

Sun™ Ultra™ 45 and Ultra 25 Workstations™ Installation Guide



Sun Microsystems, Inc.
www.sun.com

Part No. 819-1892-11
May 2006, Revision A

Submit comments about this document at: <http://www.sun.com/hwdocs/feedback>

Copyright 2006 Sun Microsystems, Inc., 4150 Network Circle, Santa Clara, California 95054, U.S.A. All rights reserved.

Sun Microsystems, Inc. has intellectual property rights relating to technology embodied in the product that is described in this document. In particular, and without limitation, these intellectual property rights may include one or more of the U.S. patents listed at <http://www.sun.com/patents> and one or more additional patents or pending patent applications in the U.S. and in other countries.

This document and the product to which it pertains are distributed under licenses restricting their use, copying, distribution, and decompilation. No part of the product or of this 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 in other countries, exclusively licensed through X/Open Company, Ltd. Mozilla is a trademarks or registered trademarks of Netscape Communications Corporation in the United States and other countries

Sun, Sun Microsystems, the Sun logo, Ultra, AnswerBook2, docs.sun.com, OpenBoot, Power Management, Java, Java Coffee Cup logo, SunSolve, SunVTS, and Solaris are trademarks or registered trademarks of Sun Microsystems, Inc. in the U.S. and in other countries.

All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. in the U.S. and in 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.



Sun Microsystems is an ENERGY STAR® partner. Those configurations of this product that bear the ENERGY STAR mark meet or exceed the ENERGY STAR guidelines.

Use, duplication, or disclosure by the U.S. Government is subject to restrictions set forth in the Sun Microsystems, Inc. license agreements and as provided in DFARS 227.7202-1(a) and 227.7202-3(a) (1995), DFARS 252.227-7013(c)(1)(ii) (Oct. 1998), FAR 12.212(a) (1995), FAR 52.227-19, or FAR 52.227-14 (ALT III), as applicable.

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 2006 Sun Microsystems, Inc., 4150 Network Circle, Santa Clara, California 95054, Etats-Unis. Tous droits réservés.

Sun Microsystems, Inc. a les droits de propriété intellectuels relatants à la technologie incorporée dans le produit qui est décrit dans ce document. En particulier, et sans la limitation, ces droits de propriété intellectuels peuvent inclure un ou plus des brevets américains énumérés à <http://www.sun.com/patents> et un ou les brevets plus supplémentaires ou les applications de brevet en attente dans les Etats-Unis et dans les autres pays.

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 des systèmes 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. Mozilla sont marques de Netscape Communications Corporation aux Etats-Unis et à d'autres pays.

Sun, Sun Microsystems, le logo Sun, Ultra, AnswerBook2, docs.sun.com, OpenBoot, Power Management, Java, le logo Java Coffee Cup, SunSolve, SunVTS et Solaris sont des marques 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.

LA DOCUMENTATION EST FOURNIE "EN L'ÉTAT" ET TOUTES AUTRES CONDITIONS, DECLARATIONS, ET GARANTIES EXPRESSES OU TACITES SONT FORMELLEMENT EXCLUES, DANS LA MESURE AUTORISÉE PAR LA LOI APPLICABLE, Y COMPRIS NOTAMMENT TOUTE GARANTIE IMPLICITE RELATIVE A LA QUALITE MARCHANDE, A L'APTITUDE A UNE UTILISATION PARTICULIERE OU A L'ABSENCE DE CONTREFAÇON.

Contents

Preface	xi
1. Setting Up the Sun Ultra 45 and Ultra 25 Workstations	1
Safety and Compliance	1
Planning Your Workstation Installation	2
Verifying Workstation Requirements	2
Sun Ultra 45 and Ultra 25 Workstations Installation Process	4
Verifying Shipping Kit Contents	5
Front Panel Overview	6
Back Panel Overview	8
Side Cover Overview	10
Keyboard and Mouse Overview	11
Installing Optional Hardware Components	12
Setting Up the System Stabilizer	13
Cabling Your Workstation	14
Powering On the Workstation	15
Powering Off the Workstation	18
2. Installing and Configuring Preinstalled Solaris Operating System Software	19
Planning Your Solaris Operating System Software Installation	19

Solaris Operating System Installation Process	21
Installing and Configuring Your Solaris Operating System Software	21
Power Management	26
Power LED	27
Placing the Workstation Into Low-Power Mode	27
Activating the Workstation From Low-Power Mode	28
3. Getting Started With Preinstalled Software	31
Desktop System Software Documentation	32
Solaris 10 Operating System Software Documentation	32
Preinstalled Productivity Software	32
SunVTS 6.1 PS1	32
Service Procedure Animations	33
Service Procedure Movies	33
Development Tools	34
NetBeans 5.0	34
Sun Java Studio Creator 2	34
Sun Java Studio Enterprise 8	35
Sun Studio 11	35
Restoring and Backing Up Preinstalled Software	37
Restoring Preinstalled Software	37
Restoring Solaris Preinstalled Software	38
Reinstalling Other Software	38
Backing Up the Preinstalled Image to Another Hard Drive	39
Hard Drive Mirroring	39
4. Diagnosing Sun Ultra 45 and Ultra 25 Workstations Installation Problems	41
Diagnosing and Repairing Basic Workstation Installation Problems	41
Collecting Information for Technical Support	46

How to Get Technical Support 47

Index 49

Figures

FIGURE 1-1	Sun Ultra 45 and Ultra 25 Workstations Installation Process Diagram	4
FIGURE 1-2	Front Panel Overview—Sun Ultra 45 and Ultra 25 workstations	6
FIGURE 1-3	Back Panel Overview—Sun Ultra 45 and Ultra 25 workstations	8
FIGURE 1-4	Side Cover Overview—Sun Ultra 45 and Ultra 25 Workstations	10
FIGURE 1-5	Type 7 Keyboard and Mouse Overview—Sun Ultra 45 and Ultra 25 Workstations	11
FIGURE 1-6	Setting Up the System Stabilizer—Sun Ultra 45 and Ultra 25 Workstations	13
FIGURE 1-7	Cabling the Sun Ultra 45 and Ultra 25 workstations	14
FIGURE 1-8	Powering On the Workstation	16
FIGURE 1-9	Solaris Installer (Configuration) Window (enlarged)	17
FIGURE 2-1	Solaris Operating System Software—Installation Process Diagram	21
FIGURE 2-2	Solaris 10 Installer (Configuration) Window	22
FIGURE 2-3	Entitlement and Software License Agreement	23
FIGURE 2-4	Sun USB Type-7 Keyboard, Java DS keys, Sleep Key, and Power Off Selection Menu	28

Tables

TABLE 1-1	Electrical Specifications – Sun Ultra 45 and Ultra 25 Workstations	2
TABLE 1-2	Operating Temperature Specifications—Sun Ultra 45 and Ultra 25 Workstations	3
TABLE 1-3	Verifying Shipping Kit Contents—Sun Ultra 45 and Ultra 25 Workstations	5
TABLE 1-4	Front Panel Overview—Sun Ultra 45 and Ultra 25 Workstations	6
TABLE 1-5	Back Panel Overview—Sun Ultra 45 and Ultra 25 Workstation	8
TABLE 1-6	Side Cover Overview—Sun Ultra 45 and Ultra 25 Workstations	10
TABLE 1-7	Type 7 Keyboard and Mouse Overview—Sun Ultra 45 and Ultra 25 Workstations	11
TABLE 1-8	Powering Off the Workstation	18
TABLE 2-1	Preinstalled Hard Drive Image—Partition Configuration	20
TABLE 2-2	Information to Collect Before Installing and Configuring—A Networked Solaris Operating System	24
TABLE 2-3	Information to Collect Before Installing and Configuring—A Nonnetworked Solaris Desktop Operating System	25
TABLE 2-4	Power LED Status	27
TABLE 3-1	ShowMe How Movies	33
TABLE 4-1	Diagnosing and Repairing Basic Workstation Installation Problems	42
TABLE 4-2	Information to Collect Before Calling a Sun Service Support Center	46
TABLE 4-3	Useful Sun Technical Support Web Sites and Phone Numbers	47

Preface

The *Sun Ultra 45 and Ultra 25 Workstations Installation Guide* (819-1891) describes how to set up and operate your workstation. This document is written for users who have experience installing and configuring workstation hardware and software.

The *Sun Ultra 45 and Ultra 25 Workstations Installation Guide* is translated into French, German, Italian, Spanish, Swedish, Japanese, Korean, Simplified Chinese, and Traditional Chinese. The translated documentation is located on the Sun™ Ultra™ 45 and Ultra 25 Hardware Documentation CD (705-1341). The *Sun Ultra 45 and Ultra 25 Workstations Installation Guide* and its translations are also located at:

<http://www.sun.com/documentation/>

Before You Read This Document

Before following any of the procedures described in this document, ensure that you have read the *Sun Ultra 45 and Ultra 25 Workstations Safety and Compliance Guide* (819-2785) and *Important Safety Information for Sun Hardware Systems* (816-7190).

How This Document Is Organized

This document is organized into chapters as follows:

Chapter 1 includes information about the following topics:

- Safety and compliance
- Planning your workstation installation
- Verifying workstation requirements
- Installing optional hardware components
- Setting up the stabilizer
- Cabling your workstation
- Powering on the workstation
- Powering off the workstation

Chapter 2 includes information about the following topics:

- Planning your Solaris™ Operating System software installation
- Installing and configuring your Solaris Operating System software
- Power management

Chapter 3 includes information about the following topics:

- Desktop system software documentation
- Preinstalled productivity software
- Development tools
- Multimedia software
- Restoring and backing up preinstalled software

Chapter 4 includes information about the following topics:

- Diagnosing and repairing basic workstation installation problems
- How to get technical support

Using UNIX Commands

The *Sun Ultra 45 and Ultra 25 Workstations Installation Guide* might not contain all of the information needed to perform basic UNIX[®] commands and procedures such as shutting down the system, booting the system, and configuring devices.

See one or more of the following documents for additional UNIX commands:

- *Solaris 10 Sun Hardware Platform Guide* (817-6337)
- Solaris Operating System documentation, which is at:
<http://docs.sun.com>
- *Sun Ultra 45 and Ultra 25 Workstations Service and Diagnostics Manual* (819-1892)
- Other software documentation that you received with your system

Shell Prompts

Shell	Prompt
C shell	<i>machine-name%</i>
C shell superuser	<i>machine-name#</i>
Bourne shell and Korn shell	\$
Bourne shell and Korn shell superuser	#
ALOM shell	sc>
OpenBoot [™] PROM shell	ok

Typographic Conventions

Typeface*	Meaning	Examples
AaBbCc123	The names of commands, files, and directories; on-screen computer output	Edit your <code>.login</code> file. Use <code>ls -a</code> to list all files. % You have mail.
AaBbCc123	What you type, when contrasted with on-screen computer output	% su Password:
<i>AaBbCc123</i>	Book titles, new words or terms, words to be emphasized. Replace command-line variables with real names or values.	Read Chapter 6 in the <i>User's Guide</i> . These are called <i>class</i> options. You <i>must</i> be superuser to do this. To delete a file, type <code>rm filename</code> .

