Oracle® eMail Server

Installation Guide

Release 5.2 for Sun SPARC Solaris

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ORACLE

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Part No. A86649-01

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Preface

Oracle eMail Server Installation Guide provides the information you will need to properly and successfully install and configure Oracle eMail Server.

This preface contains these topics:

Audience

This guide is intended for anyone who will be installing and configuring the eMail Server. It describes the installation and configuration tasks you will perform.

Organization

This document contains:

Chapter 1, "Preinstallation"

This chapter describes the preinstallation procedures for eMail Server and includes an installation overview, system requirements, and preinstallation tasks.

Chapter 2, "Installing and Configuring eMail Server"

This chapter describes eMail Server installation and configuration procedures for new installations and upgrades. It contains step-by-step procedures for installing and configuring Oracle eMail Server.

Chapter 3, "Postinstallation"

This chapter describes tasks that must be done after eMail Server is installed or upgraded.

Chapter 4, "Deinstallation"

This chapter contains step-by-step instructions for deinstalling database objects and software.

Chapter 5, "Troubleshooting"

This chapter contains information relating to troubleshooting the installation of Oracle eMail Server.

Related Documentation

For more information, see these Oracle resources:

- *Oracle8i Installation Guide, Release 3 (8.1.7) for Sun SPARC Solaris*
- *Oracle8i Installation Guide, Release 3 (8.1.7) for Windows NT*
- *Oracle8i Administrator's Reference, Release 3 (8.1.7) for Sun SPARC Solaris*
- *Oracle8i Administrator's Reference, Release 3 (8.1.7) for Windows NT*

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Conventions

This section describes the conventions used in the text and code examples of this document. It describes:

- Conventions in Text
- Conventions in Code Examples

Conventions in Text

We use various conventions in text to help you more quickly identify special terms. The following table describes those conventions and provides examples of their use.

Convention	Meaning	Example
Bold	Bold typeface indicates terms that are defined in the text or terms that appear in a glossary, or both.	The C datatypes such as **ub4**, **sword**, or **OCINumber** are valid. When you specify this clause, you create an **index-organized table**.
Italics	Italic typeface indicates book titles, emphasis, syntax clauses, or placeholders.	*Oracle9i Concepts* You can specify the *parallel_clause*. Run `U`*`old_release`*`.SQL` where *old_release* refers to the release you installed prior to upgrading.

Convention	Meaning	Example
UPPERCASE monospace (fixed-width font)	Uppercase monospace typeface indicates elements supplied by the system. Such elements include parameters, privileges, datatypes, RMAN keywords, SQL keywords, SQL*Plus or utility commands, packages and methods, as well as system-supplied column names, database objects and structures, user names, and roles.	You can specify this clause only for a `NUMBER` column. You can back up the database using the `BACKUP` command. Query the `TABLE_NAME` column in the `USER_TABLES` data dictionary view. Specify the `ROLLBACK_SEGMENTS` parameter. Use the `DBMS_STATS.GENERATE_STATS` procedure.
lowercase monospace (fixed-width font)	Lowercase monospace typeface indicates executables and sample user-supplied elements. Such elements include computer and database names, net service names, and connect identifiers, as well as user-supplied database objects and structures, column names, packages and classes, user names and roles, program units, and parameter values.	Enter `sqlplus` to open SQL*Plus. The `department_id`, `department_name`, and `location_id` columns are in the `hr.departments` table. Set the `QUERY_REWRITE_ENABLED` initialization parameter to `true`. Connect as `oe` user.

Conventions in Code Examples

Code examples illustrate SQL, PL/SQL, SQL*Plus, or other command-line statements. They are displayed in a monospace (fixed-width) font and separated from normal text as shown in this example:

```
SELECT username FROM dba_users WHERE username = 'MIGRATE';
```

The following table describes typographic conventions used in code examples and provides examples of their use.

Convention	Meaning	Example
[ ]	Brackets enclose one or more optional items. Do not enter the brackets.	`DECIMAL (digits [ , precision ])`
{ }	Braces enclose two or more items, one of which is required. Do not enter the braces.	`{ENABLE | DISABLE}`
|	A vertical bar represents a choice of two or more options within brackets or braces. Enter one of the options. Do not enter the vertical bar.	`{ENABLE | DISABLE}` `[COMPRESS | NOCOMPRESS]`

Convention	Meaning	Example
`...`	Horizontal ellipsis points indicate either: ■ That we have omitted parts of the code that are not directly related to the example ■ That you can repeat a portion of the code	`CREATE TABLE ... AS subquery;` `SELECT col1, col2, ... , col`*`n`* `FROM employees;`
. . .	Vertical ellipsis points indicate that we have omitted several lines of code not directly related to the example.	
Other notation	You must enter symbols other than brackets, braces, vertical bars, and ellipsis points as it is shown.	`acctbal NUMBER(11,2);` `acct CONSTANT NUMBER(4) := 3;`
`Italics`	Italicized text indicates variables for which you must supply particular values.	`CONNECT SYSTEM/`*`system_password`*

`UPPERCASE`	Uppercase typeface indicates elements supplied by the system. We show these terms in uppercase in order to distinguish them from terms you define. Unless terms appear in brackets, enter them in the order and with the spelling shown. However, because these terms are not case sensitive, you can enter them in lowercase.	`SELECT last_name, employee_id FROM employees;`
		`SELECT * FROM USER_TABLES;`
		`DROP TABLE hr.employees;`

`lowercase`	Lowercase typeface indicates programmatic elements that you supply. For example, lowercase indicates names of tables, columns, or files.	`SELECT last_name, employee_id FROM employees;` `sqlplus hr/hr`

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Preinstallation

This chapter describes the preinstallation procedures for eMail Server.

This chapter contains these topics:

Installation Overview

eMail Server is a highly scalable messaging framework that provides complete messaging services. Prior to installation, you should plan your implementation strategy and be familiar with eMail Server system components, concepts, and terminology.

The installation process is composed of the following steps:

1. Plan an implementation strategy, considering the following factors:
   - Anticipated usage of the e-mail system (total number of users, anticipated number of concurrent users at peak load, how much e-mail you expect to transmit and receive each day, and how much e-mail you expect to store)
   - Domain requirements (`acme.com` as opposed to `us.acme.com` and `uk.acme`.com, for instance)
   - E-mail clients you plan to use
   - Security concerns
   - Network topology and bandwidth
   - Performance and availability requirements
2. Complete the required preinstallation tasks, including backing up an existing system, configuring the UNIX environment, and preparing related processes and products for the installation.
3. Use the Oracle Universal Installer (OUI) on the Oracle software CD to install or upgrade eMail Server and related software products, including running the `root.sh` script.
4. Complete the required postinstallation tasks and verify the installation by starting processes and checking process logs.

Once you have verified the installation, refer to the *Oracle eMail Server Administration Guide* for instructions on how to configure, maintain, and optimize eMail Server.

Requirements

You must have the following items to install eMail Server:

- An OFA-compliant Oracle8i Database Server installed
- A CD-ROM drive supported by Solaris (Oracle uses High Sierra or ISO 9660 format CD-ROM disks with RockRidge extension)
- The eMail Server Release 5.2 software CD-ROM

This section describes the following:

- Hardware Requirements
- Software Requirements

Hardware Requirements

For each server identified in your implementation strategy (node, dedicated protocol server, LDAP server, test system), you must determine the following hardware requirements:

- CPU Requirements
- Memory Requirements
- Disk Space Requirements
- Network Bandwidth Requirements

> **Note:** To make support easier, it is often best to choose a single hardware provider for all of your hardware and to have the same or similar hardware configurations. Please contact Oracle Sales for more information.

CPU Requirements

The metric for CPU usage is the number of SPECint_rate95 points used during steady state activity. SPECint_rate95 is a benchmark designed to measure the possible throughput of integer calculations for a given system and is applicable for this database application.

> **See Also:** For more detailed discussion on SPECint_rate95 and a list of systems and their SPECint_rate95 ratings, refer to http://www.spec.org/osg/cpu95/results/rint95.html

The following rates are the SPECint_rate95 demands needed for the different eMail Server processes for 1000 users at sample light, medium, and heavy workloads.

Process	Corporate	ISP
Oracle8i Database Server	260	120
IMAP4	80	40
POP3	20	12
SMTP/MIME Gateway processes	80	45

Process	Corporate	ISP
Total demands	440	217

Memory Requirements

The memory required for the background processes for Oracle8i Database Server and the eMail Server depend on the configuration of the database, features selected for eMail Server, and the number of concurrent users to be supported. The following table illustrates the memory usage for the base installation and the incremental memory demands as the work load increases.

Process	Base Memory Demand (MB)	Incremental Memory Demand Per User (MB)
UNIX OS	30 MB	5 MB per 1000 connected IMAP4 clients
X Windows Manager (if launched)	15 MB	0
Oracle8i Database Server + static IM background processes	50 MB	0
Database buffer Cache	20 MB	10 MB per 1000 users[1]
SGA	10 MB	4.5 MB per 1000 users
Database connections	0	15 MB per 1000 users[2]
Postman processes	4 MB	2 MB per 1000 users
IMAP4 process	10 MB	120 MB per 1000 users[3]
POP3 process	10 MB	5 MB per 1000 users[4]
Sendmail and ofcuto	2 MB	23 MB per 1000 users connected[5]
SMTP/MIME Gateway process	10 MB	3.5 MB per 250 users

[1] The database buffer cache can be tuned to hold database blocks and reduce disk I/O and improve response times. Refer to the documentation provided with the Oracle database for tuning of this memory parameter. The number provided is a generic prescription to handle most messaging workloads.

[2] The SPS architecture has many different requests being handled by a few static database connections. Given the high volume of traffic over these few connections, the Oracle multi-threaded Server Option should not be used. The number of database connections needed to sustain a user population depends upon the rate of incoming requests and the rate in which the requests are handled. If the incoming rate is very high and the server is handling each request slowly the required number of database connections will go up.

[3] This memory requirement is for the number of IMAP4 clients actually holding a socket with the server. Netscape and other IMAP4 clients close their socket with the server if no activity is determined after a preset amount of time. Netscape closes the socket after two uneventful get mail cycles. The user is not aware of being "disconnected" as the client automatically reconnects upon the next user action.

[4] A thread is launched to handle the incoming POP3 request. The thread is only in existence during the get mail cycle, therefore the total memory consumption at any given time is quite low.

[5] When a message comes in via SMTP, a new sendmail process is launched to handle the message. Sendmail writes the message to the sendmail queue directory and then either sends the message to outside the intranet or hands it off for local delivery. If there is a bottleneck in the system such as insufficient disk I/O capacity the number of resident processes can grow. If there is insufficient physical memory to handle the necessary processes, the resulting paging disk I/O will slow down the system and increase the number of resident processes.

Disk Space Requirements

Consider the following factors when determining the disk requirements for an eMail Server:

- Disk space required by the operating system and other applications
- The mailbox quota will affect the disk space requirements for the servers
- Swap space required by the operating system
- Space required for archiving, backup, and disk mirroring
- Space for Oracle software, such as Oracle8i Database Server, SQL*Plus, and eMail Server
- Space for the Oracle database objects
- Number of separate disk drives to handle I/O requests

See your operating system, application, and system maintenance documentation for information on the first three factors.

