

HOW to INSTALL the SOLARIS<sup>™</sup> 10 OS ON x86 SYSTEMS

and B

> Solaris 10 How To Guides



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# 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.

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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.

- 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.

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# 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.



#### 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.



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.



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 "ngeo") may differ from the exact data displayed below and that each step can take up to a couple of minutes to complete:

```
MUTICE: MPU disabled because memory is interleaved

Configuring devices.

1

1. Solaris Interactive (default)

2. Custon JunpStart

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 Interactive Text (Console session)

Using install cd in /dev/dsk/clt0d0p0

Using Interactive Text (Console session)

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.



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.

 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.

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0. Pop15th 1. French 2. Gerann 3. Italian 5. Italian 5. Norrac 6. Signiffed Chrase 7. Spanith 5. Sanith 5. Frantish 5. Traitional Chrase				
ease make a choice (0 - 9), or press h or P for help:	I	-		

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.

window Edit Options		Help
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the solaris installation program is driven by the proceeded to achieve by the solar section, you'll be achieve by the solar section, you'll be achieve by the solar section of	elevient into a perior of dort pection termination for the paralitation. At alle to change the selections you ve the to change the selections you ve on function impose, or they can mak and the bottom of the screen import to use for narrantion.	
		Solaris Install Console

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

Sutteri-dentification-	1.1
ndow Edit Options	Help
anelly wis system	- P
n the next screens, you must identify this system as networked or non-networked, and set the default time zone and date/time.	
	10
I 12.Continue 14.Jelp	
	S
completing system identification.	

 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.

-	System identification		
Window Edit	Options	Help	p
S C B (CEC)	a		F
Specify whethe Protocol, on t		next generation Internet will have no effect if	
this machine is will not be af		service. IPv4 service	
> To acke a se		aht the option and	
Enable IPv			
(8) No.			
F2_Continue	glen_at		
			1
		Č.	lar
	Completing sy	stem identification	10

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.

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Window Edit Options		Help		
The state of the second s				
<ul> <li>certa the rolevation to change any interaction, dress hereanized by interaction, dress hereanized the certain the probability the robability the robabilit</li></ul>				
8				
		Solaris Int	all Console	
	Completing system identification			

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

		1.1
Window B	idit Options	Help
and the state	Sound and the second	
-		
F2_Cont	Inue F6_Help	
		Cala
	Completing system identification	Solar
	•	

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

System		
window Edit Options		Help
CHEDY, D.E., MARKING COM.		
12. Continue 14. Change 16.4	2 Pla	
		Solaris Install Console

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

-	System dentification	1.11
Window Edit Option	5	Help
NAME AND ADDRESS		-
		e name 1 either
		Tisted
ED None		
FZ_continue Hi_H	eip	
		Solar
	Completing system identificati	on

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

	12131	
indow Edit Options	Help	
From a figure of the figure of the second	E Contraction of the second se	
	rect, press F2;	
F2.Continue 14.Change F6.Hels		
	Solar	is instan console
Completing -	system imentification	

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

System Reptification	1110
it gptions	Help
10 PB 8	
	the most wight ownors
IS, stelp	
Completing system identificat	501a 101

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

indow Edit	Options	Help	
CHIEFE SAME	matter for since branks		
F2.Continue	e 64_Change 66_Help		
		Solaris install Cons	sole
	Completing system identification		
	And the state of t		

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.

indow Edit Options				
		Help		
lite die				
In this screen you must specify yo				
(C) Atrica (C) Americas				
F2_Continue F6_Help				
12.Continue F6.Holp				
12.Continue F6.Melp				
12, Cantinue - 16, Selp				
12.Continue 16.Selp		Solaris Install	Console	1
12, Continue 76, velp	Capiting system (dentification	Solaris Install	Console	1
12.Continue 76.og1p	Cospleting system identification.	Solaris install	Console	1
12. Caritiner - Kevel a	Completing system identification.	Solaris install	Console	

