Solaris 10 Installation Guide: Basic Installations

Sun Microsystems, Inc.
4150 Network Circle
Santa Clara, CA 95054
U.S.A.

Part No: 817–0544–10
January 2005

Copyright 2005 Sun Microsystems, Inc. 4150 Network Circle, Santa Clara, CA 95054 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, JumpStart, Solaris Flash, Power Management, Java, and Solaris are trademarks or registered trademarks of Sun Microsystems, Inc. in the U.S. and other countries. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. in the U.S. and other countries. Products bearing SPARC trademarks are based upon an architecture developed by Sun Microsystems, Inc.

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

U.S. Government Rights – Commercial software. Government users are subject to the Sun Microsystems, Inc. standard license agreement and applicable provisions of the FAR and its supplements.

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 2005 Sun Microsystems, Inc. 4150 Network Circle, Santa Clara, CA 95054 U.S.A. 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, JumpStart, Solaris Flash, Power Management, Java, et Solaris sont des mardques de fabrique ou des marques déposées, de Sun Microsystems, Inc. aux Etats-Unis et dans d'autres pays. Toutes les marques SPARC sont utilisées sous licence et sont des marques de fabrique ou des marques déposées de SPARC International, Inc. aux Etats-Unis et dans d'autres pays. Les produits portant les marques SPARC sont basés sur une architecture développée par Sun Microsystems, Inc.

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

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

041129@10536

Contents

Preface 5

1 Planning for a Solaris Installation From CD or DVD Media (Tasks) 9

System Requirements and Recommendations 9

Solaris Installation Program GUI or Text Installer Requirements 10

Checklist for Installation 11

Where to Find Additional Installation Information 17

2 Installing With the Solaris Installation Program (Tasks) 19

SPARC: Performing an Installation or Upgrade With the Solaris Installation Program 19

▼ SPARC: To Install or Upgrade With the Solaris Installation Program 19

x86: Performing an Installation or Upgrade With the Solaris Installation Program 26

▼ x86: To Install or Upgrade With the Solaris Installation Program 26

Index 37

Preface

This book describes how to use CD or DVD media to install the Solaris™ Operating System (Solaris OS) on a nonnetworked system.

This book does not include instructions about how to set up system hardware or other peripherals.

Note – This Solaris release supports systems that use the SPARC® and x86 families of processor architectures: UltraSPARC®, SPARC64, IA-32, AMD64. The supported SPARC based systems are listed in the *Solaris Sun Hardware Platform Guide* at `http://docs.sun.com`. The supported x86 based systems appear in the *Solaris Hardware Compatibility List* at `http://www.sun.com/bigadmin/hcl`. This document cites any implementation differences between the platform types.

In this document the term "x86" refers to the Intel 32-bit family of microprocessors and compatible 64-bit and 32-bit microprocessors made by AMD. For supported systems, see the *Solaris Hardware Compatibility List*.

Who Should Use This Book

This book is intended for system administrators who are responsible for installing the Solaris OS. This book provides basic Solaris installation information for system administrators who perform infrequent Solaris installations or upgrades.

If you need advanced Solaris installation information, see "Related Books" on page 6 to find the book that describes the information.

Related Books

Table P–1 lists related information that you need when you install the Solaris software.

TABLE P–1 Related Information

Information	Description
Solaris 10 Installation Guide: Network-Based Installations	This book describes how to perform a remote Solaris installation over a local area network or a wide area network.
Solaris 10 Installation Guide: Solaris Live Upgrade and Upgrade Planning	This book describes how to use CD or DVD media to upgrade a system to the Solaris OS. This book also describes how to use the Solaris Live Upgrade feature to create and maintain boot environments, and how to upgrade systems to these boot environments.
Solaris 10 Installation Guide: Custom JumpStart and Advanced Installations	This book describes how to create the files and directories necessary to perform an unattended custom JumpStart installation. This book also describes how to create RAID-1 volumes during a JumpStart installation.
Solaris 10 Installation Guide: Solaris Flash Archives (Creation and Installation)	This book describes how to create a Solaris Flash archive and deploy the archive over the network to quickly install the Solaris OS. This book also describes how to maintain these archives, and how to quickly update clone systems by using differential Flash archives.
System Administration Guide: Devices and File Systems	This book describes how to back up system files.
Solaris 10 Release Notes	This book describes any bugs, known problems, software that is being discontinued, and patches that are related to the Solaris release.
SPARC: *Solaris 10 Sun Hardware Platform Guide* on `http://docs.sun.com`	This book contains information about supported hardware.
Solaris 10 Package List	This book lists and describes the packages in the Solaris 10 OS.
x86: Solaris Hardware Compatibility List	This list contains supported hardware information and device configuration details.

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`.

Ordering Sun Documentation

Sun Microsystems offers select product documentation in print. For a list of documents and how to order them, see "Buy printed documentation" at `http://docs.sun.com`.

Typographic Conventions

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

TABLE P–2 Typographic Conventions

Typeface or Symbol	Meaning	Example
`AaBbCc123`	The names of commands, files, and directories, and onscreen computer output	Edit your `.login` file. Use `ls -a` to list all files. `machine_name% you have mail.`
`AaBbCc123`	What you type, contrasted with onscreen computer output	`machine_name%` **`su`** `Password:`
AaBbCc123	Command-line placeholder: replace with a real name or value	The command to remove a file is `rm` *filename.*

TABLE P–2 Typographic Conventions *(Continued)*

Typeface or Symbol	Meaning	Example
AaBbCc123	Book titles, new terms, and terms to be emphasized	Read Chapter 6 in the *User's Guide*. Perform a *patch analysis*. Do *not* save the file. [Note that some emphasized items appear bold online.]

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–3 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	`#`

Platform Conventions

The following keyboard and mouse conventions are applicable to SPARC and x86 based systems:

- The key referred to as Return is labeled Enter on some keyboards.
- From left to right on a three-button mouse, the default settings for CDE are SELECT, ADJUST, and MENU. For example, the text says, "Click SELECT" instead of "Click the left mouse button." Otherwise, these keys are referred to as mouse button 1, mouse button 2, and mouse button 3.
- From left to right on a two-button mouse, the default settings are SELECT and MENU. The ADJUST function is obtained by simultaneously pressing SELECT and the Shift key on the keyboard (Shift-SELECT).

CHAPTER 1

Planning for a Solaris Installation From CD or DVD Media (Tasks)

This chapter provides you with system requirements and planning information to help you install the Solaris OS. This chapter describes the following topics.