Space for Oracle Software

eMail Server Release 5.2 with Oracle 8.1.7	750 MB
Oracle SPS Tier	255 MB
Oracle Email Administration	44 MB

Space for the Oracle Database Objects

The following tablespaces are required for an eMail Server system. Sizing information is based on a configuration where eMail Server is the only application.

System Tablespaces

SYSTEM	40 MB minimum
TOOLS	default
USERS	default
RBS (rollback)	20 MB minimum
TEMP	5 MB + (100Kb * number of users)

eMail Server Tablespaces

OFC_MAIN	10 MB (minimum)
OFC_INDS	(size of OFC_MAIN) * 0.4
OFC_MESG	5 MB + (quota * number of users)
OFC_INDB	(size of OFC_MESG) * 0.1

Number of Separate Disk Drives to Handle I/O Requests per 1000 Users

The number of disk I/O operations per second that a device can handle is highly dependent upon the types of disks, number of controllers, if RAID is used or any other striping strategy and the mix of I/O requests on the device. In general a modern single SCSI II drive can handle 40 disk I/O operations per second.

The following estimates show the number of disk I/O operations per second. Add disks to the hardware configuration to reduce the disk I/O operations per second on each disk.

Process	Corporate	ISP
Oracle8i Database Server	105	45
IMAP4	2	2
POP3	2	2
SMTP/MIME Gateway processes	60	20
Total I/O’s per second	169	69

Network Bandwidth Requirements

The following estimates show average network bandwidth requirements for 100 users. These numbers should be added to the values for the existing network usage.

User profile	Bandwidth on Middle Tier	Bandwidth on Database Tier
ISP	2.9 Mbps	1.2 Mbps
Corporate	4	1.8

Note: The middle tier is composed of the IMAP4, POP3, and Sendmail processes.

Software Requirements

eMail Server requires the following software components and associated versions:

Software Requirements	Version	Comments	State During eMail Server Installation
eMail Server	5.2		
Network Listener	8.1.7		Running
Net8	8.1.7		Installed
Oracle8i Database Server	8.1.7		Installed and Running
PL/SQL	8.1.7		Installed
SQL*Plus	8.1.7		Installed
JRE	1.1.8		Installed
JSP engine (iAS)	3.0		Installed and Running
JSDK	2.0 and above		Installed
Oracle JDBC	8.0.4 and above		Installed

Note: Oracle eMail Server's protocol servers require an installation of iAS.

Preinstallation Tasks

Perform the following preinstallation tasks described in this section to prepare for eMail Server installations and upgrades:

- Task 1: Back Up Existing Database and Log Files
- Task 2: Configure the Oracle Database Server
- Task 3: Configure the UNIX Environment
- Task 4: Start the Database
- Task 5: Configure Net8 and Check the LISTENER.ORA and TNSNAMES.ORA Files
- Task 6: Configure the Net8 SQLNET.ORA File

Task 1: Back Up Existing Database and Log Files

Perform a full backup of your existing Oracle8i Database Server before you perform any new installation or upgrade. A full backup ensures that you can recover from errors encountered during new installation or upgrade processes.

This backup should be performed with the database shut down cleanly. If you use SHUTDOWN IMMEDIATE or SHUTDOWN ABORT to force users off the system, be sure to restart the database in restricted mode, and then shut it down with normal priority.

> **See Also:** *Oracle8i Administrator's Guide* or *Oracle8i Backup and Recovery* for more information

For upgrades, also back up:

- `$ORACLE_HOME/office/ds/incoming/*`
- `$ORACLE_HOME/office/ds/outgoing/*`
- `$ORACLE_HOME/office/admin/*.cfg`

Task 2: Configure the Oracle Database Server

eMail Server requires reconfiguration of specific database parameters. Before starting this configuration, shut down the network listener and the database, and configure the `init.ora` file located in the `$ORACLE_HOME/dbs` directory.

1. To shut down the network listener:

   ```
   % lsnrctl stop
   ```

2. To shut down the database:

   ```
   % sqlplus
   Enter user-name: internal
   Connected.
   SQL> shutdown
   SQL> exit
   ```

3. To configure the `init.ora` file, use the text editor to add or enable the following entry:

   ```
   utl_file_dir = $ORACLE_HOME/office/log
   ```

   Note: Set this file to where `$ORACLE_HOME` should be replaced by an absolute path to the `$ORACLE_HOME` mount point.

Use the text editor to edit the `init`*`sid`*`.ora` file located in the `$ORACLE_HOME/dbs` directory to reflect the following minimum values for the following parameters.

Parameter	Minimum Settings
DB_FILES	40
DB_BLOCK_BUFFERS	300
SHARED_POOL_SIZE	15 MB
PROCESSES	200
DML_LOCKS	200
LOG_BUFFER	32768
OPEN_CURSORS	255
OPEN_LINKS	4
GLOBAL_NAMES	false
COMPATIBLE	*current database version*

ROLLBACK SEGMENTS	At least one rollback segment must be available in addition to the System rollback segment
OPTIMIZER_MODE	Choose the default value

Task 3: Configure the UNIX Environment

Set the UNIX environment variables required to install and run eMail Server components. Add these settings to a `.cshrc` (C shell) or `.profile` (Bourne or Korn shell) for the eMail Server database owner.

1. Log in as the `root` user. Use the text editor to add the following two lines to the end of the `system` file located in the `/etc` directory if they do not already exist:

   ```
   set rlim_fd_max=1024
   set rlim_fd_cur=1024
   ```

   This increases the file descriptor limit, which increases the maximum number of clients associated with each server.

2. Reboot the machine.

3. Set `ulimit` (Bourne or Korn shell) or `limit` (C shell) to `unlimited` to allow the `root.sh` postinstallation script to complete without errors. Run the command appropriate for your shell environment to set the maximum file size that can be created on your machine.

   See the UNIX man pages for more information on `ulimit` and `limit`.

   Define the `$ORACLE_HOME` environment variable in the `.login` file (for the C shell) or the `.profile` file (for the Bourne or Korn shell):

`.login`	`setenv $ORACLE_HOME` *`directory_name`*
`.profile`	`$ORACLE_HOME=`*`directory_name`* `export $ORACLE_HOME`

   Execute the `.profile` or `.login` file.

   Define the `$ORACLE_BASE` environment variable in the `.login` file or the `.profile` file as the parent directory of the Java runtime environment that is shipped with the `$ORACLE_HOME` database.

`.login`	`setenv $ORACLE_BASE` *`directory_name`*

`.profile`	`$ORACLE_BASE=`*`directory_name`* `export $ORACLE_BASE`

4. Ensure that the DISPLAY environment variable is set to your display address.

   In C shell, set DISPLAY as follows:

   `% setenv DISPLAY `*`hostname`*`:0.0`

   In Bourne or Korn shell, set DISPLAY as follows:

   `$ DISPLAY=`*`hostname`*`:0.0;export DISPLAY`

5. Ensure that `xhost`, while physically located on the host machine, is set to enable access to the X server on your machine. Use the following command:

   ```
   % /usr/openwin/bin/xhost +
   access control disabled, clients can connect from any host
   ```

   See the UNIX man pages for more information on `xhost`.

6. Ensure that the following environment variables are set.

Environment Variable	Setting
LD_LIBRARY_PATH	Place `$ORACLE_HOME/lib` before any other path entries. Also include any directories containing the Motif shared libraries, such as `/usr/openwin/lib` and `/usr/dt/lib` (required for motif-based products). It must also contain `/usr/lib` or `/etc/lib` if running the LDAP server. **Note**: If you are installing Oracle *inter*Media Text 8.1.6 (**correct version number???**), also add `$ORACLE_HOME/cxt/lib`.
ORACLE_HOME	The Oracle8i Database Server home directory.
ORACLE_SID	The Oracle8i Database Server ID.
ORACLE_BASE	Set ORACLE_BASE to point to the JRE location.
PATH	Include `$ORACLE_HOME/bin`, `/bin`, `/opt/bin` (or any valid local bin directory to which the database owner can write), `/usr/bin`, and `/usr/ccs/bin`. Also include the `make` utility directory. **Note**: If you require `/usr/ucb` in the search path, make sure `/usr/ccs/bin` is before it in the search order. **Note**: If you are installing Oracle interMedia Text 8.1.6, also add `$ORACLE_HOME/cxt/bin`.

Environment Variable	Setting
SRCHOME	Unset
TMPDIR	Unset
TWO_TASK	Unset
TZ	Set to the timezone offset for your region. This step is required in addition to the GMT offset specified during installation.

Task 4: Start the Database

Start the database as follows:

```
% sqlplus
Enter user-name: internal
Connected to an idle instance.
SQL> startup
SQL> exit
```

Start the network listener:

```
% lsnrctl start
```

Task 5: Configure Net8 and Check the LISTENER.ORA and TNSNAMES.ORA Files

Note: The following task is for installations of domain configuration nodes (DCN) or member nodes, only.

If you are installing a DCN or Member node, configure Net8 to enable the new node to connect to the host server.

The following are methods for configuring Net8:

- Configuring Net8 with an Oracle Names Server
- Configuring Net8 with a TNSNAMES.ORA Configuration File

Configuring Net8 with an Oracle Names Server

Use an Oracle Names server to simplify the setup and administration of global client/server computing networks by maintaining a central directory of service names for all the services on the network.

See Also: The Oracle Names Server or Net8 documentation for more information

Configuring Net8 with a TNSNAMES.ORA Configuration File

If you are not using an Oracle Names Server, then you must add entries to the `tnsnames.ora` configuration file.

1. Use a text editor to open the `tnsnames.ora` file in the `$ORACLE_HOME/network/admin` directory.

   Note: If the `tnsnames.ora` file does not exist, see the Net8 documentation for information on how to create this file.

2. Add the following entry for each eMail Server node to which you want to connect:

   ```
   connect_string =
       (DESCRIPTION=
           (ADDRESS=( PROTOCOL= TCP)(HOST= host_server_name)(PORT= 1521))
           (CONNECT_DATA= (SID= sid)))
   ```

   Follow these guidelines when adding entries:

   - The `tnsnames.ora` file must contain an entry for each eMail Server node to which you want to connect.
   - The `tnsnames.ora` file should be copied to each node that will be part of the network configuration.
   - The connect string for each entry must match the service name that you specified when the node was installed. You can also define additional entries that use other connect strings as aliases.

   The following is an example:

   ```
   host1,io1,host1.us.oracle.com,io1.us.oracle.com =
       (DESCRIPTION =
           (ADDRESS = (PROTOCOL= TCP) (HOST=
                 iosun-test1.us.oracle.com)(PORT=1521))
           (CONNECT_DATA = (SID= io1)))
   ```

3. Verify the modified `tnsnames.ora` file:

   ```
   % tnsping host
   ```

4. Start the network listener:

   ```
   % lsnrctl start
   ```

5. The `listener.ora` and `tnsnames.ora` files are automatically configured during the installation of an Oracle database. They are located in the `$ORACLE_HOME/network/admin` directory.

   Verify that the `listener.ora` file contains entries for an IPC key EXTPROC and a SID PLSExtProc.