* The settings on your browser might differ from these settings.

Related Documentation

Read *Important Safety Information for Sun Hardware Systems* (816-7190) and the *Sun Ultra 45 and Ultra 25 Workstation Getting Started Guide* (819-1894) before performing any of the procedures documented in this installation guide. The documents listed are available online at:

<http://www.sun.com/>

Sun Ultra 45 and Ultra 25 Documentation on CD-ROM

The Sun Ultra 45 and Ultra 25 Hardware Documentation CD (705-1341) that shipped with your workstation includes HTML or PDF versions of:

- *How To Use This CD* (HTML document on Hardware Documentation CD)
- *Sun Ultra 45 and Ultra 25 Workstations Installation Guide*
- *Sun Ultra 45 and Ultra 25 Workstations Service and Diagnostics Manual*
- Service procedure animated movies

TABLE P-1 describes the content of the Sun Ultra 45 and Ultra 25 Hardware Documentation CD.

TABLE P-1 Sun Ultra 45 and Ultra 25 Hardware Documentation CD

Document Content	Where Located	Part Number
How to use the Sun Ultra 45 and Ultra 25 Hardware Documentation CD	<i>How To Use This CD</i> (HTML document on Hardware Documentation CD)	819-2786
Basic workstation setup and diagnostic information	<i>Sun Ultra 45 and Ultra 25 Workstations Installation Guide</i>	819-1892
Detailed service and diagnostics procedures for the workstation	<i>Sun Ultra 45 and Ultra 25 Workstations Service and Diagnostics Manual</i>	819-1892
Video animations that demonstrate installation and removal procedures for workstation hardware	MPEG-1 movies located on the Sun Ultra 45 and Ultra 25 Hardware Documentation CD	705-1341
Where to find all Sun Ultra 45 and Ultra 25 workstation documentation	<i>Where to Find Sun Ultra 45 and Ultra 25 Workstations Documentation</i>	819-2788

Sun Ultra 45 and Ultra 25 Workstations Online Documentation

TABLE P-2

Document Content	Where Located	Part Number
Basic hardware setup and Solaris OS installation	<i>Sun Ultra 45 and Ultra 25 Workstations Getting Started Guide</i>	819-1894
Workstation hardware and software setup and basic diagnostic information	<i>Sun Ultra 45 and Ultra 25 Workstations Installation Guide</i>	819-1892 English
		819-3102 French
		819-3103 German
		819-3104 Italian
		819-3105 Spanish
		819-3106 Swedish
		819-3107 Japanese
		819-3108 Korean
		819-3109 Simplified Chinese
819-3110 Traditional Chinese		
Detailed service and diagnostics procedures	<i>Sun Ultra 45 and Ultra 25 Workstations Service and Diagnostics Manual</i>	819-1892
Late-breaking information about changes to the hardware, software, and documentation.	<i>Sun Ultra 45 and Ultra 25 Workstations Product Notes</i>	819-1893
Safety and compliance information	<i>Sun Ultra 45 and Ultra 25 Workstations Safety and Compliance Guide</i>	817-5120
	<i>Important Safety Information for Sun Hardware Systems</i>	816-7190
Solaris 10 1/06 Operating System information	<i>Solaris 10 1/06 Sun Hardware Platform Guide</i>	817-6337
Graphics accelerators	<i>Sun XVR-100 Graphics Accelerator Installation Guide</i>	816-7560
	<i>Sun XVR-2500 Graphics Accelerator Installation and User's Guide</i>	817-7517

Accessing Sun Documentation Online

You can view, print, or purchase a broad selection of Sun documentation, including localized versions of Sun publications, at:

<http://www.sun.com/documentation/>

TABLE P-2 describes the content of the Sun Ultra 45 workstation online documentation.

Note – For useful Sun technical support web sites and phone numbers see, “How to Get Technical Support” on page 47.

Documentation, Support, and Training

Sun Function	URL
Documentation	http://www.sun.com/documentation/
Support	http://www.sun.com/support/
Training	http://www.sun.com/training/

Third-Party Web Sites

Sun is not responsible for the availability of third-party web sites mentioned in this document. Sun does not endorse and is not responsible or liable for any content, advertising, products, or other materials that are available on or through such sites or resources. Sun will not be responsible or liable for any actual or alleged damage or loss caused by or in connection with the use of or reliance on any such content, goods, or services that are available on or through such sites or resources.

Sun Welcomes Your Comments

Sun is interested in improving its documentation and welcomes your comments and suggestions. You can submit your comments by going to:

<http://www.sun.com/hwdocs/feedback>

Please include the title and part number of your document with your feedback:

Sun Ultra 45 and Ultra 25 Workstations Installation Guide, part number 819-1892

Setting Up the Sun Ultra 45 and Ultra 25 Workstations

This chapter includes information about the following topics:

- “Safety and Compliance” on page 1
- “Planning Your Workstation Installation” on page 2
- “Verifying Shipping Kit Contents” on page 5
- “Installing Optional Hardware Components” on page 12
- “Setting Up the System Stabilizer” on page 13
- “Cabling Your Workstation” on page 14
- “Powering On the Workstation” on page 15
- “Powering Off the Workstation” on page 18

Safety and Compliance

Read the *Important Safety Information for Sun Hardware Systems* (816-7190) document. This document is included with Sun Ultra 45 or Ultra 25 workstations.

Additional safety and compliance information can be found in the *Sun Ultra 45 and Ultra 25 Workstations Safety and Compliance Guide* (817-5120). This guide is installed on the Sun Ultra 45 and Ultra 25 Workstations Documentation CD (704-7736) and is also available online at:

<http://www.sun.com/documentation/>

Planning Your Workstation Installation

Successful installation of the Sun Ultra 45 and Ultra 25 workstations consists of the following steps:

- Verifying workstation requirements
- Unpacking the workstation and identifying your workstation's hardware, software, and documentation components
- Installing optional components
- Cabling your workstation, monitor, keyboard, mouse, and network interface
- Powering on the workstation
- Powering off the workstation

Use FIGURE 1-1 as a process tool to assist you with installation of the Sun Ultra 45 and Ultra 25 workstations.

Verifying Workstation Requirements

Before unpacking the Sun Ultra 45 or Ultra 25 workstation for setup and installation, verify that the electrical power and the temperature of the operating environment are correct.

1. Verify that the AC power supplied to the workstation is correct (TABLE 1-1).

If necessary, correct the supplied electrical power to the workstation.

TABLE 1-1 Electrical Specifications – Sun Ultra 45 and Ultra 25 Workstations

Maximum AC input	Voltage	Current	Frequency
Range 1	100 Vac	12A	50–60 Hz
Range 2	110 – 127 Vac	10A	50–60 Hz
Range 3	200 – 240 Vac	6A	50–60 Hz

2. Verify that the temperature of the environment for the workstation is correct (TABLE 1-2).

If necessary, correct the operating temperature for the workstation.

TABLE 1-2 Operating Temperature Specifications—Sun Ultra 45 and Ultra 25 Workstations

Parameter	Specification
Temperature of the environment where the workstation is installed	41 ⁰ – 95 ⁰ F (5 ⁰ – 35 ⁰ C)

See the *Sun Ultra 45 and Ultra 25 Workstations Service and Diagnostics Manual* (819-1892) for additional workstation specifications.

Sun Ultra 45 and Ultra 25 Workstations Installation Process

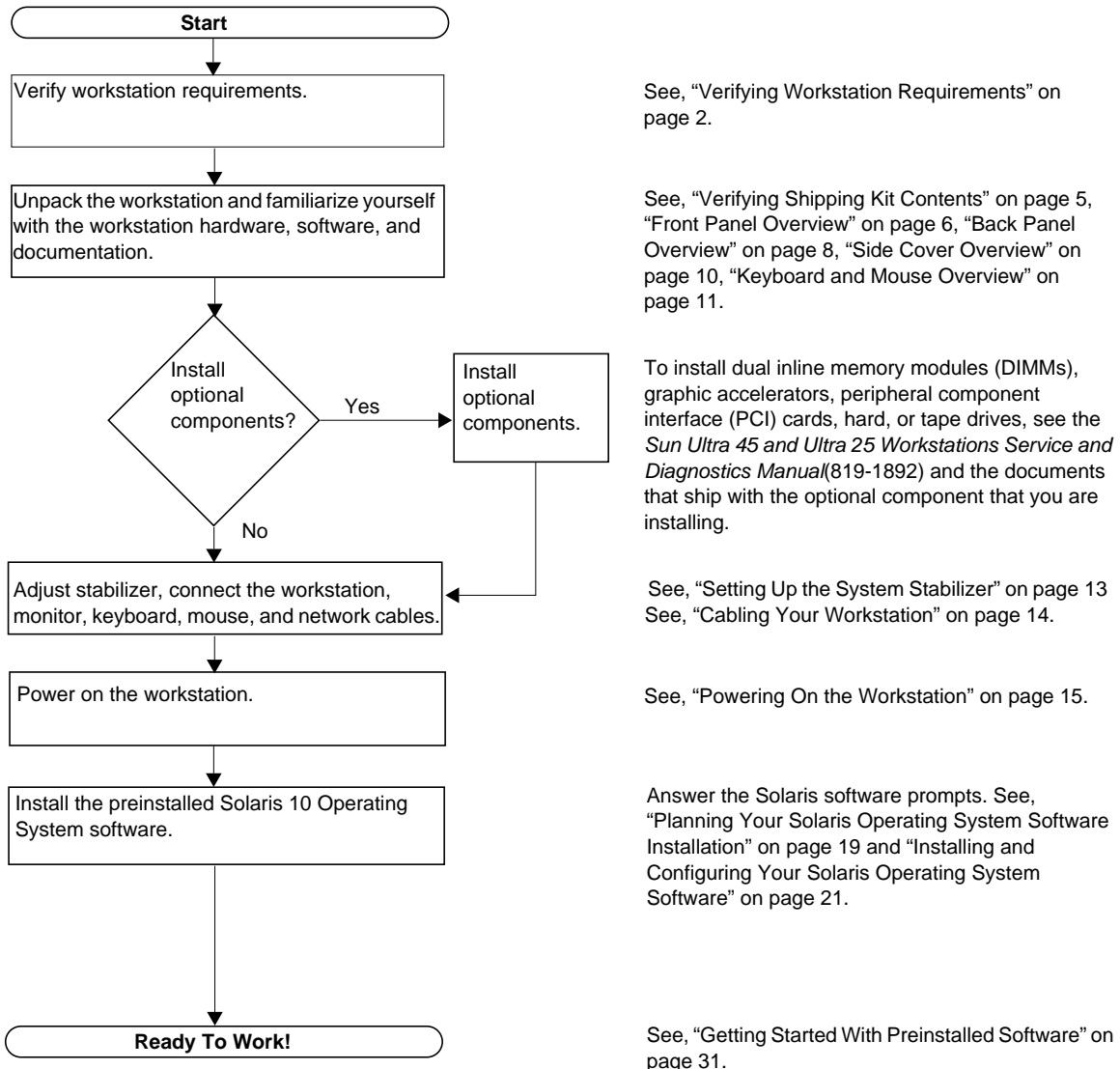


FIGURE 1-1 Sun Ultra 45 and Ultra 25 Workstations Installation Process Diagram

Note – Solaris 10 Operating System software is the only Sun supported operating system for the Sun Ultra 45 and Ultra 25 workstations. The workstations might not correctly operate if other versions of Solaris software are installed.