- "System Requirements and Recommendations" on page 9
- "Checklist for Installation" on page 11
- "Where to Find Additional Installation Information" on page 17

Note – This book uses the term *slice*, but some Solaris documentation and programs might refer to a slice as a partition. To avoid confusion, this book distinguishes between `fdisk` partitions (which are supported only in Solaris for x86 based systems) and the divisions within the Solaris `fdisk` partition, which might be called slices or partitions.

System Requirements and Recommendations

The following table lists basic system requirements to install the Solaris OS.

TABLE 1–1 Memory, Swap, and Processor Recommendations

System	Size
Memory to install or upgrade	256 MB is the recommended size. 64 MB is the minimum size. **Note –** Some optional installation features are enabled only when sufficient memory is present. For example, if you install from a DVD with insufficient memory, you install through the Solaris installation program's text installer, not through the graphical user interface (GUI). For more information about these memory requirements, see Table 1–2.
Swap area	512 Mbytes is the default size. **Note –** You might need to customize the swap space. Swap space is based on the size of the system's hard disk.
x86: Processor requirements	SPARC: 200–MHz or faster processor is required. x86: 120–MHz or faster processor is recommended. Hardware floating-point support is required.

Solaris Installation Program GUI or Text Installer Requirements

The Solaris installation program on the Solaris 10 Operating System DVD or Solaris 10 Software - 1 CD can be run with a graphical user interface (GUI) or as an interactive text installer in a desktop or console session. For x86 based systems, the Solaris Device Configuration Assistant is included in the Solaris installation program.

- GUI – The Solaris installation GUI provides windows, pull-down menus, buttons, scrollbars, and iconic images to enable you to interact with the installation program. The GUI requires a local or remote DVD-ROM or CD-ROM drive or network connection, video adapter, keyboard, monitor, and enough memory. For more information about these memory requirements, see Table 1–2.
- Text installer – The Solaris interactive text installer enables you to type information in a terminal or console window to interact with the installation program. You can run the text installer in a desktop session with a windowing environment, or in a console session. The text installer requires a local or remote DVD-ROM or CD-ROM drive or network connection, keyboard, and monitor. You can run the Solaris installation text installer with the `tip` command. For more information, see the man page, `tip`(1).

You can choose to install the software with a GUI or with or without a windowing environment. If there is sufficient memory, the GUI is displayed by default. Other environments are displayed by default if memory is insufficient for the GUI. You can override defaults with the `nowin` or `text` boot options. But, you are limited by the amount of memory in your system or by installing remotely. Also if the Solaris installation program does not detect a video adapter, it automatically displays in a console-based environment. Table 1–2 describes these environments and lists memory requirements for displaying them.

TABLE 1–2 Memory Requirements for Display Options

Memory	Type of Installation	Description	Windowing Environment
64–127 MB	Console-based	Contains no graphics and no windowing environment. If no video adapter is detected, the installer displays a console-based environment. If you are installing remotely through a `tip` line or using the `nowin` boot option, you are limited to the console-based installation.	
128–383 MB	Console-based	Contains no graphics, but provides a window and the ability to open other windows. Requires a local or remote DVD-ROM or CD-ROM drive or network connection, video adapter, keyboard, monitor. If you install by using the `text` boot option and have enough memory, you are installing in a windowing environment.	X
384 MB and greater	GUI-based	Provides windows, pull-down menus, buttons, scrollbars, and iconic images. A GUI requires a local or remote DVD-ROM or CD-ROM drive or network connection, video adapter, keyboard, monitor.	X

You can also specify the installer you want to use during the installation by entering a selection or special command at a prompt. For instructions, see the procedures in Chapter 2.

Checklist for Installation

Use the following checklist to gather the information that you need to install the Solaris OS. You do not need to gather all of the information that is requested on the checklist. You only need to collect the information that applies to your system.

Use this checklist if you are performing an initial installation. If you are upgrading your system, see "Checklist for Upgrading" in *Solaris 10 Installation Guide: Solaris Live Upgrade and Upgrade Planning*.

TABLE 1–3 Installation Checklist

Information for Installation		Description or Example	Answer — Defaults are noted with and asterisk (*)
Network connection		Is the system connected to a network?	Networked Nonnetworked*
DHCP		Can the system use Dynamic Host Configuration Protocol (DHCP) to configure its network interfaces?	Yes/No*
If you are not using DHCP, note the network address.	IP Address	If you are not using DHCP, supply the IP address for the system. Example: 172.31.255.255 To find this information on a running system, type the following command. # **ypmatch** *host-name* **hosts**	
	Subnet	If you are not using DHCP, is the system part of a subnet? If yes, what is the netmask of the subnet? Example: 255.255.255.0 To find this information on a running system, type the following command. # **more /etc/netmasks**	255.255.255.0*
	IPv6	Do you want to enable IPv6 on this machine?	Yes/No*
Host Name		Host name that you choose for the system. To find this information on a running system, type the following command. # **uname -n**	
Kerberos		Do you want to configure Kerberos security on this machine? If yes, gather this information: Default Realm: Administration Server: First KDC: (Optional) Additional KDCs:	Yes/No*

TABLE 1–3 Installation Checklist *(Continued)*

Information for Installation		Description or Example	Answer — Defaults are noted with and asterisk (*)
If the system uses a name service, provide the following information.	Name Service	Which name service should this system use? To find this information on a running system, type the following command. # **cat /etc/nsswitch.conf**	NIS+/NIS/DNS/ LDAP/None*
	Domain Name	Provide the name of the domain in which the system resides. To find this information on a running system, type the following command. # **domainname**	
	NIS+ and NIS	Do you want to specify a name server or let the installation program find one? If you want to specify a name server, provide the following information. Server's host name: To display the server's host name, type the following command. # **ypwhich** Server's IP Address: To display the server's IP address, type the following command. # **nismatch** *nameserver-name* **hosts.org_dir**	Specify One/Find One*
	DNS	Provide IP addresses for the DNS server. You must enter at least one IP address, but you can enter up to three addresses. Server's IP Address(es): To display the server's IP address, type the following command. # **getent ipnodes dns** You can enter a list of domains to search when a DNS query is made. Search Domain: Search Domain: Search Domain:	

TABLE 1–3 Installation Checklist *(Continued)*

Information for Installation		Description or Example	Answer — Defaults are noted with and asterisk (*)
	LDAP	Provide the following information about your LDAP profile. Profile Name: Profile Server: If you specify a proxy credential level in your LDAP profile, gather this information. Proxy-Bind Distinguished Name: Proxy-Bind Password:	
Default Route		Do you want to specify a default route IP address or let the Solaris installation program find one? The default route provides a bridge that forwards traffic between two physical networks. An IP address is a unique number that identifies each host on a network. You have the following choices: ■ You can specify the IP address. An `/etc/defaultrouter` file is created with the specified IP address. When the system is rebooted, the specified IP address becomes the default route. ■ You can let the Solaris installation program detect an IP address. However, the system must be on a subnet that has a router that advertises itself by using the ICMP router discovery protocol. If you are using the command-line interface, the software detects an IP address when the system is booted. ■ You can choose None if you do not have a router or do not want the software to detect an IP address at this time. The software automatically tries to detect an IP address on reboot.	Specify One/Detect One/None*
Time Zone		How do you want to specify your default time zone?	Geographic Region* Offset From GMT Time Zone File
Root Password		Provide the root password for the system.	