   ```
   (KEY=EXTPROC)
   (SID_NAME=PLSExtProc)
   ```

   Verify that the `tnsnames.ora` file contains an entry for EXTPROC_CONNECTION_DATA which uses the IPC key EXTPROC and SID PLSExtProc.

   > **See Also:** Net8 Administrator's Guide for more information regarding the `listener.ora` and `tnsnames.ora` files

Task 6: Configure the Net8 SQLNET.ORA File

Change the BEQUETH_DETACH variable setting in the `sqlnet.ora` file to facilitate cleanup of defunct UNIX processes associated with eMail Server as follows:

1. Use a text editor to open the `sqlnet.ora` file in the `$ORACLE_HOME/network/admin` directory.

   > **Note:** If the `sqlnet.ora` file does not exist, see the Net8 documentation for information on how to create this file.

2. In the `sqlnet.ora` file, ensure that there is an entry for the BEQUETH_DETACH variable and that its value is set to `yes`:

   ```
   BEQUETH_DETACH = yes
   ```

2

Installing and Configuring eMail Server

This chapter describes eMail Server installation and configuration procedures for new installations and upgrades.

The chapter contains these topics:

Installing eMail Server

This section contains the following tasks:

> **Note:** Two $ORACLE_HOME directories must be created: in one $ORACLE_HOME you will install the database and eMail Server, while in the other you will install iAS, Universal Messaging, Thin Client, and the protocol servers.

Task 1: Mount the Product CD-ROM

The Oracle product installation CD-ROM is in RockRidge format. If you are using the Solaris Volume Management software (installed by default on Sun SPARC Solaris 2.x), the CD-ROM is mounted automatically when you place it into the CD-ROM drive. If you are not using the Solaris Volume Management software, use the following procedure to mount the CD-ROM manually. You must have root privileges to mount or unmount the CD-ROM manually. Be sure to unmount the CD-ROM before removing it from the drive.

1. Place the product installation CD-ROM in the CD-ROM drive.
2. Log in as the `root` user:

   ```
   % su -root
   ```

3. Create a CD-ROM mount point directory:

   ```
   # mkdir mount_point_directory
   ```

4. Mount the CD-ROM drive on the mount point directory and exit the root account:

   ```
   # mount options device_name mount_point_directory
   # exit
   ```

Task 2: Monitor Log Files

You will want to have several UNIX windows available to you during the installation process so you can monitor the installation as it happens using the log files. If any errors occur during the installation, the information in the log files will tell you where they occurred.

Monitor this log file during the Oracle Universal Installer phase of the installation:

- `installActions.log`

  This file is located in `$ORACLE_BASE/oraInventory/logs`.

Monitor the following two log files when you start the Setup Wizard:

- `iorelink.log`

  This file is located in *`$ORACLE_HOME`*`/office/log`

- `iosetup.log`

  This file is located in `$ORACLE_HOME/office/log/`*`sid`*.

  Note: You will not be able to access the `iosetup.log` file until later in the installation, because the file is created during configuration process.

Task 3: Run Oracle Universal Installer

The Oracle Universal Installer (OUI) assists you with the installation of many Oracle products. Follow these steps to run OUI:

1. Log in as the user who installed Oracle products on this machine and change to the installation directory on the CD-ROM:

   ```
   % cd mount_point_directory
   ```

2. Ensure that the DISPLAY environment variable is set to your display address as follows:

   ```
   % echo $DISPLAY.
   ```

   The DISPLAY environment variable should be set to your display address. If it is not, enter the following:

   ```
   % setenv DISPLAY hostname:0.0 (C Shell)
   $ DISPLAY=hostname:0.0;export DISPLAY (Bourne or Korn Shell)
   ```

3. Ensure that `xhost`, while physically located on the host machine, is set to enable access to the X server on your machine. Use the following command:

   ```
   % /usr/openwin/bin/xhost +
   ```

   See Also: See the UNIX man pages for more information on xhost

4. From the installation directory on the CD-ROM, enter the following:

   ```
   % ./runInstaller
   ```

The `./runInstaller` command launches the OUI and displays the Welcome screen.

Figure 2–1 OUI Welcome Screen

The following table provides information about OUI screen buttons.

Screen Button	Function
Deinstall Products	Opens the Deinstall screen
About Oracle Universal Installer	Displays the version number
Exit	Exits the installation session
Help	Displays the online help

Screen Button	Function
Installed Products	Displays what Oracle products you have installed
Previous	Opens the previous screen
Next	Opens the next screen

5. Using another window, enter the following to monitor the `installActions.log` file located in the `$ORACLE_BASE/oraInventory/logs` directory:

```
% tail -f installActions.log
```

Leave this window open in the background. You will notice text scrolling up that window as the installation progresses.

6. Click Next to display the File Locations screen.

Task 4: Enter File Locations

At the File Locations screen, enter the locations of the source and destination files. The source file is the location from which eMail Server will be installed, while the destination is the `$ORACLE_HOME` where eMail Server will be installed.

Figure 2–2 OUI File Locations Screen

1. Enter the source and destination path information, or use the Browse button to select the source and destination directories for the installation.
2. Click Next to display the Available Products screen.

Task 5: Select Available Products

At the Available Products screen, select the eMail Server products to install.

Figure 2–3 OUI Available Products Screen

Available Products	Components	Appropriate Uses
Oracle eMail Server 5.2	Installs the eMail Server, IMAP4 & POP3 server, and the eMail Server Administration Tool	Select this option if you have never installed eMail Server
IMAP4 & POP3 Protocol Server 5.2	Installs IMAP4 & POP3 protocol servers only	Select this option if you only want to install the IMAP4 & POP3 protocol servers
eMail Server Administration Tool 5.2	Installs the eMail Server Administration Tool only	Select this option if you want to install the eMail Server Administration Tool only
eMail Server 5.2	Installs the eMail Server only	Select this option if you want to install the eMail Server only
eMail Server Administration Tool 5.2	Installs the eMail Server Administration Tool only	Select this option if you want to install the eMail Server Administration Tool only

Select the product to install and click Next to display the Summary screen.

Task 6: Verify Installation Settings

Verify your installation settings at the Summary screen. The settings include the source and destination locations you specified; the installation type you selected; the product language; the space requirement for installation, and the space currently available; and the eMail Server products that will be installed.

Figure 2–4 OUI Summary Screen

- To change the source or destination location, or installation type, click Previous to return to the appropriate screen.
- To begin the installation, click Install to display the Install screen.

The Install screen shows the installation progress. To stop the installation, click Cancel.

Running the `root.sh` Script

During installation process, a dialog box prompts you to run the `root.sh` script.

> **Note:** You must run the `root.sh` script to set up the appropriate permissions for the servers because, prior to completing the installation, it changes the owner of the servers and sets the `userid` bit. This is extremely important.

Using a different window (one that is not monitoring the installation progress), perform the following steps to run the `root.sh` script:

1. Log in as `root`:

   ```
   % su -root
   ```

2. Change to the installation directory and run the `root.sh` script:

   ```
   # cd $ORACLE_HOME
   # ./root.sh
   # exit
   ```

When you have completed running the `root.sh` script, click OK. The installation process continues and installs the products in the specified location.

Task 7: Complete the Installation

When installation is complete, the End of Installation screen displays.To begin configuration, click the Configuration Tools button to display the Optional Configuration Tools screen. Otherwise, click Exit.

Configuring eMail Server

This section contains the following tasks:

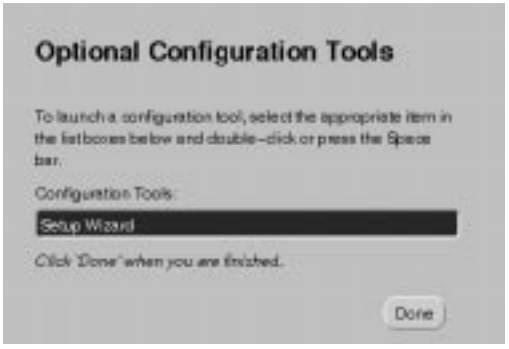
Task 1: Start the Configuration Assistant

The Configuration Assistant is designed to aid in configuring Oracle eMail Server. Launch the Configuration Assistant screen automatically or manually.

Starting the Configuration Assistant Automatically

1. From the End of Installation screen, select the Configuration Tools button to display the Optional Configuration Tools screen.

Figure 2–5 Optional Configuration Tools Screen



2. Double click on Setup Wizard in the Configuration Tools field to display the Configuration Assistant screen.

Starting the Configuration Assistant Manually

At the operating system prompt, enter the following to launch the Configuration Assistant:

```
% $ORACLE_HOME/bin/imconfig
```

Using the Configuration Assistant

The Configuration Assistant helps configure eMail Server.

Figure 2–6 Setup Wizard Configuration Assistant Screen

The following table provides information about the Configuration Assistant screen buttons.

Screen Button	Function
Cancel	Exits the Configuration Assistant
Back	Returns to the previous screen
Next	Proceeds to the next screen

Click Next to display the Configuration Type screen.

Task 2: Select the Configuration Type

The Configuration Type screen allows you to select the appropriate configuration for your installation. Use the table below to choose which is right for you.

Configuration Type	Function	Appropriate Uses
Create a new node	Creates a new eMail Server node	Select this configuration type if you want to create a new eMail Server node. See "Task 3: Create a New Node" on page 2-12.

Configuration Type	Function	Appropriate Uses
Upgrade or Add component(s)	Upgrades or adds components to an existing eMail Server system	Select this configuration type if you have an existing eMail Server node. See "Task 5: Upgrade an Existing eMail Server Node" on page 2-24.
Configure a protocol server	Creates a POP3/IMAP4 server layer	Select this configuration type if you want to create a POP3/IMAP4 server layer. See "Task 7: Configure a Protocol Server" on page 2-29
Run utilities	Creates or stores an SSL certificate and migrates directory data	Select this configuration type if you want to create or store an SSL certificate, or if you want to migrate directory data. See "Task 8: Run Utilities" on page 2-29

Figure 2–7 Configuration Type Screen

Select the appropriate configuration type and click Next.

Task 3: Create a New Node

When you select Create a new node from the Configuration Type screen, the First Domain screen displays.

Figure 2–8 First Domain Screen

To install a new Oracle eMail Server, type the domain name and the domain description in the corresponding fields and click Next. The Default/Custom Install screen displays. Some examples of domain names are com, gov, org, and edu.

Note: Write down the domain name you choose, as you will need it later.

Figure 2–9 Default/Custom Install Screen

- If configuring a Default Node, select Default and click Next. See "Task 12: Complete the Configuration" on page 2-43

> **Note:** The default configuration does not enable synchronization processes that load an LDAP server. Please refer to Oracle eMail Server Administration Guide.

- If configuring a Custom Node, select Custom and click Next. See "Task 4: Configure a Custom Node" on page 2-14.

Make your selection and click Next. The next screen displayed will ask you if you have an existing database. eMail Server cannot be installed unless there is an existing database. Select Yes and click Next to proceed.

Task 4: Configure a Custom Node

Select Custom node from the Default/Custom Install screen and click Next. The First Node screen displays.

Figure 2–10 First Node Screen

From the First Node screen, you can make the following selections:

- Select Yes if this is the first Oracle eMail Server you are installing

See Also: "Installing Your First Oracle eMail Server Node" on page 2-15

- Select No if this not the first Oracle eMail Server you are installing.

