Solaris ISP Server 2.0 Installation Guide

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Preface

Using this guide, you can install, upgrade, configure, and uninstall Solaris ISP Server™ 2.0 platform extensions and services.

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.

Before You Read This Book

Before reading this book, you must have read “Introducing Solaris ISP Server” in *Solaris ISP Server 2.0 Administration Guide.*

How This Book is Organized

The chapters in this book discuss steps to install, upgrade, configure, and uninstall Solaris ISP Server 2.0 platform extensions and services.

Chapter 1 presents an overview (in flowcharts) of the installation process including:

- Preinstallation tasks
- Postinstallation tasks

Chapter 2 discusses:

- Sample network configurations.
- Changes to Solaris services and Solaris ISP Server `admin` file
- Creating user-defined scripts

Chapter 3 discusses:

- Operating system requirements
- Hardware requirements
- Component dependencies

Chapter 4 discusses the steps for:

- Installing Solaris ISP Server 2.0 software from the browser
- Installing Solaris ISP Server 2.0 software from the command line

Chapter 5 discusses the steps for:

- Upgrading to or reinstalling Solaris ISP Server 2.0 software from the browser
- Upgrading to or reinstalling Solaris ISP Server 2.0 software from the command line

Chapter 6 discusses the steps for:

- Uninstalling Solaris ISP Server 2.0 software from the browser
- Uninstalling Solaris ISP Server 2.0 software from the command line

Chapter 7 discusses steps for:

- Integrating Sun™ Internet Mail Server with Solaris ISP Server
- Updating Solaris ISP Server Directory

Chapter 8 discusses steps for:

- Starting the license server to get the licenses for making entries in Sun Directory Services

- Configuring HotJava™ to support the applet security setting requirements of the components
- Starting Sun™ Internet Administrator™ to initialize the entries in Sun Directory Services and to register to access and manage the services
- Starting the services from Sun Internet Administrator or directly from a browser

Chapter 9 discusses the error messages that you may receive while:

- Installing or upgrading to Solaris ISP Server 2.0 software
- Uninstalling Solaris ISP Server 2.0 software

Solaris ISP Server Related Documentation

Documentation related to Solaris ISP Server includes printed manuals, AnswerBooks, PostScript, PDF, and man pages. Each is listed below.

Manuals

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

- *Solaris ISP Server 2.0 Installation Guide*
- *Solaris ISP Server 2.0 Administration Guide*
- *Solaris ISP Server 2.0 Reference Guide*

AnswerBook

These documents are provided as AnswerBook on the CD:

- The *Solaris ISP Server 2.0 Collection* includes:
  - The *Solaris ISP Server 2.0 Administration Guide*
  - The *Solaris ISP Server 2.0 Installation Guide*
  - The *Solaris ISP Server 2.0 Reference Guide*
- *Sun Directory Services 3.1 Administration Guide*

- *Sun Directory Services 3.1 User's Guide*
- *SunScreen SKIP User's Guide, Release 1.1*

PostScript and PDF Files

These documents are provided as PostScript™ and PDF on the CD:

- The *Solaris ISP Server 2.0 Administration Guide*
- The *Solaris ISP Server 2.0 Installation Guide*
- The *Solaris ISP Server 2.0 Reference 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 ISP Server software man pages are listed below:

- The host configuration and LDAP access API man pages are located in `/opt/SUNWisp/man`.
- The JDK™ 1.1.6 man pages are located in `/usr/share/man`.
- The FLEXlm 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 1.1.1 man pages are located in `/opt/SUNWicg/man`.
- The Sun™ Internet FTP Server™ man pages are located in `/opt/SUNWixfta/1.1/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 man pages for the Network Cache Accelerator are located in `/usr/share/man`
- The Sun Internet Administrator man pages are located in `/opt/SUNWixamc/man` and `/opt/SUNWisp/man`.

Online Help

Application-specific information is provided in the form of online help for easy access while working with the software. Each software component has its own help set, accessible from the graphical user interface.

The README *File*

The Solaris ISP Server `README.html` 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.

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*

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 `.login` file. Use `ls –a` to list all files. `machine_name% you have mail.`
`AaBbCc123`	What you type, contrasted with on-screen computer output.	`machine_name%` **`su`** `Password:`

TABLE P–1 Typographic Conventions *(continued)*

Typeface or Symbol	Meaning	Example
AaBbCc123	Placeholder to replace with a real name or value.	To delete a file, type **rm** *filename.*
AaBbCc123	Book titles, new words, or terms, or words to be emphasized.	Read Chapter 6 in *User's Guide.* These are called *class* options. You must be *root* 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	`#`

CHAPTER 1

How to Plan Your Installation

Welcome to Solaris ISP Server™ 2.0 software. For the installation of Solaris ISP Server, careful planning is required. This chapter presents a high-level overview of the various steps involved in installing or upgrading to Solaris ISP Server 2.0 software.

The Installation Process

The installation process consists of planning and preparing the machines on the network, installing the desired components, and accessing the component user interfaces.

Installation Process Overview

You *must* perform the steps discussed here. This section examines the steps in the installation process as illustrated in Figure 1–1.

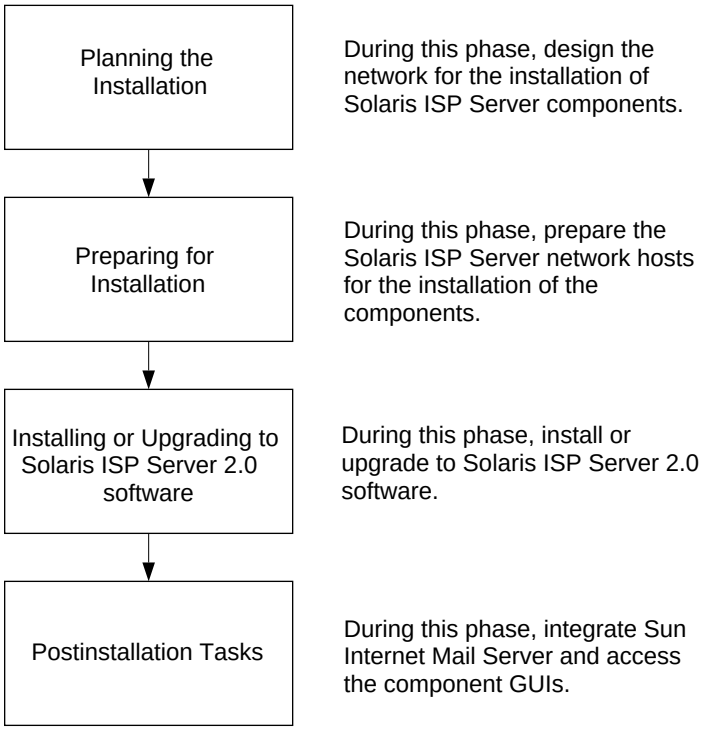

Figure 1–1 Installation Process Overview

- *Step 1*: During this phase of the process, you must see *Solaris ISP Server 2.0 Administration Guide*, Chapter 2, and `README.html` to plan the installation of Solaris ISP Server.

  The goal of this step is to:

  - Understand the features of Solaris ISP Server components as discussed in "Introducing Solaris ISP Server" in *Solaris ISP Server 2.0 Administration Guide*.
  - Design network host setup and designate role for Solaris ISP Server network hosts. See "Install Scenario" on page 11.
  - Check the `README` for late breaking news.

- *Step 2*: During this phase of the process, you must see Chapter 3 to prepare the network hosts.

  The goal of this step is to ensure that your network hosts meet:

  - Specified "Patches to Install" on page 20.
  - Specified "Hardware Requirements" on page 20.

Note - Repeat this step to prepare all the Solaris ISP Server software hosts on the network.

- *Step 3*: During this phase of the process, you must see either:

  - Chapter 4 to install Solaris ISP Server 2.0 software. Or,
  - Chapter 5 to upgrade to Solaris ISP Server 2.0 software.

  The goal of this step is to ensure

  - Successful installation of or upgrade to Solaris ISP Server platform extensions.
  - Successful installation of or upgrade to Solaris ISP Server services.

- *Step 4*: During this phase of the process, you must see Chapter 7 and Chapter 8 to perform the postinstallation tasks.

  The goal of this step is to:

  - Integrate, if required, Sun™ Internet Mail Server with Solaris ISP Server.
  - See "Configuring HotJava" on page 95 and configure HotJava™ browser to support applet security requirements for the Solaris ISP Server components.
  - Access the services through Sun Internet Administrator or directly from a browser and start the services.

Planning the Installation

You *must* perform the steps discussed here. This section examines the steps in the planning phase of the installation process as illustrated in Figure 1–2.

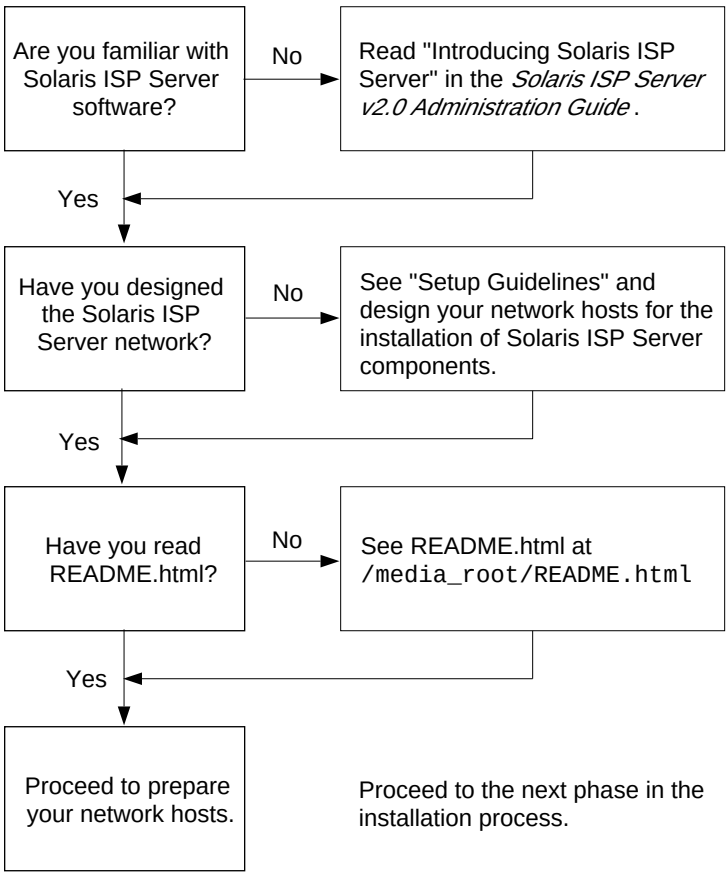

Figure 1–2 Planning the Installation

- *Step 1*: Read “Introducing Solaris ISP Server” in *Solaris ISP Server 2.0 Administration Guide*.

  The goal of this step is to understand:

  - The features of Solaris ISP Server platform extensions and services.
  - How Solaris ISP Server installs.

- *Step 2*: See Chapter 2 to design the network.

  The goal of this step is to design Solaris ISP Server network using the:

  - Sample network configuration discussed in the “Install Scenario” on page 11.
  - Understand Solaris ISP Server software installation features such as “Solaris ISP Server `admin` File” on page 16 and “Changes to Solaris” on page 13.

- *Step 3*: Check the `README`, at *media_root*`/README.html`, for any late-breaking corrections to this documentation.

- *Step 4*: Proceed to prepare for the installation of Solaris ISP Server components after designing the network. See Figure 1–3 for more information.

Preparing for Installation

You *must* perform the steps discussed here. This section examines the steps in the preparing phase of the installation process as illustrated in Figure 1–3.

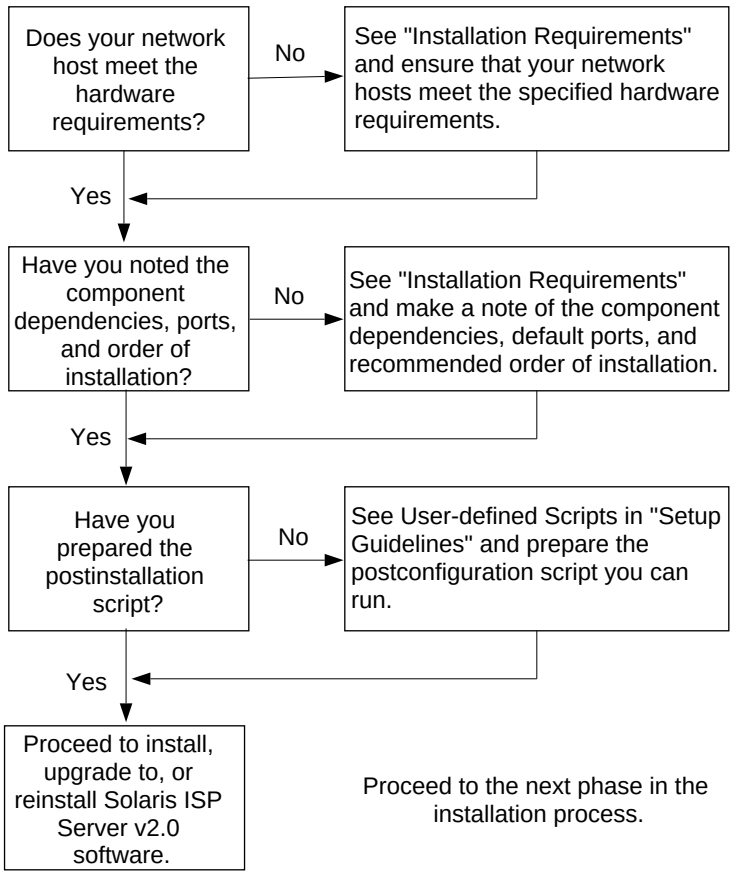

Figure 1–3 Preparing for Installation

Note - You *must* repeat these steps to prepare all the hosts on the network to install Solaris ISP Server platform extensions and services.

- *Step 1*: See Chapter 3 and verify prerequisites for installing Solaris ISP Server platform extensions and services.

The goal of this step is to ensure that your Solaris ISP Server network hosts meet:

- Specified CPU, disk space, RAM, and swap requirements as discussed in “Hardware Requirements” on page 20.
- Specified operating system requirements as discussed in “Patches to Install” on page 20.