TABLE 1–3 Installation Checklist *(Continued)*

Information for Installation	Description or Example	Answer — Defaults are noted with and asterisk (*)
Default or Custom Install	Do you want to perform a default installation, or customize the installation? ■ Select Default installation to format the entire hard disk and install a preselected set of software, including Sun Java Enterprise System. For information about Sun Java Enterprise System software configuration, see *Sun Java Enterprise System Technical Overview* on `http://docs.sun.com`. ■ Select Custom installation to modify the hard disk layout and select the software that you want to install. **Note –** The text installer does not prompt you to select a Default or Custom Installation. To perform a default installation, accept the default values that are provided in the text installer. To perform a custom installation, edit the values in the text installer screens.	Default installation*/Custom installation
Locales	For which geographic regions do you want to install support?	
SPARC: Power Management (available only on SPARC systems that support Power Management)	Do you want to use Power Management? **Note –** If your system uses Energy Star version 3 or later, you are not prompted for this information.	Yes*/No
Proxy Server Configuration	Do you have a direct connection to the Internet or do you need to use a proxy server to gain access to the Internet? If you use a proxy server, provide the following information. Host: Port:	Direct Connection*/Proxy Server
Automatic Reboot or CD/DVD Ejection	Reboot automatically after software installation? Eject CD/DVD automatically after software installation?	Yes*/No Yes*/No
Software Group	Which Solaris Software Group do you want to install? For detailed descriptions of these software groups, see "Disk Space Recommendations for Software Groups" in *Solaris 10 Installation Guide: Custom JumpStart and Advanced Installations*.	Entire Plus OEM Entire* Developer End User Core Reduced Networking

TABLE 1–3 Installation Checklist *(Continued)*

Information for Installation	Description or Example	Answer — Defaults are noted with and asterisk (*)
Custom Package Selection	Do you want to add or remove software packages from the Solaris Software Group that you install? **Note –** When you select which packages to add or remove, you need to know about software dependencies and how Solaris software is packaged.	
Select Disks	On which disks do you want to install the Solaris software? Example: `c0t0d0`	
x86: `fdisk` Partitioning	Do you want to create, delete, or modify a Solaris `fdisk` partition? Each disk that is selected for file system layout must have a Solaris `fdisk` partition. Only one x86 Boot partition is allowed per system. For planning information for your x86 partitions, see "Partitioning Recommendations" in *Solaris 10 Installation Guide: Custom JumpStart and Advanced Installations*. If your system currently has a diagnostic or service partition, the Solaris installation program preserves the service partition by default. If you do not want to preserve the service partition, you must customize the `fdisk` partitions. For more information about preserving a service partition, see "Default Boot-Disk Partition Layout Preserves the Service Partition" in *Solaris 10 Installation Guide: Network-Based Installations*. Select disks for `fdisk` partition customization? Customize `fdisk` partitions?	 Yes/No* Yes/No*
Preserve Data	Do you want to preserve any data that exists on the disks where you are installing the Solaris software?	Yes/No*
Auto-layout File Systems	Do you want the installation program to automatically lay out file systems on your disks? If yes, which file systems should be used for auto-layout? Example: `/, /opt, /var` If no, you must provide configuration information for the file system.	Yes*/No

TABLE 1–3 Installation Checklist *(Continued)*

Information for Installation	Description or Example	Answer — Defaults are noted with and asterisk (*)
Mount Remote File Systems	Does this system need to access software on another file system? If yes, provide the following information about the remote file system. Server: IP Address: Remote File System: Local Mount Point:	Yes/No*
If you are installing through a `tip` line, follow these instructions.	Ensure that your window display is at least 80 columns wide and 24 rows long. For more information, see `tip`(1). To determine the current dimensions of your `tip` window, use the `stty` command. For more information, see the man page, `stty`(1).	
Check your Ethernet connection.	If the system is part of a network, verify that an Ethernet connector or similar network adapter is connected to your system.	
Review the planning chapter and other relevant documentation.	■ Review the entire planning chapter or specific sections in "System Requirements and Recommendations" on page 9. ■ Review the *Solaris 10 Release Notes* on `http://docs.sun.com` and vendor release notes to ensure that the software you use is supported in the new Solaris release. ■ Review the *Solaris 10 Sun Hardware Platform Guide* to ensure that your hardware is supported. ■ Review the documentation that accompanied your system to ensure that your system and devices are supported by the Solaris release.	

Where to Find Additional Installation Information

For additional information about requirements and recommendations for installing the Solaris OS, see the following documents.

- For disk space guidelines and recommendations, see "Allocating Disk and Swap Space" in *Solaris 10 Installation Guide: Custom JumpStart and Advanced Installations*.
- For additional requirements and recommendations for upgrading to the Solaris OS, see "Upgrade" in *Solaris 10 Installation Guide: Solaris Live Upgrade and Upgrade Planning*.
- For information about working with x86 partitions during your installation, see "Partitioning Recommendations" in *Solaris 10 Installation Guide: Custom JumpStart and Advanced Installations*.
- For a road map of the overall installation process, see "Task Map: Installing or Upgrading the Solaris Software" in *Solaris 10 Installation Guide: Custom JumpStart and Advanced Installations*.

These documents are available at `http://docs.sun.com`.

CHAPTER 2

Installing With the Solaris Installation Program (Tasks)

This chapter explains how to use the Solaris installation program on the Solaris 10 Operating System DVD or Solaris 10 Software - 1 CD to install or upgrade Solaris software.

This chapter contains the following topics:

- "SPARC: Performing an Installation or Upgrade With the Solaris Installation Program" on page 19
- "x86: Performing an Installation or Upgrade With the Solaris Installation Program" on page 26

SPARC: Performing an Installation or Upgrade With the Solaris Installation Program

You can either install or upgrade the Solaris OS by using the Solaris installation program. This section lists the tasks you need to perform to install the Solaris OS, and provides detailed instructions about how to install the Solaris OS from DVD or CD media.

