

Installation Guide

iPlanet Messaging Server

RELEASE 5.0

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Contents

About This Guide	7
Who Should Read This Book	8
What You Need to Know	8
How This Book is Organized	9
Document Conventions	10
Monospaced Font	10
Bold Monospaced Font	10
Italicized Font	11
Square or Straight Brackets	11
Command Line Prompts	11
Where to Find Related Information	12
Where to Find This Book Online	12
Chapter 1 Installation Overview	13
System Requirements	14
Hardware Requirements	14
Software Requirements	15
Installation Guidelines	15
The Messaging Server Suite	16
Netscape Server Core	16
Netscape Directory Suite	17
Administration Services	17
iPlanet Messaging Applications	18
A Graphical Overview of the Messaging Suite	20
Product Hierarchy and Interaction	21
Port Numbers	21
When and Where to Install each Product	21

Required Information for the iPlanet Delegated Administrator for Messaging Installation	22
Installation Process Overview	23
Configuring an Existing Directory Server	24
Choosing a Configuration Directory Server	24
Administration Domains	24
Choosing a Users/Groups Directory Server	25
Running the <code>ims_dssetup</code> Utility	26
Installation Types	27
Express Installation	27
Typical Installation	27
Custom Installation	28
Silent Installation	28
Chapter 2 Installation Questions	29
Common Questions	30
Component Questions	32
Directory Server Questions	34
Administration Server Questions	45
Messaging Server Questions	47
MMP Questions	53
Chapter 3 Installation Instructions	55
Pre-Installation Checklist	56
Making the Install Files Available for Installation	57
From the Web	57
From the CD	57
Running the setup Program	58
Installation Scenarios and Instructions	59
Scenario One	60
Scenario Two	62
Scenario Three	64
Scenario Four	66
Silent Installation	68
Running the <code>ims_dssetup</code> Utility	69

Appendix A High Availability	71
High Availability Models	71
Asymmetric	72
Symmetric	73
N+1 (N Over 1)	74
Which High Availability Model is Right for you?	76
System Down Time Calculations	76
Installing High Availability	77
Cluster Agent Installation	77
Veritas Cluster Server Agent Installation	78
SunCluster Agent Installation	83
Notes for Multiple Instances of Messaging Server	85
Create a Second Service Group	85
Installation Notes	85
Configuration Notes	86
Appendix B Installing the Messaging Multiplexor	87
Installing and Configuring Multiplexor	87
Before You Install	88
Multiplexor Files	88
Multiplexor Installation	89
Post-Installation Procedures	92
Configuring the MMP to use SSL	93
Creating Additional Instances	95
Modifying an Existing Instance	95
Starting the Multiplexor	96
Sample Messaging Topology	96
Appendix C Un-Installing the Software	101
Why Un-Install?	101
Uninstalling Messaging Server Components	102
Un-Installing High Availability	105
Un-Installing High Availability for Veritas Cluster Server	106
Un-Installing High Availability for SunCluster	106
Index	107

About This Guide

This manual explains how to install iPlanet Messaging Server 5.0 and its accompanying software components. iPlanet Messaging Server 5.0 provides a powerful and flexible cross-platform solution to the email needs of enterprises and messaging hosts of all sizes using open Internet standards.

Topics covered in this chapter include:

- Who Should Read This Book
- What You Need to Know
- How This Book is Organized
- Document Conventions
- Where to Find Related Information
- Where to Find This Book Online

Who Should Read This Book

You should read this book if you are responsible for installing and deploying iPlanet Messaging Server 5.0 at your site.

NOTE The installation program does not give you the option to migrate any existing mailboxes and message queues to the newly installed server. If you choose to migrate your existing data, you must contact Technical Support.

What You Need to Know

This book assumes that you are responsible for installing the Messaging Server software and that you have a general understanding of the following:

- The Internet and the World Wide Web
- iPlanet Administration Server
- iPlanet Directory Server and LDAP
- Netscape Console

How This Book is Organized

This book contains the following chapters and appendix:

- About This Guide (this chapter)
- Chapter 1, “Installation Overview“

This chapter provides much of the information you will need to know before beginning the installation. Some of the topics covered include system requirements, installation options, and descriptions of the various components/products being installed.

- Chapter 2, “Installation Questions“

This chapter lists and describes all the questions that make up the Messaging Server installation and the responses that are expected from you. Depending on the type of installation you are performing, you may or may not see all of the questions listed in this chapter.

- Chapter 3, “Installation Instructions“

This chapter describes four basic installation scenarios that you can choose from, and a checklist/worksheet of the questions that you will be expected to answer for each scenario. Information about how to transfer the install files to the server machine and how to run and use the `setup` program is also included in this chapter.

- Appendix A, “High Availability“

This appendix describes the high availability models and outlines the advantages/disadvantages of each model. It also provides pre- and post-installation instructions and some configuration information.

- Appendix B, “Installing the Messaging Multiplexor“

This appendix contains detailed instructions for installing and starting the Messaging Multiplexor. It also contains sample configuration files. More detailed information about the Messaging Multiplexor can be found in the *iPlanet Messaging Server 5.0 Administrator’s Guide* and *iPlanet Messaging Server 5.0 Reference Manual*.

- Appendix C, “Un-Installing the Software“

This appendix explains why you might want to un-install the Messaging Server and provides instructions for doing so.

Document Conventions

Monospaced Font

Monospaced font is used for any text that appears on the computer screen or text that you should type. It is also used for filenames, distinguished names, functions, and examples.

Bold Monospaced Font

bold monospaced font is used to represent text within a code example that you should type. For example, you might see something like this:

```
./setup  
Sun-Netscape Alliance  
iPlanet Server Products Installation/Uninstallation  
-----
```

```
Welcome to the iPlanet Server Products installation program. This  
program will install iPlanet Server Products and the iPlanet Console  
on your computer.
```

```
It is recommended that you have "root" privilege to install the  
software.
```

```
Tips for using the installation program:
```

- Press "Enter" to choose the default and go to the next screen
- Type "Control-B" to go back to the previous screen
- Type "Control-C" to cancel the installation program
- You can enter multiple items using commas to separate them.

```
For example: 1, 2, 3
```

```
Would you like to continue with installation? [Yes]:
```

In this example, **./setup** is what you would type from the command line and the rest is what would appear as a result.

Italicized Font

Italicized font is used to represent text that you enter using information that is unique to your installation (for example, variables). It is used for server paths and names and account IDs.

For example, throughout this document you will see path references of the form:

```
server-root/msg-serverID/...
```

In these situations, *server-root* represents the directory path in which you install the server, and *msg-serverID* represents the server instance you use when you install it. For example, if you install your server in the directory `/usr/iplanet/server5` and use the server instance `tango`, the actual path is:

```
/usr/iplanet/server5/msg-tango/
```

Square or Straight Brackets

Square (or straight) brackets `[]` are used to enclose optional parameters. For example, in this document you will see the usage for the `setup` command described as follows:

```
./setup [options] [argument]
```

It is possible to run the `setup` command by itself as follows to start the Messaging Server installation:

```
./setup
```

However, the presence of `[options]` and `[arguments]` indicate that there are additional optional parameters that may be added to the `setup` command. For example, you could use `setup` command with the `-k` option to keep the installation cache:

```
./setup -k
```

Command Line Prompts

Command line prompts (for example, `%` for a C-Shell, or `$` for a Korn or Bourne shell) are not displayed in the examples. Depending on which operating system environment you are using, you will see a variety of different command line prompts. However, you should enter the command as it appears in the document unless specifically noted otherwise.

Where to Find Related Information

In addition to this guide, iPlanet Messaging Server 5.0 comes with supplementary information for administrators as well as documentation for end users and developers. Use the following URL to see all the Messaging Server documentation:

<http://docs.iplanet.com/docs/manuals/messaging.html>

Listed below are the additional documents that are available:

- iPlanet Messaging Server 5.0 Administrator's Guide
- iPlanet Messaging Server 5.0 Reference Manual
- iPlanet Messaging Server 5.0 Schema Reference
- iPlanet Messaging Server 5.0 Provisioning Guide
- iPlanet Delegated Administrator for Messaging Installation Guide

The iPlanet Messaging Server product suite contains numerous other products such as Netscape Console, Directory Server, and Administration Server. Documentation for these and other products can be found at the following URL:

<http://docs.iplanet.com/docs/manuals/index.html>

Where to Find This Book Online

You can find the iPlanet Messaging Server 5.0 Installation Guide online in PDF and HTML formats. To find this book, use this URL:

<http://docs.iplanet.com/docs/manuals/messaging/ims50/install/contents.htm>

Installation Overview

This chapter provides important information you need to be familiar with before you begin the installation. It includes the following sections:

- System Requirements
- The Messaging Server Suite
- Product Hierarchy and Interaction
- Installation Process Overview
- Configuring an Existing Directory Server
- Installation Types

System Requirements

This section outlines the minimum hardware and software requirements and installation privileges needed to install iPlanet Messaging Server 5.0. You should make certain that these requirements are met before performing the installation.

Hardware Requirements

The minimum hardware requirements for iPlanet Messaging Server 5.0 are:

- Approximately 500MB of disk space for a standard installation. For production systems, you should plan at least 1GB to support the product binaries.
- 64MB of RAM. For production systems, you should have a minimum of 256MB of RAM; be sure to allocate this accordingly depending on the size of your site, number of users, etc.
- Adequate space for your user mailboxes (message store), database, log files, and message queue directory. These can grow in size dramatically depending on the size of your site, so be sure to allocate space accordingly.
- RAID storage for fast access (optional).

NOTE If you are operating an existing Certificate Management System in "single-copy" mode, you may need temporary disk space equal to at least double the size of the message store. If installation fails and the log reports a lack of space problem, add additional temporary disk space.

Software Requirements

iPlanet Messaging Server 5.0 is supported on the following platforms:

- Solaris 2.6 for Sparc with patch 105591-09 (Shared library patch for C++) and other recommended patches.
- Solaris 8 for Sparc with recommended patches.

A list of recommended patches for Solaris 2.6 and Solaris 8 can be found at the following URL:

<http://access1.sun.com/patch.public/>.

For Messenger Express access, Messaging Server requires a JavaScript-enabled browser. For optimal performance, iPlanet recommends using the following browsers:

- Netscape Navigator 4.7 or later
- Internet Explorer 5.0 or later

Installation Guidelines

This section contains information you need and suggested guidelines you should follow as you prepare for your Messaging Server installation.

Installation Privileges

You must install iPlanet Messaging Server 5.0 logged in as `root`.

Host and Domain Names

The iPlanet installation utilities assume that your host and domain names are defined correctly in your UNIX system files. Make sure that both the `hostname` and `domainname` commands return the correct information before installing iPlanet servers. If your system does not support the `domainname` command, check the domain name in the `/etc/resolv.conf` file.

Directories

The Messaging Server, Directory Server, and Administration Servers are installed into directories referred to as *server-roots*. These directories provide a known file location structure (file directory path) that enables the servers to identify one another.

The Messaging Server Suite

The iPlanet Messaging Server installation contains everything you need to run iPlanet Messaging Server 5.0. The suite of products included in the installation is described throughout the remainder of this section.

Netscape Server Core

During the installation, you will have the option of installing the Netscape Server Core, which contains the products/components described in the following subsections.

Netscape Server Product Core Components (Netscape Console 4.2)

Netscape Console provides the common user interface for all Netscape and iPlanet server products. From it you can perform common server administration functions, such as stopping and starting non-SMTP servers, installing new server instances, and managing user and group information. Netscape Console can be installed stand-alone on any machine on your network and used to manage remote servers.

Netscape Core Java Classes

The Java classes needed to run and support the Netscape and iPlanet server product core components.

Java Runtime Environment (JRE)

The compilers, tools, and binaries needed to run and support the Netscape and iPlanet server product core components.

Netscape Directory Suite

The products in the Netscape Directory Suite are described in the following subsections.

Netscape Directory Server

The Directory Server is iPlanet's LDAP-compliant server that manages directory database services and responds to requests from LDAP clients such as iPlanet Messaging Server 5.0. It runs as the `ns-slaped` process on your machine.

NOTE It is recommended that the Directory Server be installed on a different machine from the Messaging Server.

Netscape Directory Server Console

This is the portion of the Netscape Console designed specifically for use with the Directory Server. The Directory Server Console enables you to perform most Directory Server administrative tasks, such as starting and stopping the server, managing access control, viewing and configuring server logs, backing up and restoring directory databases, etc.

Administration Services

The products in the Administration Services installation component are described in the following subsections.

Netscape Administration Server.

The Administration Server receives communications from the Netscape Console and passes those communications to the appropriate iPlanet server. Your site will have at least one Administration Server for each *server-root* in which you have installed an iPlanet server.

Administration Server Console

This is the portion of the Netscape Console designed specifically for use with the Administration Server. You can perform most Administration Server tasks through the Administration Server Console (for example, starting and stopping servers).

iPlanet Messaging Applications

The products/components in the Messaging Applications installation component are described in the following subsections.

iPlanet Message Store and Message Access

Email messages are delivered by the MTA to the Message Store. Access to the Message Store is provided by Message Access; a server within the Messaging Server. Message Access allows access to the Message Store via HTTP, POP, or IMAP.

Messaging Server provides the foundation for unified messaging services through the storage of email, voice mail, and faxes in one universal Message Store. Access to the message store is available through multiple devices (telephones, PDAs, etc.) and protocols (HTTP, POP, IMAP). The Message Access component is responsible for handling the retrieval of messages from the Message Store.

iPlanet Message Transport Agent (MTA)

The MTA handles tasks such as routing and delivering user mail, SMTP authentication, DNS address resolution, etc. The MTA provides support for features such as hosted domains, domain aliases, server-side filters, etc.

iPlanet Messaging Multiplexor (MMP)

The MMP is a proxy server that acts as a single point of connection to multiple instances of iPlanet Messaging Server 5.0. With the MMP, large-scale mail-service providers can distribute POP and IMAP user mailboxes across many machines to increase messaging capacity. All users connect to the single Multiplexor server, which redirects each connection to the appropriate mail server.

NOTE The MMP is not installed by default; be sure to select it from the menu if you want it installed. You may use either the Typical or Custom installation to install the MMP.

High Availability for iPlanet Messaging Server

High Availability enables server management functions such as expansion of message store capacity and backup and recovery of user folders. iPlanet Messaging Server 5.0 is designed to integrate with the Veritas Cluster Server 1.1 or later and SunCluster 2.2 high availability clustering software.

For information about the various high availability models, configuration information, and installation instructions, see Appendix A, “High Availability.”

NOTE High availability for the Messaging Server is not installed by default; be sure to select it from the menu if you want it installed. You must use the Custom installation to install high availability.

iPlanet Delegated Administrator for Messaging CLI

These command line utilities (CLIs) provide the capability to perform provisioning on domains, users, and groups. They also grant privileges to the Service Administrator and Domain Administrators.

NOTE The iPlanet Delegated Administrator CLIs require iPlanet Delegated Administrator for Messaging 4.5. See “Software Requirements” on page 15 for details.

A Graphical Overview of the Messaging Suite

Figure 1-1 illustrates the relationships between the various products and components within the Messaging Suite.