- *Step 2*: Verify Solaris ISP Server platform extensions and services dependencies (see “Solaris ISP Server Components” on page 21)

  The goal of this step is to ensure that, for successful installation and functioning of Solaris ISP Server software,

  - All specified bundled and independent package dependencies have been noted.
  - All component default ports are available for installing the components.

- *Step 3*: Write a postinstallation script to be executed after installation of Solaris ISP Server software. This is optional and if you do not wish to perform any tasks after installation, proceed to install Solaris ISP Server 2.0 software. For guidelines to write the script, see “Creating User-defined Scripts” on page 17.

  The goal of this step is to :

  - Write a postinstallation script.
  - Supply a path to the script.

- *Step 4*: Proceed to install or upgrade to Solaris ISP Server 2.0 software. See Figure 1–4 for more information.

Installing Solaris ISP Server

You *must* perform the steps discussed here if this is the first instance of a Solaris ISP Server software installation on the machine. This section examines the steps in the installation phase of the process as illustrated in Figure 1–4.

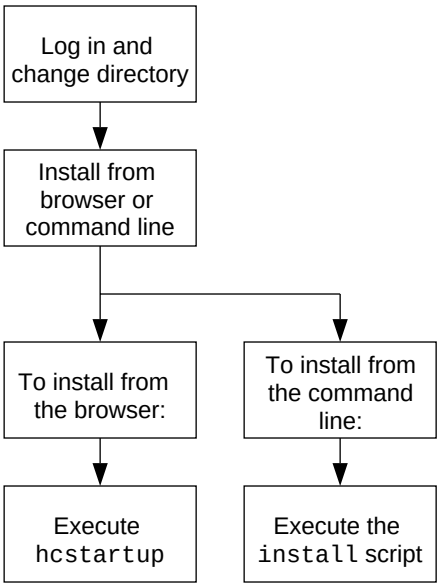

Figure 1–4 Installing Solaris ISP Server

- *Step 1*: See Chapter 4 and follow the steps in "Preinstallation Tasks" on page 29.

  The goal of this step is to:

  - Log into the computer where you want to install Solaris ISP Server components.
  - Change directory to the root of the installation media.

- *Step 2*: Select method of installing. You can install from a browser or from the command line.

  The goal of this step is to help you identify the best method of installing Solaris ISP Server components. If you select to install from:

  - A browser, see "Installing From the Browser" on page 31.
  - The command line, see "Installing from the Command Line" on page 37.

- *Step 3*: Proceed to install the components from the browser by referring to the "To Install the Components" on page 33. Or, see "To Install Solaris ISP Server 2.0 Software" on page 37 to install from the command line.

  The goal of this step is to:

  - Select components for installing, change Solaris service settings, specify a postinstallation script (optional), save the install scenario (optional), and install from the browser.
  - Execute the component `install` script from the command line.

Upgrading to Solaris ISP Server 2.0 Software

You *must* perform the steps discussed here if you are upgrading to Solaris ISP Server 2.0 software. This section examines the steps to upgrade to Solaris ISP Server 2.0 software as illustrated in Figure 1–5.

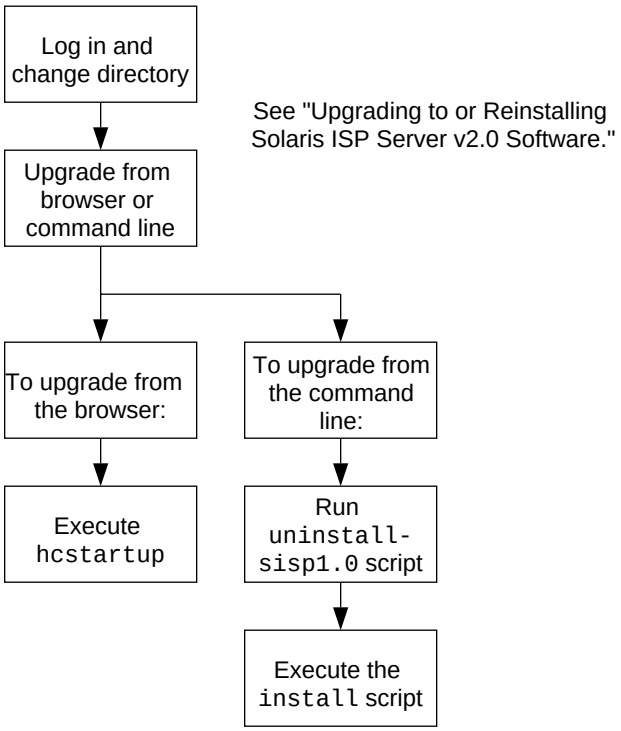

Figure 1–5 Upgrading to Solaris ISP Server 2.0

- *Step 1*: See Chapter 5 and follow the “Preinstallation Tasks” on page 52.

  The goal of this step is to:

  - Log into the computer running Solaris for ISPs 1.0 components to upgrade to 2.0.
  - Change directory to the root of the installation media.

- *Step 2*: Select method of upgrading. You can upgrade from a browser or from the command line.

  The goal of this step is to assist you in upgrading to Solaris ISP Server 2.0 software. If you select to upgrade from:

  - A browser, see “Upgrading From a Browser” on page 53.
  - The command line, see “Upgrading From the Command Line” on page 59.

- *Step 3*: To install from the browser, execute `hcstartup` and start the host configuration tool (see “To Start the Host Configuration GUI” on page 53).

  To install from the command line, execute `uninstall-sisp1.0` and the component `install` script.

  The goal of this step is to upgrade to 2.0 by:

  - Reaping the maximum benefits of upgrading from a browser. Or,
  - First uninstalling 1.0 components (and save the data) and then installing the 2.0 components from the command line.

Postinstallation Tasks

You *must* perform the steps discussed here. This section examines the steps to integrate Sun™ Internet Mail Server with Solaris ISP Server 2.0 software and access the installed components as illustrated in Figure 1–6.

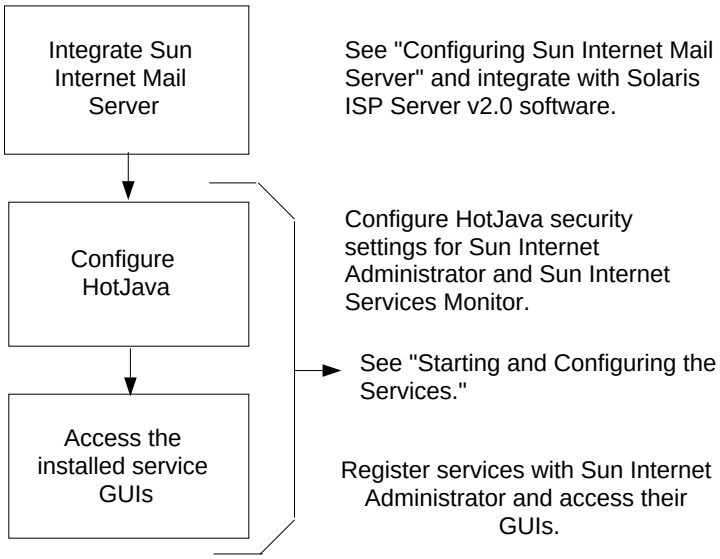

Figure 1–6 Postinstallation Tasks

- *Step 1*: Integrate Sun Internet Mail Server.
- *Step 2*: Configure HotJava security settings to enable applets and servlets.
- *Step 3*: Register services with Sun Internet Administrator and manage the services.

CHAPTER 2

Setup Guidelines

This chapter discusses the guidelines for configuring your network host for the installation of Solaris ISP Server software. This configuration information is essential for successful installation. Please read carefully.

Install Scenario

You *must* design your network before installing Solaris ISP Server. This section discusses two examples of a Solaris ISP Server network hosts setup. Use the network hosts setup example that most closely suits your environment.

Sample Network Configurations

This section describes a sample base and expanded network setup, and the requirements and recommendations for the hardware configuration of the setups.

Note - We do not assume the existence of a firewall in our example network configurations. If you are using an Internet firewall product to control network traffic to or from any Solaris ISP Server software host, you should examine the security policy controlling the host to make sure the relevant types of communication are allowed. This document does *not* offer recommendations related to Internet firewalls.

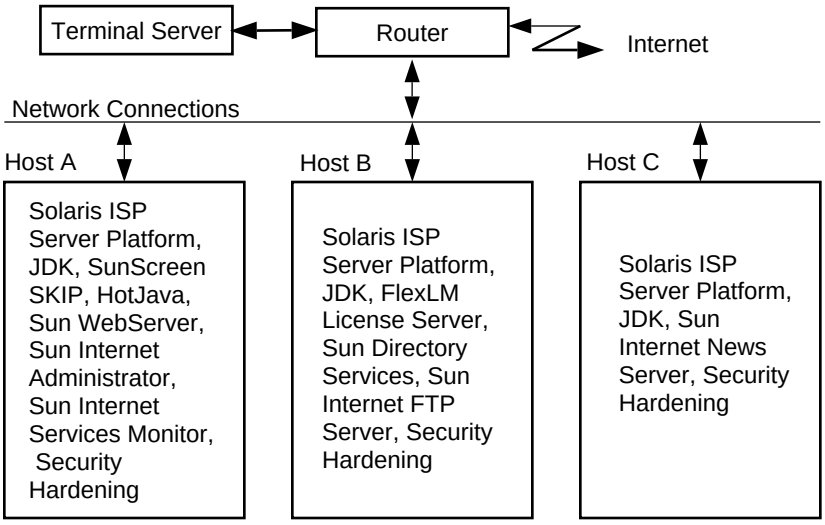

Figure 2–1 Sample Base Setup

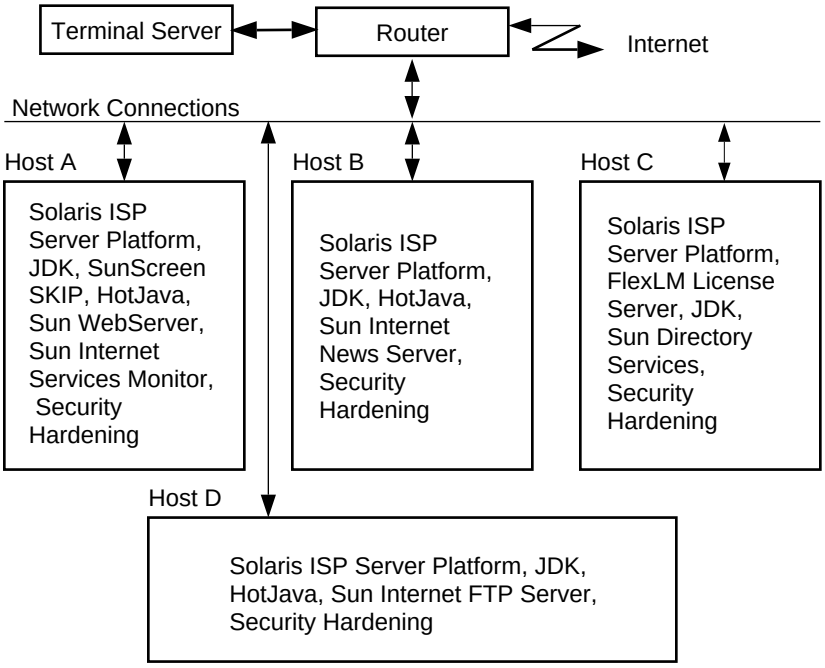

Figure 2–2 Sample Expanded Setup

To setup a Solaris ISP Server network, you require high-end workstations and primary and secondary DNS servers. You need not install Solaris ISP Server extensions and services on a host acting as a DNS server. Most extensions and services only require the ability to perform name lookups regularly. The hosts *must*

be on a network connected to the Internet and you can use any server on the network to act as a client host.

While preparing a host for the installation of Solaris ISP Server software, we recommend you reserve:

- 2 MB disk space in `/`.
- 69 MB disk space in `/opt`.
- 51 MB disk space in `/usr`.
- 33 MB disk space in `/var`.

Changes to Solaris

This section discusses the reconfigurable changes that may be made to Solaris services during host configuration. The installation of Solaris ISP Server platform extensions and services with their default configuration will override the default service behavior on the hosts where they are installed. This procedure creates a more secure server by disabling Solaris network utilities that are not essential to the Solaris ISP Server software installed on the system.

Note - You *must* review and may modify, if necessary, the default settings during host configuration.

If you accept the default installation setup, these Solaris services will be disabled, unless noted otherwise. Disabling of these services is not required, but we recommend disabling these services to avoid potential security holes and to conserve resources. To change the value of these services, `inetd.conf` will be modified, unless stated otherwise.

Closing Potential Security Holes

We recommend disabling of the following services to ensure protection for passwords and to restrict access to hosts for unauthorized individuals.

Note - If you accept the default setting, you will no longer be able to access the host with these disabled “r” commands.

- `rexecd`: Disable this service to discontinue support for remote command execution via the `rexec(3N)` function, which passes passwords in the clear.

- `rlogind`: Disable this service to ensure security for passwords because it relies on `.rhosts` and `hosts.equiv` for password-less authentication during remote logging.
- `rshd`: Disable this service to protect password because it relies on `.rhosts` and `hosts.equiv` for password-less authentication during remote command execution.

Note - If you accept the default setting, the following services will be enabled. You *must* review and may modify the setting.

- `telnetd`: If you accept the default installation setting, this service is enabled to support remote login mechanisms.
- `ftpd`: If you accept the default installation setting, this service is enabled to provide support for file transfer to and from remote network sites in the least insecure manner. This service will be disabled if you select Sun Internet FTP Server for installation.

Note - If you require security for telnet and FTP services, set up your network such that file transfer requests are made within the network.

We recommend disabling the following services to protect information from unauthorized users. Disabling these services will enhance system security and will restrict access to system information by preventing host responses to these network requests.

- `fingerd`: Disable this service to safeguard information from a network-based finger request.
- `netstat`: Disable this service to ensure that the contents of the various network-related data structures are not exposed by remote invocation of `netstat`.
- `rstatd`: Disable this service to prevent access to system statistics.
- `rusersd`: Disable this service to protect information about logged-in users.
- `systat`: Disable this service to discontinue support for remotely running `ps` on the host.
- `routing`: Disable this service to ensure that the host is not operated as a router. If disabled, the file `/etc/notrouter` is created.
- `sendmail`: Disable this service to protect against denial of service attacks and to disable support for receiving mail. However, the system checks for queues and pushes outgoing mails. `S88sendmail` will be modified.
- `sprayd`: Disable this service to discontinue support to test the network and record packages sent by spray.