▼ SPARC: To Install or Upgrade With the Solaris Installation Program

This procedure describes how to install a standalone SPARC based system from CD or DVD media.

Note – If you want to install the Solaris OS on a machine or domain that does not have a directly attached DVD-ROM or CD-ROM drive, you can use a DVD-ROM or CD-ROM drive that is attached to another machine. For detailed instructions, refer to Appendix B, "Installing or Upgrading Remotely (Tasks)," in *Solaris 10 Installation Guide: Network-Based Installations*.

Before You Begin

Perform the following tasks before you begin your installation.

- Ensure that you have the following media.
  - For a DVD installation, the Solaris 10 Operating System for SPARC Platforms DVD
  - For a CD installation:
    - Solaris 10 Software CDs.
    - Solaris 10 Languages for SPARC Platforms CD – The installation program prompts you for this CD if necessary to support languages for specific geographic regions.
- Verify that your system meets the minimum requirements.

  Your system should meet the following requirements.

  - Memory – 64 Mbytes or greater
  - Disk space – 12 Gbytes or greater
  - Processor speed – 200 MHz or greater

  For detailed information about system requirements, see "System Requirements and Recommendations" on page 9.
- Gather the information you need to install the Solaris OS.
  - For a nonnetworked system, gather the following information.
    - Host name of the system that you are installing
    - Language and locales that you intend to use on the system
  - For a networked system, gather the following information.
    - Host name of the system that you are installing
    - Language and locales that you intend to use on the system
    - Host IP address
    - Subnet mask
    - Type of name service (for example, DNS, NIS, or NIS+)
    - Domain name
    - Host name of the name server
    - Host IP address of the name server
    - Root password

  For information that you need to gather to install your system, see "Checklist for Installation" on page 11. If you are upgrading your system, see "Checklist for Upgrading" in *Solaris 10 Installation Guide: Solaris Live Upgrade and Upgrade*

Planning.

- (Optional) Back up your system.

  If you want to preserve any existing data or applications, back up the system. For detailed instructions about how to back up your system, see Chapter 23, "Backing Up and Restoring File Systems (Overview)," in *System Administration Guide: Devices and File Systems*.

Steps

1. **Insert the Solaris 10 Operating System for SPARC Platforms DVD or Solaris 10 Software for SPARC Platforms - 1 CD.**

2. **Boot the system.**

   - **If the system is new, out-of-the-box, turn on the system.**
   - **If you want to install a system that is currently running, shut down the system.**

   The `ok` prompt is displayed.

3. **Start the Solaris installation program.**

   - **To boot from the local DVD or CD and start the Solaris installation GUI, type the following command.**

     ```
     ok boot cdrom
     ```

   - **To boot from the local DVD or CD and start the text installer in a desktop session, type the following command.**

     ```
     ok boot cdrom - text
     ```

     `text` Specifies to run the text installer in a desktop session. Use this option to override the default GUI installer.

   - **To boot from the local DVD or CD and start the text installer in a console session, type the following command.**

     ```
     ok boot cdrom - nowin
     ```

     `nowin` Specifies to run the text installer in a console session. Use this option to override the default GUI installer.

   For detailed information about the Solaris installation GUI and text installer, see "Solaris Installation Program GUI or Text Installer Requirements" on page 10.

   The installation begins. The installation program prompts you to select a language to use during the installation.

4. **Select the language you want to use during the installation, and press Enter.**

   After a few seconds, the Solaris Installation Program Welcome screen appears.

   - If you are running the Solaris GUI installation program, the screen that is shown in Figure 2–1 is displayed.

- If you are running the Solaris text installer in a desktop session, the screen that is shown in Figure 2–2 is displayed.

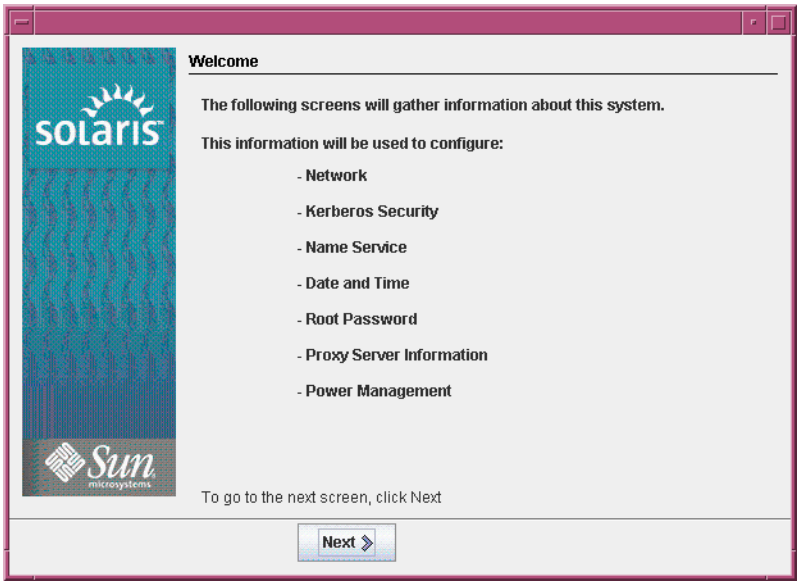

FIGURE 2–1 Solaris GUI Installation Program Welcome Screen

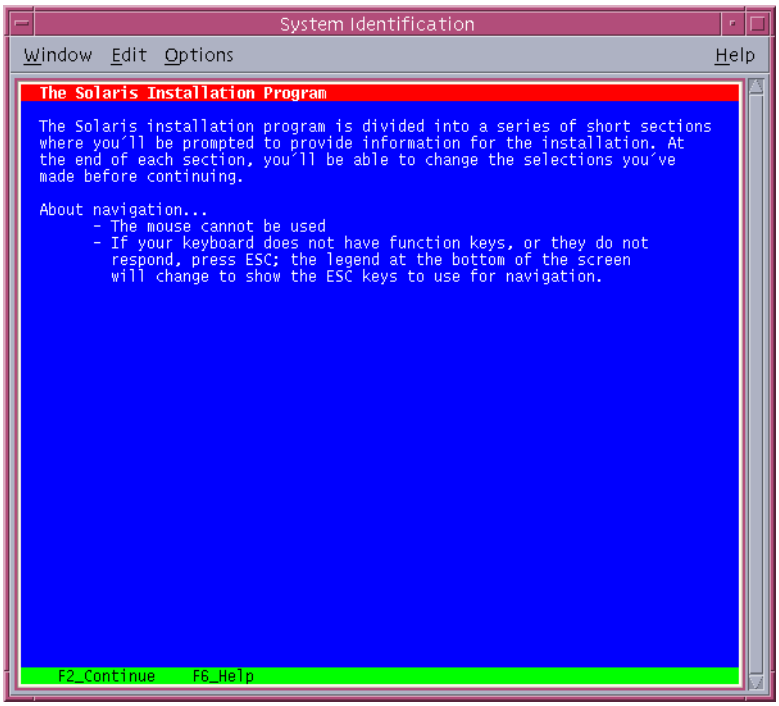

FIGURE 2–2 Solaris Text Installer Welcome Screen

5. **Click Next to begin the installation. If you are prompted, answer the system configuration questions.**

