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## Solaris for ISPs Installation Guide

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U.S.A.

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# Preface

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Using this *Solaris™ for ISPs™*, you can install, configure, and uninstall all platform extensions and services used in an Internet service provider's network.

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## Who Should Use This Book

The audience for this book includes system administrators and individuals adding and configuring new workstations, setting up user accounts, and installing system-wide software.

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## Before You Read This Book

Before reading this book, you must have read:

- Chapters 1 through 4 of the *Solaris for ISPs Administration Guide*, part # 805-4874  
The Solaris for ISPs overview documentation is available in several formats for your convenience.
  - At the root directory of your installation media, this documentation is at *see media\_root/docs/README.1st for the location*.
  - In the printed documentation, refer *Solaris for ISPs Administration Guide*.
  - On the World Wide Web, you can access this document at <http://access1.sun.com/Products/ISP>.
- *Sun Directory Services 3.1 Administration Guide*, part # 805-6061

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# How This Book is Organized

The chapters in this book discuss steps to install, configure, and uninstall Solaris for ISPs platform extensions and services:

Chapter 1 discusses:

- The “Preinstallation Tasks” on page 2 to be performed.
- The steps for “Installing the Software” on page 3 using the host configuration software.
- How to recover from the “Host Configuration Error Messages” on page 10 to continue with the installation process.
- The steps for “Uninstalling Solaris for ISPs” on page 11 using the host configuration software.

Chapter 2 discusses:

- The “Preinstallation Tasks” on page 17 to be performed.
- The steps for “Installing the Software” on page 18 from the command line.
- The method of “Determining That Installation Was Successful” on page 30.
- The steps for “Uninstalling Solaris for ISPs Components” on page 31 from the command line.

Chapter 3 discusses the steps for:

- “Starting the Directory Services” on page 35 to enable Sun Internet Administrator to initialize the entries.
- “Starting the License Server” on page 36 to get the licenses for making entries in Sun Directory Services.
- “Starting Sun Internet Administrator” on page 38 to initialize the entries in Sun Directory Services and to register to access and manage the services.
- “Configuring HotJava” on page 40 to support the applet security setting requirements of the components.
- “Starting the Services” on page 42 through the Sun Internet Administrator console or directly from a browser.

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# Solaris™ for ISPs™ Related Documentation

Documentation related to Solaris for ISPs includes printed manuals, AnswerBooks, and man pages. Each is listed below.

## *Manuals*

Books that will support you in the installation and configuration process includes:

- *Solaris™ for ISPs™ Installation Guide*, part # 805-4875 (the book you are currently reading)
- *Solaris for ISPs Administration Guide*, part # 805-4874
- *Solaris for ISPs Command Reference*, part # 805-4876

## *Answer Books*

- *Solaris for ISPs Installation Guide*, 805-5031
- *Solaris for ISPs Administration Guide*, 805-5032
- *Sun Directory Services 3.1 Administration Guide*
- *Sun Directory Services 3.1 User's Guide*

## *Man Pages*

Each manual page, commonly known as a “man” page, discusses one subject, such as a user command or library function.

The location of Solaris for ISPs platform extensions and services man pages are listed below:

- The host configuration man pages are located in `/opt/SUNWisp/man`.
- The JDK 1.1.5™ man pages are located in `/usr/share/man`.
- The FLEX1m man pages are located in `/opt/SUNWste/license_tools/man`.
- The Sun™ Directory Services man pages are located in `/opt/SUNWconn/man`.
- The Sunscreen™ SKIP man pages are located in `/opt/SUNWicg/man`.
- The Sun™ Internet FTP Server™ man pages are located in `/opt/SUNWixfta/1.0/man`.

- The Sun™ Internet News Server™ man pages are located in `/opt/SUNWsns/man`.
- The Sun™ WebServer™ man pages are located in `/usr/share/man`.
- The Sun™ Internet Administrator console man pages are located in `/opt/SUNWixamc/man`.

## *Related Web Sites*

Web sites that will assist you in the installation and configuration of Solaris for ISPs components includes:

- <http://access1.sun.com/Products/ISP> for required and recommended patches.
- <http://www.javasoft.com/products/jdk/1.1/index115.html> for JDK 1.1.5 documentation.
- <http://www.java.sun.com/products/hotjava/1.1.4/> for known HotJava bugs and FAQ information.
- <http://skip.incog.com/spec/SKIP.html> for documentation on SKIP.

## *The README File*

The Solaris for ISPs `README.1st` file is a short file on the product CD that contains late breaking news, bugs, release information, and pointers to software readme files and documents for installing.

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## Other Related Documents

You may also want to consult the following books for information on the subject matter discussed in this book:

- *Automating Solaris Installations (A Custom JumpStart Guide)*, by Paul Anthony Kasper and Alan L. McClellan, SunSoft Press, 1995.
- *Solaris Advanced Installation Guide*, part # 802-5740-10.

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## Related Web Sites

You may also want to consult the following Web sites for information on the subject matter discussed in this book.

- <http://sunsolve1.sun.com> for public patches.
- <http://www.isc.org/> for reference on implementation of core Internet protocols.
- [http://www.sun.com/servers/ultra\\_enterprise/sw/webstart/](http://www.sun.com/servers/ultra_enterprise/sw/webstart/) for Jumpstart installation.

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## Ordering Sun Documents

The SunDocs<sup>SM</sup> program provides more than 250 manuals from Sun Microsystems, Inc. If you live in the United States, Canada, Europe, or Japan, you can purchase documentation sets or individual manuals using this program.

For a list of documents and how to order them, see the catalog section of the SunExpress<sup>TM</sup> Internet site at <http://www.sun.com/sunexpress>.

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## Accessing Sun Documentation Online

The docs.sun.com Web site enables you to access Sun technical documentation online. You can browse the docs.sun.com archive or search for a specific book title or subject. The URL is <http://docs.sun.com>.

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## Definitions of Typefaces

The following table describes the typographic conventions used in this book.

TABLE P-1 Typographic Conventions

Typeface or Symbol	Meaning	Example
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.  machine_name% you have mail.
<b>AaBbCc123</b>	What you type, contrasted with on-screen computer output.	machine_name% <b>su</b> Password:
<i>AaBbCc123</i>	Placeholder to replace with a real name or value.	To delete a file, type <b>rm</b> <i>filename</i> .
<i>AaBbCc123</i>	Book titles, new words, or terms, or words to be emphasized.	Read Chapter 6 in <i>User's Guide</i> .  These are called <i>class</i> options.  You must be <i>root</i> to do this.

## Shell Prompts in Command Examples

The following table shows the default system prompt and superuser prompt for the C shell, Bourne shell, and Korn shell.

TABLE P-2 Shell Prompts

Shell	Prompt
C shell prompt	machine_name%
C shell superuser prompt	machine_name%
Bourne shell and Korn shell prompt	\$
Borne shell and Korn shell superuser prompt	#

# Installing and Uninstalling Solaris for ISPs from a Browser

---

Welcome to Solaris™ for ISPs™. The steps discussed in this chapter will help you in installing Solaris for ISPs platform extensions and services from a graphical user interface. An overview of the installation process is illustrated in Figure 1-1.

