



HOW to INSTALL the **SOLARIS™ 10 OS** **ON x86 SYSTEMS**

> **Solaris 10** How To Guides

About This Solaris How To Guide

This How-to Guide instructs users unfamiliar with Solaris[™] 10 Operating System installation on how to install the Solaris 10 OS on a Sun-supported x86 system (including the family of 32-bit x86 systems as well as 64-bit AMD64 and Intel 64 systems). It is assumed that you are installing Solaris 10 5/09; all features described in this guide may not be available in earlier updates. This step-by-step guide, complete with screen shots, takes users through the installation process in 22 simple steps. Novice users should be able to complete a Solaris 5/09 Operating System installation on a standalone x86 system using the instructions in this guide.

Contributors: Angel Camacho, Larry Wake

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Installation Assumptions

This guide makes several assumptions, including:

- The system is an x86 system
- The system is compatible with the Solaris 10 5/09 OS and is listed on the Solaris Hardware Compatibility List (HCL)
- The system has a graphical interface

While this guide is most appropriate for a stand-alone system that doesn't connect to a network or connects to a network with automatic configuration, it can be used to install a system with a fixed IP address if the network configuration information is available.

If problems arise during the installation process that are not discussed in this guide, refer to the *Solaris 10 OS Installation Guide: Basic Installations* for more information. This guide is part of the Solaris 10 Release and Installation Collection located on the Sun Web site at docs.sun.com/app/docs/prod/solaris.10.

Check the Hardware Compatibility List

The first step before the installation process is to verify that the system to be installed is on the hardware compatibility list located at: sun.com/bigadmin/hcl/.

Note: The term “x86” refers to the family of 32-bit x86-compatible architecture and 64-bit AMD64 and Intel 64.

Basic System Requirements

Verify the computer system meets the following requirements.

Note: The requirements below are recommended minimums.

While it is possible to install the Solaris OS on a system with less disk capacity and CPU speed, it is not recommended.

- Minimum 1024 MB of physical RAM
- Minimum 10 GB of available hard drive space
- Minimum 400 MHz CPU speed
- DVD or CD-ROM drive
- Attached monitor or integrated display

For more information on Solaris system requirements, visit sun.com/solaris/specs.jsp. For a catalog of the more than 5000 Solaris-ready applications and solutions, please visit sun.com/bigadmin/apps.

Obtaining Media for the x86 Platform

The Solaris 10 5/09 OS release is available via download from the Sun Web site.

1. Go to sun.com/solaris/ and click on the Solaris logo if you want to obtain information about the Solaris 10 5/09 OS; if not, proceed to step 2.
2. Go to sun.com/solaris/get to begin the download process.
3. Choose Solaris 10 on the list of available downloads.
4. Click on the appropriate media format (Solaris for x86 systems).
5. Register at the Sun Download Center, if you have not already done so.
6. Answer the short questionnaire.
7. Read and accept the license agreement.
8. Download and burn the CDs or DVDs.

See the Solaris 10 Self Help FAQs located at sun.com/solaris/self_help.jsp for additional guidance, instruction, and tips on downloading the Solaris 10 OS or burning installation CD and DVD media.

Power Up and Media Boot

If you don't want to substitute your current operating system and instead you want to run Solaris as a guest OS or Virtual Machine, please download and install xVM VirtualBox for free from virtualbox.org/.

The following procedure can be used to install Solaris 10 5/09 on a new or used system.

1. Power up the system and insert the first installation CD or DVD into the drive tray.
2. Restart the system.
3. If the system appears to be booting from the hard disk and the Solaris OS installer does not start, power cycle the system (power cycle is shutting down the power on the system and then restarting the system). As the system begins to boot, enter setup mode. Typically, the system displays a message indicating which key to press (such as "Enter F2 to enter setup", although the key to press varies by manufacturer; the ESC and F12 keys are other common options.) If you miss the message, simply restart the system a couple of times until you are able to view it.
4. Once in setup mode, specify the boot device for the system. This example specifies the CD or DVD drive as the boot device. To do so, find the list that describes boot order and re-order as needed to ensure the CD or DVD drive appears first on the list. The system should then boot from the CD or DVD drive to start the install process.



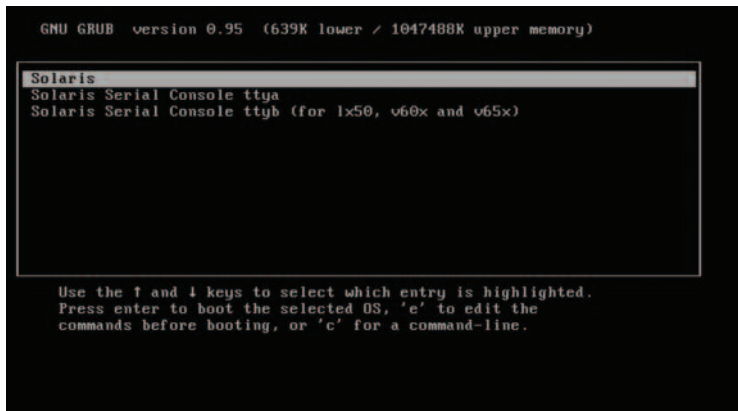
Installing the Solaris 10 5/09 Operating System

Identifying the Console

The next step in the installation process is to select the type of console for the hardware on which the Solaris OS is being installed. Use the arrow keys to select the version of the Solaris OS that matches the hardware configuration. For most x86 systems, use the default selection.

Press the ENTER key and boot the version of operating system selected. The highlighted entry boots in 60 seconds even if a key is not pressed.

Note: Prompts do not appear during the boot process. If a selection is not made, the screen times out and the system automatically boots the Solaris OS.



```
GNU GRUB version 0.95 (639K lower / 1047488K upper memory)

Solaris
Solaris Serial Console ttya
Solaris Serial Console ttyb (for 1x50, v60x and v65x)

Use the ↑ and ↓ keys to select which entry is highlighted.
Press enter to boot the selected OS, 'e' to edit the
commands before booting, or 'c' for a command-line.
```

Selecting the Type of Installation

After the ENTER key is pressed or the counter times out, a series of dots will run on the screen and you will see the basic device configuration message along with a menu with six installation options.

```
SunOS Release 5.10 Version Generic_137138-08 32-bit
Copyright 1983-2008 Sun Microsystems, Inc. All rights reserved.
Use is subject to license terms.
NOTICE: MPO disabled because memory is interleaved

Configuring devices.
|
```

Before this new counter times out, select option 3 to install Solaris 10 5/09 from the beginning using Solaris ZFS™ as the root file system. You can get more information on ZFS from sun.com/solaris/zfs.

```
SunOS Release 5.10 Version Generic_137138-08 32-bit
Copyright 1983-2008 Sun Microsystems, Inc. All rights reserved.
Use is subject to license terms.
NOTICE: MPO disabled because memory is interleaved

Configuring devices.
|
 1. Solaris Interactive (default)
 2. Custom JumpStart
 3. Solaris Interactive Text (Desktop session)
 4. Solaris Interactive Text (Console session)
    (Select option 3 or 4 to install a ZFS root file system)
 5. Apply driver updates
 6. Single user shell

Enter the number of your choice.
Automatically continuing in 9 seconds
```

Note: If you don't want to use ZFS as your root filesystem, you can use option 1. Please refer to the previous version of this "How To Guide."