See Also: "Installing Additional Oracle eMail Server Nodes" on page 2-18

Installing Your First Oracle eMail Server Node

If this is the first eMail Server node you are installing, select Yes from the First Node screen and click Next. The Node Information screen displays.

Figure 2–11 Node Information Screen

1. At the Node Information screen, if you choose not to use the default node name and description of ESNODE and Oracle eMail Server, respectively, enter your node name and description and click Next. The First Community screen displays.

> **Note:** If you choose to change the node name and description at this time, be sure to write down the node name you choose, because you will be asked to enter it later. Also, you may change the values of these two fields, and the values of subsequent fields, later.

Figure 2–12 First Community Screen

2. At the First Community screen, enter the community name and the descriptions and click Next. The TNS Connection screen displays.

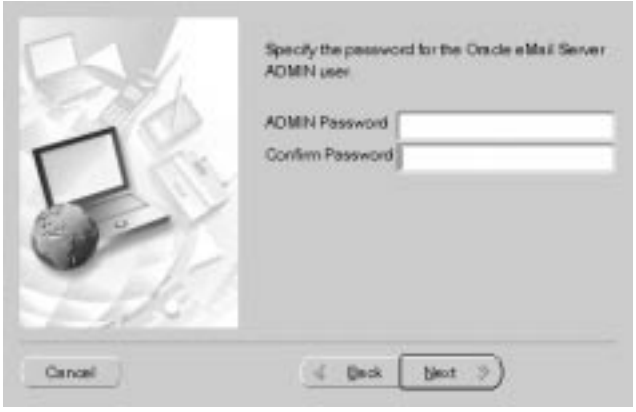
Figure 2–13 TNS Connection Screen

3. At the TNS Connection screen, specify the service name or connect string in the Service Name field that will be used by other Oracle eMail Server nodes in the same community to access this node. Click Next to display the Time Zone screen.

Figure 2–14 Time Zone Screen

4. At the Time Zone screen, select the time zone for your area from the dropdown list and click Next. The ADMIN User screen displays.

Figure 2–15 Admin User Screen



5. At the Admin User screen Enter the admin password and confirmation password and click Next. The User Account screen displays.

Figure 2–16 User Account Screen

6. At the User Account, enter the eMail Server database password and confirmation password in the corresponding fields and click Next. The eMail Protocol screen displays.

> **Note:** Remember to write down the passwords you entered for Steps 5 and 6.

7. Proceed to "Task 9: Enable the IMAP4 and POP3 Servers" on page 2-36.

Installing Additional Oracle eMail Server Nodes

> **Note:** Additional eMail Server nodes must be installed on a different database, with a different $ORACLE_HOME, from the initial installation.

1. At the First Node screen, if this is not the first eMail Server node you are installing, select No and click Next. The Sponsor Node screen displays.

Figure 2–17 Sponsor Node Screen

2. Enter the service name and OO password and click Next. The Node Definition screen displays.

Figure 2–18 Node Definition Screen

3. At the Node Definition screen, select the mode of definition for creating the new Node and click Next. The New Domain screen displays.

Figure 2–19 New Domain Screen

4. At the New Domain Screen, choose one of the following:

- Create a Domain Configuration Node in the new Oracle eMail Server domain.

  See: "Creating a New Domain Configuration Node" on page 2-20

- Add a new member node to an existing Oracle eMail Server domain.

  See: "Adding a Member Node" on page 2-23

Creating a New Domain Configuration Node

Note: Additional domain configuration nodes must be installed on a different database, with a different $ORACLE_HOME, from the initial installation.

To create a domain configuration node (DCN), select Create DCN from the New Domain screen (see Figure 2-19) and click Next. The Domain Parent screen displays.

Figure 2–20 Domain Parent Screen

1. Click the drop down list, select the parent domain, and click Next. The Domain Information screen displays.

Figure 2–21 Domain Information Screen

2. At the Domain Information screen, enter the domain name and description and click Next. The New Node Information screen displays.

Figure 2–22 New Node Information Screen

3. At the New Node Information screen, enter the node name and description and click Next. The Select Community screen displays.

Figure 2–23 Select Community Screen

4. At the Select Community screen, select the Oracle eMail Server community of the node from the dropdown list and click Next. The TNS Connection screen displays (see Figure 2–13).

5. In the Service Name field of the TNS Connection screen, enter the service name and click Next. The Time Zone screen displays (see Figure 2–14).
6. At the Time Zone screen, select the time zone for your area from the dropdown list and click Next. The Admin User screen displays (see Figure 2–15).
7. At the Admin User screen enter the admin password and confirmation password and click Next. The User Account screen displays (see Figure 2–16).
8. At the User Account screen enter the eMail Server database password and confirmation password and click Next.
9. Proceed to "Task 9: Enable the IMAP4 and POP3 Servers" on page 2-36.

Adding a Member Node

To add a member node to an existing Oracle eMail Server domain, select Add member node from the New Domain screen (see Figure 2–19) and click Next. The Select Domain screen displays.

1. Click on the dropdown list, select the parent domain, and click Next. The New Node Information screen displays (see Figure 2–11).
2. At the New Node Information screen, enter the domain name and the domain description and click Next. The Select Community screen displays (see Figure).
3. From the dropdown list, select the Oracle eMail Server community to which this node will belong and click Next. The TNS Connection screen displays (see Figure 2–13).
4. In the Service Name field of the TNS Connection screen, enter the service name and click Next. The Time Zone screen displays (see Figure 2–14).
5. At the Time Zone screen, select the time zone for your area from the dropdown list and click Next. The Admin User screen displays (see Figure 2–15).
6. At the Admin User screen, enter the admin password and confirmation password and click Next. The User Account screen displays (see Figure 2–16).
7. At the User Account screen, enter the eMail Server database password and confirmation password and click Next.
8. Proceed to "Task 9: Enable the IMAP4 and POP3 Servers" on page 2-36.

Task 5: Upgrade an Existing eMail Server Node

> **Note:** Before running setup wizard to upgrade to eMail Server Version 5.2, the user has to copy all config files from the old `$ORACLE_HOME/office/admin` to the new `$ORACLE_HOME/office/admin`.

If the previous installation does not use default tablespace names for Oracle eMail Server objects, you need to create the default tablespaces as described below before starting the upgrade.

1. To create default tablespaces, use SQL*Plus as the SYS user and run the `deftblspc.sql` script located in the `$ORACLE_HOME/office/admin/rsql` directory:

```
% cd $ORACLE_HOME/office/admin/rsql
% sqlplus SYS/SYS_password
SQL> @deftblspc.sql
```

From the Configuration Type screen (see Figure 2–7), select Upgrade or Add component(s) and click Next. The Upgrade screen displays.

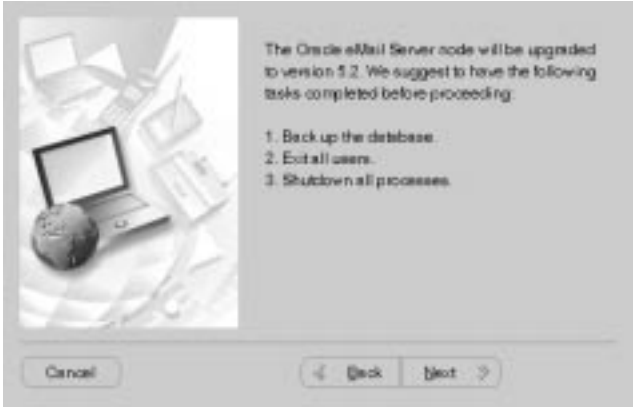
Figure 2–24 Upgrade Screen

2. From the Upgrade screen, select Upgrade and click Next. The Existing Node screen displays.

Figure 2–25 Existing Node Screen

3. At the Existing Node screen enter the Service Name and OO Password and click Next. The Begin Upgrade screen displays.

Figure 2–26 Begin Upgrade Screen



4. Once you have completed the steps listed, click Next. The DCN Version screen displays.

Figure 2–27 DCN Version Screen

5. If the DCN version is 4.03 or greater, select Yes. Otherwise select No and click Next. In either case, the following steps and screen displays are the same.

- To determine your DCN version, enter:

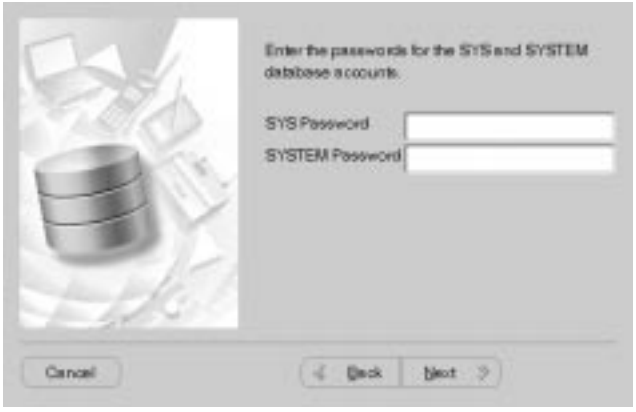
  ```
  % oomgr
  ```

  The computer returns the following:

  ```
  Oracle eMail Server Manager: Release #
  ```

  The Release # is your version.

Figure 2–28 Database User Screen



6. At the Database User screen, enter the SYS and SYSTEM Passwords and click Next. The CTXSYS User screen displays.

Figure 2–29 CTXSYS User Screen

Note: If you installed Oracle *inter*Media prior to installing Oracle eMail Server, then enter in your CTXSYS password as instructed in Step #6. If you did not install Oracle interMedia prior to Oracle eMail Server, the Configuration Assistant skips the CTXSYS screen.

7. At the CTXSYS User screen, enter in the CTXSYS password (the default CTXSYS Password is `CTXSYS`) and click Next. The Begin Setup screen displays.
8. At the Begin Setup screen, click Next to begin configuration, or click Cancel to exit the Configuration Assistant.

Task 6: Add Components to an Existing Node

From the Configuration Type screen (see Figure 2–7), select Upgrade or Add component(s) and click Next. The Upgrade screen displays (see Figure).

1. Select Add Components and click Next. The Existing Node screen displays (see Figure).
2. At the Existing Node screen, enter the service name and OO password and click Next. The Email Protocol screen displays.

Task 7: Configure a Protocol Server

This section describes the procedures for configuring a protocol server.

1. From the Configuration Type screen (see Figure 2–7), select Configure a protocol server and click Next. The Existing Node screen displays (see Figure).
2. At the Existing Node screen, enter the service name and OO password and click Next. The Guardian screen displays.

Figure 2–30 Guardian Screen

\

3. Select a Guardian Process ID that is not being used by the eMail Server node, and click Next.
4. Proceed to "Task 9: Enable the IMAP4 and POP3 Servers" on page 2-36.

Task 8: Run Utilities

This section describes the procedures to perform the following functions:

- Generating an SSL Certificate
- Storing an SSL Certificate
- Migrating Directory Data

The Utilities Menu, obtained from the Configuration Type screen, allows you to perform these functions.

Generating an SSL Certificate

Use the following procedure to generate an SSL certificate.