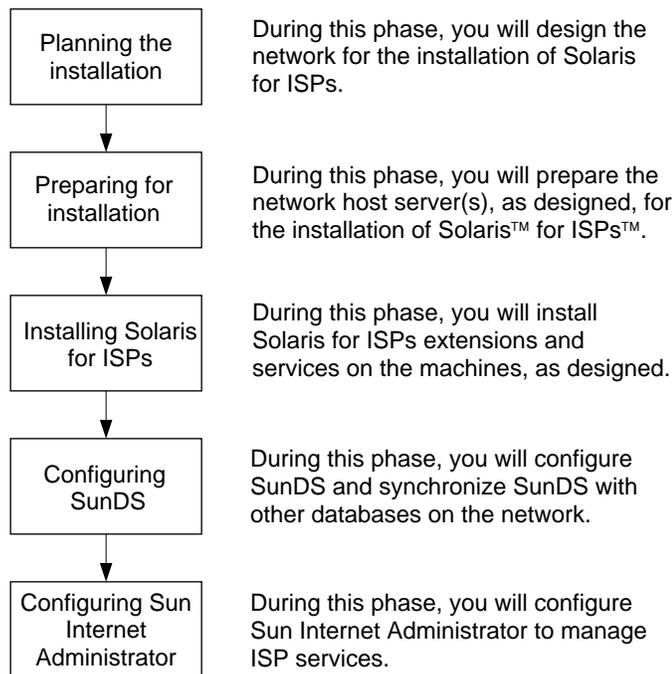


Figure 1-1 Overview of the Installation Process

---

**Note** - You *must* perform the steps illustrated in Figure 1-1. For a detailed description of the steps illustrated here, go to Chapter 2 of the *Solaris for ISPs Administration Guide*.

---

## Preinstallation Tasks

To properly prepare for installing Solaris for ISPs, you must understand how the various platform extensions and services fit together and depend upon one another. Chapters 1 through 4 of the *Solaris for ISPs Administration Guide* provide an overview of the product and explain in detail the hardware and operating system requirements for each software component.

### ▼ Planning Your Installation

1. **Read the overview documentation, Chapters 1 through 4 of the *Solaris for ISPs Administration Guide*, and perform the steps outlined there.**
  - Chapter 1, “Solaris for ISPs Overview,” discusses product features and benefits.
  - Chapter 2, “How to Plan your Installation,” presents in detail the steps in planning, preparing, and installing the product.
  - Chapter 3, “Setup Guidelines,” presents configuration guidelines, including details on the Solaris service configuration performed by the host configuration software.
  - Chapter 4, “Installation Requirements,” lists RAM, disk space, and OS requirements for the product software. It discusses the default ports used by the components and the component dependencies.
2. **Check the README, at `media_root/docs/README.1st`, for any late-breaking corrections to this documentation.**

---

# Installing the Software

Once you have planned your network and ensured that each computer has the required hardware and software for its planned role in the network, run the Solaris for ISPs host configuration software for each computer in the plan.

---

**Note** - Run the host configuration software at least once for each computer that will host Solaris for ISPs software. The host configuration process has five phases:

1. Choosing software components (and configuring their installation parameters).
  2. Reviewing the Solaris services that the host configuration software will disable (and possibly customizing these settings).
  3. Specifying an optional post-configuration command (or script) that the host configuration software will run towards the end of its batch install process.
  4. Reviewing a summary of all the changes you have specified. At this point, you can use the Back button on the browser to access earlier screens and amend your choices. You can also save the configuration scenario (all your settings) to be used in a repeatable installation later.
  5. Executing the configuration scenario you specified in steps one through four.
- 

## ▼ Beginning Host Configuration: Running `hcstartup`

1. Log into the computer where you want to install the software and give yourself root access.

If you are installing remotely, enter:

```
% xhost +remotehostname

% rlogin remotehostname

% password

% su

Password: rootpassword

# DISPLAY=localhost:0.0

# export DISPLAY
```

If you are using a C-shell, remember that your command to set the display variable is different.

---

**Note** - If you do not set the DISPLAY environment variable, to continue the configuration process, you must open the URL in a browser. Refer to "Host Configuration Error Messages" on page 10 for information on how to proceed.

---

**2. Change directory to the root of the media from which you are installing.**

Change to either the directory where you unwrapped the electronic distribution or the root directory of the mounted CD-ROM.

**3. Enter # ./hcstartup**

The script asks a few questions before bringing up the host configuration GUI.

- a.** Enter path to installation media (enter ``none`` if no media)  
[ *current working directory* ]

If your current working directory is the root of the installation media, press Return. If it is not, enter the path to the installation media. If you enter **none**, only uninstall options will be available.

- b.** Enter port to use [8000]

If port 8000 is available, press Return. Otherwise, enter a port that the host configuration software can use for the temporary Web server that delivers its GUI. The script checks to see if the port is available and prompts you for another if the port number you enter is in use.

You will see a series of messages:

```
Unwrapping archives for Host Configuration
Setting up media database
Starting web server
Ready to start hotjava
```

- c.** Please choose one of the following options:

Press Return to start HotJava™. This is the default option. Enter 2 to open the URL for host configuration in another browser. At this point, you can also abort the installation by entering 3.

After a moment,

If you selected the default HotJava browser for host configuration, the browser appears and displays the splash screen.

If you selected the second option, to continue the configuration process you must open a browser and access the URL:

```
http://hostname:8000/cgi-bin/splash
```

where *hostname* is the host name of the machine where you are

installing. If you specified a port other than the default for the host configuration software to use, replace 8000 with that port number.

### Possible Error Messages

If you receive an error message when you run `hcstartup`, see “Host Configuration Error Messages” on page 10.

---

**Note** - You can use the on-line help from this screen to proceed with the installation.

---

Continue with the “Host Configuration: Choosing Software Components” on page 5.

## ▼ Host Configuration: Choosing Software Components

At this point, you have already performed the steps in the “Beginning Host Configuration: Running `hcstartup`” on page 3. You are looking at the browser displaying the host configuration splash screen.

For each component listed here, refer to Chapter 1 of the *Solaris for ISPs Administration Guide* for an overview of the component.

**1. Click on Begin.**

The Component Configuration screen is displayed.

**2. For each Solaris for ISPs component that you want to install on this host:**

**a. Verify installation status in the Installed? column**

If the status displayed is no, the component is not installed on the host. If the status displayed is yes, the component is currently installed on the host and you cannot install the same component again on this host.

**b. Choose Install from the option menu in the Action column.**

By default, No Action will be executed for the component.

---

**Note** - You *must* install the Solaris™ for ISPs™ Platform software.

---

**c. Select for installation all other component listed as required for the component you want to install.**

---

**Note** - To customize installation of the component, you *must* select for installation all the other components it depends upon.

---

- d. **Click on Configure (if available), in the Customize Installation column, to set the installation parameters for the selected component.**

The Configure Installation screen for the selected component is displayed.

---

**Note** - For the selected component, you *must* specify the appropriate installation parameters and must not accept the default customizations.

---

- e. **Examine the installation parameters for the selected component and set them as appropriate for your environment.**

---

**Note** - Refer to on-line help to specify installation parameters.

---

- f. **Click on Done when you are finished.**

The Component Configuration screen is displayed.

---

**Note** - Review the screen and ensure that appropriate installation parameters for all components, selected for installation, have been specified.

---

3. **After selecting components and setting installation parameters on their Configure Installation screen, click on Next.**

The Solaris Service Configuration screen is displayed.

Continue with the “Host Configuration: Solaris Services Settings” on page 6.

## ▼ Host Configuration: Solaris Services Settings

At this point, you have completed selecting components for installation. You are looking at the Solaris Service Configuration screen.

The Solaris services on this screen will be enabled or disabled (as displayed) to improve the security and performance of the system. Change settings on Solaris services only if your particular system plan requires it.

Each Solaris service configured on the screen is documented in the on-line help for the host configuration software and in the “Reconfigurable Settings” section of Chapter 3 of the *Solaris for ISPs Administration Guide*.

1. **If your system plan requires it, select enable or disable from the option menu in the Desired State column.**

To get maximum benefit from the host configuration software, accept its recommendations.

2. **When the Solaris service settings are as you want them, click on Next.**

The Post-Configuration Command screen is displayed.

