Solaris Software

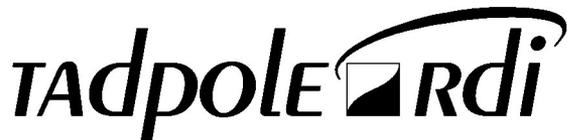## Installation Guide

TADPOLE RDI

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Solaris Software Installation Guide

Tadpole-RDI Part # 431107702, Revision A

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Solaris Software Installation Guide

P **Preface**

Welcome to the *Solaris Software Installation Guide*. This manual contains valuable information about using your new UltraBookIIi.

Conventions in this Installation Guide

The following conventions are used in this Guide:

Procedures

Procedures are numbered.

Example:

1. Turn on your workstation.

Notes

Notes precede information that requires special attention.

Example:

NOTE For your convenience, you can use your UltraBookIIi's on-board LCD or attach an external monitor.

Some notes indicate that the process may take some time and are indicated by a clock:

This completes the System Identification portion of the Solaris installation. The system may pause for several minutes at this point before proceeding.

Warnings and Cautions

Information of a hazardous nature is shown as indented and preceded by warning/caution icon.

Example:

Warning: *Disconnect all AC power and remove the battery prior to performing any cleaning and maintenance. Personal injury and equipment damage could result if a power source is connected to the UltraBookIIi during cleaning or maintenance.*

Warnings are in italics to highlight conditions of potential personal injury. Cautions point out possible equipment damage.

Keyboard Conventions

Keyboard keys are shown in inital upper-case type.

1. Type Search and press the Enter key to have the system search for bootable devices.

Screen Messages

Screen messages appear in `Courier` type within a box.

Example:

After the UltraBookIIi passes its self-test, the following initial message appears:

```
UltraBookIIi
ROM Rev. x.xx, xx, Serial #xxxxxxx
xxMB memory installed, Keyboard Present
Ethernet address x:x:xx:x:x:xx, Host ID: xxxxxxxx
```

Variables

Variables appear as an italicized x. For example, the x's in the screen on the previous page are variables because the values shown for ROM Rev., serial number. Ethernet address, and host ID will vary from system to system.

1 Installing the Solaris Operating System

This instruction steps through the Tadpole-RDI installation of the Solaris operating system. Solaris is installed via the Sun-distributed CD-ROM. If you do not have this CD-ROM, a copy can be purchased through Tadpole-RDI.

Installation Instructions

If there is existing data on your workstation, back it up before beginning this procedure.

NOTE Refer to your "Sun System Administration Manual" or the man pages for *ufsdump* (Solaris), or *cpio*.

1. Attach a CD-ROM drive to the SCSI port on your workstation. Power-on both the workstation and the CD-ROM drive. Load the Solaris CD into the CD-ROM drive.

2. When the system starts the boot process, place the workstation into the PROM monitor mode. This is done by holding down the STOP key and pressing the A key to interrupt the boot process.

    *The **ok** prompt appears on the screen.*

3. Type **boot cdrom** to boot from an external SCSI CD-ROM and press Enter to boot the workstation.

    The system boots and displays various system messages.

    The system may require several minutes to boot.

After the system messages appear, the system boots up and starts the Solaris Installation Program. The initial screen for the installation program displays on your screen.

```
┌──────────────────────────────────────────────────┐
│         The Solaris Installation Program           │
│                                                    │
│   You are now interacting with the Solaris         │
│   installation program.  The program is            │
│   divided into a series of short sections.         │
│    At the end of each section, you will            │
│   see a summary of the choices you've              │
│   made, and be given the opportunity to            │
│   make changes.                                    │
│                                                    │
│   As you work with the program, you will           │
│   complete one or more of the following            │
│   tasks:                                           │
│                                                    │
│     1 - Identify peripheral devices                │
│     2 - Identify your system                       │
│     3 - Install Solaris software                   │
│                                                    │
│   > To begin the installation process,             │
│   choose                                           │
│       Continue.                                    │
│                                                    │
│                                                    │
│  ┌──────────┐                      ┌──────────┐    │
│  │ Continue │                      │  Help    │    │
│  └──────────┘                      └──────────┘    │
└──────────────────────────────────────────────────┘
```

Figure 1-1 The Solaris Installation Program

4. Choose **Continue** to proceed.

System Identification

This installation requires you to provide the following information:

- Your system hostname
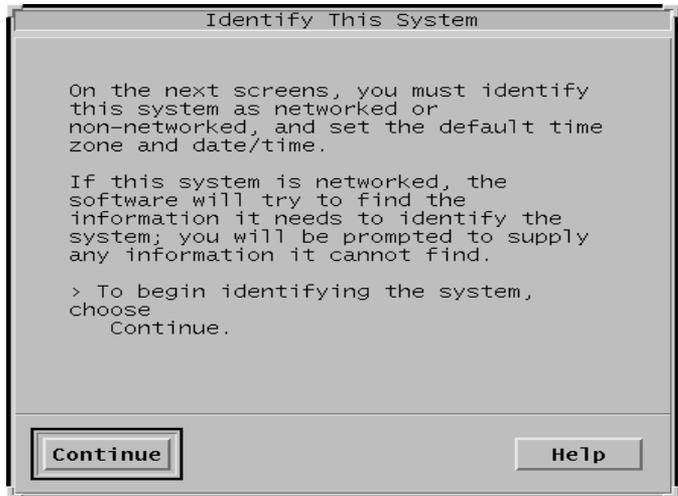
- Your system network address (IP address)

Figure 1-2 Identify This System

Obtain this information before proceeding with the section. Or, use the defaults shown in this guide. Hostname and IP address can be changed using the VWA utility.

1. Choose **Continue** to proceed.

Setting the Hostname

This installation assumes the workstation is installed as a standalone system, relying on local system files for password and host information. In this procedure, the name "ultrabook" will be used; replace this name with the one appropriate for your system.