Conserving Resources

We recommend disabling of the following CDE and OpenWindows services unless they are required in your environment. Disabling these services will enhance system performance.

- `cmsd`: Disable this service as it is required only if CDE calendars are located on the host.
- `dtspcd`: Disable this service to discontinue support for CDE sessions.
- `kcms_server`: Disable this service to discontinue support for remote access to OpenWindows KCMS profiles.
- `ttdbserverd`: Disable this service to discontinue support for Tooltalk database server required for proper CDE operation.

We recommend disabling the following network (`inetd`) services unless required in your environment. Disabling these services will free resources and enhance system performance. Modify the default configuration if you require any network utilities listed below.

- `chargen`: Disable this service to discontinue support to test `inetd` and generate characters.
- `discard`: Disable this service to discontinue discarding all input from testing `inetd`.
- `echo`: Disable this service to discontinue support to echo back all input from testing `inetd`.
- `fs.auto`: Disable this service to disable the font server.

Note - If you accept the default setting, the following services are enabled. You must review and may modify the setting.

- `time`: If you accept the default installation setting, this service is enabled. It returns machine-readable time.
- `cachefsd`: If you accept the default installation setting, this service is enabled. This is the `cacheFS` daemon.

We recommend disabling of the following services unless they are essential for your environment. Disabling these services will enhance system performance. Please modify the default configuration if you require any services listed below.

- `automountd`: Disable this service as this supports automounting only and not normal NFS mounts. `S74autofs` will be modified.
- `comsat`: Disable this service to discontinue `biff(1)` notification of new mail on the host.
- `daytime`: Disable this service to discontinue support to return the time of day remotely over the network.
- `rquotad`: Disable this service to discontinue support for quotas on export NFS file systems.

- `sadmind`: Disable this service to discontinue support for performing distributed system administration operations using Solstice AdminSuite.
- `talkd`: Disable this service to discontinue support for running the interactive talk program.
- `tnamed`: Disable this service to discontinue support for DARPA name server protocol.
- `lpd`: Disable this service to ensure that the host is not operated as a BSD print server. This does not disable the system V print server.
- `uucpd`: Disable this service to discontinue support for remote file transfer and remote command execution using the UUCP protocol.
- `walld`: Disable this service to discontinue support for sending messages by `wall` over the network.
- `Xaserver`: Disable this service to discontinue support for X-based audio over the network.

Note - You can also refer to the on line help during host configuration for help in enabling or disabling the Solaris services.

Solaris ISP Server `admin` File

Solaris ISP Server uses an administration file that overrides your system default parameters. You must accept this administration file to install Solaris ISP Server software. If you are installing Solaris ISP Server 2.0 software:

- Using the host configuration software, you have the option of specifying whether or not you wish to accept Solaris ISP Server `admin` file before proceeding with the installation.
- From the command line, this `admin` file will override your system default `admin` file.

Please review the parameters discussed in this section before installing Solaris ISP Server software. See `admin(4)` man page in *man Pages(4): File Formats* for more information.

TABLE 2–1 Solaris ISP Server `admin` File

Parameters	Default	Will use
conflict	ask	nocheck
instance	unique	overwrite
setuid	ask	nocheck

TABLE 2–1 Solaris ISP Server `admin` File *(continued)*

Parameters	Default	Will use
mail	(none)	(your current setting)
space	ask	quit
runlevel	ask	nocheck
idepend	ask	quit
basedir	default	default
action	ask	nocheck
rdepend	ask	quit
partial	ask	quit

Creating User-defined Scripts

This section discusses certain installation and configuration updates you may provide for executing after installing Solaris ISP Server software. These parameters can be written as a shell script. For example, you can write a command similar to: `echo "`*foo*`" >> /etc/ftpusers`

The path to your script can be registered while configuring the host (`Post-Configuration Command` screen) for installation of Solaris ISP Server. Or, you may specify a sequence of commands separated by a semicolon. Your postconfiguration command will be executed during a batch install.

Note - Creating this script is optional.

Some postinstallation system setup examples that you may address in your script to be executed after installation are illustrated in the following. For example:

- Write a program to verify and confirm changes to system setup.
- Write a program to notify or print disk space availability after installation.
- Write a program to reconfigure notification messages from `syslog` for failed authorization entries. See “Introducing Solaris ISP Server” in *Solaris ISP Server 2.0 Administration Guide.*
- Write a program to set interval values for the host configuration log file management daemon (`hclfmd`). See `hclfmd(4m)` man page for more information.
- Write a program to configure other independent software.

CHAPTER 3

Installation Requirements

This chapter discusses the preinstallation requirements for Solaris ISP Server™ 2.0 software. Please read carefully and ensure that your network hosts meet all prerequisites specified. The various sections in this chapter will discuss:

- The operating system requirements such as the:
  - Required version of Solaris
  - Patches to install
- The hardware requirements for:
  - Solaris ISP Server platform extensions
  - Solaris ISP Server services
- The Solaris ISP Server component:
  - Dependencies on bundled and independent packages
  - Order of installation
  - Default ports
  - Packages

Operating System Requirements

This section discusses the operating system requirements such as the version of Solaris required for the installation and functioning of Solaris ISP Server platform extensions and services, and the operating system patches that you must install.

Version of Solaris

The Solaris version required for the successful installation and functioning of Solaris ISP Server platform extensions and services is *Solaris 2.6* or *Solaris 7*.

Patches to Install

This section discusses the Solaris 2.6 patches required for the effective functioning of Solaris ISP Server platform extensions and services. You have the option of specifying whether or not you want to install these patches at the time of installing Solaris ISP Server Platform software. See `README.html` for more information.

TABLE 3–1 Required Operating System Patches

Patch description	SPARC Patch #	x86 Patch #
SunOS 5.6: kernel update patch	105181-09	105182-09
Motif 1.2.7 Runtime library patch [1]	105284-16	105280-16
Manual page patch [2]	105390-02	106061-02
Linker patch	105490-05	105491-05
SunOS 5.6: libbsm patch	105621-08	105662-08
SunOS 5.6: /usr/bin/login patch	105665-03	105666-03
SGML patch [2]	106123-02	106124-02
`/usr/lib/libpam.so.1` patch	106257-04	106258-04

1. This patch enhances the Motif window manager to provide compatibility with JDK 1.1.6.
2. You will require these patches to view Solaris ISP Server man pages.

Hardware Requirements

This section discusses the CPU, disk space, RAM, and swap space required for the installation of Solaris ISP Server 2.0 components. See also “Install Scenario” on page 11 for information on disk partitioning.

TABLE 3–2 Hardware Requirements for Platform Extensions

Solaris ISP Server Platform Extensions	CPU	Disk Space	RAM	Swap Space
	Recommended	Minimum	Recommended	Recommended
Solaris ISP Server [1]	High-end dual processor system	4 GB	256 MB	1 GB
Solaris ISP Server Platform [2]	High-end workstation	3 MB	NA	NA
Sun Internet Administrator		1 MB	64 MB	NA
Sun Internet Services Monitor		5 MB	64 MB	NA

1. The requirements specified here are for an installation of all the Solaris ISP Server components on a single machine.
2. Since this component *must* be installed on every machine running a Solaris ISP Server component, ensure that these requirements are met by every Solaris ISP Server machine on the network.

TABLE 3–3 Hardware Requirements for Services

Solaris ISP Server Services	CPU	Disk Space	RAM
	Recommended	Minimum	Minimum
Sun Internet FTP Server	High-end workstation	23.1 MB	64 MB
Sun Internet News Server		2-20 GB [1]	64 MB
Sun WebServer		4MB + documents and log files	64 MB

1. This specification expands as news data base expands.

Solaris ISP Server Components

This section discusses the component:

- Dependencies on bundled and independent packages
- Order of installation
- Default ports
- Primary and secondary packages

Dependencies

TABLE 3–4 Solaris ISP Server Component Dependencies

Required and recommended Packages	For Solaris ISP Server extensions and services	Where to find
JDK/JRE 1.1.6	All Solaris ISP Server components *require* this package.	Bundled
SSL	Sun WebServer, Sun Internet Administrator, Sun Internet FTP Server, Sun Internet News Server	Bundled
SKIP 1.1.1	Sun Internet Administrator[1]	Bundled
JavaIDL	Sun Internet FTP Server, Sun Internet News Server	Bundled

1. SKIP is recommended on the server side for this component.

Order Of Installation

The Solaris ISP Server components, if installed using a browser, are installed in the order discussed in this section. If you are installing from the command line, install the components in the same order as recommended here.

Note - If you are upgrading to Solaris ISP Server 2.0 software, we recommend upgrading the Sun Internet Administrator host before upgrading other Solaris ISP Server software hosts in the network.

TABLE 3–5 Recommended Order of Installation

Order of Installation	Solaris ISP Server Components	Component Requirements
1	Solaris ISP Server Platform software	
2	JDK 1.1.6	Requires Solaris ISP Server Platform
3	HotJava 1.1.4[1]	Requires Solaris ISP Server Platform

TABLE 3–5 Recommended Order of Installation *(continued)*

Order of Installation	Solaris ISP Server Components	Component Requirements
4	FlexLM License Server for Solaris ISP Server	Requires Solaris ISP Server Platform
5	Sun Directory Services	Requires Solaris ISP Server Platform and JDK
6	SKIP 1.1.1[2]	Requires Solaris ISP Server Platform
7	Sun Internet FTP Server	Requires Solaris ISP Server Platform and JDK
8	Sun Internet News Server	Requires Solaris ISP Server Platform and JDK
9	Sun WebServer	Requires Solaris ISP Server Platform and JDK
10	Sun Internet Administrator	Requires Solaris ISP Server Platform, JDK, and Sun WebServer
11	Sun Internet Services Monitor	Requires Solaris ISP Server Platform, Sun WebServer and JDK.
12	Security Hardening	Requires Solaris ISP Server Platform

1. You will require this browser to access Solaris ISP Server components administration GUI.
2. SKIP must be installed on the Sun Internet Administrator host and the service host(s) to secure all communications betweem them.

Default Ports

Solaris ISP Server uses the following ports:

- 8000 is the default port for the temporary Web server used for the installation by the host configuration software.
- 50080 is the default port for the administration web server used by Sun™ Internet Administrator™.
- 2380 is the default port for Sun™ WebServer™ administration server.
- 2381 is the default port for Sun™ Internet Services Monitor™.

Primary and Shared Packages

By default, Solaris ISP Server software packages are installed in `/var/opt/`*ComponentID* where *ComponentID* is the unique component identifier (for example, `SUNWisp` is the component identifier for Solaris ISP Server Platform software). The unique component identifier of the component is specified within parenthesis.

TABLE 3–6 Solaris ISP Server Platform (`SUNWisp`) Packages

Package Name	Package Description
`SUNWisp`	Solaris ISP Server host configuration
`SUNWixamr`	Solaris ISP Server management console host package
`SUNWixds`	Solaris ISP Server directory information APIs, header files, and Java classes
`SUNWixhws`	Host configuration Web server
`SUNWixpl`	PAM-LDAP module for ISP authentication
`SUNWixvh`	Solaris ISP Server libvh.so and headers
`SUNWlldap`	LDAP libraries
`SUNWixdoc`	Solaris ISP Server Administration Guide in HTML
`SUNWisph`	Online help files for host configuration
`SUNWispm`	Manual pages for host configuration
`SUNWnca`	Network Cache Accelerator
`SUNWncman`	Manual pages for Network Cache Accelerator
`SUNWix18n`	Java classes to support Solaris ISP Server internationalization

TABLE 3–7 Java Developer Kit (`SUNWjdk`) Packages

Package Name	Package Description
`SUNWjvdem`	JavaVM demo programs
`SUNWjvdev`	JavaVM developer's packages. It includes javac, javah, and javap
`SUNWjvjit`	Java JIT compiler
`SUNWjvman`	JavaVM man pages
`SUNWjvrt`	JavaVM run time environment
`SUNWixinh`	JavaVM online help

TABLE 3–8 HotJava (SUNWdthj) Packages

Package Name	Package Description
SUNWdthj	HotJava browser for Solaris

TABLE 3–9 FlexLM Licenser Server (SUNWlicsw) Packages

Package Name	Package Description
SUNWlit	STE License installation tool and scripts
SUNWlicsw	FlexLM License System and script

TABLE 3–10 Sun Directory Services (SUNWconn) Packages

Package Name	Package Description
SUNWixsds	Solaris ISP Server Sun Directory Services
SUNWsds	Manual pages and executables for Sun Directory Services
SUNWsdsc	Manual pages and executables for Sun Directory Services client tools

TABLE 3–11 SunScreen SKIP (SUNWicg) Packages

Package Name	Package Description
SICGbdcdr	SKIP primary component package
SICGc3des	SKIP primary component package
SICGcdes	SKIP primary component package
SICGcrc2	SKIP primary component package
SICGcrc4	SKIP primary component package
SICGcsafe	SKIP primary component package
SICGes	SKIP primary component package
SICGkdsup	SKIP primary component package
SICGkeymg	SKIP primary component package
SICGkisup	SKIP primary component package

TABLE 3–12 Sun Internet FTP Server (SUNWftp) Packages

Package Name	Package Description
SUNWixftpr	File Transfer Protocol daemon and utilities
SUNWftpu	File Transfer Protocol daemon and utilities
SUNWixfta	Sun Internet FTP Server administration modules
SUNWftpm	Sun Internet FTP Server manual pages (This package is shared with Sun Internet Administrator)
SUNWfth	Sun Internet FTP Server online help (This package is shared with Sun Internet Administrator)

TABLE 3–13 Sun Internet News Server (SUNWsns) Packages

Package Name	Package Description
SUNWsnsf	USENET news server (feeder service)
SUNWsnsr	USENET news server (reader service)
SUNWsnsc	USENET news server
SUNWixsna	Sun Internet News Server administration modules
SUNWixsnh	Sun Internet News Server administration online help files
SUNWsnsm	Sun Internet News Server manual pages (Shared with Sun Internet Administrator)