Once option 3 is selected, you'll see the following screen with some information regarding your hardware. Keep in mind that the hardware information displayed (such as "nge0") may differ from the exact data displayed below and that each step can take up to a couple of minutes to complete:

```
NOTICE: MPO disabled because memory is interleaved

Configuring devices.
|
 1. Solaris Interactive (default)
 2. Custom JumpStart
 3. Solaris Interactive Text (Desktop session)
 4. Solaris Interactive Text (Console session)
    (Select option 3 or 4 to install a ZFS root file system)
 5. Apply driver updates
 6. Single user shell

Enter the number of your choice.
Selected: 4

Solaris Interactive Text (Console session)

Using install cd in /dev/dsk/c1t0d0p0
Using RPC Bootparams for network configuration information.
Attempting to configure interface e1000g0...
Skipped interface e1000g0
Reading ZFS config: done.
Setting up Java. Please wait...
```

After a few seconds, you are presented with the keyboard layout configuration in case you don't have a standard keyboard or if you have a localized keyboard. If you have a US keyboard, press the [F2] key; if not, select the right language using the arrow keys to move up or down, make your selection with the [space bar] and then press [F2] to continue.

```

Configure Keyboard Layout

Please specify the keyboard layout from the list below.

> To make a selection, use the arrow keys to highlight the option and
  press Return to mark it (X).

Keyboard Layout
-----
^ | | Serbia-and-Montenegro
| | | Slovenian
| | | Slovakian
| | | Spanish
| | | Swedish
| | | Swiss-French
| | | Swiss-German
| | | Taiwanese
| | | TurkishQ
| | | TurkishF
| | | UK-English
- | | (X) US-English

F2_Continue  F6_Help

```

Immediately, you'll see the following message. Press ENTER to continue.

```

Discovering additional network configuration...

Starting Solaris Interactive (graphical user interface) Installation.

You must respond to the first question within 30 seconds
or the installer proceeds in a non-window environment
(console mode).

If the screen becomes blank or unreadable the installer
proceeds in console mode.

If the screen does not properly revert to console mode,
restart the installation and make the following selection:

Solaris Interactive Text (Console session)

Press ENTER to continue.

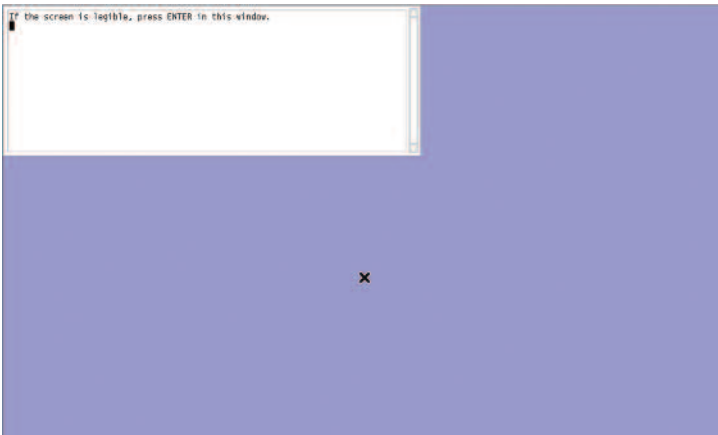
```

System Configuration

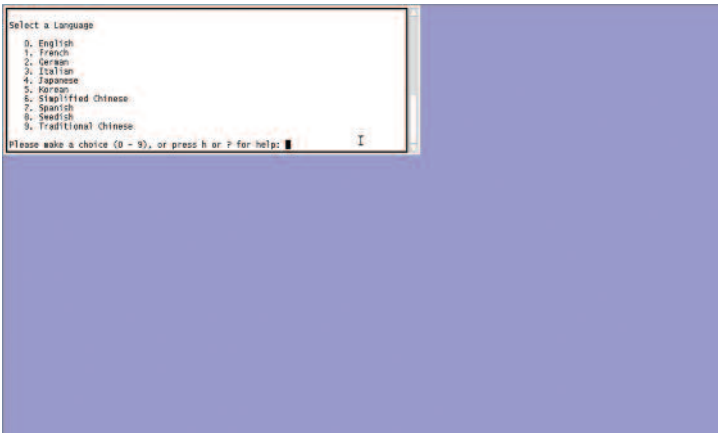
A series of screens guides you through the Solaris OS configuration process.

Note: The graphical screens require a mouse to be rolled over the window in order to answer questions posed throughout the configuration process.

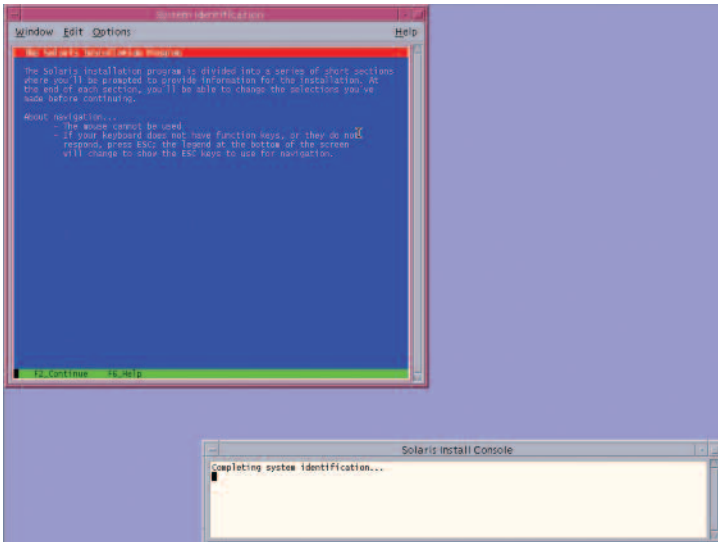
1. After you press ENTER, the system configuration process will start through a series of windows. Please roll the mouse over the window, click the mouse, then press ENTER to continue.



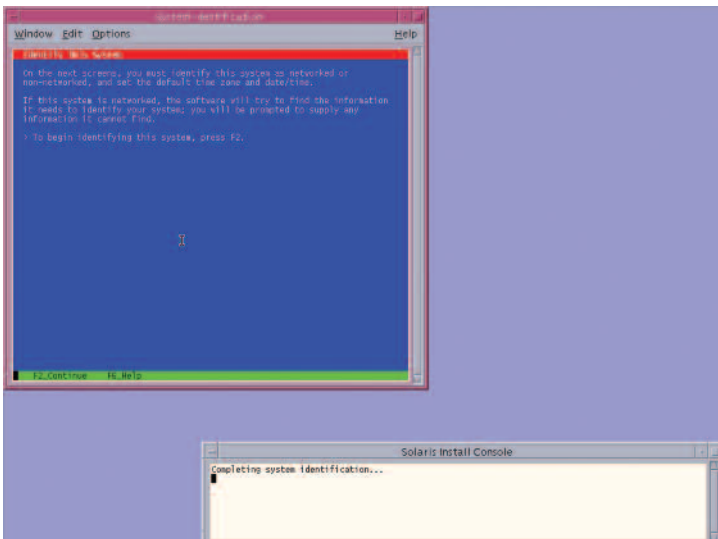
2. Select a language for the system.



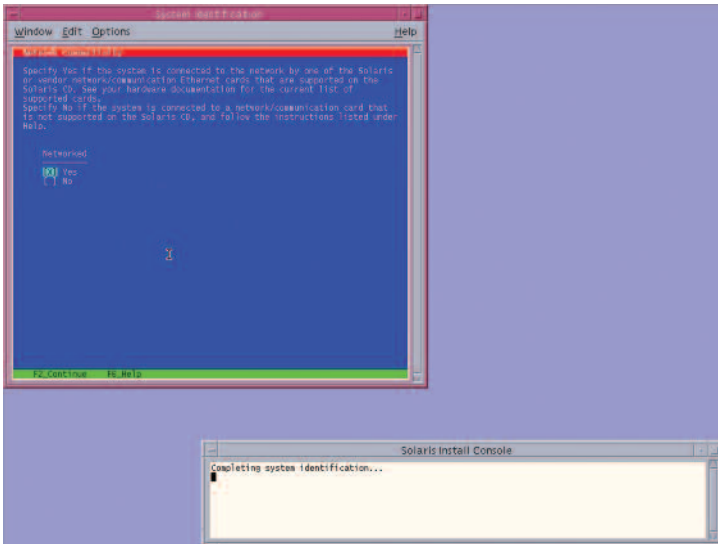
3. A new window, the Solaris Install Console, appears in the bottom-right corner. This window is used to display pertinent installation messages. Another window appears in which the Solaris OS installation questions should be answered. Press [F2] to continue.