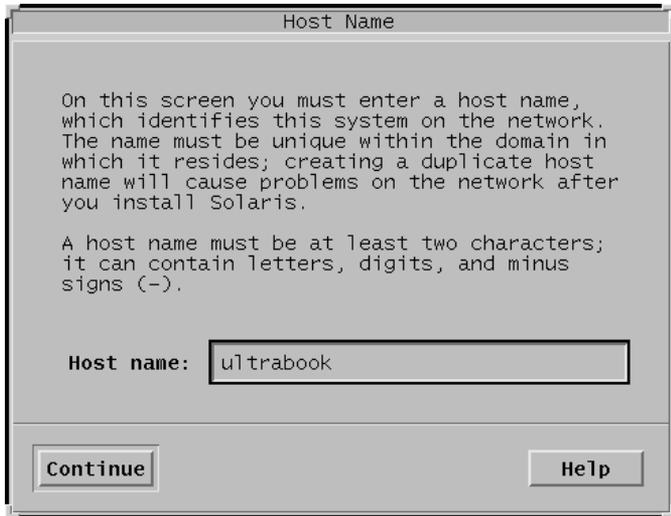The installation program will ask you to enter your hostname by displaying a message similar to the following:

```
┌─────────────────────────────────────────────────────────┐
│                      Host Name                          │
├─────────────────────────────────────────────────────────┤
│                                                         │
│   On this screen you must enter a host name,            │
│   which identifies this system on the network.          │
│   The name must be unique within the domain in          │
│   which it resides; creating a duplicate host           │
│   name will cause problems on the network after         │
│   you install Solaris.                                  │
│                                                         │
│   A host name must be at least two characters;          │
│   it can contain letters, digits, and minus             │
│   signs (-).                                            │
│                                                         │
│                                                         │
│   Host name:   │ultrabook                        │      │
│                                                         │
│                                                         │
│  ┌──────────┐                          ┌──────┐         │
│  │ Continue │                          │ Help │         │
│  └──────────┘                          └──────┘         │
└─────────────────────────────────────────────────────────┘
```

Figure 1-3 Host Name

1. Enter the name for your system.

2. Choose **Continue** to proceed.

Configuring the Networking

The best way to install a portable workstation is to install it as a networked, standalone machine, which does not run NIS or any other naming service. Use VWA to configure networked states for this system. The installation will ask you to specify whether the machine is connected to a network. A message similar to the following will appear:
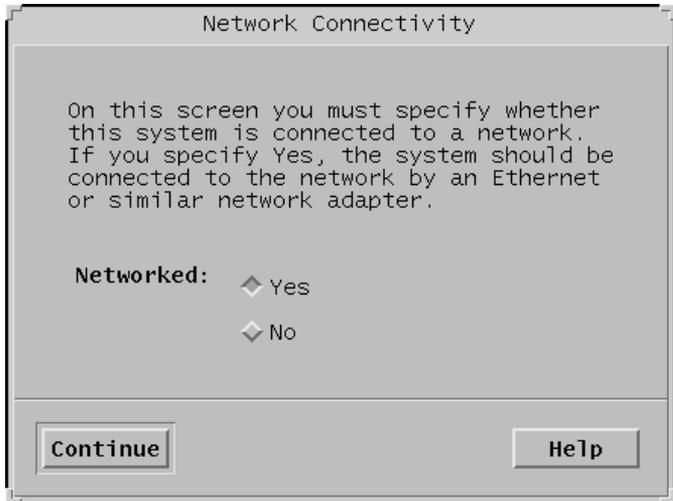

Figure 1-4 Network Connectivity

1. If the workstation is **or will ever be** connected to a network via an Ethernet or similar network adapter, select the **Yes** option.

> **NOTE**
> Disregard any messages indicating the workstation should be connected to a network during installation.

2. Choose **Continue** to proceed.

Setting the IP Address

If you selected Yes for a networked workstation, the following message appears:

```
                    IP Address

    On this screen you must enter the
    Internet Protocol (IP) address for this
    system.  It must be unique and follow
    your site's address conventions, or a
    system/network failure could result.

    IP addresses contain four sets of
    numbers separated by periods (for
    example 192.9.200.1).


    IP address:  [ 192.9.200.1 ]


  [ Continue ]                      [ Help ]
```

Figure 1-5 IP Address

1. Enter an IP Address for your system. This example uses the address

   "192.9.200.1"

NOTE While you can enter your specific IP Protocol address, Tadpole-RDI suggests entering the "temporary" IP address shown in the example above. This will restore the workstation to its preset factory defaults for network connectivity.

2. Choose **Continue** to proceed.

Confirming Host and Network Information

The next step in the installation asks you to confirm the information you have entered. The information will appear on the screen in a format similar to the following:

```
                    Confirm Information

     > Confirm the following information.  If
     it is correct, choose Continue; to change
     any information, choose Change.




       Host name:  ultrabook
       Networked:  Yes
       IP address: 192.9.200.1



   [Continue]          [ Change ]          [ Help ]
```
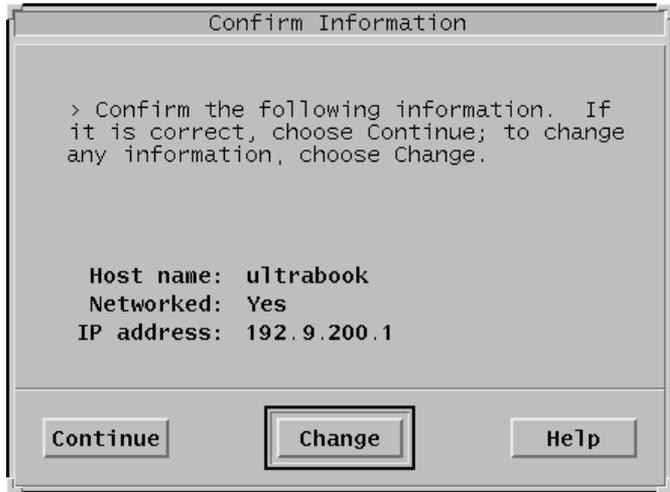
Figure 1-6 Confirm Information

1. Verify the information is correct.

2. If it is incorrect choose **Change** and re-enter the applicable information.

3. If the information is correct choose **Continue** to proceed.

NOTE If workstation is not attached to an active network, a message may appear:

```
hme0: No carrier - twisted pair cable problem or hub link test
disabled?
```

You can ignore these messages during the installation procedure.