   - If you preconfigured all of the system information, the installation program does not prompt you to enter any configuration information. See Chapter 4, "Preconfiguring System Configuration Information (Tasks)," in *Solaris 10 Installation Guide: Network-Based Installations* for more information.
   - If you did not preconfigure all the system information, the installation program prompts you for this information on several screens. Use the "Checklist for Installation" on page 11 to help you answer the configuration questions.

   After you answer the configuration questions, the Welcome to Solaris dialog box appears.

FIGURE 2–3 Welcome to Solaris Screen

The Installer Questions screen appears.

6. **Decide if you want to reboot the system automatically and if you want to automatically eject the disc. Click Next.**

   The Specify Media screen appears.

7. **Specify the media you are using to install. Click Next.**

8. **Decide if you want to perform an initial installation or an upgrade. Click Next.**

   The Solaris installation program determines if the system can be upgraded. To upgrade, the system must have an existing Solaris root (/) file system. The Solaris installation program detects the necessary conditions and then upgrades the system.

9. **Select the type of installation you want to perform. Click Next.**

   - **Select Default Install to install the Entire Solaris Software Group and the Sun Java™ Enterprise System software.**
   - **Select Custom Install if you want to perform the following tasks.**
     - Install a specific software group
     - Install specific software packages
     - Install a specific locale
     - Customize the disk layout

For more information about software groups, see “Disk Space Recommendations for Software Groups” in *Solaris 10 Installation Guide: Network-Based Installations*.

Note – The text installer does not prompt you to select a Default or Custom Installation. To perform a default installation, accept the default values that are provided in the text installer. To perform a custom installation, edit the values in the text installer screens.

---

10. **If you are prompted, answer any additional configuration questions.**

    When you have provided the information that is required to install the system, the Ready to Install screen is displayed.

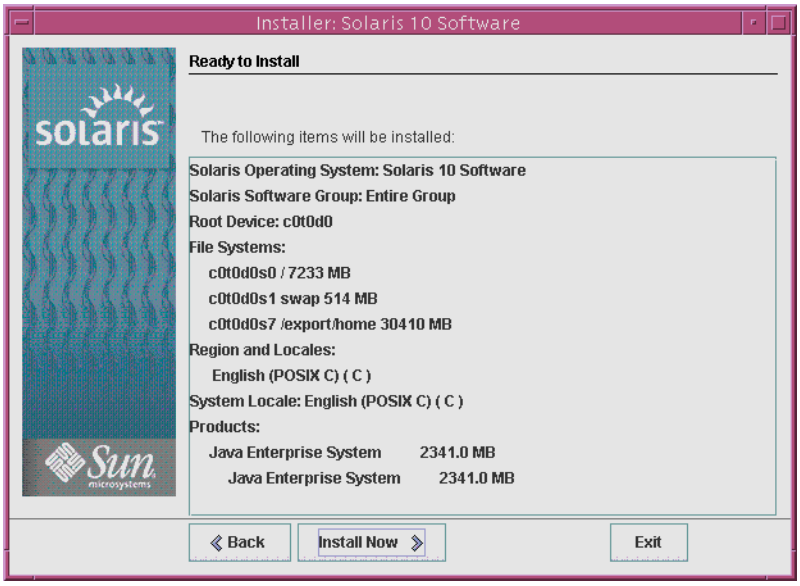

FIGURE 2–4 Solaris Installation Ready to Install Screen

11. **Click Install Now to install the Solaris software. Follow the instructions on the screen to install the Solaris software.**

    When the Solaris installation program finishes installing the Solaris software, the system reboots automatically or prompts you to reboot manually.

    If you are installing additional products, you are prompted to insert the DVD or CD for those products. For installation procedures, refer to the appropriate installation documentation.

After the installation is finished, installation logs are saved in a file. You can find the installation logs in the `/var/sadm/system/logs` and `/var/sadm/install/logs` directories.

- **If you are performing an initial installation, the installation is complete. Go to Step 12.**
- **If you are upgrading the Solaris software, you might need to correct some local modifications that were not preserved. Continue to Step a.**

  a. **Review the contents of the `/a/var/sadm/system/data/upgrade_cleanup` file to determine whether you need to correct local modifications that the Solaris installation program could not preserve.**

  b. **Correct any local modifications that were not preserved.**

12. **If you did not select automatic reboot during the installation, reboot the system.**

```
# reboot
```

Troubleshooting If you encountered any problems during the installation or upgrade, see Appendix A, "Troubleshooting (Tasks)," in *Solaris 10 Installation Guide: Custom JumpStart and Advanced Installations*.

x86: Performing an Installation or Upgrade With the Solaris Installation Program

You can either install or upgrade the Solaris OS by using the Solaris installation program. This section lists the task you need to perform to install the Solaris OS, and provides detailed instructions about how to install the Solaris OS from DVD or CD media.

▼ x86: To Install or Upgrade With the Solaris Installation Program

This procedure describes how to install a standalone x86 based system from CD or DVD media.

Note – If you want to install the Solaris OS on a machine or domain that does not have a directly attached DVD-ROM or CD-ROM drive, you can use a DVD-ROM or CD-ROM drive that is attached to another machine. For detailed instructions, refer to Appendix B, "Installing or Upgrading Remotely (Tasks)," in *Solaris 10 Installation Guide: Network-Based Installations*.

Before You Begin

Perform the following tasks before you begin your installation.

- Ensure that you have the following media.
  - If you are installing from a DVD, use the Solaris 10 Operating System for x86 Platforms DVD.
  - If you are installing from CD media, use the following:
    - Solaris 10 Software CDs.
    - Solaris 10 Languages for x86 Platforms CD – The installation program prompts you for this CD if necessary to support languages for specific geographic regions.
- Check your system BIOS to make sure you can boot from CD or DVD media. If your system must boot from a diskette, complete the steps described in "Copying the Boot Software to a Diskette" in *Solaris 10 Installation Guide: Network-Based Installations*.
- Acquire any install time updates (ITUs) or drivers that you need to install the Solaris OS on your hardware. To determine if you need an ITU or additional drivers, see your hardware documentation.
- Verify that your system meets the minimum requirements.