Verifying Shipping Kit Contents

Carefully unpack all of the workstation components from the packing cartons. Verify that your workstation has all of the components listed in TABLE 1-3. If any of the components are missing, contact your Sun sales representative for replacements.

TABLE 1-3 Verifying Shipping Kit Contents—Sun Ultra 45 and Ultra 25 Workstations

Item	Component Description
1	<i>Sun Ultra 45 and Ultra 25 Workstations Getting Started Guide (819-1894)</i>
2	<i>Sun Ultra 45 and Ultra 25 Workstations Product Notes (819-1893)</i>
3	Antistatic wrist strap
4	Sun Ultra 45 or Ultra 25 Workstation
5	<i>Sun Ultra 45 and Ultra 25 Hardware Documentation CD (705-1341)</i>
6	<i>Sun Ultra 45 and Ultra 25 Workstations Where to Find Doclette (819-2788)</i>
7	<i>Important Safety Information for Sun Hardware Systems (816-7190)</i>

Front Panel Overview

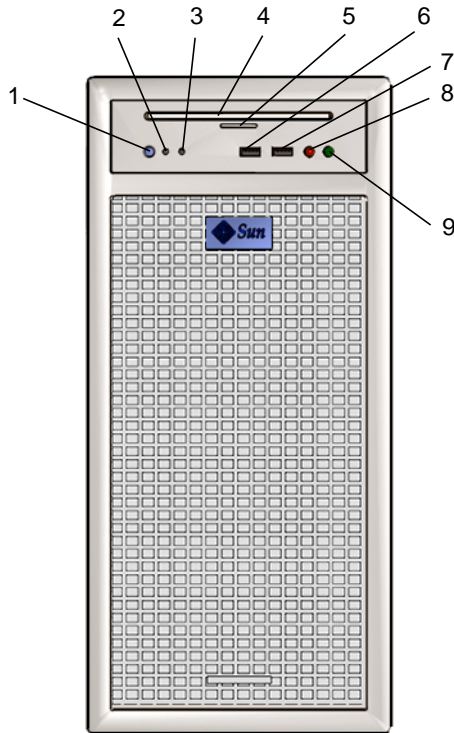


FIGURE 1-2 Front Panel Overview—Sun Ultra 45 and Ultra 25 workstations

TABLE 1-4 Front Panel Overview—Sun Ultra 45 and Ultra 25 Workstations

Item	Description
1	Power button
2	Power LED
3	Fault LED
4	DVD dual drive slot Note: Behind this slot is the removable I/O module. This module contains a power button, power LED, fault LED, DVD dual drive, USB, microphone, and headphone connectors.
5	DVD dual drive eject button
6	USB V2.x connector

TABLE 1-4 Front Panel Overview—Sun Ultra 45 and Ultra 25 Workstations (*Continued*)

Item	Description
7	USB V2.x connector
8	Microphone connector (red)
9	Headphone connector (green)

Back Panel Overview

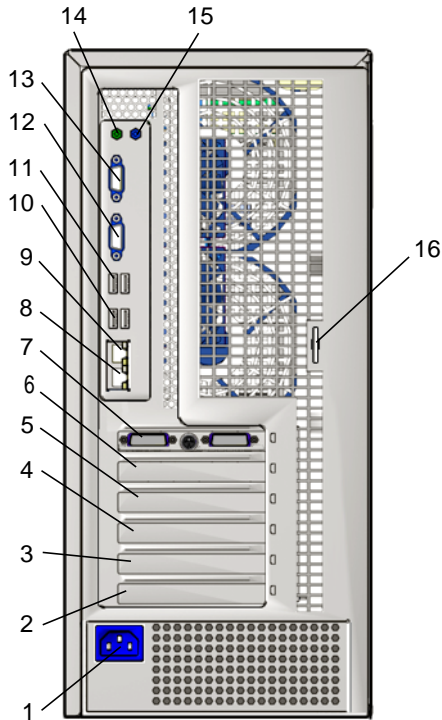


FIGURE 1-3 Back Panel Overview—Sun Ultra 45 and Ultra 25 workstations

TABLE 1-5 Back Panel Overview—Sun Ultra 45 and Ultra 25 Workstation

Item	Description
1	Power connector
2	Filler panel shown, peripheral component interconnect extended (PCI-X0) 100 MHz (Slot 0) behind this panel
3	Filler panel shown, peripheral component interconnect extended (PCI-X1) 100 MHz (Slot 1) behind this panel
4	Filler panel shown, peripheral component interconnect express (PCI-E0 x8) (Slot 2) behind this panel
5	Filler panel shown, peripheral component interconnect express (PCI-E1 x16) (Slot 3) behind this panel
6	Filler panel shown, no peripheral component interface slot behind this filler panel

TABLE 1-5 Back Panel Overview—Sun Ultra 45 and Ultra 25 Workstation (*Continued*)

Item	Description
7	Sun XVR-2500 graphics accelerator shown, peripheral component interconnect express (PCI-E2 x16) (Slot 4) behind this graphics accelerator
8	Twisted-pair Ethernet (TPE 1) 10/100/1000 Mbit/second
9	Twisted-pair Ethernet (TPE 0) 10/100/1000 Mbit/second
10	Universal serial bus (USB) V2.x (2)
11	Universal serial bus (USB) V2.x (2)
12	Serial connector, DB9 (RS-432) TTYA
13	Serial connector, DB9 (RS-432) TTYB
14	Audio line-out (green)
15	Audio line-in (blue)
16	Lock hasp

Note – Only place Sun XVR-100 graphics accelerators in PCI-X slots 0 or 1.

For information about connectors refer to the *Sun Ultra 45 and Ultra 25 Workstations Service and Diagnostics Manual* (819-1892).

Side Cover Overview



Caution – Always power off the workstation before removing the side cover. If necessary, see the *Sun Ultra 45 and Ultra 25 Workstations Service and Diagnostics Manual* (819-1892) for powering off and side cover removal instructions.

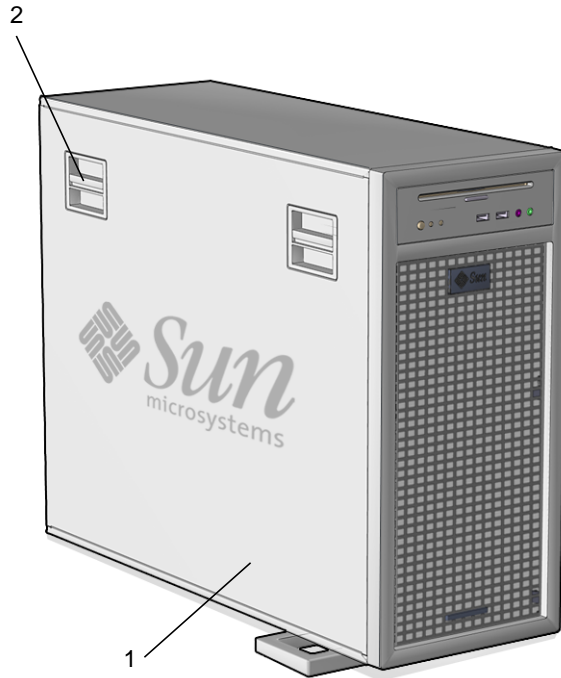


FIGURE 1-4 Side Cover Overview—Sun Ultra 45 and Ultra 25 Workstations

TABLE 1-6 Side Cover Overview—Sun Ultra 45 and Ultra 25 Workstations

Item	Description
1	Side cover
2	Latch (2)

Keyboard and Mouse Overview

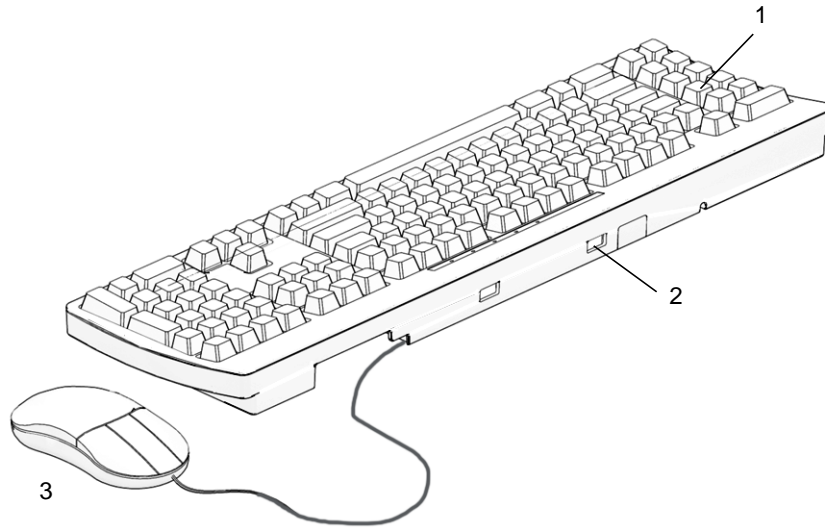


FIGURE 1-5 Type 7 Keyboard and Mouse Overview—Sun Ultra 45 and Ultra 25 Workstations

TABLE 1-7 Type 7 Keyboard and Mouse Overview—Sun Ultra 45 and Ultra 25 Workstations

Item	Description
1	Keyboard, Type 7 (Java™ Desktop System keys shown)
2	Universal serial port (3) (Third USB port located under keyboard)
3	Mouse, 3-button

The Type 7 keyboard has Java DS keys. For additional information about Sun keyboards and mice see *Sun Type 7 Keyboard Installation Guide* (819-2907).