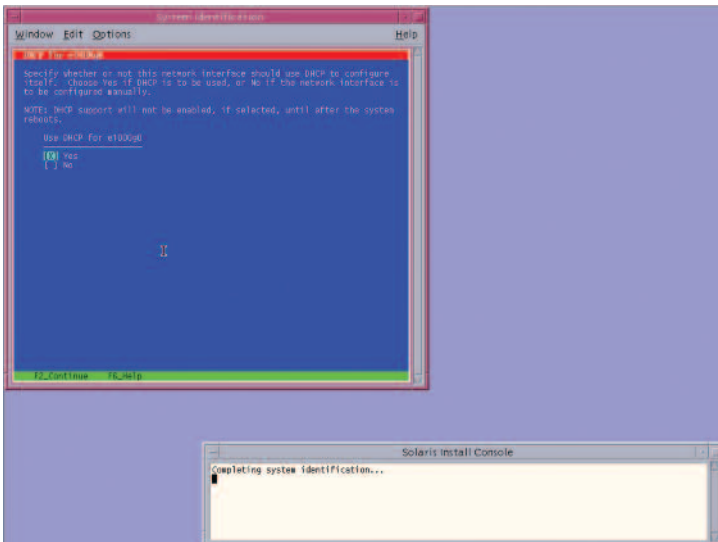
4. The system identification process begins. Press [F2] to continue:



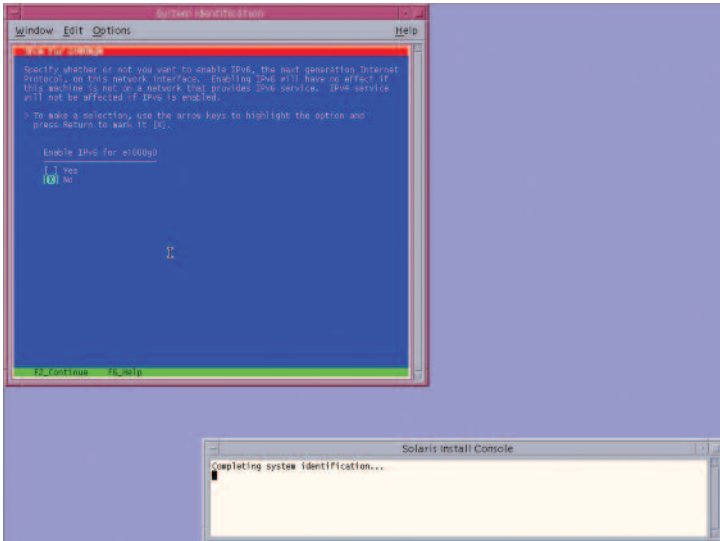
- The Network Connectivity window appears. Use the default answer, (unless you don't have a network) and press [F2] to continue.



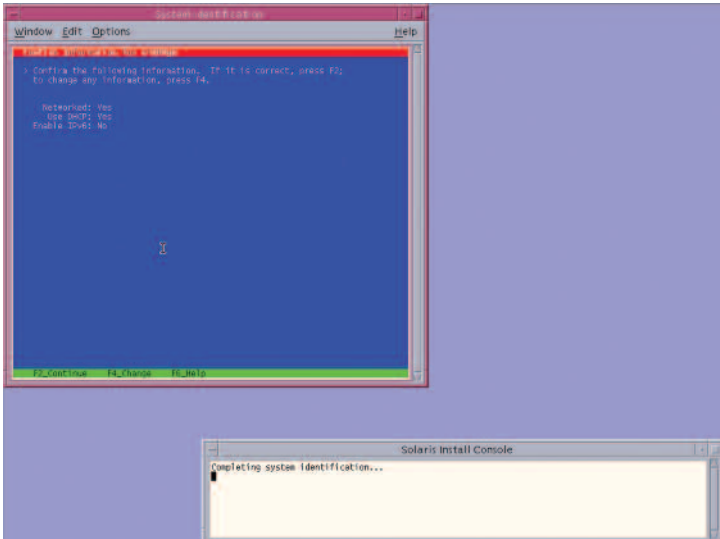
- The DHCP selection appears. For most cases, just select DHCP for your network configuration using the arrow keys and the space bar to make the selection and then press [F2] to continue.



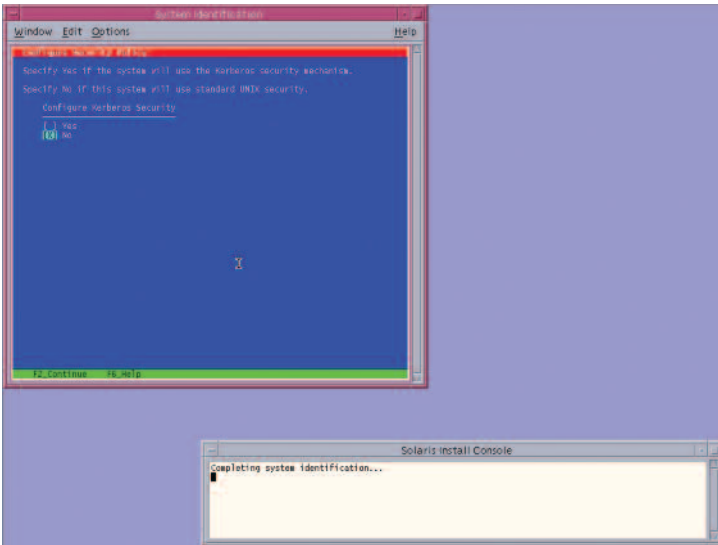
7. The IPv6 window appears. Just use the default and press [F2] to continue.



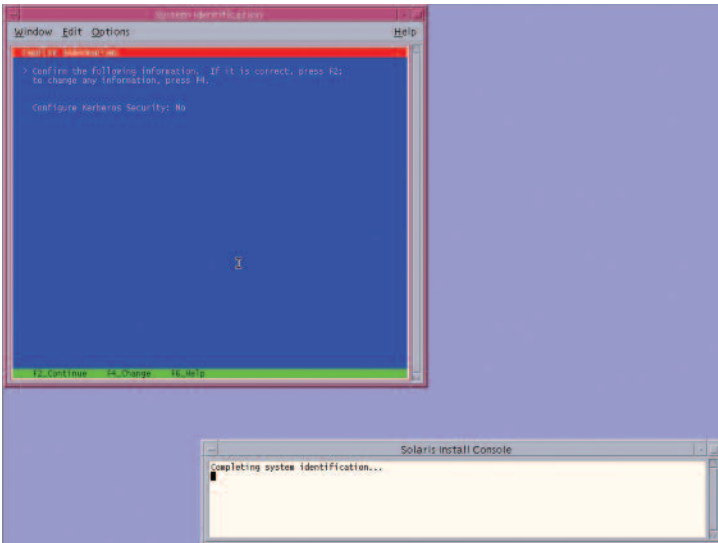
8. The Confirmation window appears. If you agree with your selections, press [F2] to continue; if not, press [F4] and the process will go back to step 5.