TABLE 3–14 Sun WebServer (SUNWhttp) Packages

Package Name	Package Description
SUNWhttpc	HTTP server configuration files
SUNWhtisp	Sun WebServer configurations for Solaris ISP Server
SUNWhtdoc	Online help files for Sun WebServer administration GUI
SUNWhtman	Manual pages for Sun WebServer utilities and configuration files
SUNWfns	Federated naming system
SUNWski	SKI 1.0 software - user package
SUNWskicw	SKI 1.0 software - licensing package
SUNWskild	SKI 1.0 software - US and Canada library package

TABLE 3–14 Sun WebServer (SUNWhttp) Packages *(continued)*

Package Name	Package Description
SUNWssld	SSL 1.0 software - US and Canada library version
SUNWskimu	SKI 1.0 software - user manual
SUNWskimc	SKI 1.0 software - certificate agent manual
SUNWskica	SKI 1.0 software - certificate agent package
SUNWixklg	Solaris ISP Server KLG classes
SUNWixavm	JMAPI AVM classes
SUNWhttp	Sun WebServer daemons and support binaries
SUNWhtsvl	Sun WebServer server support
SUNWhtadm	Sun WebServer administration package

TABLE 3–15 Sun Internet Administrator (SUNWixamc) Packages

Package Name	Package Description
SUNWixamc	Sun Internet Administrator primary package installed in /opt
SUNWixamv	Sun Internet Administrator primary package installed in /var
SUNWixame	Sun Internet Administrator configurations installed in /etc
SUNWixamh	Online help files for Sun Internet Administrator
SUNWixamm	Onlline help files for Sun Internet Administrator utilities and configuration files

TABLE 3–16 Sun Internet Services Monitor (SUNWixmon) Packages

Package Name	Package Description
SUNWixmon	Sun Internet Services Monitor primary package
SUNWixmh	Sun Internet Services Monitor online help
SUNWixmm	Manual pages for Sun Internet Services Monitor

TABLE 3–17 Security Hardening (`SUNWhard`) Packages

Package Name	Package Description
SUNWfixm	Script that changes file owner, group, and modes on all files on the system

CHAPTER 4

Installing Solaris ISP Server 2.0 Software

The steps discussed in this chapter will help you in installing Solaris ISP Server™ platform extensions and services from a browser (graphical user interface) or from the command line. If you are upgrading to Solaris ISP Server 2.0 or if you are reinstalling Solaris ISP Server 2.0 components, see Chapter 5.

During installation, if a Solaris ISP Server component detects existing configuration information it can use, the component will use the data. If you do not want the components to use existing configurations and want to perform a fresh install, ensure that the component is not installed on the machine and remove associated data (see “Removing the Files” on page 78).

To perform a fresh installation of Solaris ISP Server software, proceed to:

1. Reinstall the operating system.
2. Install Solaris ISP Server 2.0 components following the steps discussed in this chapter.

Preinstallation Tasks

To properly prepare for installing Solaris ISP Server, you must:

- Understand how the various platform extensions and services fit together and depend upon one another. See *Solaris ISP Server 2.0 Administration Guide* for an overview of the product.
- Plan and prepare your network hosts for the installation of Solaris ISP Server 2.0 components. Chapters 1 through 3 will assist you in planning and preparing your Solaris ISP Server network hosts.

▼ To Start the Installation

1. **Log into the computer where you wish to install the software and become superuser (root).**

   For example, to connect from a remote machine, enter:

```
% xhost +remotehostname
% rlogin remotehostname
% Password: yourpassword
% 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 - You must set the DISPLAY environment variable and allow access to your display only if you want to install from the default browser launched by the host configuration software. Set the DISPLAY environment variable before logging in as a different user (`su -`) or before logging in remotely.

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. **Select method of installation. If you wish to install from:**

   - A browser, go to "Installing From the Browser" on page 31.

- The command line, go to “Installing from the Command Line” on page 37.

Installing From the Browser

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 ISP Server host configuration software at least once for each computer that will host the Solaris ISP Server software. The host configuration software enables:

1. Choosing software components (and configuring their installation parameters).
2. Selecting specific system hardening steps and reviewing the Solaris services that the host configuration software will enable or disable (and possibly customizing these settings).
3. Specifying an optional postconfiguration 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.

▼ To Start the Host Configuration GUI

1. Enter `# ./hcstartup`

The script asks a few questions before bringing up the host configuration GUI. Steps 2 through 4 will assist you in answering the questions.

Note - If you receive an error message when you run `hcstartup`, see “Host Configuration Error Messages” on page 101.

---

2. `Enter path to the 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.

3. `The following parameters in /var/sadm/install/admin/default will not be honored and the values below will be used. Do you want to continue?`

   See "Solaris ISP Server `admin` File" on page 16 for more information. To proceed with the installation, press Return. Otherwise, enter **`No`** and quit the installation.

4. `Enter port number for the temporary web server [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 ... done.  Checking for installed components ...  No components found to be upgrade
```

5. `Please choose one of the following options:`

   Press Return to start HotJava™. This is the default option. Enter **2** to access the URL for host configuration from another browser. Enter **3** to abort the installation.

Note - If you did not set the DISPLAY environment variable, to continue the configuration process, you must open the URL in a browser. Refer to Chapter 9 for information on how to proceed.

After a moment, if you selected the default HotJava browser for host configuration, the browser appears and displays the host configuration splash screen.

If you opted to continue the configuration process in another browser, you must open a browser and access the URL: `http://`*hostname*`:8000/cgi-bin/splash`, where *hostname* is the host name of the machine on which you are installing the software. If you specified a port other than the default for the host configuration software to use, replace 8000 with that port number.

See "To Install the Components" on page 33.

▼ To Install the Components

At this point, you have already performed the steps in the “To Start the Host Configuration GUI” on page 31. You are looking at the browser displaying the host configuration splash screen.

Tip - You can also use the online help from this screen to proceed with the installation.

---

1. **Click *Begin*.**

   The *Component Configuration* screen is displayed. For each component listed here, see “Introducing Solaris ISP Server” in *Solaris ISP Server 2.0 Administration Guide* for an overview of the features of the component.

2. **For each Solaris ISP Server component that you wish to install on this host:**

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

      If the status displayed is *no*, the component is not currently 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 without first uninstalling it.

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

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

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

      Note - To customize installation of the component, you *must* select for installation all the other components it depends upon. See Chapter 3.

      ---

   d. **Click *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 without reviewing.

      ---

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

Note - See online help to specify installation parameters. Once completed, review the screen and ensure that appropriate installation parameters have been specified.

f. Click *Done* when you are finished.

The *Component Configuration* screen is displayed.

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

The *Solaris Service Configuration* screen is displayed.

See "To Configure Solaris Service Settings" on page 34.

▼ To Configure Solaris Service 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 online help for the host configuration software and in "Closing Potential Security Holes" on page 13.

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 *Next*.

The *Post-Configuration Command* screen is displayed.

See "To Specify a Post-Configuration Command" on page 35.

▼ To Specify a 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 postconfiguration command is optional and completely user-defined. Use this option to add your own standard postinstallation and configuration tasks to the host configuration software for automatic execution.

Some examples of postconfiguration commands that you can use are discussed in "Creating User-defined Scripts" on page 17.

You can specify any non-interactive command or sequence of commands separated by a semicolon. If you have no postconfiguration needs, click *Next*.

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

2. **Click *Next*.**

   The *Confirm Configuration* screen is displayed.

See "To Confirm and Save the Install Scenario" on page 35.

▼ To Confirm and Save the Install Scenario

See "Solaris ISP Server Platform Software" in *Solaris ISP Server 2.0 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 wish to save this installation and configuration scenario for use in the future,**

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

      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.

Note - 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 *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 *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 in the background.
To view the batch installation status, use the following command:
tail -f /var/opt/SUNWisp/hc/logs/config.yy-mm-dd.hhmm.

This will display the contents of the time stamped installation log
file. When the installation completes successfully, the following
message will be posted to the installation logfile: "Exiting
SUCCESSFUL batch configuration."

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, if you installed from the default browser, the browser exits. If you installed using a browser of your choice, you must close the browser window.

The host configuration process is complete when the system reboots, or when the final `Cleaning up` message is entered in the log file.

See "Determining that Installation was Successful" on page 48:

- For information on how to read the log file.
- To determine whether host configuration is complete
- To determine whether installation was successful

Installing from the Command Line

We recommend installing Solaris ISP Server 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.

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 security modifications. It allows you to save the configuration specifications you provide during installation as a configuration scenario for repeatable installation.

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 or for repeatable installation. The host configuration software also allows you to execute some non-interactive postinstallation commands or a script.

Note - Please proceed to the individual component installation section to install the component. Before proceeding to install, ensure that you meet the component interdependencies by verifying the recommended order of installation in Chapter 3.

▼ To Install Solaris ISP Server 2.0 Software

For each Solaris ISP Server component you wish to install, perform the steps discussed in this section and then proceed to the individual component installation procedure.

1. **Change the directory to** `components/`*componentid/* **where** *componentid* **is the unique component identifier of the Solaris ISP Server component you wish to install.**

We recommend you install the components in the same order as listed in the “Order Of Installation” on page 22.

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

   The component `install` script:

   - Prints a message:
     `WARNING: parameters from the system default admin file have been merged with /etc/opt/SUNWisp/hc/admin`. See “Solaris ISP Server `admin` File” on page 16 for more information.
   - Requires configuration information for installing Solaris ISP Server 2.0 components. Please proceed to the individual component installation procedure to specify the parameters.

▼ To Install Solaris ISP Server Platform (`SUNWisp`)

The Solaris ISP Server platform provides the platform extensions with configuration management tools and enhancements for logging. On each Solaris ISP Server host in the network, you *must* install this software.

1. `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.

2. `Enter the host name of the Sun Directory Services server:`

   Enter the host name of the Sun Directory Services server. All Solaris ISP Server components installed on this machine will contact this Sun Directory Services for making initial entries and for authentication.

3. `Install the Solaris ISP Server Administration Guide?`

   Press Return for `yes` or enter **b** for `no`. If you select `yes`, the *Solaris ISP Server 2.0 Administration Guide* in HTML format is installed.

4. `Install the Host Configuration manual pages?`

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

5. `Solaris ISP Server requires the following OS patches. Should the necessary patches be installed automatically?`

Press Return for `yes` or enter **b** for `no`. If you select `yes`, the operating system patches are installed.

See "Determining that Installation was Successful" on page 48.

▼ To Install JDK (`SUNWjdk`)

JDK provides the Java classes needed by several of the Solaris ISP Server components. You cannot customize installation of this software.

- `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.

See "Determining that Installation was Successful" on page 48.

▼ To Install HotJava (`SUNWdthj`)

This is the web browser you must use to access Sun™ Internet Administrator™ and most Solaris ISP Server component GUI. You cannot customize installation of this software.

- `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.

See "Determining that Installation was Successful" on page 48.

▼ To Install the License Server for Solaris ISP Server (`SUNWlicsw`)

This is the FlexLM server for Solaris ISP Server. You cannot customize installation of this software. Use the license certificate for this software to obtain a license key and initialize more entries in Sun Directory Services.

♦ `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.

See "Determining that Installation was Successful" on page 48.

▼ To Install 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.

For more information about the configuration fields, see *Sun Directory Services 3.1 Administration Guide*, *Sun Directory Services 3.1 User's Guide*, and *Solaris ISP Server 2.0 Administration Guide*.

Solaris ISP Server 2.0 components require Sun Directory Services 3.1. If:

- You are currently running a version of Sun Directory Services less than Sun Directory Services 3.1, abort this installation. Uninstall the existing version of Sun Directory Services and then install this component.
- You are currently running a version of Sun Directory Services greater than the one selected for installation, abort this installation.
- Your existing version of Sun Directory Services does not meet the configuration requirements of Solaris ISP Server components, abort this installation. See relevant documentation and reconfigure your existing Sun Directory Services before installing this component.
- You do not wish to use data detected on the machine during this installation of Sun Directory Services, abort this installation. This Sun Directory Services will detect, on the system, data:

  - If you manually uninstalled Sun Directory Services from this machine. To use this data, you must manually install Sun Directory Services 3.1 before installing this component.
  - From compatible and incompatible releases of this component. Data from a compatible release will be used to restore previous configurations of this component and data from incompatible release will be preserved, but not used during this installation.
  - In an unrecognized state. This data will be preserved, but not used during this installation.

1. `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.

2. `Enter the DNS domain of your organization`

Enter the DNS domain name of your organization (for example, `xyz.com`).

3. `Enter the DN (distinguished name) of your organization`

Enter your organization name and the two-character country code. To enter, use the format `ou=`*`foo`*`,o=`*`xyz`*`,c=`*`US`* where **ou** refers to the organisationalUnit, **o** refers to the organizationName, and **c** refers to the countryName.

4. `Enter the root DN (distinguished name) for Sun Directory Services`

Enter the distinguished name for binding to the directory services as the server administrator. 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 3.

---

5. `Enter the root password for Sun Directory Services`

Enter the password for the server administrator for binding to the directory services.

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

---

6. `Do you want to run the RADIUS server included with this component?`

Press Return for `yes` or enter **b** for `no`. If you select `no`, the RADIUS server bundled with Solaris ISP Server will not be started.

7. `This component requires the following patches. Should these patches be installed automatically?`

You must install this patch for Sun Directory Services to work with Solaris ISP Server 2.0 components.

See “Determining that Installation was Successful” on page 48.

▼ To Install SKIP (SUNWicg)

Simple key-management for Internet Protocols (Sunscreen™ SKIP) supports secure IP communication between hosts. You can install and configure this component on every host to protect admin communications (see also "Ensuring Security" in *Solaris ISP Server 2.0 Administration Guide*). You cannot customize installation of this software.

♦ `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.

See "Determining that Installation was Successful" on page 48.

▼ To Install Sun Internet FTP Server (SUNWftp)

You cannot customize installation of 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 on the network.

♦ `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.

See "Determining that Installation was Successful" on page 48.

▼ To Install Sun Internet News Server (SUNWsns)

This is a highly-scalable multi threaded news server. After installation, to access the browser-based graphical user interface of this software, ensure that you register this Sun™ Internet News Server™ with a Sun Internet Administrator on the network.