Continue with the “Host Configuration: Post-Configuration Command” on page 7.

## ▼ Host Configuration: Post-Configuration Command

At this point, you have already selected components and reviewed the Solaris services settings. You are looking at the Post-Configuration Command screen.

The post-configuration command is optional and completely user-defined. Use this option to add your own standard post-installation and configuration tasks to the host configuration software for automatic execution.

Some examples of post-configuration commands that you can use are discussed in the “User-defined Scripts” section of Chapter 3 of the *Solaris for ISPs Administration Guide*.

You can specify any non-interactive command or series of commands. If you have no post-configuration needs, click on Next.

1. **If you have a command or script you want run at the end of installation and configuration, enter the complete path to it here.**

2. **Click Next.**

The Confirm Configuration screen is displayed.

Proceed to “Host Configuration: Configuration Summary and Saving Scenarios” on page 8.

## ▼ Host Configuration: Configuration Summary and Saving Scenarios

See Chapter 1 of the *Solaris for ISPs Administration Guide* for information on saving configuration scenarios.

1. **Review and confirm the settings you provided by reviewing the specifications displayed in the various sections.**

Use the Back button in the browser to modify any specification.

2. **If you want to save this installation and configuration scenario for use in the future,**

- a. **Enter the path where you want to store the scenario files.**

---

**Note** - This directory, where the scenario files are to be stored, will be created and should not exist. However, the parent for the scenario directory must exist. For example, to store the scenario files in `/usr/foo/bar`, do not create the `bar` directory and ensure that `/usr/foo` exists.

Do not create the scenario directory before saving the scenario files. If you attempt to save a configuration scenario to an existing directory, you will receive an error message and the software will refuse to export the scenario.

---

- b. **Click on Save.**

3. **Complete the installation and configuration process. Do one of the following:**

- a. **Click Execute (with reboot) if you want to perform the installation and configuration and then reboot the computer. We recommend you select this option.**

- b. **Click Execute (no reboot) if you want to perform the installation and configuration and then perform additional tasks before rebooting the computer.**

---

**Note** - Remember to reboot when your tasks are complete, as certain configuration settings require a reboot to take effect.

---

- c. **Click on Exit, if you do not want to perform the installation and configuration (for example, if you simply wanted to save a scenario for future use).**

The following message is displayed if you executed the installation:

The batch installation process has started. You can find the log file for this process in `/var/opt/SUNWisp/hc/logs`. No more interaction with the browser will occur. You may shut the browser down at any time. If this is a local browser, it will automatically be shut down when the batch installation process has completed.

After a few moments, the browser exits. The host configuration process is complete when the system reboots, or when the final `Cleaning up` message is entered in the log file. See the “Determining that Installation and Host Configuration Are Complete” on page 9 for how to read the log file and to determine whether host configuration is complete.

## ▼ Determining that Installation and Host Configuration Are Complete

1. **Change directory to** `/var/opt/SUNWisp/hc/logs`.
2. **Find the log file named for the current date. For example, if today is April 1, 1998, find the log file named** `config.1998-04-01.1845`.
3. **Read the log file, and find this message at the end:** `Cleaning up /tmp/hcpid` where *pid* is the host configuration process ID.

If the last entry in the log file is `Cleaning up /tmp/hcpid`, the host configuration batch process is finished and has exited. .

If you had clicked on `Execute (no reboot)`, remember to reboot the computer when your post-installation tasks are complete, so that all settings of the host configuration can take effect.

## ▼ Determining that Installation and Host Configuration Are Successful

1. **Change directory to** `/var/opt/SUNWisp/hc/logs`.
2. **Find the log file named for the current date. For example, if today is April 1, 1998, find the log file named** `config.1998-04-01.1845`.

3. **Read the log file.** For each software component selected for installation (or deinstallation), you will see a section beginning with four greater-than signs (>>>>) and a message including the component identifier. If that section ends with the message: `Installation successful`, that component has been successfully installed.

If the log file section for any component does not end with the message `Installation successful`, installation of the component failed. The remainder of the installation is aborted (nothing further is installed). Check the details in the log file and the system requirements for the software component.

---

## Host Configuration Error Messages

At times, you may receive an error message from the host configuration software. These are listed below for easy reference and recovery.

```
It appears that a session of this program is
already running. You may not start a new session
until the other session has completed or is terminated.
If you know that a session is not running, remove the files:
/tmp/hcstartup.running
/tmp/hcbi.running
```

Ensure that no other legitimate host configuration session is running. Then delete the files listed and run `hcstartup` again.

---

**Note** - You will get this error message if, during the last time you started the host configuration process,

- You closed the browser window. Or,
- The browser crashed.

To exit an installation, always click on Exit and do not close the browser window.

To reenter the host configuration process:

1. Start the browser.
  2. Access the host configuration software user interface. To access, type URL: `http://hostname:8000/cgi-bin/splash`, where *hostname* is the name of the host where another session is running, and please specify port number if you installed on a port other than the default, 8000.
-

Not enough disk space.  
You may enter a different directory to  
install a working copy of this software.

By default, `hcstartup` installs a temporary Web server in `/tmp`. If there is not enough disk space in `/tmp`, it will prompt you to specify another directory for it to use. Please ensure that the directory you specify has at least 10MB of free space available.

DISPLAY environment variable is not set.  
To continue the configuration process, you will need to open the following URL in a web browser:  
`http://host:port/cgi-bin/splash`  
Do you want to continue?

To continue with the configuration process for installing Solaris for ISPs, type `y` and press Return. Open the URL in a browser.

To exit the installation process, type `n` and press Return. If you exit the installation process, the Web server will be automatically shut down and the temporary files will be removed.

Cannot find `hotjava` in `/usr/dt/bin`. You will need to bring the following URL up in another browser:  
`http://host:port/cgi-bin/splash`

The `hcstartup` script has completed its background tasks. Start a Web browser and access the URL listed. The *host* is the machine where the host configuration software is running and the *port* the one you specified to `hcstartup`.

---

## Uninstalling Solaris for ISPs

To uninstall a component or multiple Solaris for ISPs components, run the host configuration software. During host configuration, you will repeat some of the steps you executed during installation. This will enable you to reconfigure the machine to the same state it was in before installing Solaris for ISPs. The steps are:

1. Choosing software components to uninstall.
2. Reviewing and resetting the Solaris services that the host configuration software configured during installation.
3. Specifying an optional post-configuration command (or script) that the host configuration software will run towards the end of its batch uninstall process.

4. Reviewing a summary of all the changes you have specified. At this point, you can use the Back button on the browser to access earlier screens and amend your choices.
5. Executing the configuration scenario you have specified.

## ▼ Beginning Host Configuration

1. **Start host configuration software. To start,**
  - a. **Log into the computer where you want to install the software and give yourself root access.**

If you are installing remotely, enter:

```
% xhost +remotehostname
% rlogin remotehostname
% password
% su
Password: rootpassword
# DISPLAY=localhostname:0.0
# export DISPLAY
```

If you are using a C shell, remember that your command to set the display variable is different.

---

**Note** - If you do not set the DISPLAY environment variable, to continue the configuration process, you must open the URL in a browser. Refer to “Host Configuration Error Messages” on page 10 for information on how to proceed.

---

- b. **Change directory to the root of the media from which you are uninstalling.**  
Change to either the directory where you unwrapped the electronic distribution or the root directory of the mounted CD-ROM.
    - c. **Enter # ./hcstartup**  
The script asks a few questions before bringing up the host configuration GUI.
      - i. Enter path to installation media (enter ``none`` if no media)  
[ *current working directory*]  
  
If your current working directory is the root of the media from which you are uninstalling, press Return. If it is not, enter the path to the media from which you are uninstalling.
      - ii. Enter port to use [8000]

Enter a port that the host configuration software can use for the temporary Web server that delivers its GUI. The script checks to see if the port is available and prompts you for another if the port number you enter is in use. If port 8000 is available, press Return.