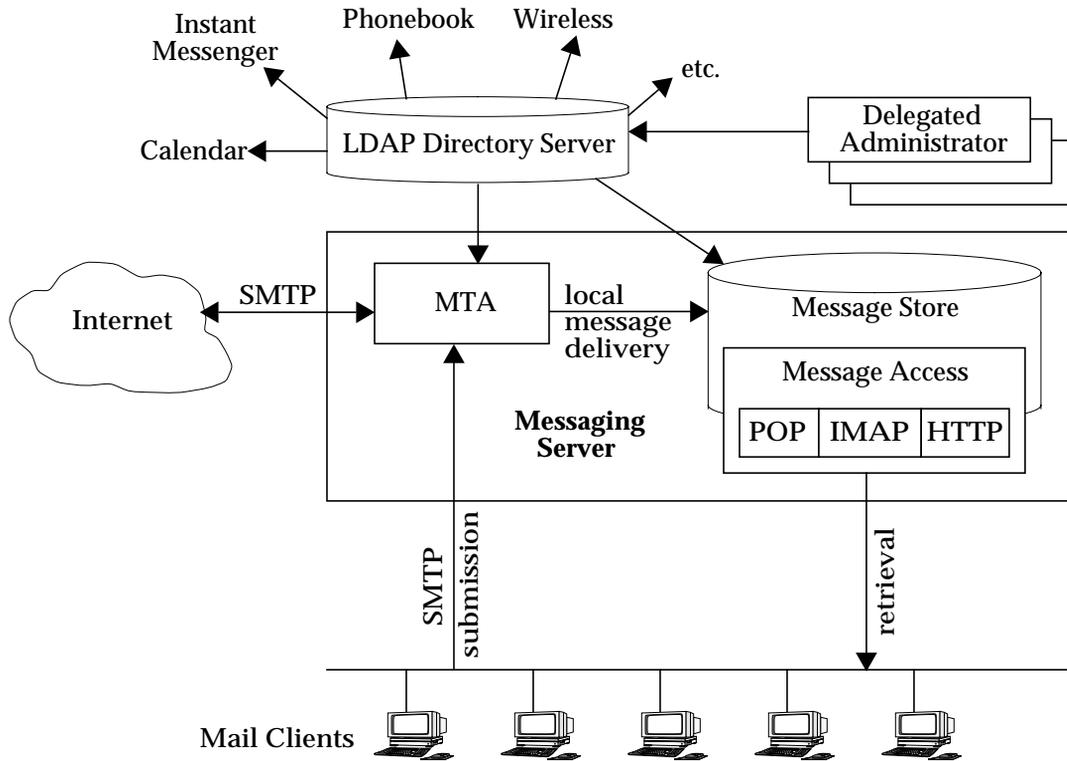


Figure 1-1 Messaging Suite Products and Components

Product Hierarchy and Interaction

Messaging Server 5.0 requires the following:

- Netscape Enterprise Server 4.1 Service Pack 2
- Netscape Administration Server 4.2
- Netscape Directory Server 4.11 or 4.12
- iPlanet Delegated Administrator for Messaging

These products are all included on the Messaging Server CD and in the archive file. Enterprise Server is required for iPlanet Delegated Administrator.

Port Numbers

Both Enterprise Server and Messenger Express use port 80 as the default port; be sure to specify different port numbers for one or both of these servers to avoid any conflicts. Additionally, both `sendmail` and SMTP use port 25 by default; you must stop `sendmail` before installing the Messaging Server.

TIP It is recommended that you record all of the port numbers you specify during the installation, along with the specific component using that port number.

When and Where to Install each Product

Although the Directory Server is included, you may chose to use an existing Directory Server and not install the one that is included with the Messaging Server. If you do so, you must run `ims_dssetup` against that existing Directory Server prior to installing the Messaging Server. See “Configuring an Existing Directory Server” on page 24 for more information.

The Enterprise Server must be installed on the same machine as the Delegated Administrator, but the Messaging Server can be installed on a separate machine. Since the existence of the Enterprise Server is required for the Delegated Administrator, you must install the Enterprise Server before you install the Delegated Administrator.

The Delegated Administrator should be installed immediately after the Messaging Server; if you start to provision the Messaging Server before installing the Delegated Administrator, you may encounter some complications in the Delegated Administrator installation.

TIP It is recommended that you install the Messaging Server first, then the Enterprise Server, then the Delegated Administrator.

Required Information for the iPlanet Delegated Administrator for Messaging Installation

The Delegated Administrator requires the following information from the Messaging Server installation; make sure you record this information accurately before or during the Messaging Server installation:

- Fully Qualified hostname and domainname of the Users/Groups Directory Server
- Port number on which the Users/Groups Directory Server listens
- Suffix for this Users/Groups Directory Server
- Bind DN and password of the Directory Manager
- TCP/IP port numbers for POP3, IMAP, SMTP, and Messenger Express (for the Delegated Administrator, you need to record the Messenger Express port number)
- Login ID and password for the Service Administrator (also known as the Top-Level Administrator for the Delegated Administrator)
- Messaging Server hostname and domainname
- Hostname and port of the Web server that will host the iPlanet Delegated Administrator for Messaging

Installation Process Overview

The basic steps that should be followed for installing the iPlanet Messaging Server and its suite of products are listed below:

1. Review the system requirements and verify that they have been met.
2. Select an installation type.
3. Gather the information you'll need to complete the installation based on the type of installation you want to perform (for example, IDs, passwords, etc.).
4. Determine whether you want to use an existing Directory Server or install the Directory Server that is included with the Messaging Server.
 - a. If you chose to use an existing Directory Server, you must run the `ims_dssetup` script on this existing Directory Server before you install Messaging Server. For more information, see "Configuring an Existing Directory Server," on page 24.
 - b. If you do not have an existing Directory Server or you chose not to use an existing Directory Server, you must install the Directory Server provided with the Messaging Server installation. The Messaging Server installation creates only one instance of the Directory Server.

NOTE If you install the Directory Server that comes with the Messaging Server, you do not need to run the `ims_dssetup` program; this is only used for a pre-existing Directory Server to prepare it for the Messaging Server installation.

5. Make sure that the install files are available, either from the product CD or downloaded from the World Wide Web.
6. Run the following command to stop `sendmail`:

```
/etc/init.d/sendmail stop
```
7. Run the `setup` program to perform the installation.
8. Verify that the installation was successful.

Configuring an Existing Directory Server

This section provides information for configuring an existing Directory Server in preparation for a Messaging Server installation. If you do not have an existing Directory Server, or you want to install and configure the Directory Server that comes with the Messaging Server, you do not need to read this section.

NOTE iPlanet Messaging Server 5.0 is compatible with Netscape Directory Server version 4.11 or 4.12. To configure an existing Directory Server, run the `ims_dssetup` utility. (See “Running the `ims_dssetup` Utility” on page 26.)

Choosing a Configuration Directory Server

All iPlanet servers use an instance of the Directory Server to store configuration information. This information is stored in the `o=NetscapeRoot` directory tree. Your configuration directory is the Directory Server that contains the `o=NetscapeRoot` tree used by your servers. For more information, refer to your Directory Server documentation.

When setting up your Directory Servers, you will want to centralize the administrative configuration settings on a single LDAP server and use it to host the configurations of any number of iPlanet Servers. In this way, when you open Netscape Console for any server, you will see all the other servers that are using the same LDAP server as the Configuration Server directory.

Administration Domains

On any Configuration Directory Server, you can group your servers under different administration domains for increased manageability. When you first install a Directory Server and choose it to be your Configuration Directory Server, you can specify an Administration Domain.

You can have as many administration domains as you wish. Each administration domain can have its own set of global preferences, such as resource editor extensions. Additionally, each administration domain can define its own default Users and Groups directory URL.

Choosing a Users/Groups Directory Server

For increased manageability, when setting up iPlanet Messaging Server 5.0, it is recommended that you specify one Directory Server as the Configuration Directory Server and another Directory Server for Users and Groups.

When you install the Messaging Server, there are two ways to specify your Users/Groups Directory Server:

- Install Netscape Console, Directory Server, and Messaging Server.

When you install a Directory server, you can specify it to be your Users/Groups server. If you want to specify another Directory Server for Users and Groups, you can specify that information during the installation process when the Directory Server gathers installation information.

- Install Netscape Console and Messaging Server.

In this case, you need to know which Configuration Directory Server and administration domain you will be using. The installation program automatically detects the Users and Groups LDAP information from the Configuration Directory Server on that administration domain.

If you want to specify a server other than the what the installation program suggests, you can run `ims_dssetup` on the Configuration Directory Server and specify another Users/Groups Server. You must then also run `ims_dssetup` on the directory you specified as your Users/Groups Server.

NOTE After completing the installation, you can use Netscape Console to change the Users and Groups Directory that your iPlanet Messaging Server 5.0 uses, regardless of what was specified during the installation.

Running the `ims_dssetup` Utility

The `ims_dssetup` utility is found in the `msg` subdirectory of the directory where you downloaded the install files. The `ims_dssetup` utility will ask you for the following:

- Directory Server Root
This is the full path of the directory where your Directory Server is installed.
- Select a Directory Server instance from a list of Directory Server instances.
- The base suffix for the DC tree (default is `o=internet`).
- The base suffix under which the users/groups data will be entered.
- Do you want to update the schema files?
- Do you want to configure new indexes?
- Enter the schema directory (default is `config` subdirectory of the directory where the `ims_dssetup` utility is located).

At this point, you are provided with a summary of the options you have selected and asked if you want to continue. Answer `yes` to continue or `no` to exit and start over.

NOTE The `ims_dssetup` utility is actually a Perl script called `ims_dssetup.pl`. You must have `perl5` available on your system to run it. For more information, see “Running the `ims_dssetup` Utility” on page 69.

Installation Types

The iPlanet Messaging Server 5.0 installation program provides four types of installation:

- Express Installation
- Typical Installation
- Custom Installation
- Silent Installation

Each type of installation is described in the following subsections.

Express Installation

This type of installation performs a "quick" installation. Because most options at this level are automatically configured with default values, it is recommended for novice users. Use Express Installation if you just want to evaluate iPlanet Messaging Server 5.0.

NOTE Because Express Installation does not offer you the choice of selecting your server port number or your directory suffix, you should not use it for actual production installations.

Typical Installation

This type of installation is more complex than the Express level. Some options are automatically configured with default values, but some require that you choose or enter the values. Typical Installation is recommended for intermediate users or for any installation that does not require custom configuration. Use this type of installation if you are performing a standard installation of iPlanet Messaging Server 5.0.

Custom Installation

This is the most complex type of installation. You must choose and enter all configuration options. Custom Installation is recommended for expert users only. Use this type of installation if you want to perform advance activities during installation such as specifying non-default network interface bindings or a non-default message store location.

Silent Installation

When you install Messaging Server with the `setup -k` command, a cache file called `install.inf` is automatically created in the `server-root/setup` directory. This file contains all the responses to the installation prompts.

By running a silent installation, you instruct the `setup` program to read the `install.inf` file. The `setup` program uses the responses in this file rather than ask you the same questions again. All the responses in the `install.inf` file are automatically applied as the new installation parameters.

Use this type of installation if you want to automate your installation process when installing more than one instance of the Messaging Server. This feature is especially useful for installing several servers in your enterprise.

Since the `setup` program reads the `install.inf` cache file for the installation parameters, you should be sure to edit this file as necessary for your next installation. For example, the host name for your next installation might be different than the one recorded in the cache file.

Instructions for running the `setup` program for a Silent installation are provided in Chapter 3, "Installation Instructions."

Installation Questions

This chapter provides a description of all the questions you may be asked during an installation. Depending on your installation options (for example, whether you are performing a Typical or Custom installation), you may or may not see all of the questions described in this chapter.

NOTE The questions are not presented in any particular order. To determine which questions you will need to answer and in what order, GO TO THE NEXT CHAPTER.

The questions in the Messaging Server installation are divided into the following major categories:

- Common Questions
- Component Questions
- Directory Server Questions
- Administration Server Questions
- Messaging Server Questions
- MMP Questions

Common Questions

You will see the questions in this section regardless of which type of installation you are performing.

1. Welcome Screen

Welcome to the iPlanet Server Products installation program. This program will install iPlanet Server Products and the iPlanet Console on your computer.

It is recommended that you have "root" privilege to install the software.

Tips for using the installation program:

- Press "Enter" to choose the default and go to the next screen
- Type "Control-B" to go back to the previous screen
- Type "Control-C" to cancel the installation program
- You can enter multiple items using commas to separate them.
For example: 1, 2, 3

Would you like to continue with installation? [Yes]:

This is the first screen you will see. It reminds you that you must have the privileges of a `root` user in order to perform the installation, and also provides some keyboard shortcuts and instructions for how to select multiple items from a menu. Be sure to read this screen, then answer `yes` or press Return to continue with the installation.

2. License Agreement

BY INSTALLING THIS SOFTWARE YOU ARE CONSENTING TO BE BOUND BY AND ARE BECOMING A PARTY TO THE AGREEMENT FOUND IN THE LICENSE.TXT FILE. IF YOU DO NOT AGREE TO ALL OF THE TERMS OF THIS AGREEMENT, PLEASE DO NOT INSTALL OR USE THIS SOFTWARE.

Do you agree to the license terms? [No]:

Read the license agreement and answer `yes` to this question to continue. The license agreement is located in the `LICENSE.txt` file in the directory where you downloaded the installation software.

3. Install iPlanet Servers

Select the items you would like to install:

1. iPlanet Servers

Installs iPlanet Servers with the integrated Netscape Console onto your computer.

2. Netscape Console

Installs Netscape Console as a stand-alone Java application on your computer.

To accept the default shown in brackets, press the Enter key.

Select the component you want to install [1]:

This Installation Guide will not cover installing just the Netscape Console. Refer to the Netscape Console documentation if you want more information. Select option 1 from this menu to continue.

4. Installation Type

Choose an installation type:

1. Express installation

Allows you to quickly install the servers using the most common options and pre-defined defaults. Useful for quick evaluation of the products.

2. Typical installation

Allows you to specify common defaults and options.

3. Custom installation

Allows you to specify more advanced options. This is recommended for experienced server administrators only.

To accept the default shown in brackets, press the Enter key.

Choose an installation type [2]:

Select an installation type from this menu. For a more detailed description of each installation type, see “Installation Types” on page 27.

5. Installation Location (*server-root*)

This program will extract the server files and install them into a directory you specify. That directory is called the server root in the product documentation and will contain the server programs, the Administration Server, and the server configuration files.

To accept the default shown in brackets, press the Enter key.

Install location [/usr/iplanet/server5]:

Specify the desired installation location, or press Return to accept the default. This installation location is referred to as the *server-root* in the remainder of this document.

Component Questions

The questions in this section relate to the Messaging Server suite of products and which ones you would like to install.

6. iPlanet Server Products Components

iPlanet Server Products components:

Components with a number in () contain additional subcomponents which you can select using subsequent screens.

1. Netscape Server Products Core Components (3)
2. Netscape Directory Suite (2)
3. Administration Services (2)
4. iPlanet Messaging Suite (5)

Specify the components you wish to install [All]:

Specify which products/components in the Messaging Server suite you want to install. For a detailed description of each product/component, see “The Messaging Server Suite” on page 16.

7. Netscape Server Products Core Components

Netscape Server Products Core Components components:

Components with a number in () contain additional subcomponents which you can select using subsequent screens.

1. Netscape Server Products Core Components
2. Netscape Core Java classes
3. Java Runtime Environment

Specify the components you wish to install [1, 2, 3]:

Specify which of the Netscape Server Products Core components you want to install. See “Netscape Server Core” on page 16 for details on each component.

8. Netscape Directory Suite Components

Netscape Directory Suite components:

Components with a number in () contain additional subcomponents which you can select using subsequent screens.

1. Netscape Directory Server
2. Netscape Directory Server Console

Specify the components you wish to install [1, 2]:

Specify which of the Netscape Directory Suite components you want to install. See “Netscape Directory Suite” on page 17 for details on each component.

9. Administration Services Components

Administration Services components:

Components with a number in () contain additional subcomponents which you can select using subsequent screens.

1. Netscape Administration Server
2. Administration Server Console

Specify the components you wish to install [1, 2]:

Specify which of the Administration Services components you want to install. See “Administration Services” on page 17 for details on each component.