Setting the Name Service

A message similar to the following will be displayed on the screen:
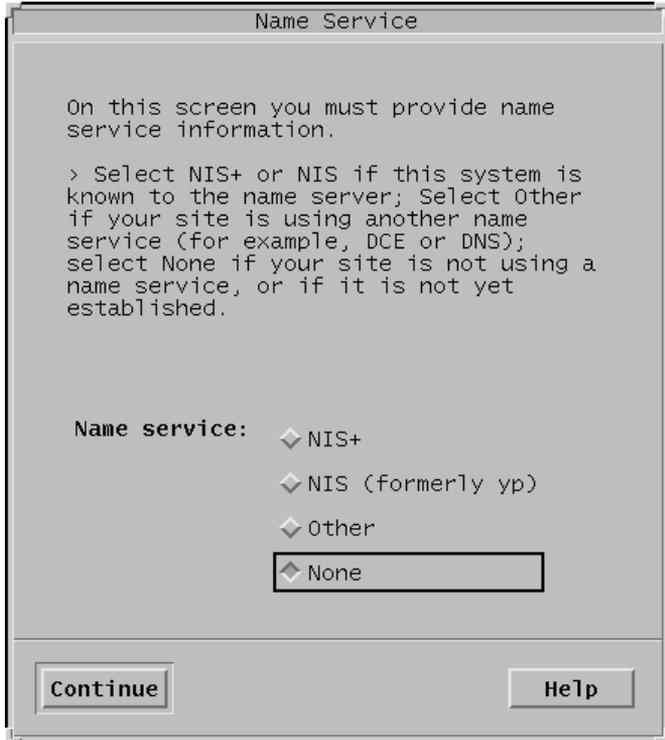
Figure 1-7 Name Service

1. Select the **None** option.

2. Choose **Continue** to proceed.

NOTE If you selected any option other than **None**, your workstation will not boot successfully unless it is attached to the network with the server, or unless you have configured this machine as a server. This is normal behavior for Solaris.

Confirming Network Information

This part verifies the networking information you have entered. This information appears on a screen similar to the following:
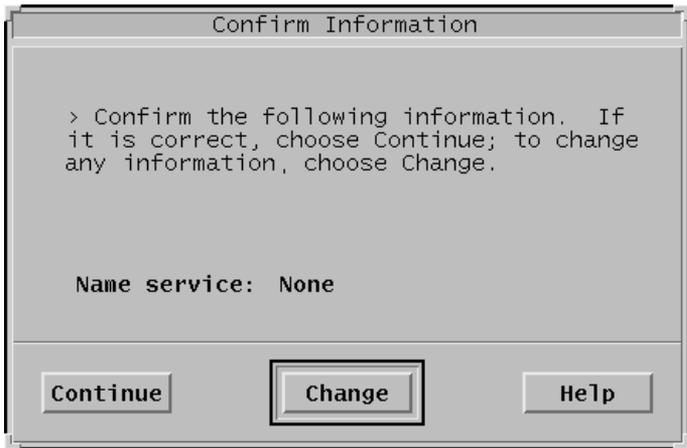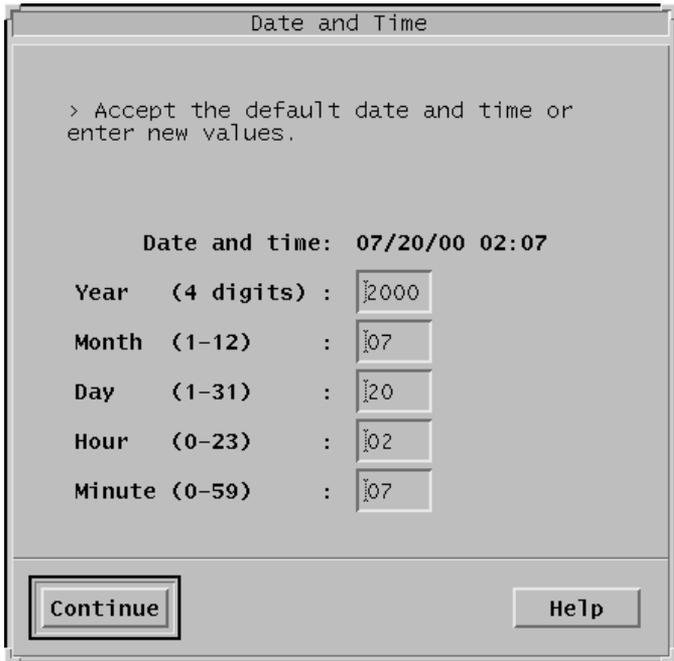

Figure 1-8 Confirm Information

1. Choose **Continue** to proceed.

Configuring Subnet Information

The next part of the installation program asks if your network has subnets. The example in this manual assumes that your network does not. A message similar to the following will be displayed on the screen:
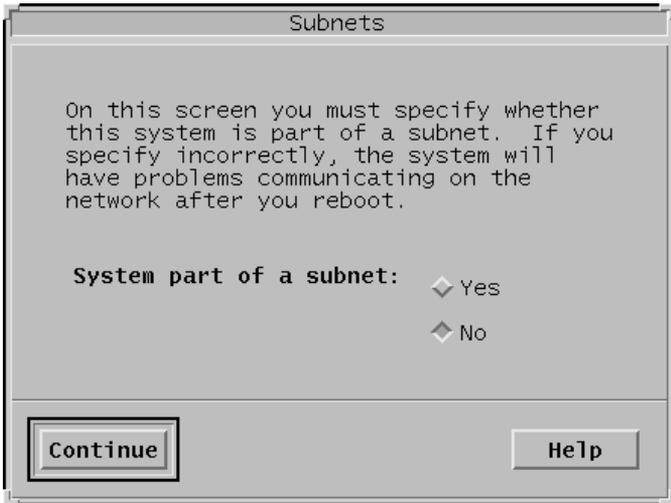
Figure 1-9 Subnets

