The Solaris Product Registry consists of two parts.

- The system registry lists Solaris software, all `svr4` packages, and all software installed and registered by the root user.
- The user registry lists software installed and registered by a user other than the root user.

The Solaris Product Registry window contains three areas of information.

- On the left, a list of installed and registered software
- In the upper-right column, standard attributes of the currently selected software
- In the bottom-right, an informational section showing internal and customized attributes of the currently selected software

Starting the Registry

From the Solaris Management Console, click the Product Registry icon in the left pane, and then double-click the Product Registry icon in the right pane to launch it.

Alternatively, you can start the Product Registry by typing the following command:

```
/usr/bin/prodreg
```

Installing Products From the Registry

All of the Admin Pack products can be individually installed using the Registry.

▼ How to Install an Admin Pack Product From the Registry

1. **If necessary, start the Registry by typing the following command:**

   ```
   /usr/bin/prodreg
   ```

2. **Click New Install at the bottom of the Registry window to open the Select Installer dialog box.**

3. **Insert the Admin Pack product CD in the CD-ROM drive.**

4. **Type the path name of the Installer of the product you want to install from the Admin Pack product CD and click Install.**

   An Abort button appears in place of the list of software on the Registry window. While the installer is running, the Registry functionality is unavailable. To stop the installer, click Abort.

Uninstalling Products From the Registry

Follow these directions to uninstall any of the individual Admin Pack products.

▼ How to Uninstall a Product From the Registry

1. **If necessary, start the Registry by typing the following command:**

```
/usr/bin/prodreg
```

2. **In the left column of the Registry window, click System Registry to reveal the list of installed products.**

3. **Select the name of the software you want to uninstall.**

4. **Read the software attributes to make sure you have selected the software you want to uninstall.**

5. **Click Uninstall at the bottom of the Registry window.**
   The Uninstall Welcome screen opens.

6. **Click Next, choose between a Full Uninstall (default) and a Partial Uninstall, and then click Uninstall Now.**
   An Uninstallation Summary window provides feedback on the uninstallation. When the product is completely uninstalled, the Product Registry window is updated.

The product is removed from the system.

APPENDIX **A**

Available Solaris 8 Admin Pack Packages

Table A–1 contains a list of the packages that make up the Solaris 8 Admin Pack products.

If you are not familiar with adding packages from the command line, you should use the Solaris Web Start method of installation as described in "Installing Admin Pack with the Installation Wizard" on page 19. Some Solaris 8 Admin Pack products require packages from other products, and some products depend on the presence of another product. See Table B–1 in Appendix B. Before beginning a `pkgadd` installation, read the documentation for each product you plan to install and make sure you understand the product dependencies. Selecting only certain packages from the Admin Pack products may cause some programs not to work.

The installation instructions contained in each product's documentation were written for standalone installation, not as part of the Admin Pack. When installing the Admin Pack using the `pkgadd` command, use the directory path for the Admin Pack product CD, not the directory information given in the individual product installation instructions.

Installing Admin Pack Products Using the `pkgadd` Command

For instructions on using the `pkgadd` command, see the *Solaris 8 (Intel Platform Edition) Installation Guide* or *Solaris 8 (SPARC Platform Edition) Installation Guide*.

Packages Available With Admin Pack Products

Table A–1 lists the packages that are part of each product except for AnswerBook2 products, which are shown in Table 4–1. The AnswerBook2 server and the AnswerBook online documentation are on the Solaris 8 Admin Pack Documentation CD.

TABLE A–1 Product Packages

Product	Packages Available
Solaris AdminSuite 3.0.1	SUNWseamj SUNWseams
Sun Enterprise Authentication Manager 1.0.1	SUNWkr5mn SUNWkr5cl SUNkr5ma SUNWkr5sl SUNWkr5sv SUNWkr5ad SUNWk5pk SUNWk5pkx SUNWk5pu SUNWk5pux
Solstice PPP 3.0.1	SUNWpppk SUNWpppkx SUNWpppm SUNWpppr SUNWppps SUNWpppu
Solaris Management Console 1.0.1	SUNWmc SUNWmcman SUNWmcapp SUNWmcc SUNWmcsws SUNWhttp SUNWhtsv1
Solaris Administration Wizards	SUNWmcwz SUNWmcwzd

APPENDIX **B**

Solaris 8 Admin Pack Product Compatibility

This section contains information on which Solaris 8 Admin Pack products depend on other products, parts of other products or other tools such as a Web browser.

Product Compatibility

Table B–1 explains which products depend on other products or parts of other products to run.

TABLE B–1 Product Platform, Compatibility, and Shared Components

Products	Platform and Components Compatibility	
Solaris Enterprise Authentication Mechanism 1.0.1	Platforms	Solaris 8 32-bit mode Solaris 8 64-bit mode
	Web Server	No
	Java	JDK 1.1 or later HotJava not required
	Other	Graphical user interface requires a pointer to the AnswerBook2 installation

TABLE B–1 Product Platform, Compatibility, and Shared Components *(continued)*

Products	Platform and Components Compatibility	
Solstice PPP 3.0.1	Platforms	Solaris 8 32-bit mode Solaris 8 64-bit mode
	Web Server	No
	Java	No
	Other	N/A
Solaris Mangement Console 1.0.1	Platforms	Solaris 8 32-bit mode Solaris 8 64-bit mode
	Web Server	Yes, embedded
	Java	JDK 1.1.8
	Other	JFC 1.1
AnswerBook2 1.4.2	Platforms	Solaris 8 32-bit mode Solaris 8 64-bit mode
	Web Server	N/A
	Java	No JDK No HotJava
	Other	An HTML 3.2-compliant browser