10. iPlanet Messaging Applications Components

iPlanet Messaging Applications components:

Components with a number in () contain additional subcomponents which you can select using subsequent screens.

1. iPlanet Message Store and Message Access
2. iPlanet Internet Message Transport Agent
3. iPlanet Messaging Multiplexor
4. High Availability for iPlanet Messaging Server
5. iPlanet Delegated Administrator Command Line Utilities

Specify the components you wish to install [1, 2, 5,]:

Specify which iPlanet Messaging Applications components you want to install. See “iPlanet Messaging Applications” on page 18 for details on each component.

Directory Server Questions

The questions in this section relate to the Directory Server. The questions you will see and the answers you are expected to provide differ depending on your specific installation scenario.

11. Fully Qualified Domain Name of the installation machine

Enter the fully qualified domain name of the computer on which you’re installing server software. Using the form

```
<hostname>.<domainname>
```

Example: eros.airius.com.

To accept the default shown in brackets, press the Enter key.

Computer name [budgie.siroe.com]:

Specify the fully qualified domain name of the machine on which you are installing the server software.

12. System User and System Group

Choose a Unix user and group to represent the iPlanet server in the user directory. The iPlanet server will run as this user. It is recommended that this user should have no privileges in the computer network system. The Administration Server will give this group some permissions in the server root to perform server-specific operations.

If you have not yet created a user and group for the iPlanet server, create this user and group using your native UNIX system utilities.

To accept the default shown in brackets, press the Return key.

System User [nobody]:

System User and System Group are configuration variables used to set ownership for the configuration files and directories that are shared by all the servers in the *server-root* (for example, SSL key/cert files, LDAP tools, libraries, etc.). Any server installed in the same *server-root* would have the same privileges in terms of accessing this information.

The default for both the system user and group is *nobody* because this account should already exist on all UNIX systems. It is recommended that rather than using the default, you create a new user for running your Messaging Server (for example, *imsuser*). This new user must belong to the group *nobody*.

NOTE The system group ID should be the same as the one used for the Directory Server so that the Messaging Server has access to configuration and security data. For security reasons, it is recommended that this user ID does not have any privileges elsewhere on the system.

13. LDAP URL of the Directory Server

iPlanet Server Products require an LDAP-based Directory Server for the administration of server configuration. This server contains the Configuration Directory.

Enter the non-secured LDAP URL of the server that contains the Configuration Directory using the form:

```
ldap://<hostname>:<port>
```

```
URL of Directory Server [ldap://budgie.siroe.com:389/]:
```

Specify the LDAP URL of your existing Directory Server in the form `ldap://hostname:port`. To determine the *port* that the Directory Server is using, check the `slapd.conf` file in this Directory Server's `server-root/slapd-serverID/config` directory. See your Directory Server documentation for detailed information.

14. Administration Domain in the Configuration Directory

Please specify the name of the Administration Domain in the Configuration Directory where your server configuration information is to be stored.

You must have already been granted write access to this Administration Domain in order to install the software.

To accept the default shown in brackets, press the Enter key.

```
Administration Domain name [siroe.com]:
```

You may use the same domain name that you used for your Configuration Directory Server, or some other Administration Domain that you may have created in your Configuration Directory Server. The Administration Domain is part of the Configuration Directory Server; if you are managing multiple software releases at the same time, or are managing information about multiple domains, you can use the Administration Domain to keep them separate.

You are asked this question if you chose to install Messaging Server with an existing Directory Server.

15. Login ID and password of the Configuration Server Administrator

Enter the User ID or Distinguished Name of the administrator who is authorized to access the Configuration Directory at

```
ldap://budgie.siroe.com:6892/
```

Configuration Admin ID or DN: [admin]:

This is the username and associated password of the account that can make configuration changes to the servers through Netscape Console. The Configuration Server Administrator has administration privileges over all of the servers (such as iPlanet Messaging Server 5.0) that use the Configuration Directory Server instance, but not over the Configuration Directory Server itself.

You are asked this question if you chose to use an existing Configuration Directory Server, and you install any server that will use this existing Configuration Directory Server, or when you run the `ims_dssetup` utility to prepare this existing Configuration Directory Server for a Messaging Server installation. The default is `admin`.

16. Register with an existing Directory Server?

Netscape server information is stored in the Netscape configuration directory server, which you may have already set up. If so, you should configure this server to be managed by the configuration server. To do so, the following information about the configuration server is required: the fully qualified host name of the form `<hostname>.<domainname>` (e.g. `hostname.domain.com`), the port number, the suffix, and the DN and password of a user having permission to write the configuration information, usually the Netscape configuration directory administrator.

If you want to install this software as a standalone server, or if you want this instance to serve as your Netscape configuration directory server, press Enter.

Do you want to register this software with an existing Netscape configuration directory server? [Yes]:

If you answer `yes` to this question, make certain that your existing Configuration Directory Server is up and running, and that you have run the `ims_dssetup` script against it to prepare it for this Messaging Server installation. For more information, see “Configuring an Existing Directory Server” on page 24.

17. Fully Qualified Domain Name of the existing Configuration Directory Server in the form *hostname.domainname*

Enter the fully qualified domain name of the Netscape configuration directory server host in the form <hostname>.<domainname> (e.g. hostname.domain.com).

Netscape configuration directory server host name:

Specify the fully qualified domain name of the machine on which the existing Configuration Directory Server resides.

18. Port number on which the Configuration Directory Server listens

Please specify the port number on which the Netscape configuration directory server listens.

Netscape configuration directory server port number [389]:

To determine the *port* that the server is using, check the `slapd.conf` file in this Directory Server's `server-root/slapd-serverID/config` directory. See your Directory Server documentation for detailed information.

You are asked this question if you are installing the Messaging Server with an existing Configuration Directory Server.

19. Login ID and password of the Configuration Server Administrator

To write configuration information into the Netscape configuration directory, you must bind to the server as an entity with the appropriate permissions. Usually, the Netscape configuration directory administrator is used for this purpose, although you can give other directory accounts the proper access.

Netscape configuration directory server administrator ID [admin]:

The Configuration Server Administrator can make configuration changes to the servers through Netscape Console . This user has administration privileges over all of the servers (such as iPlanet Messaging Server 5.0) that use the Configuration Directory Server instance, but not over the Configuration Directory Server itself.

You are asked this question if you do not have an existing Configuration Directory Server and/or you chose to install the one included with the Messaging Server software. You are prompted for the password twice.

20. Administration Domain

The Administration Domain is a part of the configuration directory server used to store information about Netscape software. If you are managing multiple software releases at the same time, or managing information about multiple domains, you may use the Administration Domain to keep them separate.

If you are not using administrative domains, press Enter to select the default. Otherwise, enter some descriptive, unique name for the administration domain, such as the name of the organization responsible for managing the domain.

```
Administration Domain [siroe.com]:
```

Specify the Administration Domain; refer to your Directory Server documentation for information about Administration Domains.

You are asked this question if you do not have an existing Directory Server and/or you are installing the one included with the Messaging Server.

21. Directory Server network port

The standard directory server network port number is 389. However, if you are not logged as the superuser, or port 389 is in use, the default value will be a random unused port number greater than 1024. If you want to use port 389, make sure that you are logged in as the superuser, that port 389 is not in use, and that you run the admin server as the superuser.

```
Directory server network port [389]:`
```

Specify the Directory Server network port number.

You are asked this question if you do not have an existing Directory Server and/or you are installing the one included with the Messaging Server.

22. Unique ID for this Directory Server

Each instance of a directory server requires a unique identifier. Press `Enter` to accept the default, or type in another name and press `Enter`.

```
Directory server identifier [budgie]:
```

This is the unique identifier for this instance of the Directory Server; each Directory Server instance must have a unique identifier, called a *serverID*. The installation program automatically adds the prefix “slapd-” to the name you specify. For example, if you name the server instance `tango`, the installation program creates the *serverID* called `slapd-tango`.

23. Suffix

The suffix is the root of your directory tree. You may have more than one suffix.

```
Suffix [o=siroe.com]:
```

This is the root of your directory tree beneath which users and groups for all hosted domains are defined, including the hosted domain that corresponds to the default domain. The Messaging Server installation program will attempt to provide a reasonable default; you may change this if you like. However, you must provide a properly formatted organizational DN in the following format:

```
o=suffix
```

CAUTION The root suffix you specify here must be the same for the Messaging Server, Directory Server, and Delegated Administrator. If you already have a Directory Server installed, you must use this existing root suffix for the Messaging Server and Delegated Administrator.

You are asked this question if you do not have an existing Directory Server and/or you are installing the one included with the Messaging Server. The suffix you specify here will be created for you.

24. Bind DN and password of the Directory Manager

Certain directory server operations require an administrative user. This user is referred to as the Directory Manager and typically has a bind Distinguished Name (DN) of `cn=Directory Manager`. Press `Enter` to accept the default value, or enter another DN. In either case, you will be prompted for the password for this user. The password must be at least 8 characters long.

Directory Manager DN [`cn=Directory Manager`]:

The Directory Manager has privileges to make changes in the Directory Server schema. This user has overall administrator privileges on the Directory Server and all iPlanet servers that make use of the Directory Server (for example, the Messaging Server) and has full administration access to all entries in the Directory Server.

The default and recommended DN is `cn=Directory Manager`.

25. Do you want another Directory Server to store your Users and Groups data?

If you already have a directory server you want to use to store your data, such as user and group information, answer `Yes` to the following question. You will be prompted for the host, port, suffix, and bind DN to use for that directory server.

If you want this directory server to store your data, answer `No`.

Do you want to use another directory to store your data? [`No`]:

If you answer `yes` to this question, make certain that your existing Users/Groups Directory Server is up and running, and that you have run the `ims_dssetup` script against it to prepare it for this Messaging Server installation. For more information, see “Configuring an Existing Directory Server” on page 24.

26. Fully Qualified hostname and domainname of the Users/Groups Directory Server

Enter the fully qualified domain name of the user directory host of the form <hostname>.<domainname> (e.g. hostname.domain.com).

User directory host name :

Specify the fully qualified hostname and domainname of the machine on which the existing Users/Groups Directory Server resides in the form *hostname.domainname* (for example: budgie.siroe.com).

27. Port number on which the Users/Groups Directory Server listens

Please specify the port number on which the user directory listens.

User directory port number [389]:

To determine the *port* that the server is using, check the `slapd.conf` file in this Directory Server's `server-root/slapd-serverID/config` directory. See your Directory Server documentation for detailed information.

28. Suffix for this Users/Groups Directory Server

Please specify the suffix for the user directory server.

User directory server suffix [o=siroe.com]:

You are asked this question if you are installing the Messaging Server with an existing Users/Groups Directory Server. The suffix you specify here must already exist.

29. Login ID and password for the Users/Groups Server Administrator

In order to add and modify information in the user directory, you must be able to bind to the server as an entity with the correct permissions. This user is usually the Directory Manager, although other users may be given the proper access. You will also be asked to provide the password.

User directory administrator ID [cn=Directory Manager]:

This person has administration privileges for the Users and Groups directories on the Directory Server. You can use different directories for managing server configuration (a Configuration Server) and for users and groups (a Users and Groups Server). The User/Groups Server Administrator should have all privileges over the Users and Groups directory. The default and recommended value is `cn=Directory Manager`.

NOTE The Users/Groups Administrator account is not created by the `ims_dssetup` utility; you must create this account from the Messaging Server installation.

30. Directory Server replication

Replication is used to duplicate all or part of a directory server to another directory server. This can be used for failsafe purposes, to ensure that the directory data is always online and up-to-date in case one server goes down. It is also useful for distributing directory data from a central main repository to remote directory servers.

Do you want to configure this directory server to use replication? [No]:

Replication is used to duplicate all or part of a Directory Server to another Directory Server. This can be used for failsafe purposes, to ensure that the directory data is always online and up-to-date in case one server goes down. It is also useful for distributing directory data from a central main repository to remote Directory Servers.

NOTE For this installation, answer `no`. You can configure the Directory Server to use replication at a later time. Refer to your Directory Server documentation for detailed information and instructions.

31. Sample entries

You may install some sample entries in this directory instance. These entries will be installed in a separate suffix and will not interfere with the normal operation of the directory server.

Do you want to install the sample entries? [No]:

The samples are installed in a separate suffix and will not interfere with the normal operation of this Directory Server.

32. Populate your new Directory Instance with some data

You may wish to populate your new directory instance with some data. You may already have a file in LDIF format to use or some suggested entries can be added. If you want to import entries from an LDIF file, you may type in the full path and filename at the prompt. If you want the install program to add the suggested entries, type the word suggest at the prompt. The suggested entries are common container entries under your specified suffix, such as ou=People and ou=Groups, which are commonly used to hold the entries for the persons and groups in your organization. If you do not want to add any of these entries, type the word none at the prompt.

Type the full path and filename, the word suggest, or the word none [suggest]:

If you want to import entries from an existing LDIF file, specify the full path and filename. If you want the install program to add the suggested entries, type the word “suggest” at the prompt. If you do not want any of these entries, type the word “none” at the prompt. The default is “suggest.”

33. Disable schema checking

If you are going to import an old database immediately after or during installation, and you think you may have problems with your old schema, you may want to turn off schema checking until after the import. If you choose to do this, schema checking will remain off until you manually turn it back on. Netscape recommends that you turn it back on as soon as possible.

Do you want to disable schema checking? [No]:

If you are going to import an old database immediately after or during installation, and you think you may have problems with your old schema, you may want to turn off schema checking until after the import. If you choose to do this, schema checking will remain off until you manually turn it back on. It is recommended that you turn it back on as soon as possible.

Administration Server Questions

The questions in this section relate to the Administration Server. The questions you will see and the answers you are expected to provide differ depending on your specific installation scenario.

34. Administration Server Port

The Administration Server is separate from any of your application servers since it listens to a different port and access to it is restricted.

Pick a port number between 1024 and 65535 to run your Administration Server on. You should NOT use a port number which you plan to run an application server on, rather, select a number which you will remember and which will not be used for anything else.

The default in brackets was randomly selected from the available ports on your system. To accept the default, press return.

Administration port [6910]:

You should pick an unused port number between 1024 and 65535.

NOTE Be sure to note this port number. If you forget to do so, you can find it in the *server-root/admin-serv/config/adm.conf* file.

35. Bind the Administration Server to a specific IP address rather than the default IP address of the current host?

If you want to configure the Administration Server to bind to a specific IP address rather than the default IP address of the current host, enter the address below.

To accept the default shown in brackets, press the Return key.

IP address [192.18.126.126]:

Refer to your Administration Server documentation for detailed information.

36. User name of the Administration Server

The Administration Server program runs as a certain user on your system. This user should be different than the one which your application servers run as. Only the user you select will be able to write to your configuration files. If you run the Administration Server as "root", you will be able to use the Server Administration screen to start and stop your application servers.

Run Administration Server as [root]:

The Administration Server runs as this user who will have write privileges for all of your configuration files. This user should be different from your Directory Server user. The default and recommended user is `root`, which lets you use the Netscape Console interface to start and stop your servers.

NOTE The Administration Server is primarily used to change Users and Groups information. To administer your Directory Server and Messaging Server configurations, it is recommended that you use Netscape Console.

Messaging Server Questions

The questions in this section relate to the Messaging Server. The questions you will see and the answers you are expected to provide differ depending on your specific installation scenario.

37. Unique identifier for this Messaging Server

The instance name is the unique identifier for this installed Messaging Server. It is customary to use the host name as instance name. However, you may choose any name you wish.

The instance name will be prefixed with "msg-" to identify the installed server as a Messaging Server.