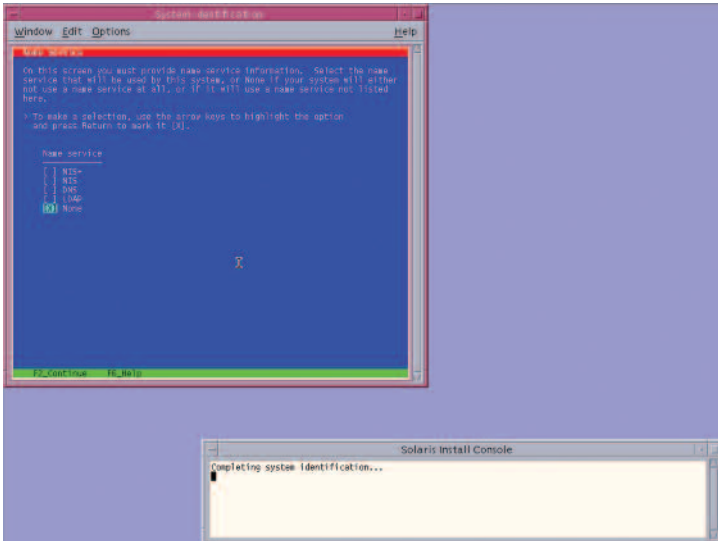
9. The Security Policy window appears. Use the default for No Kerberos configuration, then press [F2] to continue.



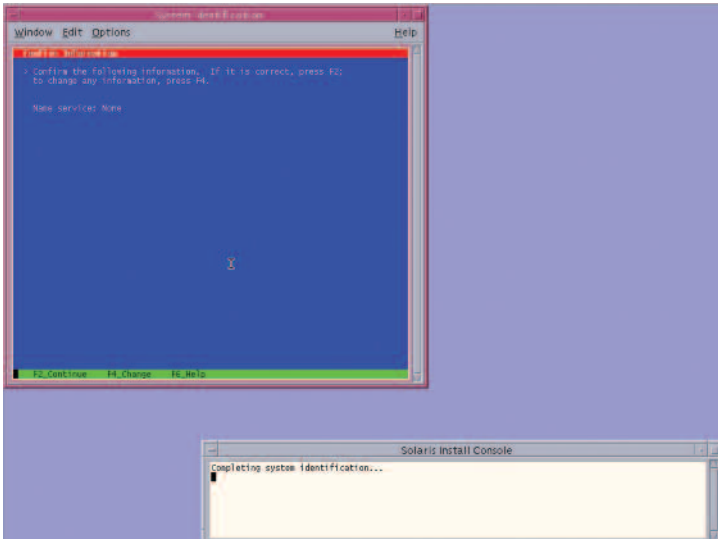
10. For confirmation of your policy selection, press [F2] and continue to the next screen.



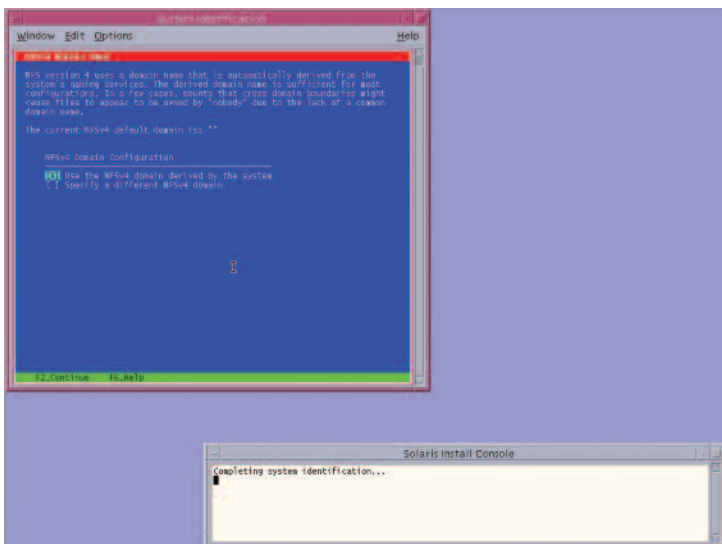
11. The Name Service window appears. Select NONE using the arrow keys and pressing the space bar to select, then press [F2] to continue.



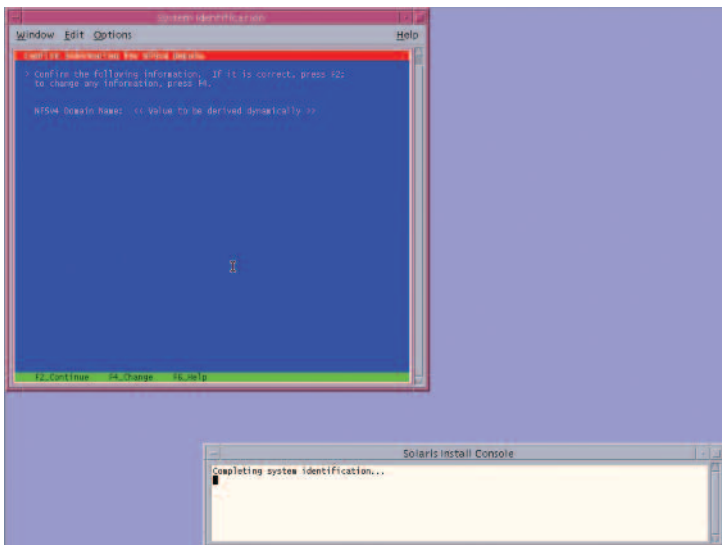
12. For confirmation of your selection, press [F2] and continue to the next screen.



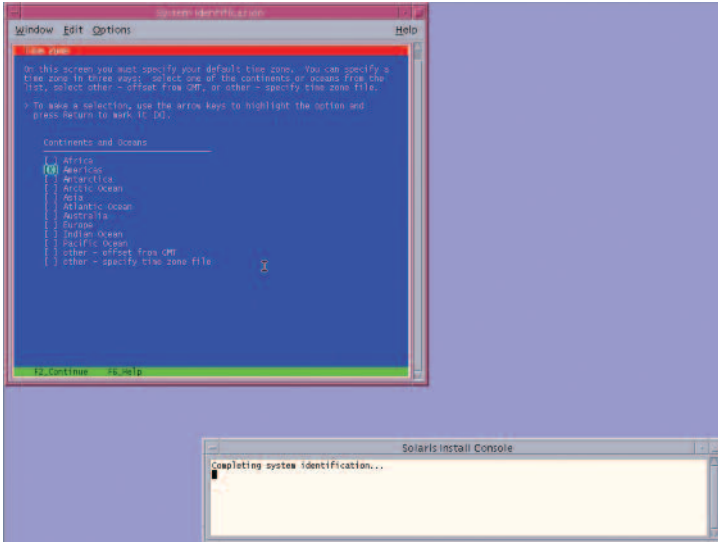
13. The NFSv4 domain name window appears. Let the system use the default option and press [F2] to continue.



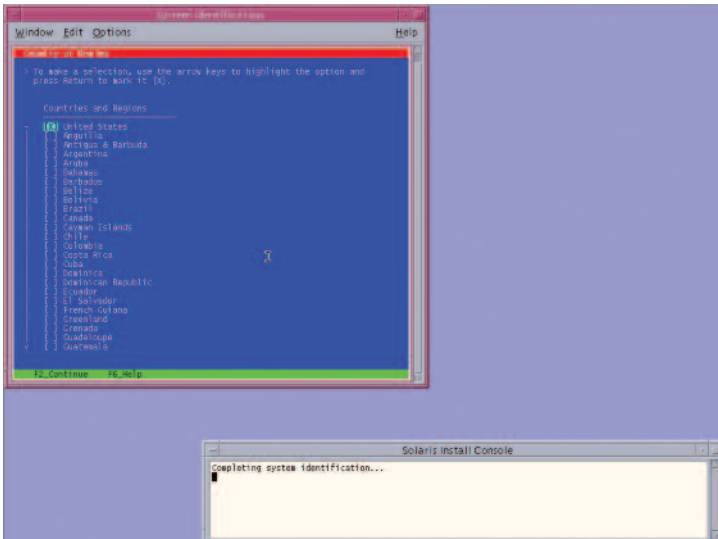
14. For confirmation of your selection, press [F2] to continue to the next screen.