Installing Optional Hardware Components

If you are installing optional internal components such as DIMMs, PCI cards, graphics accelerators, or hard drives, see the *Sun Ultra 45 and Ultra 25 Workstations Service and Diagnostics Manual* (819-1892) and the installation documentation that was provided with the optional hardware component.



Caution – Optional components such as DIMMs, PCI cards, graphics accelerators, and hard drives are sensitive to static electricity. Always wear an antistatic wrist strap when handling hardware components.

Service procedure animated movies are located on the Sun Ultra 45 and Ultra 25 Hardware Documentation CD (705-1341). These movies demonstrate installation and removal procedures for optional hardware components such as motherboards, power supplies, removable I/O modules, dual drives, DIMMs, PCI cards, graphics accelerators, and hard drives. For additional information see, “Service Procedure Movies” on page 33.

Setting Up the System Stabilizer

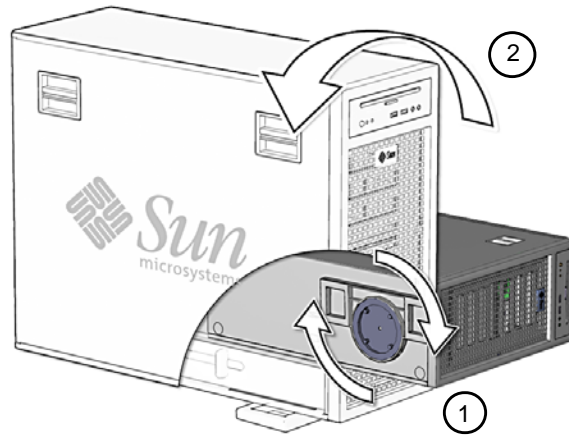


FIGURE 1-6 Setting Up the System Stabilizer—Sun Ultra 45 and Ultra 25 Workstations

Cabling Your Workstation

Perform the following procedure to cable your workstation.

1. Connect the mouse to the USB port under the keyboard (FIGURE 1-7).

Turn the keyboard over and locate the USB port. Connect the mouse to this port. FIGURE 1-7 illustrates the cable connections for the workstation.

2. Connect the keyboard to a back panel USB port.

Note – Do not connect the keyboard or mouse to the front panel USB ports.

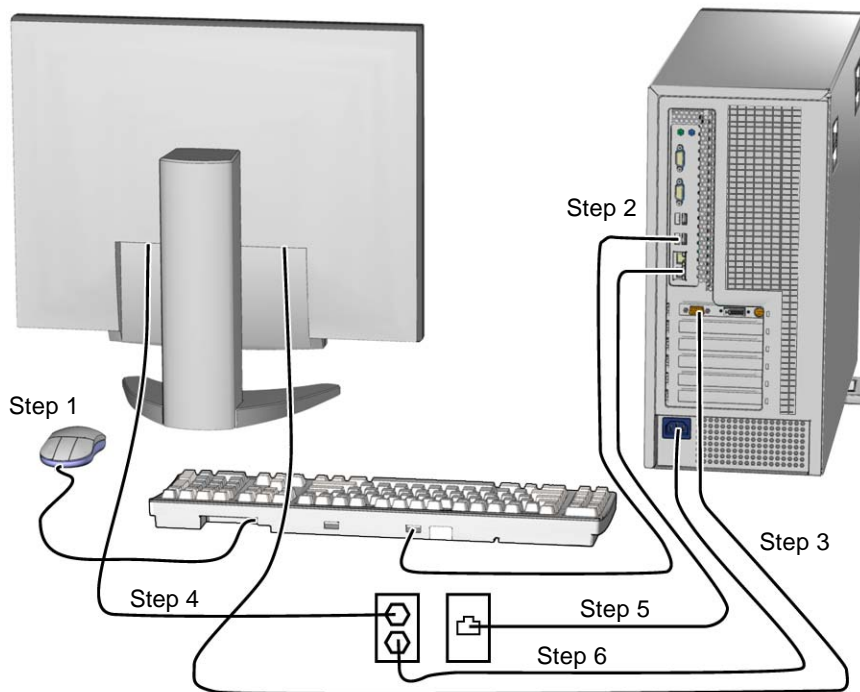


FIGURE 1-7 Cabling the Sun Ultra 45 and Ultra 25 workstations

3. Connect the monitor cable to the video connector on the graphics accelerator.

The graphics accelerator shown in FIGURE 1-7 is a Sun XVR-2500. Your Sun Ultra 45 or Ultra 25 workstation might contain a different graphics accelerator than shown.

Note – Monitors that have 13W3 connectors require a Sun DB13W3-to-15 HD/M adapter cable for proper connection. This adapter cable (Sun store part no. X471A) can be obtained from your Sun sales representative or the Sun store at:

<http://store.sun.com/>

To find the cable, search for both the part number and the cable by description.



Caution – High voltage present.

4. Connect the monitor power cord to a grounded electrical outlet.

5. Connect the Ethernet cable to one of the two TPE connectors.

A Sun Ultra 45 or Ultra 25 workstation has two Gigabit Ethernet ports.



Caution – High voltage present.

6. Connect the workstation power cord to a grounded electrical outlet.

7. Connect any additional external devices to the workstation's other connectors.

Powering On the Workstation

Install all optional internal components before powering on the workstation. For additional information see the *Sun Ultra 45 and Ultra 25 Workstations Service and Diagnostics Manual* (819-1892) and the documents that shipped with the optional component that you are installing.

1. Power on the monitor and all external devices (FIGURE 1-8).

See the *Sun Ultra 45 and Ultra 25 Workstations Service and Diagnostics Manual* (819-1892) for power on instructions.

2. Press and release the workstation Power button on the front panel (FIGURE 1-8).

Verify that the power LED illuminates after the Power button is pressed.

3. Allow the workstation to boot to the Solaris installer (configuration) window (FIGURE 1-8 and FIGURE 1-9).

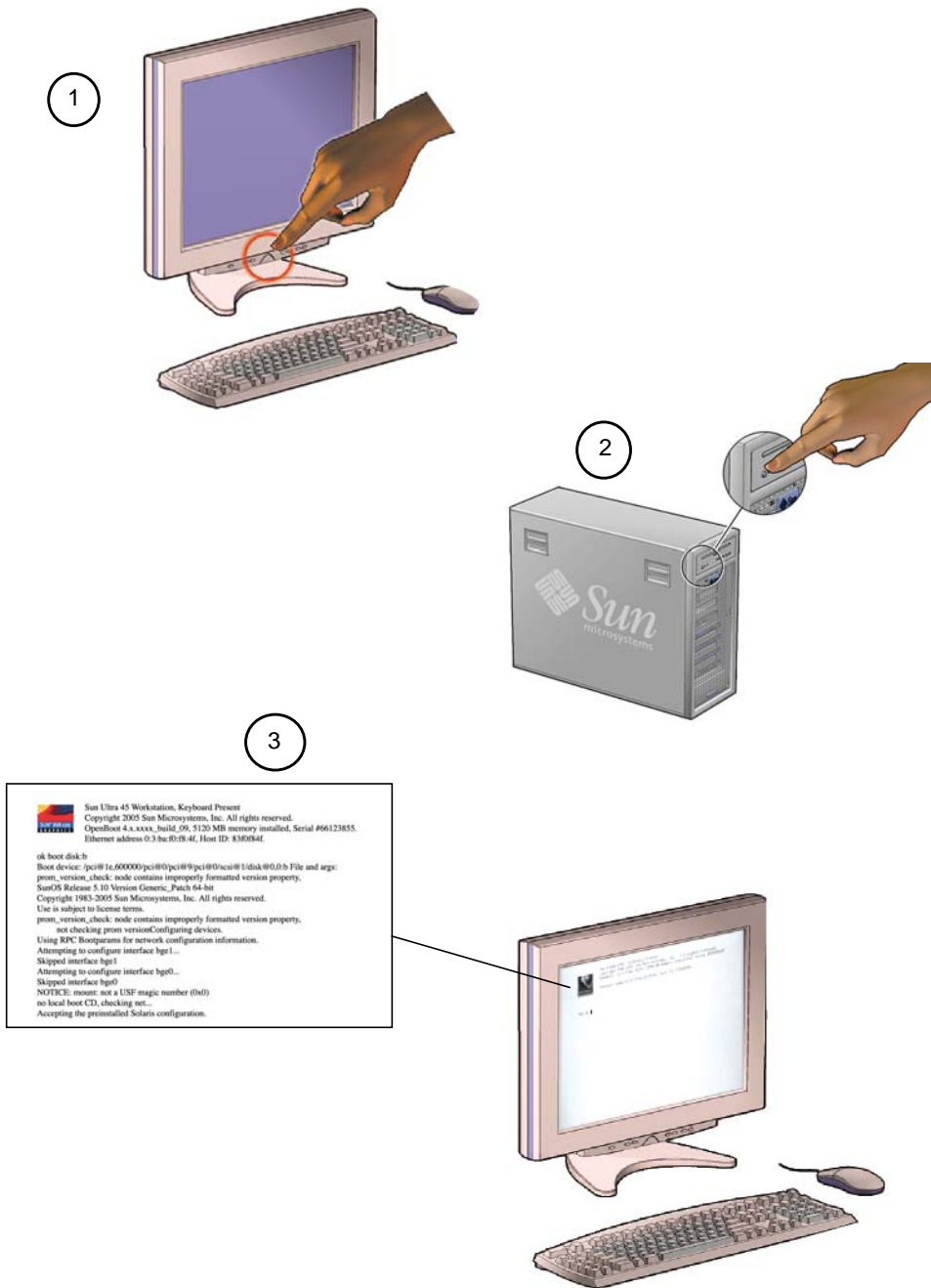


FIGURE 1-8 Powering On the Workstation



Sun Ultra 45 Workstation, Keyboard Present
Copyright 2005 Sun Microsystems, Inc. All rights reserved.
OpenBoot 4.x.xxxx_build_09, 5120 MB memory installed, Serial #66123855.
Ethernet address 0:3:ba:f0:f8:4f, Host ID: 83f0f84f.

```
ok boot disk:b
Boot device: /pci@1e,600000/pci@0/pci@9/pci@0/scsi@1/disk@0,0:b File and args:
prom_version_check: node contains improperly formatted version property,
SunOS Release 5.10 Version Generic_Patch 64-bit
Copyright 1983-2005 Sun Microsystems, Inc. All rights reserved.
Use is subject to license terms.
prom_version_check: node contains improperly formatted version property,
not checking prom versionConfiguring devices.
Using RPC Bootparams for network configuration information.
Attempting to configure interface bge1...
Skipped interface bge1
Attempting to configure interface bge0...
Skipped interface bge0
NOTICE: mount: not a USF magic number (0x0)
no local boot CD, checking net...
Accepting the preinstalled Solaris configuration.
```

FIGURE 1-9 Solaris Installer (Configuration) Window (enlarged)

Note – Some details of the configuration window may be different from what is shown above.