Instance Name [budgie]:

This is the unique identifier for this instance of the Messaging Server; each Messaging Server instance must have a unique identifier, called a *serverID*. The installation program automatically adds the prefix "msg-" to the name you specify. For example, if you name the server instance `tango`, the installation program creates the *serverID* called `msg-tango`.

Server identifiers must be a single, unqualified element using only alphanumeric characters, hyphens, and underscores. They cannot contain periods (.) or other punctuation marks or special characters (such as @ # \$ % ^ & *, etc.)

38. Messaging Server hostname and domainname

The Messaging Server responds to requests for a particular host and domain. It is recommended you use the host and domain name of the machine on which you are installing the Messaging Server.

Host Name [budgie.siroe.com]:

This is the host and domain name of the machine where the Messaging Server resides and executes commands. Be sure to specify this in the form *hostname.domainname* (for example: `budgie.siroe.com`).

39. User name of the Messaging Server

The Messaging Server runs as a privileged user. The account should already exist on the system and should be a member of the iPlanet Group.

User Name [mailsrv]:

This is the user ID under which the Messaging Server runs; the Messaging Server must be run as a privileged user.

The messaging data files, such as the message store, are owned by this user, meaning that this user should be highly secure. This user should also be a member of the System Group, but should not be the System User. For security reasons, this user account should have no special privileges on the system. In the course of operation, servers will assign some directory permissions to this user and the Netscape group for certain server-specific operations. The default user ID is mailsrv.

40. Default domain and organization for the Messaging Server

Please enter the default domain and the default organization DN below. The default domain is the domain of unqualified user-id's that do not belong to any particular domain.

The default organization DN should represent the subtree under which all users that belong to the default domain are located. All users that belong to the default domain are managed under this subtree.

Default Domain [budgie.siroe.com]:

Default Organization DN [o=budgie.siroe, o=siroe.com]:

Specify the domain and organization for this Messaging Server. The default domain is the domain of unqualified user IDs that do not belong to any particular domain. The default organization DN should represent the subtree under which all users belonging to the default domain are located. All users belonging to the default domain are managed under this subtree.

41. Distinguished name and password of the Directory Manager

The Directory Manager DN and password.

```
ldap://budgie.siroe.com:389/o=siroe.com
```

User DN:

Certain Directory Server operations require an administrative user. This user is referred to as the Directory Manager and typically has a bind Distinguished Name (DN) of `cn=Directory Manager`. Specify the DN and password for the Directory Manager.

42. Hostname and port of the Web server that will host the iPlanet Delegated Administrator for Messaging

The Messaging Server requires the use of a Delegated Administration Server. The Delegated Administration Server is used by administrators and endusers to manage user accounts and their preferences.

A Delegated Administration Server does not have to exist at the given host and port. It may be installed later.

Host Name [budgie.siroe.com]:

Messaging Server requires the use of a Delegated Administration Server, which is used by administrators and end users to manage user accounts and their preferences.

NOTE A Delegated Administrator server does not have to pre-exist at this specified port and server; it can be installed later.

The hostname must be the name of the machine that will host the Web server for the Delegated Administrator; this machine can be either local or remote. The port number is the port on which that Web server listens.

NOTE If you choose to install the Delegated Administrator client (for example, the Command Line Interface) on a different machine from the Delegated Administrator, then you will be asked for this information in the Delegated Administrator installation. Be sure to record it.

43. Specify whether or not the Messaging Server will be run from behind a firewall

The Messaging Server can route mail through a firewall. The firewall controls access between the Internet and your internal network.

If you choose to operate your Messaging Server behind a firewall, you must specify the fully qualified host name of the Smart Host, which has the Messaging Server routing information.

If your Messaging Server cannot route mail to a recipient's address, it forwards the message to its Smart Host.

[1] Yes, the Messaging Server is behind a firewall.

[2] No, the Messaging Server will not use a firewall.

Will the Messaging Server use a firewall [2]:

If you choose to operate your Messaging Server behind a firewall, you must specify the fully qualified host name of the Smart Host, which has the ability to route messages beyond the firewall.

If your Messaging Server cannot route mail to a recipient's address, it forwards the message to its Smart Host.

44. Primary message store directory

The Messaging Server will use the directory shown below as its primary message store.

Store Directory

[/usr/iplanet/server5/msg-budgie/store/partition/primary]:

This is the path to the message storage area to which messages will be written and from which they will be retrieved. You must specify the absolute path name for this directory. The default location is *server-root/serverID/store/partition/primary*.

45. TCP/IP port numbers for POP3, IMAP, SMTP, and Messenger Express

The Messaging Server uses TCP/IP ports for sending and receiving messages.

POP3 Port [110]:

The default port numbers are:

- POP3 (110)
- IMAP (143)
- SMTP (25)
- Messenger Express (80)

46. Login ID and password for the Service Administrator

The Messaging Server requires a Service Administrator account to exist in the Users Directory Server. The account has privileges to manage the various services of the Messaging Server.

The account will be created and given the necessary privileges.

User ID [ServiceAdmin]:

This is the top-level administrator for the Delegated Administrator. The Messaging Server requires that this account exists in the Users Directory Server; this user has privileges (for example, create, modify, or delete) to manage any user, group, domain, domain organization, mailing list, etc., defined in the directory.

Additionally, the Service Administrator is implicitly granted Store Administrator privileges; for example, they can authenticate as another user via the proxy and perform such functions as checking their quota status.

47. Email address that you want to add to the postmaster group

A Postmaster alias will be created and used to distribute administrative email related to the Messaging Server. Mail sent to the Postmaster will be distributed to the members of the postmaster group. An email address that will be the initial member of the postmaster group is required. The given address (e.g. admin@domain.com) must be a valid address (it will NOT be created during the install).

Do not use an email address that begins with "Postmaster@". This email address is already assigned to the Postmaster alias.

Email Address:

A postmaster group (i.e., email group) will be created by the installation program and you are asked to specify an email address which will be made a member of that group. Any mail addressed to the postmaster in the Users/Groups Directory Server will be sent to this email account.

NOTE The email address you specify for the postmaster is accepted during installation; a postmaster group is added and the email address is added to the postmaster group. However, the email address that you specify may not previously exist in the Directory Server. In this case, a user or group account must be created with this email address, using either the Console or the iPlanet Delegated Administrator for Messaging.

MMP Questions

The questions in this section relate to the Messaging Multiplexor (MMP). You will not see these questions if you did not select the MMP from the iPlanet Messaging Applications Components menu.

48. User ID under which the MMP will run

The Mail Multiplexor runs as a privileged user. The account should already exist on the system and should be a member of the iPlanet Group.

Please enter the Mail Multiplexor user [mmprsv]:

49. LDAP URL for the domain component tree in the Users/Groups Directory Server

The Mail Multiplexor needs access to the domain component tree in the users and groups directory server. Enter the LDAP URL of the DC tree below, e.g., ldap://directory.siroe.com:389/o=internet

Please enter the LDAP URL to the domain component tree [ldap://budgie.siroe.com:389/o=internet]:

Installation Instructions

This chapter describes how to install iPlanet Messaging Server 5.0. It includes the following sections:

- Pre-Installation Checklist
- Making the Install Files Available for Installation
- Running the setup Program
- Installation Scenarios and Instructions
- Silent Installation

Pre-Installation Checklist

At this point, you are almost ready to run the `setup` program and begin the Messaging Server installation. You should be able to answer “yes” to the following questions before you continue:

1. Have you reviewed the system requirements defined in Chapter 1, “Installation Overview” and verified that they have been met?
2. Have you reviewed “Product Hierarchy and Interaction” on page 21 and determined which components you will be installing and where?
3. Have you determined the type of installation you would like to perform and gathered all the necessary info?
4. Have you decided whether you want to use an existing Directory Server or install the one that comes with the Messaging Server?
 - a. If you have an existing Directory Server that you want to use as the Configuration Directory Server, have you run `ims_dssetup` to prepare it for the Messaging Server installation? See “Running the `ims_dssetup` Utility” on page 69 for details.
 - b. If you have an existing Directory Server that you want to use as the Users/Groups Directory Server, have you run `ims_dssetup` to prepare it for the Messaging Server installation? See “Running the `ims_dssetup` Utility” on page 69 for details.

Making the Install Files Available for Installation

From the Web

To transfer and extract the compressed installation program files from the World Wide Web, locate the iPlanet Messaging Server 5.0 archive file on the Messaging Server web site. The file will be in the format *archive.tar.gz*, where *archive* represents the name of the compressed archive file.

After you have located the archive file:

1. Create a directory (for example, `/opt/msg5install`) on the machine that will host the Messaging Server and copy the archive file to that directory.
2. Go to the directory where you copied the archive file and then uncompress and extract the contents. Use the following command:

```
gunzip -c archive.tar.gz | tar -xvf -
```

Status messages are displayed as the archive file is uncompressed and unpacked.

After the archive file is uncompressed and unpacked, you are ready to run the `setup` program.

From the CD

To install the Messaging Server from the product CD:

1. Insert the CD into the CD-ROM drive on your installation machine.
2. `cd` to the `solaris` directory.
3. `cd` to the appropriate subdirectory of the product you want to install:
 - o ES (Netscape Enterprise Server)
 - o iDA (iPlanet Delegated Administrator for Messaging)
 - o iMS (iPlanet Messaging Server)

At this point, you are ready to run the `setup` program.

Running the setup Program

The `setup` program is used to install the Messaging Server Suite. You can run the command as follows:

```
./setup [options]
```

NOTE You must use a terminal display with a minimum of 50 rows in order for all the screens to appear properly.

The optional parameters for the `setup` command are listed in Table 3-1:

Table 3-1 Optional Parameters for the `setup` Command

Parameter	Description
-h	List the optional parameters.
-s	Silent install mode. This parameter must be used in conjunction with the <code>-f file</code> parameter.
-f <i>file</i>	Specify <i>file</i> as the silent install script. This parameter must be used in conjunction with the <code>-s</code> parameter.
-b <i>dir</i>	Install only the binaries from the specified <i>dir</i> ; do not install any configuration files.
-k	Keep the installation cache.

If you are going to perform a Silent Installation, you must first run the `setup` command with the `-k` option. This creates a file called `install.inf` which is used for the Silent Installation. For more information, see “Silent Installation” on page 28 in Chapter 1, “Installation Overview,” and also “Silent Installation” on page 68.

Installation Scenarios and Instructions

This section provides detailed instructions for installing the Messaging Server Suite. You must select one of the following installation scenarios:

NOTE The instructions in these scenarios are geared for a Custom Installation. If you are performing an Express or Typical Installation, you will not see all of the questions listed here.

- “Scenario One:” You are installing the Messaging Server and Directory Server on the same server.
- “Scenario Two:” You are installing the Messaging Server with an existing Configuration and Users/Groups Directory Server.
- “Scenario Three:” You are installing the Messaging Server with an existing Configuration Directory Server only.
- “Scenario Four:” You are installing the Messaging Server with an existing Users/Groups Directory Server only.

NOTE If you are installing the Messaging Server with an existing Directory Server, you must run the `ims_dssetup` utility against that existing Directory Server to prepare it for the Messaging Server installation. For more information, see “Configuring an Existing Directory Server” on page 24.

For some questions, you are instructed to provide a specific answer; for the others, you will need to provide your own answer. Detailed information about each question can be found in Chapter 2, “Installation Questions.”

TIP It is important that you record your answer for each question; you may need them for another product installation (for example, iPlanet Delegated Administrator for Messaging requires answers to several of the questions specified during the Messaging Server installation).

Scenario One

Follow the installation instructions provided below if you are installing the Messaging Server and Directory Server on the same machine:

1. Go to the directory where you downloaded the install files. For example:

```
cd /opt/msg5install
```

2. Run the following command to stop `sendmail` and free up port 25 for SMTP:

```
/etc/init.d/sendmail stop
```

3. Run the `setup` program to begin the installation. For example:

```
./setup -k
```

4. Provide answers for the following screens/questions as described in Chapter 2, "Installation Questions:"
 - o Question 1. Welcome Screen
 - o Question 2. License Agreement
 - o Question 3. Install iPlanet Servers
 - o Question 4. Installation Type
 - o Question 5. Installation Location (server-root)
 - o Question 6. iPlanet Server Products Components (select all the components on this screen)
 - o Question 7. Netscape Server Products Core Components
 - o Question 8. Netscape Directory Suite Components
 - o Question 9. Administration Services Components
 - o Question 10. iPlanet Messaging Applications Components
 - o Question 11. Fully Qualified Domain Name of the installation machine
 - o Question 12. System User and System Group
 - o Question 16. Register with an existing Directory Server? (answer `no` to this question)
 - o Question 25. Do you want another Directory Server to store your Users and Groups data? (answer `no` to this question)
 - o Question 21. Directory Server network port
 - o Question 22. Unique ID for this Directory Server

- Question 19. Login ID and password of the Configuration Server Administrator
- Question 23. Suffix
- Question 24. Bind DN and password of the Directory Manager
- Question 20. Administration Domain
- Question 30. Directory Server replication (answer no to this question)
- Question 31. Sample entries (answer no to this question)
- Question 32. Populate your new Directory Instance with some data (answer suggest to this question)
- Question 33. Disable schema checking (answer no to this question)
- Question 34. Administration Server Port
- Question 35. Bind the Administration Server to a specific IP address rather than the default IP address of the current host?
- Question 36. User name of the Administration Server
- Question 37. Unique identifier for this Messaging Server
- Question 38. Messaging Server hostname and domainname
- Question 39. User name of the Messaging Server
- Question 40. Default domain and organization for the Messaging Server
- Question 42. Hostname and port of the Web server that will host the iPlanet Delegated Administrator for Messaging
- Question 43. Specify whether or not the Messaging Server will be run from behind a firewall
- Question 44. Primary message store directory
- Question 45. TCP/IP port numbers for POP3, IMAP, SMTP, and Messenger Express
- Question 46. Login ID and password for the Service Administrator
- Question 47. Email address that you want to add to the postmaster group
- Question 48. User ID under which the MMP will run
- Question 49. LDAP URL for the domain component tree in the Users/Groups Directory Server

Scenario Two

Follow the installation instructions provided below if you are installing the Messaging Server with an existing Configuration and Users/Groups Directory Server:

1. Go to the directory where you downloaded the install files. For example:

```
cd /opt/msg5install
```

2. Run the following command to stop `sendmail` and free up port 25 for SMTP:

```
/etc/init.d/sendmail stop
```

3. Run the `setup` program to begin the installation. For example:

```
./setup -k
```

4. Provide answers for the following screens/questions as described in Chapter 2, "Installation Questions:"

- o Question 1. Welcome Screen
- o Question 2. License Agreement
- o Question 3. Install iPlanet Servers
- o Question 4. Installation Type
- o Question 5. Installation Location (server-root)
- o Question 6. iPlanet Server Products Components (do not select the Netscape Directory Suite component)
- o Question 7. Netscape Server Products Core Components
- o Question 9. Administration Services Components
- o Question 10. iPlanet Messaging Applications Components
- o Question 11. Fully Qualified Domain Name of the installation machine
- o Question 12. System User and System Group
- o Question 13. LDAP URL of the Directory Server
- o Question 14. Administration Domain in the Configuration Directory
- o Question 15. Login ID and password of the Configuration Server Administrator
- o Question 34. Administration Server Port

- Question 35. Bind the Administration Server to a specific IP address rather than the default IP address of the current host?
- Question 36. User name of the Administration Server
- Question 37. Unique identifier for this Messaging Server
- Question 38. Messaging Server hostname and domainname
- Question 39. User name of the Messaging Server
- Question 40. Default domain and organization for the Messaging Server
- Question 41. Distinguished name and password of the Directory Manager
- Question 42. Hostname and port of the Web server that will host the iPlanet Delegated Administrator for Messaging
- Question 43. Specify whether or not the Messaging Server will be run from behind a firewall
- Question 44. Primary message store directory
- Question 45. TCP/IP port numbers for POP3, IMAP, SMTP, and Messenger Express
- Question 48. User ID under which the MMP will run
- Question 49. LDAP URL for the domain component tree in the Users/Groups Directory Server