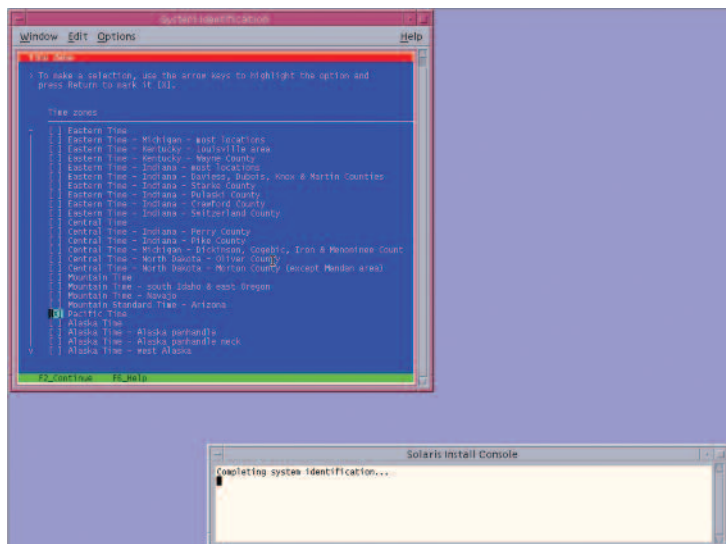
15. The Time Zone window appears. Next, set the time zone for the system. This example sets the Americas time zone. Use the arrow keys and the space bar to make the selection, then press [F2] to continue.



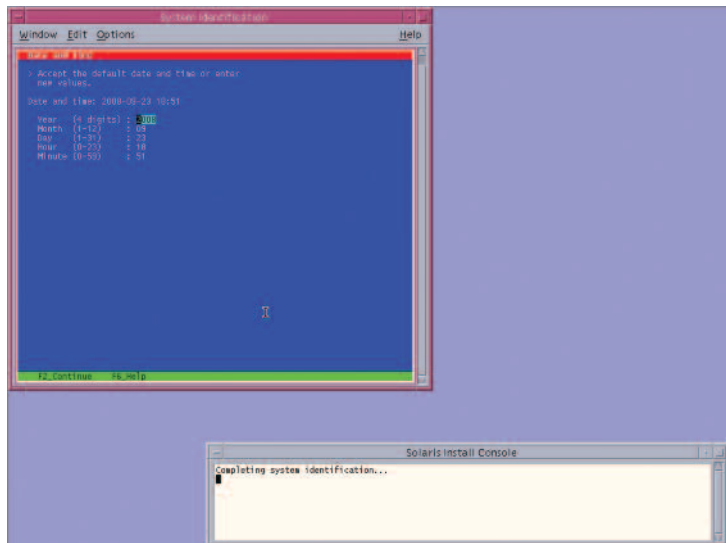
16. Time Zone cont'd. Set the United States Country & Region, then press [F2] to continue.



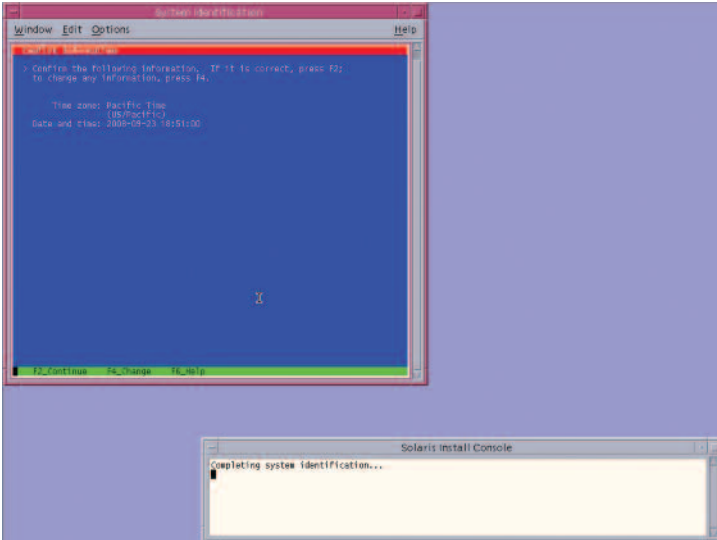
17. Time Zone cont'd. Set the Pacific Time, then press [F2] to continue.



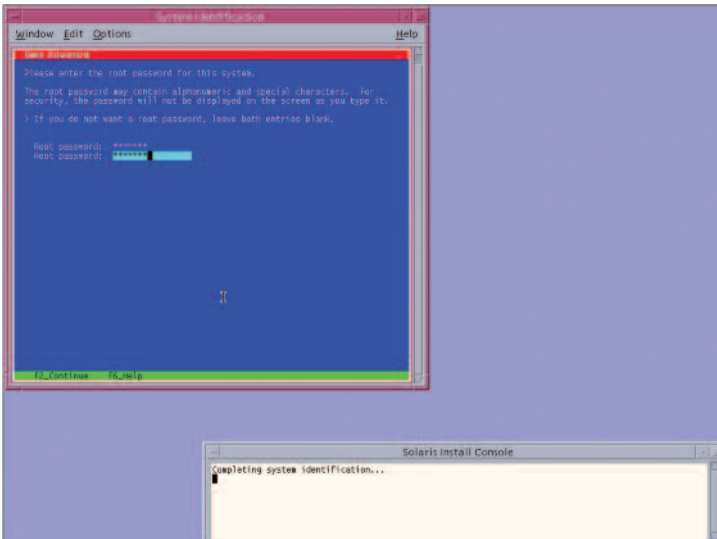
18. Set current date and time. Use arrow keys and keyboard to change the proposed date and time, then press [F2] to continue.



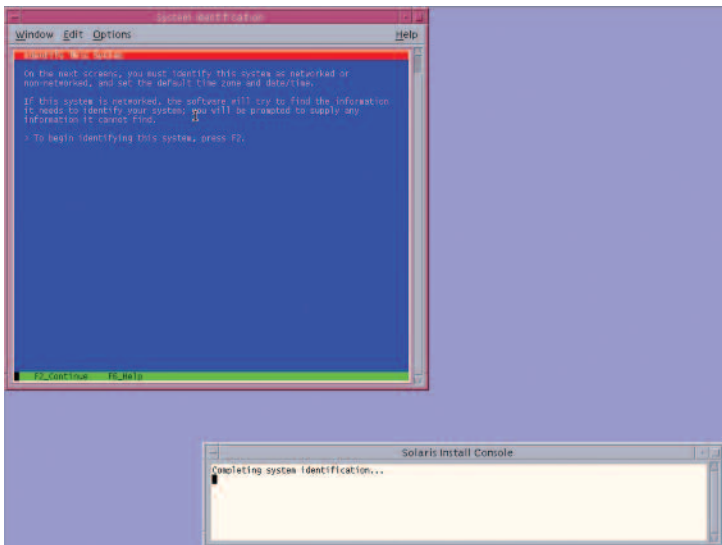
19. To confirm your selection, press [F2] to continue.



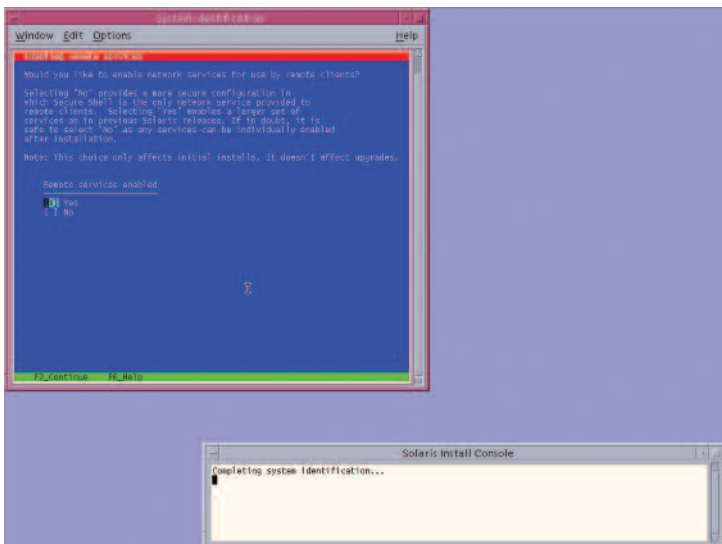
20. The Root Password window appears. Set the root password. Note the password typed remains invisible. Re-enter the password in the second box and press [F2] to continue.