4. Configure the Solaris Operating System software for your workstation.

See “Planning Your Solaris Operating System Software Installation” on page 19 for additional instructions.

Note – If the Solaris 10 Operating System is already configured on your system, the workstation will boot to the Solaris Welcome window. Enter your user name and password to log in and begin using the workstation.

If you experience problems during power on, see “Diagnosing and Repairing Basic Workstation Installation Problems” on page 41.


Powering Off the Workstation

TABLE 1-8 describes three methods for powering off the workstation.



Caution – After powering off the workstation, always wait at least six seconds before powering on the workstation again.

TABLE 1-8 Powering Off the Workstation

Method	Instructions
Method 1	 <ol style="list-style-type: none">1. Close and save any open applications.2. Press the Sleep key (located on the keyboard). You can also press and release the Power button.3. Select Shutdown.
Method 2	<ol style="list-style-type: none">1. Close and save any open applications.2. As superuser, type: shutdown
Method 3	<ol style="list-style-type: none">1. Press and hold the power button for four seconds—the workstation powers off. This is a forced shutdown. All open applications and files are closed abruptly without saving any changes. The workstation file system might be corrupted.

Installing and Configuring Preinstalled Solaris Operating System Software

This chapter includes information about the following topics:

- “Planning Your Solaris Operating System Software Installation” on page 19
- “Installing and Configuring Your Solaris Operating System Software” on page 21
- “Power Management” on page 26

Planning Your Solaris Operating System Software Installation

Your workstation has a single-boot image. During system setup you can choose to finish configuring the preinstalled Solaris 10 Operating System software or you can choose to install another operating system such as Linux.

This procedure describes how to complete installation of the preinstalled Solaris 10 Operating System software. Earlier versions of Solaris software are not supported on Sun Ultra 45 or Ultra 25 workstations.

Note – The preinstalled Solaris 10 01/06 OS software, requires no licensing fee. If you install a different version of Solaris software, you might be required to pay a licensing fee for the additional software. For more information, refer to the following web site:

<http://www.sun.com/software/>

The exact configuration that has been preinstalled on the primary hard drive is (TABLE 2-1):

TABLE 2-1 Preinstalled Hard Drive Image—Partition Configuration

Slice	Name	Size
0	/ (root)	20 GB
1	swap partition	2 GB
2	backup	entire disk
3	/space	remainder
4 – 7		unused

Use FIGURE 2-1 to assist you with installation of the Solaris OS.

Solaris Operating System Installation Process

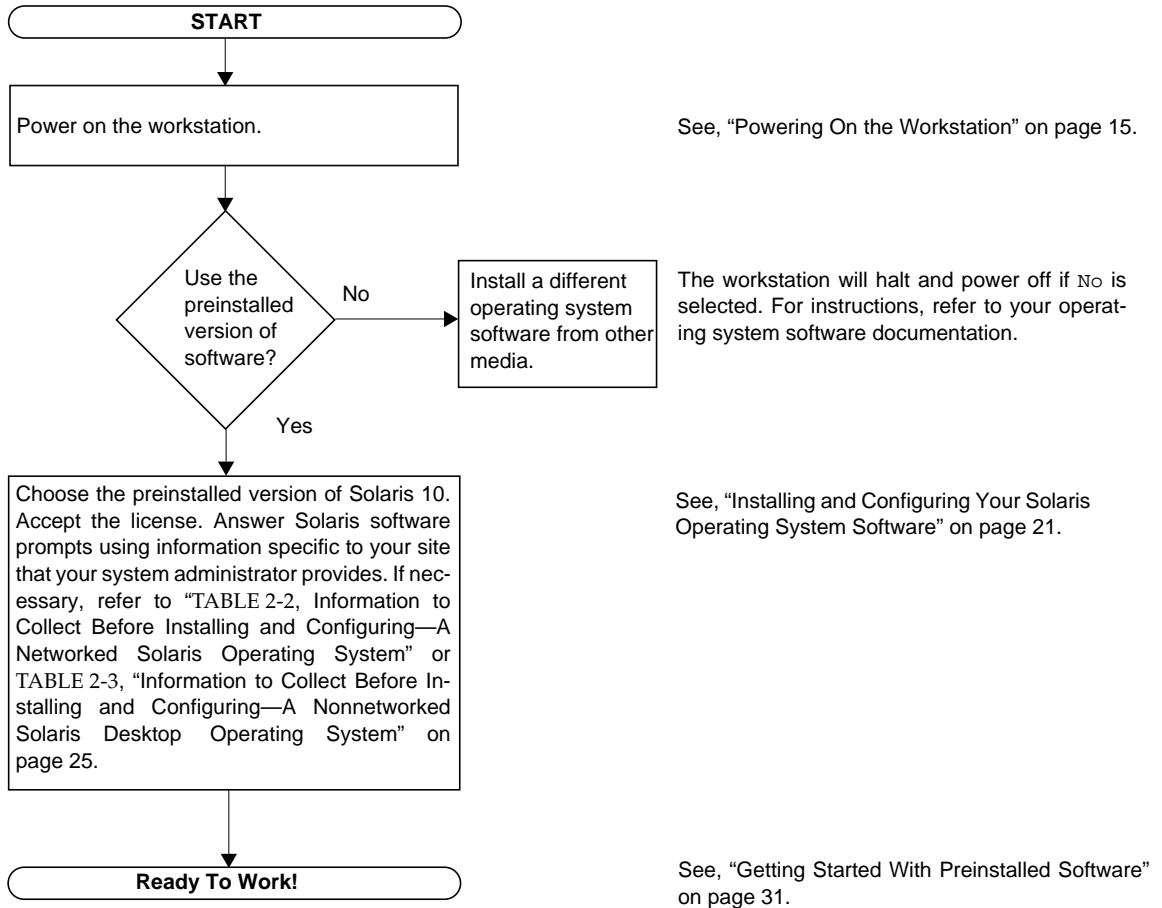


FIGURE 2-1 Solaris Operating System Software—Installation Process Diagram

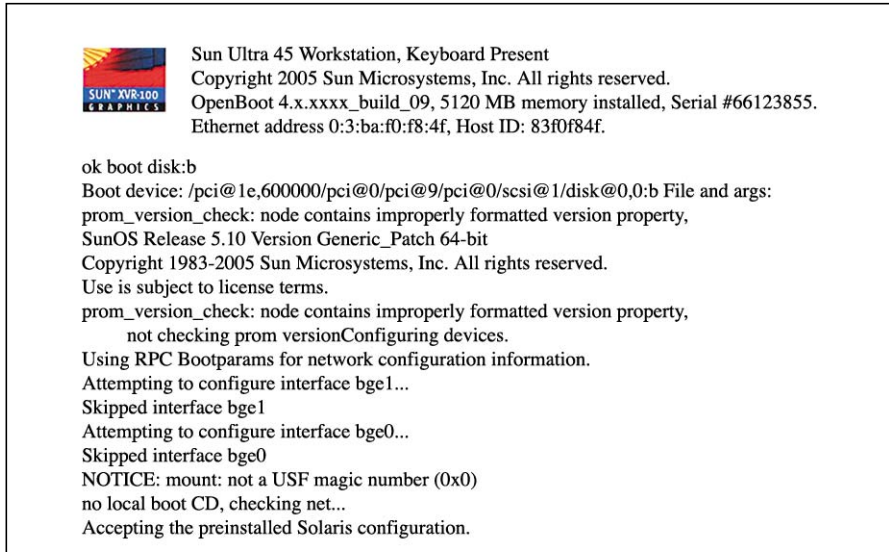
Installing and Configuring Your Solaris Operating System Software

1. If necessary, power on the workstation.

See "Powering On the Workstation" on page 15.

2. Verify that the Solaris 10 Installer (Configuration) Window is displayed
(FIGURE 2-2).

Allow the workstation to boot until a Solaris 10 installer window is displayed similar to FIGURE 2-2 below.



```
Sun Ultra 45 Workstation, Keyboard Present
Copyright 2005 Sun Microsystems, Inc. All rights reserved.
OpenBoot 4.x.xxxx_build_09, 5120 MB memory installed, Serial #66123855.
Ethernet address 0:3:ba:f0:f8:4f, Host ID: 83f0f84f.

ok boot disk:b
Boot device: /pci@1e,600000/pci@0/pci@9/pci@0/scsi@1/disk@0,0:b File and args:
prom_version_check: node contains improperly formatted version property,
SunOS Release 5.10 Version Generic_Patch 64-bit
Copyright 1983-2005 Sun Microsystems, Inc. All rights reserved.
Use is subject to license terms.
prom_version_check: node contains improperly formatted version property,
not checking prom versionConfiguring devices.
Using RPC Bootparams for network configuration information.
Attempting to configure interface bge1...
Skipped interface bge1
Attempting to configure interface bge0...
Skipped interface bge0
NOTICE: mount: not a USF magic number (0x0)
no local boot CD, checking net...
Accepting the preinstalled Solaris configuration.
```

FIGURE 2-2 Solaris 10 Installer (Configuration) Window



Caution – Some versions of the Solaris OS do not correctly operate on the Sun Ultra 45 or Ultra 25 workstation. Verify that you are installing Solaris 10 01/06 OS or a subsequent compatible version of Solaris OS on your workstation before you begin this installation.

3. Review the Software Licensing Agreement for the Sun Ultra 45 and Ultra 25 workstations.

4. Press space to continue or type q to skip to: Do you accept this licensing agreement (FIGURE 2-3)?

Note – If you are not familiar with the Software Licensing Agreement, read it completely. Press the space bar to review each of the supplemental licensing terms, before accepting the collective licensing agreement.

ENTITLEMENT AND SOFTWARE LICENSE AGREEMENT for
SOLARIS 10 3/05 OPERATING SYSTEM

ENTITLEMENT

THIS ENTITLEMENT EVIDENCES YOUR AUTHORIZED SCOPE OF USE UNDER THE TERMS OF THE SUN MICROSYSTEMS, INC. SOFTWARE LICENSE AGREEMENT FOR THE SUN SOFTWARE INDICATED BELOW (THE "SLA") UNLESS OTHERWISE AGREED IN WRITING BETWEEN YOU AND SUN MICROSYSTEMS, INC. ("SUN").