You will see a series of messages:

```
Unwrapping archives for Host Configuration
Setting up media database
Starting web server
Ready to start hotjava
```

iii. Please choose one of the following options:

Press Return to start HotJava™. This is the default option. Enter 2 to open the URL for host configuration in another browser. At this point, you can also abort the installation by entering 3.

After a moment,

If you selected the default HotJava browser for host configuration, the browser appears and displays the splash screen.

If you selected the second option, to continue the configuration process you must open a browser and access the URL:

`http://hostname:8000/cgi-bin/splash` where *hostname* is the host name of the machine where you are installing and *8000* is the default port number. If you specified a port other than the default for the host configuration software to use, enter that port number.

2. Click on **Begin** in the host configuration welcome screen.

The Component Configuration screen is displayed.

## ▼ Choosing Components to Uninstall

1. Select the component you want to uninstall from the list in the **Component** column and verify component installation status by referring to the status displayed in the **Installed?** column.

Solaris for ISPs host configuration software will prevent you from uninstalling components that other installed components rely upon.

---

**Note** - If the status displayed is yes, the component is currently installed on the machine. If the status displayed status is no, the component is currently not installed on the machine.

---

2. **Select Uninstall from the option menu, in the Action column, for each component.**

By default, No Action will be executed for the component.

3. **Click on Next.**

The Solaris Service Configuration screen is displayed.

## ▼ Reconfiguring Solaris Services

This screen enables you to reconfigure Solaris services that you had enabled or disabled during installation of Solaris for ISPs.

1. **Select enable or disable, for the service you wish to reconfigure, from the option menu in the Desired State column.**

2. **When the Solaris service settings are as you want them, click on Next.**

The Post-Configuration Command screen is displayed.

## ▼ Confirming Scenario

1. **Click on Next in the Post Configuration screen.**

The Confirm Configuration screen is displayed.

---

**Note** - You can specify some commands or script to be executed after uninstalling the specified component.

---

2. **Click on Execute (with reboot) to uninstall the specified component.**

## ▼ Determining that Uninstall was Successful

1. **Change directory to `/var/opt/SUNWisp/hc/logs`.**

2. Find the log file named for the current date. For example, if today is April 1, 1998, find the log file named `config.1998-04-01.1845`.
3. Read the log file. For each software component selected for uninstall, you will see a section beginning with four greater-than signs (>>>>) and a message including the component identifier. Ensure that the section ends with the message:  
Component ``*Componentname*`` (ID=*Componentid*) uninstalled successfully  
where *Componentname* is the name of the component that has been uninstalled and *Componentid* is the package name of the component removed.



## Installing and Uninstalling from the Command Line

---

The sections in this chapter will help you install and uninstall Solaris™ for ISPs™ platform extensions and services from the command line.

If you choose to install from the command line, you will not get the benefits of the host configuration software. The host configuration software allows you to perform, as part of the installation process from a browser, some tuning and security modifications. It allows you to save the configuration specifications you provide during installation as a configuration scenario.

A scenario is the combination of the current state of the server plus the specifications you provided; in other words, the desired final state of the server. If you save the scenario using the host configuration software, you can use it for setting up JumpStart™ scripts to duplicate the scenario on other servers. The host configuration software also allows you to execute some non-interactive post-installation commands or a script.

We recommend installing Solaris for ISPs from a browser using the host configuration software. Please install from the command line only if you are completely familiar with the product and its various component dependencies.

---

## Preinstallation Tasks

To properly prepare for installing Solaris for ISPs, you must understand how the various platform extensions and services fit together and depend upon one another. Chapters 1 through 4 of the *Solaris for ISPs Administration Guide* provide an overview of the product and explain in detail the hardware and operating system requirements for each software component.

## ▼ Planning Your Installation

1. **Read the overview documentation, Chapters 1 through 4 of the *Solaris for ISPs Administration Guide*, and perform the steps outlined there.**
  - Chapter 1, “Solaris for ISPs Overview,” discusses product features and benefits.
  - Chapter 2, “How to Plan your Installation,” presents in detail the steps in planning, preparing, and installing the product.
  - Chapter 3, “Setup Guidelines,” presents configuration guidelines.
  - Chapter 4, “Installation Requirements,” lists RAM, disk space, and OS requirements, for the product software. This chapter also discusses the component dependencies on bundled and unbundled software.
2. **Check the `README`, at `media_root/docs/README.1st`, for any late breaking corrections to this documentation.**

The Solaris for ISPs overview documentation is available in several formats for your convenience.

- At the root directory of your installation media, the overview documentation is at *see `media_root/docs/README.1st` for the location.*
- In the printed documentation, this information is in Chapters 1 through 4 of the *Solaris for ISPs Administration Guide*.
- On the World Wide Web, you can access this information at *see `media_root/docs/README.1st` for the location.*

---

## Installing the Software

This section discusses the steps involved in the installation of Solaris for ISPs from the command line.

## ▼ Installing Solaris for ISPs Components

1. **Log into the computer where you want to install the software and give yourself root access.**

If you are installing remotely, enter:

```
% rlogin remotename
```

```
% password
```

```
% su
```

```
Password: rootpassword
```

**2. Change directory to the root of the media from which you are installing.**

Change to either the directory where you unwrapped the electronic distribution or the root directory of the mounted CD-ROM.

---

**Note** - Please proceed to the individual component installation section to install the component.

---

## ▼ Installing Solaris for ISPs Platform (SUNWisp)

The Solaris for ISPs platform provides the platform extensions with configuration management tools and enhancements for logging. If this is the first instance of a Solaris for ISPs installation on this machine, you *must* install this software.

**1. Change directory to** `components/SUNWisp/`.

**2. Enter** `./install`

The script will ask for a few configuration information for installing the component.

**3. Please enter the root of the distribution media:**

Enter the path of the distribution media from which you are installing. Enter either the directory path where you unwrapped the electronic distribution or the directory path of the mounted CD-ROM based on the media you are installing from (for example, *DistributionMediaPath/components/SUNWisp/*).

**4. Do you want to install the Solaris for ISPs Administration Guide?**

Press Return for *yes* or enter **n** for no. If you select *yes*, the *Solaris for ISPs Administration Guide* in HTML format is installed.

**5. Do you want to install the Host Configuration manual pages?**

Press Return for *yes* or enter **n** for no. If you select *yes*, the manual pages for the host configuration command-line tools are installed.

Proceed to “Determining That Installation Was Successful” on page 30.

## ▼ Installing JDK 1.1.5 (SUNWjdk)

JDK 1.1.5 provides the Java classes needed by several of the Solaris for ISPs components. You cannot customize installation of this software. You *must* install the Solaris for ISPs platform (SUNWisp) before installing JDK 1.1.5.

1. **Change directory to** `components/SUNWjdk/`.

2. **Enter** `./install`

The script requests information for installing the component.

3. Please enter the root of the distribution media:

Enter the path of the distribution media from which you are installing. Enter either the directory path where you unwrapped the electronic distribution or the directory path of the mounted CD-ROM based on the media you are installing from (for example, *DistributionMediaPath/components/SUNWjdk/*).

Proceed to “Determining That Installation Was Successful” on page 30.

## ▼ Installing HotJava 1.1.4 (SUNWdthj)

This is the Web browser you must use to access Sun™ Internet Administrator. You cannot customize installation of this software. You *must* install Solaris for ISPs platform (SUNWisp) before installing HotJava™.

1. **Change directory to** `components/SUNWdthj/`.

2. **Enter** `./install`

The script requests information for installing the component.