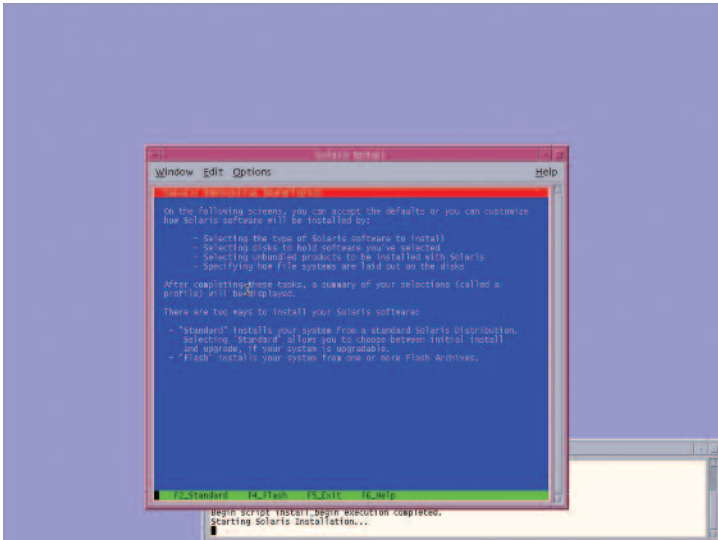
21. The Network Services window appears. Click [F2] to continue.



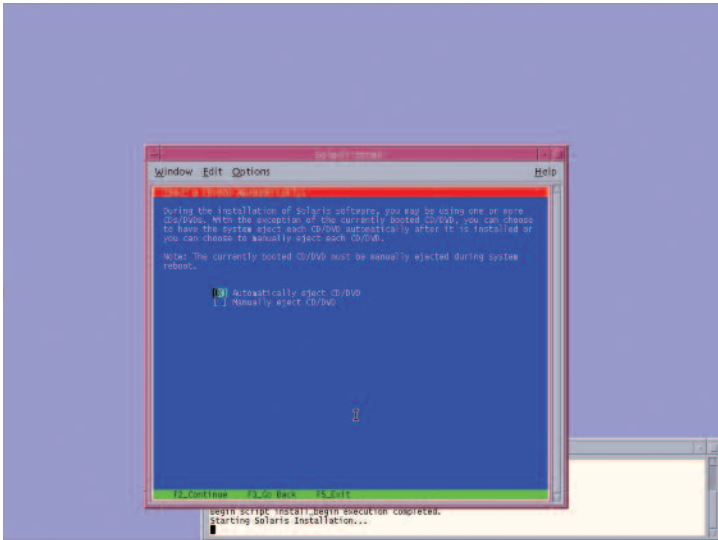
22. The Remote Services window appears. In this window, you can choose a "Secure by default" Solaris installation, but afterwards individual services should be enabled. If you are unsure of your type of installation, follow the default "Yes" to enable all remote services and press [F2] to continue.



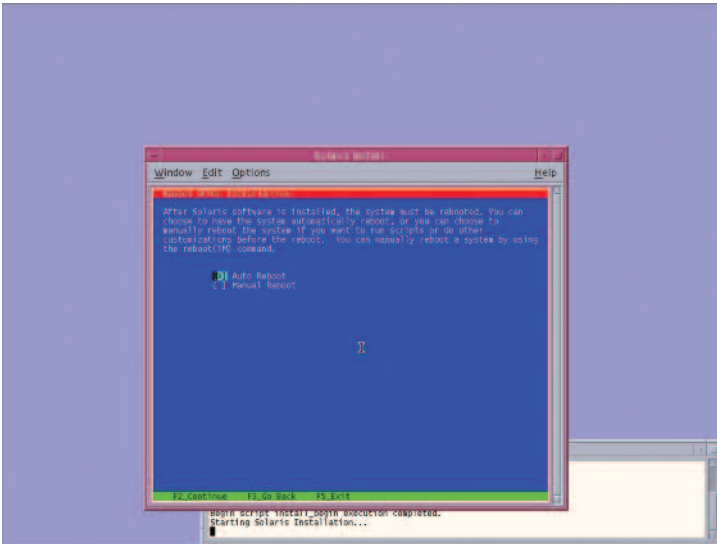
23. The Install Progress window appears. Wait for a few minutes while Solaris installs on your system. After the installation is completed, the system will reboot automatically and will start the Solaris OS. Remember that in some cases, you will have to eject the media manually.



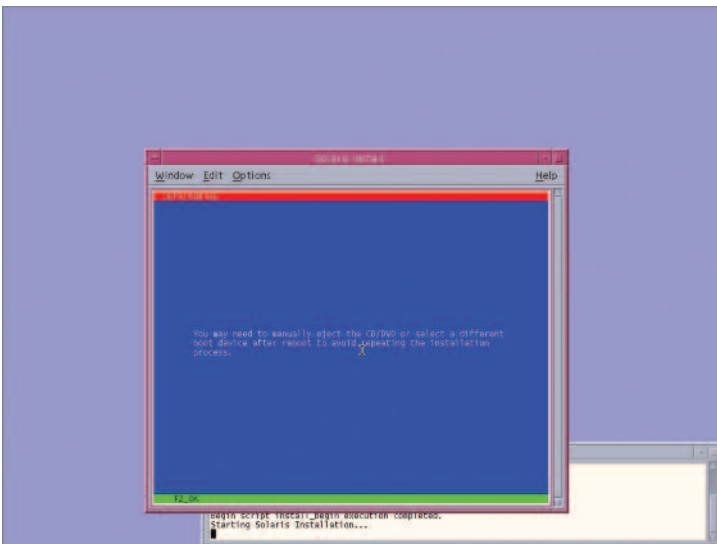
24. The Eject CD/DVD window appears. Use the default. Press [F2] to continue; the system will automatically eject the media after installation.



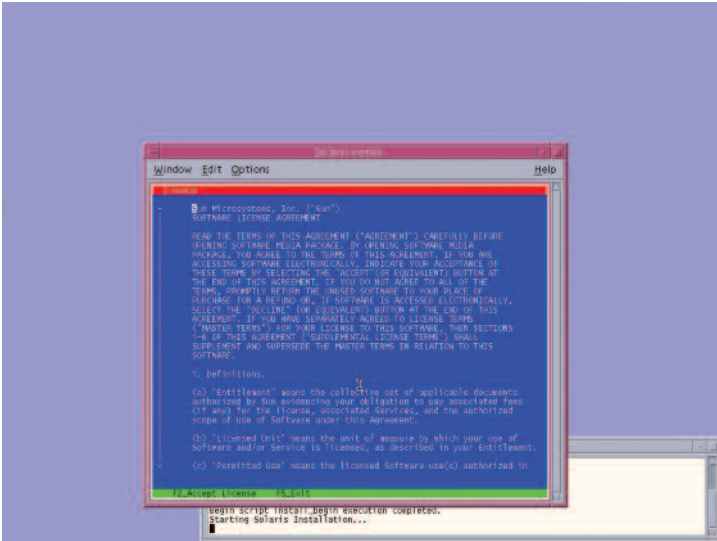
25. The Reboot After Installation window appears. Use the default, press [F2] to continue.