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

ndow Edit Options	Help		
control on the land	10		
IRI includ States Arguita Arguita Arguita Arguita Arguita Arguita Arguita Arguita Arguita Branche Branche Branche Arguita Branche Branche Collegia Collegia Destrict Collegia Collegia Collegia Destrict Collegia Collegia Destrict Collegia Collegia Collegia Destrict Collegia			
F2_Continue F6_Help			
	Solaris Install C	onsole	

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



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

Virtual Edit Option:     Help	e Sustan I	Henritication -		
An and for a margin the second take and the or when: Defended take 1000-00-20 thet make (d-forted) = 201 make (d-500) = 10 R Alarate (d-500) = 10 R Alarate (d-500) = 10 R	Window Edit Options		Help	
> Accept the default date and the or water may value. Date and time. 2000-00-20 total man (second second se	The second state			
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Watch         (1 + 0)         0           Bay         (1 + 0)         0				
R. Continue - He wile	Norm         (1-4)(1-2) <td></td> <td></td> <td></td>			
	12 Cartinus - 15 rela	Я		
			Solaris install Console	
Solaris Install Console		Completing system identifica	lon	

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

e System				
Window Edit Options		Help		
and the second second second				
Conting the following information to change any information, press		1		
Time zone: Pacific Time				
F2_Continue F4_Change F6_+	e) p			
		Solaris Inst	tall Console	
	Completing system identification			

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.

Synteni	Rent fice Soli-	1.12		
window Edit Options		Help		
Sant Breatical				
		or e it.		
Roal password:				
F2_Continue F6_Help				
		Solaris Install Con	sole	
	Completing system identificati	xn		

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

System identification	1912
Window Edit Options	Help
Encoretty while Special	
On the next screens, you must identify this system a non-networked, and set the default time zone and dat	networked or Vines
If this system is networked, the software will try t it needs to identify your system; you will be promot information it cannot find.	find the information d to supply any
> To begin identifying this system, press F2.	
F2_Continue F6_Help	5
	Sola
Completing sys	en identification

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.

ini Sector	n destrication -	
Window Edit Options		Help
THE REPORT OF THE PROPERTY OF		12
Would you like to enable network		
Selecting 'No" provides a more se which Secure Shell is the only me remote clients. Selecting 'Ves' services as in previous Solaris' isafe to solater 'No' as any servic after installation.		
Note: This choice only affects in		des.
Remote services enabled		
OI Yes		
F2_Continue F6_Help		
		-
		Solar
	Completing system identification	

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.

soly is terral is	le la
Indow Edit Options	Help
Sanatar anna a tai anna taitan	
	stonize
	*
	tion.

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

w Test. Totious	Help
	ng che primore , you can choose is installed ar
	during system
13) 4 towatically start 20/000 Lj Manually spert CD/000	

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.



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

Speak Britten A	1-1-
window Edit Options	Help
Select the generality radius for which support should be installed	

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

Jindow Edit Options	Help
	s been installed.

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

<u>Cut approximation</u> is a method. Found at the selected location that are in a met Start Head form will be added by the Province list.	Help

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

Solar (Motol) w <u>E</u> dit Options	<u>H</u> elp
a Tribulate Tipo t the filesystem to use for your Selaris installation	

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

Solaria Ipitali	1.1
Vindow Edit Uptions	Help
NOTE: After selecting a software group, you can add or remove software customizing it. However, this requires understanding of software dependencies and how Solaris software is packaged.	iare by
Tett in Distribution plus CEM support	

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.

Solare Installs	110
neow Fort Options	Help
	you have chosen. e pool that is
275 Puol Name: FPOOl	_

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.

ndow Edit Options	Help Help
Harle to information shown below is your profile for insta t reflects the choices you've wade on provious ocree	lling Solaris software. ns.
	Distribution

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.

Window Edit Options	barnwarr	Help
Solarie Joitial Install		
MBytes Installed: MBytes Remaining: Installing:		
0 20		

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.

<i></i> ♦ <u>Sun</u>		
	Welcome to unknown	solaris
	Please enter your user name	Start Over OK

# **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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