3. Please enter the root of the distribution media:

Enter the path of the distribution media from which you are installing. Enter either the directory path where you unwrapped the electronic distribution or the directory path of the mounted CD-ROM based on the media you are installing from (for example, *DistributionMediaPath/components/SUNWdthj/*).

Proceed to “Determining That Installation Was Successful” on page 30.

## ▼ Installing the License Server for Solaris for ISPs (SUNWlicsw)

FlexLM server for Solaris for ISPs. You cannot customize installation of this software. You *must* install Solaris for ISPs platform (SUNWisp) before installing this license server. Use the license certificate for this software to obtain a license key to initialize more entries in Sun Directory Services. To install:

1. **Change directory to** `components/SUNWlicsw/`.

2. **Enter** `./install`

The script requests information for installing the component.

3. Please enter the root of the distribution media:

Enter the path of the distribution media from which you are installing. Enter either the directory path where you unwrapped the electronic distribution or the directory path of the mounted CD-ROM based on the media you are installing from (for example, *DistributionMediaPath/components/SUNWlicsw/*).

Proceed to “Determining That Installation Was Successful” on page 30.

## ▼ Installing Sun Directory Services (SUNWconn)

This Lightweight Directory Access Protocol (LDAP) implementation provides a shared repository for user (administrator), service configuration, and subscriber information in Sun™ Directory Services. You *must* install Solaris for ISPs platform (SUNWisp) and JDK 1.1.5 (SUNWjdk) before installing Sun Directory Services.

For more information about the configuration fields, refer *Sun Directory Services 3.1 Administration Guide*, *Sun Directory Services 3.1 User's Guide*, and chapters 5 and 6 of the *Solaris for ISPs Administration Guide*.

1. **Change directory to** `components/SUNWconn/`.

Before installing the component, verify component dependencies by referring to Chapter 4 of the *Solaris for ISPs Administration Guide*.

2. **Enter** `./install`

The script will ask for a few configuration information for installing the component.

3. Please enter the root of the distribution media:

Enter the path of the distribution media from which you are installing. Enter either the directory path where you unwrapped the electronic distribution or the directory path of the mounted CD-ROM based on the media you are installing from (for example, *DistributionMediaPath/components/SUNWconn/*).

4. Do you want to run the RADIUS server included with Solaris for ISPs?

Press Return for yes or enter **n** for no. If you select no, the RADIUS server bundled with Solaris for ISPs will only be installed and will not be started.

5. What country do you wish to specify as your root for this install of Sun Directory Services?

Enter your two-character country code. You can accept the default [US] by pressing Return and specify your two-character country code.

6. Organization name for root of Sun Directory Services

Enter your organization name (for example, Sun).

---

**Note** - The values entered in steps two and three are used to define your top level distinguished name in the OSI tree. For example, *o=sun,c=us*.

---

7. Root DN (distinguished name) for Sun Directory Services?

Enter the distinguished name of the server administrator for binding to the directory services. Use the format *cn=admin,o=sun,c=US*, where *cn* is the commonName, *o* is the organizationName, and *c* is the countryName.

---

**Note** - Here, *c* and *o* *must* match the values specified in Step 5 on page 22 and Step 6 on page 22 respectively.

---

8. Top level domain for Sun Directory Services?

Enter the top level domain for Sun Directory Services DITs (for example, COM).

9. What do you wish to use as your administrative root password?

Enter the server administrator, specified in Step 7 on page 22, password for binding to the directory services.

---

**Note** - Make a note of the information you entered in steps two through six if you want Sun Internet Administrator to contact this directory services server.

---

10. Do you wish to have the Web Gateway server automatically started and monitored?

The Web gateway allows you to browse entries in the directory through an HTML interface. Press Return for yes or enter **n** for no.

11. Do you wish to have the Sun Directory Services administration server automatically started and monitored?

Press Return for yes or enter **n** for no.

---

**Note** - Monitoring the daemons enables automatically restarting the daemons if they die. If you do not choose to start and monitor the daemons after installation, you can also manually start these daemons at another time by referring to “Starting the Directory Services” on page 35. For more information on how you should start the daemons, refer *Sun Directory Services 3.1 Administration Guide*.

---

Proceed to “Determining That Installation Was Successful” on page 30.

## ▼ Installing SKIP (SUNWicg)

Simple key-management for Internet Protocols (Sunscreen™ SKIP) is the recommended standard of key management for IP encryption. You cannot customize installation of this software. You *must* install Solaris for ISPs platform (SUNWisp) before installing SKIP.

1. **Change directory to** `components/SUNWicg/`.

2. **Enter** `./install`

The script requests information for installing the component.

3. Please enter the root of the distribution media:

Enter the path of the distribution media from which you are installing. Enter either the directory path where you unwrapped the electronic distribution or the directory path of the mounted CD-ROM based on the media you are installing from (for example, *DistributionMediaPath*/`components/SUNWicg/`).

Proceed to “Determining That Installation Was Successful” on page 30.

## ▼ Installing Sun Internet FTP Server (SUNWftp)

You cannot customize installation of the FTP server. You *must* install Solaris for ISPs platform (SUNWisp) and JDK 1.1.5 (SUNWjdk) before installing Sun™ Internet FTP Server™. After installation, to access the browser-based graphical user interface of this software, ensure that you register this Sun Internet FTP Server with a Sun Internet Administrator console on the network. To install:

1. **Change directory to** `components/SUNWftp/`.

2. **Enter** `./install`

The script requests information for installing the component.

3. Please enter the root of the distribution media:

Enter the path of the distribution media from which you are installing. Enter either the directory path where you unwrapped the electronic distribution or the directory path of the mounted CD-ROM based on the media you are installing from (for example, *DistributionMediaPath/components/SUNWftp/*).

Proceed to “Determining That Installation Was Successful” on page 30.

## ▼ Installing Sun Internet News Server (SUNWsns)

This is a highly-scalable multi threaded news server. You *must* install Solaris for ISPs platform (SUNWisp) and JDK 1.1.5 (SUNWjdk) before installing Sun™ Internet News Server™. After installation, to access the graphical user interface of this software, ensure that you register this Sun Internet News Server with a Sun Internet Administrator console on the network. To install:

1. **Change directory to** `components/SUNWsns/`.

Before installing the component, verify component dependencies by referring to Chapter 4 of the *Solaris for ISPs Administration Guide*.

2. **Enter** `./install`

The script will ask for a few configuration information for installing the component.

3. Please enter the root of the distribution media:

Enter the path of the distribution media from which you are installing. Enter either the directory path where you unwrapped the electronic distribution or the directory path of the mounted CD-ROM based on the media you are installing from (for example, *DistributionMediaPath/components/SUNWsns/*).

4. Select the desired News server configuration

Press Return for Reader and Feeder Services which is the default [c] option. Or, enter:

- a for Reader Service Only (Remote feed). Or,
- b for Feeder Service Only.

---

**Note** - These three choices allow you to specify the type of service you wish to provide from this news server.

---

5. Enter the UNIX user name of the News service administrator

Press Return and accept the default UNIX user name of the news service administrator responsible for this news server. The default uid is root. Sun Internet News Server can be accessed only by root.

6. Enter the Unix group name of the News service administrator

Press Return and accept the default UNIX group name of the news service administrator responsible for this news server. The default gid is sys.

Proceed to “Determining That Installation Was Successful” on page 30.

## ▼ Installing Sun WebServer (SUNWhttp)

This is used by some Solaris for ISPs components and can be used for standard Web service. You *must* install Solaris for ISPs platform (SUNWisp) and JDK 1.1.5 (SUNWjdk) before installing Sun™ WebServer™. To install:

1. **Change directory to** `components/SUNWhttp/`, **where** *componentid* **is the package name of the Solaris for ISPs component you want to install.**

2. **Enter** `./install`

The script will ask for a few configuration information for installing the component.