1. At the Configuration Type screen (see Figure 2–7), select Run Utilities and click Next. The Utility screen displays

Figure 2–31 Utility Screen

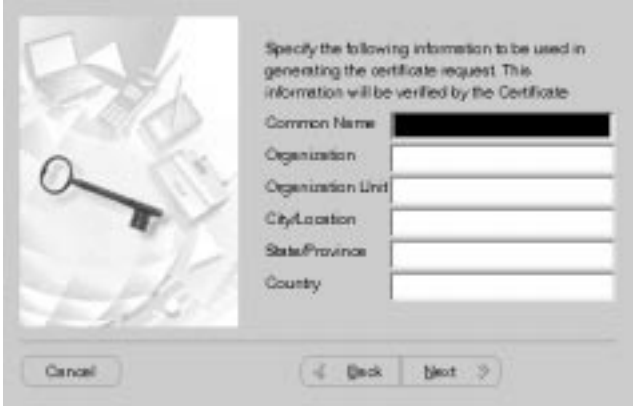
.

2. Select Generate or Store SSL Certificate and click Next. The Generate SSL screen displays.

Figure 2–32 Generate SSL Screen

3. Select Generate Certificate and click Next. The Certify SSL screen displays.

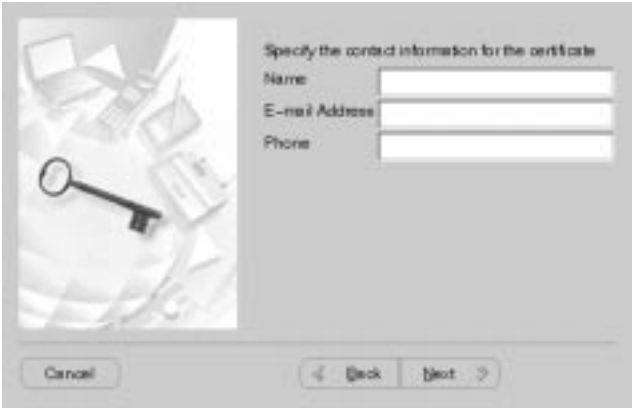
Figure 2–33 Certify SSL



4. Specify the Common Name, Organization, Organization Unit, City/Location, State/Province, and Country. See the table below for more information.Click Next to display the SSL Contact screen.

Parameter	Description
Common Name	Name of the person requesting the certificate
Organization	Name of your company
Organization Unit	Name of your department or division
City/Location	The city or location where your company is located
State/Province	The state or province your company is located
Country	The country your company is located

Figure 2–34 SSL Contact Screen



5. Specify the contact information for the certificate and click Next. The SSL Password screen displays.

Figure 2–35 SSL Password Screen

6. Enter the password and click Next. The SSL Processing screen displays.
7. At the SSL Processing screen, click Next to complete the process and generate a certificate.

Storing an SSL Certificate

Use the following procedure to store an SSL certificate.

1. At the Configuration Type screen (see Figure 2–7), select Run Utilities and click Next. The Utility screen displays.
2. Select Store certificate and click Next. The SSL Admin screen displays.

Figure 2–36 SSL Admin Screen

3. At the SSL Admin screen, enter the service name and admin password and click Next. The SSL/Protocol screen displays.

Figure 2–37 SSL/Protocol Screen

4. At the SSL Admin Password screen, enter the service name and admin password and click Next. The SSL/Protocol screen displays.

5. At the SSL/Protocol screen, select the protocol server or servers that will be using the SSL certificate. You can select one or both protocol servers.

6. Enter the file location of the private key and certificate. You can also click Browse to find the location.
7. Click Next. The Password Specification screen displays.
8. At the Password Specification screen, enter the password you want to use to encrypt and decrypt the private key.
9. In the Confirm field of the Password Specification screen, enter the password again to confirm the password and click Next. The Generate Certificate Request screen displays.
10. Click Next to generate the certificate, or click Cancel to exit the Configuration Assistant.

Migrating Directory Data

Use the following procedure to migrate directory data.

1. At the Configuration Type screen (see Figure 2–7), select Run Utilities and click Next. The Utility screen displays.
2. At the Utility screen, select Migrate Directory Data and click Next. The Existing Node screen displays (see Figure).
3. At the Existing Node screen, enter the Service Name and OO Password and click Next. The Migration screen displays.

Figure 2–38 Migration Screen

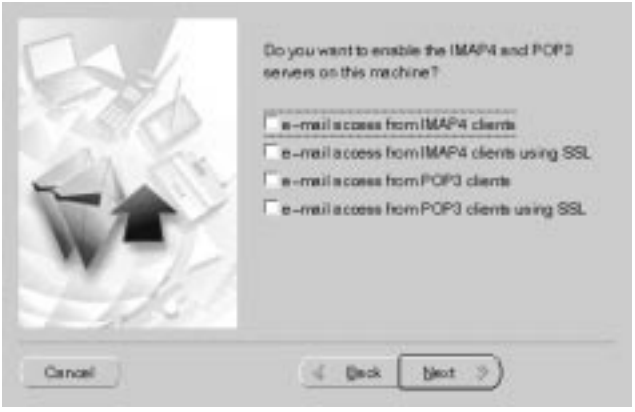
4. Select the domain, specify your admin password, and click Next. The LDAP Migration screen displays.
5. Click Next to start directory data migration, or click Cancel to exit the Configuration Assistant.

Task 9: Enable the IMAP4 and POP3 Servers

You have been directed to this part of the installation from various locations depending upon which configuration you are using. Use the following procedure to enable IMAP or POP3 servers.

1. At the Email Protocol screen, select the IMAP4 and POP3 servers you want to enable and click Next.

Figure 2–39 Email Protocol Screen



2. You can select more than one option. The SMTP Gateway screen displays.

Figure 2–40 SMTP Gateway Screen

Task 10: Enable the SMTP Gateway

Use the following procedure to enable SMTP.

Note: If you do not want to enable SMTP, select No and click Next. See "Task 11: Enable LDAP" on page 2-39 to enable LDAP or "Task 12: Complete the Configuration" on page 2-43 to complete this procedure.

1. At the SMTP Gateway screen, select Yes and click Next. The Gateway screen displays.

Figure 2–41 Gateway Screen

2. At the Gateway screen, select Define and configure a new gateway or Configure a previously defined gateway, and click Next. The SMTP Information screen displays.

Figure 2–42 SMTP Information Screen

3. At the SMTP Information screen, enter the e-mail domain for the SMTP gateway and click Next. The LDAP screen displays.

Figure 2–43 LDAP Screen

4. If you do not want to enable LDAP, select No and click Next. Go to "Task 12: Complete the Configuration" on page 2-43

Task 11: Enable LDAP

1. To enable LDAP, at the LDAP screen, select Yes and click Next. The LDAP Server screen displays.

Figure 2–44 LDAP Server Screen

2. At the LDAP Server screen, select the directory server with which you want the eMail Server directory to synchronize and click Next. The Synchronization screen displays.

Figure 2–45 Synchronization Screen

3. At the Synchronization screen, select the server process or processes you want to configure. You can select more than one. See the table below for more information.

Synchronization	Description	Appropriate Use
Forward	eMail Server to LDAP Directory	The data is administered on the eMail Server server and you want it synchronized with the LDAP Directory server
Backward	LDAP Directory to eMail Server	The data is administered on the LDAP Directory server and you want it synchronized with the eMail Server

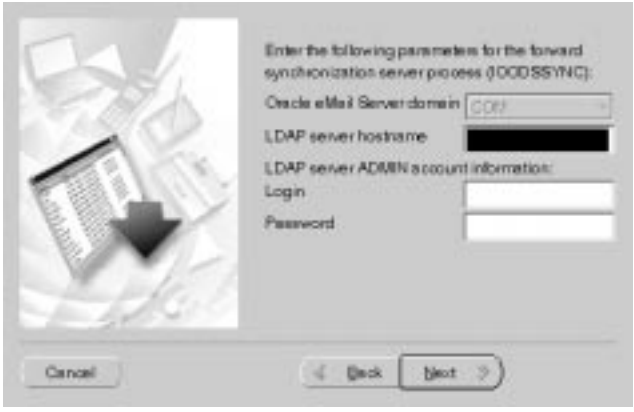
4. Once you have made your selection, click Next.
   - If you selected Forward Synchronization, see "Forward Synchronization Parameters" on page 2-41.
   - If you selected Backward Synchronization, see "Backward Synchronization Parameters" on page 2-41.

- If you selected both Forward and Backward Synchronizations, see "Forward Synchronization Parameters" on page 2-41 and "Backward Synchronization Parameters" on page 2-41.

Forward Synchronization Parameters

1. From the Synchronization screen, select Forward synchronization server (or both Forward and Backward synchronization server) and click Next. The Forward Synchronization screen displays.

Figure 2–46 Forward Synchronization Screen



2. Enter the LDAP server hostname and the LDAP server ADMIN account login and password, and click Next.

   - If you selected only the Forward Synchronization process, see "Task 12: Complete the Configuration" on page 2-43.
   - If you selected both Forward and Backward Synchronization processes, see "Backward Synchronization Parameters" on page 2-41.

Backward Synchronization Parameters

From the Synchronization screen, select Backward synchronization server (or both Forward and Backward sycnchronization server) and click Next. The Backward Synchronization screen displays.

Figure 2–47 Backward Synchronization Screen

1. Enter the eMail Server Admin account login and password, and the LDAP Replication_ DN account login and password, and click Next. The Database screen displays.
2. At the Database screen, you are asked if you have an existing database. Select Yes and click Next. The Database Connection screen displays.

Figure 2–48 Database Connection Screen

3. At the Database Connection screen, enter the Service Name, SYS Password, and SYSTEM Password, and click Next. The CTXSYS User screen displays (see Figure 2–30).
4. See "Task 12: Complete the Configuration" on page 2-43 to complete this procedure.

Task 12: Complete the Configuration

Use the following procedure to complete configuration of the eMail Server system.

1. At the Database screen, click Next. The Database Connection screen displays (see Figure 2–48).
2. At the Database Connection screen, enter the Service Name, SYS Password, and SYSTEM Password, and click Next. The CTXSYS User screen displays.
   - If you installed Oracle interMedia prior to installing Oracle eMail Server, proceed to Step 3.
   - If you did not install Oracle interMedia prior to Oracle eMail Server, proceed to Step 6.
3. At the CTXSYS User screen, type in the CTXSYS password (the default CTXSYS Password is `CTXSYS`) and click Next. The Begin Setup screen displays.
4. Click Next to start the configuration, or click Cancel to exit the Configuration Assistant.

3

Postinstallation

This chapter describes tasks that must be done after you have installed or upgraded eMail Server.

This chapter contains this topic:

Postinstallation Tasks

The tasks described in this section are as follows:

Task 1: Verify the Network Listener

The listener must be running so that the system can establish database connections from the eMail Server and clients. The listener may already be running if you have not stopped it since preinstallation.

To verify that the listener is running, enter the following:

```
% lsnrctl status
```

If the computer returns a message that contains the line `no listener`, then the listener needs to be started. Otherwise, the listener is up and running and you may proceed to Task 2.

To start the listener, enter the following:

```
% lsnrctl start
```

Note: If you installed a new Member node, use the `tnsping` command to check the configuration and verify that the DCN is up and running.

Task 2: Start eMail Server Processes

There are several processes that run in the background to perform specific eMail Server functions.