  Your system should meet the following requirements.

  - Memory – 64 Mbytes or greater
  - Disk space – 12 Gbytes or greater
  - Processor speed – 120 MHz or greater with hardware floating point

  For detailed information about system requirements, see "System Requirements and Recommendations" on page 9.

  If you are installing the Solaris OS on a system that is not produced by Sun Microsystems, Inc., check the Solaris Hardware Compatibility List at `http://www.sun.com/bigadmin/hcl` before you begin to install.
- Gather the information you need to install the Solaris OS.
  - For a nonnetworked system, gather the following information.
    - Host name of the system that you are installing
    - Language and locales that you intend to use on the system
  - For a networked system, gather the following information.

- Host name of the system that you are installing
- Language and locales that you intend to use on the system
- Host IP address
- Subnet mask
- Type of name service (for example, DNS, NIS, or NIS+)
- Domain name
- Host name of the name server
- Host IP address of the name server
- Root password

For information that you need to gather to install your system, see "Checklist for Installation" on page 11. If you are upgrading your system, see "Checklist for Upgrading" in *Solaris 10 Installation Guide: Solaris Live Upgrade and Upgrade Planning*.

- If your system must boot from diskette, copy the Solaris Device Configuration Assistant to diskette. To determine if your system must boot from diskette, check the system BIOS.

  For instructions, see "Copying the Boot Software to a Diskette" in *Solaris 10 Installation Guide: Network-Based Installations*.

- (Optional) Back up your system.

  If you want to preserve any existing data or applications, back up the system. For detailed instructions about how to back up your system, see Chapter 23, "Backing Up and Restoring File Systems (Overview)," in *System Administration Guide: Devices and File Systems*.

Steps

1. **Insert the appropriate media in your system.**

   - If you boot from the Solaris 10 Operating System DVD or the Solaris 10 Software - 1 CD, insert the disc. Your system's BIOS must support booting from a DVD or CD.

     You might need to manually set your BIOS to boot from a DVD or CD. See your hardware documentation for more information about how to set the BIOS.

   - If you boot from a diskette, insert a Solaris 10 Device Configuration Assistant diskette into the system's diskette drive.

2. **Boot the system by shutting it down and then turning it off and on.**

3. **If you need to manually set the BIOS to boot from CD or DVD, type the appropriate key sequence to interrupt your system boot process.**

   Modify the boot priority in the BIOS, and exit the BIOS to return to the installation program.

   A memory test and hardware detection are executed. The screen refreshes. The Solaris Booting System screen is displayed.

4. **Decide if you need to modify device settings.**

You might need to modify device settings if you want to perform the following tasks:

- Install device drivers
- Install ITUs
- Disable Advanced Configuration and Power Interface (ACPI)
- Set up a serial console
- Reset the default boot device

- **If you do not need to modify device settings, continue.**

- **If you need to modify device settings with the Solaris Device Configuration Assistant, press the ESC key.**

Note – You must press the ESC key within five seconds to interrupt the installation and modify device settings.

The Solaris Device Configuration Assistant (DCA) screen is displayed. Follow the instructions on the DCA screens to modify the device settings.

The Solaris installation program checks the default boot disk for the requirements to install or upgrade the system. If the Solaris installation cannot detect the system configuration, the program prompts you for any missing information.

When the check is completed, the installation selection screen is displayed.

5. **Select an installation type.**

   The installation selection screen displays the following options.

```
Select the type of installation you want to perform:

   1 Solaris Interactive
   2 Custom JumpStart
   3 Solaris Interactive Text (Desktop session)
   4 Solaris Interactive Text (Console session)

   Enter the number of your choice followed by the <ENTER> key.
   Alternatively, enter custom boot arguments directly.

   If you wait 30 seconds without typing anything,
   an interactive installation will be started.
```

- **To install with the Solaris installation GUI, type 1, then press Enter.**

- **To perform an unattended custom JumpStart installation, type 2, then press Enter.**

  For information about the custom JumpStart installation method, see *Solaris 10 Installation Guide: Custom JumpStart and Advanced Installations*.

- **To install with the text installer in a desktop session, type 3, then press Enter. You can also type `b - text` at the prompt.**

  Select this installation type to override the default GUI installer and run the text installer.

- **To install with the text installer in a console session, type 4, then press Enter. You can also type `b - nowin` at the prompt.**

  Select this installation type to override the default GUI installer and run the text installer.

For detailed information about the Solaris installation GUI and text installer, see "Solaris Installation Program GUI or Text Installer Requirements" on page 10.

The system configures the devices and interfaces, and searches for configuration files. After a few seconds, the Solaris Installation Program screen is displayed.

6. **On the Solaris Installation Program screen, press F2_Continue.**

   - If the installation program detects the type of keyboard, display, and mouse on your system, the Select a Language screen is displayed. Go to Step 12.
   - If the installation program does not detect the type of keyboard, display, and mouse on your system, the kdmconfig – Introduction screen is displayed. Go to Step 7.

7. **(Optional) Configure your system to use the keyboard, display, and mouse.**

   - **If you want to install the Solaris OS with the text installer in a console session, press F4_Bypass. Go to Step 12.**
   - **If you want to install the Solaris OS with the Solaris interactive installation GUI or the text program in a desktop session, press F2_Continue.**

     The `kdmconfig` utility detects the drivers that are necessary to configure the keyboard, display, and mouse on your system. The `kdmconfig` utility displays the results of this search in the kdmconfig – View and Edit Window System Configuration screen.

     Note – If the `kdmconfig` utility cannot detect the video driver for your system, the `kdmconfig` utility selects the 640x480 VGA driver. The Solaris installation GUI cannot be displayed with the 640x480 VGA driver. As a result, the Solaris installation text installer is displayed. To use the Solaris installation GUI, use the `kdmconfig` utility to select the correct video driver for your system.

     ---

8. **Examine the configuration information on the kdmconfig – View and Edit Window System Configuration screen and make any changes you need.**

   If any of the devices that are listed are not properly configured, follow these steps.

   a. **Select the device you want to change, and press F2_Continue.**

b. Select the appropriate driver for the device, and press F2_Continue.

c. Repeat Step a through Step b for each device you need to change.

9. When you are finished, select No changes needed – Test/Save and Exit and press F2_Continue.

The kdmconfig Window System Configuration Test screen appears.

10. Press F2_Continue.

The screen refreshes and the kdmconfig Window System Configuration Test palette and pattern screen appears.