1. `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.

2. `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.

---

3. `Enter the UNIX user name of the News service administrator`

   Enter the user name of this news server administrator and press Return. The default `uid` is root.

4. `Enter the UNIX group name of the News service administrator`

   Enter the group name and press Return. The default `gid` is `sys`.

5. `Enter the fully qualified DNS domain name for your News server host.`

   Enter the fully qualified DNS domain name of this news server host and press Return.

See “Determining that Installation was Successful” on page 48.

▼ To Install Sun WebServer (`SUNWhttp`)

This is used by most Solaris ISP Server 2.0 components and can also be used for standard web service.

1. `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.

2. `Do you want SSL support?`

   This allows you to have secure communication with 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.

3. `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 `yes` or enter **b** for `no`

4. `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.

5. `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.

---

6. `Do you want in-kernel HTTP acceleration to be activated (after reboot) for port 80?`

   This option is available only if you are installing on Solaris 7. The cache in-kernel activator will greatly enhance the performance of the web server for static pages. Press Return for `yes` or enter **b** for `no`.

See “Determining that Installation was Successful” on page 48.

▼ To Install Sun Internet Administrator (`SUNWixamc`)

This provides secure central management for distributed Internet services.

The configuration information you enter here is stored in `/var/opt/SUNWixamc/awsconf/aws.conf`.

1. `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.

2. `Install the Solaris ISP Server manual pages?`

   This option allows you to install the on line Solaris ISP Server man pages. Press Return for `yes` or enter **b** for `no`.

3. `Enter the root DN (distinguished name) for Sun Directory Services`

   Enter the distinguished name to bind to the directory server as the server administrator. To specify, use the format: **cn=*admin*, o=*xyz*, c=*US*** where **cn** is the commonName, **o** is the organizationName, and **c** is the countryName.

4. `Enter the root password for Sun Directory Services.`

   Enter the password to bind to the directory services as the server administrator.

5. `Enter the DN (distinguished name) of your organization (must match value specified for Sun Directory Services):`

   Enter the distinguished name of your organization. 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 three 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.

---

6. `Enter a user name for the administrator of Sun Internet Administrator`

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

7. `Enter a password for the administrator of Sun Internet Administrator`

   Enter a password for the administrator of Sun Internet Administrator.

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

See “Determining that Installation was Successful” on page 48.

▼ To Install Sun Internet Services Monitor (SUNWixmon)

This performance monitoring software allows you to set up special monitor machines that emulate a subscriber's experience with the services.

1. `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.

2. `What port do you want the monitoring web server to use?`

Press Return to accept the default port. The default port is 2381. Or, specify another port number.

3. `What color do you want to use to display normal results? Provide three integer values (RGB) from 0 to 255, separated by '.'`

By default, green is used to display normal results. Press Return to accept the default. Otherwise, specify the RGB value for the color of your choice.

4. `What color do you want to use to display results that exceed performance thresholds? Provide three integer values (RGB) from 0 to 255, separated by '.'`

By default, yellow is used to display performance that exceed threshold. Press Return to accept the default. Otherwise specify the RGB value for the color of your choice.

5. `What color do you want to use to display errors? Provide three integer values (RGB) from 0 to 255, separated by '.'`

By default, red is used to display errors (such as timeout). Press Return to accept the default. Otherwise specify the RGB value for the color of your choice.

6. `What color do you want to use to display selected bars on the graph? Provide three integer values (RGB) from 0 to 255, separated by '.'`

By default, black is used to display bars selected in the graph. Press Return to accept the default. Otherwise specify the RGB value for the color of your choice.

Note - You can, at any time after the installation, reset the colors by referring to Sun Internet Services Monitor online help.

See “Determining that Installation was Successful” on page 48.

▼ To Install Security Hardening

You can install this component to ensure security for passwords and safeguard file permissions to the file owner. When you install this component, a script similar to the script in `ftp://ftp.wins.uva.nl:/pub/solaris/fix-modes.tar.gz` is run on the machine and this script makes modes of files installed as part of Solaris packages more secure. See “Solaris ISP Server Overview” in *Solaris ISP Server 2.0 Administration Guide* for more information.

1. `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.

2. `Run fixmodes to secure permissions on setuid and setgid files?`

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

3. `Change umask to 077 in default /.cshrc and /.profile?`

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

4. `Add root to /etc/ftpusers to prevent root access through FTP?`

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

5. `Set MAXWEEKS in /etc/default/passwd to force password expiration?`

Press Return for `yes` or enter **b** for `no`. If you press Return, specify `MAXWEEKS value:`. Default is 12.

6. `Edit /etc/syslog.conf for more granular event logging and intrusion detection?`

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

7. `Run bsmconv and configure /etc/security to log administrative actions, logins, and logouts?`

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

See “Determining that Installation was Successful” on page 48.

▼ To Install 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 or 106498) to access the manual pages.

1. **Become superuser and change directory to** `/components/SUNWisp/pkgs`**.**

2. **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.

3. **If you are installing from a CD-ROM, proceed to step 5. 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 wish to install the package. Become superuser and proceed to step 4.**

4. **Get** `SUNWlldap.tar` **and enter** `# tar -xvf SUNWlldap.tar` **to untar the file.**

5. **Enter** `# pkgadd -d . SUNWlldap`

   The LDAP client library package is installed.

Determining that Installation was Successful

If you are installing from a browser:

▼ To Determine that Browser-Based Installation 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 December 1, 1998, find the log file named** `config.1998-12-01.1845`**.**

3. **Read the log file to**:
   a. **Determine that installation and host configuration are complete. To determine, find this message at the end:** `Cleaning up /tmp/hc`*pid* **where** ***pid*** **is the host configuration process ID. This indicates that the host configuration batch process is finished and has exited.**

Note - If you selected *Execute (no reboot)*, you may proceed to reboot the computer when your postinstallation tasks are complete, so that all settings of the host configuration can take effect. If you selected *Execute (with reboot)*, the machine will be automatically rebooted.

---

   b. **Determine that installation and host configuration was successful. To determine, for each software component selected for installation, 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.

If you are installing from the command line:

▼ To Determine that Command Line 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 unique component identifier (for example, `SUNWisp` is the component identifier for Solaris ISP Server Platform software).

CHAPTER 5

Upgrading to or Reinstalling Solaris ISP Server 2.0 Software

You can:

- Perform a fresh installation of Solaris ISP Server™ 2.0 software. Follow steps discussed in Chapter 4.
- Upgrade to or reinstall Solaris ISP Server 2.0 software. Follow steps discussed in this chapter.

When you upgrade to Solaris ISP Server 2.0 software from:

- A browser, the software uninstalls the 1.0 component(s), saves the configurations, and allows you to install the 2.0 components. See “Upgrading From a Browser” on page 53.
- The command line, you must uninstall the 1.0 components and install the new version. See “Upgrading From the Command Line” on page 59.

While upgrading or reinstalling, the components will use old configurations. If you do not want the components to use old configuration information,

1. See “Removing the Files” on page 78 and move or remove the files.
2. See Chapter 4 and follow the instructions to install the software.

You cannot run Solaris ISP Server 2.0 and 1.0 components on the same machine by performing a partial upgrade (that is, upgrade only some components on a machine to 2.0). You must upgrade all the Solaris™ for ISPs™ 1.0 components on a machine. Please follow the instructions carefully to upgrade to Solaris ISP Server 2.0.

Preinstallation Tasks

To properly prepare for upgrading to Solaris ISP Server 2.0 software, you must understand how the various platform extensions and services fit together and depend upon one another. See “Solaris ISP Server Overview” in *Solaris ISP Server 2.0 Administration Guide* for an overview of the product.

▼ To Start the Installation

1. **Log into the computer where Solaris for ISPs 1.0 components are installed and become superuser (root).**

   For example, to connect from a remote machine, enter:

```
% xhost +remotehostname
% rlogin remotehostname
% Password: yourpassword
% 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 - You must set the DISPLAY environment variable and allow access to your display only if you want to upgrade from the default browser launched by the host configuration software. Set the DISPLAY environment variable before logging in as a different user (`su -`) or before logging in remotely.

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. **Select method of installation. If you wish to install from**:

   - A browser, go to "Upgrading From a Browser" on page 53.
   - The command line, go to "Upgrading From the Command Line" on page 59.

Upgrading From a Browser

Once you have ensured that your network hosts meet the installation requirements (see Chapter 3), run the Solaris ISP Server 2.0 host configuration software on each computer you are upgrading. The host configuration software:

1. Uninstalls existing Solaris for ISPs 1.0 components, if found installed, and saves the configuration information for upgrading to Solaris ISP Server 2.0 software.
2. Enables selecting components for upgrading. If you uninstall the 1.0 components from this instance of the host configuration process, the host configuration software preselects the components for upgrading.
3. Enables or disables the Solaris services.
4. Executes the postconfiguration command (or script) you specify towards the end of its batch install process.
5. Enables reviewing a summary of all the upgrade 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 upgrade later.
6. Enables executing the configuration scenario you specified in steps one through five.

▼ To Start the Host Configuration GUI

1. **Enter** `# ./hcstartup`

   The script asks a few questions before bringing up the host configuration graphical user interface. Steps 2 through 4 will assist you in answering the questions.

Note - If you receive an error message when you run `hcstartup`, see Chapter 9.

---

2. `The following parameters in /var/sadm/install/admin/default will not be honored and the values below will be used. Do you want to continue?`

   See "Solaris ISP Server `admin` File" on page 16 for more information. To proceed with the installation, press Return. Otherwise, enter **No** and quit the installation.

3. `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.

4. `Enter port number for the temporary web server [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 ... done.  Checking for installed components ...
```

5. `There are Solaris for ISPs 1.0 components installed on this machine. Before installing Solaris ISP Server 2.0, this program will uninstall the old version. The configuration data for these components will be saved and they will be uninstalled (you may then select them for reinstallation and the saved data will be restored).`
   `Do you wish to proceed? [y,n]`

   You will get this option only if you are currently running Solaris for ISPs 1.0 components on this machine. If you wish to save and use the old configuration information to upgrade to this version, press Return or enter **Yes**.

6. `Please choose one of the following options:`

   Press Return to start HotJava™. This is the default option. Enter **2** to access the URL for host configuration from another browser. Enter **3** to abort the installation.

Note - If you did not set the DISPLAY environment variable, to continue the configuration process, you must open the URL in a browser. Refer to Chapter 9 for information on how to proceed.

After a moment, if you selected the default HotJava browser for host configuration, the browser appears and displays the splash screen.

If you opted to continue the configuration process without HotJava, you must open a browser and access the URL: `http://`*hostname*`:8000/cgi-bin/splash`, where *hostname* is the host name of the machine on which you are installing the software. If you specified a port other than the default for the host configuration software to use, replace 8000 with that port number.

▼ To Upgrade to Solaris ISP Server 2.0 Software

At this point, you have already performed the steps in the "To Start the Host Configuration GUI" on page 53. You are looking at the browser displaying the host configuration splash screen.

Tip - You can also use the online help from this screen to proceed with upgrading to Solaris ISP Server 2.0 software.

---

1. **Click *Begin*.**

   The *Component Configuration* screen is displayed.

   For each component listed here, see "Solaris ISP Server Overview" in *Solaris ISP Server 2.0 Administration Guide* for an overview of the features of the component.

2. **For each Solaris ISP Server component that you wish to install:**

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

      If the status displayed is *no*, the component is not installed on the host.

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

      By default, components that were uninstalled during this instance of the host configuration process will be preselected for installation. Otherwise, *No Action* will be executed for the component.

      Note - You *must* install the Solaris ISP Server™ Platform software at least once on each Solaris ISP Server host on the network.

      ---

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

      To customize installation of the component, you *must* select for installation all the other components it depends upon. See "Order Of Installation" on page 22.

d. Click *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. Do not accept the default customizations without first reviewing them.

---

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

See online help to specify installation parameters.

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

---

f. Click *Done* when you are finished.

The *Component Configuration* screen is displayed.

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

The *Solaris Service Configuration* screen is displayed.

See "To Configure Solaris Service Settings" on page 56.

▼ To Configure Solaris Service Settings

At this point, you have completed selecting components for upgrading. 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 online help for the host configuration software and in "Closing Potential Security Holes" on page 13.

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 *Next*.**
   The *Post-Configuration Command* screen is displayed.

Proceed “To Specify a Postconfiguration Command” on page 57.

▼ To Specify a Postconfiguration 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 postconfiguration command is optional and completely user-defined. Use this option to add your own standard postinstallation and configuration tasks to the host configuration software for automatic execution.

Some examples of postconfiguration commands that you can use are discussed in “Creating User-defined Scripts” on page 17.

You can specify any non-interactive command or series of commands separated by a semicolon. If you have no postconfiguration needs, click *Next*.

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

2. **Click *Next*.**
   The *Confirm Configuration* screen is displayed.

See “To Confirm and Save the Upgrade Scenario” on page 57.

▼ To Confirm and Save the Upgrade Scenario

See “Solaris ISP Server Platform Software” in *Solaris ISP Server 2.0 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 wish to save this installation and configuration scenario for use in the future,**

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

      This directory, where you want to store the scenario files, 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.

      Note - 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 *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 *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 in the background.
To view the batch installation status, use the following command:
tail -f /var/opt/SUNWisp/hc/logs/config.yy-mm-dd.hhmm.

This will display the contents of the time stamped installation log
file. When the installation completes successfully, the following
```

(continued)

(Continuation)

```
message will be posted to the installation logfile: "Exiting
SUCCESSFUL batch configuration."

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, if you installed from the default browser, the browser exits. If you installed using a browser of your choice, you must close the browser window. The host configuration process is complete when the system reboots, or when the final `Cleaning up` message is entered in the log file.

See “Determining that Upgrade was Successful” on page 67:

- For information on how to read the log file
- To determine whether host configuration is complete
- To determine whether upgrade was successful

Upgrading From the Command Line

If you choose to upgrade from the command line, you will not get the benefits of upgrading using the host configuration software. The host configuration software enables you to perform, as part of the upgrade process from a browser, some security modifications on your system. It allows you to save the configuration specifications you provide during the upgrade 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 postinstallation commands or a script.

We recommend upgrading Solaris ISP Server from a browser using the host configuration software. Please upgrade from the command line only if you are completely familiar with the product and its various component dependencies.