Warning: Do not run any eMail Server 5.2 administration tools against previous eMail Server versions.

See Also: Table A–1, "eMail Server Processes and Descriptions" in Appendix A for a list of processes and their descriptions

To start the Guardian process, enter the following:

```
% ofcguard start [connect=connect_string]
```

The *connect_string* is required if accessing a remote node. To verify the startup of the Guardian process, locate the `guardian01.log` file in the `$ORACLE_HOME/office/log/`*SID* and enter the following:

```
% tail -f hostname guardian01.log
```

Note: The Guardian process is the parent of all eMail Server processes. If it is not running, the next task will fail.

---

1. Enter the following to start the OOMGR.

   ```
   % oomgr
   ```

   Enter your user name, password, connect string, and qualified domain name at the appropriate prompts.

   Since you have only one domain level, all you need to enter is your username and password. You initially must use the *connect_string* and *qualified_domain*, however, if you are trying to connect to another database.

   Note: The default username is `admin` and the password is `welcome`.

See Also: The *Oracle eMail Server Administration Guide* for more information on OOMGR

2. Perform the following steps to start eMail Server processes and verify that they are running.

   To start processes, enter the following:

   ```
   IOFCMGR> startup all;
   Started successfully.
   ```

3. To display process status, enter the following:

   ```
   IOFCMGR> disp process;
   ```

   The following is sample output:

Server Name	Instance	Last Wakeup	Process Id	DBSession Id
Postman	1	06 Dec 14:24	3771	652
Collector	1	06 Dec 05:51	3772	654
Monitor	1	06 Dec 11:13	3774	653
Statistics	1	06 Dec 14:07	3777	655
IOLISTENER	1		3778	657
Replicator	1	06 Dec 14:24	3780	656
POP3SRV	1		3783	658
IMAP4SRV	1		3785	660
SMTP.COM	1	06 Dec 14:23	3787	662
SMTP_IN.COM	1	06 Dec 14:26	3790	666

   To exit `IOFCMGR`, enter the following:

   ```
   IOFCMGR> exit
   ```

4. Check the eMail Server process logs. The logs contain entries for all typical operation and errors. Check the logs to ensure that the Guardian and all other registered server processes are error-free.

   Perform the following steps to check server process logs:

   Access the `$ORACLE_HOME/office/log/`*`SID`* directory.

Check the following log files for error messages.

Process	Log File Name
Guardian	`local_guardian01.log`
Postman	*node_name*`_postman01.log`
Collector	*node_name*`_collector01.log`
Monitor	*node_name*`_mon.log`
Statistics	*node_name*`_stt.log`
Replicator	*node_name*`_repl01.log`
POP3	*node_name*`_pop301.log`
IMAP4	*node_name*`_imap01.log`
Listener	*node_name*`_lsnr01.log`

See Also: If you find error codes or messages, see "Error Codes and Messages" in the *Oracle eMail Server Administration Guide* for descriptions and corrective actions

Task 3: Insert a Qualified Domain Name

Fully qualified domains are within any company or organization. The domain is usually in the form of *company/organization_name.extension*. Oracle.com and whitehouse.gov are two examples of fully qualified domains. At this point, your installation of eMail Server has only one ldomain level (the top level), which you chose using the installation wizard. To insert the next level of your domain, perform the following steps:

1. Use the OOMGR command line to insert the next level of domain. Enter the following:

   ```
   % oomgr
   ```

   to start `IOFCMGR>`.

2. To display login, node, and domain information, enter the following:

   ```
   IOFCMGR>whoami
   Login: ADMIN Node: ESNODE: Domain: COM
   ```

> **Note:** The domain returned by the computer must match the domain you created during the configuration in order to continue.

3. To further qualify the domain, enter the following:

```
IOFCMGR>insert domain qualifiedname=qualified name.extension
configNode=node_name description="your company/organization name";
Inserted successfully
```

An example of *qualified_name.extension* is oracle.com. The `description` is optional in the above command line. To create a subdomain below *qualified_name.extension*, log out of OOMGR and repeat Steps 1 through 3, connecting into the *qualified_name.extension* domain.

4. Connect the OOMGR session to your new domain.

```
IOFCMGR>connect admin/password/service_name/qulified name.extension
Connected.
```

Task 4: Create a Test User

> **See Also:** Oracle eMail Server Administration Guide for more information regarding inserting an account

Create a test user and alias to send a test message, and ensure that the mail is delivered as expected.

1. Verify that you are connected to the fully qualified domain as follows:

```
IOFCMGR>whoami
Login: ADMIN Node: ESNODE: Domain: company/organization_name.extension
```

2. Insert your test user as follows:

```
IOFCMGR>insert person username=username password=password uanode=node;
Inserted successfully.
IOFCMGR>exit
```

Note: Username and password can be anything you choose.

Task 5: Configure SMTP Gateway and Create Aliases

The gateway configuration file unx.cfg, is created during the installation. Register the gateway with Sendmail, the standard UNIX mail transfer agent that handles all messages traveling to and from the Internet. To register the gateway with Sendmail, specify gateway information in the `sendmail.cf` file so that Sendmail knows how to forward messages coming in from the Internet. Set up aliases to redirect incoming mail to the gateway.

Note: You can use any version of Sendmail supplied with your operating system or supplied on the eMail Server CD for Windows NT. If you do not have Sendmail, you can download it from `ftp.sendmail.org`. For documentation on Sendmail, go to `http://www.sendmail.org`.

Note: The Sendmail file can require configuration steps in addition to those provided here, depending on how many gateways you are using and the complexity of your system. See the documentation for the version of Sendmail for more information.

Note: Oracle Support Services can only provide information on the basic Sendmail configuration required to receive messages. For more complex configurations, contact the distributor of your Sendmail program.

Perform the following steps from `root`.

1. Use a text editor to modify the `sendmail.cf` file, usually located in either `/etc/` or `/etc/mail/`, by adding the following information about the SMTP/MIME mailer to the end of the file:

```
Mofcmail, [tab] P=$ORACLE_HOME/bin/ofcuto, F=rlSsDCFMPpmn, S=10, R=20,
[tab]A=ofcuto - $ORACLE_HOME$ORACLE_SID -f config_file -
$g $a $b $f $x ( $u )
```

Entry	Description
`Mofcmail`	This directs Sendmail to run the eMail Server mailer. The mailer delivers the message to the Gateway process, which inserts the message in the Internet Messaging database. You can specify a different mailer name. See the Sendmail documentation for more information about mailers.
`$ORACLE_HOME`	Enter the full path for the `$ORACLE_HOME` directory.
`$ORACLE_SID`	The system identifier (SID) that you registered in the `listener.ora` file during installation.
`config_file`	Enter the name of the gateway configuration file. The default filename is `unx.cfg`.
`[tab]`	Press the Tab key where indicated instead of the space bar.

2. In the machine-dependent section of the `sendmail.cf` file, add the following entries to ruleset Parse1 before the line "`# short circuit local delivery so forwarded email works`":

```
## Oracle eMail Server: Hook to Oracle eMail Server mailer ##
R$+.ofcmail<@$=w.>[tab][tab]$#ofcmail$:$1[tab][tab]Oracle eMail Server
passoff
R$+.OFCMAIL<@$=w.>[tab][tab]$#ofcmail$:$1[tab][tab]Oracle eMail Server
passoff
```

   Add the following entries to ruleset Parse1 before the line "`# handle locally delivered names`":

```
## Oracle eMail Server: Hook to Oracle eMail Server mailer ##
R$+.ofcmail[tab][tab]$#ofcmail$:$1[tab][tab]Oracle eMail Server passoff
R$+.OFCMAIL[tab][tab]$#ofcmail$:$1[tab][tab]Oracle eMail Server passoff##
```

   Note: You may use both lines but then you need to have both upper and lower case aliases.

3. In the list of trusted users in the `sendmail.cf` file, add the user name of the owner of the Oracle eMail Server `$ORACLE_HOME` directory. Trusted users such as `root`, `daemon`, and `uucp` generally begin with a "T":

```
T root daemon uucp Oracle_eMail_Server_owner
```

4. After modifying the `sendmail.cf` file and the `rc.local` file, restart Sendmail as the root user.

5. To locate the Process ID of the existing Sendmail, enter the following command:

   ```
   # ps -ef|grep sendmail
   ```

6. To pass e-mail to the eMail Server, it is necessary to create a unix alias. Change to the `/etc/mail` directory as follows:

   ```
   # cd /etc/mail
   ```

7. Alternative SMTP delivery: If your intention is to not have any unix accounts on your server, then, by editing the `sendmail.cf` file, you can direct all mail into the eMail Server. This is done by changing the following `Mlocal` mailer definition and replacing it with the `Mofcmail` mailer definition. Use a text editor to perform the following steps:

   Note: The `Mofcmail` mailer definition will redirect all message stores, including those destined for OS users (such as root). This option gives the administrator the lowest level of control over incoming message stores.

   1. Comment out all three lines of the `Mlocal` mailer definition.
   2. Add the following new line just below the three lines you have just commented out:

      ```
      Mlocal,[tab]P=$ORACLE_HOME/bin/ofcuto, F=rlSsDCFMPpmn, S=10,
      R=20,[tab]A=ofcuto-$ORACLE_HOME-fconfig_file -$g $a $b $f $x ($u
      ```

   3. Kill and restart Sendmail (see Step 11, below).

8. Use the text editor to edit the `aliases` file located in the `/etc/mail` directory, and insert the following line at the end of the file:

   Note: This option gives the administrator the highest level of control over incoming message stores. For an installation with many users, however, this option may be inappropriate as the administrator must create an alias for each user.

   `username: username.ofcmail@system_name.domain_name.extension`

   `username.ofcmail` is the minimum amount of information required. *`system_name, domain_name.extension`* are optional.

Note: The names in the message store are appended with `.ofcmail`. This extension needs to be stripped or added as messages enter or leave the message store. This is done by rewrite rules in the alias file or simply by passing all messages through the local mailer in the `sendmail.cf` file. This option offers another level control to the administrator between the two previously mentioned options. Refer to Sendmail documentation at `www.sendmail.org` for more information.

9. Add the new alias to the `aliases` database by entering the following:

   ```
   # newaliases
   ```

10. To terminate the Sendmail process, use the text editor to retrieve the *process_id* number from the `sendmail.pid` file located in the `/etc/mail` directory. Enter the command

    ```
    # kill -9 process_id
    ```

11. To restart Sendmail, enter the following:

    ```
    # /usr/lib/sendmail -bd -q30m
    ```

Note: You can also use the `# ps -aef|grep sendmail` command to retrieve the *process_id* information. Once you have the *process_id*, you can use `kill -HUP` *process_id* to terminate and restart Sendmail.

Task 6: Migrate Directory Data to an LDAP Directory

You must export private aliases and distribution lists from the eMail Server directory to an LDAP directory. To replicate data from the eMail Server directory to an LDAP directory, you must run a migration script to create data files that you can import into the LDAP directory.

Note: The private aliases and distribution lists that were stored in the eMail Server directory can be migrated to a standard-based `LDIF` representation of this data. However, to store these in the directory, use the thin client.