Capitalized terms not defined in this document have the meanings ascribed to them in the SLA. These terms will supersede any inconsistent or conflicting terms in the SLA.

Licensee/Company: Entity in receipt of Software from an authorized source

Beginning Date of License Term: the date of receipt of this Entitlement

Software: Solaris 10 3/05

- Press "space" to continue, 'q' to skip -

FIGURE 2-3 Entitlement and Software License Agreement

5. Answer the Solaris Operating System setup prompts by following the on-screen instructions.

Note – Use TABLE 2-2 as a guide for collecting installation and configuration information for networked workstations. Use TABLE 2-3 as a guide for collecting installation and configuration information for nonnetworked workstations.

Note – To help you answer the workstation setup prompts, your system administrator (SA) should provide you with information specific to your site before you begin the Solaris installation.

For additional information about Solaris 10 configuration and setup see:
<http://docs.sun.com/>

Note – Collect this network information (TABLE 2-2) before installing and configuring your Solaris 10 Operating System.

TABLE 2-2 Information to Collect Before Installing and Configuring—A Networked Solaris Operating System

Solaris 10 Installation Window	Explanation and Notes	Your Information
Solaris License	Accept or decline the Solaris Operating System license.	
Solaris Release	Choose Solaris 10 Operating System Operating System release.	
Select Language and Locale	Native language and locale to use for the workstation.	
Host Name of Your Workstation	Select a name for the workstation.	
Host Name of Your Server	Obtain this information from your system administrator.	
Host IP Address of Your Name Server		
Network Connectivity Protocols: bge DHCP IPv6	<p>Network or stand-alone workstation protocols. A system administrator might be required to complete this section.</p> <p>Note: Depending on how you answer the network connectivity prompts and what information is provided by your network, you might be prompted for the workstation's host IP address.</p>	
Kerberos Security	Decline, or accept to setup Kerberos security.	
Name Service (type)	<p>Select a name service to use: NIS+, NIS, DNS, LDAP, or none.</p> <p>Note: This window is not displayed if the workstation is not connected to a network.</p>	
Domain Name	<p>Select NIS or NIS+ domain for this workstation.</p> <p>Note: This window is not displayed if the workstation is not using the NIS or NIS+ service.</p>	

TABLE 2-2 Information to Collect Before Installing and Configuring—A Networked Solaris Operating System (Continued)

Solaris 10 Installation Window	Explanation and Notes	Your Information
Name Server/ Subnet/ Subnet Mask	Specify the name server or have the workstation find a name server on a local subnet. Note: This window is not displayed if the workstation is not connected to a network.	
Time Zone	Select a local time zone by geographic region, GMT offset, or a time zone file.	
Date and Time	Select the current date and time (or accept the default or enter the current date and time).	
Root and Password	Enter root and password	

Note – Collect this nonnetwork information (TABLE 2-3) before installing and configuring your Solaris 10 Operating System.

TABLE 2-3 Information to Collect Before Installing and Configuring—A Nonnetworked Solaris Desktop Operating System

Solaris 10 Installation Window	Explanation and Notes	Your Information
Host Name of Your Workstation	Select a name for the workstation.	
Select Language and Locale	Native language and locale to use for the workstation.	
Time Zone	Select a local time zone by geographic region, GMT offset, or a time zone file.	
Date and Time	Select the current date and time (or accept the default or enter the current date and time).	
Root and Password	Enter a (superuser ID) and password.	

6. When you reach the setup window titled Confirmation Information, confirm your workstation’s selection summary and click the Confirm button.

After clicking the Confirm button, the workstation reboots and the operating system is reconfigured.

The workstation now displays the Solaris 10 Welcome screen.

7. Enter your user name and password to log in and begin using the workstation.

Note – A number of other useful software packages are preinstalled on your workstation's hard drive. For information about these applications, see "Getting Started With Preinstalled Software" on page 31.

8. Review the latest Solaris 10 release notes for any late-breaking information about your preinstalled software.

The *Solaris 10 Release Notes* can be found at:

<http://docs.sun.com>

Power Management

Sun Microsystems is an Energy Star[®] partner. Configurations of this product that bear the Energy Star mark meet or exceed the Energy Star guidelines.

For information about Energy Star compliance, go to:

<http://www.energystar.gov/>

The Power Management[™] software that is integrated with Solaris improves the energy efficiency of your workstation by placing the internal subsystems into low-power mode.

Note – The Sun Ultra 25 workstation meets or exceeds Energy Star guidelines in operation only when using the Java Desktop System windowing system, rather than using the CDE windowing system.

If you are currently using CDE, you can switch to the Java Desktop System by logging out from a CDE session, then logging back in after selecting Java Desktop System instead of CDE.

Note – Power is returned to your workstation's subsystems on an as-needed basis. The default period of inactivity is 30 minutes.

While in low-power mode, your workstation retains network awareness and responds to network traffic. For details and information on how to change the power management settings on your workstation, refer to:

<http://docs.sun.com/app/docs/prod/Solaris10/>

Search for the *Solaris Common Desktop Environment: User's Guide* and locate the information on Power Management. If necessary, you can download or purchase the user's guide.

Power LED

The power LED located on the front panel has three states that indicate the power status of the workstation, as described in TABLE 2-4.

TABLE 2-4 Power LED Status

LED Activity	Meaning
LED off	System power is off or the workstation is booting up.
LED blinking	All internal subsystems are in the lowest possible power consumption mode for this workstation. Note: Some hardware components and software drivers might not support the workstation's lowest possible power consumption mode. When this occurs, the power LED does not blink.
LED on	Full power is on in one or more of the internal subsystems. Note: The power LED energizes when the power button is pressed. This occurs before system self-test has completed successfully.

Placing the Workstation Into Low-Power Mode

After a predetermined period of inactivity, the workstation might automatically enter low-power mode. You can manually put the workstation into low-power mode by performing the following procedure.

- 1. Press the Sun Type 7 USB keyboard Sleep key (FIGURE 2-4).**

The Power Off Selection dialog box is displayed.

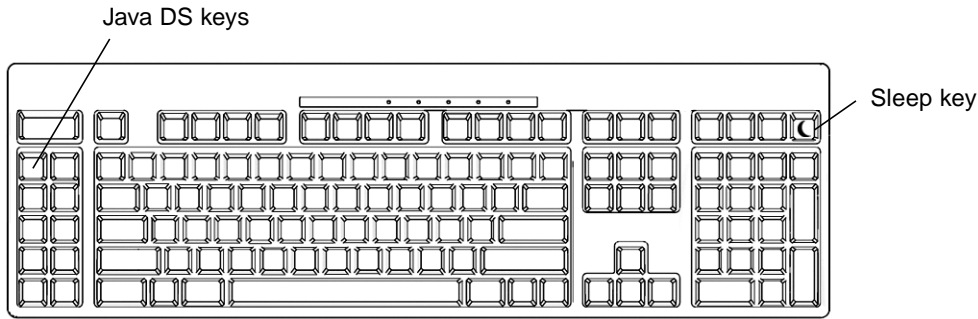
Note – Type 7 keyboards have Java Desktop System (Java DS) keys.

- 2. Select LowPower from the Power Off Selection dialog box.**

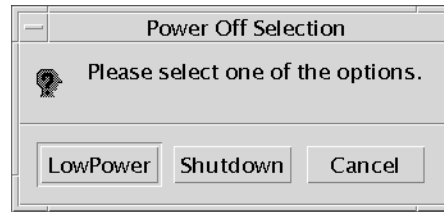
The workstation completes any in-process activities, then enters low-power mode after a short time-out period.

Note – You can use the keyboard Sleep key to place the workstation in low-power mode or to shut down the workstation. See FIGURE 2-4.

Note – The Sleep key cannot be used to power on the workstation. Press the Power button on the front panel to power on the workstation.



Type 7 keyboard



Power off selection menu

FIGURE 2-4 Sun USB Type-7 Keyboard, Java DS keys, Sleep Key, and Power Off Selection Menu

Activating the Workstation From Low-Power Mode

To activate a workstation that is in low-power mode, move the mouse or press any key on your keyboard. The monitor display, if blank, refreshes, and the CPU and hard drives return to full power as needed.

Note – By default, the internal disks of the hard drive are stopped when the workstation is in low-power mode. The internal drive(s) can take as long as 30 seconds to restart and reach the correct speed. To change hard drive power management settings, refer to:

<http://docs.sun.com/app/docs/prod/Solaris10/>

Search for the *Solaris Common Desktop Environment: User's Guide* and locate the information on Power Management. If necessary, you can download or purchase the user's guide.

Getting Started With Preinstalled Software

This chapter includes information about your Solaris 10 Operating System and the software installed on your workstation's hard drive image and the Sun Ultra 45 and Ultra 25 Hardware Documentation CD. This chapter includes information about the following topics:

Desktop System Software Documentation

- "Solaris 10 Operating System Software Documentation" on page 32

Preinstalled Productivity Software

- "SunVTS 6.1 PS1" on page 32

Preinstalled Developer Tools

- "NetBeans 5.0" on page 34
- "Sun Java Studio Creator 2" on page 34
- "Sun Java Studio Enterprise 8" on page 35
- "Sun Studio 11" on page 35

Service Procedure Animated Multimedia

- "Service Procedure Movies" on page 33

Restoring and Backing Up Preinstalled Software

- "Restoring Preinstalled Software" on page 37
- "Backing Up the Preinstalled Image to Another Hard Drive" on page 39

Desktop System Software Documentation

Solaris 10 Operating System Software Documentation

For Solaris Operating System documentation, refer to the following web site:

<http://docs.sun.com/>

Select: Solaris 10→Solaris 10 User Collection→Solaris 10 README

The Solaris 10 on Sun Hardware collection documentation is also located at:

<http://docs.sun.com/>

To access the hardware collection select: Solaris 10→Solaris 10 on Sun Hardware Collection:

<http://www.sun.com/documentation/>

For a summary of Solaris preinstalled content refer to the following website:

<http://www.sun.com/software/preinstall/>

Preinstalled Productivity Software

SunVTS 6.1 PS1

SunVTS[™] software is available as part of the preinstalled software on the hard disk included with your Sun Ultra 45 or Ultra 25 workstation. SunVTS software is operating-system specific. Use only version 6.1 (or subsequent compatible version of SunVTS), which supports the Sun Ultra 45 and Ultra 25 workstations.

You can find the latest revision of SunVTS software on the web at:

<http://www.sun.com/oem/>

The web site can also provide you with SunVTS installation instructions. The installation and removal instructions for SunVTS are located in the *SunVTS 6.1 User's Guide*.