▼ To Upgrade to Solaris ISP Server 2.0 Software

Before upgrading to Solaris ISP Server 2.0 software, you must uninstall Solaris for ISPs 1.0 components currently installed on the machine and save the configuration data. Then, proceed to install the new version of the component.

1. **Enter** `# ./uninstall-sisp1.0` *media_root* **where *media_root* is the root of the installation media.**

   This script uninstalls all the Solaris for ISPs 1.0 components currently installed on the machine and saves the data in a component specific directory. See `uninstall-sisp1.0(1m)` man page for more information.

2. **Change the directory to** `components/`*componentid*`/` **where** *componentid* **is the unique component identifier of the Solaris ISP Server component you wish to install.**

   We recommend installing components in the same order as listed in the "Order Of Installation" on page 22.

3. **Enter** `./install`

   The component `install` script:

   - Prints a message:
     `WARNING: parameters from the system default admin file have been merged with /etc/opt/SUNWisp/hc/admin`
     See "Solaris ISP Server `admin` File" on page 16 for more information.
   - Requires configuration information for upgrading to Solaris ISP Server 2.0 software. Please proceed to the individual component installation procedure to specify the parameters.

▼ To Install Solaris ISP Server Platform Software (`SUNWisp`)

The Solaris ISP Server Platform software provides the platform extensions with configuration management tools and enhancements for logging. On each Solaris ISP Server software host in the network, you *must* install this software.

1. `Please enter the root of the distribution media:`

   Enter the path of the distribution media from which you are upgrading. Enter either the directory path where you unwrapped the electronic distribution or the directory path of the mounted CD-ROM.

2. `Do you want to install the Solaris ISP Server v2.0 Administration Guide?`

Press Return for `yes` or enter **b** for `no`. If you select `yes`, the *Solaris ISP Server 2.0 Administration Guide* in HTML format is installed.

3. `Do you want to install the Host Configuration manual pages?`

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

See "Determining that Upgrade was Successful" on page 67.

▼ To Install JDK (`SUNWjdk`)

JDK provides the Java classes needed by several of the Solaris ISP Server components. You cannot customize installation of this software.

♦ `Please enter the root of the distribution media:`

Enter the path of the distribution media from which you are upgrading. Enter either the directory path where you unwrapped the electronic distribution or the directory path of the mounted CD-ROM.

See "Determining that Upgrade was Successful" on page 67.

▼ To Install HotJava (`SUNWdthj`)

This is the web browser you must use to access Solaris ISP Server component GUIs. You cannot customize installation of this software.

♦ `Please enter the root of the distribution media:`

Enter the path of the distribution media from which you are upgrading. Enter either the directory path where you unwrapped the electronic distribution or the directory path of the mounted CD-ROM.

See "Determining that Upgrade was Successful" on page 67.

▼ To Install the License Server for Solaris ISP Server (SUNWlicsw)

This is the FlexLM server for Solaris ISP Server. You cannot customize installation of this software. Use the license certificate for this software to obtain a license key and initialize more entries in Sun Directory Services.

♦ `Please enter the root of the distribution media:`

Enter the path of the distribution media from which you are upgrading. Enter either the directory path where you unwrapped the electronic distribution or the directory path of the mounted CD-ROM.

See "Determining that Upgrade was Successful" on page 67.

▼ To Install 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.

For more information about the configuration fields, refer *Sun Directory Services 3.1 Administration Guide*, *Sun Directory Services 3.1 User's Guide*, and *Solaris ISP Server 2.0 Administration Guide*.

Solaris ISP Server 2.0 components require Sun Directory Services 3.1. If:

- You are currently running a version of Sun Directory Services less than Sun Directory Services 3.1, abort this installation. Uninstall the existing version of Sun Directory Services and then install this component.
- You are currently running a version of Sun Directory Services greater than the one selected for installation, abort this installation.
- Your existing version of Sun Directory Services does not meet the configuration requirements of Solaris ISP Server components, abort this installation. See relevant documentation and reconfigure your existing Sun Directory Services before installing this component.
- You do not wish to use data detected on the machine during this installation of Sun Directory Services, abort this installation. This Sun Directory Services will detect, on the system, data:

  - If you manually uninstalled Sun Directory Services from this machine. To use this data, you must manually install Sun Directory Services 3.1 before installing this component.

- From compatible and incompatible releases of this component. Data from a compatible release will be used to restore previous configurations of this component and data from incompatible release will be preserved, but not used during this installation.
- In an unrecognized state. This data will be preserved, but not used during this installation.

1. `Please enter the root of the distribution media:`

   Enter the path of the distribution media from which you are upgrading. Enter either the directory path where you unwrapped the electronic distribution or the directory path of the mounted CD-ROM.

2. `This component requires the following patches. Should these patches be installed automatically?`

   You must install this patch for this Sun Directory Services to operate with the Solaris ISP Server 2.0 components.

See “Determining that Upgrade was Successful” on page 67.

▼ To Install SKIP (SUNWicg)

Simple key-management for Internet Protocols (Sunscreen™ SKIP) can be used to secure IP communications between network hosts. You cannot customize installation of this software.

♦ `Please enter the root of the distribution media:`

Enter the path of the distribution media from which you are upgrading. Enter either the directory path where you unwrapped the electronic distribution or the directory path of the mounted CD-ROM.

See “Determining that Upgrade was Successful” on page 67.

▼ To Install Sun Internet FTP Server (SUNWftp)

1. `Please enter the root of the distribution media:`

   Enter the path of the distribution media from which you are upgrading. Enter either the directory path where you unwrapped the electronic distribution or the directory path of the mounted CD-ROM.

2. `Saved data was found from version 1.0. Do you wish to upgrade to version 1.1?`

   If you want to upgrade from Sun Internet FTP Server 1.0 to 1.1, enter **a** or press Return for `no`.

3. `If you continue with this installation, existing configuration for FTP will be re-used. Is this ok?`

   Press Return for `no` or enter **a** for `yes`. If you select `yes`, the existing configuration information will be used to upgrade to Sun Internet FTP Server 1.1. If you do not wish to use saved data, abort the installation and remove the files (see "Removing the Files" on page 78).

See "Determining that Upgrade was Successful" on page 67.

▼ To Install Sun Internet News Server (`SUNWsns`)

This is a highly-scalable multi threaded 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 on the network.

1. `Please enter the root of the distribution media:`

   Enter the path of the distribution media from which you are upgrading. Enter either the directory path where you unwrapped the electronic distribution or the directory path of the mounted CD-ROM.

2. `If you continue with this installation, existing configuration for news will be re-used. Is this ok?`

   Press Return for `yes` or enter **b** for `no`. If you select `yes`, the existing configuration information will be used to upgrade to Sun Internet News Server 1.1.

See "Determining that Upgrade was Successful" on page 67.

▼ To Install Sun WebServer (SUNWhttp)

This is the web server used by most Solaris ISP Server components. This can also be used for standard web service.

1. `Please enter the root of the distribution media:`

Enter the path of the distribution media from which you are upgrading. Enter either the directory path where you unwrapped the electronic distribution or the directory path of the mounted CD-ROM.

2. `Do you want in-kernel HTTP acceleration to be activated (after reboot) for port 80?`

   This option is available only if you are upgrading to or reinstalling Sun WebServer on Solaris 7. The cache in-kernel activator will greatly enhance the performance of the web server for static pages. Press Return for `yes` or enter **b** for `no`.

3. `There are existing web site configurations listed in /etc/http/httpd-instances.conf. If you proceed with this installation, they will be reused. Server configuration files will be converted to support SWS2.1 if necessary. Continue?`

   You will get this option if Sun WebServer detects data from a previous installation of this component. Sun WebServer will use the existing data during this installation. If you do not want to use the detected data, enter **b** to abort this installation. Then remove the files by referring to “Removing the Files” on page 78. Otherwise, press Return for `yes` and proceed with the installation.

See “Determining that Upgrade was Successful” on page 67.

▼ To Install Sun Internet Administrator (SUNWixamc)

This provides secure central management for distributed Internet services.

1. `Please enter the root of the distribution media:`

   Enter the path of the distribution media from which you are upgrading. Enter either the directory path where you unwrapped the electronic distribution or the directory path of the mounted CD-ROM.

2. `Install the Solaris ISP Server manual pages?`

   This option allows you to install the on line Solaris ISP Server man pages. Press Return for `yes` or enter **b** for `no`.

3. `If you continue with the this installation, existing configuration for Sun Internet Administrator will be re-used. Is this ok?`

Press Return for `yes` or enter **`b`** for `no`. If you select `yes`, the existing configuration information will be used to upgrade to Sun Internet Administrator 1.1.

See "Determining that Upgrade was Successful" on page 67.

▼ To Install Sun Internet Services Monitor (SUNWixmon)

This performance monitoring software allows you to set up special monitor machines that emulate a subscriber's experience with the services.

1. `Please enter the root of the distribution media:`

   Enter the path of the distribution media from which you are upgrading. Enter either the directory path where you unwrapped the electronic distribution or the directory path of the mounted CD-ROM.

2. `What port do you want the monitoring web server to use?`

   Press Return to accept the default port. The default port is 2381. Or, specify another port number.

3. `What color do you want to use to display normal results? Provide three integer values (RGB) from 0 to 255, separated by '.'`

   By default, green is used to display normal results. Press Return to accept the default. Otherwise, specify the RGB value for the color of your choice.

4. `What color do you want to use to display results that exceed performance thresholds? Provide three integer values (RGB) from 0 to 255, separated by '.'`

   By default, yellow is used to display performance that exceed threshold. Press Return to accept the default. Otherwise specify the RGB value for the color of your choice.

5. `What color do you want to use to display errors? Provide three integer values (RGB) from 0 to 255, separated by '.'`

   By default, red is used to display errors (such as timeout). Press Return to accept the default. Otherwise specify the RGB value for the color of your choice.

6. `What color do you want to use to display selected bars on the graph? Provide three integer values (RGB) from 0 to 255, separated by '.'`

   By default, black is used to display bars selected in the graph. Press Return to accept the default. Otherwise specify the RGB value for the color of your choice.

Note - You can, at any time after the installation, reset the colors by referring to Sun Internet Services Monitor online help.

---

7. `Found old monitor configuration. Do you want to convert it to the new format (otherwise it will be removed)?`

   You will get this option if you are upgrading to Sun Internet Services Monitor 1.1. Press Return for `yes` or enter **b** for `no`. If you select `yes`, the existing configuration information will be used for upgrading to Sun Internet Services Monitor 1.1.

8. `Found previous monitor configuration. Do you want to use it (otherwise it will be removed)?`

   You will get this message only if you are reinstalling Sun Internet Services Monitor 1.1. Press Return for `yes` or enter **b** for `no`. If you select `yes`, the existing configuration information will be used to reinstall Sun Internet Services Monitor.

See "Determining that Upgrade was Successful" on page 67.

Determining that Upgrade was Successful

If you are upgrading to Solaris ISP Server 2.0 software from a browser:

▼ To Determine that Browser-Based Upgrade 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 December 1, 1998, find the log file named** `config.1998-12-01.1845`**.**

3. **Read the log file to**:

   a. **Determine that installation and host configuration are complete. To determine, find this message at the end**: `Cleaning up /tmp/hc`*pid* **where** ***pid*** **is the host configuration process ID. This indicates that the host configuration batch process is finished and has exited.**

Note - If you selected:

- *Execute (no reboot)*, you may proceed to reboot the computer when your postinstallation tasks are complete, so that all settings of the host configuration can take effect.
- *Execute (with reboot)*, the machine will be automatically rebooted.

---

   b. **Determine that installation and host configuration was successful. To determine, for each software component selected for upgrade, 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`**, the newer version of 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.

If you are upgrading to Solaris ISP Server 2.0 from the command line:

▼ To Determine that Command Line Upgrade was Successful

♦ **Wait for one of two messages**:

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

Or,

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

Note - Here, *ComponentId* is the unique component identifier (for example, `SUNWisp` is the component identifier for Solaris ISP Server Platform software).

CHAPTER 6

Uninstalling Solaris ISP Server 2.0 Software

The sections in this chapter will help you uninstall Solaris ISP Server™ platform extensions and services from a browser using the host configuration software or from the command line.

Note - Before uninstalling Solaris ISP Server components registered with Sun™ Internet Administrator™, unregister the components.

Beginning to Uninstall

This section discusses the preliminary steps you must perform to uninstall Solaris ISP Server 2.0 software.

▼ To Log In to the Computer

1. **Log into the computer where you have the software installed and become superuser (root).**

   For example, to connect from a remote machine, enter:

```
% xhost +remotehostname
```

(continued)

```
% rlogin remotehostname
% Password: yourpassword
% 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 - You must set the DISPLAY environment variable and allow access to your display only if you want to uninstall from the default browser launched by the host configuration software. Set the DISPLAY environment variable before logging in as a different user (`su -`) or before logging in remotely.

---

2. **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.

3. **Select method of uninstall. If you are wish to uninstall from**:

   - A browser, go to “Uninstalling Solaris ISP Server from the Browser” on page 73.

- The command line, go to “Uninstalling Solaris ISP Server from the Command Line” on page 76.

Uninstalling Solaris ISP Server from the Browser

To uninstall a component or multiple Solaris ISP Server components, run the host configuration software. The host configuration software will enable you to reconfigure the machine to the same state it was in before installing Solaris ISP Server software. The host configuration software enables:

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 postconfiguration 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.

▼ To Start Host Configuration

1. Enter `# ./hcstartup`

The script asks a few questions before bringing up the host configuration GUI. Steps 2 through 5 will help you answer the questions.

Note - If you receive an error message when you run `hcstartup`, see Chapter 9.

---

2. `The following parameters in /var/sadm/install/admin/default will not be honored and the values below will be used. Do you want to continue?`

See “Solaris ISP Server `admin` File” on page 16 for more information. To proceed to uninstall, press Return. Otherwise, enter **`No`** and quit the process.

3. `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.

4. `Enter port number for the temporary web server [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 ... done.  Checking for installed components ...  No components found to be upgrade
```

5. `Please choose one of the following options:`

   Press Return to start HotJava™. This is the default option. Enter **2** to access the URL for host configuration from another browser. At this point, you can also abort the uninstall process by entering **3**.