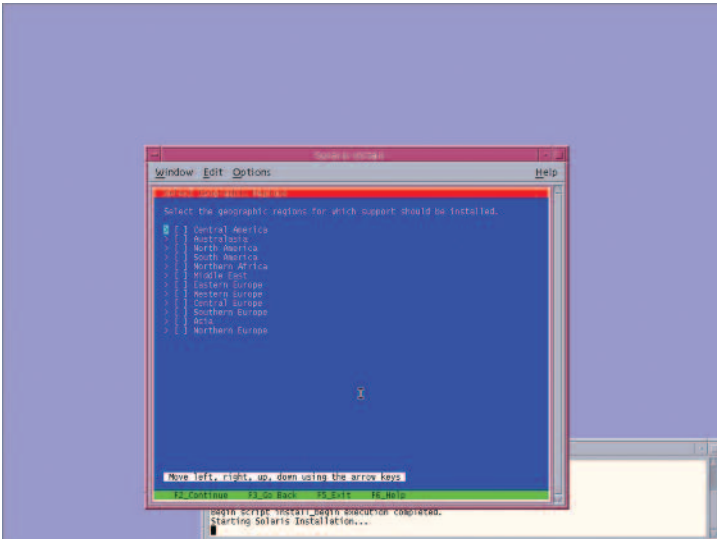
26. The Confirmation window appears; press [F2] to continue. In some cases, the system will not be able to eject the media after installation. Be sure to eject it manually to avoid starting the installation process again; if after the installation your system didn't eject the media and the install process started again, you can simply reboot your system. During the boot process, eject the media and the system will boot from the hard disk using the freshly installed Solaris 10 image.



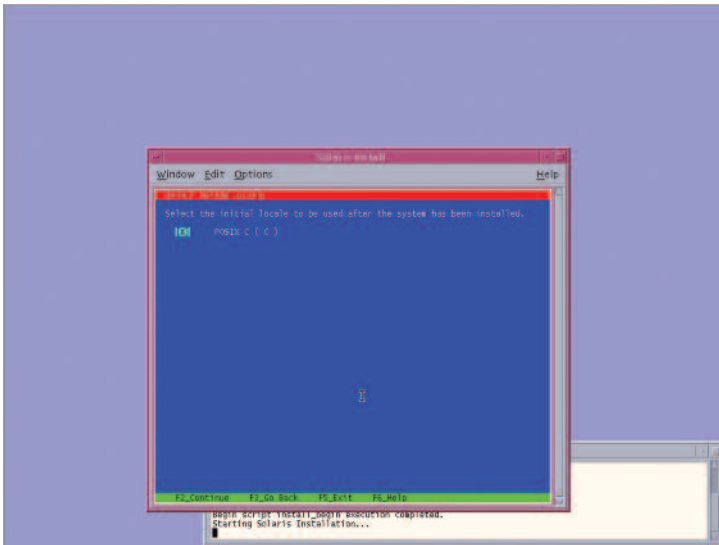
27. The License window appears. Please read the Solaris License Agreement, and if you agree, press [F2] to continue.



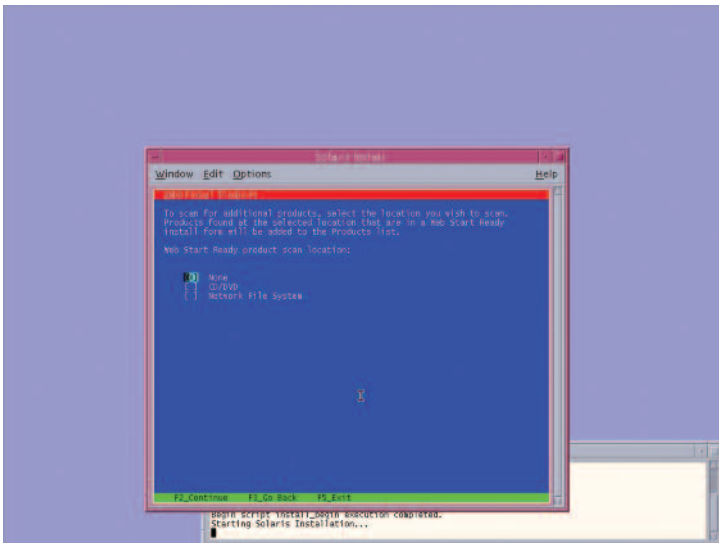
28. The Geographic Regions window appears. To add support for other regions, select the desired region; if not, press [F2] to continue.



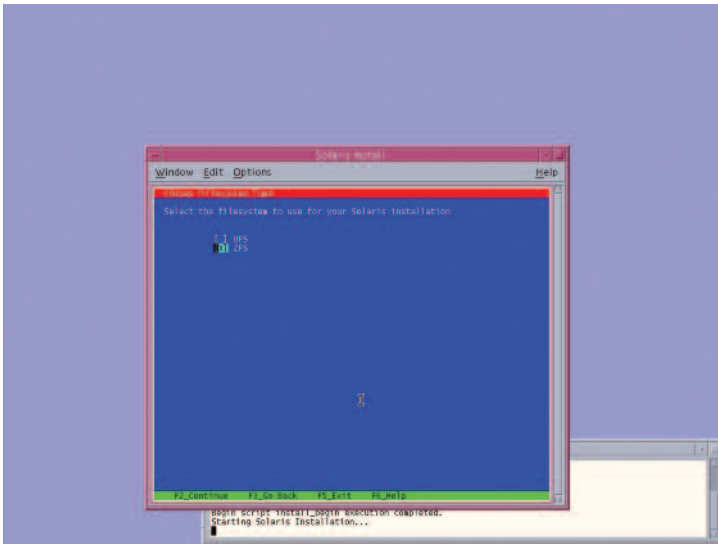
29. The System Locale window appears. Press [F2] to continue.



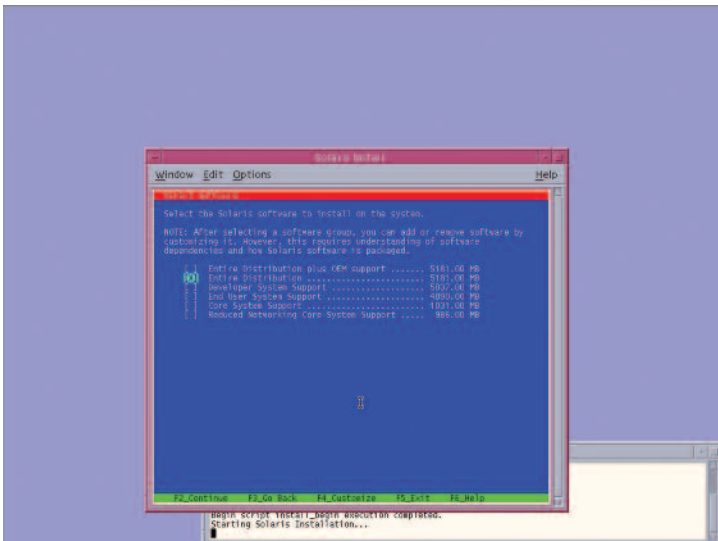
30. The Selection of Additional Products window appears. Press [F2] to continue.



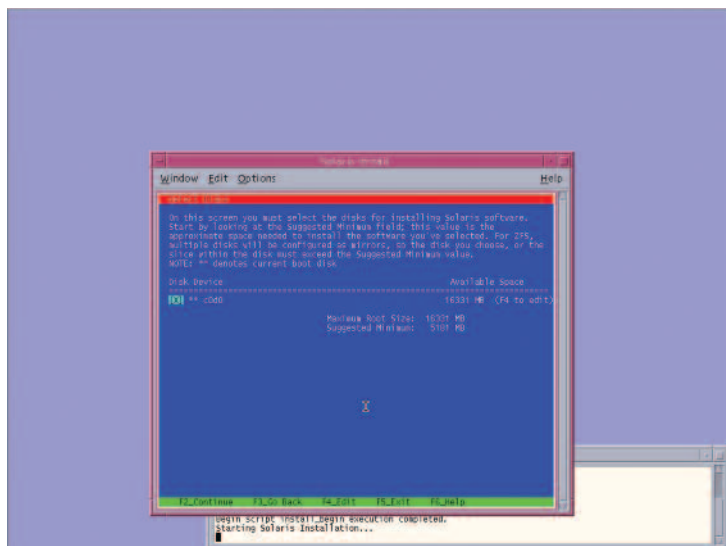
31. The Root File System selection window appears. Select ZFS and press [F2] to continue.