You can find the latest revision of the SunVTS documentation on the web at:

<http://www.sun.com/oem/vts>

Service Procedure Animations

Service Procedure Movies

Service procedure tutorial movies are located on the Sun Ultra 45 and Ultra 25 Hardware Documentation CD (705-1341). These movies demonstrate installation and removal procedures for the Sun Ultra 45 workstation (TABLE 3-1). The procedures covered also apply to the Ultra 25 workstation.

View these movies before installing optional hardware components in your Sun Ultra 45 or Ultra 25 workstations. Instructions for viewing these movies on Solaris, Microsoft Windows XP/2000, and MacOS based systems are located on the Sun Ultra 45 and Ultra 25 Hardware Documentation CD.

TABLE 3-1 ShowMe How Movies

Workstation Component	ShowMe How Video Title
Power	Powering Off the System Powering On the System
Power supply	Replacing the Power Supply
Hard drive	Installing and Replacing a Hard Drive Replacing the Hard Drive Backplane
Motherboard	Replacing the Motherboard
PCI	Installing and Replacing PCI Boards
DIMM	Installing and Replacing Memory (Ultra 25 memory procedures may be slightly different from what is shown.)
DVD dual drive	Replacing the DVD Dual Drive

Development Tools

The following Sun development tools for the Java platform are preinstalled on your workstation's hard disk image.

Note – If you need to restore the Java products, you can download the latest versions by selecting links from the following web site:
<http://java.sun.com/>

NetBeans 5.0

NetBeans™ 5.0 is an open source applications development tool that allows developers to produce Java applications in the web tier. Information about NetBeans 5.0 is located at:

<http://www.netbeans.org/>

Downloads are available at:

<http://www.netbeans.org/downloads/index.html>

NetBeans IDE 5.0 installation location: `/opt/netbeans-5.0`

To run the IDE, launch: `/opt/netbeans-5.0/bin/netbeans`

To uninstall the IDE, launch: `/opt/netbeans-5.0/_uninst/uninstaller`

Sun Java Studio Creator 2

Sun Java Studio Creator 2 is a front end, web applications builder that runs on Windows XP/2000, Linux, Solaris, and the MacOS platforms. Information about Sun Studio Creator 2 is located at:

<http://developers.sun.com/prodtech/javatools/jscreator/reference/docs/>

Java Studio Creator 2 includes the following:

- Sun Java Studio Creator development environment
- Sun Java System Application Server Platform Edition
- Point Base Embedded Database

Installation location: /opt/Creator

Installation log: /opt/Creator/install.log

ApplicationServerInformation:

- Adminusername: admin
- Adminuserpassword: adminadmin
- Adminport: 14848

More port information: /opt/Creator/system/install.properties

Sun Java Studio Enterprise 8

Sun Java Studio Enterprise 8 is an application tool that allows developers collaborate and share information in real time. Information about Sun Java Studio Enterprise 8 is located at:

<http://developers.sun.com/prodtech/javatools/jsenterprise/index.html>

Sun Java Studio Enterprise 8 will be installed in the following location:

/opt/sun/jstudio_ent8

The following features are included:

- Sun Java Studio Enterprise 8
- Sun Java System Application Server 8.1 UR2 Platform Edition
- Collaboration Runtime

Installation Summary:

- Total size: 273.9 MB
- Product: /opt/sun/jstudio_ent8
- IDE:/opt/sun/jstudio_ent8/ide
- Application Server:/opt/sun/jstudio_ent8/AppServ8.1UR2
- Application Server admin username: admin
- Application Server admin password: adminadmin
- Collaboration Runtime:/opt/sun/jstudio_ent8/CollabRuntime

Sun Studio 11

Sun Studio 11 software allows users to develop high performance software applications using C, C++, and Fortran. This release allows developers to build scalable 32-bit and 64-bit applications on Sun's hardware platforms including the latest multi-core UltraSPARC® and x64/x86 systems. Information about Sun Studio 11 is located at:

Solaris platforms:

<http://developers.sun.com/prodtech/cc/documentation/ss11/index.html>

Linux platforms:

<http://developers.sun.com/prodtech/cc/documentation/ss11/indexLinux.html>

The installation and licensing log files are located at: `/var/sadm/install/logs`

To view a log file, type at the prompt:

```
% cd /var/sadm/install/logs;more filename
```

The installed product contains Update Notification, a feature that checks a web service at Sun Microsystems and informs you of relevant updates. Refer to the Release Notes for further information.

If you installed any component of the Sun Studio 11 developer tools on a network server, to send getting started information to the developers who use the network-installed software, you can use the email template:

```
/install-directory/SUNWspro/READMEs/email_template.txt
```

You should now set your PATH to include:

```
/opt/SUNWspro/bin
```

For Bourne-family shells (sh, bash, ksh):

```
$ PATH=/opt/SUNWspro/bin:$PATH; export PATH
```

For C-family shells (csh, tcsh):

```
% setenv PATH /opt/SUNWspro/bin:$PATH
```

Then, to run the IDE, type at the prompt: `% sunstudio`

Restoring and Backing Up Preinstalled Software

Restoring Preinstalled Software

Note – All Solaris 10 and Java Desktop System (Java DS) components are available through download of the Solaris 10 Operating System or through the Solaris 10 media kit. For information about obtaining Solaris 10 and Java DS components see:

<http://www.sun.com/software/>

Your workstation comes preconfigured with the Solaris 10 Operating System and other preinstalled software. However, if you replace your hard drive for any reason, the replacement drive does not come preconfigured with the Solaris 10 Operating System and other preinstalled software.

You should make and keep a full backup of the operating system, which can be used to restore your system if it is ever needed. Instructions for backing up your Operating System are included in the Solaris 10 System Administration Collection. For information about the Solaris 10 System Administration Collection see:

<http://docs.sun.com/>

You can also restore some of the software that is preinstalled on your hard drive image from the CD-ROMs included in the appropriate version of the Solaris Media Kit. The Solaris Media Kit contains some of the same software that is preinstalled on your workstation. To reinstall some software, you might need to download the software from the web sites provided throughout this document. Some software product companies, such as Mozilla, offer different versions of software on their respective web sites.

Restoring Solaris Preinstalled Software

Note – You must use Solaris 10 Operating System OS or a subsequent compatible version on the Sun Ultra 45 or Ultra 25 workstations.

1. Get the Solaris Media Kit for your workstation.

You might already have the Solaris Media Kit if you ordered it with your workstation. If you did not order the kit with your system, contact your Sun sales representative and order the Solaris Media Kit for your language and version of Solaris. For more information, refer to the following web site:

<http://www.sun.com/software/>

2. Follow the installation instructions in the *Start Here* document that comes with the kit.

You can install the Solaris Operating System and as much of the additional software as you want.

You can also download patches from the SunSolveSM web site:

<http://sunsolve.sun.com/>

The *Sun Ultra 45 and Ultra 25 Workstations Product Notes* (819-1893) might also contain patch and software version information. To obtain the latest *Sun Ultra 45 and Ultra 25 Workstations Product Notes*, refer to the following web site:

<http://www.sun.com/documentation/>

Reinstalling Other Software

If you must reinstall other software packages, ensure that you have the latest software version. For more information on the latest software versions, refer to the web sites listed throughout this guide.

Backing Up the Preinstalled Image to Another Hard Drive

Information about hard drive backups can be found in the *Solaris 10 System Administration Guide*. To obtain this guide, refer to the following web site:

<http://docs.sun.com/>

Hard Drive Mirroring

Use Solaris Volume Manager to perform hard drive mirroring using the Solaris 10 OS.

For information about Solaris Volume Manager, see the *Solaris Volume Manager Administration Guide* at:

<http://www.sun.com/documentation/>

Diagnosing Sun Ultra 45 and Ultra 25 Workstations Installation Problems

This chapter contains information to help you diagnose basic workstation installation problems. Topics include:

- “Diagnosing and Repairing Basic Workstation Installation Problems” on page 41
- “How to Get Technical Support” on page 47

Diagnosing and Repairing Basic Workstation Installation Problems

The diagnostics described within this section are intended to help you diagnose and repair simple problems that might occur after you cable, power on, and configure the workstation for the first time. Detailed basic and advanced diagnostic procedures are described in *Sun Ultra 45 and Ultra 25 Workstations Service and Diagnostics Manual* (819-1892).

Note – As you diagnose workstation malfunctions, always compare normal operation with observed operation and document the differences. This information might be useful if you need to contact Sun technical support.

If you experience problems after cabling, powering on, and configuring your workstation, refer to the diagnostic information in TABLE 4-1.

Note – Advanced diagnostic procedures are described in the *Sun Ultra 45 and Ultra 25 Workstations Service and Diagnostics Manual* (819-1892).

TABLE 4-1 Diagnosing and Repairing Basic Workstation Installation Problems

Symptom	Diagnostic Procedures
Workstation does not power on when the power button is pressed.	<ol style="list-style-type: none"> 1. Is the power LED for the workstation illuminated? In normal operation the power LED illuminates after the Power button is pressed and the workstation beeps. If this does not occur, verify that the power cord for the workstation is connected to a correctly operating AC outlet (TABLE 1-1) and that the power cord is connected to the workstation's power connector. 2. After the power button is pressed, does the power LED for the workstation illuminate? If not, replace the power cord. 3. Does the power LED illuminate? If not, does the system beep when the system is powered on? Verify that the keyboard and mouse are correctly connected to the USB ports. See "Cabling Your Workstation" on page 14. 4. Test with another keyboard and mouse that you know are functional. Does the system beep when you connect the keyboard and power on the system? 5. Does the monitor sync (The green LED on the monitor stops flashing and remains illuminated.) within 5 minutes after power on? <p>Note: If the monitor syncs but does not display an ok prompt or a login window, the system might not be passing POST. See the <i>Sun Ultra 45 and Ultra 25 Workstations Service and Diagnostics Manual</i>. If the system passes POST and displays the ok prompt but does not boot Solaris, type: <code>boot -r</code></p>
Workstation powers on, but the monitor does not power on.	<ol style="list-style-type: none"> 1. Is the power LED for the monitor illuminated? In normal operation the monitor's power LED is green when a signal is received from a graphics accelerator and AC power is supplied from the workstation. In sleep mode the LED is flashing or is amber (yellow) in color. The monitor wakes from sleep mode when you tap the keyboard space bar or move the mouse. If the power LED does not respond to these actions, verify that the power cord for the monitor is connected to a correctly operating AC outlet (TABLE 1-1) and that the power cord is connected to the monitor's power connector. 2. Is the power LED for the monitor illuminated? If not, verify that the monitor cable is properly connected and seated to the graphics accelerator and the monitor. 3. Does the power LED for the monitor illuminate? If not, see the <i>Sun Ultra 45 and Ultra 25 Workstations Service and Diagnostics Manual</i>.