Note - If you did not set the DISPLAY environment variable, to continue with the configuration process, you must open the URL in a browser. Refer to Chapter 9 for information on how to proceed.

   After a moment, if you selected the default HotJava browser for host configuration, the browser appears and displays the host configuration 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`. Here, *hostname* is the host name of the machine from which you are uninstalling the software 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.

6. **Click *Begin* in the host configuration welcome screen.**

   The *Component Configuration* screen is displayed.

▼ To Uninstall Components

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

   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.

Note - The host configuration software will prevent you from uninstalling components that other installed components depend upon.

---

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

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

3. **Click *Next*.**

   The *Solaris Service Configuration* screen is displayed.

▼ To Reconfigure the Solaris Services

This screen enables you to reconfigure Solaris services that you had enabled or disabled during installation of Solaris ISP Server software.

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 *Next*.**

   The *Post-Configuration Command* screen is displayed.

▼ To Confirm the Uninstall Scenario

1. **Click *Next* in the *Post-Configuration Command* screen.**

Note - If you wish to specify some commands or script to be executed after uninstalling the selected components, please enter the command or script in the *Post Configuration Command* screen text field.

The *Confirm Configuration* screen is displayed.

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

After a few moments, if you uninstalled from the default browser, the browser exits. If you uninstalled using a browser of your choice, you must close the browser window. See “Determining that Uninstall Was Successful” on page 77.

Uninstalling Solaris ISP Server from the Command Line

This section discusses the steps to uninstall Solaris ISP Server components 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 ISP Server from the Browser” on page 73 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 unique component identifier of the Solaris ISP Server component you wish to uninstall.**

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

2. **Enter** `./uninstall`

See “Determining that Uninstall Was Successful” on page 77.

Determining that Uninstall Was Successful

If you are uninstalling from the browser:

▼ To Determine that Browser-Based 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 December 1, 1998, find the log file named** `config.1998-12-01.1845`**.**

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 and *Componentid* is the unique component identifier of the component that has been uninstalled.

If you are uninstalling from the command line:

▼ To Determine that Command Line Uninstall Was Successful

- **Wait until you get the message:** `Removal of <Componentid> was successful` **where *Componentid* is the unique component identifier of the Solaris ISP Server component you are uninstalling.**

  The command prompt # is displayed after successful removal of the component.

When Solaris ISP Server 2.0 component is uninstalled, the component saves the associated data files. To remove data saved by the component, see “Removing the Files” on page 78.

Removing the Files

The component configuration information and associated data is saved when you uninstall:

- Solaris for ISPs 1.0 components either using the Solaris ISP Server 2.0 host configuration software or the `uninstall-sisp1.0` script.
- Solaris ISP Server 2.0 components using the host configuration software or the `uninstall` script of the component.

The component will use this configuration information while upgrading to or reinstalling Solaris ISP Server 2.0 software. If you want to delete data left behind by a component after an uninstall, follow the instructions in this section.

▼ To Remove Data Saved by Solaris ISP Server Platform (`SUNWisp`):

- **Remove files and directories in** `/var/tmp/SUNWisp-save/SUNWisp` **if you uninstalled using the**:
  - Solaris ISP Server 2.0 host configuration software or component `uninstall` script.
  - `uninstall-sisp1.0` script.
- **Remove files and directories in** `/etc/opt/SUNWixamr` **and** `/etc/opt/SUNWisp/hc` **only if you uninstalled Solaris for ISPs 1.0 components using the component** `uninstall` **script.**

▼ To Remove Data Saved by Sun Directory Services (`SUNWconn`)

- **Remove files and directories in** `/usr/tmp/dsservconf.*` **and** `/var/opt/SUNWconn/ldap/dbm`**.**

  The configuration information are saved in file names matching `dsservconf.*` and databases are saved in `dbm`.

▼ To Remove Data Saved by Sun Internet FTP Server (SUNWftp)

- **Remove files and directories in** `/var/tmp/SUNWisp-save/SUNWftp`**.**

▼ To Remove Data Saved by Sun Internet News Server (SUNWsns)

- **Remove files and directories in** `/var/tmp/SUNWisp-save/SUNWsns`**.**

▼ To Remove Data Saved by Sun WebServer (SUNWhttp)

- **Remove files and directories in** `/etc/http/httpd-instances.conf` **and** `/var/http/`*server-name*`/websites/`*website-name*`/conf`**.**

▼ To Remove Data Saved by Sun Internet Administrator (SUNWixamc)

- **Remove files and directories in** `/var/tmp/SUNWisp-save/SUNWixamc` **if you uninstalled using the**:
  - Solaris ISP Server 2.0 host configuration software or component `uninstall` script.
  - `uninstall-sisp1.0` script.
- **Remove files and directories in** `/etc/opt/SUNWisp/ldap/ispconf`**,** `/etc/opt/SUNWixamc`**, and** `/var/opt/SUNWixamc/awsconf.bak.*` **if you uninstalled 1.0 using the component** `uninstall` **script of the same version.**

CHAPTER 7

Configuring Sun Internet Mail Server

This chapter explains how to integrate Sun™ Internet Mail Server (SIMS) service with Solaris ISP Server. The two systems currently use different versions of Sun™ Directory Services and so do not share the same directory. Solaris ISP Server includes tools to configure a SIMS directory and a Solaris ISP Server directory to work together and share data.

This chapter covers

- Integration Overview
- Requirements
- Integration Tools
- Integration Procedures
- Maintaining the Directories

Solaris ISP Server and Sun Internet Mail Server Integration Overview

You can install Sun Internet Mail Server in a Solaris ISP Server environment and share subscriber data, but each must use a different directory service. To achieve seamless integration, you can configure the SIMS directory server to be a slave of the Solaris ISP Server directory and modify the directories so they use compatible schemas.

Solaris ISP Server includes tools to configure the directory servers in both environments. The tools are part of the Solaris ISP Server Directory Service component. They will configure a SIMS directory to be a slave of the Solaris ISP Server directory, and modify the Solaris ISP Server schema to use the attributes and object classes required by SIMS.

Since the directory requirements are different, you must run the Sun Internet Mail Server Directory Service and the Solaris ISP Server Directory Service on separate network hosts.

Once the integration steps are complete, the Solaris ISP Server directory is configured to push all changes to relevant data in its directory to the Sun Internet Mail Server directory. The user data can now be shared freely, and the same subscriber entries can be used with applications like Sun WebServer and Sun Internet Mail Server.

The data must be maintained in the master directory. Changes made in the slave (Sun Internet Mail Server) by the directory service root DN will not get propagated to the master.

Integration Requirements

For Solaris ISP Server and Sun Internet Mail Server to interoperate, your network software configuration must meet the following requirements:

- Sun Internet Mail Server and the Solaris ISP Server Directory Service must be installed on different machines. Refer to *Sun Internet Mail Server 3.5 Advanced Installation Guide* for instructions for installing Sun Internet Mail Server. Refer to Chapter 4 for more information on installing the Sun Directory Services component of Solaris ISP Server.
- The two machines must be able to reach one another over the network. The Sun Internet Mail Server directory will be configured as a slave of the Solaris ISP Server directory, and the master must be able to propagate data to the slave over the network.
- The replication of data between the two directories is not secure. You should use SunScreen SKIP (included with Solaris ISP Server) to encrypt network communication between the two hosts. Some form of network encryption is required for the replication to be considered secure.
- The Sun Internet Mail Server directory does not support the `sunds` (or CRAM MD5) method of encrypting protected data such as user passwords. One of the configuration steps performed by the integration tools is to convert the Solaris ISP Server directory to use the weaker `crypt` method for the encryption of protected data.
- The Solaris ISP Server Directory Service must be version 2.0 (the 2.0 Host Configuration tool can be used to upgrade a Solaris for ISPs 1.0 installation).
- The Sun Internet Mail Server directory should not be maintained by binding as the administrator DN. Changes made by the administrator will not be propagated to the master directory. The SIMS administration tool binds to the directory as the administrator, and so should not be used to create or modify entries.

- The configuration tools included with Solaris ISP Server must be run on the Solaris ISP Server host and the Sun Internet Mail Server host. The order in which you run the configuration scripts is unimportant, so you may safely configure either directory at any time.

Integration Tools

This section describes the files and scripts used in the integration process. All of the tools are available when the Solaris ISP Server directory services component is installed on a machine.

Since many files must be copied to the Sun Internet Mail Server host, everything you will need to copy is bundled in packages which you can copy to and install on the Sun Internet Mail Server host. The file `/etc/opt/SUNWisp/ldap/sunds/sims/sims_int.tar.Z` contains all of the packages you need to perform the integration on the Sun Internet Mail Server host.

The following integration commands are located in `/opt/SUNWisp/ldap/sunds/sbin`:

`addusers`	Creates user entries in the Solaris ISP Server directories using the `sims_users.ldif` file created when the Sun Internet Mail Server directory is reconfigured. You only need to run this if you do not have the mail users' data when you upgrade the Solaris ISP Server directory.
`sims2sisp`	Configures a Sun Internet Mail Server directory to be a slave of a Solaris ISP Server directory, updates the directory schema with new object classes and attributes from the Solaris ISP Server schema, and creates an ldif file that can be used to add existing user entries to the Solaris ISP Server directory.
`sisp2sims`	Configures a Solaris ISP Server directory to replicate its data to a Sun Internet Mail Server directory and adds user entries from that directory if an ldif file is available.
`undosims`	Reverses the configuration changes made by `sisp2sims` on a Solaris ISP Server directory. Only the replication configuration is removed;

	any entries that were added or altered remain unchanged.
`undosisp`	Reverses the configuration changes made by `sims2sisp` on a Sun Internet Mail Server directory. The replication configuration is removed, but any entries that were added or altered remain unchanged.

In addition to these commands, you will need to use the files that contain Solaris ISP Server schema information. These files are bundled in a package in the `sims_int.tar.Z` file that you copy to the Sun Internet Mail Server directory host.

`SUNWisp.dsserv.at.conf`	Defines attributes used by Solaris ISP Server object classes in the extended schema.
`SUNWisp.dsserv.oc.conf`	Defines the `ispSubscriber`, `ispAdministrator`, `ispService`, and `ispManagedService` object classes used in the Solaris ISP Server directory schema.

Integration Procedures

These procedures explain the steps you need to take to configure an existing installation of Sun Directory Services from Solaris ISP Server and an existing installation of Sun Internet Mail Server to interoperate and share subscriber data. These procedures assume that you have already installed the software on separate machines.

You do not need to install both products before you run the configuration procedures, but if you have not you may need to repeat steps later when more information is available.

The recommended order for the integration procedures is

1. Update the Sun Internet Mail Server directory using the `sims2sisp` script, and copy the output ldif file of users from the mail directory to the Solaris ISP Server directory host.
2. Update the Solaris ISP Server directory host using the `sisp2sims` script with the output file created by `sims2sisp`.

If the ldif file containing mail users from the Sun Internet Mail Server directory is unavailable when you update the Solaris ISP Server directory, you can run the `addusers` script when the ldif file is available.

If you want to undo the integration procedures, you can run `undosims` and `undosisp` to revert to the original configurations of the Sun Directory Services servers; these scripts will not remove entries from the directory, only change the configurations so that the Sun Internet Mail Server directory is no longer a slave.

▼ To Update the Sun Internet Mail Server Directory:

1. **Make sure that the Sun Directory Services component of Solaris ISP Server 2.0 has been installed on a machine.**

   A Solaris ISP Server 2.0 installation of Sun Directory Services is required because it includes the required scripts and schema changes that allow you to configure the Sun Internet Mail Server directory as a slave.

2. **Create a temporary directory on the Sun Internet Mail Server host where you can store the packages you need to install.**

   Since you only need this directory until the packages are installed, use `/tmp`. For example,

```
# mkdir /tmp/sims/
```

3. **Copy the `sims_int.tar.Z` file from the Solaris ISP Server directory host to the directory you just created on the Sun Internet Mail Server host.**

   This archive is installed to `/etc/opt/SUNWisp/ldap/sunds/sims/` by default.

4. **Log in to the Sun Internet Mail Server host, become superuser (`root`), and change directory to where the `sims_int.tar.Z` file is located:**

```
simshost% su root
Password: # cd /tmp/sims
```

5. **Uncompress and unpack the archive to get the packages:**

```
# zcat sims_int.tar.Z | tar xvf -
```

This will create a package directory for the SUNWixsim package. There may be other packages with locale-specific data if your version of the Solaris ISP Server software supports languages other than English.

6. Install all of the packages that are extracted from the archive:

```
# ls
SUNWixsim

# pkgadd -d . SUNWixsim
```

The package installs the scripts you will need in /opt/SUNWisp/ldap/sunds/sbin. You may install these to a different location using the –R option to pkgadd; for example

```
# pkgadd -R /tmp -d . SUNWixsim
```

installs the scripts in /tmp/ldap/sunds/sbin.

The configuration files required to update the Sun Directory Services configuration are copied to /etc/opt/SUNWisp/ldap/sunds/default.

7. Run the sims2sisp script, specifying the host name of the Solaris ISP Server directory and the distinguished name and password needed to bind to the Sun Internet Mail Server directory.

The script is installed in /opt/SUNWisp/ldap/sunds/sbin/ by default.

sims2sisp –h *sispHost* –D *bindDN* [–w *bindPassword*]

Note that the host is the Solaris ISP Server directory host; this names the host that localhost will be a slave to. The default port is 389.

The –w flag is optional. If you do not specify a password, the script will prompt you to enter one. Using –w to pass the password automatically may be insecure, and you should not use it.

For example:

```
# ./sims2sisp -h directory1 -D "cn=mailadmin,o=MyISP,c=US"
Please enter the LDAP Administrator password:
```

The Sun Internet Mail Server directory has now been reconfigured as a slave and restarted. If there were any user entries in the directory, there will be a file named sims_users.ldif in the current directory.

Note - The new users in the ldif output file from `sims2sisp` contain the same relative distinguished names they had in the Sun Internet Mail Server directory. If the tree structures in the two directories do not match, the entries may not be added because a parent node does not exist.

For example, in the Sun Internet Mail Server directory, the relative dn might be "ou=People,ou=subdomain,o=Organization,c=US." If the "ou=subdomain,o=Organization,c=US" node does not exist in the Solaris ISP Server directory, all of the users beneath this "ou=People" node will not be added.

