Oracle® Collaboration Suite

Installation and Configuration Guide

Release 2 (9.0.4.1.1) for Windows

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Oracle Collaboration Suite Installation and Configuration Guide, Release 2 (9.0.4.1.1) for Windows

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Preface

This manual is your primary source of introduction, preinstallation, installation, and postinstallation information for Oracle Collaboration Suite.

This preface contains these topics:

- Audience
- Organization
- Related Documentation
- Conventions
- Documentation Accessibility

Audience

Oracle Collaboration Suite Installation and Configuration Guide is intended for anyone installing and configuring Oracle Collaboration Suite on Windows.

Users of the document should be experienced with Oracle products and computer administration.

Organization

This document contains:

Chapter 1, "Installation Overview"

This chapter discusses installation and configuration concepts for Oracle Collaboration Suite and provides information about the features and intent of each Oracle Collaboration Suite installation.

Chapter 2, "Preparing for Installation"

This chapter describes how to plan each installation of Oracle Collaboration Suite.

Chapter 3, "Upgrading to Oracle Collaboration Suite Release 2 (9.0.4.1.1)"

This chapter discusses how to upgrade to Oracle Collaboration Suite Release 2 (9.0.4.1.1) and its components.

Chapter 4, "Oracle Collaboration Suite Deployment Methods"

This chapter explains how to upgrade and downgrade certain Oracle Collaboration Suite components and discusses possible conflicts among them. It also covers database tuning if you plan to use existing Oracle9*i* databases with Oracle Collaboration Suite components.

Chapter 5, "Getting Started with Installation"

This chapter describes how to get started with installation, including how to install from CD-ROM or hard drive, and how to start Oracle Universal Installer.

Chapter 6, "Installing Oracle Collaboration Suite"

This chapter describes how to install the Oracle9*i*AS infrastructure, Oracle Collaboration Suite information storage, and Oracle Collaboration Suite middle tier.

Chapter 7, "Installing Oracle Collaboration Suite on a Single Computer"

This chapter describes how to install Oracle Collaboration Suite on a single computer.

Chapter 8, "Installing and Configuring Oracle Voicemail & Fax"

This chapter describes how to install and configure the Oracle Voicemail & Fax component of Oracle Collaboration Suite.

Chapter 9, "Silent and Non-Interactive Installation"

This chapter describes how to silently install Oracle Collaboration Suite.

Chapter 10, "Deinstalling Oracle Collaboration Suite Components"

This chapter describes how to deinstall Oracle Collaboration Suite components.

Chapter 11, "Configuring Oracle Calendar"

This chapter describes how to configure the Oracle Calendar component of Oracle Collaboration Suite.

Chapter 12, "Installing and Configuring Oracle Email"

This chapter describes how to configure the Oracle Email component of Oracle Collaboration Suite.

Chapter 13, "Configuring Search Features"

This chapter describes how to configure search features of Oracle Collaboration Suite.

Chapter 14, "Configuring Oracle Files"

This chapter describes how to configure the Oracle Files component of Oracle Collaboration Suite.

Chapter 15, "Configuring Oracle Web Conferencing"

This chapter describes how to configure the Oracle Web Conferencing component of Oracle Collaboration Suite.

Appendix A, "Java Access Bridge Installation"

This appendix describes the procedures required for installation of Java Access Bridge.

Appendix B, "Installation Checklists"

This appendix provides checklists for each installation of Oracle Collaboration Suite.

Appendix C, "Troubleshooting"

This appendix identifies common installation problems and solutions.

Appendix D, "Default Port Numbers and Port Ranges"

This appendix identifies the ports used by Oracle Collaboration Suite components.

Appendix E, "Windows Services"

This appendix lists the services that Oracle Collaboration Suite for Windows installation creates during installation.

Appendix F, "Installing Oracle Calendar Standalone"

This appendix describes requirements and procedures for installing the components of Oracle Calendar standalone.

Appendix G, "Oracle Collaboration Suite Client Installations"

This appendix describes the system requirements, installation instructions, and deinstallation instructions for the components on the Oracle Collaboration Suite Client CD-ROM.

Glossary

Related Documentation

For more information, see these Oracle resources:

- Oracle Collaboration Suite Documentation Library, Release 2 (9.0.4.1.1)

- Oracle9*i* Application Server Documentation Library, Release 2

- Oracle9*i* Database Documentation Library, Release 2

- Oracle9*i*AS Portal Documentation Library, Release 2

> **See Also:** *Oracle Collaboration Suite Documentation Roadmap*

Printed documentation is available for sale in the Oracle Store at

```
http://oraclestore.oracle.com/
```

This document is accurate to the best of our knowledge at the time of publication. You can access the latest information on the Oracle Technology Network at:

```
http://otn.oracle.com/
```

The Oracle Technology Network contains updated documentation including release notes, installation documentation, and white papers. You must register online before using Oracle Technology Network; registration is free and can be done at:

```
http://otn.oracle.com/membership/
```

If you already have an Oracle Technology Network username and password, then you can go directly to the documentation section at:

```
http://otn.oracle.com/documentation/
```

Conventions

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

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.	When you specify this clause, you create an **index-organized table**.
Italics	Italic typeface indicates book titles or emphasis.	*Oracle9i Database Concepts*
		Ensure that the recovery catalog and target database do *not* reside on the same disk.
`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 by using the `BACKUP` command.
		Query the `TABLE_NAME` column in the `USER_TABLES` data dictionary view.
		Use the `DBMS_STATS.GENERATE_STATS` procedure.
`lowercase monospace (fixed-width) font`	Lowercase monospace typeface indicates executables, filenames, directory names, 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 password is specified in the `orapwd` file.
		Back up the data files and control files in the `/disk1/oracle/dbs` directory.
		The `department_id`, `department_name`, and `location_id` columns are in the `hr.departments` table.
	Note: Some programmatic elements use a mixture of UPPERCASE and lowercase. Enter these elements as shown.	Set the `QUERY_REWRITE_ENABLED` initialization parameter to `true`.
		Connect as `oe` user.
		The `JRepUtil` class implements these methods.

Convention	Meaning	Example
lowercase italic monospace (fixed-width) font	Lowercase italic monospace font represents placeholders or variables.	You can specify the *parallel_clause*.
		Run U*old_release*.SQL where *old_release* refers to the release you installed prior to upgrading.

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]
...	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*, ... , *coln* FROM employees;

Convention	Meaning	Example
. . .	Vertical ellipsis points indicate that we have omitted several lines of code not directly related to the example.	``` SQL> SELECT NAME FROM V$DATAFILE; NAME ------------------------------------ /fs1/dbs/tbs_01.dbf /fs1/dbs/tbs_02.dbf . . . /fs1/dbs/tbs_09.dbf 9 rows selected. ```

Other notation	You must enter symbols other than brackets, braces, vertical bars, and ellipsis points as shown.	```
		acctbal NUMBER(11,2);
		acct CONSTANT NUMBER(4) := 3;
		``

Italics	Italicized text indicates placeholders or variables for which you must supply particular values.	``` CONNECT SYSTEM/system_password DB_NAME = database_name ```
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. **Note:** Some programmatic elements use a mixture of UPPERCASE and lowercase. Enter these elements as shown.	``` SELECT last_name, employee_id FROM employees; sqlplus hr/hr CREATE USER mjones IDENTIFIED BY ty3MU9; ```

Conventions for Windows Operating Systems

The following table describes conventions for Windows operating systems and provides examples of their use.

Convention	Meaning	Example
Choose **Start** >	How to start a program.	To start the Database Configuration Assistant, choose **Start** > **Programs** > **Oracle** - *HOME_ NAME* > **Configuration and Migration Tools** > **Database Configuration Assistant**.
File and directory names	File and directory names are not case sensitive. The following special characters are not allowed: left angle bracket (<), right angle bracket (>), colon (:), double quotation marks ("), slash (/), pipe (|), and dash (-). The special character backslash (\) is treated as an element separator, even when it appears in quotes. If the file name begins with \\, then Windows assumes it uses the Universal Naming Convention.	`c:\winnt"\"system32 is the same as` `C:\WINNT\SYSTEM32`
`C:\>`	Represents the Windows command prompt of the current hard disk drive. The escape character in a command prompt is the caret (^). Your prompt reflects the subdirectory in which you are working. Referred to as the *command prompt* in this manual.	`C:\oracle\oradata>`

Special characters	The backslash (\) special character is sometimes required as an escape character for the double quotation mark (") special character at the Windows command prompt. Parentheses and the single quotation mark (') do not require an escape character. Refer to your Windows operating system documentation for more information on escape and special characters.	`C:\>exp scott/tiger TABLES=emp`
		`QUERY=\"WHERE job='SALESMAN' and`
		`sal<1600\"`
		`C:\>imp SYSTEM/password FROMUSER=scott`
		`TABLES=(emp, dept)`

HOME_NAME	Represents the Oracle home name. The home name can be up to 16 alphanumeric characters. The only special character allowed in the home name is the underscore.	`C:\> net start OracleHOME_NAMETNSListener`

Documentation Accessibility

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```
http://www.oracle.com/accessibility/
```

Accessibility of Code Examples in Documentation   JAWS, a Windows screen reader, may not always correctly read the code examples in this document. The conventions for writing code require that closing braces should appear on an otherwise empty line; however, JAWS may not always read a line of text that consists solely of a bracket or brace.

Accessibility of Links to External Web Sites in Documentation   This documentation may contain links to Web sites of other companies or organizations that Oracle Corporation does not own or control. Oracle Corporation neither evaluates nor makes any representations regarding the accessibility of these Web sites.

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Part I

Oracle Collaboration Suite Pre-Installation Requirements

Part I contains conceptual information and pre-installation requirements that you should read before installing Oracle Collaboration Suite Release 2 (9.0.4.1.1).

Part I contains the following chapters:

- Chapter 1, "Installation Overview"

- Chapter 2, "Preparing for Installation"

- Chapter 3, "Upgrading to Oracle Collaboration Suite Release 2 (9.0.4.1.1)"

1

Installation Overview

This chapter provides an overview of the Oracle Collaboration Suite CD Pack contents and explains how to deploy the three Oracle Collaboration Suite installations. Oracle Corporation recommends reading this chapter before proceeding with installation.

This chapter contains these topics:

- What Are the Contents of the Oracle Collaboration Suite CD Pack?
- Installation Roadmap

What Are the Contents of the Oracle Collaboration Suite CD Pack?

The Oracle Collaboration Suite CD Pack includes the following CD-ROM sets:

- Oracle9iAS Infrastructure (32-bit) Release 2 (9.0.2.3.0) for Microsoft Windows
- Oracle Collaboration Suite Information Storage (32-bit) Release 2 (9.2.0.3.0) for Microsoft Windows
- Oracle Collaboration Suite (32-bit) Release 2 (9.0.4.1.1) for Microsoft Windows
- Oracle Collaboration Suite (32-bit) Release 2 (9.0.4.1.1) for Microsoft Windows Single-Box Installation DVD
- Oracle Collaboration Suite Clients Release 2 (9.0.4.1.1)
- Oracle Voicemail & Fax Release 2 (9.0.4.1.0) for Microsoft Windows 2000 (32-bit)
- Oracle Web Conferencing Voice & Document Conversion Components Release 2 (9.0.4.1.1) for Microsoft Windows 2000 (32-bit)
- Oracle Collaboration Suite Documentation Viewable CD Release 2 (9.0.4.1.0)

These CD-ROM sets are described in the following sections.

Oracle9iAS Infrastructure (32-bit) Release 2 (9.0.2.3.0) for Microsoft Windows

Installation of the Oracle9iAS infrastructure is a prerequisite for all middle tier applications, such as Oracle Files and Oracle Calendar, that are installed with Oracle Collaboration Suite. The Oracle9iAS infrastructure must be installed first.

> **Note:** You can use the Oracle9iAS infrastructure provided in your Oracle Collaboration Suite CD Pack, or you can use an existing Oracle9iAS infrastructure. An existing Oracle9iAS infrastructure must be first upgraded to work with Oracle Collaboration Suite. See "Upgrading Oracle9iAS Infrastructure" on page 3-5 for more information.

The Oracle9iAS infrastructure consists of three CD-ROMS labeled Oracle9iAS Infrastructure (32-bit) Release 2 (9.0.2.3.0) for Microsoft Windows that include the following components:

- Oracle9iAS Metadata Repository

A preseeded database containing metadata and schemas needed to run Oracle Collaboration Suite instances. This repository is installed and configured with every Oracle9*i*AS infrastructure installation.

- Oracle Internet Directory

  A directory service that enables information about dispersed users and network resources to be shared. Oracle Internet Directory implements the **LDAP**, version 3 standard.

- Oracle9*i*AS Single Sign-On

  An enterprise-wide user authentication process that enables access to multiple accounts and Oracle Collaboration Suite applications.

- Oracle Management Server

  Processes system management tasks and administers the distribution of these tasks across the network using the Oracle Enterprise Manager Console. The Console and its three-tier architecture can be used with the Oracle Enterprise Manager Web Site to manage not only Oracle Collaboration Suite, but your entire Oracle environment.

- J2EE and Web Cache

  This installation of J2EE and Web Cache configures **Oracle HTTP Server** and **Oracle9iAS Containers for J2EE**. These components are for internal use with the Oracle9*i*AS infrastructure.

  > **Note:** Oracle Corporation does not support use of the infrastructure installation of J2EE and Web Cache for customer application deployment.

Oracle Collaboration Suite Information Storage (32-bit) Release 2 (9.2.0.3.0) for Microsoft Windows

The Oracle Collaboration Suite information storage consists of 2 CD-ROMs labeled Oracle Collaboration Suite Information Storage (32-bit) Release 2 (9.2.0.3.0) for Microsoft Windows that include pretuned Oracle9*i* release 2 (9.2) starter databases for use with the middle tier applications listed in "Oracle Collaboration Suite (32-bit) Release 2 (9.0.4.1.1) for Microsoft Windows" on page 1-4. Install Oracle Collaboration Suite information storage after you install the Oracle9*i*AS infrastructure.

Oracle Collaboration Suite (32-bit) Release 2 (9.0.4.1.1) for Microsoft Windows

The Oracle Collaboration Suite middle tier provides an integrated enterprise-wide communication, content management, and context management solution. This enables users of desktops, laptops, personal digital assistants (PDAs), faxes, telephones, and Web clients to collaborate with one another and perform daily tasks.

The Oracle Collaboration Suite middle tier consists of three CD-ROMs labeled Oracle Collaboration Suite (32-bit) Release 2 (9.0.4.1.1) for Microsoft Windows.

The Oracle Collaboration Suite middle tier must be installed after you have:

- Installed the Oracle9*i*AS infrastructure

- Configured Oracle Internet Directory and the Oracle9*i*AS Single Sign-On components of the Oracle9*i*AS infrastructure on your network, optimally on a separate computer

- Installed Oracle Collaboration Suite information storage, which includes pretuned databases for Oracle Email, Oracle Files, and Oracle Web Conferencing

Oracle Collaboration Suite consists of the following middle tier components:

- Oracle Calendar

  Provides calendaring, scheduling, and personal information management (PIM) capabilities through desktop clients, the Web, and any mobile device. The scalable calendar architecture allows use of sophisticated group calendars and resource scheduling across an entire enterprise.

- Oracle Email

  A reliable, scalable, and secure messaging system that reduces administration, hardware, and software costs by providing a consolidated mail store. Oracle Email uses an Oracle9*i* database as a single message store for e-mail, taking advantage of Oracle access, storage, and management of all types of information. A preconfigured Oracle9*i* database is available on the Oracle Collaboration Suite information storage CD-ROM.

  > **Note:** Oracle Email contains Oracle Calendar, Oracle Calendar Sync, and Oracle Connector for Outlook.

- Oracle Files

A content management application that supports user collaboration and file sharing through a consolidated, scalable, and reliable file server. Oracle Files provides a sophisticated, Web-based user interface and industry standard protocols that enable users to easily share files of any kind with others in a workspace or across an enterprise. Oracle Files uses an Oracle9*i* database to store content. A preconfigured Oracle9*i* database, the Oracle Collaboration Suite information store, is available on the Oracle Collaboration Suite information storage CD-ROM.

- Oracle Web Conferencing

Brings real-time online collaboration to any enterprise enabling customers, employees, teams, and partners to meet online within the context provided by the content, commerce, and comprehensive business flows of e-business.

- Oracle Ultra Search

Provides an enterprise search engine that enables corporate users to locate valuable information within the intranet or extranet. Oracle Ultra Search provides a search facility for unified searching of data sources like Web pages and Oracle9*i* databases.

- Oracle Voicemail & Fax

Oracle Voicemail & Fax is a reliable, highly scalable voice mail and fax system that provides centralized and secure message storage and retrieval for voice mails and faxes. Oracle Voicemail & Fax uses the Oracle Collaboration Suite information storage for voice mail and fax messages.

- Oracle9*i*AS Wireless

Enables mobile employees to have full access to all of their corporate information from any device, including mobile phones, PDAs, and other wireless devices.

> **Note:** Oracle9*i*AS Wireless includes built-in applications that must be configured after installation. The underlying Oracle9*i*AS Wireless stack, then the applications must be configured before use. For information on configuring these applications and other Oracle9*i*AS Wireless components, see *Oracle9iAS Wireless Administrator's Guide*.

- Oracle Collaboration Suite Web Client

Oracle Collaboration Suite provides an integrated Web client for browser-enabled computers, using the underlying Oracle9*i*AS infrastructure to provide a secure, single sign-on environment for accessing messages (e-mail, voice mail, and fax), calendar and directory information, and content stored in Oracle Files, a file server designed for large-scale collaboration.

- Oracle9*i*AS Portal

  Enables you to install, configure, and manage the portlets that are included with Oracle Collaboration Suite.

  > **Note:** Oracle9*i*AS Portal is a complete solution for building, deploying, and monitoring Web database applications and content-driven Web sites. Oracle9*i*AS Portal enables you to create and view database objects through an easy-to-use HTML-based interface. Contact your Oracle representative for information on licensing Oracle9*i*AS Portal.

All middle tier applications are installed with each Oracle Collaboration Suite installation. During installation of Oracle Collaboration Suite, you can configure Oracle Calendar, Oracle Email, Oracle Files, Oracle Web Conferencing, and Oracle9*i*AS Portal. Optionally, you can configure these applications after installation.

Oracle Collaboration Suite (32-bit) Release 2 (9.0.4.1.1) for Microsoft Windows Single-Box Installation DVD

The Oracle Collaboration Suite (32-bit) Release 2 (9.0.4.1.1) for Microsoft Windows Single-Box Installation DVD enables you to install Oracle Collaboration Suite and all of its components on a single computer.

> **See Also:** Chapter 7, "Installing Oracle Collaboration Suite on a Single Computer"

Oracle Collaboration Suite Clients Release 2 (9.0.4.1.1)

The Oracle Collaboration Suite Clients Release 2 (9.0.4.1.1) CD-ROM includes of the following components:

Desktop Clients:

- Oracle Connector for Outlook 9.0.4.1

- Oracle Calendar desktop client 9.0.4.1 for Windows

- Oracle Calendar desktop client 9.0.4 for Macintosh OS9 and OSX

- Oracle Calendar desktop client 9.0.4 for Linux x86

- Oracle Calendar desktop client 9.0.4.1 for Solaris Operating Environment (SPARC 32-bit)

Oracle Calendar Synchronization Clients:

- Oracle Calendar Sync 9.0.4.1 for Palm for Windows

- Oracle Calendar Sync 9.0.4 for Palm for Macintosh OS9 and OSX

- Oracle Calendar Sync 9.0.4.1 for Pocket PC for Windows

Developer Packages:

- Oracle Calendar SDK 9.0.4.1 (HP)

- Oracle Calendar SDK 9.0.4.1 (Linux)

- Oracle Calendar SDK 9.0.4.1 (Solaris)

- Oracle Calendar SDK 9.0.4.1 (Windows)

- Oracle Calendar SDK 9.0.4 (Macintosh)

- Oracle Calendar Web Services 9.0.4

Miscellaneous:

- Oracle Email `esmigration.zip`

- Oracle Files `FileSync.exe`

Oracle Voicemail & Fax Release 2 (9.0.4.1.0) for Microsoft Windows 2000 (32-bit)

The Oracle Voicemail & Fax Release 2 (9.0.4.1.0) for Microsoft Windows 2000 (32-bit) CD-ROM installs Oracle Voicemail & Fax on Windows 2000.

> **See Also:** Chapter 8, "Installing and Configuring Oracle Voicemail & Fax" for configuration instructions

Oracle Web Conferencing Voice & Document Conversion Components Release 2 (9.0.4.1.1) for Microsoft Windows 2000 (32-bit)

The Oracle Web Conferencing Voice & Document Conversion Components Release 2 (9.0.4.1.1) for Microsoft Windows 2000 (32-bit) CD-ROM installs the following components:

- Oracle Web Conferencing Document Conversion Server

  Converts Microsoft Office documents into HTML for viewing in Document Presentation mode. The Oracle Web Conferencing Document Conversion Server must be installed on a computer with Microsoft Windows and Microsoft Office.

- Oracle Web Conferencing Voice Conversion Server

  Enables voice streaming and capturing and recording of the audio portion of a conference. The Oracle Web Conferencing Voice Conversion server must be installed on a computer with Microsoft Windows and requires specialized telephony hardware and software.

  > **See Also:**
  >
  > - "Additional Hardware Requirements for Oracle Web Conferencing" on page 2-2
  > - "Additional Software Requirements for Oracle Web Conferencing" on page 2-3

Oracle Collaboration Suite Documentation Viewable CD Release 2 (9.0.4.1.0)

The Oracle Collaboration Suite Documentation Viewable CD Release 2 (9.0.4.1.0) CD-ROM includes the Oracle Collaboration Suite documentation library. You can view the documentation from the CD-ROM or copy it to your hard drive.

> **See Also:** *Oracle Collaboration Suite Documentation Roadmap*

Installation Roadmap

This section provides an overview of the required procedures for installing and configuring Oracle Collaboration Suite.

> **See Also:** Chapter 3, "Upgrading to Oracle Collaboration Suite Release 2 (9.0.4.1.1)" for information on upgrading to Oracle Collaboration Suite

This section contains the following topics:

- General Installation Procedures
- Oracle Calendar Installation
- Oracle Email Installation
- Oracle Files Installation
- Oracle Web Conferencing Installation
- Oracle Ultra Search Installation
- Oracle Voicemail & Fax Installation
- Oracle9iAS Wireless Installation

> **Note:** See Appendix C, "Troubleshooting" if you encounter problems during the installation or configuration process

General Installation Procedures

The general procedures for installing Oracle Collaboration Suite are as follows:

1. Complete the installation planning requirements described in Chapter 2, "Preparing for Installation".

   If you plan to install Oracle Web Conferencing, be sure to read the *Oracle Web Conferencing Sizing Guide* for hardware and software requirements for the voice conversion and document conversion servers.

   The voice conversion server is a grouping of Oracle Web Conferencing components that dials into a voice conferencing system, converts the analog voice to digital format, and streams it. The document conversion server is a grouping of Oracle Web Conferencing components that converts Microsoft Office documents into HTML for viewing in Document Presentation mode.

   After reading the *Oracle Web Conferencing Sizing Guide*, set up the voice conversion server hardware by following the instructions in "Additional Hardware Requirements for Oracle Web Conferencing" on page 2-2. Install prerequisite software on the systems on which the voice conversion server and document conversion servers will reside.

2. Plan your deployment methodology by reading Chapter 4, "Oracle Collaboration Suite Deployment Methods".

3. Print and complete the installation checklists in Appendix B, "Installation Checklists".

4. Complete the installation procedures described in Chapter 5, "Getting Started with Installation".

5. Install the Oracle9*i*AS infrastructure by following the installation procedures described in "Installing the Oracle9iAS Infrastructure" on page 6-2.

6. Install the Oracle Collaboration Suite information storage database by following the installation procedures described in "Installing the Oracle Collaboration Suite Information Storage Database" on page 6-4.

7. Install the Oracle Collaboration Suite middle tier by following the installation procedures described in "Installing the Oracle Collaboration Suite Middle Tier" on page 6-8.

8. Configure the installed Oracle Collaboration Suite components by following the procedures described in the component configuration chapters in Part III, "Oracle Collaboration Suite Component Configuration".

During the middle tier installation process, you can choose which components of Oracle Collaboration Suite that you want to configure. Each of the individual components of Oracle Collaboration Suite have specific installation and configuration requirements that are outlined in the following sections.

Oracle Calendar Installation

This section contains the following topics:

- Installing Oracle Calendar as Part of Oracle Collaboration Suite
- Installing Oracle Calendar Standalone

Installing Oracle Calendar as Part of Oracle Collaboration Suite

The procedures for installing Oracle Calendar as part of Oracle Collaboration Suite are as follows:

1. Read Chapter 3, "Calendar Deployment" in the *Oracle Calendar Administrator's Guide* for sizing requirements, preinstallation checklists and deployment information.

2. Read the Oracle Calendar chapter in the *Oracle Collaboration Suite Release Notes* for installation or configuration issues.

3. If you are upgrading from a previous version, read Chapter 3, "Upgrading to Oracle Collaboration Suite Release 2 (9.0.4.1.1)".

4. Follow Steps 1 through 7 in "General Installation Procedures" on page 1-9.

5. Follow the configuration procedures described in Chapter 11, "Configuring Oracle Calendar".

6. To install Oracle Connector for Outlook, Oracle Calendar desktop clients, or Oracle Calendar Sync clients, see Appendix G, "Oracle Collaboration Suite Client Installations".

7. Refer to the *Oracle Calendar Administrator's Guide* for configuration and maintenance procedures for Oracle Calendar components. For detailed information concerning configuration parameters and command-line administration utilities, refer to the *Oracle Calendar Reference Manual.*

Installing Oracle Calendar Standalone

The procedures for upgrading from Oracle CorporateTime to Oracle Calendar 9.0.4 are as follows:

1. Read Chapter 3, "Calendar Deployment" in the *Oracle Calendar Administrator's Guide* for sizing requirements, preinstallation checklists and deployment information.

2. Read the Oracle Calendar chapter in the *Oracle Collaboration Suite Release Notes* for installation or configuration issues.

3. To upgrade from Oracle CorporateTime to Oracle Calendar 9.0.4, follow the steps described in Appendix F, "Installing Oracle Calendar Standalone".

4. To install Oracle Connector for Outlook, Oracle Calendar desktop clients, or Oracle Calendar Sync clients, see Appendix G, "Oracle Collaboration Suite Client Installations".

5. Refer to the *Oracle Calendar Administrator's Guide* for configuration and maintenance procedures for Oracle Calendar components. For detailed information concerning configuration parameters and command-line administration utilities, refer to the *Oracle Calendar Reference Manual.*

Oracle Email Installation

The procedures for installing Oracle Email are as follows

1. Read the Oracle Email chapter in the *Oracle Collaboration Suite Release Notes* for installation or configuration issues.

2. Follow Steps 1 through 7 in "General Installation Procedures" on page 1-9.

3. Install and configure Oracle Email by following the procedures in Chapter 12, "Installing and Configuring Oracle Email".

4. Refer to the *Oracle Email Administrator's Guide* for information on managing and maintaining Oracle Email.

Oracle Files Installation

The procedures for installing Oracle Files are as follows:

1. Read the *Oracle Files Planning Guide* to determine sizing requirements and hardware information.

2. Read the Oracle Files chapter in the *Oracle Collaboration Suite Release Notes* for installation and configuration issues.

3. Follow Steps 1 through 7 in "General Installation Procedures" on page 1-9.

4. Configure Oracle Files by following the procedures in Chapter 14, "Configuring Oracle Files".

> **See Also:** "Troubleshooting Oracle Files Installation" on page C-4 to resolve Oracle Files configuration issues

5. If you wish to install Oracle FileSync, follow the procedures in "Oracle FileSync" on page G-30.

6. Refer to the *Oracle Files Administrator's Guide* for information on managing and maintaining Oracle Files.

Oracle Web Conferencing Installation

The procedures for installing Oracle Web Conferencing are as follows:

1. Read the Oracle Web Conferencing chapter in the *Oracle Collaboration Suite Release Notes* for the latest installation and configuration issues.

2. Read Chapter 4, "Oracle Collaboration Suite Deployment Methods".

3. Follow Steps 1 through 7 in "General Installation Procedures" on page 1-9.

4. Follow the procedures in Chapter 15, "Configuring Oracle Web Conferencing" to configure Oracle Web Conferencing.

5. Refer to the *Oracle Web Conferencing Administrator's Guide* for information on:

- Deployment scenarios not covered in this manual
- Advanced customization
- Monitoring the system
- Running reports
- Creating and managing sites

Oracle Ultra Search Installation

The procedures for installing Oracle Ultra Search are as follows:

1. Read "Deploying Oracle Ultra Search" on page 4-7 to determine sizing requirements and hardware information.

2. Follow Steps 1 through 7 in "General Installation Procedures" on page 1-9.

3. Configure Oracle Ultra Search by following the procedures in Chapter 13, "Configuring Search Features".

4. Refer to the *Oracle Ultra Search User's Guide* for information on managing and maintaining your Oracle Ultra Search instance.

Oracle Voicemail & Fax Installation

The section describes the procedures for installing Oracle Voicemail & Fax.

> **Note:** You must install and configure Oracle Email before you install Oracle Voicemail & Fax.

To install Oracle Voicemail & Fax:

1. Read the Oracle Voicemail & Fax chapter in the *Oracle Collaboration Suite Release Notes* for installation or configuration issues.

2. Install and configure Oracle Email by following the procedures in "Oracle Email Installation" on page 1-11.

3. Install and configure Oracle Voicemail & Fax by following the procedures in Chapter 8, "Installing and Configuring Oracle Voicemail & Fax".

4. Refer to the *Oracle Voicemail & Fax Administrator's Guide* for information on managing and maintaining Oracle Voicemail & Fax.

Oracle9*i*AS Wireless Installation

The procedures for installing Oracle9*i*AS Wireless are as follows:

1. Follow Steps 1 through 7 in "General Installation Procedures" on page 1-9.

2. Refer to the *Oracle9iAS Wireless Administrator's Guide* for information on configuring and managing your Oracle9*i*AS Wireless instance.

2

Preparing for Installation

This chapter describes how to plan each Oracle Collaboration Suite installation.

This chapter contains these topics:

- Hardware Requirements
- Operating System Versions
- Multilingual Support
- Online Documentation Requirements
- Port Allocations
- Certified Software
- Environment Preinstallation Tasks

Hardware Requirements

Table 2–1 describes the minimum hardware requirements for each installation of Oracle Collaboration Suite.

Table 2–1   Oracle Collaboration Suite Hardware Requirements[1]

Requirement	Value
CPU	■ Oracle Collaboration Suite and the Oracle9*i*AS infrastructure require an Intel Pentium 300 MHz, or faster, processor. ■ Oracle Collaboration Suite information storage requires an Intel Pentium 166 MHz, or faster, processor.
Monitor	256 color viewing capability
Memory (minimum requirement)	■ Oracle9*i*AS infrastructure: 512 MB ■ Oracle Collaboration Suite information storage: 128 MB ■ Oracle Collaboration Suite middle tier: 256 MB
TMP or TEMP directory	Oracle9*i*AS infrastructure and Oracle Collaboration Suite middle tier require at least 300 MB of free space
Disk Space	■ Oracle9*i*AS infrastructure: 3.58 GB ■ Oracle Collaboration Suite information storage: ■ Oracle Collaboration Suite middle tier: 1 GB

[1] For detailed information regarding Oracle Files hardware and sizing requirements, see the *Oracle Files Planning Guide*.

Additional Hardware Requirements for Oracle Web Conferencing

Oracle Web Conferencing offers document and voice conversion services. Document conversion services convert Microsoft Office documents into HTML for viewing in Document Presentation mode. Voice conversion services allow for voice streaming and for capturing and recording of the audio portion of a conference.

Document conversion is provided through the Document Conversion Server, which must reside on a separate computer from the middle tier. The computer must have Microsoft Windows 2000. The Voice Conversion Server must also reside on a separate computer from the middle tier, and this computer must have Microsoft Windows 2000. In addition, the Voice Conversion Server must have an Intel Dialogic card. Depending on your sizing requirements, you can install both servers on a single computer.

> **See Also:** *Oracle Web Conferencing Sizing Guide* for specific
> information on sizing requirements for your system

Operating System Versions

Table 2–2 describes the operating system requirements for each installation of
Oracle Collaboration Suite.

Table 2–2   Operating System Requirements for Oracle Collaboration Suite

Requirement	Value
Operating System	Oracle9*i*AS infrastructure and Oracle Collaboration Suite middle tier:
	■ Microsoft Windows NT 4.0 Workstation and Server with Service Pack 6a, or higher
	■ Microsoft Windows 2000 Professional and Server with Service Pack 1 or higher
	Oracle Collaboration Suite information storage:
	■ Microsoft Windows NT 4.0 Workstation and Server with Service Pack 5, or higher
	■ Microsoft Windows 2000 Professional and Server with Service Pack 1, or higher
Virtual Memory	Oracle9*i*AS infrastructure:
	■ 1024 MB minimum
	■ 2 GB recommended
	Oracle Collaboration Suite information storage:
	■ 200 MB minimum
	■ 400 MB maximum
	Oracle Collaboration Suite middle tier:
	■ 512 MB minimum
	■ 1 GB recommended
	See Also: "Changing the Size of the Virtual Memory Paging File" on page 2-7

Additional Software Requirements for Oracle Web Conferencing

Oracle Web Conferencing voice conversion services and document conversion
services require additional hardware and software. Voice conversion services are

enabled with the Oracle Web Conferencing Voice Conversion server and document conversion services are enabled with the Oracle Web Conferencing Voice Conversion server. For a description of these servers and their hardware requirements, see

The computer or computers on which Oracle Web Conferencing voice and document conversion services reside must have the Microsoft Windows 2000 operating system. The computer with the Voice Conversion Server must also have the Intel Dialogic software. The computer with the Document Conversion Server must have Microsoft Office 2000. Depending on your sizing requirements, both servers can be installed on a single computer, but all hardware and software requirements must be met.

Multilingual Support

The Oracle Collaboration Suite user interface is available in the following languages: Arabic, Brazilian Portuguese, Danish, Dutch, English, Finnish, French, German, Greek, Italian, Japanese, Korean, Norwegian, Portuguese, Simplified Chinese, Spanish, Swedish, Traditional Chinese, and Turkish.

Oracle Calendar Multilingual Support Limitations

Oracle Calendar server administration tools have an English interface but support entering data in all Oracle Collaboration Suite supported languages.

The Oracle Calendar clients are available only in English with the following exceptions:

- **Oracle Connector for Outlook**: All Oracle Collaboration Suite supported languages, except Arabic

- **Oracle Calendar Web client**: All Oracle Collaboration Suite supported languages, except Arabic

- **Oracle Calendar desktop client for Windows**: English, French, German, and Japanese

- **Oracle Calendar Sync for Palm for Windows**: English, French, German, and Japanese

- **Oracle Calendar Sync for Pocket PC for Windows**: English, French, German, and Japanese

Online Documentation Requirements

You can view Oracle Collaboration Suite documentation online using a Web browser or Portable Document Format (PDF) Viewer.

Table 2–3 lists the requirements for viewing Oracle Collaboration Suite online documentation.

Table 2–3   Online Documentation Requirements

Requirement	Items
Online Readers	Any one of the following:
	HTML
	■ Netscape Navigator 4.7, or later
	■ Microsoft Internet Explorer 5.0, or later
	PDF
	■ Acrobat Reader 4.0, or later
	■ Acrobat Reader+Search 4.0, or later
	■ Acrobat Exchange 4.0, or later
	■ PDFViewer Web browser plug-in 1.0, or later
Library-wide HTML search and navigation	Active Internet connection
Disk Space	37.5 MB

> **See Also:**   *Oracle Collaboration Suite Documentation Roadmap*

Port Allocations

Following installation, the Oracle Universal Installer creates a file named portlist.ini showing the ports assigned during the installation of Oracle Collaboration Suite components. The installation process automatically detects any port conflicts and selects an alternate port in the range allocated for that component.

> **See Also:**   Appendix D, "Default Port Numbers and Port Ranges"

Certified Software

Many Oracle Collaboration Suite components require a Web browser. All Oracle Collaboration Suite installations require an Oracle9*i*AS infrastructure and Oracle9*i* database. A complete list of certified software, including certified Oracle9*i*AS infrastructure releases, database releases, and Web browsers for Oracle Collaboration Suite is located at Oracle*MetaLink*:

```
http://metalink.oracle.com
```

Environment Preinstallation Tasks

This section contains these topics:

- Setting Environment Variables
- Changing the Size of the Virtual Memory Paging File
- Real Application Clusters for Oracle Collaboration Suite Information Storage Installation

Setting Environment Variables

When installing the Oracle9*i*AS infrastructure or the Oracle Collaboration Suite middle tier, ensure that the TMP or TEMP directory has 300 MB, or more, of free space.

Important: The ORACLE_HOME environment variable is automatically set in the registry. Do not set this variable as a System Environment variable, as it prevents installation.

To change the TMP or TEMP directory path on Windows NT:

1. Select **Start** > **Settings** > **Control Panel** > **System**.
2. Select the **Environment** tab.
3. Select the TMP or TEMP variable from the **User Variables for *username*** list box.
4. Change the **Value** field to a directory with 300 MB, or more, of free space.
5. Click **Set**.
6. Click **OK**.

To change the TMP or TEMP directory path on Windows 2000:

1. Select **Start** > **Settings** > **Control Panel** > **System**.

2. Select the **Advanced** tab.

3. Click **Environment Variables**.

4. Select the TMP or TEMP variable from the **User Variables for *username*** list box.

5. Click **Edit**.

6. Change the **Variable Value** field to a directory with 300 MB, or more, of free space.

7. Click **OK** until you exit System Properties.

Changing the Size of the Virtual Memory Paging File

To change the amount of virtual memory on Windows NT:

1. Select **Start** > **Settings** > **Control Panel** > **System**.

2. Select the **Performance** tab.

3. Click **Change**.

4. Select the appropriate drive and enter the new value in the **Initial size (MB)** field.

5. Click **Set**.

6. Click **OK** until you exit System Properties.

To change the amount of virtual memory on Windows 2000:

1. Select **Start** > **Settings** > **Control Panel** > **System**.

2. Select the **Advanced** tab.

3. Click **Performance Options**.

4. Click **Change**.

5. Select the appropriate drive and enter the new value in the **Initial size (MB)** field.

6. Click **Set**.

7. Click **OK** until you exit System Properties.

Real Application Clusters for Oracle Collaboration Suite Information Storage Installation

Perform the following preinstallation steps to install Real Application Clusters. This information is also described in the Oracle Cluster Setup Wizard online help.

> **See Also:** *Oracle9i Real Application Clusters Setup and Configuration* for more information on preinstallation steps for Real Application Clusters. This manual is available on Oracle Technology Network at
>
> `http://otn.oracle.com/`

This section contains these topics:

- Raw Device Requirements
- Real Application Clusters Preinstallation Tasks

Raw Device Requirements

Each instance shares a set of unformatted devices on a shared disk subsystem for data files. The number and type of raw devices required depends on several factors.

If you plan to use one of the General Purpose, Transaction Processing, or Data Warehouse database configuration types, you must create specific tablespaces using the minimum sizes listed in Table 2–4. When considering size requirements for your disks, remember to account for the initial signature of 1 or 2 MB on each disk that cannot be used for extended partitions. These requirements are the same for both the vendor-supplied clusterware layer and the Oracle-supplied clusterware layer.

If you do not create the database with the database configuration assistant, the number of logical drives you create depends on the number of data files, redo log files, and control files you plan to create. However, you must still create a logical drive of 100 MB for the Voting disk.

Table 2–4   Logical Drive Disk Sizes for Database Configuration Assistant

Create a Partition for...	File Size
SYSTEM tablespace	420 MB
server parameter file	5 MB
USERS tablespace	120 MB
TEMP tablespace	120 MB

Table 2–4   Logical Drive Disk Sizes for Database Configuration Assistant

Create a Partition for...	File Size
`UNDOTBS` tablespace	320 MB
`EXAMPLE` tablespace	160 MB
`CWMLITE` tablespace	100 MB
`XDB` tablespace	50 MB
`ODM` tablespace	280 MB
`INDX` tablespace	70 MB
`TOOLS` tablespace	12 MB
`DRSYS` tablespace	250 MB
First control file	110 MB
Second control file	110 MB
Two redo log files for each instance	120 MB
`srvcfg` (Voting disk for clusterware)	100 MB

By default, the database configuration assistant uses automatic undo management. Create one Undo tablespace for each instance. Logical drive for the Undo tablespace for all preconfigured database templates must be at least 320 MB. If you use manual undo management, make the RBS logical drive at least 625 MB in size.

> **See Also:**   *Oracle9i Real Application Clusters Setup and Configuration* for more information on planning your raw device creation strategy and DBCA database configuration options

Real Application Clusters Preinstallation Tasks

Perform the following tasks on your Windows NT or Windows 2000 computer to prepare a set of nodes for cluster software installation:

- Task 1: Creating an Extended Partition and Logical Drives

- Task 2: Assigning Symbolic Link Names

- Task 3: Creating a Cluster

Task 1: Creating an Extended Partition and Logical Drives

To configure unformatted logical drives, create an extended partition and multiple logical drives.

From one node in the cluster, run Windows NT Disk Administrator or Disk Management to create an extended partition and multiple logical drives. Each computer must be a member of the same domain or within a trusted domain.

> **See Also:** Your Windows Disk Administrator or Disk Management online help for more information about creating and managing extended partitions and logical drives

This section contains instructions for:

- Creating Partitions and Drives on Windows NT
- Creating Partitions and Drives on Windows 2000

Creating Partitions and Drives on Windows NT

Run Windows NT Disk Administrator from one node to create an extended partition and configure logical drives on the shared disk for the entire cluster. You can use more than one disk to accommodate all the partitions, depending on your shared disk array's configuration. Each computer must be a member of the same domain or within a trusted domain.

To create an extended partition:

1. Log in as member of the Administrators Group.

2. Choose **Start** > **Programs** > **Administrative Tools** > **Disk Administrator** to display the Disk Administrator window.

3. Right-click an unpartitioned disk, or an area of free space on a disk that does not contain an extended partition.

4. Select **Create Extended**. The Disk Administrator displays the maximum sizes for the extended partition.

5. Enter the size of the partition of the extended partition, then click **OK**.

To create a logical drive:

> **Note:** When storing Oracle files on raw devices, Oracle Corporation recommends that you do not create more than 120 logical drives within an extended partition. Doing so can significantly increase the time needed to restart your computer and start the disk administration tools.

1. Select an area of free space in the extended partition.

2. Click **Partition** > **Create**.

   The Disk Administrator window displays the minimum and maximum sizes for the logical drive.

   a. Enter the size of the logical drive that you want to create. Create the logical drives with file sizes shown in Table 2–4 on page 2-8.

   b. Click **OK**.

3. Select the logical drive.

4. Click **Tools** > **Assign Drive Letter**.

5. Select the **Do not assign a drive letter** option.

6. Click **OK**.

> **Note:** Optionally, run the `LetterDelete` utility after creating all logical drives to remove all drive letter assignments with a single command.

7. Repeat steps 1-5 until all required logical drives are created.

8. Click **Partition** > **Commit Changes Now**.

   A confirmation dialog displays, informing you that changes have been made to the disk.

9. Click **Yes** to acknowledge the message.

   A dialog box displays, informing you the disks have been updated successfully.

10. Click **OK**.

11. Click **Partition** > **Exit**.

   Changes should be visible on all nodes.

The Disk Administrator window shown in Figure 2–1 illustrates an example of a disk configuration. The logical partitions are sized to allow the database configuration assistant to create a cluster database.

Figure 2–1   Disk Administrator Window
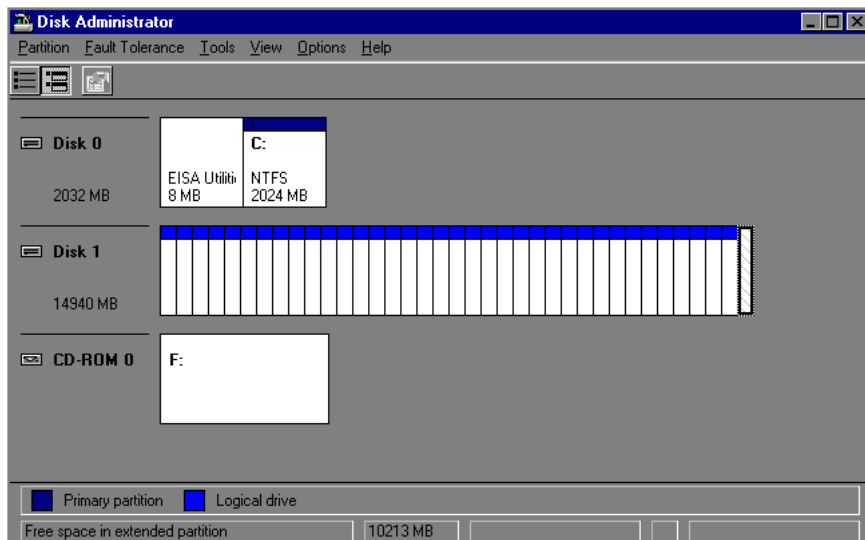
Disk	Contains
Disk 0	A primary partition
Disk 1	An extended partition with 36 logical partitions and an area of free space

Creating Partitions and Drives on Windows 2000

Run Windows 2000 Disk Management from one node to create an extended partition and configure logical drives on the shared disk for the entire cluster. You can use more than one disk to accommodate all the partitions, depending on your shared disk array's configuration. Each computer must be a member of the same domain or within a trusted domain.

You must create primary partitions, an extended partition, and logical drives on basic disks. Dynamic disks are not supported. A basic disk uses the same partitions as earlier versions of Windows and can contain up to four primary partitions, or three primary partitions and one extended partition.

To create an extended partition and logical drives:

1. Click **Settings** > **Control Panel**.

2. Double-click **Administrative Tools**.

3. Click the + next to **Storage**, then select **Disk Management**.

    The Computer Management window displays. View the status of a disk or volume in the **Status** column. Figure 2–2 shows the status of Healthy for volumes, and Online for disks.

Figure 2–2   Computer Management Window
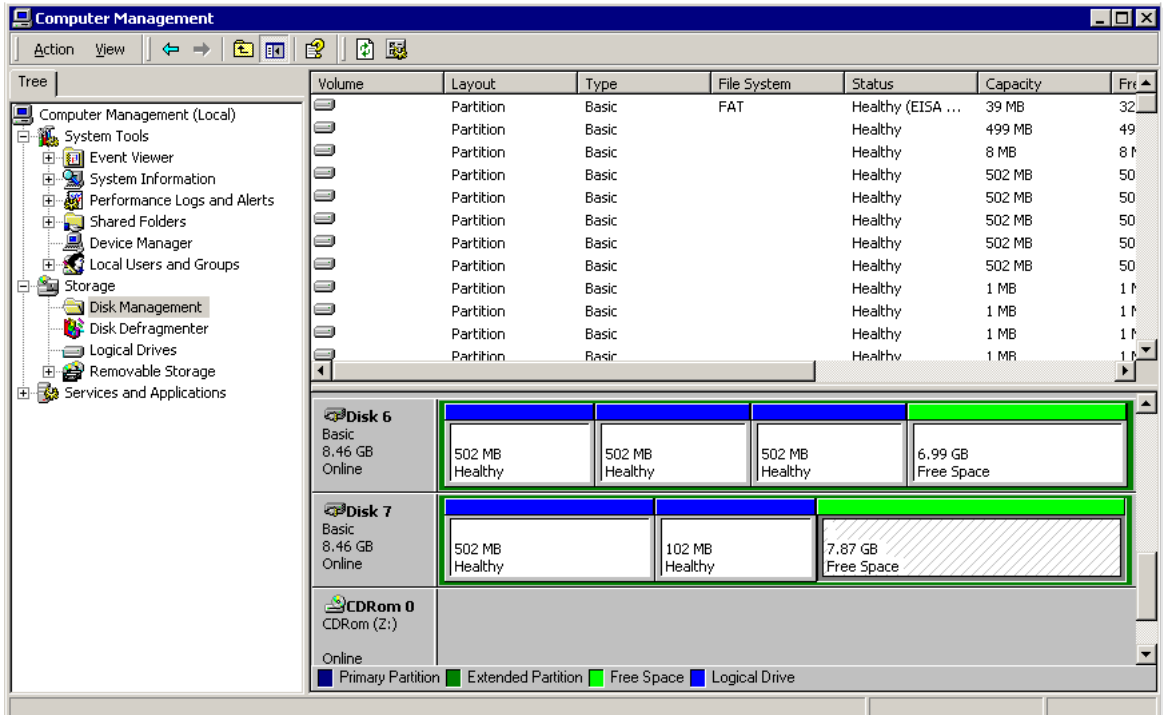
4. Right-click an unallocated region of a basic disk, and click **Create Partition**. Or, right-click free space in an extended partition, and click **Create Logical Drive**.

5. Click **Next** > **Extended Partition** > **Next**, or **Logical Drive** > **Next**. Set the appropriate logical drive size for each tablespace data file listed in Table 2–4 on page 2-8.

6. Click **Next**.

7. Select the **Do not assign a drive letter or drive path** option.

8. Click **Next**.

9. Select the **Do not format this partition** option.

10. Click **Next**.

11. Click **Finish**.

> **Note:** If the Disk Management window is open during any disk management modifications, such as creating symbolic links or adding logical partitions, you need to close and open the window to view any changes you applied.

Task 2: Assigning Symbolic Link Names

Use one of the following methods to assign symbolic link names:

- Using Oracle Cluster Setup Wizard
- Using Object Link Manager
- Using ImportSYMLinks Utility

Using Oracle Cluster Setup Wizard

The **Oracle Cluster Setup Wizard** assists with cluster creation and the addition of nodes to an existing cluster. It also enables you to assign symbolic link names to logical drives. Refer to "Task 3: Creating a Cluster" on page 2-16 to create symbolic link names and create a cluster using Oracle Cluster Setup Wizard.

Using Object Link Manager

Object Link Manager is a graphical user interface (GUI) tool that assigns symbolic link names or renames existing symbolic link names.

> **See Also:** "Installing the Raw Devices Management Utilities Manually" on page 2-20 to install Oracle Object Link Manager

1. Select c:*temp*\GUIOracleOBJManager.exe, where *temp* is the temporary directory defined in step 2 of the "Installing the Raw Devices Management Utilities Manually" section on page 2-20.

The Oracle Object Manager window displays.

2. Select the row to update and click any point within the highlighted row.

   An edit window, with an active blinking cursor, opens in the **New Link Name** column.

3. Enter the new link name and click **Enter**.

4. Repeat steps 2 and 3 to create additional symbolic link names.

   Note: Do not proceed to step 5 if the edit window is active. Changes will not apply.

   ---

5. Select **Options** > **Commit**.

Using ImportSYMLinks Utility

The ImportSYMLinks utility is a command line tool that assigns symbolic link names or renames existing symbolic link names.

> **See Also:** "Installing the Raw Devices Management Utilities Manually" on page 2-20 to install the ImportSYMLinks utility

1. Create a TBL file.

Task	Procedure
Modify an existing symbolic link name	Export existing links to a TBL file using the following command:
	`ExportSYMLinks.exe /f:filename`
	If `/f:filename` is not specified, then the default filename, `symmap.tbl`, is generated in the current working directory.
Create a TBL file	A sample ASCII file is located in the following directory on the first component CD-ROM:[1]
	`\preinstall_rac\olm\sample.tbl`
	1. Create a TBL file.
	2. Save the file.

[1] This sample file contains symbolic link names associated with raw partitions for a two-node cluster database.

2. Use the following command to import symbolic link mappings:

   `ImportSYMLinks.exe /f:filename`

For example,