1. Select the **No** option.

2. Choose **Continue** to proceed.

Setting the Time Zone

The following screen display sets your preferred time zone configuration.
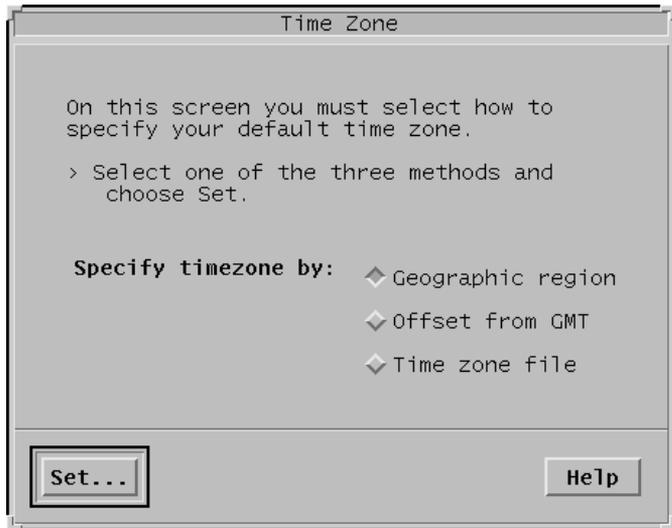
Figure 1-10 Time Zone

1. Select the appropriate geographic location. The example above shows workstation location by Geographic region.

2. Choose **Set....**

Setting the Geographic Region

Set your time zone according to your geographic region.
This example uses the Pacific time zone.
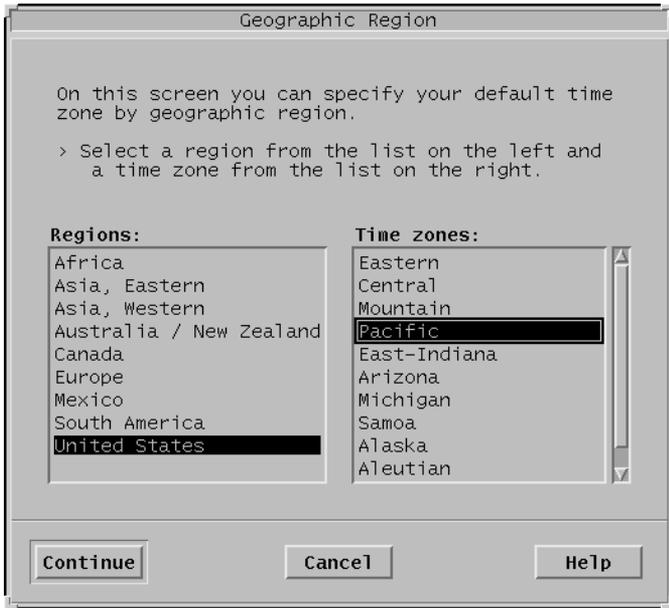
Figure 1-11 Geographic Region

1. Select the appropriate region and time zone.

2. Choose **Continue** to proceed.

Verifying Date and Time Information

At this point, the program verifies the information you have entered. The information will appear on a screen similar to the following:


```
┌──────────────────────────────────────────────┐
│                Date and Time                   │
├──────────────────────────────────────────────┤
│                                                │
│   > Accept the default date and time or        │
│   enter new values.                            │
│                                                │
│                                                │
│        Date and time:  07/20/00 02:07          │
│                                                │
│   Year   (4 digits) : [2000                    │
│                                                │
│   Month  (1-12)     : [07                       │
│                                                │
│   Day    (1-31)     : [20                       │
│                                                │
│   Hour   (0-23)     : [02                       │
│                                                │
│   Minute (0-59)     : [07                       │
│                                                │
│                                                │
│  ┌──────────┐                    ┌──────────┐  │
│  │ Continue │                    │   Help   │  │
│  └──────────┘                    └──────────┘  │
└──────────────────────────────────────────────┘
```

Figure 1-12 Date and Time

1. Verify the displayed information is correct.

2. If the displayed information is incorrect enter the correct information.

3. Once the displayed information is correct, choose **Continue** to proceed.

Solaris Installation

Confirming Time Zone & Date and Time Information

The installation program asks you to verify the system time zone and date information you have entered and indicates whether or not your workstation is part of a subnet.
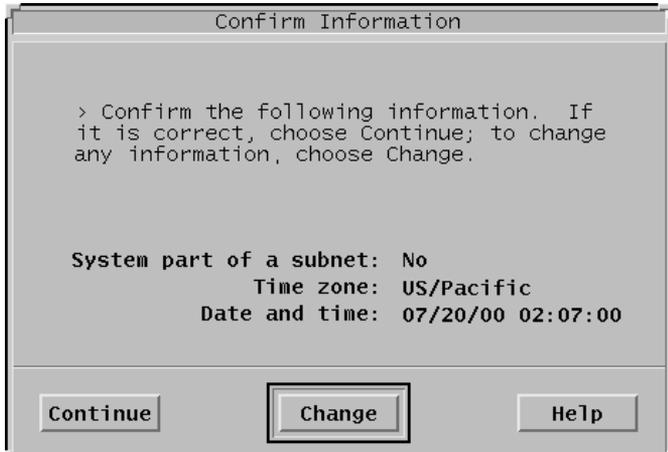
Figure 1-13 Confirm Information

1. Verify the information is correct.

2. If it is incorrect, choose **Change** and re-enter the correct information.

3. Once the displayed information is correct, choose **Continue**.

This completes the System Identification portion of the Solaris installation. The system may pause for several minutes at this point before proceeding.