11. Move the pointer and examine the colors that are shown on the palette to ensure that they are displayed accurately.

- **If the colors are not displayed accurately, click No. If possible, press any key on the keyboard, or wait until `kdmconfig` exits the kdmconfig Window System Configuration Test screen automatically. Repeat Step 7 through Step 11 until the colors are displayed accurately and you can move the pointer as expected.**
- **If the colors are displayed accurately, click Yes.**

After a few seconds, the Select a Language screen is displayed.

12. Select the language you want to use during the installation, and press Enter.

After a few seconds, the Solaris Installation Program screen appears.

- If you are running the Solaris GUI installation program, the screen that is shown in Figure 2–5 is displayed.
- If you are running the Solaris text installer in a desktop session, the screen that is shown in Figure 2–6 is displayed.

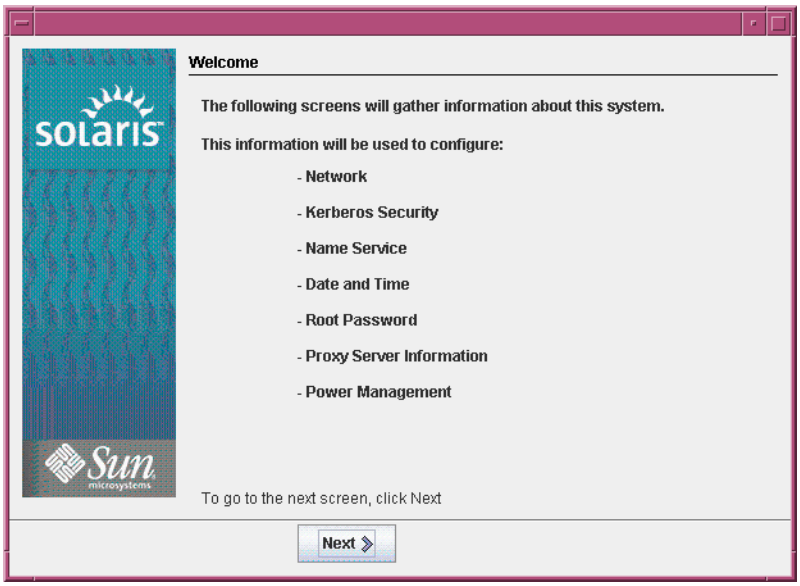

FIGURE 2–5 Solaris GUI Installation Program Welcome Screen

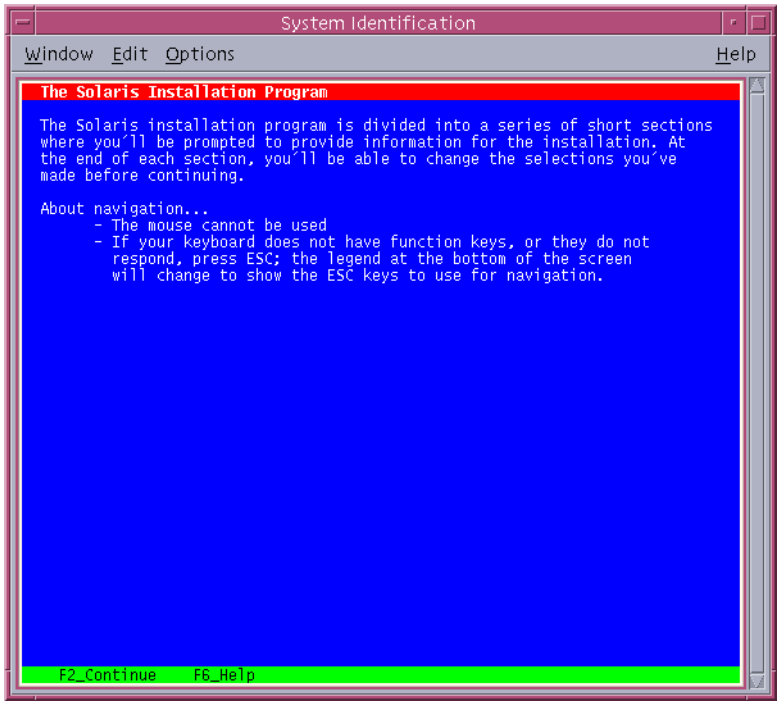

FIGURE 2–6 Solaris Text Installation Program Welcome Screen

13. **Click Next to begin the installation. If you are prompted, answer any remaining configuration questions.**

    - If you preconfigured all of the system information, the installation program does not prompt you to enter any configuration information. See Chapter 4, "Preconfiguring System Configuration Information (Tasks)," in *Solaris 10 Installation Guide: Network-Based Installations* for more information.
    - If you did not preconfigure all the system information, the installation program prompts you for this information on several screens. Use the "Checklist for Installation" on page 11 to help you answer the configuration questions.

    After you answer the configuration questions, the Welcome to Solaris dialog box appears.

FIGURE 2–7 Welcome to Solaris Screen

14. **Decide if you want to reboot the system automatically and if you want to automatically eject the disc. Click Next.**

    The Specify Media screen appears.

15. **Specify the media you are using to install. Click Next.**

16. **Decide if you want to perform an initial installation or an upgrade. Click Next.**

    The Solaris installation program determines if the system can be upgraded. To upgrade, the system must have an existing Solaris root (/) file system. The Solaris installation program detects the necessary conditions and then upgrades the system.

    Note – If you restored the diagnostic or service partition on your system before you started the installation, you might not be able to upgrade to the Solaris OS. For more information, see "Upgrade" in *Solaris 10 Installation Guide: Solaris Live Upgrade and Upgrade Planning*.

    ---

17. **Select the type of installation you want to perform. Click Next.**

    - **Select Default Install to install the Entire Solaris Software Group and the Sun Java Enterprise System software.**
    - **Select Custom Install if you want to perform the following tasks.**

- Install a specific software group
- Install specific software packages
- Install a specific locale
- Customize the disk layout

For more information about software groups, see "Disk Space Recommendations for Software Groups" in *Solaris 10 Installation Guide: Network-Based Installations*. For information about customizing `fdisk` partitions, see "Partitioning Recommendations" in *Solaris 10 Installation Guide: Custom JumpStart and Advanced Installations*.

Note – The text installer does not prompt you to select a Default or Custom Installation. To perform a default installation, accept the default values that are provided in the text installer. To perform a custom installation, edit the values in the text installer screens.

---

18. **If you are prompted, answer any additional configuration questions.**

    When you have provided the information that is required to install the system, the Ready to Install screen is displayed.