Scenario Three

Follow the installation instructions provided below if you are installing the Messaging Server with an existing Configuration Directory Server only:

1. Go to the directory where you downloaded the install files. For example:

```
cd /opt/msg5install
```

2. Run the following command to stop `sendmail` and free up port 25 for SMTP:

```
/etc/init.d/sendmail stop
```

3. Run the `setup` program to begin the installation. For example:

```
./setup -k
```

4. Provide answers for the following screens/questions as described in Chapter 2, "Installation Questions:"
 - o Question 1. Welcome Screen
 - o Question 2. License Agreement
 - o Question 3. Install iPlanet Servers
 - o Question 4. Installation Type
 - o Question 5. Installation Location (server-root)
 - o Question 6. iPlanet Server Products Components (select all the components on this screen)
 - o Question 7. Netscape Server Products Core Components
 - o Question 9. Administration Services Components
 - o Question 10. iPlanet Messaging Applications Components
 - o Question 11. Fully Qualified Domain Name of the installation machine
 - o Question 12. System User and System Group
 - o Question 16. Register with an existing Directory Server? (answer `yes` to this question)
 - o Question 17. Fully Qualified Domain Name of the existing Configuration Directory Server in the form `hostname.domainname`
 - o Question 18. Port number on which the Configuration Directory Server listens
 - o Question 19. Login ID and password of the Configuration Server Administrator

- Question 20. Administration Domain
- Question 21. Directory Server network port
- Question 22. Unique ID for this Directory Server
- Question 23. Suffix
- Question 24. Bind DN and password of the Directory Manager
- Question 30. Directory Server replication (answer `no` to this question)
- Question 31. Sample entries (answer `no` to this question)
- Question 32. Populate your new Directory Instance with some data (answer `suggest` to this question)
- Question 33. Disable schema checking (answer `no` to this question)
- Question 34. Administration Server Port
- Question 35. Bind the Administration Server to a specific IP address rather than the default IP address of the current host?
- Question 36. User name of the Administration Server
- Question 37. Unique identifier for this Messaging Server
- Question 38. Messaging Server hostname and domainname
- Question 39. User name of the Messaging Server
- Question 40. Default domain and organization for the Messaging Server
- Question 42. Hostname and port of the Web server that will host the iPlanet Delegated Administrator for Messaging
- Question 43. Specify whether or not the Messaging Server will be run from behind a firewall
- Question 44. Primary message store directory
- Question 45. TCP/IP port numbers for POP3, IMAP, SMTP, and Messenger Express
- Question 46. Login ID and password for the Service Administrator
- Question 47. Email address that you want to add to the postmaster group
- Question 48. User ID under which the MMP will run
- Question 49. LDAP URL for the domain component tree in the Users/Groups Directory Server

Scenario Four

Follow the installation instructions provided below if you are installing the Messaging Server with an existing Users/Groups Directory Server only:

1. Go to the directory where you downloaded the install files. For example:

```
cd /opt/msg5install
```

2. Run the following command to stop `sendmail` and free up port 25 for SMTP:

```
/etc/init.d/sendmail stop
```

3. Run the `setup` program to begin the installation. For example:

```
./setup -k
```

4. Provide answers for the following screens/questions as described in Chapter 2, "Installation Questions:"
 - o Question 1. Welcome Screen
 - o Question 2. License Agreement
 - o Question 3. Install iPlanet Servers
 - o Question 4. Installation Type
 - o Question 5. Installation Location (server-root)
 - o Question 6. iPlanet Server Products Components (select all the components on this screen)
 - o Question 7. Netscape Server Products Core Components
 - o Question 9. Administration Services Components
 - o Question 10. iPlanet Messaging Applications Components
 - o Question 11. Fully Qualified Domain Name of the installation machine
 - o Question 12. System User and System Group
 - o Question 16. Register with an existing Directory Server? (answer `no` to this question)
 - o Question 25. Do you want another Directory Server to store your Users and Groups data? (answer `yes` to this question)
 - o Question 26. Fully Qualified hostname and domainname of the Users/Groups Directory Server

- Question 27. Port number on which the Users/Groups Directory Server listens
- Question 28. Suffix for this Users/Groups Directory Server
- Question 29. Login ID and password for the Users/Groups Server Administrator
- Question 21. Directory Server network port
- Question 22. Unique ID for this Directory Server
- Question 19. Login ID and password of the Configuration Server Administrator
- Question 24. Bind DN and password of the Directory Manager
- Question 20. Administration Domain
- Question 30. Directory Server replication (answer `no` to this question)
- Question 31. Sample entries (answer `no` to this question)
- Question 32. Populate your new Directory Instance with some data (answer `suggest` to this question)
- Question 33. Disable schema checking (answer `no` to this question)
- Question 34. Administration Server Port
- Question 35. Bind the Administration Server to a specific IP address rather than the default IP address of the current host?
- Question 36. User name of the Administration Server
- Question 37. Unique identifier for this Messaging Server
- Question 38. Messaging Server hostname and domainname
- Question 39. User name of the Messaging Server
- Question 40. Default domain and organization for the Messaging Server
- Question 42. Hostname and port of the Web server that will host the iPlanet Delegated Administrator for Messaging
- Question 43. Specify whether or not the Messaging Server will be run from behind a firewall
- Question 44. Primary message store directory

- Question 45. TCP/IP port numbers for POP3, IMAP, SMTP, and Messenger Express
- Question 46. Login ID and password for the Service Administrator
- Question 47. Email address that you want to add to the postmaster group
- Question 48. User ID under which the MMP will run
- Question 49. LDAP URL for the domain component tree in the Users/Groups Directory Server

Silent Installation

This section provides information for performing a Silent installation. For more information about the Silent installation, see “Silent Installation” on page 28 in Chapter 1, “Installation Overview.”

NOTE In order to perform a Silent installation, you must have a cache file from a previous installation. The cache file that is created by default is *server-root/setup/install.inf*.

1. Review and edit the `install.inf` cache file as necessary.
2. Run the `setup` command with the `-s` and `-f filename` options, where *filename* represents the full path and name of the cache file. For example:

```
./setup -s -f /usr/iplanet/server5/setup/install.inf
```

NOTE When you use a cache file in this way, no new cache file is created from this installation.

If you have many similar server configurations to set up, you can place the cache file plus the server installation package on each machine. You can then perform a Silent installation on each machine and the `setup` program will extract all information it needs from the cache file as it performs the installation.

Running the `ims_dssetup` Utility

The `ims_dssetup` utility is located in the `msg` subdirectory where you downloaded the archive file from the web; on the CD-ROM, it is located in the `solaris/ims/msg` directory. From this directory:

1. Execute the `ims_dssetup` utility with the following command:

```
perl5 ims_dssetup.pl
```

NOTE The `ims_dssetup.pl` utility is a Perl script; you must have `perl5` available on your system to run it.

2. Enter `yes` or press `Return` to continue,

```
Welcome to the iMS Directory Server preparation tool.
```

```
This tool will help you setup a Netscape Directory Server and
make it ready to use for installing iPlanet Messaging Server.
```

```
Do you want to continue [y]:
```

3. Specify the Directory Server root.

```
Please enter the full path to the directory where Netscape
Directory Server was installed.
```

```
Directory server root [/usr/netscape/server4] :
```

4. Select a Directory Server instance from the list.

```
Please select a directory server instance from the following
list:
```

```
[0]  slapd-budgie
```

```
Which instance do you want [0]:
```

5. Specify the base suffix for the DC tree or press `Return` to accept the default value.

```
Please enter the base suffix for DC Tree [o=internet]:
```

6. Specify the base suffix under which the Users/Groups data should be set up. Press `Return` to accept the default value.

```
Please enter the base suffix under which the Users/Groups data
should be setup [o=siroe.com] :
```

7. Answer `yes` or press `Return` to update the schema files.

```
Do you want to update the schema files [yes]:
```

8. Answer `yes` or press `Return` to configure the new indexes.

Do you want to configure new indexes [yes]:

9. Specify the schema directory; this is the `config` subdirectory of the directory where the `ims_dssetup` utility is located:

Please enter the schema directory
[/usr/iplanet/server5/msg/config]:

At this point, you will see a summary of your options. It will look similar to the following:

Here is a summary of the settings that you chose:

```
Server Root           : /usr/netscape/server4
Server Instance      : slapd-budgie
Update Schema        : yes
DC Root              : o=internet
User/Group Root      : o=siroe.com
Add New Indexes      : yes
Schema Directory     : /usr/iplanet/server5/msg/config
```

10. Answer `yes` or press `Return` to continue, or answer `no` to start over.

Do you want to continue [y]:

At this point, the configuration of the specified Directory Server begins.

High Availability

This appendix contains the following sections to help you determine which high availability model is right for you and how to setup your system to run high availability with Messaging Server:

- High Availability Models
- Installing High Availability
- Notes for Multiple Instances of Messaging Server

High Availability Models

There are three basic high availability models that can be used with Messaging Server:

- Asymmetric (hot standby)
- Symmetric
- $N + 1$ (N Over 1)

Each of these models is described in greater detail in the following subsections.

Asymmetric

The basic asymmetric or “hot standby” high availability model consists of two clustered host machines or “nodes.” A logical IP address and associated hostname are designated to both nodes.

In this model, only one node is active at any given time; the backup or hot standby node remains idle for most of the time. A single shared disk array between both nodes is configured and designated to the active or “primary” node. A single message store and Mail Transport Agent (MTA) queue reside on this shared volume. Additionally, only one mail service instance will run on the active node.

Figure A-1 illustrates the basic asymmetric high availability model.

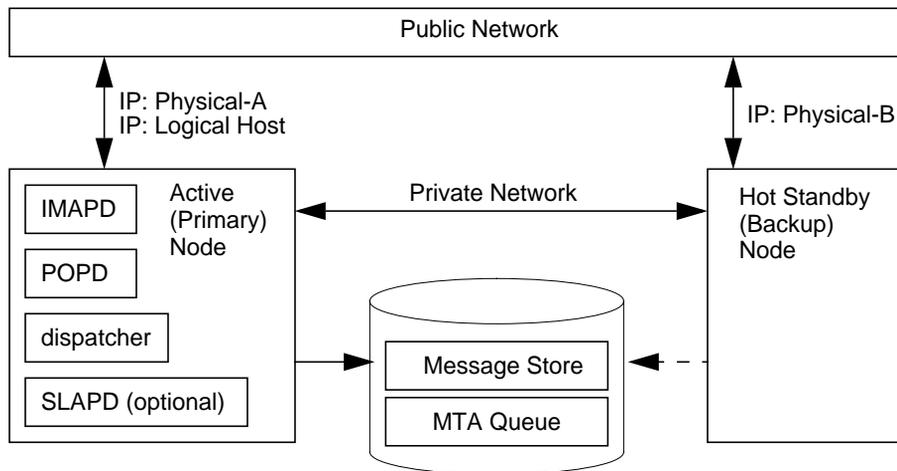


Figure A-1 Asymmetric High Availability Model

Before failover, the active node is Physical-A. Upon failover, Physical-B becomes the active node and the shared volume is switched so that it is designated to Physical-B. All services are stopped on Physical-A and resume on Physical-B.

The advantage of this model is that the backup node is dedicated and completely reserved for its primary node; there is no resource contention on the backup node. However, this model also means that the backup node stays idle most of the time and this resource is not completely utilized.

Symmetric

The basic symmetric or “dual services” high availability model consists of two hosting machines, each with its own logical IP address. Each logical node is associated with one physical node, and each physical node controls one disk array with two storage volumes. One volume (message store and MTA queue) is used for its local mail store, and the other is a mirror image of its partner’s mail store.

In the symmetric high availability model, both nodes are active concurrently, and each node serves as a backup node for the other. Under normal conditions, each node runs only one instance of the mail service.

Figure A-2 illustrates the basic symmetric high availability model.

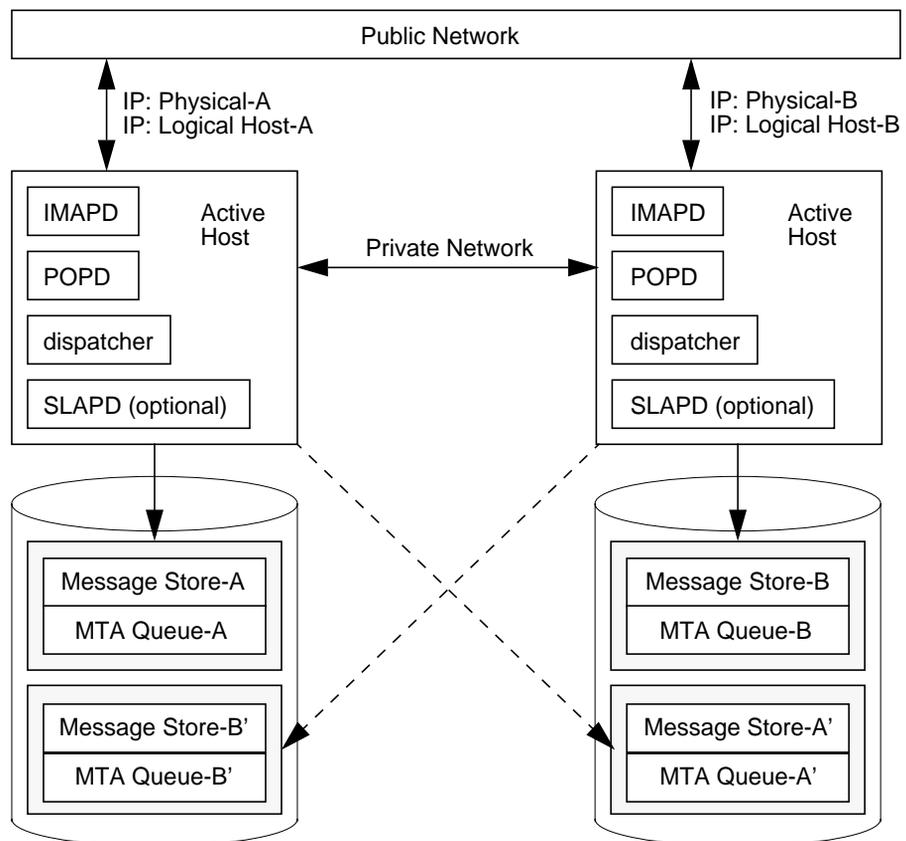


Figure A-2 Symmetric High Availability Model

Upon failover, the services on the failing node are shut down and restarted on its backup node. The mail store on the failed node switches to its backup node. At this point, the backup node is running two instances of the mail server and is managing two separate mail store volumes.