Installation or Upgrade

If there is currently no operating system loaded on the disk, or if an ineligible version of Solaris is loaded, the system displays the Install Solaris Software – Initial screen. The Solaris installation program then proceeds to Setting the System Type.
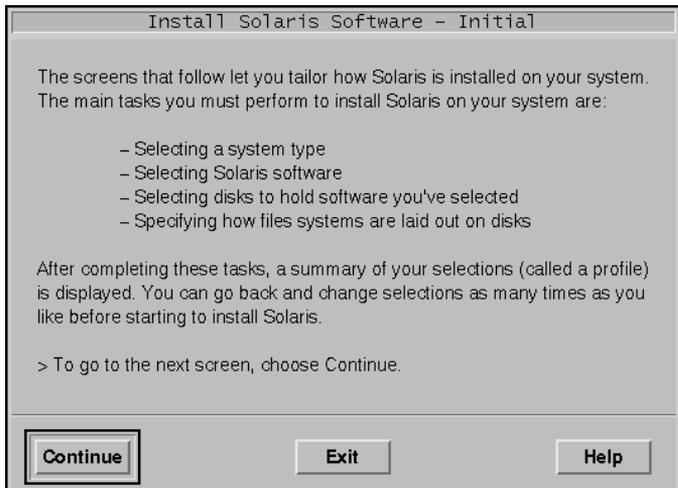
Figure 1-14 Install Solaris Software – Initial

If an earlier version of Solaris has previously been loaded onto this workstation, the Solaris installation program may notify you about an option to upgrade the existing operating system.

This option is not recommended, and the upgrade procedure is outside the scope of this instruction. For information about upgrading a previous version of Solaris, refer to the "Sun Solaris Installation Manual".

NOTE

Only certain configurations of Solaris can be upgraded.

If your system is upgradable, a message similar to the following is displayed:
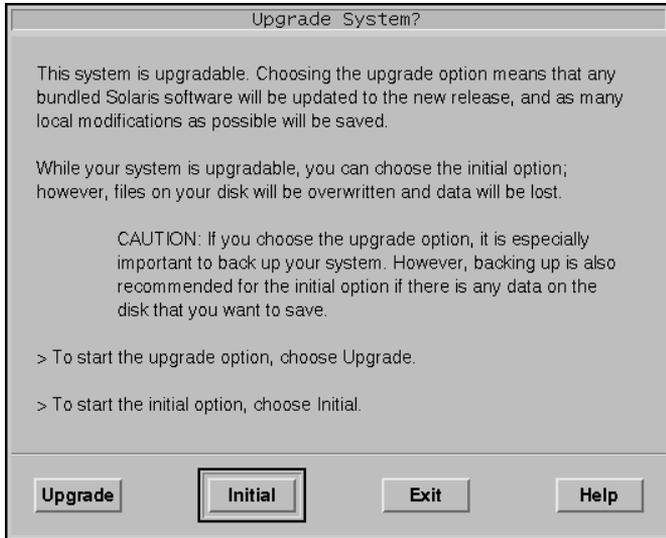
Figure 1-15 Upgrade System

1. Choose **Initial**.

   The installation program will then ask you to specify a system type.

Setting the System Type

The installation program asks you to define the type of system you are working on. The type of system describes where the workstation obtains the files essential for its operation.

A standalone workstation can obtain or share files with other systems, but does not require them to be present to function, and is not required by other systems to function properly. A portable workstation is, by definition, a standalone type.

A message similar to the following will be displayed:

System Type

On this screen you must specify one of the following system types. A system type determines where a system will get its directories and file systems, and whether it provides parts of the Solaris software to other systems.

System type: ◆ Standalone
◆ OS Server
◆ Dataless Client

| Continue | Go Back | Exit | Help |
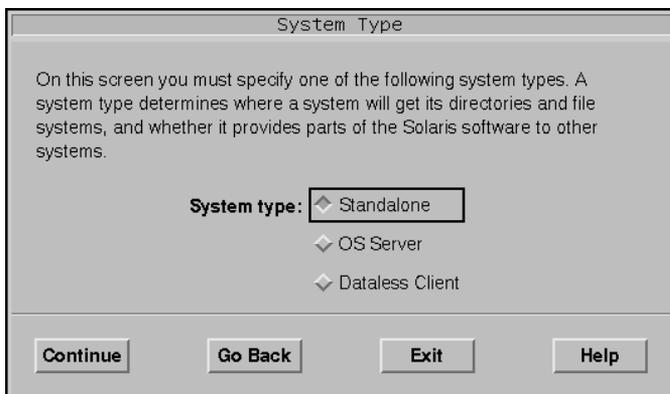
Figure 1-16 System Type

1. Select the **Standalone** option, as shown in the screen. This option allows your system to share file systems with other machines, but prevents your system from relying on having another machine present in order to boot successfully.

2. Choose **Continue** to begin choosing the software configuration to be installed on the workstation.

Selecting the Software Configuration

The procedure specifies the software to be loaded on your system. The available options include loading the entire Solaris distribution, loading one of several predetermined subsets, or modifying one of the previous options to tailor the installation for your system.

Solaris Installation

The Software group selection or similar screen appears:
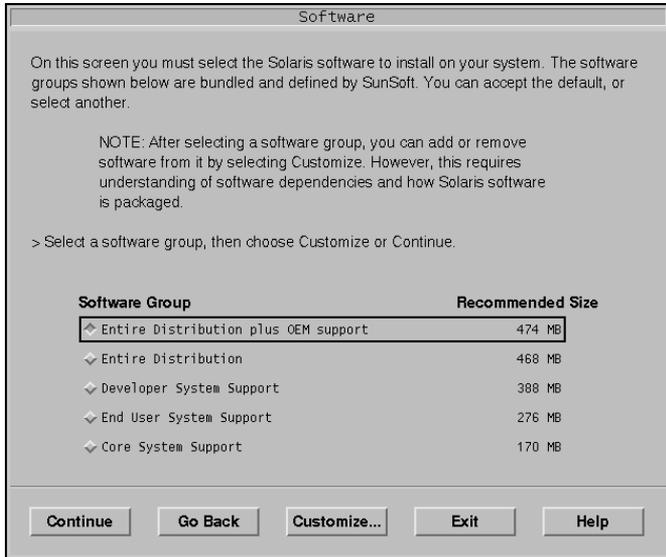
Figure 1-17 Software

1. Select the **Entire Distribution plus OEM Support** option and choose **Continue** to accept the installation defaults and continue.

2. (Optional, not recommended)

    Choose **Customize** to begin modifying the selected software group.

    Choosing to customize is not recommended, unless you have a thorough understanding of networked and standalone systems configuration.