3. Please enter the root of the distribution media:

Enter the path of the distribution media from which you are installing. Enter either the directory path where you unwrapped the electronic distribution or the directory path of the mounted CD-ROM based on the media you are installing from (for example, *DistributionMediaPath/components/SUNWhttp/*).

4. Do you want SSL support?

This allows you to have secure communication with the Sun Internet Administrator via Secure Socket Layer (SSL). SSL supports Verisign certificates for protected, encrypted communications. Press Return for *yes* or enter **b** for *no*. If you select *no*, the SSL packages will not be installed.

5. Do you want Java(TM) Servlet support?

Using servlets rather than CGI scripts provides the cross-platform advantages of Java on the server side while improving processing speed. Java Servlet support requires installation of the JDK 1.1.5 component. Press Return for *yes* or enter **b** for *no*.

6. Do you want Apache configuration emulation so that Microsoft FrontPage Server Extensions may be installed?

This option allows your customers to use Microsoft FrontPage for authoring, administration, and dynamic content.

Press Return for *no* or enter **b** for *yes*

---

**Note** - The FrontPage Server Extensions are currently not available for x86.

---

7. Do you want this installation to create and populate a web server and site in /var/http/sws\_server?

Press Return for *yes* or enter **b** for *no*. If you select *yes*, a web server and a customizable web site are created.

8. Under what user name should a Web server daemon operate by default?

Specify the user name under which you want this Web server daemon to operate.

---

**Note** - For security reasons, do not run Sun WebServer as user *root*, or user *nobody*. We recommend creating a second user and executing the Sun WebServer daemon under that name.

---

Proceed to “Determining That Installation Was Successful” on page 30.

## ▼ Installing Sun Internet Administrator (SUNWixamc)

This provides secure central management for distributed Internet services. If you install Sun Internet FTP Server (SUNWftp) or Sun Internet News Server (SUNWsns), you *must* install this software to access their user interfaces. You *must* install Solaris for ISPs platform (SUNWisp), JDK 1.1.5 (SUNWjdk), and Sun WebServer (SUNWhttp) before installing Sun Internet Administrator.

The configuration information you enter here is stored in `/var/opt/SUNWixamc/awscnf/aws.conf`. To install:

1. **Change directory to `components/SUNWixamc/`, where *componentid* is the package name of the Solaris for ISPs component you want to install.**

2. Enter `./install`

The script will ask for a few configuration information for installing the component.

3. Please enter the root of the distribution media:

Enter the path of the distribution media from which you are installing. Enter either the directory path where you unwrapped the electronic distribution or the directory path of the mounted CD-ROM based on the media you are installing from (for example, *DistributionMediaPath/components/SUNWixamc/*).

4. Install the Solaris for ISPs manual pages?

This option allows you to install the on-line Solaris for ISPs man pages. Press Return for yes or enter **n** for no.

5. Enter the host name of the Sun(TM) Directory Services servers

Enter the host name of the Sun Directory Services server this Sun Internet Administrator will contact to make initial entries.

6. Enter Sun(TM) Directory Services administrator's DN (Eg, `cn=admin,o=sun,c=US`). This value must match what you specified for Sun Directory Services

Enter the distinguished name of the data store administrator you specified (in Step 7 on page 22) when installing Sun Directory Services. To specify, use the

format: **cn=admin,o=sun,c=US** where **cn** is the commonName, **o** is the organizationName, and **c** is the countryName.

7. Enter Sun Directory Services administrator's password.

Enter the password of the data store administrator specified in Step 6 on page 27.

8. Enter the Sun(TM) Directory Services top level DN (for example, **o=sun,c=US**). This value must match the Country and Organization name that were specified for Sun Directory Services.

Enter the top level distinguished name of the root domain you specified (in Step 5 on page 22 and Step 6 on page 22) when installing Sun Directory Services. To specify, use the format: **o=sun,c=US** where **o** is the organizationName and **c** is the countryName.

---

**Note** - The values you enter in steps two through five must match the values you entered at the time of installing the directory services this Sun Internet Administrator will contact to make initial entries.

---

9. Enter a user name for the administrator of Sun(TM) Internet Administrator

Enter the user login name for the administrator of the Sun Internet Administrator console.

10. Enter a password for the administrator of Sun(TM) Internet Administrator

Enter a password for the administrator of Sun Internet Administrator, specified in Step 9 on page 28.

---

**Note** - You will need the information you entered in steps six and seven to log into the Sun Internet Administrator console.

---

Proceed to "Determining That Installation Was Successful" on page 30.

## ▼ Installing Sun Internet Services Monitor (SUNWixmon)

This performance monitoring software allows you to set up special client machines that emulate a subscriber's experience with the services. You *must* install Solaris for ISPs platform (SUNWisp) and Sun WebServer (SUNWhttp) before installing Sun™ Internet Services Monitor™. To install:

◆ **Change directory to** `components/SUNWixmon/`.

◆ **Enter** `./install`

The script will ask for a few configuration information for installing the component.

◆ Please enter the root of the distribution media:

Enter the path of the distribution media from which you are installing. Enter either the directory path where you unwrapped the electronic distribution or the directory path of the mounted CD-ROM based on the media you are installing from (for example, *DistributionMediaPath/components/SUNWixmon/*).

◆ What port should the monitor use?

Press Return to accept the default port. The default port number Sun Internet Services Monitor uses is 2381.

---

**Note** - You must not change the port of the SUNWixmon Web server process after registering it with Sun Internet Administrator. Changing the port will invalidate information required by Sun Internet Administrator. If you must change the port, refer to Sun Internet Administrator on-line help.

---

Proceed to “Determining That Installation Was Successful” on page 30.

## ▼ Installing LDAP Client Library Packages (SUNWlldap)

You can install the LDAP (lightweight directory access protocol) client library on any machine on your network to enable access to LDAP libraries. After installation, install the LDAP manual page patch (106497-01 or 106498-01) to access the manual pages. To install:

1. **If you are installing using a CD-ROM, load the CD-ROM and log into the computer where you want to install the software. Or, log into the computer where you unwrapped the electronic distribution.**
2. **Give yourself root access. To get root access, enter:**  
    % su  
  
    **Password: *rootpassword***
3. **Change directory to the root of the media from which you are installing.**  
    Change to either the directory where you unwrapped the electronic distribution or the root directory of the mounted CD-ROM.
4. **Change directory to /components/SUNWisp/pkg.**
5. **Enter # tar -cvf SUNWlldap /tmp/SUNWlldap.tar**  
  
    This stores SUNWlldap.tar package in the /tmp directory. You must tar the file only if you are going to copy this file on to another machine.
6. **If you are installing from a CD-ROM, proceed to step 7. If you are installing from an electronic distribution, you must log out of the machine where you unwrapped the electronic distribution and log into the machine where you want to install the package. Give yourself root access and proceed to step 6.**
7. **Get SUNWlldap.tar and enter # tar -xvf SUNWlldap.tar to untar the file.**
8. **Enter # pkgadd -d . SUNWlldap**  
  
    The LDAP client library package is installed.

---

## Determining That Installation Was Successful

The packages that are installed for the component are displayed. To determine if the component has been successfully installed, wait for one of two messages:

```
Installation of <Componentid> was successful  
Or,
```

```
/var/opt/SUNWisp/hc/media/components/Componentid
done
```

---

**Note** - Here, *Componentid* is the primary package name of the component installed.

---

The primary package name (Componentid) that is displayed to indicate successful installation of:

- Solaris for ISPs platform is SUNWisp.
- JDK 1.1.5 is SUNWjdk.
- HotJava 1.1.4 is SUNWdthj.
- FlexLM licenser server is SUNWlicsw.
- Sun Directory Services is SUNWconn.
- SunScreen™ SKIP is SUNWicg.
- Sun Internet FTP Server is SUNWftp.
- Sun Internet News Server SUNWsns.
- Sun WebServer is SUNWhttp.
- Sun Internet Administrator is SUNWixamc.
- Sun Internet Services Monitor is SUNWixmon.