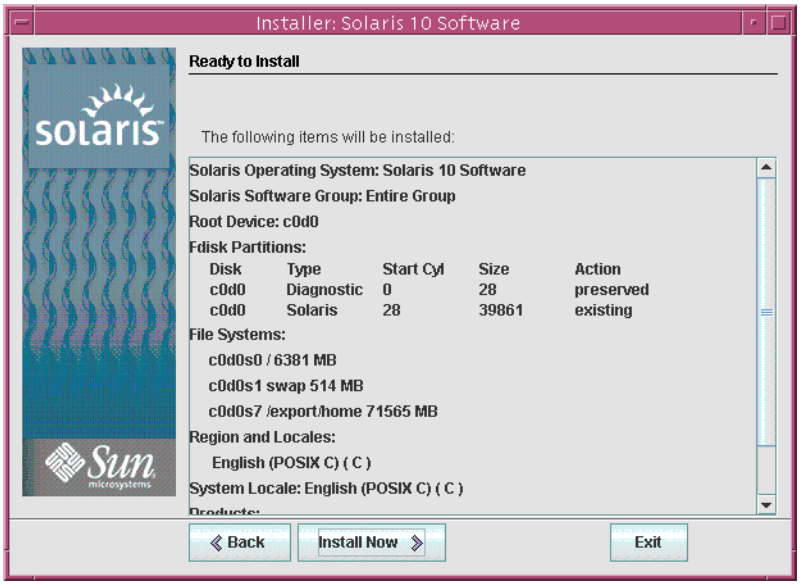

FIGURE 2–8 Solaris Installation Ready to Install Screen

19. **Click Install Now to install the Solaris software. Follow the instructions on the screen to install the Solaris software and any additional software on the system.**

When the Solaris installation program is finished installing the Solaris software, the system reboots automatically or prompts you to reboot manually.

After the installation is finished, installation logs are saved in a file. You can find the installation logs in the `/var/sadm/system/logs` and `/var/sadm/install/logs` directories

- **If you are performing an initial installation, the installation is complete. Got to Step 20.**
- **If you are upgrading the Solaris software, you might need to correct some local modifications that were not preserved. Go to Step a.**

  a. **Review the contents of the `/a/var/sadm/system/data/upgrade_cleanup` file to determine whether you need to correct local modifications that the Solaris installation program could not preserve.**

  b. **Correct any local modifications that were not preserved.**

20. If you did not select automatic reboot during the installation, reboot the system.

```
# reboot
```

Troubleshooting If you encounter any problems during the installation or upgrade, see Appendix A, "Troubleshooting (Tasks)," in *Solaris 10 Installation Guide: Custom JumpStart and Advanced Installations*.

Index

A

Advanced Configuration and Power Interface (ACPI), disabling, 28

B

BIOS
- requirements, 27
- setting boot priority, 28

boot priority, setting in system BIOS, 28
booting the system
- SPARC based systems, 21
- x86 based systems, 28

C

checklist of installation information, 11-17
commands to start an installation
- SPARC based systems, 21
- x86 based systems, 29

configuring the keyboard, display, and pointing device, 30
custom installation, description, 24

D

default boot device, resetting, 28
default route, specifying, 14
device drivers, installing, 28
device settings, modifying, 28
disabling Advanced Configuration and Power Interface (ACPI), 28
display, configuring for x86 based systems, 30
DNS, 13
domain name, 13

F

`fdisk` partitioning, 16

G

gathering information before installing, 11-17
geographic region support, 15
graphical user interface (GUI)
- command to start (SPARC based systems), 21
- command to start (x86 based systems), 29
- description, 10
- memory requirements, 11

H

host name, how to determine on running system, 12

I

information required for installation, 11-17

install time updates (ITUs), installing, 28
installing
  device drivers, 28
  information required, 11-17
  install time updates (ITUs), 28
  SPARC based systems, 19-26
  x86 based systems, 26-36
instructions
  installing SPARC based systems, 19-26
  installing x86 based systems, 26-36
IP addresses
  how to determine on running system, 12
  specifying a default route, 14

K

kdmconfig, configuring peripheral devices with, 30
Kerberos, information to configure, 12
keyboard, configuring for x86 based systems, 30

L

languages, selecting during installation, 21, 31
LDAP, information to configure, 14
locale support, 15
log files, upgrade installation, 26

M

media required to install
  SPARC based systems, 20
  x86 based systems, 27
memory requirements for displaying the Solaris installation program, 11
modifying device settings during installation, 28
mounting remote file systems, 17
mouse, configuring for x86 based systems, 30

N

name service, 13
netmask, how to determine on running system, 12
NIS, 13
NIS+, 13

O

output files, upgrade log, 26

P

partition, description, 9
password, specifying, 14
Power Management (SPARC based systems), 15
preparing for installation
  information you need before installing, 11-17
  SPARC based systems, 20
  x86 based systems, 27
prerequisites for installing
  SPARC based systems, 20
  x86 based systems, 27
proxy server, information to configure, 15

R

Ready to Install screen, 25
remote file systems, information required to mount, 17
requirements, 9-11
  BIOS, 27
  for displaying Solaris installation program, 11
  media
    SPARC based systems, 20
    x86 based systems, 27
  memory, 10
  `tip` line installations, 17
resetting the default boot device, 28

S

serial console, 28

setting boot priority in system BIOS, 28
setting up a serial console, 28
slice, description, 9
software groups, 15
Solaris Device Configuration Assistant,
  accessing, 28
Solaris installation program, 19-36
  description, 10-11
  graphical user interface (GUI)
    command to start (SPARC based systems), 21
    command to start (x86 based systems), 29
    description, 10
  memory requirements, 11
  Ready to Install screen
    SPARC based systems, 25
    x86 based systems, 35
  text installer
    command to start in console session (SPARC based systems), 21
    command to start in console session (x86 based systems), 30
    command to start in desktop session (SPARC based systems), 21
    command to start in desktop session (x86 based systems), 30
    description, 10
SPARC based systems
  instructions to install, 19-26
  preparing to install, 20
starting an installation
  SPARC based systems, 21
  x86 based systems, 29
system requirements, 9-11

T

text installer
  command to start in console session (SPARC based systems), 21
  command to start in console session (x86 based systems), 30
  command to start in desktop session (SPARC based systems), 21
  command to start in desktop session (x86 based systems), 30
  description, 10
text installer (Continued)
  memory requirements, 11
time zone, specifying, 14
`tip` line requirements, 17

U

upgrade, log file, 26
upgrading, postinstallation tasks, 26

X

x86 based systems
  BIOS requirements, 27
  booting, 28
  instructions to install, 26-36
  preparing to install, 27