    If you chose **Continue** *proceed to the section on "Disk Configuration," on page 20.*

Software Customization

Use your mouse to move among and to select various software packages and their components. Press Enter to make the selection.

Some packages incorporate several smaller packages. These are referred to as clusters. A cluster can be dealt with as a whole, or by its individual package components.

The screen shown here displays a legend of the possible conditions for selected software clusters and packages.
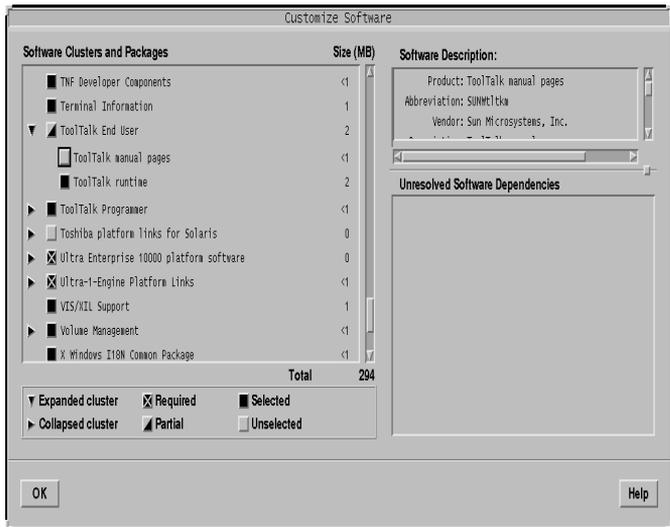
Figure 1-18 Customize Software

1. To expand a software cluster, select the desired cluster.

2. To collapse an expanded software cluster, select the expanded cluster again.

> **NOTE** A program or cluster can be selected, partially selected, or unselected. See the screen legend to determine the selection status of an individual program or cluster.

Required packages must be installed for the system to function properly.

3. When you have finished making your software selections choose **OK** to continue.

   This ends the Software Selection/Customization portion of the Solaris installation. The next section of the Installation process will require you to configure your disk drive(s).

Disk Configuration

In this section, you tell the Solaris Installation Program where to place the software that you've chosen to load onto the workstation.

The program, in turn, will tell you how much disk space is required for your software, and the available configured and unconfigured disks.

During this process, this screen will display an entry line for each disk drive attached to your workstation. You must configure an operating system disk (or disks), with sufficient space to hold all of your software selections.

If there are other disks attached to the system, you can also partition them at this time.

Refer to the additional disk configuration requirements in the README file for your Solaris version on the VWA CD-ROM.

The following screen is an example of the Disk Configuration screen.
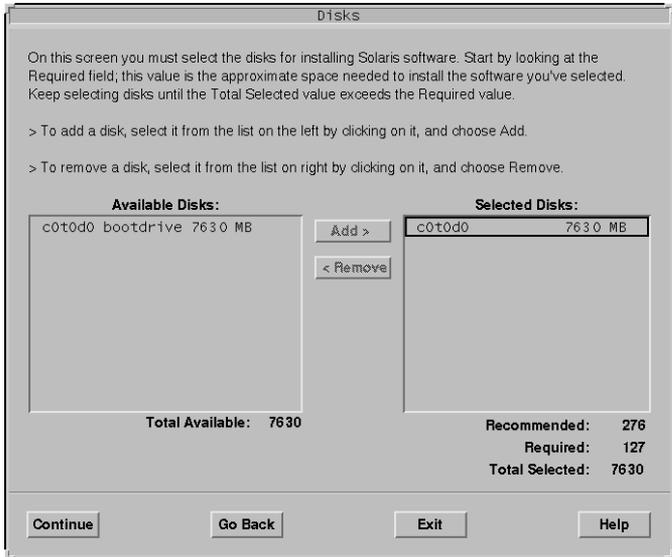
Figure 1-19 Disks

1. Select the applicable disk and choose **Add** to add the selected disk to the Selected Disks list.

2. Choose **Continue** to proceed.

Data Preservation

If the disk(s) have file systems previously created on them, the Preserve Data? screen appears.
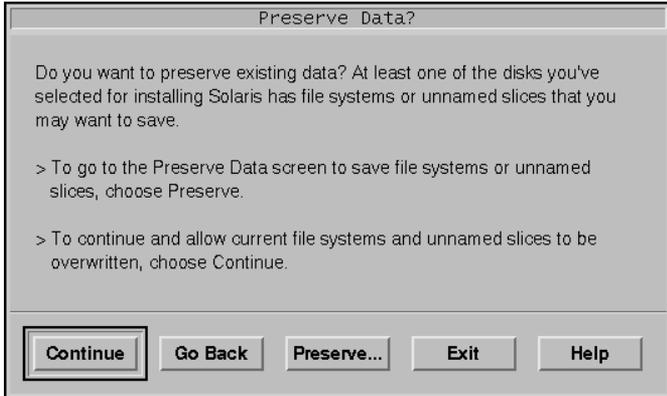
Figure 1-20 Preserve Data

You cannot preserve your operating system partitions in a Solaris initial software installation. However, if you have other partitions or disks you want left alone, select the **Preserve** option and answer the applicable questions.

You will not be able to preserve operating system partitions or to resize the partitions you want preserved if:

- The disk you are configuring is the operating system disk and there are no data partitions on it.

- There are no data partitions that you want to preserve.

1. Choose **Continue** to allow the installation program to overwrite existing slices and file systems or select another option to preserve existing data.

It is recommended that you choose **Continue**.

Laying Out File Systems

Here, the program asks how you want to partition or allocate the disk space you have. The program can assume the requirements and do the allocation for you. This is called the auto-layout feature.

The installation program asks if you want the installation program to layout file systems automatically. Tadpole-RDI recommends that you choose this layout option.
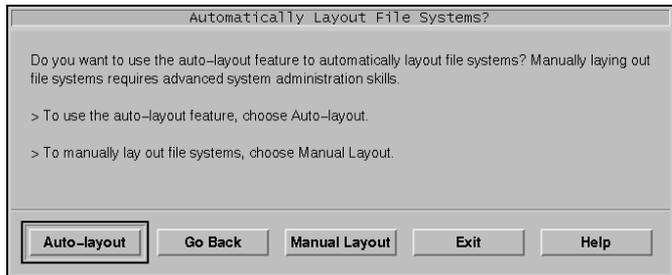
Figure 1-21 Automatically Layout File Systems

1. Choose **Auto-layout** to have the installation program layout your file systems automatically.

Caution: Unless you are an experienced network administrator, it is recommended you use the automatic layout procedure.