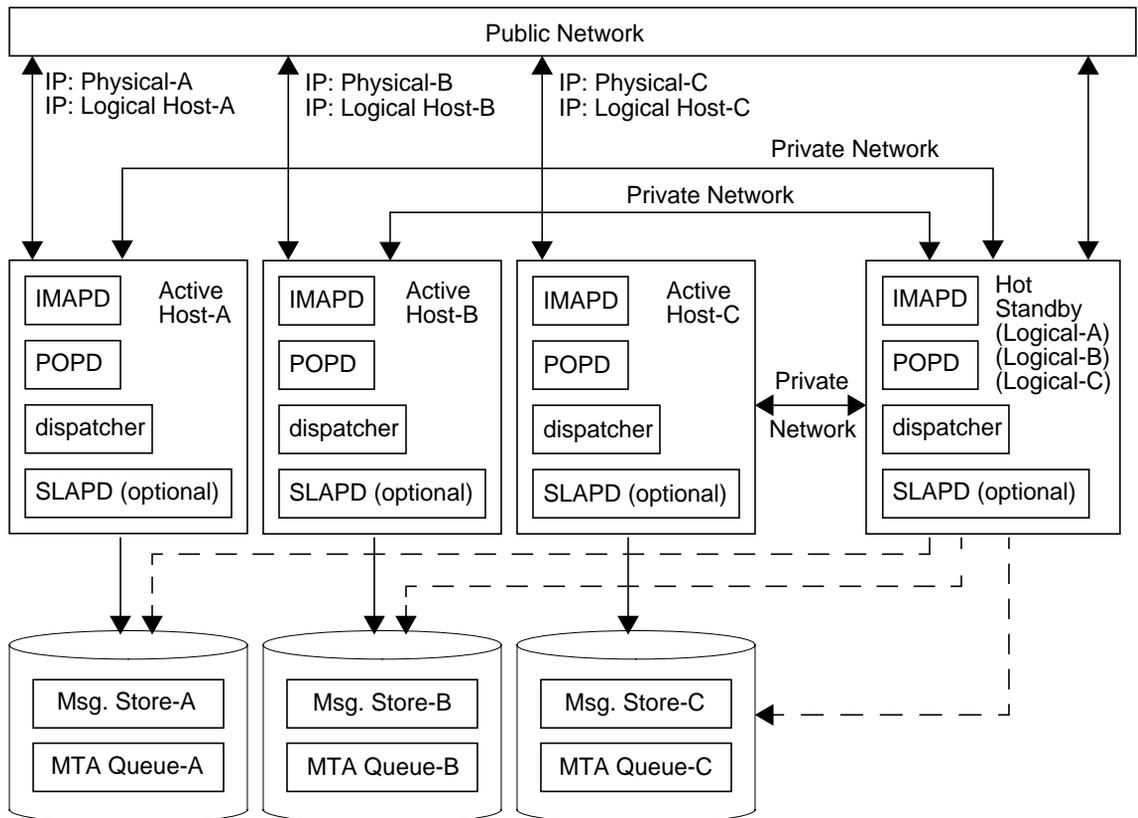
The big advantage of this model is that both nodes are active simultaneously, thus fully utilizing machine resources. However, multiple instances of the mail server on a single node can result in competition for CPU time and memory resources. Therefore, you should repair the failed node as quickly as possible and switch the servers back to their dual services state.

This model also provides a backup storage array; in the event of a disk array failure, its mirror image can be picked up by the service on its backup node.

N+1 (N Over 1)

The N + 1 or “N over 1” model operates in a multi-node asymmetrical configuration. N logical hostnames and N shared disk arrays are required. A single backup node is reserved as a hot standby for all the other nodes. The backup node is capable of running up to N instances of the mail server.

Figure A-3 illustrates the basic N + 1 high availability model.

**Figure A-3** N + 1 High Availability Model

Upon failover of one or more active nodes, the backup node picks up the failing node's responsibilities.

The advantages of the N + 1 model are that the server load can be distributed to multiple nodes and that only one backup node is necessary to sustain all the possible node failures. Thus, the machine idle ratio is $1/N$ as opposed to $1/1$, as is the case in a single asymmetric model.

Which High Availability Model is Right for you?

Table A-1 summarizes the advantages and disadvantages of each high availability model. Use this information to help you determine which model is right for you.

Table A-1 High Availability Model Advantages and Disadvantages

Model	Advantages	Disadvantages	Recommended User
Asymmetric	<ul style="list-style-type: none"> Simple Configuration Backup node is 100 percent reserved 	<ul style="list-style-type: none"> Machine resources are not fully utilized 	A small service provider with plans to expand in the future.
Symmetric	<ul style="list-style-type: none"> Better use of system resources Higher availability 	<ul style="list-style-type: none"> Resource contention on backup node Mirrored disks reduce performance 	A medium-sized service provider with no expansion plans on their backup systems in the near future.
N + 1	<ul style="list-style-type: none"> Load distribution Easy expansion 	<ul style="list-style-type: none"> Configuration complexity 	A large service provider who requires distribution with no resource constraints.

System Down Time Calculations

Table A-2 illustrates the probability that on any given day the mail service will be unavailable due to system failure. These calculations assume that on the average, each server goes down for one day every three months due to either a system crash or server hang, and that each storage device goes down one day every 12 months. They also ignore the small probability of both nodes being down simultaneously.

Table A-2 System Down Time Calculations

Model	Server Down Time Probability
Single server (no high availability)	$\text{Pr}(\text{down}) = (4 \text{ days of system down} + 1 \text{ day of storage down}) / 365 = 1.37\%$
Asymmetric	$\text{Pr}(\text{down}) = (0 \text{ days of system down} + 1 \text{ day of storage down}) / 365 = 0.27\%$
Symmetric	$\text{Pr}(\text{down}) = (0 \text{ days of system down} + 0 \text{ days of storage down}) / 365 = (\text{near } 0)$
N + 1	$\text{Pr}(\text{down}) = (0 \text{ days of system down} + 1 \text{ day of storage down}) / (365 \times N) = 0.27\% / N$

Installing High Availability

This section provides the information you need to install either the Veritas Cluster Server 1.1 or later or SunCluster 2.2 high availability clustering software and prepare it for use with the Messaging Server.

The example used in this section is based on a simple, two node cluster server (the asymmetric model). As always, you should refer to your Veritas Cluster Server documentation for detailed installation instructions and information.

The basic asymmetric model requires one public and two private network interfaces and one shared disk. The private network interface is used for cluster heartbeat connections. The shared disk must be connected to both nodes via a SCSI fiber channel connector and the SCSI ID on both ends must be different.

Cluster Agent Installation

A cluster agent is a Messaging Server API program that runs under the cluster framework. During Messaging Server 5.0 installation process, if you choose to install the High Availability component, the `setup` program will automatically detect the clustering software you have installed on your server and install the appropriate set of agent programs into the appropriate location.

NOTE The `setup` program will only copy one set of agents onto your server, so be sure to install and configure only one type of clustering software on your server.

For Veritas Clustering Software 1.1 or later, the agent type file is located in the `/etc/VRTSvcs/conf/config` directory and the agent programs are in the `/opt/VRTSvcs/bin/MsgSrv` directory. For SunCluster 2.2, the agents are installed in the `/opt/SUNWcluster/ha/msg` directory.

Some items of note regarding the Messaging Server installation and high availability:

- When you are asked for the *server-root* (see Step 5 in Chapter 2, “Installation Questions”), be sure that it is on a shared storage volume; otherwise, high availability will not work.
- When you are asked for the computer name (see Step 11 in Chapter 2, “Installation Questions”), be sure to specify the logical hostname of the machine where the Messaging Server was installed, rather than the physical hostname.

- When you are asked for the Directory Server identifier (see Step 22 in Chapter 2, “Installation Questions”), be sure to specify the logical hostname of the machine where the Directory Server was installed, rather than the physical hostname.
- When you are asked for the IP address (see Step 35 in Chapter 2, “Installation Questions”), be sure to specify the IP address of the logical host machine, not the physical host machine.

If you are using the Veritas Cluster Server 1.1 or later high availability software, go to “Veritas Cluster Server Agent Installation” on page 78. If you are using the SunCluster 2.2 high availability software, go to “SunCluster Agent Installation” on page 83.

Veritas Cluster Server Agent Installation

After you decide which high availability model you want to implement, you are ready to install the Veritas Cluster Server software and prepare it for use with Messaging Server. The procedures in this section must be completed before you install the Messaging Server.

NOTE It is assumed that you are already familiar with Veritas Cluster Server concepts and commands.

Pre-Installation Instructions

This section describes the procedures for installing the Veritas Cluster Server and preparing it for use with the Messaging Server.

To install and set up the Veritas Cluster Server for use with Messaging Server:

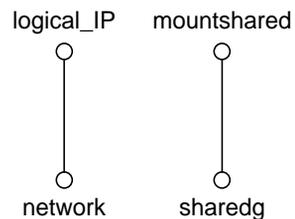
1. Install Veritas Cluster Server 1.1 or later on both nodes.
2. Configure and start the Veritas Cluster Server.

NOTE For these first two steps, you should refer to your Veritas Cluster Server documentation for detailed information and instructions.

3. Create the `/etc/VRTSvcs/conf/config/main.cf` file.
4. Create a service group called `ims5`.

Within this service group:

- a. Create the `network` resource (specify `NIC` as the resource type).
Use the public network interface name for the `Device` attribute (for example, `hme0`).
 - b. Create the `logical_IP` resource (specify `IP` as the resource type).
Use the logical IP for the `Address` attribute and the public interface for the `Device` attribute.
 - c. Create a `sharedg` resource (specify `DiskGroup` as the resource type).
Use the disk group name for the `DiskGroup` attribute.
 - d. Create a `mountshared` resource (specify `Mount` as the resource type).
Use the shared device name `BlockDevice`, specify `MountPoint` as the mount point, and set `FSType` to the appropriate file system type.
5. Bring all of the above resources online on the primary (active) node.
 6. Start the dependency tree as follows: the `logical_IP` resource depends on the `network` resource, and the `mountshared` resource depends on the `sharedg` resource. Your dependency tree should look like this:



Installing High Availability

At this point, you have successfully installed Veritas Cluster Server and have prepared it for the Messaging Server installation. You must install the Messaging Server on the first node, but only the High Availability component on the second node. To do so, select only the iPlanet Messaging Suite component from the iPlanet Server Products menu, then select only the High Availability component from the iPlanet Messaging Applications menu.

When you run the Messaging Server installation, the `setup` program checks to see if the Veritas Cluster Server has been installed and properly configured. If so, then the appropriate high availability files are installed.

Post-Installation Instructions

After these steps are completed, you must perform the following on the secondary node:

1. Switch the `logical_IP` and shared disk to the secondary node.
2. Run the `setup` program on the secondary node to start the Messaging Server installation:

```
./setup
```
3. From the list of installation types, select Custom installation, then select just the high availability packages in the iPlanet Messaging Applications component.

On the machine where you installed the Veritas Cluster Server software:

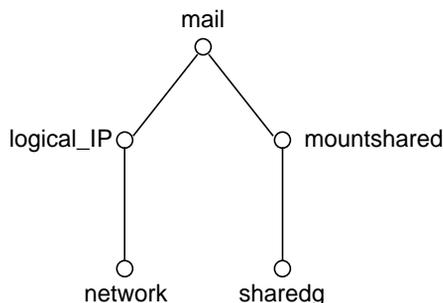
1. Stop the Veritas Cluster Server.
2. Add the following line in `main.cf`:

```
include "MsgSrvTypes.cf"
```
3. Start the Veritas Cluster Server.
4. Create a resource named `mail` (specify `MsgSrv` as the resource type) and enter the instance name (`InstanceName`) and the log host name (`LogHostName`).

5. Set the `logical_IP` and `mountshared` resources as children of the `mail` resource.

This means that both the `logical_IP` and `mountshared` resources depend on the `mail` resource.

Your dependency tree should now look like this:



Now, you are ready. On any node, bring up the `mail` resource online. This automatically starts the mail server on that node.

Configuring High Availability for Veritas Cluster Server

To configure high availability for the Veritas Cluster Server, you can modify the parameters in the `MsgSvrType` configuration file. Below is the relevant entry:

```

type MsgSrv (
    static int MonitorInterval = 180
    static int MonitorTimeout = 180
    static int OnlineRetryLimit = 1
    static int OnlineWaitLimit = 1
    static int RestartLimit = 2
    static str ArgList[] = { State, InstanceName, LogHostName,
PrtStatus, DebugMode }
    NameRule = resource.InstanceName
    str InstanceName
    str LogHostName
    str PrtStatus
    str DebugMode
)
  
```

Table A-3 describes the various parameters:

Table A-3 MsgSrv Parameters

Parameter	Description
MonitorInterval	The duration in seconds between each probing.
MonitorTimeout	The duration in seconds before a probe times out.
OnlineRetryLimit	The number of times to retry online.
OnlineWaitLimit	The number of MonitorIntervals to wait after completing the online procedure and before the resource comes online.
RestartLimit	The number of restarts before the resource is failed over.

Table A-4 describes the various arguments:

Table A-4 MsgSrv Arguments

Parameter	Description
State	Indicates if the service is online or not in this system. This value is not changeable by the user.
InstanceName	The Messaging Server's instance name without the msg- prefix.
LogHostName	The logical host name that is associated with this instance.
PrtStatus	If set to TRUE, the online status is printed to the Veritas Cluster Server log file.
DebugMode	If set to TRUE, the debugging information is sent to the Veritas Cluster Server log file.

SunCluster Agent Installation

After you decide which high availability model you want to implement, you are ready to install the SunCluster high availability software and prepare it for use with Messaging Server. The procedures in this section must be completed before you install the Messaging Server.

NOTE It is assumed that you are already familiar with SunCluster concepts and commands.

Pre-Installation Instructions

This section describes the procedures for installing the SunCluster software and preparing it for use with the Messaging Server.

To install and set up the SunCluster for use with Messaging Server:

1. Install SunCluster 2.2 on both nodes.

NOTE The HA fault monitor agent requires the `tcpclnt` binary file in SunCluster 2.2 SUNWscpro package. Thus, you must also install this package for the probing feature to fully work.

2. Configure and start the SunCluster so you have access to both the logical IP and the shared volume.

NOTE For these first two steps, you should refer to your SunCluster documentation for detailed information and instructions.

Installing High Availability

At this point, you have successfully installed the SunCluster software and have prepared it for the Messaging Server installation. You must install the Messaging Server on the first node, but only the High Availability component on the second node. To do so, select only the iPlanet Messaging Suite component from the iPlanet Server Products menu, then select only the High Availability component from the iPlanet Messaging Applications menu.

When you run the Messaging Server installation, the `setup` program checks to see if the SunCluster software has been installed and properly configured. If so, then the appropriate high availability files are installed.

Post-Installation Instructions

After these steps are completed, you must copy the `server-root/bin/msg/ha/sc/config/ims_ha.cnf` file to your shared disk mount point directory (for example, `/mnt` if your shared disk is mounted under the `/mnt` directory).

Additionally, you must first register the Messaging Server data service before using it by running the `hareg -Y` command.

If you want to change the logical host timeout value, use the following command:

```
scconf cluster_name -l seconds
```

where `cluster_name` is the name of the cluster and `seconds` is the number of seconds you want to set for the timeout value. The number of seconds should be twice the number of seconds needed for the start to complete. For more information, refer to your SunCluster documentation.

Directory Server Configuration

If you install and configure your Directory Server under the same `server-root` as the Messaging Server, there is no need for additional SunCluster agent files. If not, then there is an existing Sun-supplied agent package that you can use. The package is `SUNWscnsl`, which is supported by the SunCluster team at Sun.

Notes for Multiple Instances of Messaging Server

If you are using the Symmetric or N + 1 high availability models, there are some additional things you should be aware of during installation and configuration in order to prepare the Cluster Server for multiple instances of Messaging Server.

Create a Second Service Group

If you are using Veritas Cluster Server 1.1 or later, you must create a second service group in addition to the `ims5` group you created earlier. This group should have the same set of resources and the same dependency tree as `ims5`.

If you are using SunCluster 2.2, create another logical host which consists of a different logical IP and a shared volume. The new instance can then be installed on this volume.

NOTE When bringing up SunCluster 2.2 using the `hareg -Y` command, be sure there is only one instance on each node. SunCluster 2.2 does not allow you to bring up multiple logical IPs on one node using this command.

Installation Notes

During the Messaging Server installation, be sure that all the mail services are offline during the installation process; running mail services may interfere with the Messaging Server installation.