Note: eMail Server Version 5.2 has a PL/SQL package which has been written that will migrate the data to an LDIF file. Make sure that the database parameter `UTL_FILE_DIR` has been specified in the `init`*`SID`*`.ora` file. The script that starts the migration is still `MigrateIOData.sh`

Note: You must run the migration script to use the client's address book search feature.

Use the following procedure to replicate the private aliases, distribution lists, and public data from the eMail Server directory to an LDAP directory:

1. Manually invoke the `MigrateIOData.sh` scripts that generate the following two data files in the `$ORACLE_HOME/office/log` directory:
   - `replog.log` contains all data except private aliases and distribution lists
   - `private_aliases_and_dls.log` contains only private aliases and distribution lists
2. If you are using Oracle Internet Directory for the LDAP directory, configure the initial context and add the initial directory tree before importing the data.

   See Also: Oracle Internet Directory Administrator's Guide, "Managing Entries" and "Managing Schema" for more information

3. Start the LDAP server.

   See Also: Oracle Internet Directory Administrator's Guide, "Preliminary Tasks" for more information

4. Insert the eMail Server database schema (not the data) into the Oracle Internet Directory database. As the owner of the eMail Server database account, enter the following:

```
% cd $ORACLE_HOME/office/admin/rsql
% ldapadd -h hostname -p 389 -f add_ldap_attr.dat
% ldapadd -h hostname -p 389 -f add_ldap_obj.dat
```

Replace *hostname* with the name of the machine on which Oracle Internet Directory is running.

If you are using a third-party LDAP directory, you must define the eMail Server database schema specified in the `add_ldap_attr.dat` and `add_ldap_obj.dat` files before importing the data into the directory.

> **See Also:** The documentation for the third-party LDAP directory for instructions on how to do this

5. Copy the `replog.log` and `private_aliases_and_dls.log` files to the `/tmp` directory of the LDAP server.

> **Note:** You can copy the files to a directory other than the `/tmp` directory; the `/tmp` directory is used in this step and subsequent steps as an example.

6. Check the eMail Server directory entries in the `replog.log` file for erroneous data, by running the following command on the LDAP server as the LDAP directory database owner:

```
% $ORACLE_HOME/ldap/bin/bulkload.sh -connect service_name -check -generate
/tmp/replog.log
```

> **Note:** `ORACLE_HOME` is located where the LDAP server is installed.

Replace *service_name* with the LDAP directory database service name in the `tnsnames.ora` file.

7. If the bulkload check is successful, the files in the `$ORACLE_HOME/ldap/log` directory show no errors. Bulk load the data on the LDAP server as follows:

```
% bulkload.sh -connect service_name -load -generate
     /tmp/replog.log
```

> **Note:** The `bulkload.sh` script is located in the `$ORACLE_HOME/ldap/bin` directory on the LDAP server.

Replace *`service_name`* with the LDAP directory database service name in the `tnsnames.ora` file.

At this point, all directory objects except private aliases and distribution lists are loaded into the directory.

8. To load the private aliases and distribution lists into the directory, begin by running one of the following commands on the eMail Server:

   - For Oracle Internet Directory:

     ```
     % acl.pl replog.log
     ```

   - For a Netscape LDAP directory:

     ```
     % acl.pl replog.log netscape
     ```

     > **Note:** The `acl.pl` script only supports Netscape as a third party vendor.

   The command creates a file called `replog.log.acl`. The generated Access Control List, ACL, will be for Oracle Internet Directory or Netscape.

Task 7: Configure eMail Server Preferences (ESPrefs)

Perform the following steps to set up the ESPrefs.

1. Copy the `espref` directory located in `$ORACLE_HOME/office/admin` to the host where the web server is running. The `espref` directory contains the following directories:
   - config
   - media
   - beans
   - jsp
2. Copy the `espref.jar` file located in the `$ORACLE_HOME/office/lib` directory into the `espref/beans` directory on the target host.

3. Expand the `espref.jar` file:

```
% cd espref/beans
% jar xvf espref.jar
```

4. Edit the following configuration files located in the `espref/config` directory. The configuration files are text files, where each entry is separated by a space.

esDomains.cfg

The `esDomains.cfg` file lists the following domain information:

- domain = domain name
- host = name of the DCN node
- SID = SID of the database
- port = port number on which the SQLNET listener is running.

All entries in the file must be formatted in the following way:

```
domain  host  SID  port
```

Example

```
acme.com  mail.acme.com  mail 1521
```

Note: Only one entry per domain is needed.

esConnectStrings.cfg

The `esConnectStrings.cfg` file contains the following connect information for all the nodes in the system:

- connectstring = database connect string
- host = host name of the database
- SID = SID of the database
- port = port number on which the SQLNET listener is running.

All entries in the file must be formatted as follows:

```
connectstring  host  SID  port
```

Example

```
imapmail  mail.acme.com  mail 1521
```

It can also have the following format:

```
connnectstring = database connect info as used in the tnsnames.ora
format
```

Note: This must be one string.

Example

```
imapmail (DESCRIPTION=(ADDRESS_LIST=(ADDRESS=(PROTOCOL=TCP)
(Host=mail.acme.com)(Port=1521)))(CONNECT_DATA=(SERVICE_NAME=mail)))
```

esPrefs.cfg

The `esPrefs.cfg` file contains an array of key/value pairs the administrator sets to enable subscribers to set the auto-reply and auto-forward templates. This must be set to either Yes or No, depending on the administrator's preference.

The values must be formatted as follows:

```
AutoReplySet  Yes/No
AutoForwardSet  Yes/No
```

Task 8: Set Up the ESPrefs Server

To configure the ESPrefs server, set the path of the configuration directory.

iAS Server Setting

1. Set up the `espref` directory.

   Copy the `espref` directory from the build environment to `$ORACLE_HOME/Apache/Apache/htdocs/espref`

   Unjar the `espref.jar` file located in the `$ORACLE_HOME/Apache/Apache/htdocs/espref/beans` directory:

   ```
   % cd $ORACLE_HOME/Apache/Apache/htdocs/espref/beans
   % jar xvf espref.jar
   ```

   Refer to Task 7: Configure eMail Server Preferences (ESPrefs) to configure ESprefs.

2. Set up the iAS configuration file.

   Open `$ORACLE_HOME/Apache/Jserv/etc/jserv.properties` using a text editor, and add the following two lines to the end of the file:

```
wrapper.bin.parameters=-DFILE_LOCATION=$ORACLE_HOME/Apache/Apache/htdocs
/espref/config/

wrapper.classpath=$ORACLE_HOME/Apache/Apache/htdocs/espref
```

3. Restart iAS.

```
% cd $ORACLE_HOME/Apache/Apache/bin
% ./apachectl stop
% ./apachectl start
```

4. Test to see that ESPrefs works. Open a browser and enter the following URL:

   `http://hostname:port/espref/jsp/esLogin.jsp`

   You should see the logon page.

Task 9: Configure eMail Server Thin Client

The Thin Client is an application that gives you access to e-mail functions, directory, and message searching capability from a single web page. You can customize the Thin Client to support your working style. With the Thin Client, you can compose new messages, organize existing messages and message folders, search for messages, create address book aliases and distribution lists, change your password, check mail quotas, change time zones, create mail rules and filters, and customize the look of the Thin Client.

Note: The Thin Client must be installed on a different $ORACLE_HOME than that of the database and eMail Server. In the following steps, $ESCLIENT_HOME refers to the full path of the directory where `esclient` resides.

---

1. Set up the `esclient` directory as follows:

   Copy the `esclient` directory from the build environment to `$ORACLE_HOME/Apache/Apache/htdocs/esclient`

   Untar the `esclient.tar` file located in the `$ESCLIENT_HOME` directory:

```
% cd $ESCLIENT_HOME
% tar xvf esclient.tar
```

2. Set up the iAS configuration file as follows:

Open $ORACLE_HOME/Apache/Jserv/etc/jserv.properties and use a text editor to verify that the following lines are contained in the file:

```
wrapper.bin.parameters=-DES_PROPERTIES=$ESCLIENT_HOME/es.properties
wrapper.classpath=$ESCLIENT_HOME/lib/j2ee.jar
wrapper.classpath=$ESCLIENT_HOME/lib/jgl.zip
wrapper.classpath=$ESCLIENT_HOME/lib/classes111.zip
wrapper.classpath=$ESCLIENT_HOME/lib/ldap.jar
wrapper.classpath=$ESCLIENT_HOME/lib/providerutil.jar
wrapper.classpath=$ESCLIENT_HOME/lib/es.jar
```

Use a text editor to verify or insert the following lines into the zone.properties file, also located in the /$ORACLE_HOME/Apache/Jserv/etc directory:

```
repositories=$ESCLIENT_HOME/servlets
```

3. Configure Oracle Internet Directory (OiD) by loading *.dat files found in $ESCLIENT_HOME/doc to OiD, as follows:

   ```
   % ldapadd -h host -D 'cn=orcladmin' -w password> -f *.dat
   ```

   See Also: Oracle Internet Directory Administrator's Guide for more information about loading the preferences schema manually using the OiD administrator's console.
   The orclMailApplicationPreferences.readme file contains a list of required attributes.

   Load DIT file using the following command:

   ```
   ldapadd -h host -D 'cn=orcladmin' -w password -f oracle.ldif
   ```

   Note: One LDAP entry is required for each user. See the entry.readme file located in the $ESCLIENT_HOME/doc directory for more information.

4. Configure the es.properties file located in the directory using the text editor. Instructions on how to configure this file are located within the es.properties file.

5. Test to see that the Thin Client works. Open a browser and enter the following url:

   ```
   http://hostname:port/esclient/templates/login.jsp
   ```

   You should see the logon page.

Task 10: Send a Test E-mail

There are four log files to monitor to ensure that your first message is successfully sent and delivered.

- `syslog`

  This log file is located in the `/var/log` directory and is written to by the Sendmail daemon.

- `ofcuto.log`

  This log file is located in the `$ORACLE_HOME/office/log/`*`SID`* directory and is written to by the `ofcuto` process that the Sendmail mailer launches.

- *`system_name`*`_ofcutosrv.log`

  This log file is located in the `$ORACLE_HOME/office/log/`*`SID`* directory and is written to by the `ofcutosrv` process that uploads the mail into eMail Server.

- *`system_name`*`_postman.log`

  This log file is located in the `$ORACLE_HOME/office/log/`*`SID`* directory and is written to by the `postman` process which evaluates the e-mail from the submission queue.

  The list is in the order by which e-mail is passed to eMail Server. Use the `% tail -f` command to view these files in real time.

Use the following command to send your first test e-mail (you must be logged in as `root`).

```
# /usr/lib/sendmail -v address
```

Where *`address`* is the name of your test user. Since an alias has been set up, you do not need the rest of the address in order to send e-mail.

Example

```
# /usr/lib/sendmail -v user1
user1...aliased to user1.ofcmail
first test message.
.
user1.ofcmail...Connecting to ofcmail...
user1.ofcmail...Sent
```

The message entered by the administrator is "first test message."

By following the log files you should see the message flow through to the destination account inside eMail Server.

The next step is to log in to the account using the IMAP client chosen during the installation to confirm that the message was sent.