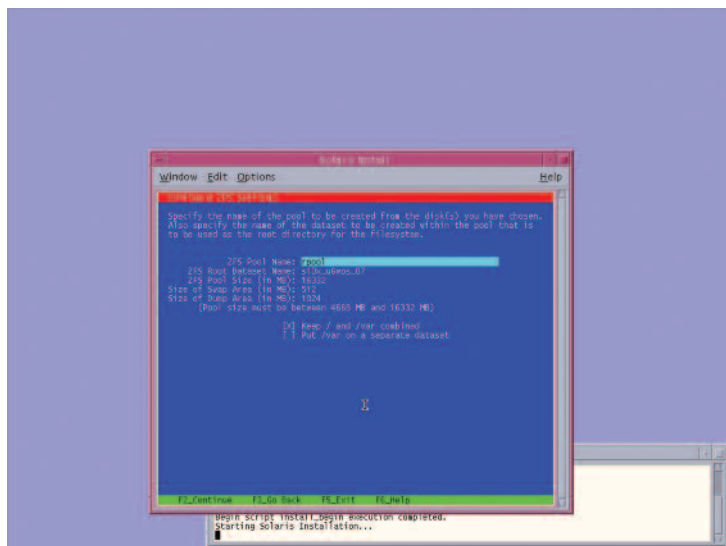
32. The Software Selection window appears. Use the default and press [F2] to continue.



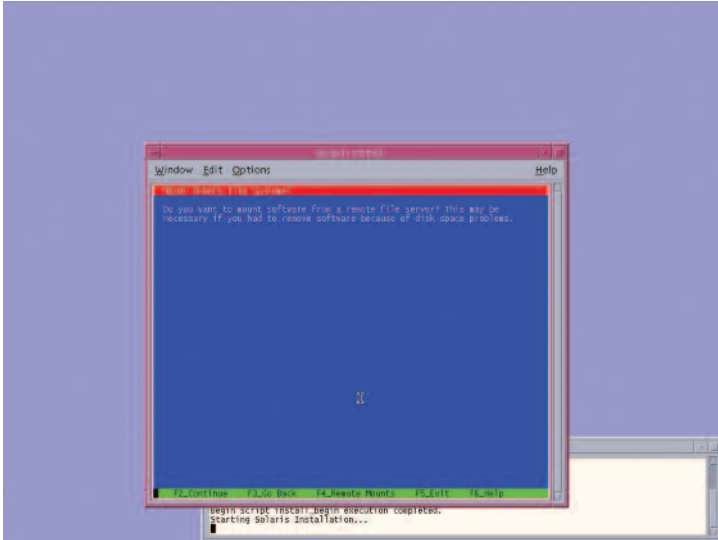
33. The Disk Selection window appears. Use the default and press [F2] to continue.



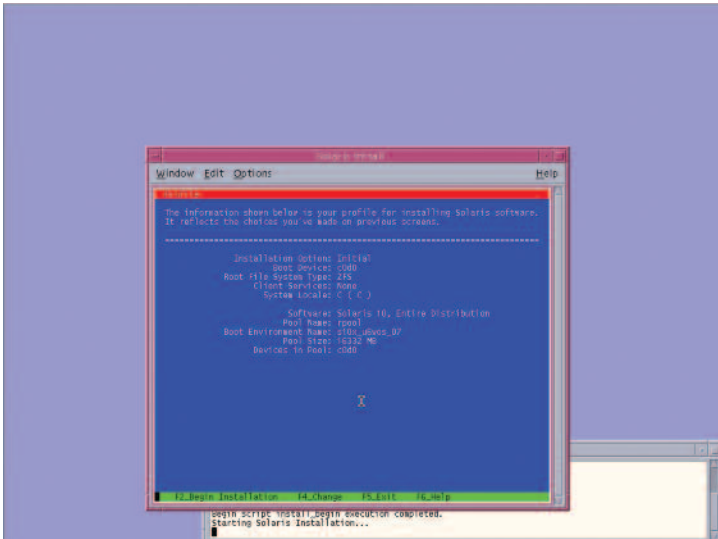
34. The ZFS Configuration window appears. Use the default and press [F2] to continue.



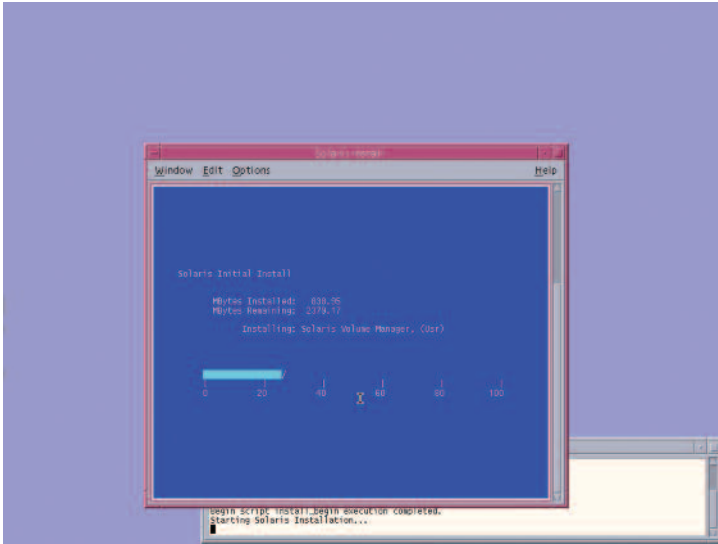
35. The Remote Mounts window appears. Use the default and press [F2] to continue.



36. The Profile window appears. On this window, you can see a technical description of how Solaris will be installed on your system. Press [F2] to continue.



37. The Install Progress window appears. Wait for a few minutes while Solaris installs on your system. After the installation is completed, the system will reboot automatically and will start the Solaris OS. Remember that in some cases, you will have to eject the media manually.



38. Now you have successfully installed Solaris 10 5/09 on your system. Login using the root user and the password you assigned on step 19.



For More Information

For more information regarding the Solaris 10 OS, visit sun.com/solaris.

| Documentation and Community | |
|---|--|
| Sun Documentation | docs.sun.com/ |
| Big Admin System Administration Portal | sun.com/bigadmin/ |
| Sun BluePrints Articles | |
| Configuring JumpStart Servers to Provision Sun x86 Systems | sun.com/blueprints/0205/819-1692.pdf |
| Performing Network Installations Without a Local Boot Server | sun.com/blueprints/0504/817-7288.pdf |
| Configuring Multiboot Environments on Sun x86 Systems with AMD Opteron Processors | sun.com/blueprints/0905/819-2889.pdf |
| Related Web Sites | |
| Solaris Hardware Compatibility List | sun.com/bigadmin/hcl |
| Solaris 10 System Requirements | sun.com/solaris/specs |
| Solaris 10 OS Features Comparison Chart | sun.com/solaris/newfeatures |
| Next Steps to Solaris 10 Adoption | |
| Get hands on experience with Solaris 10 using "Solaris 10 How To Guides" | sun.com/solaris/teachme |
| Get trained on Solaris 10—free! | sun.com/solaris/freetraining |
| Get a support contract | sun.com/solaris/get_support |
| Participate in the OpenSolaris community | opensolaris.org |

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