Configuration Notes

Multiple instances of the Messaging Server running on the same server require that the correct IP address bonds to each instance. The following subsections provide instructions on how to bind the IP address for each instance. If this is not done correctly, the multiple instances could interfere with each other.

IP Address Binding for IMAP/POP3 Servers

Use the `configutil` command as follows:

```
configutil -o service.listenaddr -v IP_address
```

where *IP_address* is the address to which the service will bind.

IP Address Binding for SMTP Service

Add the following line in the `SERVICE=SMTP` section in the `dispatcher.cnf` file:

```
INTERFACE_ADDRESS=IP_address
```

IP Address Binding for SMTP_SUBMIT Service

Add the following line in the `SERVICE=SMTP_SUBMIT` section in the `dispatcher.cnf` file:

```
INTERFACE_ADDRESS=IP_address
```

IP Address Binding for LDAP Service

Add the following line in the `slapd.conf` file:

```
listenhost IP_address
```

Changing the Default tcp_port Number

The `tcp_port` number in the `job_controller.cnf` file must be different for each instance. If the `tcp_port` numbers are the same, change them so that they are different.

Installing the Messaging Multiplexor

This appendix contains the following sections to help you install and configure the Messaging Multiplexor:

- Installing and Configuring Multiplexor
- Starting the Multiplexor
- Sample Messaging Topology

Installing and Configuring Multiplexor

The Messaging Multiplexor (MMP) is available as part of iPlanet Messaging Server. You can install the MMP at the same time as you install Messaging Server, or you can install it later using the `setup` program. Either way, you first need to prepare the system to support the MMP.

More information about the MMP can be found in the following:

- iPlanet Messaging Server 5.0 Administrator's Guide
- iPlanet Messaging Server 5.0 Reference Manual

Before You Install

Before installing the MMP:

1. Choose the machine on which you will install the MMP. It is recommended that you do not install the MMP on a system that is also running the Messaging Server or Directory Server. It is best to use a separate machine for the MMP.
2. Check that the system meets all the hardware and software requirements for using iPlanet Messaging Server. For more information about installation requirements, see “System Requirements” on page 14.
3. On the machine that the MMP is to be installed on, create a new user to be used exclusively by the MMP. This new user must belong to a group. Suggested names for the user are `nsmp` or `nsmail`. The default is `mmpsrv`.
4. Set up the LDAP Directory Server and its host machine for use with Messaging Server, if they are not already set up. For more information, see your Directory Server documentation.
5. If you already have an older version of the MMP installed and want to replace it, you must remove the old version of MMP before you can install the new one. To do this, run the Messaging Server `uninstall` script located in *server-root*.

Multiplexor Files

The Messaging Multiplexor files are stored in the `mmp-hostname` subdirectory of the *server-root*. Each MMP instance will have its own `mmp-hostname` directory that contains the files described in Table B-1:

Table B-1 Messaging Multiplexor Files

File	Description
<code>PopProxyAService.cfg</code>	Configuration file specifying environment variables used for POP services.
<code>ImapProxyAService.cfg</code>	Configuration file specifying environment variables used for IMAP services.
<code>AService.cfg</code>	Configuration file specifying which services to start and a few options shared by both POP and IMAP services.
<code>AService.rc</code>	Executable used to start, stop, restart, and/or reload the MMP. For more information, see “Starting the Multiplexor” on page 96.

Multiplexor Installation

To install the MMP, you must use the Messaging Server setup program, which gives you the option of choosing to install the Messaging Multiplexor. For detailed information about the setup program refer to the *iPlanet Messaging Server Installation Guide*.

NOTE It is recommended that the MMP not be installed on a machine that is also running either Messaging Server or Directory Server.

You can run the setup program to install the MMP at any time. For instructions on using the setup program, see the *Messaging Server Installation Guide*.

NOTE The MMP is not installed by default; you must select it as part of the Messaging Server Applications component in the Messaging Server installation.

To install the MMP:

1. Run the Messaging Server setup program.

```
./setup
```

2. Answer yes or press Return for the following to continue with the installation:

```
Welcome to the iPlanet Server Products installation program. This
program will install iPlanet Server Products and the iPlanet
Console on your computer.
```

```
It is recommended that you have "root" privilege to install the
software.
```

```
Tips for using the installation program:
```

- Press "Enter" to choose the default and go to the next screen
- Type "Control-B" to go back to the previous screen
- Type "Control-C" to cancel the installation program
- You can enter multiple items using commas to separate them.
For example: 1, 2, 3

```
Would you like to continue with installation? [Yes]:
```

3. Read the license agreement and answer *yes* to the following question to continue. The license agreement is located in the `LICENSE.txt` file in the directory where you downloaded the installation software.

```
BY INSTALLING THIS SOFTWARE YOU ARE CONSENTING TO BE BOUND BY AND  
ARE BECOMING A PARTY TO THE AGREEMENT FOUND IN THE LICENSE.TXT  
FILE. IF YOU DO NOT AGREE TO ALL OF THE TERMS OF THIS AGREEMENT,  
PLEASE DO NOT INSTALL OR USE THIS SOFTWARE.
```

```
Do you agree to the license terms? [No]:
```

4. Select option 1 from the following:

```
Select the items you would like to install:
```

1. iPlanet Servers

```
Installs iPlanet Servers with the integrated Netscape Console  
onto your computer.
```

2. Netscape Console

```
Installs Netscape Console as a stand-alone Java application  
on your computer.
```

```
To accept the default shown in brackets, press the Enter key.
```

```
Select the component you want to install [1]:
```

5. Select either the Typical or Custom installation from the following menu:

NOTE You cannot install the Messaging Multiplexor with the Express Installation; you must use either the Typical or Custom Installation.

```
Choose an installation type:
```

1. Express installation

```
Allows you to quickly install the servers using the most  
common options and pre-defined defaults. Useful for quick  
evaluation of the products.
```

2. Typical installation

```
Allows you to specify common defaults and options.
```

3. Custom installation

```
Allows you to specify more advanced options. This is  
recommended for experienced server administrators only.
```

```
To accept the default shown in brackets, press the Enter key.
```

```
Choose an installation type [2]:
```

6. Specify the desired installation location, or press Return to accept the default.

This program will extract the server files and install them into a directory you specify. That directory is called the server root in the product documentation and will contain the server programs, the Administration Server, and the server configuration files.

To accept the default shown in brackets, press the Enter key.

Install location [/usr/iplanet/server5]:

7. Select option 4 from the following menu:

iPlanet Server Products components:

Components with a number in () contain additional subcomponents which you can select using subsequent screens.

1. Netscape Server Products Core Components (3)
2. Netscape Directory Suite (2)
3. Administration Services (2)
4. iPlanet Messaging Suite (5)

Specify the components you wish to install [All]:

8. Select option 3 from the following menu:

iPlanet Messaging Suite components:

Components with a number in () contain additional subcomponents which you can select using subsequent screens.

1. iPlanet Message Store and Message Access
2. iPlanet Internet Message Transport Agent
3. iPlanet Messaging Multiplexor
4. High Availability for iPlanet Messaging Server
5. iPlanet Delegated Administrator Command Line Utilities

Specify the components you wish to install [1, 2, 5]:

9. Specify the fully qualified domain name of the installation machine.

Enter the fully qualified domain name of the computer on which you're installing server software. Using the form <hostname>.<domainname>

Example: eros.airius.com.

To accept the default shown in brackets, press the Enter key.

Computer name [budgie.siroe.com]:

10. Specify a system user and system group.

Choose a Unix user and group to represent the iPlanet server in the user directory. The iPlanet server will run as this user. It is recommended that this user should have no privileges in the computer network system. The Administration Server will give this group some permissions in the server root to perform server-specific operations.

If you have not yet created a user and group for the iPlanet server, create this user and group using your native UNIX system utilities.

To accept the default shown in brackets, press the Return key.

System User [nobody]:

11. Specify the user ID under which the MMP will run:

The Mail Multiplexor runs as a privileged user. The account should already exist on the system and should be a member of the iPlanet Group.

Please enter the Mail Multiplexor user [mmpsrv]:

At this point, the installation begins. Various messages are displayed as the installation proceeds.

Post-Installation Procedures

The Messaging Server default directory ACIs require a bind to authenticate users against the Directory Server. This means that you must set the `BindDN` and `BindPass` options before you start the MMP.

The recommended method for doing so is to copy the values for `local.ldapsiedn` and `local.ldapsiecred` from a Messaging Server installation to the `BindDN` and `BindPass` options in an MMP installation. These options can be found in the `ImapProxyAservice.cfg` and `PopProxyAservice.cfg` configuration files.

It is also possible for an end user to set `BindDN` and `BindPass` by using the Directory Manager DN (for example, `cn=Directory Manager`) and password specified during installation.

NOTE It is important that the password is something fairly cryptic and not some easy-to-guess dictionary word.

Configuring the MMP to use SSL

To configure the MMP to use SSL, do the following:

NOTE It is assumed that the MMP is installed on a machine that does not have a Message Store or MTA.

1. Install the Administration Console, Administration Server, and MMP on the machine.
 Point the MMP to a Directory Server on a different machine that is already configured as a Messaging Server Message Store.
2. Go to your *server-root* and run `startconsole` to login to the Netscape Console:

```
./startconsole
```
3. Open up the "server group" for the MMP server.
 The MMP server does not appear, but the Administration Server does; double-click on the Administration Server icon.
4. Click on the "configuration" tab and within that tab, click on the "Encryption" tab.
5. Click on "Certificate Setup Wizard."
 The setup wizard walks you through a certificate request.
6. Install the certificate as the certificate for "This Server."
7. From the command line, make the following symbolic links to simplify things:

```
cd server-root/mmp-hostname
ln -s ../alias/admin-serv-instance-cert7.db cert7.db
ln -s ../alias/admin-serv-instance-key3.db key3.db
ln -s ../admin-serv/config/secmod.db secmod.db
```

 Also, make sure that those files are owned by the user ID under which the MMP will run.
8. Create an `sslpassword.conf` file in this directory.
 This file contains:

```
Communicator Certificate DB:password
```

 where *password* is the password you specified in the Certificate Setup Wizard.
9. Edit the `ImapProxyAService.cfg` file and uncomment all the SSL settings.

10. If you want SSL and POP, edit the `PopProxyAService.cfg` file and uncomment all the SSL settings.

Additionally, you must edit the `AService.cfg` file and add "|995" after the "110" in the `ServiceList` setting.

11. Make sure that the `BindDN` and `BindPass` options are set in the `ImapProxyAService.cfg` and `PopProxyAService.cfg` files.

It is possible to copy these values from the `local.ugldapbinddn` and `local.ugldapbindcred` configutil options on the Messaging Server, but you can also create a new user with search privileges (for plain text support) or search privileges and user password read privileges (for CRAM-MD5/APOP support). You should also set the `DefaultDomain` option to your default domain (the domain to use for unqualified user names).

If you just want server-side SSL support, you are finished. Start the MMP with the following command:

```
AService.rc start
```

If you want client-side SSL support, do the following:

12. Get a copy of a client certificate and the CA certificate which signed it. You can do this with Netscape CMS 4.1, which is available from the iPlanet web site.
13. Start the Netscape Console and Certificate Wizard as before (on the same machine as the MMP), but this time import the CA certificate as a "Trusted Certificate Authority."
14. Create a Store Administrator.

For more information, see the *iPlanet Messaging Server 5.0 Administrator's Guide*.

15. Create a `certmap.conf` file for the MMP. For example:

```
certmap default      default
default:DNComps
default:FilterComps e=mail
```

This means to search for a match with the "e" field in the certificate DN by looking at the "mail" attribute in the LDAP server.

16. Edit your `ImapProxyAService.cfg` file and:
 - a. Set `CertMapFile` to `certmap.conf`
 - b. Set `StoreAdmin` and `StorePass` to values from Step 14.
 - c. Set `CertmapDN` to the root of your Users/Groups tree.

17. If you want client certificates with POP3, repeat Step 16 for the `PopProxyAService.cfg` file.
18. If the MMP is not already running, start it with:


```
AService.rc start
```

 or


```
AService.rc restart
```
19. Import the client certificate into your client. In Netscape, click on the padlock (Security) icon, then select "Yours" under "Certificates," then select "Import a Certificate..." and follow the instructions.

NOTE All your users will have to perform this step if you want to use client certificates everywhere.

Creating Additional Instances

Use the Messaging Server `setup` program to create new instances of the MMP after an initial installation. You will run through the same installation procedure as when you created your first instance; you will be asked all the same questions. The setup program automatically creates a new instance in the *server-root*; for example, if you are installing on a machine called `tarpit`, the first instance you created would be called `mmp-tarpit`, and the second instance would be `mmp-tarpit-1`.

Modifying an Existing Instance

To modify an existing instance of the MMP, edit the `ImapProxyAService.cfg` and/or `PopProxyAService.cfg` configuration files as necessary. These configuration files are located in the `mmp-hostname` subdirectory.

Starting the Multiplexor

To start an instance of the Messaging Multiplexor, run the `AService.rc` script in the `server-root/mmp-hostname` directory:

```
./AService.rc [options]
```

Optional parameters for the `AService.rc` script are described below in Table 3-2.

Table 3-2 Optional Parameters for the `AService.rc` Script

Option	Description
<code>start</code>	Start the MMP (even if one is already running).
<code>stop</code>	Stop the most recently started MMP.
<code>restart</code>	Stop the most recently started MMP, then start an MMP.
<code>reload</code>	Causes an MMP that is already running to reload its configuration without disrupting any active connections.

Sample Messaging Topology

The fictional Siroe Corporation has two Multiplexors on separate machines, each supporting several Messaging Servers. POP and IMAP user mailboxes are split across the Messaging Server machines, with each server dedicated exclusively to POP or exclusively to IMAP. (You can restrict client access to POP services alone by removing the IMAP-server binary; likewise, you can restrict client access to IMAP services alone by removing the POP-server binary.) Each Multiplexor also supports only POP or only IMAP. The LDAP directory service is on a separate, dedicated machine.

This topology is illustrated below in Figure 3-1.

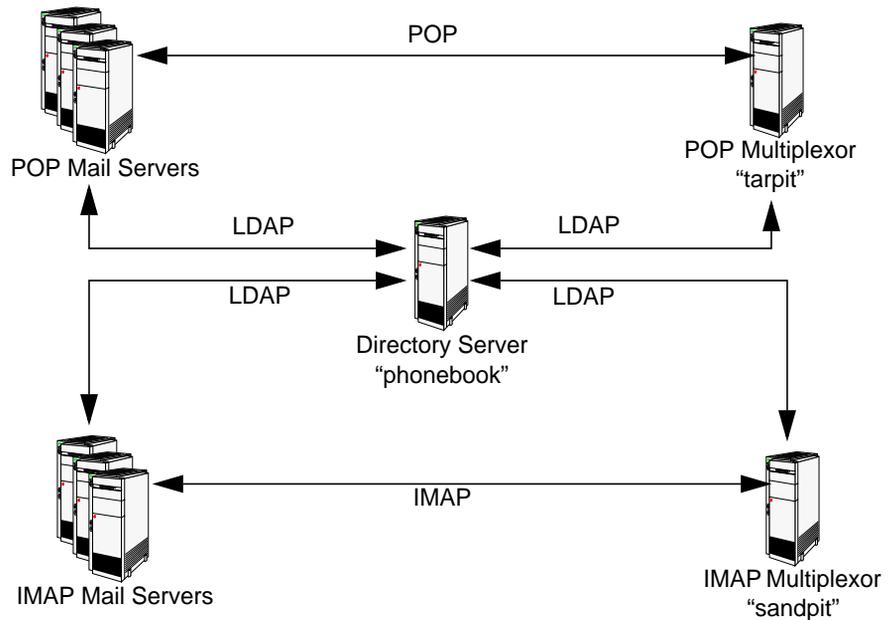


Figure 3-1 Multiple MMPs Supporting Multiple Messaging Servers

IMAP Configuration Example

The IMAP Multiplexor in Figure 3-1 is installed on `sandpit`, a machine with two processors. This Multiplexor is listening to the standard port for IMAP connections (143). Multiplexor communicates with the LDAP server on the host `phonebook` for user mailbox information, and it routes the connection to the appropriate IMAP server. It overrides the IMAP capability string, provides a virtual domain file, and supports SSL communications.