```
ImportSYMLinks.exe \f:c:\temp\mysymlinks.tbl
```

where temp is the temporary directory defined in step 2 of the "Installing the Raw Devices Management Utilities Manually" section on page 2-20 and *filename* is the full path and filename of the valid TBL file.

Task 3: Creating a Cluster

If you intend to use Oracle9*i* operating system dependent clusterware, use the Oracle Cluster Setup Wizard to install the clusterware, assign symbolic links, and create a cluster. If you intend to use vendor operating system dependent clusterware, refer to your vendor documentation.

If you intend to use vendor operating system dependent clusterware instead of Oracle9*i* operating system dependent clusterware, you do not need to run the Oracle Cluster Setup Wizard. However, the raw device management utilities are required to configure a raw device before the Oracle Universal Installer is invoked. You must temporarily install the raw device management utilities.

Run the Oracle Cluster Setup Wizard on a node that is to become a node in the cluster. Running the wizard from a node that will not become a node in the cluster is not supported. To add a node to an existing cluster, run the Oracle Cluster Setup Wizard from the CD-ROM at any time.

> **See Also:** *Oracle9i Real Application Clusters Administration* for more information about adding a node at the clusterware layer on a Windows platform

Before you Begin

- Ensure all the nodes to be part of the cluster are up and can communicate with each other in a TCP/IP environment

- Ensure you have 2 MB available on each node to install the Oracle operating system dependent clusterware and Object Link Manager

- Stop the vendor operating system dependent clusterware. This only applies if you plan to install the Oracle operating system dependent clusterware, and have a version of your vendor operating system dependent clusterware running.

> **Note:** Oracle Corporation recommends using the same username and password on each node in a cluster, or a domain username. You must have administrative privileges and each node must be in the same domain.

To verify administrative privileges, from the node on which the Oracle Cluster Setup Wizard runs, enter the following for each node in the cluster:

```
NET USE \\host_name\C$
```

where `host_name` is the public network name for the other node.

For example, if you run the Oracle Cluster Setup Wizard on node1 and plan to create a four-node cluster with `node1`, `node2`, `node3`, and `node4`, enter the following commands on `node1`:

```
NET USE \\node2\C$
NET USE \\node3\C$
NET USE \\node4\C$
```

When the command completes successfully, you have administrative privileges on each node.

To create a cluster:

1. Insert the first component CD-ROM on one node of the cluster, and go to the `\preinstall_rac\clustersetup` directory.

2. Select `clustersetup.exe` to launch the Oracle Cluster Setup Wizard.

3. Click **Next**.

4. Choose to Create a cluster, then click **Next** to display the Disk Configuration screen.

5. Optionally, perform one of the ftasks listed in Table 2–5 to rename or add a symbolic link:

Table 2–5   Symbolic Link Tasks

Task	Procedure
Rename a symbolic link	1. Click **Create Oracle Symbolic Links** to display the Oracle Object Link Manger window.
	2. Select a row to update from the **Symbolic Link** column.
	The cursor starts blinking.
	3. Enter the new link name.
	4. Repeat steps 2 and 3 to rename any additional symbolic link names.
	5. Click **Apply**.
	6. Click **Close** when the progress bar at the bottom of the screen stops moving.
Create a symbolic link	1. Click **Create Oracle Symbolic Links** to display the Oracle Object Link Manger window.
	2. Select an empty row from the **Symbolic Link** column.
	The cursor starts blinking.
	3. Enter a link name.
	4. Repeat steps 2 and 3 to assign any additional symbolic link names.
	5. Click **Close** when the progress bar at the bottom of the screen stops moving.

6. Assign a Voting disk, labeled as `srvcfg`, by highlighting the corresponding row.

7. Click **Next**.

8. Choose **Create a cluster** and click **Next**, to display the Network Selection window.

9. Select **Use private network for interconnect** if the nodes are connected by a high speed private network. Otherwise, select **Use public network for interconnect** and click **Next** to display the Network Configuration window.

10. Enter the names of the nodes and click **Next**.

   ■ Enter the public and private names for the nodes if private network was chosen in step 9 of this section

- Enter the public names if public network was chosen in step 9 of this section

    The VIA Detection window displays if VIA is detected on the local node. Go to step 11. Otherwise, go to step 12.

11. Chose whether or not to use VIA for the clusterware interconnect. After making your selection, click **Next** to display the Install Location window.

12. Choose an installation location and click **Next**.

    A progress window displays the various actions performed by Oracle Cluster Setup Wizard.

    > **See Also:** Oracle Cluster Setup Wizard online Help

Raw Devices Management Utilities Overview

Additional disk management utilities, listed in Table 2–6, are installed by the Oracle Cluster Setup Wizard on all nodes. These utilities are not installed if you do not run Oracle Cluster Setup Wizard.

Table 2–6   Raw Devices Disk Management Utilities

Utility	Task
Object Link Manager	A graphical user interface (GUI) tool that creates or modifies symbolic links to logical drives. This utility can be used as part of the Oracle Cluster Setup Wizard, or separately.
DeleteDisk	Reformats an entire disk and deletes its contents.
LetterDelete	Removes all drive letters from Oracle raw partitions and updates the disk key registry to disable mappings when you restart your computer.
LogPartFormat	Initializes all space in a logical partition to zero and removes the symbolic link name.
crlogdr	Creates and deletes logical drives and their associated symbolic names on a disk that does not have a primary partition and one extended partition. Use this tool to review the disk layout.
ExportSYMLinks	Reads persistent symbolic links from their respective disk drives and generates a TBL file of the list (named by default symmap.tbl).
ImportSYMLinks	Reads a TBL file and creates persistent symbolic links on the disks and on all nodes in the cluster.

See Also:

-

- The README on using the utilities, which, along with the disk management tools, is located in the *directory*\olm directory, where *directory* is where you installed the Oracle operating system dependent clusterware with Oracle Cluster Setup Wizard

Installing the Raw Devices Management Utilities Manually

If you did not install Oracle9*i* operating system dependent clusterware using the Oracle Cluster Setup Wizard, manually install the raw device management utilities.

To manually install the disk management utilities, perform the following tasks on each node of the cluster:

1. Create a temporary directory.

2. Copy the contents of the \preinstall_rac\olm directory from the first component CD-ROM to the temporary directory you created.

3. Install Oracle Object Service by entering the following command from the temporary directory you created:

   ```
   C:\temp> OracleOBJService \INSTALL
   ```

   > **Note:** The Oracle Cluster Setup Wizard automatically creates and starts this service.

   Set the Oracle Object Service service on each node in the cluster to automatic. Refer to your Microsoft online help for more information about configuring, starting, and stopping services.

3

Upgrading to Oracle Collaboration Suite Release 2 (9.0.4.1.1)

This chapter contains procedural information for upgrading existing Oracle Collaboration Suite Release 1 (9.0.3) installations and associated components to Oracle Collaboration Suite Release 2 (9.0.4.1.1).

The sequence of events for a successful upgrade is as follows:

1. Back up important information
2. Globalization requirements
3. Upgrade the infrastructure
4. Upgrade the information store
5. Install the Oracle Collaboration Suite Release 2 (9.0.4.1.1) middle tier
6. Perform pre-upgrade tasks
7. Upgrade the middle tier
8. Perform post-upgrade tasks

This chapter contains these topics:

- Backing Up Oracle Installations
- Enabling Multiple Language Support in Oracle Collaboration Suite Release 2 (9.0.4.1.1)
- Upgrading Oracle9iAS Infrastructure
- Upgrading the Oracle Collaboration Suite Information Storage Database
- Upgrading the Oracle Collaboration Suite Middle Tier

- Post-Upgrade Tasks

- Upgrading CorporateTime Server 5.4 to Oracle Collaboration Suite

- Performing a Non-Oracle Collaboration Suite Upgrade

Backing Up Oracle Installations

> **Note:** Oracle Corporation recommends backing up the software in the Oracle home directory, database files, and the Oracle Inventory prior to upgrading the software.

> **See Also:** Oracle9*i* Application Server 9.0.2 documentation is available on Oracle Technology Network at
>
> `http://otn.oracle.com/`

Back up your Oracle installations.

1. Back up the Oracle Collaboration Suite Release 1 (9.0.3) information storage database.

2. Back up the Oracle Collaboration Suite Release 1 (9.0.3) infrastructure.

3. Back up the Oracle Collaboration Suite Release 1 (9.0.3) middle tier.

4. Back up the directory (or directories) listed for your platform in Table 9–1 on page 9-3.

5. Back up Oracle Calendar by logging in as the user `unison` and backing up the `\users\unison` directory.

6. Back up the Oracle Universal Installer inventory located in the `oraInventory` directory.

   a. Copy the `oraInventory` subdirectory and all of its contents to another directory.

Enabling Multiple Language Support in Oracle Collaboration Suite Release 2 (9.0.4.1.1)

Oracle Collaboration Suite Release 2 (9.0.4.1.1) provides translation support for 9 additional languages to that of Release 1 (9.0.3), as shown in Table 3–1.

To enable multiple language support in Oracle Collaboration Suite Release 2 (9.0.4.1.1), execute the `ptlasst.bat` script from the Release 1 (9.0.3) middle tier, located in the following directory, before going through the upgrade process:

Notes:

- You must run the script for each language you want to enable.

- You cannot enable a language that is already enabled or it corrupts the Oracle9*i*AS Single Sign-On and Oracle9*i*AS Portal repositories. If you have all 9 languages of Release 1 (9.0.3) enabled, ensure that you do not enable them again. Generally, in a typical Release 1 (9.0.3) installation, either English only, is enabled, or all 9 languages are.

```
%ORACLE_HOME%\ora9ias\assistants\opca
```

The usage of the `ptlasst.bat` file is as follows:

```
%ORACLE_HOME%\ora9ias\assistants\opca\ptlasst.bat -mode LANGUAGE -s portal -sp
portal -o orasso -op orasso -c myhost.domain.com:1521:mySID -lang lang
-available -silent- verbose -sso_c myhost.domain.com:1521:mySID
```

`-available`: Determines whether the language is available for user translation

`-c`: Connect string to the target database. The format should be *hostname:port:SID*

`-o`: Oracle9*i*AS Single Sign-On schema name. The default is `orasso`.

`-op`: Oracle9*i*AS Single Sign-On password. The default is `orasso`.

`-lang`: Language code for the language to install. Table 3–1 lists the various languages and their associated codes.

`-silent`: Runs the Oracle9*i*AS Portal configuration assistant in silent mode. Default is `TRUE`.

`-sp`: Oracle9*i*AS Portal schema password. The default is `portal`.

`-sso_c`: Connect string to the target database where Oracle9*i*AS Single Sign-On is installed. The format should be *hostname:port:SID*.

`-verbose`: Enables detailed logging mode. Even if there are errors in the log file, Oracle9*i*AS Portal configuration assistant install will continue. If this parameter is not set, logging information is brief and Oracle9*i*AS Portal configuration assistant

aborts the install if it encounters any `ORA-`, `PLS-`, or `SP2` errors. The default is `TRUE`.

You can retrieve Oracle9*i*AS Portal and Oracle9*i*AS Single Sign-On randomized passwords from Oracle Internet Directory with the following distinguished name:

```
OrclResourceName=PORTAL,orclReferenceName=sid.myhost.domain.com,cn=IAS
Infrastructure Databases,cn=IAS,cn=Products,cn=OracleContext

OrclResourceName=ORASSO,orclReferenceName=sid.myhost.domain.com,cn=IAS
Infrastructure Databases,cn=IAS,cn=Products,cn=OracleContext
```

Table 3–1 lists the 18 languages supported by Oracle Collaboration Suite Release 2 (9.0.4.1.1) along with their associated language codes.

Table 3–1   Languages Supported in Oracle Collaboration Suite Release 2 (9.0.4.1.1)

Language	Code	Supported in Release 1 (9.0.3)
Arabic	ar	no
Brazilian Portuguese	ptb	yes
Danish	dk	no
Dutch	nl	no
Finnish	sf	no
French	f	yes
German	d	yes
Greek	el	no
Italian	i	yes
Japanese	ja	yes
Korean	ko	yes
Norwegian	n	no
Portuguese	pt	no
Simplified Chinese	zhs	yes
Spanish	e	yes
Swedish	s	no
Traditional Chinese	zht	yes

Table 3–1   Languages Supported in Oracle Collaboration Suite Release 2 (9.0.4.1.1)

Language	Code	Supported in Release 1 (9.0.3)
Turkish	tr	no

> **See Also:**   *Oracle9i Globalization Support Guide* for more information about language codes

Upgrading Oracle9*i*AS Infrastructure

In addition to upgrading the Oracle9*i*AS infrastructure at the Oracle Collaboration Suite level, the infrastructure must also be upgraded at the component level for Oracle Email and Oracle9*i*AS Wireless.

This section contains the following topics:

- Upgrading the Oracle9iAS Infrastructure at the Suite Level

- Upgrading Oracle Email on the Oracle9iAS Infrastructure

- Upgrading Oracle9iAS Wireless on the Oracle9iAS Infrastructure

Upgrading the Oracle9*i*AS Infrastructure at the Suite Level

Perform the following procedures to upgrade the Oracle9*i*AS Infrastructure 9.0.2.0.1, Oracle9*i*AS Infrastructure 9.0.2.0.0, or the Oracle Collaboration Suite Release 1 (9.0.3) Infrastructure to Oracle9*i*AS Infrastructure 9.0.2.3:

1.   Apply the Oracle9*i*AS Infrastructure 9.0.2.3 patch 3038037 to the infrastucture.

> **Note:**   Contained in the README for patch 3038037 are instructions for applying the Oracle9*i* 9.0.1.4 database server patch 2517300. You must apply patch 2517300 before patch 3038037. Both of these patches are available at:
>
> `http://metalink.oracle.com/`

2.   Copy the files listed in Table 3–2 from the `CDROM_ROOT\tools \upgrade` directory on the Oracle9*i*AS Infrastructure Installation CD-ROM for Release 2 (9.0.4.1.1) to the specified target directory in the infrastructure Oracle home directory that you are upgrading:

Table 3–2   Files to be Copied to Specified Target Directories

File	Target Directory
modDirectiveMS.xsd	%ORACLE_HOME%\dcm\config\plugins\apache
opca.jar	%ORACLE_HOME%\sysman\webapps\emd\WEB-INF\lib
portalSMI.jar	%ORACLE_HOME%\sysman\webapps\emd\WEB-INF\lib
repository.jar	%ORACLE_HOME%\jlib
ApacheModuleFastCGI.dll	%ORACLE_HOME%\Apache\Apache\modules
ApacheModuleOSSO.dll	%ORACLE_HOME%\Apache\Apache\modules
FastCGI.dll	%ORACLE_HOME%\Apache\fastcgi
FastCGI.lib	%ORACLE_HOME%\Apache\fastcgi
fcgi.jar	%ORACLE_HOME%\Apache\fastcgi

3. Download Oracle9*i*AS Portal patch 2513540 available at:

```
http://metalink.oracle.com/
```

To apply this patch:

a. Unzip the contents of the file into a temporary directory. The file contains the following files:

- `secapi.pks`

- `secapi.pkb`

- `secapip.pks`

- `secapip.pkb`

- `secoid.pks`

- `secoid.pkb`

- `secoidd.pkb`

- `secrmoid.sql`

- `recompile.sql`

- `ssooidd.sql`

b. Schedule system downtime to apply the patch (shut down all the infrastructure processes except the infrastructure repository database),

because no users should be accessing Oracle9*i*AS Portal while the patch is being applied.

c. Log in as the Oracle9*i*AS Portal schema owner using SQL*Plus, as in the following example:

```
c:\>sqlplus portal/portal_schema_password
```

d. In the SQL*Plus shell, execute the following:

```
set define off
```

e. Compile the files in the following order:

- `@secapi.pks`

- `@secapip.pks`

- `@secoid.pks`

- `@secapi.pkb`

- `@secapip.pkb`

- `@secoid.pkb`

- `@secoidd.pkb`

f. Compilation of the preceding files will invalidate some dependent schema objects. Recompile those objects using the following script:

> **Note:** This script takes several minutes to execute.

```
@recompile.sql
```

g. Restart all the infrastructure processes that were shutdown in step b of this procedure.

4. Create an `orclguest` user using Oracle Delegated Administration Services.

> **Note:** You must have sufficient privilege to create new users in the default subscriber.

a. Log in to Oracle Delegated Administration Services as a user with privilege to create users.

    b. Select the **Directory** tab.

    c. In the **Search Results** section, click **Create**.

    d. Depending on the configuration, the Create User page prompts for different values. The **User Name** value in this case should be `orclguest`. The rest of the values should be filled in, accordingly. Ensure that all of the required fields are filled in.

    e. Click **Submit**.

5. Complete the following steps to complete the provisioning of the `orclguest` user using Oracle Directory Manager.

    a. Locate the DN of the default realm.

    Using Oracle Directory Manager, log in as `cn=orcladmin`. In the **Entry Management** section, navigate to the `cn=common,cn=products,` `cn=oraclecontext` entry. The value of the `orcldefaultsubscriber` attribute is the DN of the default realm.

    b. Locate the DN of the `orclguest` user entry.

    Using Oracle Directory Manager, navigate to the `cn=common,cn=products,cn=oraclecontext,`*`default_realm_DN`* entry under the default realm DN. The value of the `orclcommonusersearchbase` attribute is the DN of the user search base.

    Navigate to this DN. The `orclguest` user entry resides in the subtree under this DN—most likely one level under the user search base. Make note of the complete DN of this user.

    c. Set the `orclguest` user's default profile group to `OCS_PORTAL_USERS`.

    In the entry of the `orclguest` user, select **All** from View Properties in the DN of the `orclguest` user. Populate the `orcldefaultprofilegroup` attribute with the value `cn=ocs_portal_users,cn=groups,`*`default_`* *`realm_DN`*. Substitute *`default_realm_DN`* with the DN obtained in step a of this procedure.

    d. Add `orclguest` to the `OCS_PORTAL_USERS` group.

    Using Oracle Directory Manager, navigate to the `cn=ocs_portal_` `users,cn=groups,`*`default_realm_DN`* entry. Add the `orclguest` DN obtained in step b to the `uniquemember` attribute. Do not remove any existing values of the attribute. Make note of the DN of the `ocs_portal_` `users` entry.

> **Note:** When you create a new user, the Oracle Collaboration Suite Home page is not set by default.

> **See Also:** "Troubleshooting Oracle Collaboration Suite Web Client Configuration" on page C-2 for information on how to set the Oracle Collaboration Suite Home page

Upgrading Oracle Email on the Oracle9*i*AS Infrastructure

To upgrade Oracle Email on the Oracle9*i*AS infrastructure:

1. Make Access Control List (ACL) changes that allow e-mail administrators to modify e-mail attributes of base users.

   a. Run `oidadmin` and connect as `cn=orcladmin`.

   b. Go to the entry `cn=Common,cn=Products,cn=OracleContext`.

   c. Get the value of attribute `orclsubscribersearchbase` from the common container.

   d. Back up `emailaci.ldif` under `%ORACLE_HOME%\oes\bin` and re-create it with the following text:

   > **Note:** The last two lines of this text must be entered as a single line.

   ```
   dn: %SUBSCRIBER_SEARCHBASE%
   changetype: modify
   add: orclaci
   orclaci: access to attr=(mail) by group="cn=EmailAdminsGroup,
   cn=EMailServerContainer,cn=Products,cn=OracleContext"(write)
   ```

   e. Substitute `%SUBSCRIBER_SEARCHBASE%` in the script `emailaci.ldif` with the value for `orclsubscribersearchbase` retrieved in step c of this procedure.

   f. Load `emailaci.ldif`:

   ```
   ldapmodify -v -a -Dcn=orcladmin -w orcladmin_password -h ldap_host -p
   ldap_port -f emailaci.ldif
   ```

   2. Index attribute `targetdn`. This allows the attribute to be searched, which is
   required by Oracle Email.

   a. Log in to the computer that has the Oracle9*i*AS infrastructure Oracle
   Internet Directory as the owner of the database.

   b. Shut down the Oracle Internet Directory server.

   c. Run `catalog.bat` for the `targetdn`:

   ```
   %ORACLE_HOME%\ldap\bin/catalog.bat -connect infrastructure_connectstr
   -add -attr targetdn
   ```

   d. Restart the Oracle Internet Directory server.

Upgrading Oracle9*i*AS Wireless on the Oracle9*i*AS Infrastructure

The Oracle9*i*AS Wireless schema in the Oracle Collaboration Suite Metadata
Repository is automatically upgraded during installation of the Oracle
Collaboration Suite Release 2 (9.0.4.1.1) middle tier against the existing metadata
repository. You do not have to perform any additional upgrade steps on the Oracle
Collaboration Suite Infrastructure.

> **See Also:**
> further Oracle9*i*AS Wireless upgrade instructions

Upgrading the Oracle Collaboration Suite Information Storage Database

Both the Oracle Email and Oracle Files information stores from Oracle
Collaboration Suite Release 1 (9.0.3) must be upgraded to Oracle9*i* 9.2.0.3.

To update the information storage database to Oracle9*i* 9.2.0.3, download the patch
2761332 for the Oracle9*i* Database Server from Oracle*MetaLink* at:

```
http://metalink.oracle.com/
```

> **Notes:** After you apply patch 2761332, you must run the
> `catldap.sql` configuration script as the database `SYS` user on the
> database host system from `\rdbms\admin`.

Upgrading the Oracle Collaboration Suite Middle Tier

This section describes how to upgrade the Oracle Collaboration Suite middle tier from Release 1 (9.0.3) to Release 2 (9.0.4.1.1).

This section contains these topics:

- Installing Oracle Collaboration Suite Release 2 (9.0.4.1.1) Middle Tier
- Component Pre-Upgrade Tasks
- Oracle Collaboration Suite Upgrade Assistant

> **Important:** To enable multiple language support, you must follow the procedures in "Enabling Multiple Language Support in Oracle Collaboration Suite Release 2 (9.0.4.1.1)" on page 3-2 before performing the upgrade tasks in this section.

Installing Oracle Collaboration Suite Release 2 (9.0.4.1.1) Middle Tier

Before upgrading the middle tier, you must install the Oracle Collaboration Suite Release 2 (9.0.4.1.1) middle tier into a different Oracle home on the same computer as the Release 1 (9.0.3) middle tier, as follows:

1. Shut down all Release 1 (9.0.3) processes.

2. Follow the middle tier installation instructions in "Installing the Oracle Collaboration Suite Middle Tier" on page 6-8, with the following exception:

   When installing Oracle Collaboration Suite Release 2 (9.0.4.1.1), deselect the **Oracle Files** check box in the Oracle Universal Installer, so that the Oracle Files configuration assistant is not launched automatically.

   If the Oracle Files configuration assistant does launch, click **Cancel** to exit.

Notes:

- During the middle tier configuration phase, the Web client installation will NOT succeed, but this step is still required as it configures what would otherwise require manual configuration.

- The upgrade assistant requires that the inventory location for Release 1 (9.0.3) and Release 2 (9.0.4.1.1) should be same during a Release 2 (9.0.4.1.1) middle tier installation.

Component Pre-Upgrade Tasks

This section lists the pre-upgrade tasks that you must perform before beginning the upgrade process.

This section contains these topics:

- Oracle Calendar Pre-Upgrade Tasks
- Oracle Email Pre-Upgrade Tasks
- Oracle Ultra Search Pre-Upgrade Tasks
- Oracle Voicemail & Fax Pre-Upgrade Tasks
- Oracle9iAS Wireless Pre-Upgrade Tasks

Oracle Calendar Pre-Upgrade Tasks

Before upgrading Oracle Calendar, run `ocalPreUpg.cmd` from `%ORACLE_HOME%\ocal\upgrade`. This creates a virtual drive that will be used during the upgrade process and automatically deleted when the upgrade has been successfully completed.

> **Note:** Before performing an upgrade, you are advised to re-evaluate your sizing calculations based on the requirements provided for the new software. See Appendix A, "Disk Space and Memory" in the *Oracle Calendar Administrator's Guide* for more information. (Although this appendix is UNIX-specific, the requirements for Windows are similar.) For CPU usage, the hardware requirements have changed as a result of added functionality. If in your current calendar installation you track regular peaks in CPU usage at 60% or greater several times a day, you may require additional CPU for a new installation. You will also notice increased CPU usage if your deployment contains previous versions of the calendar clients working against a new calendar server.

Oracle Email Pre-Upgrade Tasks

Before upgrading Oracle Email, you must perform the following tasks:

■ Apply patch 2868153 to the Oracle Collaboration Suite Release 1 (9.0.3) ORACLE_HOME to upgrade the existing permissions on shared folders to a format that is required by Release 2 (9.0.4.1.1).

■ If you are planning on running multiple middle tiers that include installations of both Oracle Collaboration Suite Release 1 (9.0.3) and Oracle Collaboration Suite Release 2 (9.0.4.1.1), then you must apply patch 2979341 to the Oracle Collaboration Suite Release 1 (9.0.3) installations. This is necessary in order for the Oracle Collaboration Suite Release 1 (9.0.3) installations to access shared folders created by Oracle Collaboration Suite Release 2 (9.0.4.1.1) clients.

> **Note:** The required patches are available on Oracle*MetaLink* at
>
> http://metalink.oracle.com/

Oracle Ultra Search Pre-Upgrade Tasks

Before upgrading Oracle Ultra Search, you must perform the following tasks:

■ Log in to the Oracle Collaboration Suite Release 1 (9.0.3) Oracle Ultra Search administration tool to stop and disable all crawler synchronization schedules in every Oracle Ultra Search instance. You can enable all crawler synchronization schedules after upgrading to Oracle Collaboration Suite Release 2 (9.0.4.1.1).

- Use the Oracle Net configuration assistant to set up the network service name for the Oracle Collaboration Suite infrastructure database.

    > **See Also:** *Oracle9i Net Services Administrator's Guide* for details on using the Oracle Net configuration assistant

- In case of any failure during the upgrade, back up all the files in the database host `%ORACLE_HOME%\ultrasearch` directory

Oracle Voicemail & Fax Pre-Upgrade Tasks

Before upgrading Oracle Voicemail & Fax, you must perform the following tasks:

- Shut down the advanced queue message waiting indicator (AQMWI) processes on the Oracle Collaboration Suite Release 1 (9.0.3) middle tier.

- In case of any failure during the upgrade, back up the following trees in Oracle Internet Directory:

    ```
    cn=midtier_hostname, cn=computers, cn=oraclecontext
    cn=telephony_server_host_name, cn=computers, cn=oraclecontext
    cn=umontainer,cn=products,cn=oraclecontext
    ```

- Back up the Oracle Collaboration Suite Release 1 (9.0.3) `targets.xml` file located in the `%ORACLE_HOME%\sysman\emd` directory.

- On the Windows 2000 system, stop all running Oracle Voicemail & Fax Release 1 (9.0.3) processes. Also, delete all existing Oracle Voicemail & Fax Release 1 (9.0.3), including `rmid`, `rmiregistry`, and all services that begin with UM.

    On the Windows 2000 system, remove the Oracle Voicemail & Fax container part from the `sc_vsto.cfg` file and restart the CT server.

    > **See Also:** "Adding an Additional Information Storage Database to Oracle Collaboration Suite" on page 8-6 for information about configuring the `sc_vsto.cfg` file

Oracle9*i*AS Wireless Pre-Upgrade Tasks

If you are upgrading multiple Oracle Collaboration Suite Wireless middle tiers, you must perform the following steps before starting the Oracle Collaboration Suite Upgrade Assistant:

1. Stop all Oracle Collaboration Suite Release 1 (9.0.3) Wireless middle tiers in the farm, including any Oracle9*i*AS middle tiers that are configured to run Oracle9*i*AS Wireless.

> **Caution:** Ensure that you have a backup of the Oracle
> Collaboration Suite Release 1 (9.0.3) Wireless schema in the
> infrastructure before you perform the installation of the first
> Oracle Collaboration Suite Release 2 (9.0.4.1.1) Wireless middle
> tier, because that schema is upgraded during the installation of
> the first Oracle Collaboration Suite Release 2 (9.0.4.1.1) Wireless
> middle tier.

2. Select the first Oracle Collaboration Suite Release 1 (9.0.3) Wireless middle tier to be upgraded.

3. Install the first Oracle Collaboration Suite Release 2 (9.0.4.1.1) Wireless middle tier on the same computer as the Oracle Collaboration Suite Release 1 (9.0.3) Wireless identified in the previous step.

Oracle Collaboration Suite Upgrade Assistant

The Oracle Collaboration Suite upgrade assistant is a command-line tool that automates the process of upgrading Oracle Collaboration Suite Release 1 (9.0.3) to Oracle Collaboration Suite Release 2 (9.0.4.1.1). During the upgrade process, you choose which Oracle Collaboration Suite components you want to upgrade. The Oracle Collaboration Suite upgrade assistant then runs separate plug-ins for each component you are upgrading to complete the upgrade process.

The Oracle Collaboration Suite upgrade assistant is located in the following directory:

```
%ORACLE_HOME%\upgrade
```

The preceding directory contains three primary files that are used in the upgrade process: `ocsua.xml`, `ocsua.properties`, and `ocsua.bat`. Each of these files is described later in this section. The Oracle Collaboration Suite upgrade assistant also contains the following two directories:

```
%ORACLE_HOME%\upgrade\log
%ORACLE_HOME%\upgrade\lib
```

The `log` directory contains log files generated during the upgrade process. The `lib` directory contains `.jar` files that are required by the Oracle Collaboration Suite upgrade assistant framework.

This section contains these topics:

- The ocsua.xml File

- The ocsua.properties File

- Running the Oracle Collaboration Suite Upgrade Assistant

The ocsua.xml File

The `ocsua.xml` file lists the component plug-ins along with variables that require user input. The Oracle Collaboration Suite upgrade assistant framework reads this file in order to read the plug-ins that perform the individual component ugprades. Do not modify this file.

The ocsua.properties File

The `ocsua.properties` files contains optional properties that are used by the Oracle Collaboration Suite upgrade assistant framework. If a property does not exist in the file, then the upgrade process uses the default values in the Java classes that are required by the Oracle Collaboration Suite upgrade assistant framework. The contents of the `ocsua.properties` are as follows:

```
#
# Global properties
#
# These properties apply to all components of Upgrade Assistant.
#
# Default global log level is NOTIFICATION
log.level=NOTIFICATION
#
# Utilities component
#
# Default log level for CopyFile class is NOTIFICATION
CopyFile.log.level=NOTICATION
#
# Component plug-in specific properties
#
#   For log level, the property name is plugin-name as a prefix
#   with ".log.level". Plug-ins can define any names for
#   other properties as long as they are prefixed with the
#   plug-in name
#
# Example: setting Ultra Search plug-in log level to TRACE to overide default
#          log level of NOTIFICATION
#UltraSearch.log.level=TRACE
```

Running the Oracle Collaboration Suite Upgrade Assistant

> **Notes:**
>
> - All Oracle Collaboration Suite components must be upgraded at the same time.
>
> - If the Oracle Collaboration Suite Release 1 (9.0.3) directory you are upgrading is also an active Oracle Enterprise Manager directory, the Oracle Enterprise Manager directory will be changed to the new Oracle Collaboration Suite Release 2 (9.0.4.1.1) directory. If the active Oracle Enterprise Manager directory is not the same as the Oracle Collaboration Suite Release 1 (9.0.3) home directory, it will not be changed.
>
> - The ocsua.bat script upgrades one information store at a time and must be run each time for multiple information stores.
>
> - Upgrading a middle tier does not create outages for other middle tiers in your system.
>
> - Coexistence of multiple Oracle Email middle tiers on one computer is not supported in this release of Oracle Collaboration Suite.
>
> - If you are upgrading Oracle Ultra Search from an existing Oracle9*i* database, refer to the *Oracle Ultra Search User's Guide*.
>
> - If you are upgrading Oracle Ultra Search from an existing Oracle9*i*AS infrastructure, refer to the *Oracle Ultra Search Release Notes*.
>
> - You must set the TNS connect string for Oracle9*i*AS Metadata Repository before running the upgrade assistant.
>
> - The Oracle Collaboration Suite Web client is upgraded using the Web client configuration assistant. Before invoking the Web client configuration assistant, manually ensure that the Oracle9*i*AS Portal middle tier has been installed or upgraded, and configured. See "Upgrading the Oracle Collaboration Suite Web Client" on page 3-39.

The Oracle Collaboration Suite upgrade assistant automatically performs the following steps:

- Verifies the existing and version number of the source Oracle Collaboration Suite directory that is being upgraded

- Identifies the plug-ins to executed, based on the components you select to upgrade

- Identifies the configuration files to update in the Oracle Collaboration Suite Release 1 (9.0.3) source directory for each component that is being upgraded

- Displays a prompt for the values of common and plug-in specific variables for the components that are being upgraded

  Table 3–3 lists information you will need to provide to the Oracle Collaboration Suite upgrade assistant for Oracle Files.

Table 3–3 Required Oracle Files Information for Oracle Collaboration Suite Upgrade Assistant

Information	Description
Host	The database host where the existing Oracle Collaboration Suite Release 1 (9.0.3) Oracle Files schema resides
Port	The database listener port
SID	The database service name

Table 3–4 lists information you will need to provide to the Oracle Collaboration Suite upgrade assistant for Oracle Files if your existing Oracle Collaboration Suite Release 1 (9.0.3) Oracle Files schema is integrated with Oracle Workflow.

> **Note:** The schema upgrade process should be performed only for the first middle tier, not for any additional middle tiers.

Table 3–4 Required Oracle Files Information for Oracle Collaboration Suite Upgrade Assistant if Oracle Files is Integrated with Oracle Workflow

Information	Description
Oracle Files Schema	The name of the Oracle Files schema to integrate with the Oracle Workflow schema
Oracle Files Schema Password	The password for the Oracle Files schema
Oracle Workflow Schema	The name of the Oracle Workflow schema that is integrated with Oracle Files schema

Table 3–4   Required Oracle Files Information for Oracle Collaboration Suite Upgrade Assistant if Oracle Files is Integrated with Oracle Workflow

Information	Description
Oracle Workflow Schema Password	The password for the Oracle Workflow schema

If an error occurs while upgrading an Oracle Collaboration Suite Release 1 (9.0.3) Oracle Files schema, check the following log file for more information:

```
%ORACLE_HOME%\upgrade\log\FilesUpgrade.log
```

Table 3–5 lists information you will need to provide to the Oracle Collaboration Suite upgrade assistant for Oracle Ultra Search.

Table 3–5   Required Oracle Ultra Search Information for Oracle Collaboration Suite Upgrade Assistant

Information	Description
SYS password	Database SYS password
WKSYS password	Database WKSYS password
TNS connect string	Database TNS connect string

- Displays a summary of files that need to be upgraded for each component
- Displays a list of pre-upgrade tasks that need to be performed, along with any warnings

To run the Oracle Collaboration Suite upgrade assistant, perform the following steps on the Oracle Collaboration Suite Release 2 (9.0.4.1.1) middle tier:

1. Change directory to %ORACLE_HOME%\upgrade.

2. Execute the ocsua.bat script to start the Oracle Collaboration Suite upgrade assistant and begin the upgrade process. The usage of the ocsua.bat file is as follows:

```
bash-2.05$ ocsua.bat -help
ocsua -sourcehome sourcehome [-config input XML] [-all]
Upgrade configuration files to the Oracle Collaboration Suite
Release 2 (9.0.4.1.1) Oracle home: -sourcehome ORACLE_HOME for
Oracle Collaboration Suite Release 1 (9.0.3) -config Input XML file that
lists all the plug-ins [-all] Run all the component plug-ins without prompt
```

The first time you perform an upgrade by executing the `ocsua.bat` file, the upgrade process automatically upgrades the Oracle9*i*AS components that are required by Oracle Collaboration Suite, including Oracle9*i*AS Portal, Oracle9*i*AS Web Cache, and Oracle Enterprise Manager.

ocsua.bat Script Example

Example 3–1 shows the log transcript of a sample upgrade session. It shows both input and output.

Example 3–1   ocsua.bat Script

```
C:\OCSV2Home> ocsua.bat -sourcehome C:\OCSV1Home
Validating Oracle homes
-------------------
These are the components that can be upgraded
1. Oracle9iAS Portal
2. Oracle Ultra Search
3. Oracle9iAS Wireless
4. Oracle Calendar Server
5. Oracle Calendar Application System
6. Oracle Email
7. Oracle Email Store
8. Oracle Voicemail & Fax
9. Oracle Files
Enter component numbers and/or ranges(example:1-3,5)[all]:
-------------------------------------------------------------
Validating component plug-ins
-------------------
Examining "Oracle9iAS Portal"
Upgrade items found:
Oracle_Collaboration_Suite_Release_1_ORACLE_HOME/assistants/opca/ptlasst.csh
-------------------
Examining "Oracle Ultra Search"
Upgrade items found:
Oracle_Collaboration_Suite_Release_1_ORACLE_HOME/j2ee/OC4J_Portal/config/dat
a-sources.xml
-------------------
Examining "Oracle9iAS Wireless"
Upgrade items found:
Oracle_Collaboration_Suite_Release_1_ORACLE_HOME/wireless/server/classes/ora
cle/panama/marconi/marconi.config
Upgrading the Oracle Collaboration Suite Middle Tier
Upgrading to Oracle Collaboration Suite Release 2 (9.0.4.1.1) 3-21
Oracle9iAS Wireless Repository
```

```
------------------
Examining "Oracle Calendar Server"
Upgrade items found:
Oracle Calendar Server configuration files
Oracle Calendar Server database files
Oracle Calendar Server Oracle Internet Directory entries
Oracle Calendar Server administrator administration files
------------------
Examining "Oracle Calendar Application System"
Upgrade items found:
Oracle Calendar applications configuration file
Oracle Calendar Web Client files
------------------
Examining "Oracle Email"
Upgrade items found:
Oracle Email Oracle Internet Directory entries
Webmail configuration
listener.ora
oc4j.properties
------------------
Examining "Oracle Email Store"
Upgrade items found:
Oracle Email Store
------------------
Examining "Oracle Voicemail & Fax"
Upgrade items found:
Oracle Voicemail & Fax Oracle Internet Directory product tree
Oracle Voicemail & Fax mid-tier Oracle Internet Directory entry
------------------
Examining "Oracle Files"
Upgrade items found:
Oracle Files Schema
--------------------------------------------------------------
Validate pre-upgrade requirements:
The destination Oracle home has not been modified since it was installed.
The source and destination instances of Oracle Collaboration Suite are not
running.
The Oracle Enterprise Manager Web Site is not running.
The source Oracle home is based on Oracle9iAS 9.0.2.0.1 version with interim
patches.
[Oracle Ultra Search] A tnsnames.ora file has been created in the destination
Oracle home and contains an entry for the Oracle9iAS Metadata Repository
Upgrading the Oracle Collaboration Suite Middle Tier
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containing the Oracle Ultra Search schema.
```

```
[Oracle Calendar Server] The ocalPreUpg.bat script has been run in the
destination Oracle home.
Have you verified all pre-upgrade requirements?[No]Y
---------------------------------------------------------------
Specify the TNS connect string for the Oracle9iAS Metadata Repository used
by Oracle Ultra Search, as well as passwords for the following users:
TNS Connect: TNS_connect_string
SYS Password: password
WKSYS Password: password
-------------------
Specify connection information (host:port:SID) and associated passwords
for the Oracle Email Store to be upgraded:
Oracle Email Store Connect: host_name:port_number:SID
SYS Password: password
ESMail Password: password
CTXSYS Password: password
------------------
Specify connection information for the Oracle Files Store to be upgraded:
Host: database_host_name
Port: port_number
SID: service_name
------------------
Specify the Oracle Files schema and password in the Oracle Files Store to be
upgraded:
Oracle Files Schema: IFSSYS
Oracle Files Schema Password: password
------------------
If Oracle Workflow was integrated with Oracle Files in the source installation,
specify the Oracle Workflow schema and password. If Oracle Workflow was not
integrated with Oracle Files, leave both fields blank:
Oracle Workflow Schema: OWF_MGR
Oracle Workflow Schema Password: password
---------------------------------------------------------------
Upgrading "Oracle Portal"
Executing the script
Oracle_Collaboration_Suite_Release_1_ORACLE_HOME/assistants/opca/ptlasst.csh
to upgrade Oracle Portal
Script terminated with exit value 0
Upgrade finished with status: Success.
------------------
Upgrading "Oracle Ultra Search"
Upgrading the metadata schema (this will take approximately 5 to 10 minutes)
The schema upgrade log file is XXXXX
Finished upgrading metadata schema
Upgrading the Oracle Collaboration Suite Middle Tier
```

```
Upgrading to Oracle Collaboration Suite Release 2 (9.0.4.1.1) 3-23
Getting JDBC connection
Loading Java stored packages (this will take approximately about 3 to 5
minutes)
Finished loading Java stored packages
Creating the file materialization table
Upgrading database files (this will take approximately about 15 to 30
seconds)
Processing XXXXX
Finished upgrading database files
Dropping the file materialization table
Upgrading mid-tier configuration files...
Processing XXXXX
Finished upgrading mid-tier configuration files
Upgrade finished with status: Success.
-------------------
Upgrading "Oracle9iAS Wireless"
Copying Oracle9iAS Wireless customization files.
Upgrading Oracle9iAS Wireless repository.
Upgrade finished with status: Success.
-------------------
Upgrading "Oracle Calendar Server"
Upgrading configuration files.
Upgrading database files.....
Upgrading Oracle Internet Directory entries...
Upgrading administration files.
Upgrade finished with status: Success.
--------------------
Upgrading "Oracle Calendar application system"
Upgrading configuration files
Upgrading Web Client files
Upgrade finished with status: Success.
-------------------
Upgrading "Oracle Email"
Upgrading Oracle Internet Directory entries...
Upgrading configuration files/205
Upgrading Oracle Webmail configuration files/205
Upgrading listener.ora...
Upgrading oc4j.properties...
Upgrade finished with status: Success.
-------------------
Upgrading "Oracle Email Store"
Upgrading database content. (this will take approximately 20 minutes)
Upgrade finished with status: Success.
-------------------
```

```
Upgrading "Oracle Voicemail & Fax"
Upgrading product tree in Oracle Internet Directory.
Upgrading process tree in Oracle Internet Directory.
Post-Upgrade Tasks
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Upgrade finished with status: Success.
-------------------
Upgrading "Oracle Files"
Upgrading the Oracle Files schema (this will take roughly approximately 15
to
20 minutes)
Upgrade finished with status: Success.
--------------------------------------------------------------
>>>>>>>>>>>>>> The upgrade completed successfully <<<<<<<<<<<<<<<<<
You must now complete the following post-upgrade tasks:
[Oracle Files] Run the following script manually to complete the Oracle Files
upgrade:
Oracle_Collaboration_Suite_Release_2_ORACLE_HOME/ifs/files/bin/ifsca
[Oracle9iAS Web Cache] The following files may need to be upgraded manually
if they were customized in the old Oracle home:
Oracle_Collaboration_Suite_Release_2_ORACLE_HOME/XXX
Oracle_Collaboration_Suite_Release_2_ORACLE_HOME/XXX
[Oracle Enterprise Manager] The
Oracle_Collaboration_Suite_Release_2_ORACLE_HOME/sysman/emd/targets.xml file
may contain duplicate target entries from both the old Oracle home and the new
Oracle home. If you want to remove the old targets, edit this file.
--------------------------------------------------------------
Log files containing details of the upgrade process can be found in the
following location:
Oracle_Collaboration_Suite_Release_2_ORACLE_HOME/upgrade/log
A transcript of this upgrade session can be found at:
Oracle_Collaboration_Suite_Release_2_ORACLE_HOME/log/ocsua.log
```

Post-Upgrade Tasks

This section contains these topics:

- Oracle Calendar Coexistence

- Oracle Email Post-Upgrade Tasks

- Upgrading Oracle Webmail 9.0.3.1 to 9.0.4

- Oracle Files Post-Upgrade Tasks

- Oracle Ultra Search Post-Upgrade Tasks

- Upgrading Oracle Voicemail & Fax

- Upgrading Oracle9iAS Wireless

- Upgrading the Oracle Collaboration Suite Web Client

- Deleting Instances of Oracle Collaboration Suite Release 1 (9.0.3)

Oracle Calendar Coexistence

Coexistence can be useful for a large organization that is upgrading its current installation of Oracle Calendar to Release 2 (9.0.4.1.1). The ability to have nodes and servers of different versions connected and running at the same time can help reduce the down time required to achieve the upgrade.

> **Note:** Coexistence between Oracle Calendar server 5.5 and Oracle Calendar server 9.0.4 is viewed as a migration step toward having a uniform (same version) network of calendar servers. It is not recommended that a mix of the two versions be sustained for a long period of time or permanently.

This section contains the following topics:

- Oracle Calendar Server Parameters

- Coexistence Limitations

- Oracle Calendar Application System Upgrades

Oracle Calendar Server Parameters

Coexistence will only work after the following parameters are added to `%ORACLE_HOME%\ocal\misc\unison.ini` on the 9.0.4 calendar server.

Section: **[ENG]**

Parameter: **coexist_cwsbasicauth**

Value: **TRUE**

Section: **[ACE_PLUGINS_SERVER]**

Parameter: **cs-standard_coexistence**

Value: **TRUE**

> **Important:** As a security precaution, you must remove the
> preceding parameters from `%ORACLE_HOME%\ocal\misc`
> `\unison.ini` **immediately after all calendar servers are**
> **upgraded to 9.0.4.**

The following parameters will be reset to the default values listed here. If you used different values in your Oracle Calendar server 5.x installation, reset them to your desired values after completing the upgrade.

Parameter: `resourcemailmap`

Value: `"O"`

Parameter: `usermailmap`

Value: `"O"`

Parameter: `usersmcprefmap`

Value: `"OU3"`

Parameter: `usermobiletypemap`

Value: `"N"`

Parameter: `usermobilemap`

Value: `"R"`

Parameter: `itemuidmap`

Value: `"P"`

Coexistence Limitations

There are limitations in having two servers of different versions coexist.

- Web services 9.0.4 will only work when all connected servers are upgraded to version 9.0.4

- Event calendars are not supported in coexistence scenarios

- Passwords longer than 15 characters are not supported by the 5.5 calendar server or pre-9.0.4 Oracle Calendar clients. Consequently, users with passwords longer than 15 characters will not be able to log in to older clients.

- Do not use 9.0.4 utilities to administer a 5.x Oracle Calendar server. The only exception to this is when moving users; the moveuser utility must be from the

latest server version (9.0.4), even if moving a user between two nodes that are both on old server nodes (5.x).

- Do not use 5.x utilities to administer a 9.0.4 Oracle Calendar server.

- If you need to create a node network, the `nodes.ini` and the use of `uninode` commands must be done on the most recent version (9.0.4) of the server within the network.

- Coexistence may cause odd error messages on an old Oracle Calendar server (5.x). This is because the old server may not understand the features introduced by the new server.

- Mapping parameters have been added to the 9.0.4 server `unison.ini` for coexistence and upgrades. 5.x servers map `O` for `EMAIL` and `P` for `UID`. However, 9.0.4 servers do not need this mapping anymore. Parameters added to a 9.0.4 server do not affect it.

  The new parameters include:

  ```
  [ENG]
  usermailmap = O
  itemuidmap = P
  resourcemailmap = O
  usersmscprefmap = OU3
  usermobiletypemap = N
  usermobilemap = R
  ```

- `Unidbfix -c` may report "Minor inconsistencies" on an Oracle Calendar 9.0.4 server when events are created by an Oracle Calendar 9.0.4 user using Oracle Connector for Outlook 9.0.4 and accepted or declined by an Oracle Calendar 5.4 user using the Windows Native client 9.0.4. These inconsistencies do not impact the integrity of the database.

- Users of previous versions of Oracle Calendar will not generate e-mail messages when using resource scheduling

- Attachment names may change to `Mime-Encoded-attachment.txt` when using a mix of Oracle Calendar 9.0.4 and 5.4 users with Oracle Connector for Outlook. The attachments will still be readable.

- Oracle Calendar desktop clients for Macintosh (V5.2.3) users may not be able to download offline files while connecting to a 9.0.4 standalone installation

- The current versions of Oracle Calendar clients work with Oracle Calendar server 9.0.4, including:

- Oracle Calendar desktop client for Windows 6.0.5

- Oracle Calendar desktop client for Macintosh version 5.2.3

- Oracle Calendar desktop client for Linux/Solaris version 5.0.2

- Oracle Connector for Outlook version 3.3 and later

It is best to use these client versions; if you are using an older client, please upgrade before proceeding with testing. The latest versions of the clients are available at:

```
http://metalink.oracle.com
```

- The Oracle Calendar portlet of Oracle Collaboration Suite Web Client Release 1 (9.0.3) is not compatible with Oracle Calendar Release 2 (9.0.4.1.1). To avoid this problem, upgrade both components to Release 2 (9.0.4.1.1), as described in "Installing the Oracle Collaboration Suite Middle Tier" on page 6-8.

  If you have already upgraded Oracle Calendar but not the Oracle Collaboration Suite Web Client, see "Upgrading the Oracle Collaboration Suite Web Client" on page 3-39.

Oracle Calendar Application System Upgrades

The upgrade assistant only migrates the following keys. Unless otherwise mentioned, they are migrated to ocwc.conf. Your installation will still work, but you may need to make changes to your parameters to get the look and feel you want. For information on editing parameters, see the *Oracle Calendar Reference Manual*.