The installation program continues and allows you to set sizes and mount points for each file system.
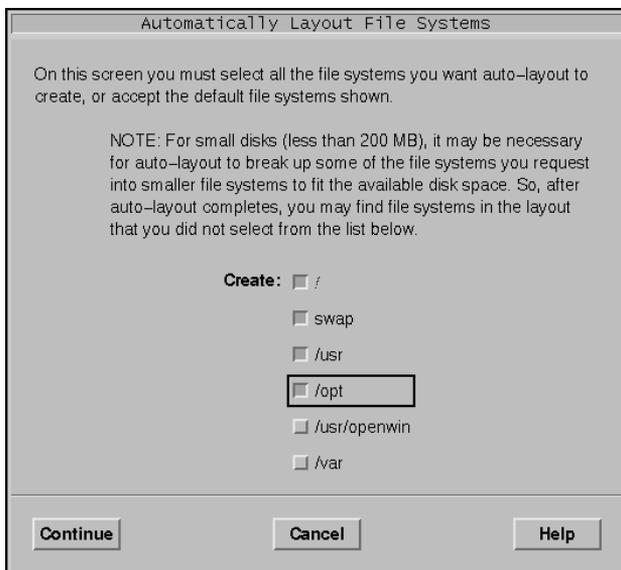
Figure 1-22 Automatically Layout File Systems

NOTE

While you can select any layout option applicable to this installation, Tadpole-RDI recommends that you also specify additional partitions for **/opt** and **/var** by selecting them as shown above.

2. Select **/opt** and **/var** and choose **Continue**.

This displays the File System and Disk Layout screen shown in Figure 1-23.

3. Review your file system and disk layout options.
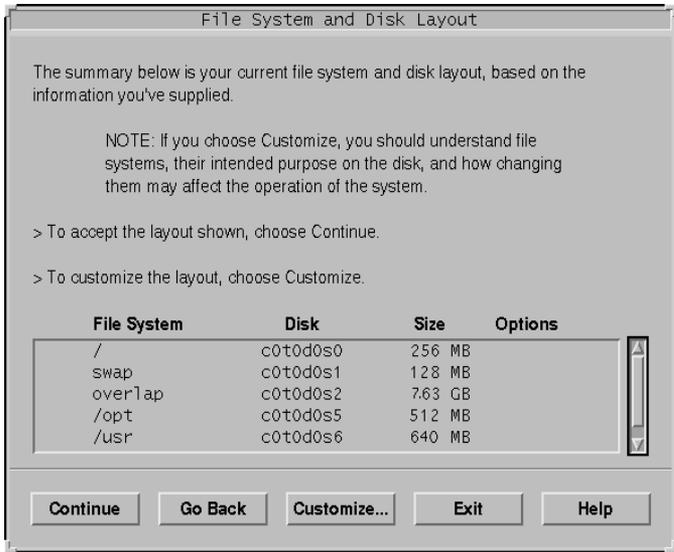
Figure 1-23 File System and Disk Layout

Tadpole-RDI recommends increasing the various partition sizes for best overall system performance. Please consult the README files on the VWA CD-ROM for more details.

Refer to the additional disk configuration requirements in the README file for your Solaris version on the VWA CD-ROM.

4. (Recommended, not required)

   Choose **Customize** to display the Custom-
   ize Disks screen.
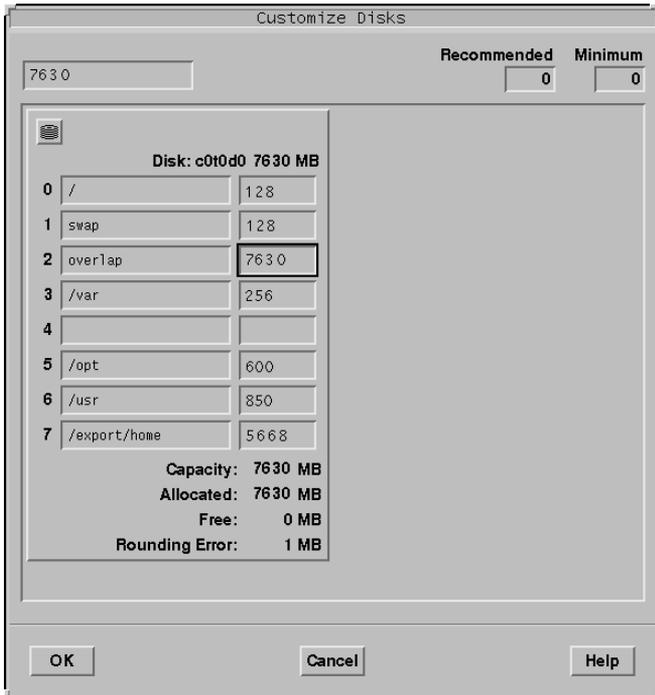
Figure 1-24 Customize Disks

a. Adjust the recommended partition sizes accord-
   ing to the disk configuration requirements in
   the README file for your Solaris version on the
   VWA CD-ROM..

NOTE The numbers shown in the above example are
for demonstration purposes only. The correct
values will depend on the version of Solaris
you are installing.

b. Choose **OK** when you have finished customizing
   partitions.