This is its ImapProxyAService.cfg configuration file:

```

default:LdapUrl          ldap://phonebook/o=Siroe.com
default:LogDir           /usr/iplanet/server5/mmp-sandpit/log
default:LogLevel         5
default:BindDN           "cn=Directory Manager"
default:BindPass         secret
default:BacksidePort     143
default:Timeout          1800
default:Capability       "IMAP4 IMAP4rev1 ACL QUOTA LITERAL+ NAMESPACE
UIDPLUS CHILDREN LANGUAGE XSENDER X-NETSCAPE XSERVERINFO AUTH=PLAIN"
default:SearchFormat     (uid=%s)
default:SSLEnable        yes
default:SSLPorts         993
default:SSLSecmodFile    /usr/iplanet/server5/mmp-sandpit/secmod.db
default:SSLCertFile      /usr/iplanet/server5/mmp-sandpit/cert7.db
default:SSLKeyFile       /usr/iplanet/server5/mmp-sandpit/key3.db
default:SSLKeyPasswdFile ""
default:SSLCipherSpecs   all
default:SSLCertNicknames Siroe.com Server-Cert
default:SSLCacheDir      /usr/iplanet/server5/mmp-sandpit
default:SSLBacksidePort  993
default:VirtualDomainFile /usr/iplanet/server5/mmp-sandpit/vdmap.cfg
default:VirtualDomainDelim @
default:ServerDownAlert  "your IMAP server appears to be temporarily out of
service"
default:MailHostAttrs    mailHost
default:PreAuth          no
default:CRAMs            no
default:AuthCacheSize    10000
default:AuthCacheTTL     900
default:AuthService       no
default:AuthServiceTTL   0
default:BGMax            10000
default:BGPenalty        2
default:BGMaxBadness     60
default:BGDecay          900
default:BGLinear         no
default:BGExcluded       /usr/iplanet/server5/mmp-sandpit/bgexcl.cfg
default:ConnLimits       0.0.0.0|0.0.0.0:20
default:LdapCacheSize    10000
default:LdapCacheTTL     900
default:HostedDomains    yes
default:DefaultDomain    Siroe.com

```

POP Configuration Example

The POP Multiplexor example in Figure 3-1 is installed on `tarpit`, a machine with four processors. This Multiplexor is listening to the standard port for POP connections (110). Multiplexor communicates with the LDAP server on the host `phonebook` for user mailbox information, and it routes the connection to the appropriate POP server. It also provides a spoof message file.

This is its `PopProxyAService.cfg` configuration file:

```
default:LdapUrl          ldap://phonebook/o=Siroe.com
default:LogDir           /usr/iplanet/server5/mmp-tarpit/log
default:LogLevel         5
default:BindDN           "cn=Directory Manager"
default:BindPass         password
default:BacksidePort     110
default:Timeout          1800
default:Capability       "IMAP4 IMAP4rev1 ACL QUOTA LITERAL+ NAMESPACE
UIDPLUS CHILDREN LANGUAGE XSENDER X-NETSCAPE XSERVERINFO AUTH=PLAIN"
default:SearchFormat     (uid=%s)
default:SSLEnable        no
default:VirtualDomainFile /usr/iplanet/server5/mmp-tarpit/vdmap.cfg
default:VirtualDomainDelim @
default:MailHostAttrs    mailHost
default:PreAuth           no
default:CRAMs             no
default:AuthCacheSize    10000
default:AuthCacheTTL     900
default:AuthService       no
default:AuthServiceTTL   0
default:BGMax             10000
default:BGPenalty         2
default:BGMaxBadness      60
default:BGDecay           900
default:BGLinear          no
default:BGExcluded        /usr/iplanet/server5/mmp-tarpit/bgexcl.cfg
default:ConnLimits        0.0.0.0|0.0.0.0:20
default:LdapCacheSize     10000
default:LdapCacheTTL     900
default:HostedDomains     yes
default:DefaultDomain     Siroe.com
```

Sample Messaging Topology

Un-Installing the Software

This appendix contains instructions for un-installing the Messaging Server software. It includes the following sections:

- Why Un-Install?
- Uninstalling Messaging Server Components
- Un-Installing High Availability

Why Un-Install?

You might remove the Messaging Server software from a machine if you need to free up some disk space, or if you want to re-install the product.

NOTE In order to remove Messaging Server, you must be logged in as `root`. All procedures in this chapter, unless otherwise noted, require that you access the system as `root`.

Uninstalling Messaging Server Components

This section describes how to remove an existing instance of the Messaging Server from a machine.

NOTE The `uninstall` program will not attempt to remove any Message Store or Message Access components; if you want to remove these, you must do so manually.

Additionally, the `uninstall` program does not remove any high availability components. See “Un-Installing High Availability” on page 105 for instructions on removing the high availability components.

In the directory in which you installed the Messaging Server files, you will find the `uninstall` program. To run `uninstall`, use the following steps:

1. Login as `root`.
2. Halt the Messaging Server instance.

To halt the server instance, run the `stop-msg` utility. This utility is stored in the `server-root/msg-instance` directory. For example:

```
cd /usr/iplanet/server5/msg-budgie
./stop-msg
```

Status messages are displayed as the various daemons and services are stopped.

3. Change to the `server-root` directory.
4. Halt the Administration Server instance.

If you have an Administration Server running, run the `stop-admin` utility to halt this server instance. This utility is stored in the `server-root` directory. For example:

```
cd /usr/iplanet/server5
./stop-admin
```

NOTE Do not manually stop the Directory Server; the `uninstall` program requires the Directory Server to be up and running and it will handle the shutting down of the Directory Server.

5. Run the uninstall program:

```
./uninstall
```

NOTE The screens you see here may vary depending on which components you have installed. This example assumes you have all components installed.

6. Select which components you want to remove:

The following are the SuiteSpot components currently installed on your machine:

Components with a number in () contain additional subcomponents which you can select using subsequent screens.

1. Netscape Server Products Core Components (3)
2. Netscape Directory Suite (2)
3. Administration Services (2)
4. iPlanet Messaging Applications (5)

Select the components you wish to uninstall (default: all) [All]:

7. Select which Serer Core Product components you want to remove:

The following are the Netscape Server Products Core Components components currently installed on your machine:

Components with a number in () contain additional subcomponents which you can select using subsequent screens.

1. Netscape Server Products Core Components
2. Netscape Core Java classes
3. Java Runtime Environment

Specify the components you wish to uninstall [1, 2, 3]:

8. Select which Directory Suite components you want to remove.

The following are the Netscape Directory Suite components currently installed on your machine:

Components with a number in () contain additional subcomponents which you can select using subsequent screens.

1. Netscape Directory Server
2. Netscape Directory Server Console

Specify the components you wish to uninstall [1, 2]:

9. Select which Administration Services components you want to remove:

The following are the Administration Services components currently installed on your machine:

Components with a number in () contain additional subcomponents which you can select using subsequent screens.

1. Netscape Administration Server
2. Administration Server Console

Specify the components you wish to uninstall [1, 2]:

10. Select which iPlanet Messaging Applications components you want to remove.

The following are the iPlanet Messaging Suite components currently installed on your machine:

Components with a number in () contain additional subcomponents which you can select using subsequent screens.

1. iPlanet Message Store and Message Access
2. iPlanet Internet Message Transport Agent
3. iPlanet Messaging Multiplexor
4. High Availability for iPlanet Messaging Server
5. iPlanet Delegated Administrator Command Line Utilities

Specify the components you wish to uninstall [1, 2, 5]:

CAUTION If you installed any high availability components, you must manually remove them (See “Un-Installing High Availability” on page 105.). Although it is presented as an option, the automatic un-install of high availability components is not supported at this time; do not select this option.

11. Enter the login ID and password of the Configuration Administrator:

Enter the User ID or Distinguished Name of the administrator who is authorized to access the Configuration Directory at

```
ldap://budgie.siroe.com:389/
```

Configuration Admin ID or DN: [admin]:

At this point, the uninstall program should begin removing the various components you specified from your system.

Your un-install is now complete.

In some cases, `uninstall` might have been unable to remove some of your installation files. Please check for any remaining files and remove them manually.

NOTE The `uninstall` script does not reinstate the original `sendmail` link. You must manually restore this link if you want receive mail on the server via Solaris `sendmail`.

Additionally, if you want to remove any Message Store and Message Access components not removed by `uninstall`, you may now do so.

Un-Installing High Availability

To uninstall the high availability components:

1. Perform the normal uninstall procedures as described in the previous section (“Uninstalling Messaging Server Components”).
2. Remove the instance entry from the `/etc/msgregistry.inf` file if multiple instances are installed; otherwise, remove the `/etc/msgregistry.inf` file on both nodes.

At this point, uninstall instructions differ depending on whether you installed Veritas Cluster Server or SunCluster. Read whichever one of the following subsections is appropriate.

Un-Installing High Availability for Veritas Cluster Server

To un-install the high availability components for Veritas Cluster Server:

1. Remove the dirsync entries from cron job table on both nodes.
2. Delete all of the Veritas Cluster Server resources created during installation.
3. Stop the Veritas Cluster Server and remove following files on both nodes if no more instances exist:

```
/etc/VRTSvcs/conf/config/MsgSrvTypes.cf  
/opt/VRTSvcs/bin/MsgSrv/online  
/opt/VRTSvcs/bin/MsgSrv/offline  
/opt/VRTSvcs/bin/MsgSrv/clean  
/opt/VRTSvcs/bin/MsgSrv/monitor  
/opt/VRTSvcs/bin/MsgSrv/sub.pl
```

4. Remove the Messaging Server entries from the `/etc/VRTSvcs/conf/config/main.cf` file on both nodes.

Un-Installing High Availability for SunCluster

To un-install the high availability components for SunCluster:

1. Run the following command:

```
hareg -u ims50
```

2. Remove the following:

```
/opt/SUNWcluster/ha/msg/ims_common  
/opt/SUNWcluster/ha/msg/ims_fm_probe  
/opt/SUNWcluster/ha/msg/ims_start_net  
/opt/SUNWcluster/ha/msg/ims_stop_net
```

3. Remove the `ims_ha.cnf` file from your shared disk mount point directory (for example, `/mnt` if your shared disk is mounted under the `/mnt` directory).

SYMBOLS

/etc/resolv.conf file 15

A

Administration Domain name 36

Administration Services

products 17

Administration Server Console 17

Netscape Administration Server 17

AService.rc script 96

C

choosing a Configuration Directory Server 24

choosing a Users/Groups Directory Server 25

cluster agent 77

Configuration Server

choosing 24

configuring an existing Directory Server 24

configutil command 86

conventions used in this document 10

D

Delegated Administration Server hostname and port
49

Directory Server

choosing a Configuration Directory Server 24

choosing a Users/Groups Directory Server 25

configuring an existing Directory Server 24

dispatcher.cnf file 86

documentation

where to find Messaging Server documentation
12

domainname command 15

E

Enterprise Server

where it can be installed 21

F

firewall

smart host 50

H

hardware requirements 14

- hareg command 84
- high availability
 - cluster agent 77
 - configuration for Veritas Cluster Server 81
 - configuration parameters
 - MonitorInterval 82
 - MonitorTimeout 82
 - OnlineRetryLimit 82
 - OnlineWaitLimit 82
 - RestartLimit 82
 - dependency tree 79
 - iMS5 service group 78
 - logical_IP resource 79
 - mail resource 81
 - mountshared resource 79
 - multiple messaging server instances 85
 - multiple messaging servers
 - changing the default tcp_port 86
 - IP address binding for IMAP/POP3 servers 86
 - IP address binding for LDAP service 86
 - IP address binding for SMTP service 86
 - IP address binding for SMTP_SUBMIT service 86
 - network resource 79
 - post-installation procedures for SunCluster 84
 - post-installation procedures for Veritas Cluster Server 80
 - pre-installation procedures 78, 83
 - sharedg resource 79
 - uninstalling 105
- high availability models 71
 - a comparison of 76
 - asymmetric 72
 - N + 1 74
 - symmetric 73
 - system down time calculations 76
- hostname command 15

I

- ims_dssetup 21, 24
- ims_dssetup utility 25
 - instructions 69
 - what you will be asked for 26

- ims_ha.cnf file 84, 106
- install files
 - transferring to the installation machine 57
- install.inf file 28
- installation
 - types of 27
- installation process overview 23
- installation types 27
 - Custom Installation (see Custom Installation) 28
 - Silent Installation 28
 - Typical Installation (see Typical Installation) 27
- instance 40, 47
- iPlanet Messaging Applications 18
 - High Availability 19
 - iPlanet Delegated Administrator Command Line Utilities (CLIs) 19
 - iPlanet Message Store and Message Access 18
 - iPlanet Message Transport Agent (MTA) 18
 - iPlanet Messaging Multiplexor (MMP) 18

J

- job_controller.cnf file 86

L

- license agreement 30
- LICENSE.txt file 30
- local.ldapsiecred 92
- local.ldapsiedn 92
- logical host timeout
 - how to change 84

M

- Messaging Server
 - supported platforms 15
 - where it can be installed 21
- Messaging Server archive file

- extracting the contents 57
- Messaging Server default domain 48
- Messaging Server default organization 48
- Messaging Server documentation 12
- Messaging Suite
 - a graphical overview 20
- Messenger Express access
 - requirements for 15
- migrating existing data 8
- migration 8
- MMP 18
 - AService.cfg file 88
 - AService.rc file 88
 - creating additional instances 95
 - how to start 96
 - ImapProxyAService.cfg file 88
 - modifying an existing instance 95
 - PopProxyAService.cfg file 88
 - post-installation procedures 92
 - pre-installation checklist 88
 - sample topology 96
- MsgSvrType configuration file 81
- MTA 18
- Multiplexor
 - ImapMMP.config 88
 - installation (Unix) 87

N

- Netscape Administration Server 4.2 21
- Netscape Delegated Administrator 4.5 21
- Netscape Directory Server 4.12 21
- Netscape Directory Suite
 - products 17
 - Netscape Directory Server 17
 - Netscape Directory Server Console 17
- Netscape Enterprise Server 4.1 21
- Netscape Messenger Express
 - recommended browsers 15
- Netscape Server Core
 - products 16
 - Java Runtime Environment 16
 - Netscape Core Java Classes 16

Netscape Server Product Core Components 16

P

- ports
 - using Custom Installation 28
 - using default numbers 15
- postmaster 52
- postmaster account 52
- pre-installation checklist 56

S

- sconf command 84
- sendmail 21
- server instance 40, 47
- serverID 40, 47
- server-root
 - what it is 15
- setup program 23, 56
- Silent Installation
 - installation instructions 68
- slapd.conf file 86
- software requirements 15
- stop-admin utility 102
- stop-msg utility 102
- SunCluster 19
- system requirements
 - hardware 14
 - software 15

T

- TCP/IP port numbers
 - IMAP 51
 - Messenger Express 51
 - POP3 51
 - SMTP 51

- tcpclnt binary file 83
- transferring installation files 57
- transferring the install files to the installation machine 57

U

- uninstall program 102
- uninstalling
 - procedure 102
 - why you might want to uninstall Messaging Server 101
- uninstalling high availability 105

V

- Veritas Cluster Server 19, 78