Task 11: Configure Protocol Servers

Depending upon how you utilize Oracle eMail Server (such as number of users and number of messages), you may find that the default settings in the SPS (scalable protocol server) files are too low. Monitor the IMAP4 log file, *node_name*_imap01.log, located in the $ORACLE_HOME/office/log/*SID* directory while the system is in use, to determine whether or not the protocol servers are adequately configured.

> **See Also:** Oracle eMail Server Administration Guide, Chapter 10, for information and instructions regarding configuration of the SPS files.

Task 12: Load Shipped Statistics File for the Cost Based Optimization (Optional)

Perform the following steps to import the statistics file:

1. Run the following script:

   ```
   % $ORACLE_HOME/office/admin/pckg/apply-stats.sh
   ```

2. Enter the user's database password.
3. Enter the path of the statistics dumpfile:

   ```
   % ORACLE_HOME/office/admin/pckg/em-stats.dmp
   ```

Task 13: Configure OEM E-mail Capacity Monitoring Pack (Optional)

> **Note:** To use the Monitoring Pack, Oracle Enterprise Manager (OEM) and the associated Diagnostic Pack are required. Please contact Oracle Sales for more information.

The Oracle Enterprise Manager (OEM) Capacity Monitoring Pack allows an administrator to monitor e-mail traffic on the server from a Windows NT platform.

> **Note:** You must be using a TCP/IP network protocol.

1. On the NT side, install OEM, including the Diagnostic Pack.

See Also: Oracle Enterprise Manager Installation for more information

2. Copy the file `emschart.jar` from the Solaris installation to the NT machine where OEM is installed. The location of this file in the Solaris installation is `$ORACLE_HOME/office/admin/emschart.jar`.
3. On the NT machine, open a DOS prompt window. In this window, use the `jar` command to extract the contents of the `emschart.jar`.

   ```
   c:\> jar -xvf emschart.jar
   ```

4. Once the contents are extracted, there will be a new directory named emschart. To install the E-mail Capacity Monitoring Pack, run the `setup.exe` command which is located in the `emschart/Disk1/install/win32` directory, and follow the prompts through the installation.

   Note: The jar command is released with the Java Development Kit from Sun. If the NT machine already has a version of the JDK installed, the `jar` command will be in the JDK bin directory.

5. Discover a node with Oracle database server and applications installed.
   1. On the NT machine, choose Navigator from the OEM menu bar.
   2. Open the folder called Nodes and enter the name of the node you want to discover in the text window of the Discover Nodes dialog box. Click OK to continue.

      Note: To discover multiple nodes at one time, enter each node you want to discover on a new line with the text window.

      A status dialog box will tell you when a node is discovered. Discovered nodes will appear on the Navigator Tree.

      See Also: Troubleshooting OEM E-mail Capacity Monitoring Pack in Chapter 5 if you fail to discover nodes

6. The Navigator provides access to the Discovery/Refresh Wizard, which simplifies identifying network services and populating the Navigator tree. These services, such as databases and listeners, can be administered with OEM components. If you cannot discover a node (because an Agent is not running on the node), the Discovery/Refresh Wizard allows you to manually enter the information about services on nodes.

Note: Access to OEM services, such as jobs and events, will not be available if a node is manually configured.

1. To discover new services, select Discover Node from the Console Navigator menu to start the Discovery Wizard.

   Use the Discover Node function for nodes that have an Intelligent Agent. If you add services to these nodes, you must restart the agent on the nodes before discovering the new services.

2. To refresh existing services, select Refresh Node from the Console Navigator menu to start the Refresh Wizard.

Note: Databases on the machine where Oracle Management Server is running are discovered automatically.

4

Deinstallation

Before deinstalling eMail Server you must deinstall database objects. You must deinstall both software and database objects before you can re-install eMail Server.

This chapter contains these topics:

Deinstalling Database Objects

Use the following procedure to remove database objects.

1. Use IOFCMGR to shut down the eMail Server processes as follows:

```
% oomgr
IOFCMGR> shutdown all;
IOFCMGR> exit
```

2. Stop the Guardian process as follows:

```
% ofcguard stop
```

3. Shut down and restart the database as follows:

```
% svrmgrl
SVRMGR> connect internal
SVRMGR> shutdown
SVRMGR> startup
SVRMGR> exit
```

4. With the database running, use SQL*Plus as the SYS or SYSTEM user and use the `ofcdrp.sql` script to drop all eMail Server views, tables, users, and their data as follows:

```
% cd $ORACLE_HOME/office/admin/pckg
% sqlplus SYS/password
SQL> @ofcdrp.sql;
```

> **Note:** This script drops all eMail Server schema from the database. This includes all eMail Server users, roles, tables, views, and tablespaces.

5. Provide the database account names for eMail Server mail, scheduler, and directory components. Press Return to accept the defaults, shown in square brackets.

```
Please enter the name of the Mail database account: [oo_mail]
Please enter the name of the Directory database account: [oo_ds]
Please enter the name of the Scheduler database account: [oo_sched]
```

6. Provide tablespace names for eMail Server components. Press Return to accept the defaults, shown in square brackets, or to indicate that no such component was installed.

```
Please enter the name of the OFC_MAIN tablespace:[ofc_main]
Please enter the name of the OFC_MESG tablespace:[ofc_mesg]
```

```
Please enter the name of the OFC_INDB tablespace:[ofc_indb]
Please enter the name of the OFC_INDS tablespace:[ofc_inds]
Please enter the name of the OFC_CTX tablespace:[ofc_ctx]
```

The results of the `ofcdrp.sql` script are logged to the `$ORACLE_HOME/office/admin/pckg/ofcdrp.log` file. This process takes several minutes to complete.

7. Change directories to `$ORACLE_HOME` and shut down the database:

```
% cd $ORACLE_HOME
% svrmgrl
SVRMGR> connect internal
SVRMGR> shutdown
Database closed.
Database dismounted.
ORACLE instance shut down.
SVRMGR> exit
```

8. Remove the files used for eMail Server tablespaces. The following datafiles are located in the default datafile directory and are created by the default installation:

```
OFC_MAIN - omn$ORACLE_SID.dbf
OFC_MESG - omsg$ORACLE_SID.dbf
OFC_INDB - oidb$ORACLE_SID.dbf
OFC_INDS - oids$ORACLE_SID.dbf
OFC_INDS - oids$ORACLE_SID.dbf
OFC_     - octx$ORACLE_SID.dbf
```

9. After removing both software and database objects, you can re-install eMail Server.

Deinstalling Software

To remove eMail Server software, perform the following steps:

1. Use IOFCMGR to shut down the eMail Server processes as follows:

```
% oomgr
IOFCMGR> shutdown all;
IOFCMGR> exit
```

2. Stop the Guardian process:

```
% ofcguard stop
```

3. Start the Oracle Universal Installer, as described in Chapter 2.

4. In the Welcome screen, click on Deinstall Products. The Inventory screen displays.
5. Select the software products you want to deinstall and click Remove. The Installer deinstalls the selected software.
6. Remove any installed database objects to complete the eMail Server deinstallation.

See Also: "Deinstalling Database Objects" on page 4-2

5

Troubleshooting

This chapter contains information relating to troubleshooting installation of Oracle eMail Server.

This chapter contains these topics:

Troubleshooting the Installation

This section contains information for assisting with installation errors and problem diagnosis. The `install.log` file located in the `$ORACLE_HOME/orainst` directory indicates any errors encountered during installation.

Common Errors

Most installation errors typically involve failure to carefully follow preinstallation instructions. The following table describes common installation problems, what may have caused them, and what you should check or do to correct the problem.

Problem	Probable Cause	Corrective Action
Error in creating or upgrading database objects	Database not running or available Listener not running	Start the database or listener prior to database actions
Error in accessing shared library	Failing to properly set the LD_LIBRARY_PATH	Set the variable as described in Chapter 1
Database-related Installer error messages	Starting installation without the database running	Start database prior to installation. See Chapter 1
Permission problems during installation	Attempting to install as the wrong user	Log on as the Oracle account prior to installation. See Chapter 2
eMail Server fails due to insufficient database resources	Failing to edit the `init`*`sid`*`.ora` file located in the `$ORACLE_HOME/dbs` directory to reflect the minimum values for the listed parameters	Check the `ORACLE_HOME/office/log` file for error description. Edit the initialization parameter file as described in Chapter 1
Some or all eMail Server processes do not load	Insufficient disk, RAM, or swap space	Check memory and disk space. See the eMail Server Administration Guide for requirements.

Contacting Oracle Support Services

Before calling Oracle Support Services, verify that your software, database, and environment configurations match those described in Chapter 1. Be prepared with your CSI number (if applicable) or full contact details, including any special project information, complete release numbers of eMail Server and associated products, operating system name and version number. Record any error code numbers and full description of the issue, including:

- What did or did not happen?
  For example, the command used and result obtained.

- When did it happen?
  For example, during peak system load, or after a certain command, or after an O/S upgrade.
- Where did it happen?
  For example, on a particular system or within a certain procedure or table.
- What is the extent of the problem?
  For example, production system unavailable, or moderate impact but increasing with time, or minimal impact and stable.
- Maintain copies of trace files, core dumps, and redo log files recorded at or near the time of the incident. Oracle Support Services might need these to further investigate the problem.

For installation-related problems, have the following additional information available:

- Listings of the contents of `$ORACLE_HOME` and any staging area, if used.
- Location and names of the Configuration Wizard log files:
  - `$ORACLE_HOME/office/log/`*`SID`*`/IOSETUP.log`
- Log files are located in `$ORACLE_BASE/oraInventory/logs`:
  - `installActions.log`
  - `iosetup.log`
  - `iorelink.log`

Oracle Support Services can be reached at the following numbers. The hours are provided in your support contract.

- In the USA: 1.650.506.1500
- In Europe: +44 1344 860160
- In Asia: +61 3.924.6060

Troubleshooting OEM E-mail Capacity Monitoring Pack

Problem	Probable Cause	Corrective Action
Failure to discover a database		Make sure an entry for the database is in the `tnsnames.ora` file on the node where the agent is running. On a UNIX platform, check the `oratab` file, also.
		Stop and restart the agent if the database was not available when the agent was last started. When the agent starts, database entries are written to the services.ora file in the `$ORACLE_HOME/network/agent` directory on the server side.
		The node is down or is not running an Oracle Agent, version 7.33 or higher. You must be using a TCP/IP network protocol.

A

Appendix

Table A–1 eMail Server Processes and Descriptions

eMail Server Process	Unix Process Name	Description
Guardian	ofcguard	A Guardian process is the parent process for all of the other processes.
Postman	ofcomd	A Postman process is a message transfer agent, handling all messages and information flowing through the system.
Collector	ofcmgd	A Collector (previously called Garbage Collector) process deletes unnecessary items from the database, including deleted mail messages, and internal records for Replicator processes.
Replicator	ofcdsd	A Replicator process copies directory information between nodes that subscribe to the same domain in order to synchronize system and directory information.

eMail Server Process	Unix Process Name	Description
Monitor	ofcmon (class=5)	A Monitor process uses information gathered by the Statistics process to check message flow, database space usage, configuration problems, and missing objects and references. The Monitor processes then creates reports that indicate potential problems and suggest preventive actions.
Statistics	ofcmon (class=6)	A Statistics process collects information about delivery times and the use of database space. This information is used by the Monitor process to create reports that indicate potential problems.