The installation program redisplays the File System and Disk Layout screen with your new partition settings.
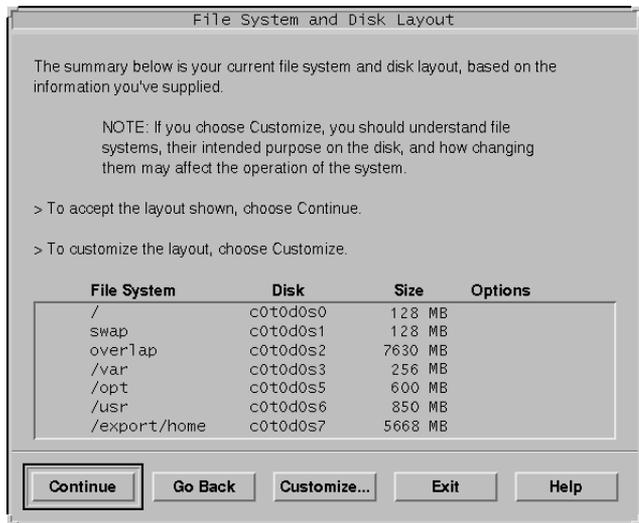
Figure 1-25 File System and Disk Layout — Customized

5. Choose **Continue** to proceed when you are satisfied with your selections or select another option to further customize your file system and disk layout selections.

Mounting Remote File Systems

The Solaris installation gives you the option to mount software from another server. It is recommended that the Mount Remote File System option NOT be selected for a portable workstation, since it requires the remote file server be always attached to the portable workstation to operate.

For a portable workstation, use VWA to configure remote mounts, or do this from the operating system level.
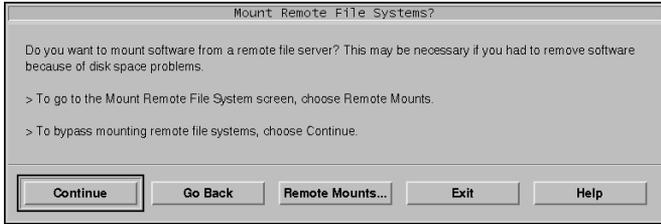
Figure 1-26 Mount Remote File Systems

1. Choose **Continue** to proceed with the Solaris installation.

Verifying Software and Disk Configuration

The Solaris installation program summarizes the software choices you have selected to be installed and the disk layout(s). The Profile screen displays the summary information applicable to your installation of the Solaris operating system.
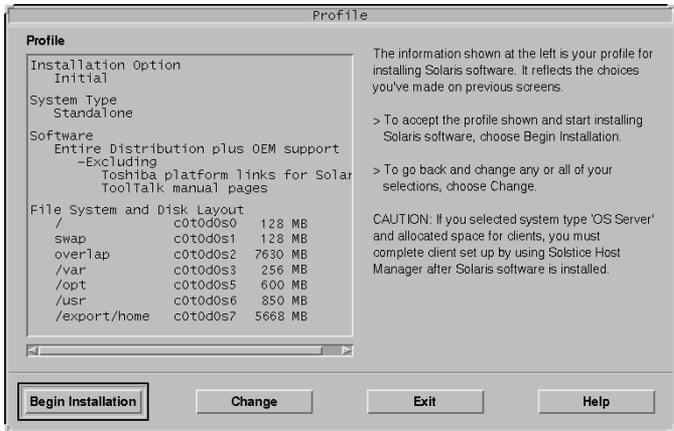
Figure 1-27 Profile

1. Verify the information displayed is correct.

2. If it is incorrect, choose **Change** and re-enter the information.

3. Choose **Begin Installation** to proceed.

Automatic Reboot option

Next, the Solaris installation program asks if you want to automatically reboot the system after loading the system software and configuring the operating system.

By default, your system will reboot after Solaris is installed. However, you can bypass rebooting and access a UNIX shell to make changes before rebooting.

> To automatically reboot after Solaris is installed, choose Reboot.

> To bypass rebooting and access a UNIX shell, choose No Reboot.

Reboot   No Reboot
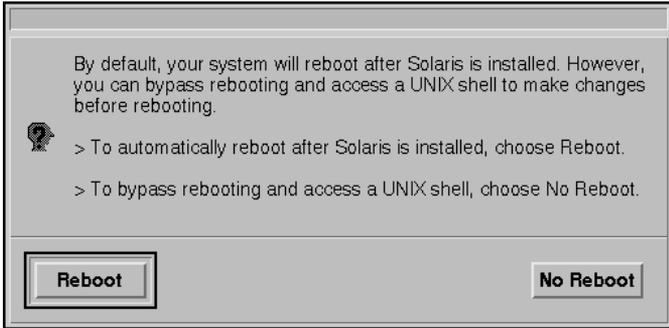
Figure 1-28 Reboot Option

1. Select the **Reboot** option.

System Installation

The system displays various messages as the operating system is loaded onto the disk. The program continuously updates the screen with messages about the amount of data installed, time remaining, and the package currently being installed.

Installing Solaris – Progress

The Solaris software is now being installed on your system using the profile you created. Installing Solaris can take between 15 minutes and 2 hours, depending on the software you've selected, and the speed of the network or local CD–ROM.

When Solaris software is completely installed, the message, 'Installation Complete' will be displayed.

Installing: Core Solaris, (Root)

Figure 1-29 Installing Solaris

NOTE The time remaining is only an estimate based on the amount of software to be loaded, and may change during the installation.

Adding a Root Password

After the system installation is complete, the workstation reboots and asks you to enter the root password.

1. Type the new password and press Enter. You are asked to re-enter the password to verify that there were no mistakes or spelling errors.

NOTE This password will be required to login to the workstation as root.

2. Re-enter the same password and press Enter. The system continues with the boot process.

NOTE Step 2 will only occur during the initial installation/boot.

The system displays various start-up messages and loads the Solaris operating system.

NOTE A password is not required. Press Enter twice in place of the steps above. However, this creates a large security hole.

Completing the Installation (Solaris 2.5.1 only)

After rebooting the workstation and entering a root password, you should also install the Common Desktop Environment (CDE) for Solaris. Installing the CDE environment will most closely restore the look and feel of your workstation's original factory configuration.

1. Mount the Solaris Desktop CD-ROM.

Solaris Installation

2. Install the Common Desktop Environment (CDE) and other related software originally installed and delivered with your workstation, e.g., Wabi.

See the VWA Software Installation Manual for further instructions on installing Tadpole-RDI enhancement software. This software is essential for your workstation to operate properly.

Completing the Installation (All Solaris Versions)

NOTE

Software installation is not complete at this point. You must continue with the VWA Installation.

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