TABLE 4-1 Diagnosing and Repairing Basic Workstation Installation Problems (Continued)

Symptom	Diagnostic Procedures
Workstation powers on, monitor powers on but no image displayed.	<ol style="list-style-type: none"> 1. Is an image displayed? In normal operation an image is displayed when the monitor's power LED is green, a signal is received from a connected graphics accelerator, and AC power is supplied to the workstation. In sleep mode the power LED is flashing or is amber (yellow) in color. The monitor wakes from the sleep mode when you tap the keyboard, spacebar, or move the mouse. If an image is not displayed after tapping the keyboard, space bar, or moving the mouse, verify that the monitor's brightness and contrast controls are adjusted correctly. 2. Is an image displayed? If not, is the monitor cable attached to the correct port on the graphics accelerator? 3. Does the monitor work when connected to another system? 4. If you have another monitor, does it work when connected to the original system? 5. Verify that OpenBoot PROM defaults are set properly: <ol style="list-style-type: none"> a. Press and hold the Power button for 4 seconds to power off the system. b. Wait 30 seconds and power on the system. c. As soon as the Power LED blinks, quickly press the Power button twice. The ok prompt is displayed and the system enters a safe NVRAM mode. d. Verify the following, OpenBoot PROM parameters: output-device is set to screen and input-device is set to keyboard. e. If the ok prompt does not display, or if changing the output-device setting does not help, contact a Sun technical support. See "How to Get Technical Support" on page 47.
Workstation appears to be in low-power mode, but the power LED does not blink.	<p>The power-indicator LED only blinks when all workstation components are in low-power mode.</p> <p>Note: Some hardware components and software drivers might not support your workstation's lowest possible power consumption mode. When this occurs, the power LED does not blink.</p>
Keyboard does not work.	<ol style="list-style-type: none"> 1. Is the keyboard correctly connected to one of the four USB ports on the back panel? In normal operation after the workstation is powered on the workstation beeps if the USB connector for the keyboard is correctly installed in one for the four USB ports on the back panel of the workstation. If the USB connector for the keyboard is not properly installed remove and reinstall the USB connector. 2. Does the keyboard work? If not, replace the keyboard with a known working keyboard. If the known working replacement keyboard works, replace the defective keyboard. 3. Does the keyboard work? If the keyboard does not work, you might have a defective motherboard, see <i>Sun Ultra 45 and Ultra 25 Workstations Service and Diagnostics Manual</i> (819-1892).

TABLE 4-1 Diagnosing and Repairing Basic Workstation Installation Problems (Continued)

Symptom	Diagnostic Procedures
Mouse does not work.	<ol style="list-style-type: none">1. Is the mouse correctly connected to one of the three USB ports on the keyboard? In normal operation the workstation beeps if the USB connector for the mouse is connected to one of the three USB ports on the Sun keyboard and the keyboard is connected to one of the four USB ports on the rear panel. If the USB connector for the mouse is not properly installed remove and reinstall the USB connector.2. Does the mouse work? If not, verify that the mouse track ball and internal rollers are clean.3. Does the mouse work? If not, replace the mouse with a known working mouse. If the known working replacement mouse works, replace the defective mouse.4. Does the mouse work? If the mouse does not work, you may have a defective keyboard or motherboard, see the keyboard does not work diagnostic. If the problems still exists, see <i>Sun Ultra 45 and Ultra 25 Workstations Service and Diagnostics Manual</i> (819-1892).
Network error message occurs during boot process.	<p>Use this procedure if the system displays these error messages:</p> <pre>Warning: timed out waiting for NIS to come up :Timeout waiting for ARP/RARP packet</pre> <ol style="list-style-type: none">1. Try connecting another Ethernet cable from the workstation to your network. Does the new cable work?2. If this cable change does not help, bring the system to the ok prompt and verify the OpenBoot PROM settings. Most systems should be set to <code>diag-switch? = false</code> and <code>boot-device</code> set to <code>disk net</code>. For more information on OpenBoot PROM settings, see the <i>Sun Ultra 45 and Ultra 25 Workstations Service and Diagnostics Manual</i>, 819-1892, or contact a Sun technical support center.3. From a remote system, ping the system with this command: <code>ping hostname</code>4. Verify with your system administrator that the network is operational.5. Contact Sun technical support, see "How to Get Technical Support" on page 47.

TABLE 4-1 Diagnosing and Repairing Basic Workstation Installation Problems (Continued)

Symptom	Diagnostic Procedures
<p>CD or DVD does not eject from the media tray when you press the Eject button.</p>	<p>User-Level Procedures</p> <ol style="list-style-type: none"> 1. Move the mouse or press any key on the keyboard. The drive might be in low-power mode. 2. Attempt to eject the CD using the Eject button on the media drive. 3. In a terminal window type: eject cdrom 4. If Step 3 does not work, verify that the CD is not mounted. In a terminal window, type: df grep cdrom If the CD is mounted, text similar to this example will be displayed: <code>/cdrom/wzi-2230 (/vol/dev/dsk/c0t2d0/wzi-2230): 0 blocks 0 files</code> 5. Unmount the CD by typing: umount and the command output shown in parentheses above. In the example above, the mount point is <code>wzi-2230</code> and you would type: umount /vol/dev/dsk/c0t2d0/wzi-2230 6. Type the command: eject cdrom <p>Alternate Procedure for Ejecting Media CDs</p> <ol style="list-style-type: none"> 1. Right-click the mouse and select Workspace Menu→Folders→Open CDROM. A File Manager window should open. 2. Select File→Eject. 3. If the CD does not eject, use a terminal window to exit the CD directory by typing: cd 4. Try again to eject the CD from the File Manager window. If you need further assistance, contact your system administrator or a Sun Service Support Center. <p>System Administrator Emergency Procedures for All CDs</p> <p>As superuser, stop the <code>vold</code> daemon:</p> <ol style="list-style-type: none"> 1. Open a terminal window. 2. As superuser, type: /etc/init.d/volmgt stop 3. Press the Eject button on the media player. <p>Note: To mount another CD, you need to start <code>vold</code> by typing: /etc/init.d/volmgt start</p> <p>If the CD has not ejected using Step 3 above, complete these steps:</p> <ol style="list-style-type: none"> 1. Go to the <code>ok</code> prompt. 2. Press the Eject button. <p>If the CD still does not eject using the two processes above, there might be a cable problem or other hardware problem. Call a SunServiceSM Support Center for further assistance.</p>

Collecting Information for Technical Support

Before contacting Sun technical support, note any change in the workstation's power-on sequence. This information might help Sun technical support quickly diagnose the error. See the *Sun Ultra 45 and Ultra 25 Workstations Service and Diagnostics Manual* (819-1892) for additional information.

TABLE 4-2 Information to Collect Before Calling a Sun Service Support Center

System Configuration Information	Write Your Information Here
SunService SM contract number	
System model (Example: Sun Ultra 45 Workstation)	
Solaris Operating System and release that you are using In a terminal window, type: cat /etc/release	
System serial number	
Peripherals attached to the system (Example: printer, external hard drive)	
Email address and phone number for you and a secondary contact Street address where the system is located	
Superuser password	(Do not write your password.)
Summary of problem and the work being done when the problem occurred	
IP address	
Workstation name (System host name)	
Network or internet domain name	
Proxy server configuration	

How to Get Technical Support

If you have technical questions about this product that are not answered in this document, see TABLE 4-3.

TABLE 4-3 Useful Sun Technical Support Web Sites and Phone Numbers

Sun Ultra 45 and Ultra 25 workstations Documents and Support Resources	URL or Telephone Number
Sun Ultra 45 and Ultra 25 workstations documents: <i>Sun Ultra 45 and Ultra 25 Workstations Service and Diagnostics Manual</i> , 819-1892 <i>Sun Ultra 45 and Ultra 25 Workstations Installation Guide</i> , 819-1891-10 <i>Sun Ultra 45 and Ultra 25 Workstations Product Notes</i> , 819-1893	http://www.sun.com/documentation/
Find Solaris and other software documents here. This is also an alternative web site for some Sun Ultra 45 and Ultra 25 workstations documents. This web site has full search capabilities.	http://docs.sun.com/
Warranty and Contract Support contacts. Links to other service tools.	http://www.sun.com/service/
Discussion and diagnostics forums.	http://supportforum.sun.com/
Technical Support, diagnostic tools, and alerts for all Sun products.	http://www.sun.com/support http://www.sun.com/bigadmin/
SunSolve: Contains links to software patches. Lists some system specifications, diagnostics, maintenance information, and other tools.	http://sunsolve.sun.com/
SunService Support phone numbers.	1-800-872-4786 (1-800-USA-4Sun) Select Option 1
This web site lists international telephone numbers for SunService Support.	http://www.sun.com/servicesolutions/

Index

B

backing up, preinstalled image, 39

D

diagnosing installation problems, 41

documentation, accessing, xiv
Online, xvii

documentation, CD-ROM

How to Use This CD, xv

ShowMe How, xv

ShowMe How movies, xv

Sun Ultra 45 Workstation and Diagnostics
Manual, xv

Sun Ultra 45 Workstation Installation Guide, xv

Sun Ultra 45 Workstation Service and

Diagnostics Manual, xv

Where to Find Doclette, xv

documentation, Online

Getting Started Guide, xvi

Important Safety Information, xvi

Service and Diagnostics Manual, xvi

Solaris 10, xvi

Solaris Operating System Software, 32

Sun Ultra 45 Installation Guide, xvi

Sun XVR 100 Installation Guide, xvi

Sun XVR 2500 Installation and Users Guide, xvi

Workstation Safety and Compliance Guide, xvi

DVD dual slot, 6

H

hard drive mirroring, 39

P

preinstalled development tools

Net Beans 5.0, 34

Sun Java Studio Creator 2, 34

Sun Java Studio Enterprise 8, 35

Sun Studio 11, 35

preinstalled productivity software

SunVTS 6.1, 32

preinstalled software, 31

restoring, 37

restoring Solaris software, 38

R

reinstalling non-OS software, 38

S

Safety and compliance information, 1

Service procedure movies, 33

specifications

electrical, 2

temperature, 3

Sun, xv

T

technical support

collecting information, 46

getting support, 47

W

workstation installation problems

CD or DVD, 45

diagnosing and repairing, 41

- keyboard, 43
- low power mode, 43
- monitor, 42
- mouse, 44
- network, 44
- power on, 42
- workstation, installation process, 4