Be sure to create the `organizationalUnit` entries you need in the Solaris ISP Server directory before you attempt to add the new user data.

8. **Copy the `sims_users.ldif` file to the Solaris ISP Server directory host, and complete the procedure "To Update the Solaris ISP Server Directory."**

▼ To Update the Solaris ISP Server Directory:

1. **Locate the `sims_users.ldif` file that was created when you updated the Sun Internet Mail Server directory. This file will be used to add the Sun Internet Mail Server users to the Solaris ISP Server directory.**

2. **Log in to the Solaris ISP Server host, become superuser (`root`), and change directory to `/opt/SUNWisp/ldap/sunds/sbin`:**

```
sisphost% su root
Password:
# cd /opt/SUNWisp/ldap/sunds/sbin
```

3. **Run the `sisp2sims` script, specifying the host name of the Sun Internet Mail Server directory; the distinguished name and password needed to bind to the Solaris ISP Server directory. Add full path name to the `sims_users.ldif` file if it is available:**

   `sisp2sims –h` *simsHost* `[–p` *port*`] –D` *bindDN* `[–w` *bindPassword*`] [–f` *simsLDIFfile*`]`

   The `–w` flag is optional. If you do not specify a password, the script will prompt you to enter one. Using `–w` to pass the password automatically may be insecure, and you should not use it.

Note that the host is the Sun Internet Mail Server directory host; this names the host that the current host will be a master of. The default port is 389.

The –`f` option names an ldif file with user entries extracted from the Sun Internet Mail Server directory using `sims2sisp`. If this file is unavailable when you update the directory configuration, you will need to run `addusers` later. See the procedure "To Add Sun Internet Mail Server Users to the Solaris ISP Server Directory."

For example:

```
# sisp2sims -h mail1 -D "cn=ISPadmin,o=MyISP,c=US" -f /tmp/sims_users.ldif
Please enter the LDAP Administrator password:
```

The Solaris ISP Server directory has now been reconfigured as a master of the Sun Internet Mail Server directory and restarted. Replication of the directories will begin if the Sun Internet Mail Server has already been configured as a slave.

Note - The version of Sun Directory Services included with Sun Internet Mail Server 3.5 does not support the `sunds` or CRAM MD5 method of encrypting protected data (such as passwords). One of the integration steps performed is to convert the value of `protected` to `crypt` in the directory configuration file (`dsserv.conf`). You must use `crypt` for the replication with Sun Internet Mail Server to function properly.

---

4. **If an entry cannot be added because it duplicates an existing entry, its distinguished name will be recorded in `/tmp/duplicates`*nnn*`.ldif`, where *nnn* represents the process id of `addusers`.**

   Refer to the procedure "To Resolve Conflicts After Adding Users" for help with resolving duplicate data.

▼ To Add Users to the Solaris ISP Server Directory:

1. **This procedure assumes that you have run `sims2sisp` to generate an ldif file of users from the Sun Internet Mail Server directory and that you have run `sisp2sims` to reconfigure the Solaris ISP Server directory. If you have not completed these steps, please follow the procedures "To Update the Sun Internet Mail Server Directory:" on page 85 and "To Update the Solaris ISP Server Directory:" on page 87 instead of these steps.**

2. **Copy the** `sims_users.ldif` **file created by the** `sims2sisp` **script from the mail directory host to the Solaris ISP Server directory host.**

3. **Run the** `/opt/SUNWisp/ldap/sunds/sbin/addusers` **script. You will need to specify the dn and password needed to bind to the directory, the full path name to the** `sims_users.ldif` **file.**

   `addusers –D` *bindDN* `[–w` *password*`] –f` *ldifFile*

   The `–w` flag is optional. If you do not specify a password, the script will prompt you to enter one. Using `–w` to pass the password automatically may be insecure, and you should not use it.

   For example:

```
# ./addusers -D "cn=ISPadmin,o=MyISP,c=US" -f /tmp/sims_users.ldif
Please enter the LDAP Administrator password:
```

4. **The script will attempt to create the Sun Internet Mail Server users in the directory using both the** `ispSubscriber` **and the** `emailPerson` **object classes. If an entry cannot be added because it duplicates an existing entry, it will be recorded in** `/tmp/duplicates`*nnn*`.ldif`**, where *nnn* represents the process id of** `addusers`**.**

   An attempted entry is considered a duplicate if the distinguished name and the `userid` attribute match an existing entry. For example, the following entries would be considered duplicates:

```
dn=cn="John Doe (jdoe)",ou="People",o=myisp,c=us
uid=jdoe
mail=John.Doe@myisp.net


dn=cn="John Doe (jdoe)",ou="People",o=myisp,c=us
uid=jdoe
mail=jdoe@virtual.net
```

▼ To Resolve Conflicts After Adding Users:

1. **After you run** `sisp2sims` **or** `addusers` **to create entries for the Sun Internet Mail Server users in the Solaris ISP Server directory, look for the file** `/tmp/duplicates`*nnn*`.ldif` **(where *nnn* is a process id number).**

If the file does not exist, there were no conflicting entries that could not be resolved.

2. **The** `duplicates`*nnn*`.ldif` **file contains the dn of original entries for adding users to the directory. Examine each corresponding entry in the** `sims_users.ldif` **file to determine whether it represents:**

   - A true duplicate which can be edited so that the `emailPerson` attributes are added to the existing `ispSubscriber` entry;
   - A duplicate that occurred because the new entry or the existing entry has incorrect or incomplete data in its `dn` or `userid` attribute.

3. **For true duplicates, you can modify the ldif entries so that they modify (rather than replace) the existing entry, then use the modified ldif file with** `/opt/SUNWconn/bin/ldapmodify` **to update the directory.**

   If you do not have this type of entry, skip these steps and go to Step 4 on page 91

   a. **Copy** `sims_users.ldif` **to another file, such as** `/tmp/modify.ldif`

   b. **Edit the new file and first remove all entries that you do not want to convert to modify entries.**

   c. **Add a** `changetype: modify` **line after each dn that needs to be modified.**

   d. **For a** `changetype: add` **entry, all of the attributes are simply listed. For the** `changetype: modify` **entries, each new attribute must be preceded by an** `add:` *attributeName* **line.**

      For example, the line

      `mailDeliveryOption: mailbox`

      would be changed to

      ```
      add: mailDeliveryOption
      mailDeliveryOption: mailbox
      ```

   e. **Delete attributes that you do not need to add.**

      There may be attributes that you do not need to add. It is likely that the existing attribute already contains all of the required attributes except for the `emailPerson` object class and its attributes. For example, you will not have to modify the `userid` attribute since that already exists and has the correct value in the directory.

      Be sure not to delete the `dn` attribute. It is required for `ldapmodify` to determine which entry to modify.

   f. **Check the format of the file. Each entry should have the following format:**

```
dn: cn="First Last",ou=People,ou=ADomain,o=Organization,c=US
changetype: modify
add: objectClass
objectClass: emailPerson
add: mailDeliveryOption
mailDeliveryOption: mailbox
add: rfc822Mailbox
rfc822Mailbox: uname@ADomain.Organization.com
add: mailQuota
mailQuota: 0
...
```

This data is just an example. The actual attributes and form of the distinguished name may be different for your data.

g. Run `ldapmodify` to add the data to the directory.

You will need to specify the distinguished name and password required to bind to the directory to make changes and the name of the input file. You should use the `–n` to preview the changes and any potential problems before you perform any actual changes. You may also want to use the `–c` option so that `ldapmodify` continues after encountering an error (instead of halting at the first error).

For example:

```
% cd /opt/SUNWconn/bin
% ./ldapmodify -n -c -D "cn=admin,o=Organization,c=US"\
 -w secret -f /tmp/updates.ldif
```

4. For duplicates that result from incorrect or incomplete data in the directory or the input file, you will need to correct the entry that is causing the problem.

For example, if an entry could not be added because it has the same `userid` value as an entry in the directory, you must change either the Solaris ISP Server directory entry or the entries in the ldif file to use a new `userid`.

▼ To Undo Directory Configuration Changes:

The `undosims` and `undosisp` commands allow you to restore the configurations of the Sun Directory Services servers to the state before you ran `sims2sisp` or `sisp2sims`. These scripts remove the master and slave configurations. Changes to entries in the directory are not undone.

If you have reconfigured both directories, you should undo the configuration changes on both machines. If you only undo one configuration, the other server will still be configured to act as a master or slave.

1. **To undo the configuration of the Solaris ISP Server directory server, log on to the machine and become superuser (**`root`**), then run** `/opt/SUNWisp/ldap/sunds/sbin/undosims`**.**

   The script automatically removes the configuration parameters that caused the data to be replicated to the Sun Internet Mail Server directory and restarts the directory service.

2. **To undo the configuration of the Sun Internet Mail Server directory server, first copy the script** `/opt/SUNWisp/ldap/sunds/sbin/undosisp` **to the machine.**

3. **Next, log on to the Sun Internet Mail Server directory host, become superuser (**`root`**), and execute the** `undosisp` **script.**

   The script automatically removes the configuration parameters that caused the directory to be a slave and restarts the directory service.

Maintaining the Directories

Make Changes Only on Solaris ISP Server Host

After reconfiguration, the Solaris ISP Server directory is actually the source of the subscriber data and any other directory information required to support it.

Caution - Do not use the Sun Internet Mail Server administration tools to modify or create entries in the directory.

Make all modifications on the Solaris ISP Server host, using the Sun Directory Services tools (`ladpmodify` or Deja, for example).

Use Network Encryption for Security

The replication of data across the network is insecure. Install the SunScreen SKIP software included with Solaris ISP Server on both directory hosts to encrypt all data passed between the two hosts. Refer to the *SunScreen SKIP User's Guide* for installation and configuration details.

CHAPTER 8

Starting and Configuring the Services

After installing Solaris ISP Server™ software, you must:

- 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 ISP Server software security requirements.

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

Installing Licenses

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 ISP Server software. To initialize more entries, you need a license key. Please refer to 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 Install the Licenses

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*.**
   If Sun Directory Services is not installed on the same machine with the license server, proceed to perform steps 7 and 8.

6. **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`

7. **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`.

Configuring HotJava

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

▼ To Configure HotJava

The Solaris ISP Server 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 access to system properties when it loads.

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

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 *Apply*.**
5. **Select the link to the *Advanced Security* page.**
6. **Configure the system permissions. To configure, select *System Permissions* radio button.**
7. **Click *Add Site* and in the *Add Web Site* text field, enter the host name of the Solaris ISP Server component.**

8. **Click *Apply*.**

Starting Sun Internet Administrator

To manage Solaris ISP Server services through Sun Internet Administrator, you must start Sun Internet Administrator and register the services with Sun Internet Administrator.

▼ To Start Sun Internet Administrator

Before starting Sun Internet Administrator, ensure that the initial entries have been made in Sun Directory Services. Sun Internet Administrator requires a properly configured and running Sun Directory Services server to make the entries. If:

- Sun Directory Services was running when you installed Sun Internet Administrator, the entries have already been initialized.
- You installed Sun Internet Administrator and Sun Directory Services together, the entries have already been initialized.
- Sun Directory Services was not running at the time of installing Sun Internet Administrator, you must initialize the Sun Internet Administrator entries.

1. **If entries have not already been initialized, obtain root access and enter:**
   `# /opt/SUNWixamc/bin/mcdsinit –d` *`DNofDSadmin`* `–n` *`ConsoleAdmin`*

   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.

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

2. **Start HotJava 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.

3. **Log in to get global access to the product and all services this Sun Internet Administrator must manage. After logging in:**

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

   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 online help.**

Note - See Sun Internet Administrator online help.

Starting the Services

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

▼ To Access Components from Sun Internet Administrator

To access a component through Sun Internet Administrator:

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 online 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.

▼ To Access 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) 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/servlet/sismgui`, where *hostname* is the host name of the monitoring software and 2381 is the default port number. You can create Monitors and Probes on Monitor to monitor your network services.
   - 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 online help to start the service.**

Migrating to Sun Internet Services Monitor 1.1

When you migrate from Sun™ Internet Services Monitor™ 1.0 to 1.1:

- Each Client you configured in 1.0 has a corresponding Monitor in 1.1. The Client name is the Monitor name.
- Each type of Monitor you configured on a Client in 1.0 has a corresponding type of Probe on a Monitor in 1.1. The Monitor name is the Probe name. For example,
  - If you specified multiple URIs to test when configuring a Web Monitor in 1.0, a Web Probe is configured for each URI to monitor in 1.1. The Monitor name is used as the Probe name with an incremental number added to each Web Probe's (monitoring one URI) name.
  - If you specified multiple news groups to test when configuring a News Monitor in 1.0, a News Probe is configured for each news group to monitor in 1.1. The Monitor name is used as the Probe name and an incremental number is added to each News Probe's (monitoring one news group) name.
- If the monitoring rate (interval) was less than the timeout, then the interval and timeout are set to be the same. Similarly, if timeout was less than the threshold, then the timeout and threshold are set to be the same.

You can now proceed to:

- Reconfigure the Monitor and Probe settings
- Configure notification messages to be sent when a Probe on a Monitor encounters an event (such as errors, alerts, and timeouts).

CHAPTER 9

Error Messages

The error messages you may receive while installing, upgrading, or uninstalling the software are discussed here for easy reference and recovery.

Host Configuration Error Messages

If you executed `hcstartup` to install Solaris ISP Server components from the browser, you may receive these error messages.

```
Error: Aborting install at user request.
```

If you do not want to save and use the Solaris™ for ISPs™ 1.0 component configuration information during this installation, you must:

- See Chapter 6 and uninstall Solaris for ISPs 1.0 components from the machine.
- See “Removing the Files” on page 78 and remove the files.

```
It looks like another instance of this program is already
running. Only one instance of this program may run at a time.
To verify that another instance is not actually running,
run "ps" and look for "hcstartup", "hchttpd", or "hcbi".  If
you do not find any of these processes, remove the following
files and start this program again:
/tmp/hcstartup.running
/tmp/hcstartup.locale
```

(continued)

```
/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 Exit and do not close the browser window.

To re-enter 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 ISP Server, 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`.

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