---

## Uninstalling Solaris for ISPs Components

This section discusses the steps to uninstall a Solaris for ISPs component from the command line. You can also uninstall these components from the browser using the host configuration software. The host configuration software allows you to uninstall multiple components at the same time. Refer “Uninstalling Solaris for ISPs” on page 11 to uninstall using the host configuration software.

### ▼ To Uninstall from the Command Line

#### 1. Change the directory to

`/var/opt/SUNWisp/hc/media/components/componentid` **where *componentid* is the primary package name of the Solaris for ISPs component you want to uninstall.**

Verify component dependencies and ensure that you do not uninstall components that other installed components depend upon.

---

**Note** - Do not uninstall a component that other installed components depend upon. The script will not remove the packages of the component you are uninstalling that are shared by other installed components.

---

## 2. Enter `./uninstall`

Wait until you get the message: Removal of `<Package>` was successful where `Package` is the package name of the component you are uninstalling. The command prompt `#` is displayed after successful removal of the component.

- The Solaris for ISPs platform packages are: `SUNWfixm`, `SUNWisp`, `SUNWixhws`, `SUNWlldap`, `SUNWixpl`, `SUNWixvh`, `SUNWixds`, `SUNWixamr`, `SUNWixdoc`, `SUNWisph`, `SUNWispm`.

---

**Note** - Uninstall all other Solaris for ISPs components before uninstalling `SUNWisp`.

---

- The JDK 1.1.5 package is `SUNWixinh`. The shared packages, `SUNWjvrt`, `SUNWjvdem`, `SUNWjvdev`, `SUNWjvjit`, `SUNWjvman`, are not removed if another component requires them.
- The HotJava 1.1.4 package, `SUNWdthj`, is not removed if another component requires it.
- The FlexLM licenser server packages are `SUNWlit`, `SUNWlicsw`
- Sun Directory Services packages are `SUNWsds`, `SUNWsdsc`, `SUNWixsds`. The shared packages, `SUNWski`, `SUNWskicw`, `SUNWskild`, `SUNWssld`, `SUNWskimu`, `SUNWskimc`, `SUNWskica`, `SUNWfns`, are not removed if another component requires them.
- The SunScreen SKIP packages are `SICGkdsup`, `SICGcsafe`, `SICGcdes`, `SICGc3des`, `SICGkisup`, `SICGkeymg`, `SICGes`, `SICGcrc4`, `SICGcrc2`, `SICGbdcdr`.
- Sun Internet FTP Server packages are `SUNWftpu`, `SUNWixftpr`. The shared packages, `SUNWixfta`, `SUNWixjnd`, `SUNWOirun`, `SUNWixtnm`, `SUNWftpm`, `SUNWixklg`, `SUNWixavm`, are not removed if another component requires them.
- The Sun Internet News Server packages are `SUNWsnsf`, `SUNWsnsr`, `SUNWsnsc`. The shared packages, `SUNWixsna`, `SUNWOirun`, `SUNWixtnm`, `SUNWsnsm`, `SUNWixklg`, `SUNWixavm`, are not removed if another component requires them.
- The Sun WebServer packages are: `SUNWhhttpc`, `SUNWhtdoc`, `SUNWhtman`. The shared packages, `SUNWhtadm`, `SUNWhhttp`, `SUNWski`, `SUNWskicw`, `SUNWskild`, `SUNWssld`, `SUNWskimu`, `SUNWskimc`, `SUNWskica`, `SUNWixavm`, `SUNWixklg`, `SUNWhtsvl`, are not removed if another component requires them.

- The Sun Internet Administrator packages are SUNWixamh, SUNWixamc. The shared packages, SUNWixfth, SUNWixsnh, SUNWixfta, SUNWixsna, SUNWixjnd, SUNW0irun, SUNWhrtman, SUNWsnsm, SUNWixmm, SUNWispm, SUNWixamm, SUNWftpm are not removed if another component requires them. The configuration information is backed up in `/var/opt/SUNWixamc/awconf.bak.0` and the servlet and access logs are backed up in `/var/opt/SUNWixamc/logs.bak.0`. The same numbers (for example, 0) are selected for the backup of the configuration and the log files. Every time the component is uninstalled, an incremental number is inserted starting with 0.
- The Sun Internet Services Monitor packages are SUNWixmon, SUNWixmh.



## Starting and Configuring the Services

---

After installing Solaris™ for ISPs™ components, you must:

- Configure Sun™ Directory Services to start the services daemon and any of the tool processes.
- Configure the FlexLM License Server to get the license for the Sun Directory Services entries.
- Configure Sun™ Internet Administrator to initialize the required entries in Sun Directory Services and to register and manage the services from Sun Internet Administrator.
- Configure HotJava™ to support the Solaris for ISPs software security requirements.

You can access some of the services directly from a browser. This chapter discusses in detail how to configure Sun Directory Services and Sun Internet Administrator, and how to access the services from Sun Internet Administrator and directly from a browser.

---

### Starting the Directory Services

If you chose `Execute (with reboot)` at the end of the installation process, the directory services should be up and running when the host system is finished rebooting. If you need to start the services by hand (for example, if you chose `no reboot` and performed other tasks before rebooting), start the services daemon and any of the tool processes you want to use. To start:

1. **Log in as root.**

2. **Change the directory to /etc/init.d.**
3. **Start the directory services (and the RADIUS server, if you have it configured), by entering the following command:**  

```
# ./dsserv start
```
4. **If you want to start the Sun Directory Services Web gateway server, enter the following command:**  

```
# ./dsweb start
```
5. **If you want to start the Sun Directory Services administration server, enter the following command:**  

```
# ./dsadm start
```

For information on why you should choose to start the gateway or administration servers, see the *Sun Directory Services 3.1 Administration Guide* and the *Sun Directory Services 3.1 User's Guide*.

---

## Starting the License Server

Sun Directory Services allows one thousand entries to be made in the directory services before requiring a license for more entries. The one thousand entry limit is sufficient to install Sun Directory Services and initialize the entries required by the Solaris for ISPs software. To initialize more entries, you need a license key. Please refer the license certificate for more information on obtaining a license key.

When you have the license key, log into the computer where the license server is installed and start the licensing tool.

### ▼ To Start the License Server

1. **Enter:**

```
# /etc/opt/licenses/lit
```

The License Installation Tool licenses configuration screen appears

2. **From the Select Product pull-down menu, select the Sun Directory Services *number of* entries for which you purchased the license key.**
3. **In the text field,**
  - a. License server: **Enter the name of the host where the license server is installed.**
  - b. Host ID: **Enter the hostid of the computer where the license server is installed.**
  - c. Rights To Use: **Enter 1**
  - d. Expiration Date: **Enter the expiry date given to you for the license key.**
  - e. Password: **Enter the license key given to you.**
4. **Click Done With License.**
5. **Click Exit - Install Licenses.**
6. Expiration date:  
If Sun Directory Services is not installed on the same machine with the license server, perform the following steps.
7. **Copy the configuration script from the license server machine to the machine where Sun Directory Services is installed.**  
The license server configuration script is located at:  
`/etc/opt/licenses/LIC_CONFIG_SCRIPT`
8. **Log into the Sun Directory Services machine and run the configuration script.**  
**To run, enter:**

```
# ./LIC_CONFIG_SCRIPT
```

You must run the script only after installing the license using the License Installation Tool.

---

# Starting Sun Internet Administrator

To manage Solaris for ISPs services through Sun Internet Administrator, you must register those services with Sun Internet Administrator. Optionally, you can create administrators for each managed service, or for groups of services.

---

**Note** - The administrator you specified during installation has global access to Sun Internet Administrator and to all services managed from it.

---

To configure Sun Internet Administrator to manage your services, first install and configure a Sun Directory Services host and all service hosts. See Chapter 3 of *Solaris for ISPs Administration Guide* for information on the design of a Solaris for ISPs system.

---

**Note** - Sun Internet Administrator requires a properly configured and running Sun Directory Services server in order to function. Be sure that the services are running before proceeding. Ensure that you reboot the system before attempting to access Sun Internet Administrator

---

## 1. Sun Internet Administrator makes initial entries in the directory services and requires those entries to be able to run.

- If Sun Directory Services was running when you installed Sun Internet Administrator, the entries have already been initialized.
- If you installed Sun Internet Administrator and Sun Directory Services together, the entries have already been initialized.
- If the directory services were not running, you must initialize the Sun Internet Administrator entries.

To initialize the entries, obtain root access and enter:

```
# /opt/SUNWixamc/bin/mcadsinit
```

```
-d DNofDSAdmin
```

```
-n ConsoleAdmin
```

where

- d ***DNofDSAdmin*** Is the distinguished name of the Sun Directory Services administrator you specified when installing the directory services (For example, `cn=admin,o=sun,c=US`).
- n ***ConsoleAdmin*** Is the name of the administrator for Sun Internet Administrator that you specified at the time of installation.

---

**Note** - The values you enter in these two fields must exactly match the values you entered when installing the software.

---

**2. You will be prompted for the:**

DA administrator password: Enter the password of the administrator of Sun Directory Services.

IA administrator password: Enter the password of the administrator of Sun Internet Administrator console.

---

**Note** - The passwords you enter here must exactly match the passwords you specified when installing the software.

---

The remainder of this procedure does not require root access. You can now access Sun Internet Administrator from a browser.

---

**Note** - For more information on `mcdsinit`, refer to the man page. To view a man page, enter `man -M /opt/SUNWixamc/man command`, where *command* is the command whose man page you want to view.

---

**3. Start one of the supported Web browsers (for example, HotJava 1.1.5) and access the URL: `http://<hostname>:50080/ispmc`.**

Where *<hostname>* is the name of the machine where you installed Sun Internet Administrator. If you configured the administration Web server to another port other than the default, 50080, enter that port number.

---

**Note** - To make accessing Sun Internet Administrator easier, you may want to make a bookmark of this URL.

---

**4. Log in to get global access to the product and all services this Sun Internet Administrator manages. To log in**

**a. Choose Register Services.**

- b. **Enter the administrator name and password you specified during installation of Sun Internet Administrator.**
- c. **Register the services and create additional administrators by referring to on line help.**

---

**Note** - From this step on, all information is also available in the Sun Internet Administrator on line help.

---

5. **For each service to be managed through Sun Internet Administrator:**
  - a. **Go to the Register Services screen by clicking the link in the table of contents pane.**
  - b. **Enter the name of the host computer where the service you want to register is installed and click on Register Host.**
  - c. **Select the desired services from the list, and click on Register Services Selected Above.**
6. **If you want to create additional administrators, go to the Manage Administrators screen by clicking the link in the table of contents pane. Follow the steps in the on-line help.**

Whenever you install additional Solaris for ISPs services, you can add them to the console by following these steps.

---

## Configuring HotJava

Sun Internet Administrator and Sun Internet Services Monitor both require the security settings in HotJava to allow applet and servlet functionality. Follow the procedures in this section to set security appropriately.

## ▼ Configuring HotJava for Sun Internet Administrator

The Solaris for ISPs remote administration applets require access to certain client system properties when they load. If your HotJava applet security settings are set to:

- High Security, the applets may not be able to load.
- Medium Security, you will be asked if the applet should be allowed to access to system properties when it loads.

You must configure the browser to Medium Security or Low Security. To configure:

1. **Start HotJava and go to the Edit menu.**
2. **Choose Preferences from the pull-down menu and select Applet Security from the cascade menu.**
3. **Select Low Security for signed applets and Medium Security for unsigned applets by clicking on the respective radio buttons.**
4. **Click on Apply.**

## ▼ Configuring HotJava to Support Sun Internet Services Monitor

Sun Internet Services Monitor works through Java Applets and requires certain security settings in HotJava for its functionality. You must configure the browser to support these requirements. To configure:

1. **Start HotJava and go to the Edit menu.**
2. **Choose Preferences from the pull-down menu and select Applet Security from the cascade menu.**
3. **Configure the system permissions. To configure, select System Permissions radio button and:**
  - a. **Select Advanced Security or click on Advanced to go to the Advanced Security Settings screen.**
  - b. **Click on Add Site and in the Add Web Site text field, enter the host name of Sun Internet Services Monitor server. Click on Add.**  
The host name is added to the box with a scrolling list.

- c. **Select the host, whose settings you wish to modify, and deselect Use default permissions for this site or certificate.**
  - d. **Click on the respective boxes to enable applets to:**
    - Open windows without warning banners.
    - Access properties, clipboard, and print jobs.
    - Launch local applications and warn before launching.
- 4. Configure network access by selecting the Network Access radio button and:**
- a. **Enter an asterisk (\*) in:**
    - Allow selection to listen on these ports text field.**
    - Allow connecting to these sites text field.**
    - Accept connections from these sites text field.**
  - b. **Click on the square boxes and disable all three warning options. Disable:**
    - Warn before allowing listen on other ports**
    - Warn before connecting to other sites**
    - Warn before accepting connection from other sites**
- 5. Click on Apply.**
- 6. Access Sun Internet Services Monitor user interface. To access, go to “Starting the Services” on page 42.**

---

## Starting the Services

Solaris for ISPs services are controlled by their individual user interfaces. Some services can be accessed only through Sun Internet Administrator. Some Solaris for ISPs services can be accessed directly from a browser, too.

### ▼ Accessing Components from Sun Internet Administrator

To access a component through the Sun Internet Administrator console:

1. **Go to the Sun Internet Administrator Manage Services screen and access the component's user interface by clicking the link.**
2. **Log into Sun Internet Administrator, either as the console administrator or as the administrator of the service to be started.**  
The component user interface is displayed.
3. **Follow the instructions in the component's on-line help to start the component.**

---

**Note** - Sun™ Internet News Server™ and Sun™ Internet FTP Server™ user interface can be accessed only from Sun Internet Administrator.

---

## ▼ Accessing Services Directly

Sun Internet Administrator, Sun Internet Services Monitor, Sun Directory Services, and Sun™ WebServer™ user interface can be accessed directly from a browser. To access a service directly:

1. **Start one of the supported Web browsers (for example, HotJava 1.0.2) and access the service URL.**

While specifying host name, specify the service host name and the port number used by that service.

- The Sun WebServer URL is: `http://hostname:2380/admin/admin.html`, where *hostname* is the host name of the Web server and 2380 is the default port number. You can configure basic information about how the server runs from this URL.
- The Sun Internet Services Monitor URL is:  
`http://hostname:2381/monitor/isp-monitor.html`, where *hostname* is the host name of the monitoring software and 2381 is the default port number. You can create clients and configure clients to monitor services from this URL.
- The Sun Internet Administrator URL is: `http://hostname:50080/ispmc`, where *hostname* is the host name of the administrator console and 50080 is the default port number. You can register service hosts, and manage administrators and services from this URL.
- The Sun Directory Services URL is: `http://hostname:1760/`, where *hostname* is the host name of the directory services and 1760 is the default port number. You can browse the directory from this URL using the Web gateway.

2. **Follow the instructions in the service's on-line help to start the service.**