```
[system]
connection

[servers]
(All keys migrated to "connection" section of ocas.conf. If the old installation
was a masternode, 'mnode' will be the only entry.)

[ACE_PLUGINS_CLIENT]
(All keys into ocas.conf)

[admin]
sso_user_env_key

[modules]
hide_eventcal
hide_global
```

```
hide_taskview
hide_managegroups
hide_suggesttime
hide_show_unconfirmed
hide_updateall
enable_designate
hide_viewpub

[file_attachment]
download_enable
upload_enable

[taskview]
quickCreateStartTime
quickCreateEndTime
showQCCompletion

[calendar_view]
default_view
default_dayview_mode
default_weekview_mode

hide_dayview_toggle
hide_weekview_toggle
pdv_notes_top_task_bottom
default_color_mgt_by

[cookies]
domain

[sched]
showicalvcal (becomes same key in "modules" section in ocwc.conf).
```

Oracle Email Post-Upgrade Tasks

The Oracle Email information storage database is upgraded when you run the Oracle Collaboration Suite upgrade assistant, as explained in "Running the Oracle Collaboration Suite Upgrade Assistant" on page 3-17.

Additionally, perform the following steps to install required files and libraries on the Release 2 (9.0.4.1.1) information storage database:

1. Copy the umbackend.tar file located in the Oracle Collaboration Suite Release 2 (9.0.4.1.1) middle tier %ORACLE_HOME%\oes directory to the information storage database.

2. Untar `umbackend.tar` to create the `backend` directory.

3. Go to the `backend\Disk1\install\win32` directory and enter the following command:

```
setup.exe
```

Upgrading Oracle Email Jar Files

Run the following commands to upgrade the Oracle Email jar files from the Release 2 (9.0.4.1.1) middle tier Oracle home. These commands must be run once for each mail store.

```
cd %ORACLE_HOME%\oes\bin
esupgv2_lj.bat password connect_string Release 2 (9.0.4.1.1)_middle_tier_
%ORACLE_HOME%
```

where `password` is the `es_mail` user password and `connect_string` is the connect string for the information storage database.

> **Note:** The `ORA-29521` error from the preceding script should be ignored.

Moving Current E-mail Text Index into New Tablespace

To move the current e-mail text index to a new tablespace, you must do it manually, as follows:

1. Log in to the information storage database as the `es_mail` user.

2. From a command prompt, log in to SQL*Plus, as follows:

```
c:\> sqlplus es_mail/es
```

> **Note:** `es` is the default password for the `es_mail` user.

3. Execute the following commands:

    a. `drop es_ot_ix_search index`

    b. `drop ctx_ddl.drop_preference('oratextstore')`

    c. `ctx_ddl.create_preference('oratextstore',
       'BASIC_STORAGE');`

d. `ctx_ddl.set_attribute('oratextstore', 'I_TABLE_CLAUSE', 'tablespace *my_new_text_tblspc*');`

e. `ctx_ddl.set_attribute('oratextstore', 'K_TABLE_CLAUSE', 'tablespace *my_new_text_tblspc*');`

f. `ctx_ddl.set_attribute('oratextstore', 'R_TABLE_CLAUSE', 'tablespace *my_new_text_tblspc* lob (data) store as (cache)');`

g. `ctx_ddl.set_attribute('oratextstore', 'N_TABLE_CLAUSE', 'tablespace *my_new_text_tblspc*');`

h. `ctx_ddl.set_attribute('oratextstore', 'I_INDEX_CLAUSE', 'tablespace *my_new_text_tblspc*');`

i. `ctx_ddl.set_attribute('oratextstore', 'P_TABLE_CLAUSE', 'tablespace *my_new_text_tblspc*');`

where *my_new_text_tblspc* is the name of the tablespace where the e-mail text index will be created.

4. Execute the following command to create the e-mail text index in the new tablespace:

```
CREATE INDEX es_ot_ix_search ON es_imt_msgbody(text) indextype IS
ctxsys.context parameters ('DATASTORE es_search_dspref FILTER
CTXSYS.NULL_FILTER SECTION GROUP es_search_sec_group STORAGE
oratextstore);
```

Upgrading Oracle Webmail 9.0.3.1 to 9.0.4

There are two manual steps required to complete the installation of Oracle Webmail on the Windows platform:

- Configuring the Oracle Webmail Application
- Updating the Java Libraries

Configuring the Oracle Webmail Application

Perform the following steps to maintain the application 9.0.3.1 settings:

1. Backup the default Oracle Webmail 9.0.4 application configuration.

```
cp %NEW_ORACLE_HOME%\j2ee\OC4J_UM\config\oc4j.properties NEW_ORACLE
_HOME\j2ee\OC4J_UM\config\oc4j.properties.bak
```

2. Copy the old Oracle Webmail 9.0.3.1 application configuration to the 9.0.4 location

```
cp %OLD_ORACLE_HOME%\j2ee\OC4J_UM\config\oc4j.properties
NEW_ORACLE_HOME\j2ee\OC4J_UM\config\oc4j.properties
```

3. Remove the obsolete properties from the new properties file. This can be done by editing `%NEW_ORACLE_HOME%\j2ee\OC4J_UM\config\oc4j.properties` and removing the lines with the following attributes:

   - `client.image.help`

   - `client.image.login`

   - `client.image.logout`

   - `client.image.portal`

   - `client.image.preferences`

   - `voicemailLanguages`

4. If you are still using the old defaults for the following values, you should change them to point to the new defaults:

   > **Note:** Old defaults are shown in parentheses.

   - `client.image.corporate=/um/images/ocs_brand_header.gif (/um/images/corporateBrand_oracle.gif)`

   - `client.image.product=/um/images/mail_subbrand.gif (/um/images/branding_collaborationsuite.gif)`

   - `mail.host.qualifiedname=(oracle.com - This new default is empty)`

   - `maxTelephonePinDigits=12 (8)`

   - `minTelephonePinDigits=7 (4)`

   - `toolkit.statefile=%NEW_ORACLE_ HOME%\\um\\client\\config\\statefile_webmail.xml (%OLD_ ORACLE_HOME%\\um\\client\\config\\statefile.xml)`

5. The following properties should be added to the new `oc4j.properties` file, if they are not already present:

```
client.esdsconnpoolparam.incrementsize=1
client.esdsconnpoolparam.initialsize=5
client.esdsconnpoolparam.maxsize=10
client.esdsconnpoolparam.minsize=5
client.esdsconnpoolparam.shrinkingtimeoutinterval=1800
client.esdsconnpoolparam.timeoutinterval=30

client.ldapsearch.maxresult=500

client.mail.defaultsort=true
client.mail.enforcenestedHTMLfonts=true
client.mail.messagetransport=SMTP

jdbc.connection.debug=false
mail.debug=false

oracle.mail.admin.ui.ojmaDebug=false
oracle.mail.admin.ldapDebug=false
oracle.mail.admin.policy.virus.parallelism.high=8
oracle.mail.admin.policy.virus.parallelism.low=1
oracle.mail.admin.policy.virus.parallelism.medium=4

oracle.mail.client.prefs.autoreply.echo=true
oracle.mail.client.prefs.autoreply.reject=true
oracle.mail.client.prefs.autoreply.reply=true
oracle.mail.client.prefs.autoreply.vacation=true
oracle.mail.client.prefs.autoreply=true
oracle.mail.client.prefs.autoreplymimesizelimit=-1

oracle.mail.sdk.esmail.cache_inactivity_timeout=300
oracle.mail.sdk.esmail.connpool_max_limit=10
oracle.mail.sdk.esmail.connpool_min_limit=1
oracle.mail.sdk.esmail.ldap_debug=true
```

Updating the Java Libraries

Execute the following Perl script to update the set of java library settings used by the client:

```
%NEW_ORACLE_HOME%\perl\5.6.1\bin\MSWin32-x86\perl.exe %NEW_ORACLE
_HOME%\oes\bin\webmail_library_mods.pl
```

Here is the Perl script that updates the Java libraries:

```
#!%ORACLE_HOME%\perl\5.6.1\bin\MSWin32-x86\perl.exe
open oldxml, '<%ORACLE_HOME%\j2ee\OC4J_UM\config\application.xml.pre_libmod';
```

```
open newxml, '>%ORACLE_HOME%\j2ee\OC4J_UM\config\application.xml';
while (<oldxml>)
{

  $_ =~ s|<library path="../../../jlib/uix2.jar"/>||g;
        s|<library path="../../../jlib/share.jar"/>||g;
        s|<library path="../../../jlib/regexp.jar"/>||g;
        s|<library path="%long_oracle_home%\\jlib/esadmin.jar"/>||g;
        s|<library path="%long_oracle_home%\\jlib/esportlet.jar"/>||g;
        s|<library path="%long_oracle_home%\\portal/jlib/ptlshare.jar"/>||g;
        s|<library path="%long_oracle_home%\\portal/jlib/pdkjava.jar"/>||g;
  print newxml $_;
}

close oldxml;
close newxml;

open oldxml, '<%ORACLE_HOME%\j2ee\OC4J_UM\application-deployments\UMClientApp
\orion-application.xml.pre_libmod';
open newxml, '>%ORACLE_HOME%\j2ee\OC4J_UM\application-deployments\UMClientApp
\orion-application.xml';
while (<oldxml>)
{

  $_ =~ s|<principals|<library path="%long_oracle_home%\\j2ee/OC4J_UM
/applications/UMClientApp/um_client/WEB-INF/webmail_lib/uix2.jar"/><principals|;
        s|<principals|<library path="%long_oracle_home%\\j2ee/OC4J_UM
/applications/UMClientApp/um_client/WEB-INF/webmail_lib/share.jar"
/><principals|;
        s|<principals|<library path="%long_oracle_home%\\j2ee/OC4J_UM/
applications/UMClientApp/um_client/WEB-INF/webmail_lib/regexp.jar"
/><principals|;
        s|<principals|<library path="%long_oracle_home%\\jlib/esadmin.jar"
/><principals|;
        s|<principals|<library path="%long_oracle_home%\\jlib/esportlet.jar"
/><principals|;
        s|<principals|<library path="%long_oracle_home%\\portal/jlib
/ptlshare.jar"/><principals|;
        s|<principals|<library path="%long_oracle_home%\\portal/jlib
/pdkjava.jar"/><principals|;
  print newxml $_;
}

close oldxml;
close newxml;
```

```
open oldxml, '<%ORACLE_HOME%\j2ee\OC4J_UM\application-deployments\VMAdminApp
\orion-application.xml.pre_libmod';
open newxml, '>%ORACLE_HOME%\j2ee\OC4J_UM\application-deployments\VMAdminApp
\orion-application.xml';
while (<oldxml>)
{

  $_ =~ s|<principals|<library path="%long_oracle_home%\\jlib/esadmin.jar"
/><principals|;
        s|WEB-INF/vmailadmin_lib|WEB-INF/vmadmin_lib|g;
  print newxml $_;
}

close oldxml;
close newxml;
```

Oracle Files Post-Upgrade Tasks

Perform the following after the Oracle Collaboration Suite upgrade assistant finishes:

1. Restart the Oracle Files configuration assistant by executing ifsca.bat from the following location:

   ```
   %ORACLE_HOME%\ifs\files\bin
   ```

2. On the Domain Operation screen, select **Set up this computer to use an existing Oracle Files domain**.

3. On the Schema Name screen, select the upgraded Oracle Files schema.

4. Click **Next** and follow the remaining Oracle Files configuration assistant screens.

   > **See Also:** "Setting Up a Computer to Use an Existing Domain" on page 14-25 for more information about these screens

5. On the Summary screen, click **Configure**.

   A progress window appears. If an error occurs, check the following log file for more information:

   ```
   %ORACLE_HOME%\ifs\files\log\FilesConfig.log
   ```

When the process is complete, a message informs you that the configuration was successful. Click **OK** to close the message. Oracle Files and the Oracle Enterprise Manager Web Site are integrated automatically.

> **Note:** You must run `ifsca.bat` on all middle tiers.

Updating Oracle Workflow Parameters

If the Oracle Files schema that you are upgrading has been integrated with Oracle Workflow, follow the post-configuration instructions in the following sections:

- "Configuring Net Service Names" on page 14-39
- "Integrating Oracle Workflow with the Oracle Files Schema" on page 14-42

> **Note:** You do not have to follow the steps in "Configuring Net Service Names" on page 14-39 unless you want to change the existing Oracle Workflow configuration parameters.

Manually Synchronize the **IFS_TEXT** Index

After upgrading an existing Oracle Files domain, you must manually sync the existing IFS_TEXT index. For more information, see Appendix A, "Oracle Text Reference", in the *Oracle Files Administrator's Guide.*

Oracle Ultra Search Post-Upgrade Tasks

The following sections describe the recovery steps for common errors:

- Error upgrading middle tier configuration files
- Failed to upgrade database file: file_name
- Error upgrading metadata schema
- Error loading Java stored packages and upgrading database files

Error upgrading middle tier configuration files

Check that the `data-sources.xml` configuration file is available in the following Oracle Collaboration Suite Release 1 (9.0.3) directory:

```
%ORACLE_HOME%\j2ee\OC4J_Portal\config
```

Re-run the Oracle Ultra Search upgrade plug-in after you confirm the availability of the `data-sources.xml` file.

Failed to upgrade database file: *file_name*

Confirm that you have write permission to the `%ORACLE_HOME%\ultrasearch` directory in the database file system. Then re-run the Oracle Ultra Search upgrade plug-in.

Error upgrading metadata schema

See the schema upgrade log file for error details. Fix the problem, and then re-run the Oracle Ultra Search upgrade plug-in.

Error loading Java stored packages and upgrading database files

Check that the file `%ORACLE_HOME%\ultrasearch\lib\ultrasearch_db.jar` is in place. Then re-run the Oracle Ultra Search upgrade plug-in.

Upgrading Oracle Voicemail & Fax

Upgrading Oracle Voicemail & Fax is not done through the Oracle Collaboration Suite upgrade assistant.

To upgrade Oracle Voicemail & Fax:

1. Install Oracle Voicemail & Fax Release 2 (9.0.4.1.1) on the Windows 2000 telephony server.

> **Note:** If you installed CT Media 2.1 or 2.1.1 for Oracle Voicemail & Fax Release 1 (9.0.3), you must download the latest version of ITMedia.jars with `NTLMAuthentication.dll` into the `Program Files\Dialogic\CT Media\Client` directory before you install Oracle Voicemail & Fax.

2. Execute the following command to upgrade Oracle Voicemail & Fax:

```
%ORACLE_HOME%\um\scripts\UpgradeTelephonyServerfromV1.bat host_name
903_ORACLE_HOME 9041_ORACLE_HOME
```

Upgrading Oracle9*i*AS Wireless

Upgrading Oracle9*i*AS Wireless involves two tasks. First, runtime customization classes and configuration files must be copied into the new Oracle home. Second, existing processes and their configurations must be moved to the new middle tier.

To upgrade Oracle9*i*AS Wireless:

1. Stop all Oracle9*i*AS Wireless Release 1 (9.0.3) middle tiers in the farms, including any Oracle9*i*AS middle tiers that are configured to run Oracle9*i*AS Wireless.

2. Select the first Oracle9*i*AS Wireless Release 1 (9.0.3) middle tier for upgrade.

3. Install the first Oracle9*i*AS Wireless Release 2 (9.0.4.1.1) middle tier on the same computer as the Oracle9*i*AS Wireless middle tier identified in step 2. During installation, the Oracle9*i*AS Wireless configuration assistant upgrades the Oracle9*i*AS Wireless schema in the Oracle9*i*AS Metadata Repository (see "Oracle9iAS Wireless Upgrade Items" on page 3-39).

   The Oracle Collaboration Suite upgrade assistant:

   a. Copies runtime customization classes (such as listener hooks and customized folder renderers) as well as suite-level configuration files from Oracle home 1 to Oracle home 2 (See "Oracle9iAS Wireless Upgrade Items" on page 3-39).

   b. Copies the process configuration information for the Oracle9*i*AS Wireless standalone processes from the Oracle9*i*AS Wireless Release 1 (9.0.3) middle tier to the Oracle9*i*AS Wireless Release 2 (9.0.4.1.1) middle tier, and configures the Release 2 (9.0.4.1.1) middle tier accordingly.

At this time, all Oracle9*i*AS Wireless Release 2 (9.0.4.1.1) middle tiers can be restarted to reduce downtime.

The configuration information for the Oracle9*i*AS Wireless standalone processes is stored in the Oracle9*i*AS Wireless schema in the Oracle9*i*AS Metadata Repository. During upgrade from Release 1 (9.0.3) to Release 2 (9.0.4.1.1), the Oracle Collaboration Suite upgrade assistant copies the process configuration information from the Release 1 (9.0.3) middle tier to the Release 2 (9.0.4.1.1) middle tier by creating additional entries in the Oracle9*i*AS Wireless schema.

In the Oracle9*i*AS Wireless schema upgrade during the first middle tier installation, the Oracle9*i*AS Wireless configuration assistant pre-populates default standalone processes for each process type. When the Oracle9*i*AS Wireless upgrade assistant copies Release 1 (9.0.3) process information to a Release 2 (9.0.4.1.1) middle tier, it deletes the redundant process (if one is found in the Release 1 (9.0.3) middle tier). In

addition, the Oracle9*i*AS Wireless upgrade assistant ensures that each process has a unique process name.

Oracle9*i*AS Wireless Upgrade Items
The following files are changed in the first phase of the Oracle9*i*AS Wireless upgrade process:

- *ORACLE_HOME_2*\wireless\server\classes*.class

- *ORACLE_HOME_2*\wireless\server\classes*.properties

- *ORACLE_HOME_2*\wireless\server\classes\marconi.config

Upgrading the Oracle Collaboration Suite Web Client

The Web client can be selected to be installed and configured using the Oracle Universal Installer during installation of the Oracle Collaboration Suite middle tier.

> **See Also:** "Installing the Oracle Collaboration Suite Middle Tier" on page 6-8

Deleting Instances of Oracle Collaboration Suite Release 1 (9.0.3)

After you successfully upgrade to Oracle Collaboration Suite Release 2 (9.0.4.1.1), you can delete any instances of Release 1 (9.0.3) by doing the following:

1. Remove all Release 1 (9.0.3) targets from the targets.xml file located in the %ORACLE_HOME%\sysman\emd directory in the active Enterprise Manager Daemon.

2. Execute the following command from the Oracle Collaboration Suite Release 2 (9.0.4.1.1) ORACLE_HOME:

```
cd %ORACLE_HOME%\dcm\bin
dcmctl destroyInstance -i Release_1_instance_name
```

> **Note:** Use the following command to list all instances by name to help identify the instances to be removed:
>
> ```
> dcmctl listInstances
> ```

3. Deinstall the old middle tier (optional).

Upgrading CorporateTime Server 5.4 to Oracle Collaboration Suite

CorporateTime Server 5.4, internal or external, can be upgraded to Oracle Collaboration Suite Release 2 (9.0.4.1.1). While this is a supported upgrade path, the process involves manual steps.

To upgrade CorporateTime Server 5.4 to Oracle Collaboration Suite:

1. Upgrade CorporateTime Server 5.4 to Release 2 (9.0.4.1) of Oracle Calendar, standalone, as described in "Server Upgrade" on page F-15.

2. Install the Oracle Collaboration Suite infrastructure and middle tier as described in Chapter 6, "Installing Oracle Collaboration Suite".

Note: Ensure that you do not install into the Oracle home you used in step 1 of this section. Also, if you install Oracle Calendar Release 2 (9.0.4) on a Windows computer that has an earlier version of Oracle Calendar installed, the earlier version will become unusable. If you want to try a test installation of Oracle Calendar standalone first, install it on a different Windows computer.

---

3. Migrate the user information to the Oracle Internet Directory component of your new Oracle Collaboration Suite infrastructure.

4. Import your CorporateTime Calendar attributes, including the `ctCalXitem ID`, into the Oracle Internet Directory component of your new Oracle Collaboration Suite infrastructure.

5. Copy the Oracle Calendar database files, upgraded in step 1 on page 3-40, over to the Oracle Calendar component of your new Oracle Collaboration Suite installation.

Performing a Non-Oracle Collaboration Suite Upgrade

1. Upgrade the Oracle9*i*AS infrastructure 9.0.2.0.1, or Oracle9*i*AS infrastructure 9.0.2.0.0 to Oracle9*i*AS infrastructure 9.0.2.3.

   a. Apply the Oracle9iAS Infrastructure 9.0.2.3 patch 3038037 to the infrastructure.

> **Note:** Contained in the README for patch 3038037 are instructions for applying the Oracle9*i* 9.0.1.4 database server patch 2517300. You must apply patch 2517300 before patch 3038037. Both of these patches are available at
>
> `http://metalink.oracle.com/`

b. Copy the files listed in Table 3–6 from the `CDROM_ROOT`/tools/upgrade directory on the Oracle9*i*AS Infrastructure Installation CD-ROM for Release 2 (9.0.4.1.1) to the specified target directory in the infrastructure Oracle home directory that you are upgrading:

Table 3–6   Files to be Copied to Specified Target Directories

File	Target Directory
modDirectiveMS.xsd	%ORACLE_HOME%\dcm\config\plugins\apache
opca.jar	%ORACLE_HOME%\sysman\webapps\emd\WEB-INF\lib
portalSMI.jar	%ORACLE_HOME%\sysman\webapps\emd\WEB-INF\lib
repository.jar	%ORACLE_HOME%\jlib
ApacheModuleFastCGI.dll	%ORACLE_HOME%\Apache\Apache\modules
ApacheModuleOSSO.dll	%ORACLE_HOME%\Apache\Apache\modules
FastCGI.dll	%ORACLE_HOME%\Apache\fastcgi
FastCGI.lib	%ORACLE_HOME%\Apache\fastcgi
fcgi.jar	%ORACLE_HOME%\Apache\fastcgi

c. Create an `orclguest` user using Oracle Delegated Administration Services, as instructed in "Upgrading the Oracle9iAS Infrastructure at the Suite Level", step 4 on page 3-7.

> **Note:** You must have sufficient privilege to create new users in the default subscriber.

– Log in to Oracle Delegated Administration Services as a user with privilege to create users.

– Select the **Directory** tab.

– In the **Search Results** section, click **Create**.

– Depending on the configuration, the Create User page prompts for different values. The **User Name** value in this case should be `orclguest`. The rest of the values should be filled in, accordingly. Ensure that all of the required fields are filled in.

– Click **Submit**.

2. Install the Oracle Collaboration Suite Release 2 (9.0.4.1.1) information storage database, as instructed in "Installing the Oracle Collaboration Suite Information Storage Database" on page 6-4.

Note: While registering the information storage database, point to the Oracle Internet Directory of the infrastructure upgraded to 9.0.2.3 in step 1a.

---

3. Install the Oracle Collaboration Suite Release 2 (9.0.4.1.1) middle tier, as instructed in "Installing the Oracle Collaboration Suite Middle Tier" on page 6-8.

4. Apply the Oracle9*i*AS Portal patch (2758529) on the middle tier computer.

5. Recompile all the invalid objects.

6. Re-run the Web Client Installer from the command line, as follows:

```
$ORACLE_HOME/webclient/bin/webclient_installer.sh OID Administrator pwd
-complete
```

7. Perform the following SQL commands to re-compile the Oracle Ultra Search PL/SQL package `wk_crw` in the infrastructure database:

```
sqlplus /nolog
connect / as sysdba
grant select on sys.dbms_lock_allocated to wksys;
alter package wksys.wk_crw compile body;
```

8. Complete the Oracle Collaboration Suite Release 2 (9.0.4.1.1) middle tier post-installation steps.

Part II

Oracle Collaboration Suite Installation Procedures

Part II contains detailed instructions for installing Oracle Collaboration Suite Release 2 (9.0.4.1.1).

Part II contains the following chapters:

- Chapter 4, "Oracle Collaboration Suite Deployment Methods"

- Chapter 5, "Getting Started with Installation"

- Chapter 6, "Installing Oracle Collaboration Suite"

- Chapter 7, "Installing Oracle Collaboration Suite on a Single Computer"

- Chapter 8, "Installing and Configuring Oracle Voicemail & Fax"

- Chapter 9, "Silent and Non-Interactive Installation"

- Chapter 10, "Deinstalling Oracle Collaboration Suite Components"

4

Oracle Collaboration Suite Deployment Methods

This section describes different methods for deploying the three Oracle Collaboration Suite installations and lists deployment recommendations. It also covers database tuning if you plan to use existing Oracle9*i* databases with Oracle Collaboration Suite components.

This chapter contains this topic:

- Oracle9iAS Infrastructure Deployments

- Oracle Collaboration Suite Information Storage Deployment

- Oracle Collaboration Suite Middle Tier Deployment

- Deployment Recommendations and Considerations

- Removing Oracle Collaboration Suite Release 1 (9.0.3)

Oracle9*i*AS Infrastructure Deployments

Oracle9*i*AS infrastructure deployment typically includes one Oracle9*i*AS Single Sign-On instance and one Oracle Internet Directory instance in a network, with one or more installations of Oracle Management Server.

To configure Oracle Internet Directory and Oracle9*i*AS Single Sign-On on separate hosts, perform the following procedures when prompted at the Select Configuration Options screen during infrastructure installation:

> **See Also:** "Installing the Oracle9iAS Infrastructure" on page 6-2

1. Select the configuration of Oracle Internet Directory and deselect the configuration of Oracle9*i*AS Single Sign-On on the first host, Host 1, during installation.

2. Select configuration of Oracle9*i*AS Single Sign-On and deselect configuration of Oracle Internet Directory on the second host, Host 2, during installation.

3. Point the Oracle9*i*AS Single Sign-On configuration on Host 2 to the Oracle Internet Directory configuration on Host 1 during installation.

   If you plan to install Oracle Internet Directory on more than one host to form a directory replication network, configure Oracle9*i*AS Single Sign-On with only one of the Oracle Internet Directory instances. The remaining instances of Oracle Internet Directory must not associate with any Oracle9*i*AS Single Sign-On configuration.

   > **See Also:** *Oracle Internet Directory Administrator's Guide* available on Oracle Technology Network at
   >
   > `http://otn.oracle.com/`

Oracle Collaboration Suite Information Storage Deployment

Some Oracle Collaboration Suite components that interact with customer data use the information storage database for metadata schema storage. Multiple Oracle Collaboration Suite component installations of the same type can use the same, or different, information storage databases. A single database instance can hold metadata schemas and data for different Oracle Collaboration Suite components.

Oracle Collaboration Suite Middle Tier Deployment

All Oracle Collaboration Suite middle tier installations require an Oracle9*i*AS infrastructure. You can use the Oracle9*i*AS infrastructure included in the Oracle Collaboration Suite CD pack, or you can upgrade an existing Oracle9*i*AS Infrastructure version 9.0.2.0.0 or 9.0.2.0.1 to Oracle9*i*AS Infrastructure version 9.0.2.1.0 or higher.

You must have Oracle Internet Directory and Oracle9*i*AS Single Sign-On installed and configured on your network. Oracle Corporation also recommends a separate Oracle9*i*AS Metadata Repository for all your middle tier applications. If you have an existing Oracle9*i*AS infrastructure, see "Backing Up Oracle Installations" on page 3-2.

All Oracle Collaboration Suite middle tier applications can share the same Oracle9*i*AS Metadata Repository, and typically do not share the same Oracle9*i*AS Metadata Repository as Oracle Internet Directory.

You can install only one middle tier for each host but you can configure multiple instances of the Oracle Collaboration Suite from a single host. Note that Oracle Email should only be configured once on a single host. However, you cannot install the Oracle Collaboration Suite middle tier into an Oracle9*i*AS infrastructure Oracle home or an existing Oracle9*i*AS middle tier Oracle home.

The Oracle Collaboration Suite consists of several middle tier applications, including Oracle9*i*AS Portal and Oracle Ultra Search. Oracle9*i*AS Portal and Oracle Ultra Search can connect to either an:

- Oracle9*i* database
- Oracle9*i*AS Metadata Repository typically not shared with Oracle Internet Directory

Oracle Ultra Search indexing is automatically stored in an Oracle9*i*AS Metadata Repository or it can be stored in an Oracle9*i* database. Store Oracle Ultra Search indexing in an Oracle9*i*AS Metadata Repository other than the repository used by Oracle Internet Directory.

Oracle Email components must connect to an Oracle9*i* release 2 (9.2) database in order to store voice mail and faxes in an Oracle Email inbox.

All Oracle Collaboration Suite middle tier applications except Oracle Email, Oracle Files, and Oracle Calendar automatically store their information in an Oracle9*i*AS Metadata Repository.

> **Notes:**
>
> - The Oracle Collaboration Suite middle tier can be installed as a single instance or as multiple instances on one or many hosts. If you install more than one instance of Oracle Collaboration Suite middle tier on a single host, do not configure Oracle Email or Oracle Calendar more than once.
>
> - Upgrade of an Oracle9*i*AS middle tier to this version of Oracle Collaboration Suite is not supported.

This section contains these topics:

- Deploying Oracle Calendar
- Deploying Oracle Email
- Deploying Oracle Files
- Deploying Oracle Ultra Search
- Deploying Oracle Voicemail & Fax
- Deploying Oracle Web Conferencing
- Deploying Oracle9iAS Wireless

Deploying Oracle Calendar

When Oracle Calendar is installed, many components are installed on the computer. These include Oracle Calendar server components such as engine, daemons, and utilities, and Web components, such as Oracle Calendar Web client, Oracle Calendar Administrator, Oracle Calendar Sync Server, and Oracle Calendar Web services.

In order to avoid redundancy, it is recommended that the software be distributed on two computers: a front-end server and a back-end server, with the Web applications on the front-end server and the Oracle Calendar server components on the back-end server. This helps eliminate the multiple copies of Web applications and Oracle HTTP Server instances and a load balancing approach can be taken for the Web server by increasing the number of front-end servers, as shown in Figure 4–1.

This configuration also allows you to isolate the back-end server behind a firewall and to set up a DMZ.

Figure 4–1 Oracle Calendar Deployment
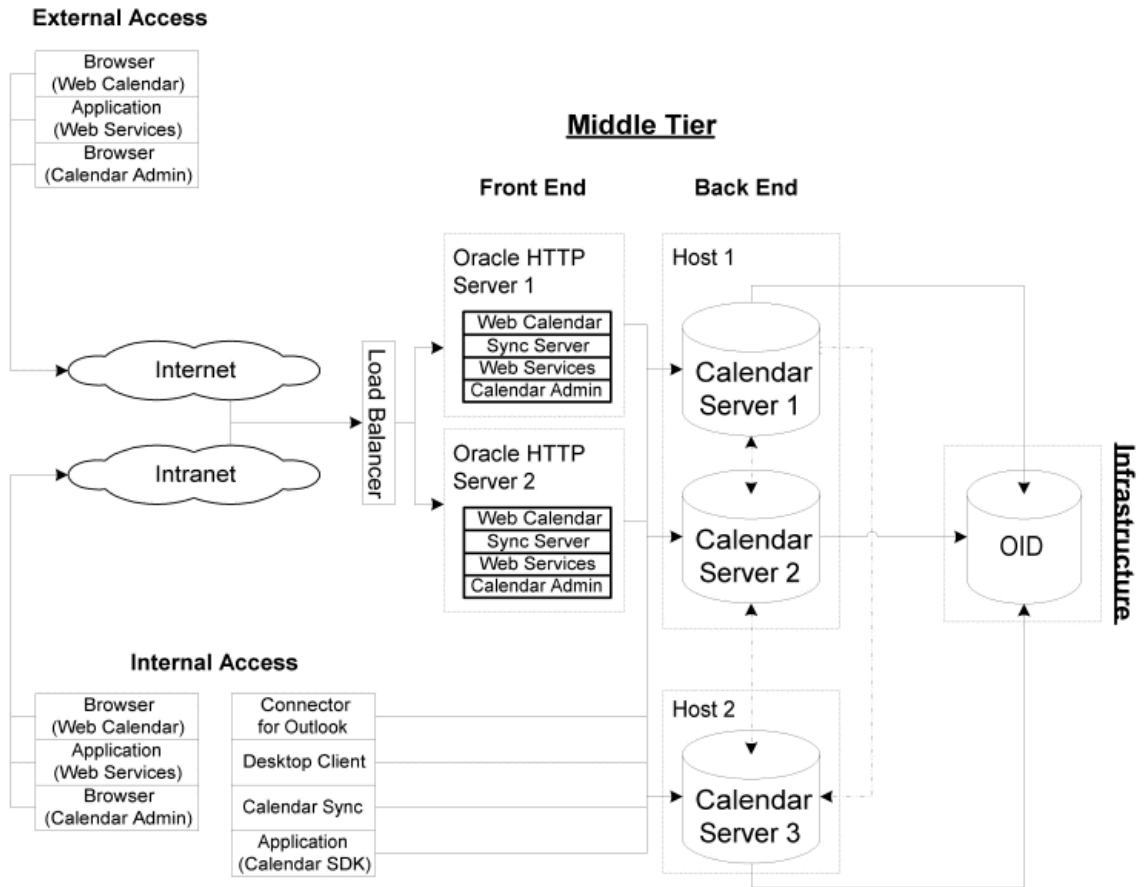
Deploying Oracle Email

Review the following considerations before installing the Oracle Collaboration Suite
middle tier and configuring Oracle Email:

- Configure only one Oracle Email instance on a single computer.

- Use an Oracle Collaboration Suite information storage database or tune an
  existing Oracle9*i* database.

Database Requirements for Using Oracle Email with an Existing Database

In order to store Oracle Email data in an existing Oracle database, other than that of the information storage database packaged with Oracle Collaboration Suite, you must configure the database before configuring Oracle Email using the initialization parameter values shown in Table 4–1. These parameters affect Oracle Email configuration and performance.

Additionally, your existing Oracle database must meet the following requirements:

- Oracle9*i* Database Server 9.2.x or later, Enterprise or Standard Edition installation type

- Oracle JDBC Thin Driver for JDK 1.3. In addition, this driver is required by the Oracle Files configuration assistant. After configuring Oracle Email, you can optionally use either Oracle JDBC Thin Driver for JDK 1.3 or Oracle JDBC/OCI Driver for JDK 1.3.

Table 4–1   Initialization Parameter Values for Oracle Email on an Existing Database

Parameter	Value
AQ_TM_PROCESSES	1
COMPATIBLE	9.2.0.0.0
DB_BLOCK_SIZE	8192
DB_CACHE_SIZE	16777216
DB_FILE_MULTIBLOCK_READ_COUNT	32
DISPATCHERS	(PROTOCOL=TCP) (SERVICE={SID}XDB)
DML_LOCKS	200
FAST_START_MTTR_TARGET	300
HASH_AREA_SIZE	1048576
HASH_JOIN_ENABLED	TRUE
LARGE_POOL_SIZE	8388608
JAVA_POOL_SIZE	41943040[1]
JOB_QUEUE_PROCESSES	10[1]
OPEN_CURSORS	300
PGA_AGGREGATE_TARGET	33554432

Table 4–1   Initialization Parameter Values for Oracle Email on an Existing Database

Parameter	Value
PROCESSES	150
QUERY_REWRITE_ENABLED	TRUE
REMOTE_LOGIN_PASSWORDFILE	EXCLUSIVE
SESSION_MAX_OPEN_FILES	50
SHARED_POOL_SIZE	50331648
SORT_AREA_SIZE	1048576
STAR_TRANSFORMATION_ENABLED	TRUE
TIMED_STATISTICS	TRUE
UNDO_MANAGEMENT	AUTO
UNDO_RETENTION	10800
UNDO_TABLESPACE	UNDOTBS1

[1]   Because certain initialization parameters overlap for both Oracle Email and Oracle Files, if you store both Oracle Email and Oracle Files data on the same existing Oracle database, use the larger of the two initialization parameter values listed in Table 4–1 and Table 4–2.

Deploying Oracle Files

Review the following considerations before installing the Oracle Collaboration Suite middle tier and configuring Oracle Files:

- Review "Verify Requirements and Choose a Deployment Type" on page 4-7.

- Use an Oracle Collaboration Suite information storage database or tune an existing Oracle9*i* database.

> **See Also:**   *Oracle Files Planning Guide* and "Oracle Files Concepts" in *Oracle Files Administrator's Guide* for information on planning your Oracle Files deployment

Verify Requirements and Choose a Deployment Type

Evaluate your hardware resources, using the detailed information regarding Oracle Files hardware and sizing requirements described in the *Oracle Files Planning Guide*, and choose an appropriate deployment path:

- Multiple Computer Deployment for Production Environments for Oracle Files

- Single Computer Deployment for Oracle Files

- Database Requirements for Using Oracle Files with an Existing Oracle Database

> **See Also:** Chapter 2, "Preparing for Installation", and the *Oracle Files Planning Guide*

Multiple Computer Deployment for Production Environments for Oracle Files

Oracle Files is designed to run as middle tier, application server software supported by Oracle Collaboration Suite. For optimal performance, run the database on one computer, Oracle Files on another computer, and the Oracle9*i*AS infrastructure on a third computer.

A component of the Oracle9*i*AS infrastructure, Oracle Internet Directory, is required for managing Oracle Files user credentials.

Single Computer Deployment for Oracle Files

Oracle Files and all of its required components can be installed on a single computer if the computer meets all hardware and software requirements listed in the *Oracle Files Planning Guide*. To install and deploy Oracle Files:

1. Install and configure Oracle Internet Directory into one Oracle home.

2. Install and configure Oracle Collaboration Suite Information Storage into a different Oracle home.

3. Install the Oracle Collaboration Suite middle tier and configure Oracle Files into a third Oracle home.

4. Use the Oracle Files configuration assistant to configure Oracle Files by following the instructions in Chapter 14, "Configuring Oracle Files".

Database Requirements for Using Oracle Files with an Existing Oracle Database

In order to store Oracle Files data in an existing Oracle database, other than that of the information storage database packaged with Oracle Collaboration Suite, you must configure the database before configuring Oracle Files using the initialization parameter values shown in Table 4–2. These parameters affect Oracle Files configuration and performance.

Additionally, your existing Oracle database must meet the following requirements:

- Oracle9*i* Database Server 9.2.x or later, Enterprise or Standard Edition installation type

- Oracle JVM 9.2 or later; included as part of the Enterprise or Standard Edition Oracle database server. Use the following command to determine if Oracle JVM is installed:

  ```
  SELECT dbms_registry.status('JAVAM') FROM dual;
  ```

  If the result is VALID, then Oracle JVM is installed.

- Oracle Text 9.2 or later; available in the Enterprise or Standard Edition Oracle database server. This is required for full-text search and retrieval.

- Oracle JDBC Thin Driver for JDK 1.3. In addition, this driver is required by the Oracle Files configuration assistant. After configuring Oracle Files, you can optionally use either Oracle JDBC Thin Driver for JDK 1.3 or Oracle JDBC/OCI Driver for JDK 1.3.

- At least 450 MB free space in the USERS tablespace (if you use the USERS tablespace to store Oracle Files objects) or enough free space in the custom tablespaces to accommodate the tables and indexes created during configuration.

Table 4–2   Initialization Parameter Values for Oracle Files on an Existing Database

Parameter	Value
AQ_TM_PROCESSES	1
COMPATIBLE	9.2.0.0.0
DB_BLOCK_SIZE	8192
DB_CACHE_SIZE	16777216
DB_FILE_MULTIBLOCK_READ_COUNT	32
FAST_START_MTTR_TARGET	300
HASH_AREA_SIZE	1048576
HASH_JOIN_ENABLED	TRUE
LARGE_POOL_SIZE	8388608
JAVA_POOL_SIZE	33554432[1]
JOB_QUEUE_PROCESSES	4[1]
OPEN_CURSORS	300

Table 4–2   Initialization Parameter Values for Oracle Files on an Existing Database

Parameter	Value
PGA_AGGREGATE_TARGET	33554432
PROCESSES	150
QUERY_REWRITE_ENABLED	TRUE
REMOTE_LOGIN_PASSWORDFILE	EXCLUSIVE
SESSION_MAX_OPEN_FILES	50
SHARED_POOL_SIZE	50331648
SORT_AREA_SIZE	1048576
STAR_TRANSFORMATION_ENABLED	TRUE
TIMED_STATISTICS	TRUE
UNDO_MANAGEMENT	AUTO
UNDO_RETENTION	10800
UNDO_TABLESPACE	UNDOTBS1

[1]   Because certain initialization parameters overlap for both Oracle Email and Oracle Files, if you store both Oracle Email and Oracle Files data on the same existing Oracle database, use the larger of the two initialization parameter values listed in Table 4–1 and Table 4–2.

Deploying Oracle Ultra Search

Oracle Ultra Search requires Oracle Text. Oracle Text is installed with the Oracle9*i*AS infrastructure and Oracle Collaboration Suite information storage installations. If you are using an existing Oracle9*i* database, ensure that Oracle Text is installed and configured.

Oracle Corporation recommends installing and configuring a separate Oracle9*i*AS Metadata Repository if you plan to use the Oracle Ultra Search indexing feature. Oracle Ultra Search indexing is automatically stored in the Oracle9*i*AS Metadata Repository. Store Oracle Ultra Search indexing in an Oracle9*i*AS Metadata Repository other than the repository used by Oracle Internet Directory.

Review the following considerations before installing the Oracle Collaboration Suite middle tier and configuring Oracle Ultra Search:

- Sufficient RAM
- Sufficient Disk Space

- Software Requirements

- Performance Factors and Sizing Guidelines

Sufficient RAM

The Ultra Search indexing engine runs within Oracle. Therefore, it is important that the system have enough memory to accommodate a large Oracle installation. The Oracle instance system global area must be a minimum of 50 MB.

> **See Also:** *Oracle9i Database Performance Tuning Guide and Reference*

The Oracle Ultra Search Web crawler runs as a separate Java process on the same host. Allocate 50 MB of memory for the Web crawler alone.

The Oracle Ultra Search administration tool is a J2EE 1.2 standard Web application. It can be installed and run on a separate host from the Oracle Ultra Search server component. However, running this component on the same host as the Ultra Search server component may limit scalability. Regardless of your choice, allocate enough memory for the J2EE engine. Oracle Corporation recommends using the Oracle HTTP Server with the Oracle9*i*AS Containers for J2EE. Allocate enough memory for the Oracle HTTP Server and the JDK that runs the J2EE engine.

Sufficient Disk Space

Because customer requirements vary widely, Oracle Corporation cannot recommend a specific amount of disk space. The following minimal requirements are meant as general guidelines:

- Allocate the same amount of disk space as needed to install the Oracle Ultra Search server component for each remote crawler host.

- Create a temporary tablespace as large as available, depending on the RAM on your host.

- Create the tablespace for the Oracle Ultra Search instance user as large as the total amount of data that you want to index. For example, if you estimate that the total amount of data to be crawled and indexed is 10 GB, then create a tablespace that is at least 10 GB for the Oracle Ultra Search instance user. Make sure to assign that tablespace as the default tablespace of the Oracle Ultra Search instance user.

> **Note:** The Oracle Ultra Search instance user is a database user that you must explicitly create. All data that is collected and processed as part of the crawling and indexing process is stored in this user's schema.

Software Requirements

The Oracle Ultra Search middle tier components are Web applications. Therefore, they require a Web server to run. Oracle Corporation recommends the Oracle HTTP Server and Jserv or Oracle HTTP Server and the Oracle9*i*AS Containers for J2EE.

Performance Factors and Sizing Guidelines

This section describes the hardware required for Oracle Ultra Search to provide uniform search capabilities across the repositories of typical small, medium, and large organizations.

Crawling and indexing performance depends on the number of documents to search, average size of documents, the kinds of documents (whether or not these documents require conversion from a native format through INSO), and other factors.

> **Note:** The actual data collected due to crawling and indexing is not stored in the user's schema. However, tokens from the data are stored.

Query performance depends on the number of users querying in consecutive, simultaneous fashion within a given, small time period, say 15 minutes. Query performance also depends on the data set size and computer resources (CPUs/memory).

Small, medium, and large corporations are defined in Table 4–3.

Table 4–3   Performance Factors for Small, Medium, and Large Corporations

Performance Factors	Small	Medium	Large
Number of Documents on Corporate Intranet	50000	500000	2500000
Average Size of Document (KB)	50	50	50
Concurrent Search Users	<10	<10	<10

Sample hardware configurations for small, medium, and large corporations are given in Table 4–4:

Table 4–4   Sizing Guidelines for Small, Medium, and Large Corporations

Tier	Small	Medium	Large
Database (Oracle9*i*AS Metadata Repository or Oracle9*i* database release 1 (9.0.1) or later)	One SUN Ultra 60 with 2 GB RAM	SUN Enterprise 450 (or equivalent) with 4 CPUs 2 GB RAM 10-15 GB free disk space	HP-UX PA-RISC (64-bit) Superdome with 16 CPU 48 GB RAM 500 GB free disk
Oracle Collaboration Suite Middle Tier	10 GB free disk space	Windows 2000 Server with 2 GB RAM each	Windows 2000 Server with 2 GB RAM each

> **Note:**   For small configurations, both the database tier and Oracle Collaboration Suite middle tier are installed on the same computer. The hard disk space requirements mentioned do not include the space required to install the software. See "Hardware Requirements" on page 2-2 for hard disk space requirements.

Deploying Oracle Voicemail & Fax

Oracle Voicemail & Fax requires a Windows 2000 Computer Telephony (CT) Server for telephony services.

> **See Also:**   *Oracle Voicemail & Fax Administrator's Guide* for hardware and software requirements and installation instructions

Deploying Oracle Web Conferencing

Oracle Web Conferencing delivers its end-user functionality as a middle tier application within Oracle Collaboration Suite. Oracle Web Conferencing is the current offering from the Oracle Real-Time Collaboration group of products.

To plan Oracle Web Conferencing deployment:

- Review the Oracle Web Conferencing related sections of this guide

- Review the *Oracle Web Conferencing Administrator's Guide*

- For the latest information, workarounds, and tips, go to

  `http://otn.oracle.com/`

Oracle Collaboration Suite requires the use of a compatible version of Oracle9*i*AS Single Sign-On server, and must be associated with Oracle Internet Directory. These are available in the Oracle9*i*AS infrastructure.

Oracle Web Conferencing requires the use of a Oracle9*i* database release 9.2, or later. You can choose to use the Oracle Collaboration Suite information storage database you may already have installed for other Oracle Collaboration Suite components, such as Oracle Files, or you can provide connection information to an appropriate separate database during installation of the middle tier. If you plan to use a database different from the Oracle Collaboration Suite information storage database, ensure you have verified the tablespace-related requirements for Oracle Web Conferencing from this guide.

Oracle Web Conferencing has higher processing power consumption in order to deliver real-time collaboration. Depending on the deployment configurations you are using, you might have to reconfigure the Oracle HTTP Server and `mod_osso` configurations for the Oracle home in which Oracle Web Conferencing is to be installed. Therefore, Oracle Corporation recommends that Oracle Web Conferencing is installed in its own Oracle home, apart from any other Oracle Collaboration Suite component products.

If you have multiple middle tier hosts for your Oracle Collaboration Suite implementation, set up Oracle Web Conferencing on the host which can provide the highest possible memory and CPU resources to Oracle Web Conferencing alone, and which has the largest bandwidth network connection to end-users.

Oracle Web Conferencing can be deployed on as many middle tiers as you choose. Each instance of Oracle Web Conferencing is configured by default to cooperate with all Oracle Web Conferencing middle tiers using the same database.

Oracle Web Conferencing can be installed and configured with other Oracle Collaboration Suite components in the same `Oracle home`.

Oracle Web Conferencing core components can also be configured where the entire Oracle Collaboration Suite, including the infrastructure, information store, and all the middle tier Oracle homes, exist on the same host, as long as the host satisfies all the requirements listed in this guide and relevant documentation for Oracle Collaboration Suite components.

> **Note:** An instance of Oracle Web Conferencing with a document conversion server and a voice conversion server requires a computer with Microsoft Windows 2000 installed. The functionality provided by this type of Oracle Web Conferencing instance might not be available if your deployment does not include a document conversion server or voice conversion server, but the core functionality of Oracle Web Conferencing is still available.

Deploying Oracle9*i*AS Wireless

If you are installing the Oracle9*i*AS Wireless component of Oracle Collaboration Suite against an existing Oracle9*i*AS Infrastructure version 9.0.2.0.0 or 9.0.2.0.1, the Oracle9*i*AS Wireless schema in the Oracle9*i*AS Metadata Repository is automatically upgraded. If you have existing Oracle9*i*AS Wireless middle tiers, versions 9.0.2.6.0 or lower, pointing to the same Oracle9*i*AS infrastructure, you must apply the Oracle9*i*AS Wireless 9.0.2.8.0 patch to each of the Oracle9*i*AS Wireless middle tiers. This patch is available on Oracle*MetaLink* at

```
http://metalink.oracle.com/
```

If you are installing the Oracle9*i*AS Wireless middle tier from the Oracle Collaboration Suite CD Pack, no upgrade is required.

High Availability for Oracle9*i*AS Wireless

In Oracle9*i*AS Wireless, applications cannot be clustered using the Oracle9*i*AS clustering mechanism. However, it is still possible to configure Oracle9*i*AS to achieve a high availability deployment.

Complete the following steps for high availability deployment:

> **Note:** Back up all files before modifying them.

1. Install the Oracle9*i*AS infrastructure on a computer, and install multiple middle tiers on separate computers. Ensure that each of these middle-tier installations points to the infrastructure.

2. Shut down the Distributed Configuration Manager and all process using the following command:

```
%ORACLE_HOME%\dcm\bin\dcmctl stop
```

3. Shut down Oracle Enterprise Manager using following the command:

```
%ORACLE_HOME%\bin\emctl stop
```

4. Verify that the `%ORACLE_HOME%\opmn\conf\ons.conf` file on each of the middle tiers and on the infrastructure contains IP address entries for all the other tiers. If not, file and add missing IP address entries.

5. On each middle tier, increase the number of processes that need to participate in the default island for the `OC4J_Wireless` OC4J instance to the desired number. This can be done from the Oracle Enterprise Manager console or by modifying the `%ORACLE_HOME%\opmn\conf\opmn.xml` file.

> **See Also:** Oracle9*i*AS Containers for J2EE documentation for details and concepts of OC4J instance and islands

For instance, if you modify `opmn.xml`, a typical entry to start four OC4J processes in the default island would be of the form:

```
<oc4j maxRetry="3" instanceName="OC4J_Wireless" gid="OC4J_Wireless"
numProcs="4">
```

6. In the `mod_oc4j` configuration file for each middle tier (specifically, `%ORACLE_HOME%\Apache\Apache\conf\mod_oc4j.conf`), modify the mount point entries for the Oracle9*i*AS Wireless runtime. If two middle tiers (`m1` and `m2`, in the following examples) are used, modify the entries, as follows:

```
Oc4jMount /ptg
instance://m1.c1.mysite.com:OC4J_Wireless,m2.c2.se4637-u-sr006.us.acme.com
:OC4J_Wireless
```

and

```
Oc4jMount /ptg/*
instance://m1.c1.mysite.com:OC4J_Wireless,m2.c2.se4637-u-sr006.us.acme.com
:OC 4J_Wireless
```

where `c1` and `c2` are the respective Oracle9*i*AS instance names and can be determined by running the command:

```
%ORACLE_HOME%\dcm\bin\dcmctl whichInstance
```

These entries should be exactly the same for all middle-tier computers.

7. Run `%ORACLE_HOME%\dcm\bin\dcmctl updateConfig` to update the Distributed Configuration Manager repository with the configuration file changes.

   On slower systems, it is likely that a Distributed Configuration Manager error (timeout) of the form ADMN-906005 is displayed. If this occurs, run the `%ORACLE_HOME%\dcm\bin\dcmctl getReturnStatus` command and wait until the command exits. This confirms that the changes have been propagated to the Distributed Configuration Manager repository.

8. Add a `<cluster-config/>` tag under the `<orion-web-app>` tag in the following file:

   ```
   %ORACLE_HOME%\j2ee\OC4J_wireless\application-deployments\ptg\ptg-web
   \orion-web.xml
   ```

9. Start the Distributed Configuration Manager and all processes by running the following command:

   ```
   %ORACLE_HOME%\dcm\bin\dcmctl start
   ```

10. Start Oracle Enterprise Manager by running the following command:

    ```
    %ORACLE_HOME%\bin\emctl start
    ```

11. Configure a hardware load-balancer to point to the middle tiers.

    Currently, high availability support is only available for the core server runtime (by default mapped to the URI `\ptg\rm`).

    > **See Also:** Oracle9*i*AS Containers for J2EE documentation for more information

Deployment Recommendations and Considerations

Oracle Corporation recommends:

- Installing the three Oracle Collaboration Suite installations in different Oracle homes in the following order:

  - Oracle9*i*AS infrastructure

  - Oracle Collaboration Suite information storage

  - Oracle Collaboration Suite middle tier

- Installing the infrastructure and middle tier on separate hosts for optimal performance

- Installing information storage and middle tier on separate hosts

- Using the same operating system user account when installing and configuring additional Oracle Collaboration Suite applications on the same host

You can achieve optimal performance for extensively-used components by connecting to an Oracle9*i*AS Metadata Repository located on a separate host. The following procedure describes how to assign a component to its own repository.

1. Install the Oracle9*i*AS infrastructure for Oracle Internet Directory and Oracle9*i*AS Single Sign-On support (and optionally for Oracle Management Server support).

2. Install the Oracle Collaboration Suite middle tier.

3. Install a second Oracle9*i*AS infrastructure without configuring Oracle Internet Directory or Oracle9*i*AS Single Sign-On.

4. Browse to the Oracle Enterprise Manager Web Site for this instance of Oracle Collaboration Suite and go to the Oracle9*i*AS Instance Home Page.

5. Select **Configure Schema**.

   From the Configure Schema page, you can change the database and schema for the selected application.

   > **See Also:** The online help topic "Configuring the Schema for an Oracle9*i*AS Component" in the Enterprise Manager Web Site online help for additional information about performing this task

Removing Oracle Collaboration Suite Release 1 (9.0.3)

If you install Oracle Collaboration Suite Release 2 (9.0.4.1.1) on a computer that contains an existing installation of Oracle Collaboration Suite Release 1 (9.0.3), without performing an upgrade, the Oracle Collaboration Suite Release 1 (9.0.3) directory will continue to be the active Oracle Enterprise Manager directory. If you later decide to remove the Oracle Collaboration Suite Release 1 (9.0.3) installation, you must first run the `emctl` command from the Oracle Collaboration Suite Release 1 (9.0.3) directory to change the Oracle Enterprise Manager directory to the Oracle Collaboration Suite Release 2 (9.0.4.1.1) directory or another location.

See Also:

- *Oracle Enterprise Manager Administrator's Guide* for information on working with the emctl command

- "Upgrading the Oracle Collaboration Suite Middle Tier" on page 3-11, for information on upgrading Oracle Collaboration Suite Release 1 (9.0.3) to Oracle Collaboration Suite Release 2 (9.0.4.1.1)

5

Getting Started with Installation

This chapter describes how to get started with the three Oracle Collaboration Suite installations. You must follow the procedures in this chapter to ensure that the installation process is successful.

This chapter contains these topics:

- Installing Oracle Components from the CD-ROMs
- Installing Oracle Components from a Hard Drive
- Oracle Universal Installer Overview
- Starting Oracle Universal Installer
- Installation Session Log Files

Installing Oracle Components from the CD-ROMs

Oracle Collaboration Suite includes CD-ROMs for installing the following products:

- Oracle9*i*AS Infrastructure

- Oracle Collaboration Suite Information Storage

- Oracle Collaboration Suite Middle Tier

- Oracle Collaboration Suite Clients

- Oracle Cluster Manager version 9.2.0.3

The Oracle CD-ROMs are in ISO 9660 format with Rockridge extensions. You can either choose to install directly from the CD-ROMs, or copy the CD-ROM contents and then install from your system hard drive. You must complete the procedures required for the installation method you choose before starting Oracle Universal Installer.

Installing Oracle Components from a Hard Drive

1. Copy each CD-ROM to your system hard drive under a directory named `Disk1` for the first CD-ROM, a directory named `Disk2` for the second CD-ROM, and so on (depending upon the number of the CD-ROM in the sequence of disks that comprises the set).

2. Double-click `setup` on `Disk1` to start Oracle Universal Installer.

Oracle Universal Installer Overview

Oracle Collaboration Suite uses Oracle Universal Installer to guide you through each step of the installation process. Oracle Universal Installer provides the following features:

- Describes installation options for Oracle Collaboration Suite

- Detects preset environment variables and configuration settings

- Deinstalls Oracle Collaboration Suite products

This section describes the following Oracle Universal Installer features:

- Oracle Universal Installer Prerequisite Checks

- Additional Component Installations with Oracle Universal Installer

Oracle Universal Installer Prerequisite Checks

Oracle Universal Installer automatically checks your computer prior to installation to verify that your system meets operational requirements. Table 5–1 lists the prerequisite checks that are performed.

Table 5–1   Oracle Universal Installer Automatic Prerequisite Checks

Prerequisite Checks	See Also
Check for enough disk space for Oracle home installation	"Hardware Requirements" on page 2-2
Check that the install host has enough RAM	"Hardware Requirements" on page 2-2
For middle tier and information storage installs, verify existence of one Oracle9*i*AS infrastructure installation	Chapter 1, "Installation Overview"
Verify that the monitor has 256 color viewing capability	"Hardware Requirements" on page 2-2

> **See Also:**   Appendix B, "Installation Checklists" for the installation checklists for each installation of Oracle Collaboration Suite

Additional Component Installations with Oracle Universal Installer

When you are planning to install a subsequent Oracle Collaboration Suite or Oracle9*i*AS infrastructure installation on the same host, Oracle Corporation recommends the following steps:

- Review Chapter 2, "Preparing for Installation" for preinstallation tasks

- Stop the Oracle Enterprise Manager Web Site

  > **See Also:**   *Oracle9i Application Server Administrator's Guide* for more information

- Ensure that all other previously installed Oracle Collaboration Suite instances are running when you begin installation

- Specify a different Oracle home than the first Oracle Collaboration Suite installation

- Use the same `oraInventory` directory for subsequent Oracle Collaboration Suite installations.

- Review Chapter 4, "Oracle Collaboration Suite Deployment Methods" in this guide to ensure successful coexistence of Oracle Collaboration Suite components

Starting Oracle Universal Installer

> **Caution:** The Oracle Universal Installer automatically installs the Oracle-supplied version of the Java Runtime Environment (JRE). This version is required to run the Oracle Universal Installer and several Oracle assistants. Do not modify the JRE except by using a patch provided by Oracle Support Services.

> **See Also:** The Oracle Universal Installer online help if you have questions about the type of information to enter during the installation procedures described in this section

Follow these steps to start Oracle Universal Installer and each Oracle Collaboration Suite installation:

1. Ensure that you have completed all the requirements described in Chapter 2, "Preparing for Installation".

2. Print and complete the installation checklists in Appendix B, "Installation Checklists" for each installation. Many of the values are needed to complete the other installations and configurations.

3. Log in as a member of the Administrators group.

> **Note:** Oracle Corporation recommends using the same operating system user account when installing and configuring additional Oracle Collaboration Suite applications on the same host.

4. Insert the first CD-ROM of the appropriate installation into the CD-ROM drive.

   The Autorun window automatically displays. If the Autorun window does not display:

   a. Choose **Start** > **Run**.

   b. Enter the following:

DRIVE_ LETTER:\autorun\autorun.exe

5. Click **Install** to display the Welcome screen of the Oracle Universal Installer.

> **Note:**   Do not install the Oracle9*i*AS infrastructure or the Oracle
> Collaboration Suite middle tier on a cluster. Only the Oracle
> Collaboration Suite information storage can be installed on a
> cluster.

> **See Also:**   *Oracle9i Real Application Clusters Setup and Configuration*
> for more information about installing Real Application Clusters
> (available on the Oracle Technology Network)

6. Click **Next** to display the Specify File Locations screen.

   If you install Oracle Collaboration Suite information storage on a cluster, the
   Cluster Node Selection screen displays. Select the nodes on which you want to
   install the Oracle software. Real Application Clusters software is installed on
   the node from which Oracle Universal Installer is run and copied to the other
   selected nodes in the cluster. The local node is always selected by default.

7. On the Specify File Locations screen:

   - In the **Source** section, accept the default path

   - In the **Destination** section, enter the **Name** and the full **Path** of the Oracle
     home

8. Click **Next** to display the Language Selection screen.

9. Select from the list languages supported by Oracle Collaboration Suite any
   languages you want supported by your installation of Oracle Collaboration
   Suite. Click **Next**.

> **Notes:**
>
> - Languages selected here enable users to access your installation
>   of Oracle Collaboration Suite in their native language, as long
>   as that language is supported by Oracle Collaboration Suite.
>
> - Supported languages cannot be added after the installation is
>   complete. In order to add other languages, you must
>   completely reinstall Oracle Collaboration Suite.

These are the initial steps that precede the various installation procedures in Chapter 6, "Installing Oracle Collaboration Suite".

Installation Session Log Files

The Oracle Universal Installer creates the *SYSTEM_DRIVE*:\Program Files\Oracle\Inventory\logs directory the first time it is run on a computer. This directory keeps an inventory of products that the Oracle Universal Installer installs on your computer, as well as other installation information. If you have previously installed Oracle products, this directory already exists.

The log file of the most recent installation is:

installActions*todays_date_time*.log

where *todays_date_time* is the date and time of installation.

6

Installing Oracle Collaboration Suite

This chapter guides you through the installation steps for Oracle Collaboration Suite Release 2 (9.0.4.1.1).

> **See Also:**
>
> - "Installation Roadmap" on page 1-8 for details about the installation sequence
> - Before installing Oracle Collaboration Suite, Oracle Corporation recommends that you read *Oracle Collaboration Suite Release Notes*, available in the doc directory of each Oracle Collaboration Suite installation CD-ROM and on Oracle Technology Network at
>
>   `http://otn.oracle.com/`

> **Note:** Oracle Collaboration Suite is not supported on Windows NT 4.0 Terminal Server, or on Windows 2000 Server with Terminal Services active.

This chapter contains the following topics:

- Installing the Oracle9iAS Infrastructure
- Installing the Oracle Collaboration Suite Information Storage Database
- Installing the Oracle Collaboration Suite Middle Tier
- Installing the Oracle Web Conferencing Document and Voice Conversion Servers
- Installing Oracle Collaboration Suite Integrated Web Client

- Manually Setting Up HTTPS with mod_osso on the Middle Tier
- Additional Documentation

Installing the Oracle9*i*AS Infrastructure

This section describes how to install Oracle9*i*AS infrastructure.

> **Note:** The industry standard LDAP ports are `389` for non-SSL and `636` for SSL. If these ports are not listed in your `%WINDIR%\system32\drivers\etc\services` file, the Oracle Universal Installer uses them as the Oracle Internet Directory ports. If these ports are listed in your `%WINDIR%\system32\drivers\etc\services` file, then the Oracle Universal Installer consecutively tries ports `4031` through `4039` as the Oracle Internet Directory ports.
>
> To use the standard ports `389` or `636`, you must delete the lines with these port number from your `%WINDIR%\system32\drivers\etc\services` file before you start configuration. It is not sufficient to comment out these lines: they must be deleted.
>
> If you currently have an LDAP server running on ports `389` or `636`, shut down the server before configuring.

1. Insert the first Oracle9*i*AS Infrastructure (32-bit) Release 2 (9.0.2.3.0) for Microsoft Windows CD-ROM and follow the instructions in "Starting Oracle Universal Installer" on page 5-4.

   The Confirm Pre-Installation Requirements screen appears after you click **Next** on the Language Selection screen at step 9 in "Starting Oracle Universal Installer" on page 5-5:

2. Click **Next** to display the Select Configuration Options screen.

   > **See Also:** Chapter 3, "Upgrading to Oracle Collaboration Suite Release 2 (9.0.4.1.1)" for procedural information about upgrades

3. Select **accept default selection** and click **Next** to display the Create Instance Name and ias_admin Password screen.

4. Choose an **Instance Name** and choose and confirm an **ias_admin Password**.

> **Notes:**
>
> - The **Instance Name** is not a database instance name but a name for the Oracle9*i*AS infrastructure instance.
>
> - The **ias_admin password** chosen here will also be the Oracle Internet Directory administrator's password for the infrastructure.

Click **Next** to display the Guest Account Password screen.

5. Enter and confirm a guest account password.

6. Click **Next** to display the Summary screen.

7. Review the information and click **Install**. The location of the log files for the installation displays.

   After you click **Install**, files are copied and linked. This process can run for more than an hour.

8. The End Of Installation screen displays the port numbers for installation and confirms success.

9. Check the installation log files for any installation errors. The installation log files are located in `SYSTEM_DRIVE:\Program Files\Oracle\Inventory\logs`.

   Each installation log takes the form `InstallActionsYYYY-MM-DD_HH-MM-SSAM.log`.

> **Notes:**
>
> - In the directory specified by the `TEMP` environment variable, the format of the directory is as follows: `OraInstallYYYY-MM-DD_HH-MM-SSAM.log`. The `installCluster.log` file shows which installation module is currently running.
>
> - The list of ports can be found in the `portlist.ini` file located in the `%ORACLE_HOME%\install` directory.

Oracle9*i*AS Infrastructure Additional Documentation

For further information about postinstallation and configuration tasks, refer to the *Oracle9i Application Server Administrator's Guide* and component-specific documentation.

Although it is not necessary for a new installation of Oracle Collaboration Suite, you can create a test user to test the installation.

> **See Also:** "Upgrading Oracle9iAS Infrastructure" on page 3-5 for instructions on creating a test user

Installing the Oracle Collaboration Suite Information Storage Database

This section describes how to install Oracle Collaboration Suite information storage database.

This section contains these topics:

- Installing a Database into an Existing Oracle Home
- Registering Oracle Collaboration Suite Information Storage with Oracle Internet Directory

Ensure that you have already installed the infrastructure.

1. Insert the first Oracle Collaboration Suite Information Storage (32-bit) Release 2 (9.2.0.3.0) for Microsoft Windows CD-ROM and follow the instructions in "Starting Oracle Universal Installer" on page 5-4.

   The Database Creation screen appears after you click **Next** on the Language Selection screen in step **8** in "Starting Oracle Universal Installer" on page 5-5. Follow these procedures to install an information storage database.

2. Select **Yes** to create a new Oracle9*i* database and click **Next** to display the Information Storage Registration screen.

3. Select **Yes** to register the information storage database with Oracle Internet Directory. Click **Next** to display the Oracle Internet Directory Information screen.

4. Enter the fully-qualified **Host** name, **Port**, **Username** (by default, the Oracle Universal Installer displays cn=orcladmin), and **Password**. Click **Next** to display the Database Identification screen.

5. Enter the **Global Database Name** and **SID**. If required, change the default SID.

6. Click **Next** to display the Database File Location screen.

7. Accept the default and click **Next** to display the Summary screen.

Installing a Database into an Existing Oracle Home

You can install more than one database in the same Oracle home.

Install a starter database or select the **Software Only** database configuration option when prompted from one of the following software CD-ROMs:

- Oracle Collaboration Suite Information Storage
- Oracle9*i* Database

> **Important:** Oracle Corporation does not recommend installing more than one database in an Oracle home in a production environment. This configuration is recommended for evaluation purposes only.

1. Run the database configuration assistant after the software is installed.
2. Select **Create a new database**.
3. Click **Next**.
4. Select the database configuration type that you want to create when prompted.
5. Answer questions such as Oracle home name and instance name.

   The database is created by the database configuration assistant in the same manner that it is created by Oracle Universal Installer.

Registering Oracle Collaboration Suite Information Storage with Oracle Internet Directory

The following sections describe how to register the information storage database with Oracle Internet Directory:

- Running the Oracle Net Configuration Assistant
- Running the Database Configuration Assistant
- Verifying Oracle Internet Directory Configuration

> **Notes:**
>
> - This section applies only if you selected **No** in the Information Storage Registration screen.
> - If your information storage is on a cluster database, then register one database instance with Oracle Internet Directory.
> - You must run both the Oracle Net and database configuration assistants with the same Oracle user account used to install the Oracle software.

Running the Oracle Net Configuration Assistant

1. Start the Oracle Net configuration assistant by selecting **Start** > **Programs** > **Oracle** - *HOME_NAME* > **Configuration and Migration Tools** > **Net Configuration Assistant** to display the Welcome screen.

2. Select **Directory Usage Configuration** and click **Next**.

3. Select the directory server you want to use. The directory server must already be configured for Oracle usage.

4. Click **Next**.

5. Select **Oracle Internet Directory** as the directory server type you want to use.

6. Click **Next**.

7. Enter the Oracle Internet Directory **host name**, **port**, and SSL port.

8. Click **Next**.

9. Select **cn=OracleContext** as the default Oracle Context in the directory server.

   > **Note:** Do not select **cn=OracleContext,*subscriber_specific_DN*.**

10. Click **Next**.

11. Proceed to the end of the Oracle Net configuration assistant configuration.

12. Exit the Oracle Net configuration assistant.

Additional Configuration Steps for Real Application Clusters

Use Oracle Net Manager to either:

- Add network addresses to the database entry for the nodes in the cluster for which there is no address listed.

- Create a separate net service name specifying the network address for one of the nodes in the cluster and the Real Application Clusters global database name as the service name of the database. Then add network address to the net service name for the other nodes in the cluster.

> **See Also:** *Oracle9i Real Application Clusters Setup and Configuration* for more information about connect string options

Running the Database Configuration Assistant

1. Start the database configuration assistant by selecting **Start** > **Programs** > **Oracle** - *HOME_NAME* > **Configuration and Migration Tools** > **Database Configuration Assistant**.

2. Click **Next**.

3. Select **Configure database options in a database**.

4. Click **Next**.

5. Select the SID of the Oracle Email database to configure.

6. Click **Next**.

7. Select the **Yes, register the database** option.

   a. Enter **cn=orcladmin** in the **User DN** field.

   b. Enter the password for the name entered in the **User DN** field.

8. Click **Finish**.

   The Restart Database screen appears.

9. Click **Yes**.

   The Summary screen appears.

10. Click **OK**.

    Database configuration progresses and the Database Configuration Assistant screen displays.

11. Enter new passwords for the SYS and SYSTEM users of the information storage database.

12. Click **Password Management**.

Select all checkboxes on the screen after verifying that your computer meets the minimum pre-installation requirements.

13. Locate the CTXSYS account and unlock it by clicking the box in the **Lock Account** column.

14. Enter and confirm a new CTXSYS password.

15. Click **OK** to display the Confirm Pre-Install Requirements screen.

16. Click **Next** to display the Create Instance Name and ias_admin Password screen.

    The installation of the information storage database is complete.

Verifying Oracle Internet Directory Configuration

To verify Oracle Internet Directory configuration, log in to Oracle Internet Directory and check under cn=oraclecontext for the information storage SID selected in step 3 in "Installing the Oracle9iAS Infrastructure" on page 6-6.

Installing the Oracle Collaboration Suite Middle Tier

This section follows the sequence of steps performed by the Oracle Universal Installer to install the middle tier and assumes that all Oracle Collaboration Suite components are being installed.

This section contains the following topics:

- Before You Begin

- Beginning Oracle Collaboration Suite Middle Tier Installation

- Installing Oracle Web Conferencing

- Installing the Oracle Calendar Server and the Oracle Calendar Application System

- Configuring Oracle Files

- Completing the Middle Tier Installation

Before You Begin

- Ensure that you have installed and configured Oracle Internet Directory and Oracle9iAS Single Sign-On somewhere in your network before installing an instance of the Oracle Collaboration Suite middle tier.

■ Ensure that you have installed and configured an Oracle9*i* database or the Oracle Collaboration Suite information storage database somewhere in your network if you are configuring Oracle Email or Oracle Files in this application middle tier instance.

> **Note:** If you installed the Oracle Collaboration Suite information storage database, it is automatically registered with Oracle Internet Directory. If you installed an Oracle9*i* database, you must manually register it with Oracle Internet Directory.

■ Have the database host name, database listener port, and the SID for the database instance in which you will have the Oracle Real-Time Collaboration repository. Verify that you can connect to the database using the preceding information from the host on which you are installing this instance of Oracle Web Conferencing.

■ Have the username and password for a user with system privileges, such as privileges for creation of users and tablespaces. The installer defaults to user SYSTEM, and if you plan to use the default, you must have the SYSTEM password.

■ The Oracle Universal Installer detects whether the database you are using already contains the Oracle Real-Time Collaboration repository. If the installer does not find one, then a new one is created in the given database. If this happens, you must enter the full path to the directory on the preceding database host where the data files for the Oracle Real-Time Collaboration tablespaces will be created during the installation. This location must have at least 500 MB of free space and be writable by the database.

> **Caution:** If the information entered here is incorrect, you will not be able to recover from installation failure, and you will have to restart the entire installation process for this Oracle home.

The tablespace picks up the default value in step 3.

■ If the database already contains the Oracle Real-Time Collaboration repository and if the installer detects the schemas to be locked, you are prompted for new passwords for the RTC and RTC_APP schemas. If the schemas are not locked, the installer prompts you for the existing RTC_APP schema password.

- The installer tries to find free ports for use by the Oracle Real-Time Collaboration components in the range of 2400-2700. If it does not find any free ports in this range, the installer extends its search to range 2400-49152 and picks up the first available ports it can find. The installer warns you when this happens.

> **Note:** The Oracle Calendar server will not work if it is installed by a user whose UNIX user ID is greater than eight characters.

Beginning Oracle Collaboration Suite Middle Tier Installation

1. Insert the first Oracle Collaboration Suite (32-bit) Release 2 (9.0.4.1.1) for Microsoft Windows CD-ROM and follow the instructions in "Starting Oracle Universal Installer" on page 5-4.

   The Confirm Pre-Install Requirements screen appears after you click **Next** on the Language Selection screen in step **8** in "Starting Oracle Universal Installer" on page 5-5. Follow these procedures to install an application middle tier.

2. Confirm the preinstallation requirements and click **Next** to display the Component Configuration screen.

3. Select the components you want to install and click **Next**. Note that Oracle Calendar Web client, Sync Server and Web services cannot be installed unless you select **Oracle Calendar Application System**. Oracle Calendar will be installed in the following locations:

Component	Location
Server	%ORACLE_HOME%\ocal\
Administrator	%ORACLE_HOME%\ocad\
Application System	%ORACLE_HOME%\ocas\

> **Notes:**
>
> To install only the Oracle Calendar server:
>
> 1. Select **Oracle Calendar Server** instead of **Oracle Calendar Application System**.
> 2. Consequently, you will be prompted for the client's **Host** and **Port**. If you do not know these values, you can enter temporary values and later, edit the server's `unison.ini` file, as follows:
>
> ```
> [RESOURCE_APPROVAL]
> url=http://host_name:port_number/ocas-bin/ocas.fcgi
> ```
>
> To install only the Oracle Calendar application system:
>
> 1. Select **Oracle Calendar Application System** instead of **Oracle Calendar Server**.
> 2. Consequently, you will only be prompted to enter the **Host**, **Port** and **Node-ID** for the Oracle Calendar server. If you do not know these values, you can enter temporary values and, later, edit the application system's `ocas.conf` file with the correct values, as follows:
>
> ```
> [CONNECTION]
> mnode=host_name:engine_port,node
> ```

4. Click **Next** to display the Existing Oracle9*i*AS Single Sign-On screen.

5. Enter the host name and port number for your existing instance of Oracle9*i*AS Single Sign-On and click **Next** to display the Oracle Internet Directory screen.

6. Enter the administrator's user name and password of the existing Oracle Internet Directory instance and click **Next** to display the Specify Administrative Password and Instance Name screen.

7. Choose an **Instance Name** and choose and confirm an **Administrative Password**.

> **Notes:**
>
> - The **Instance Name** is not a database instance name but a name for the middle tier instance installation.
>
> - The **Administrative Password** chosen here will also be the Oracle Internet Directory administrator's password for the middle tier.

Installing Oracle Web Conferencing

8. Click **Next** to display the Oracle Real-Time Collaboration Repository Location screen. Enter the required information in all the fields.

9. Click **Next** to display the Oracle Real-Time Collaboration Repository Details screen. The information for which you are prompted depends on the database you are using.

    - If you are using the Oracle Collaboration Suite information storage database, reset the passwords for the schema.

    - If you are using an existing database, create the required passwords, and designate a location for the datafiles.

10. After entering the information, click **Next** to display the Oracle Calendar Default Time Zone screen.

    > **See Also:**   *Oracle Web Conferencing Administrator's Guide*

Installing the Oracle Calendar Server and the Oracle Calendar Application System

11. Select the default time zone for new Oracle Calendar users. Click **Next** to display the Oracle Calendar Services screen.

12. The Oracle Calendar Services screen appears. Enter the password for the specified user. Click **Next.**

13. If you did not choose to install Oracle Email, the Oracle Calendar Mail Notification screen opens. Enter the fully qualified domain name of your SMTP server. Click **Next** to display the Oracle Calendar Node-ID screen.

14. Specify a unique numerical ID for the Oracle Calendar node between 1 and 49999. Click **Next** to display the Oracle Calendar Master Node screen.

15. If this is your first installation of the Oracle Calendar server, select **Yes** in the Oracle Calendar Master Node screen to make the current installation the master node. You must have one master node on your network in order for Web services and Sync Server to work. Click **Next** to display the Summary screen.

16. Review the settings for your installation. If you need to make any changes, click **Back**. Click **Next** to display the Install screen.

    The progress of the installation displays in a progress bar on this screen. Each component configuration assistant will launch automatically. If a configuration assistant fails, the cause of the failure displays in a window on the screen. Correct the cause of the failure and click **Retry**.

Configuring Oracle Files

17. When the Oracle Files Configuration Assistant screen displays, go to "Configure Oracle Files" on page 14-7 and complete the procedures listed there.

Completing the Middle Tier Installation

18. When the Oracle Files configuration assistant completes, the Configuration Assistants screen displays. Click **Next** to display the End of Installation screen.

19. Take note of the information displayed in the End of Installation screen.

20. Click **Exit** to finish the installation.

21. Use the following commands to restart Oracle Enterprise Manager:

```
%ORACLE_HOME%\bin\emctl stop
%ORACLE_HOME%\bin\emctl start
```

22. To install Oracle Email and complete the installation of the middle tier, go to Chapter 12, "Installing and Configuring Oracle Email".

Installing the Oracle Web Conferencing Document and Voice Conversion Servers

The document conversion server and voice conversion server must be installed on a separate computer from the middle tier. Both servers can be installed on the same computer, or on separate ones. Before installing the document conversion server and voice conversion server, you must install the Oracle9*i* Application Server on each computer on which these components will reside. Follow the same steps for installing the middle-tier, with the following exceptions:

- In the Component Configuration screen, it is not necessary to select Oracle Web Cache

- In the Oracle9*i*AS Infrastructure Use screen, select **No**

- In the Create Instance Name and ias_admin Password screen, create a new instance name. It is not necessary to associate this component with an existing instance.

When you finish installing the middle tier, install the document and voice conversion servers.

1. Insert the Oracle Web Conferencing Voice & Document Conversion Components Release 2 (9.0.4.1.1) for Microsoft Windows 2000 (32-bit) CD-ROM.

2. Install the document conversion server or voice conversion server by selecting the appropriate radio buttons. This selection makes it possible to install one or both of these components. Click **Next**.

3. Select the components you want to install, and click **Next**.

4. Enter the host, port number, and SID of the database that contains the Oracle Real-Time Collaboration repository. Also, enter a password for the Oracle Real-Time Collaboration repository schema `RTC_APP`. Click **Next**.

5. This screen shows the status of the component installation.

Installing Oracle Collaboration Suite Integrated Web Client

Oracle Collaboration Suite provides an integrated Web client for browser-enabled computers. It uses the underlying Oracle9*i* Application Server to provide a secure, single sign-on environment. The integrated Web client can be used to access messages (e-mail, voice mail, and fax), calendar and directory information, Oracle Web Conferencing features, and content stored in Oracle Files.

By default, the Web client is automatically integrated during the component configuration when installing Oracle Collaboration Suite. If you deselect the Web client during installation, you must run the Web client installer.

The Web client installer performs the following tasks:

- Installs the Oracle Collaboration Suite home page

- Adds Web providers and portlets for installed Oracle Collaboration Suite components

- Sets the Oracle Collaboration Suite home page as the default Web page for Oracle Collaboration Suite users

- Grants customized privileges to users of the Oracle Collaboration Suite home page

You can run the Web client installer whenever a new Oracle Collaboration Suite component is installed in order for the component to be available on the Oracle Collaboration Suite home page. The Web client installer is only available for the following Oracle Collaboration Suite components:

- Oracle Calendar

- Oracle Email

- Oracle Files

- Oracle Web Conferencing

- Oracle9*i*AS Wireless

- Oracle Ultra Search

You can invoke the Web client installer using one of the following methods:

- Through the Oracle Universal Installer by inserting the Oracle Collaboration Suite Clients Release 2 (9.0.4.1.1) CD-ROM

- Using the command line

> **See Also:** Security Web Providers document on the Oracle9*i*AS Portal Web site at
>
> `http://portalstudio.oracle.com`

Invoking the Web Client Installer using the Command Line

When you install Oracle Collaboration Suite, you can choose to install selected components instead of the entire suite. If you install an additional component later, then in order for the component to be available on the Oracle Collaboration Suite home page, you must configure the component's URL and run the Web client command line installer.

Configuring the Component's URL

Configure the component's URL by modifying the `webclient.properties` file located in the following directory:

`%ORACLE_HOME%\webclient\classes\oracle\collabsuite\webclient\resources`

The `webclient.properties` contains three URL listings for each Oracle Collaboration Suite component: the help page URL, the application URL, and the provider URL. Replace the token for the host name and the port number in all three URL listings for the component you are installing.

Running the Web Client Command Line Installer

To run the Web client command line installer, enter the following command:

`%ORACLE_HOME%\webclient\bin\webclient_installer.bat`

The preceding command will install the provider and portlets for the new component on the Oracle Collaboration Suite home page.

If you know the Oracle9*i*AS Portal schema name, password, and connect string details, you can also invoke the configuration assistant as follows:

```
%ORACLE_HOME%\webclient\bin\webclient_installer.bat -s schema -p password -c
connect_string
```

Where:

- **schema**: The Oracle database account for Oracle9*i*AS Portal

- **password**: The Oracle9*i*AS Portal account password

- **connect_string**: The connect string to the database instance where the Oracle9*i*AS Portal repository is installed; specified as *host_name*:*port*:*SID*

Manually Setting Up HTTPS with mod_osso on the Middle Tier

The Oracle Collaboration Suite installation program does not automatically configure your system to use `https` with `mod_osso` on a default Oracle Collaboration Suite middle tier. However, you can configure this manually.

The instructions in this section describe how to do this, which is recommended when using Oracle9*i*AS Single Sign-On-protected application requiring `https` on the middle tier.

Before you begin:

- *SSO_HOST* is the fully qualified host name of the Oracle9*i*AS Single Sign-On server

- *MIDTIER_HOST* is the fully qualified host name or IP address of the middle tier

- *MIDTIER_HTTPS_PORT* is the `https` port on the middle tier, usually 4443

After completing the procedure in this section:

- There will be an additional partner application for the preferred `https` port on the middle tier. This partner application will use that `https` port for each of the Oracle9*i*AS Single Sign-On URLs (the Oracle9*i*AS Single Sign-On port must match that of the middle tier's requested URL, which is why these steps are required for `https`).

- There will be two new Oracle HTTP Server configuration files on the middle tier to support this setup: `mod_osso_https.conf` and *MIDTIER_HOST*`.https-osso.conf`

This section contains the following topics:

- Verifying the Setup

- Setting up https with mod_osso

Verifying the Setup

1. Using a Web browser, go to the Oracle9*i*AS Single Sign-On server home page (assuming `http` is on port 7777):

```
http://SSO_HOST:7777/pls/orasso
```

2. Click **Login** and log in with administration privileges.

3. Click **SSO Server Administration**.

4. Click **Administer Partner Applications** and verify the following:

- For best results, the Oracle9*i*AS Single Sign-On server should be listening (and functional) on the `https` port that is to be configured on the middle tier. This will help you avoid having to re-register the `https` port with `mod_osso` when your Oracle9*i*AS Single Sign-On login page becomes SSL-protected.

- There must be only *one* partner application listed for the `http` port on the middle tier (click **Edit** to view the settings: usually 7777 when using Oracle Web Cache)

- The partner application for the `http` port on the middle tier must have the same port number for the all of the following Oracle9*i*AS Single Sign-On URLs:

  Home URL

  Success URL

  Logout URL

- There must not be any partner applications listed for the `https` port on the middle tier (usually 4443 when using Oracle Web Cache)

  If either of these requirements are not met, please refer to Oracle9*i*AS Single Sign-On and Oracle HTTP Server documentation to correct the configuration.

5. Ensure that you can restart the Oracle HTTP Server on the middle tier with no errors:

```
%ORACLE_HOME%\dcm\bin\dcmctl.bat restart -ct ohs
```

Setting up https with mod_osso

> **Note:** Ensure that the `ORACLE_HOME` environment variable is
> correct and that you have permissions to all files. In addition, add
> `%ORACLE_HOME%\bin` to the `PATH` environment variable.

1. Make the following changes to `%ORACLE_HOME%\Apache\Apach\bin`
   `\ssl-osso.bat`:

   - Set `AS_HOST` to the middle tier host name

   - Set `AS_PORT` to the middle tier Oracle Web Cache SSL port (typically 4443)

   - If your Oracle9*i*AS Single Sign-On server does not run on port 1521, replace
     `-port 1521` with the correct number

2. Run `ssl-osso.bat`.

3. Comment out the line with `LoadModule osso_module`
   `modules\ApacheModuleOSSO.dll` within the `mod_osso.conf` and `mod_`
   `osso_https.conf` files, both located in the `%ORACLE_`
   `HOME%\Apache\Apache\conf` directory.

4. In `mod_osso_https.conf`, replace the `OssoConfigFile` directive with the
   following (if it is missing, add it to the `<IfModule mod_osso.c>` section):

   ```
   OssoConfigFile conf\osso\MIDTIER_HOST.https-osso.conf
   ```

5. In `httpd.conf`, add the following directive directly after all of the
   `LoadModule` directives (right after `fastcgi_module` with a default setup):

   ```
   LoadModule osso_module modules/ApacheModuleOSSO.dll
   ```

6. Also in `httpd.conf`, add the following directive directly after the `AddModule`
   directives (right after `AddModule mod_fastcgi.c`):

   ```
   AddModule mod_osso.c
   ```

7. Within the `VirtualHost _default_:4444` directive (or your `https`
   VirtualHost if the port is different) of `httpd.conf`, add the following line:

   ```
   include conf\mod_osso_https.conf
   ```

8. Restart Oracle HTTP Server on the middle tier (you may also use `opmnctl`):

   ```
   dcmctl stop -ct ohs
   ```

```
dcmctl start -ct ohs
```

Additional Documentation

The Oracle Collaboration Suite Documentation Library CD-ROM is included in your Oracle Collaboration Suite CD Pack. For information about accessing the documentation from the CD-ROM, refer to *Oracle Collaboration Suite Documentation Roadmap.*

7

Installing Oracle Collaboration Suite on a Single Computer

In situations where Oracle Collaboration Suite is deployed in an enterprise with a small number of users and where scalability is not a consideration, installing Oracle Collaboration Suite on a single computer in a Windows environment is a viable option. Oracle Corporation recommends, however, that Oracle Collaboration Suite be installed on a distributed architecture.

Installing Oracle Collaboration Suite on a single computer simply means that all three tiers of Oracle Collaboration Suite—information storage, infrastructure, and the middle tier—are installed on a single computer.

The installation is performed using a single DVD-ROM, as opposed to a CD-ROM for each tier.

Installing Oracle Collaboration Suite on a single computer is no different than installing it on several. This chapter discusses the few differences between the two installations and provides step by step procedures for installing Oracle Collaboration Suite on a single computer.

This chapter contains these topics:

- Single-Computer Installation Overview
- Preinstallation Requirements
- Installing Oracle Collaboration Suite
- Postinstallation Tasks

Single-Computer Installation Overview

While installing Oracle Collaboration Suite on a single computer is basically the same as installing on several, there are a few differences between the two procedures, including

- Using a single DVD-ROM to successively install the three tiers

- The information storage database is installed first, followed by the infrastructure, and the middle tier

- Some options are defaulted for the single-computer installation to reduce the complexity of the overall installation

Preinstallation Requirements

Installing and configuring all three tiers of Oracle Collaboration Suite on a single system necessitates disk and memory requirements different from those of a multi-system installation. Table 7–1 lists the various hardware requirements for installing Oracle Collaboration Suite on a single computer.

Table 7–1   Hardware Requirements for Installing Oracle Collaboration Suite on a Single Computer

Requirement	Value
CPU	Minimum: 300 MHz
	Recommended: 1 GHz, or faster
Memory	Minimum: 1 GB
Swap	Minimum: 1 GB
Disk Space	Minimum: 9 GB
Temp Space	Minimum: 400 MB

Because the amount of installation data is substantial, the Oracle Collaboration Suite single-computer installation is released only on DVD-ROM. Therefore, a standard DVD-ROM drive is required to perform a single-computer installation.

> **See Also:** Chapter 2, "Preparing for Installation" to ensure that all other preinstallation requirements are met

Installing Oracle Collaboration Suite

This section guides you through the installation process for Oracle Collaboration Suite. While the installation process is continuous, the section is broken down into three parts, one each for the information storage database, infrastructure, and middle tier.

To install Oracle Collaboration Suite on a single computer:

1. Insert the Oracle Collaboration Suite (32-bit) Release 2 (9.0.4.1.1) for Microsoft Windows Single-Box Installation DVD-ROM into the DVD-ROM drive.

   The Autorun window automatically displays. If the Autorun window does not display:

   a. Choose **Start** > **Run**.

   b. Enter the following:

      DRIVE_LETTER:\autorun\autorun.exe

2. Click **Install** to display the Welcome screen of the Oracle Universal Installer.

3. Click **Next** to display the Specify File Locations screen.

   - In the **Source** section, accept the default path

   - In the **Destination** section, specify a base directory name in the **Name** field. The name must not exceed 12 characters and the directory must have at least 9 GB of available space into which Oracle Collaboration Suite will be installed. Files will be copied into three sub-directories of the base directory specified in the Specify File Locations screen, as follows:

     – *base_directory*\stg: The information storage Oracle home

     – *base_directory*\infra: The infrastructure Oracle home

     – *base_directory*\mtier: The middle tier Oracle home

   - In the **Path** field of the **Destination** section, specify the full path to the base directory. This will be the %ORACLE_HOME%.

     An Oracle home name will be assigned for each of the three tiers based on the value entered in the **Name** field, as follows:

     – %ORACLE_HOME%_stg: The information storage Oracle home name

     – %ORACLE_HOME%_inf: The infrastructure Oracle home name

     – %ORACLE_HOME%_mt: The information storage Oracle home name

4. Click **Next** to display the Language Selection screen.

   Select from the list languages supported by Oracle Collaboration Suite any languages you want supported by your installation of Oracle Collaboration Suite. Click **Next**.

   Notes:

   - Languages selected here enable users to access your installation of Oracle Collaboration Suite in their native language, as long as that language is supported by Oracle Collaboration Suite.

   - Supported languages cannot be added after the installation is complete. In order to add other languages, you must completely reinstall Oracle Collaboration Suite.

   ---

5. Click **Next** to display the Oracle Collaboration Suite Single-box Installation Methodology screen.

   This screen is for informational purposes, only, regarding the methodology of installing Oracle Collaboration Suite on a single computer.

Installing the Information Storage Database

6. Click **Next** to begin the installation.

   The Oracle Universal Installer displays a progress screen before the Database Identification screen displays.

7. Enter the **Global Database Name** and **SID**. If required, change the default SID.

8. Click **Next** to display the Database File Location screen.

9. Accept the default and click **Next** to display the Summary screen.

10. Click **Install** to begin the information storage database installation.

    Installation commences and the progress is shown. After files are copied, the information storage Oracle home is configured.

    Another progress screen displays showing the progress of various configuration assistants as they configure the information storage Oracle home and create the information storage database instance.

    The Database Configuration Assistant screen displays.

11. Enter new passwords for the SYS and SYSTEM users of the information storage database.

12. Click **Password Management**.

   Select all checkboxes on the screen after verifying that your computer meets the minimum pre-installation requirements.

13. Locate the CTXSYS account and unlock it by clicking the box in the **Lock Account** column.

14. Enter and confirm a new CTXSYS password.

15. Click **OK** to display the Confirm Pre-Install Requirements screen.

16. Click **Next** to display the Create Instance Name and ias_admin Password screen.

   The installation of the information storage database is complete.

Installing the Oracle9*i*AS Infrastructure

17. Choose an **Instance Name** and choose and confirm an **ias_admin Password** in the Create Instance Name and ias_admin Password screen.

   > **Notes:**
   >
   > - If you have previously installed Oracle9*i*AS on the same system into which you are installing Oracle Collaboration Suite, you will be prompted to enter the ias_admin password for the Oracle Enterprise Manager Web Site that is actively managing all Oracle9*i*AS instances on the system because there can be only one active management node on the system.
   >
   > - The **Instance Name** is not a database instance name but a name for the Oracle9*i*AS infrastructure instance.
   >
   > - The **ias_admin password** chosen here will also be the Oracle Internet Directory administrator's password for the infrastructure.

18. Click **Next** to display the Guest Account Password screen.

   Enter and confirm a guest account password.

19. Click **Next** to display the Oracle9*i*AS Infrastructure Summary screen.

20. Click Install to begin the infrastructure installation.

> **Note:** Unlike infrastructure installations on multiple computers, you cannot configure identity management services, such as Oracle Internet Directory and Oracle9*i*AS Single Sign-On, separately from metadata services used by Oracle Collaboration Suite middle tiers. Nor can you distribute identity management services across multiple systems in the enterprise, such as configuring Oracle Internet Directory separately from Oracle9*i*AS Single Sign-On. Instead, when performing an installation on a single computer, both identity management and metadata services are configured automatically for you on the system, and are available for use by the Oracle Collaboration Suite middle tier that will be configured after the infrastructure installation is complete.

Installation commences and the progress is shown. After files are copied, the infrastructure Oracle home is configured.

Another progress screen displays showing the progress of various configuration assistants as they configure the infrastructure Oracle home. Identity management and metadata services are configured automatically with no input required.

The Component Configuration screen displays.

Installing the Middle Tier

21. Select the components you want to configure and click **Next** to display the Existing Oracle9*i*AS Single Sign-On screen.

Enter the host name and port number for your existing instance of Oracle9*i*AS Single Sign-On.

> **Note:** Because this is an installation on a single computer, and
> because Oracle9*i*AS Single Sign-On was automatically configured
> during the infrastructure installation, enter the fully qualified host
> name of the computer on which this installation is being
> performed. You can verify the port number in the following file:
>
> ```
> %ORACLE_HOME%\infra\install\portlist.ini
> ```
>
> Locate the [Ports] section of the portlist.ini file. The value
> for the Oracle HTTP Server port is the value to enter in the Single
> Sign-On Specification screen.

22. Click **Next** to display the Oracle Internet Directory screen.

    Accept the default user name and specify the ias_admin password used in step
    17 in the "Installing the Oracle9iAS Infrastructure" section.

23. Click **Next** to display the Create Instance Name screen.

    Specify a unique name for the middle tier instance and enter the password for
    the ias_admin user you used during the infrastructure installation.

24. Click **Next** to display the Oracle Real-Time Collaboration Repository Location
    screen. Enter the required information in all the fields.

    - Enter the host name of the computer in the **Host** field

    - Enter the listener port (typically 1521) in the **Port** field

    - Enter the SID you entered in step 7 in the "Installing the Information
      Storage Database" section

    - Accept the default **DBA Username**

    - Enter the DBA Password chosen in step 11 in the "Installing the Information
      Storage Database" section

25. Click **Next** to display the Oracle Real-Time Collaboration Repository Details
    screen.

    Choose and confirm passwords for the RTC and RTC_APP schemas.

26. After entering the information, click **Next** to display the Oracle Calendar
    Default Time Zone screen.

27. Select the default time zone for new Oracle Calendar users. Click **Next** to display the Oracle Calendar Services screen.

28. The Oracle Calendar Services screen appears. Enter the password for the specified user. Click **Next.**

29. If you did not choose to install Oracle Email, the Oracle Calendar Mail Notification screen opens. Enter the fully qualified domain name of your SMTP server. Click **Next** to display the Oracle Calendar Node-ID screen.

30. Specify a unique numerical ID for the Oracle Calendar node between 1 and 49999. Click **Next** to display the Oracle Calendar Master Node screen.

31. Select **Yes** in the Oracle Calendar Master Node screen to make the current installation the master node. You must have one master node on your network in order for Web services and Sync Server to work.

32. Click **Next** to display the Summary screen.

33. Click **Install** to begin installing the middle tier.

Installation commences and the progress is shown. After files are copied, the middle tier Oracle home is configured.

Another progress screen displays showing the progress of various configuration assistants as they configure the middle tier Oracle home.

Configuring Oracle Files
If you chose to configure Oracle Files, the Oracle Files configuration assistant launches during the configuration of the middle tier.

> **See Also:** Chapter 14, "Configuring Oracle Files" for detailed instructions regarding the Oracle Files configuration assistant

---

Notes:

- When prompted by the Oracle Files configuration assistant for information storage database or Oracle Internet Directory location information, indicate that these services reside locally.

- In the **Database Host Name** field of the Database Selection Screen of the Oracle Files configuration assistant, enter the name of the information storage database that you entered in the Database Identification screen in step 7 in the "Installing the Information Storage Database"section.

- In the Website Information Screen of the Oracle Files configuration assistant, enter the host name and port number of the Oracle HTTP Server that was installed and configured in step 21 in the "Installing the Middle Tier" section.

- In the Oracle Internet Directory Login Screen of the Oracle Files configuration assistant, enter the local host name in the **Server** field and the password that you entered in step 17 in the "Installing the Oracle9iAS Infrastructure" section in the **Super User Password** field. Enter the port number assigned to the `Oracle Internet Directory (non-SSL)` property in the `[Ports]` section of the following file:

  base_directory\mtier\install\protlist.ini

Once the Oracle Files configuration assistant completes, the installation of the Oracle Collaboration Suite middle tier proceeds.

Configuring Oracle Calendar

If you chose to configure Oracle Calendar, the Oracle Calendar configuration assistant launches during the configuration of the middle tier.

> **See Also:** Chapter 11, "Configuring Oracle Calendar" for detailed instructions regarding the Oracle Calendar configuration assistant

> **Note:** When prompted by the Oracle Calendar configuration assistant for the Oracle Internet Directory password, enter the password used in step 17 in the "Installing the Oracle9iAS Infrastructure" section.

Once the Oracle Calendar configuration assistant completes, the installation of the Oracle Collaboration Suite middle tier proceeds with the rest of the middle tier configuration until the End of Installation screen displays.

34. The **Exit** button is disabled. To exit the installation close the window and click **Yes** when prompted by the Oracle Universal Installer.

Postinstallation Tasks

See the *Oracle Collaboration Suite Release Notes* for resolving issues regarding Oracle Files and Oracle Email being installed on the same host.

See the following sections of this document for further postinstallation tasks:

- "Installing the Oracle Web Conferencing Document and Voice Conversion Servers" on page 6-13
- "Installing Oracle Collaboration Suite Integrated Web Client" on page 6-14
- "Manually Setting Up HTTPS with mod_osso on the Middle Tier" on page 6-16

See the various component configuration chapters in this document to complete the installation of Oracle Collaboration Suite.

8

Installing and Configuring Oracle Voicemail & Fax

This chapter discusses and explains how to install the Oracle Voicemail & Fax system.

This chapter contains the following topics:

- Preinstallation Checklist

- Installation Requirements

- Installing Oracle Voicemail & Fax Telephony Server

- Running the Oracle Voicemail & Fax Configuration Assistant on the Middle Tier

- Adding an Oracle Voicemail & Fax Telephony Server

- Adding an Additional Information Storage Database to Oracle Collaboration Suite

Preinstallation Checklist

This section describes preinstallation tasks that must be performed prior to installing Oracle Voicemail & Fax.

Perform the following tasks prior to installing Oracle Voicemail & Fax:

1. Modify the Windows Service named CT Media or Intel NetMerge CC Server so that it runs under the context of the user performing the installation. The user performing the installation should be in the `CTMUsers` group.

2. Restart the CT Media or NetMerge server and bring it up to level 5 before installation.

Installation Requirements

Installation of Oracle Voicemail & Fax consists of two tasks:

- Installing the Oracle Voicemail & Fax Telephony Server on a Windows 2000 system
- Running the Oracle Voicemail & Fax Configuration Assistant on the middle tier

Prior to installing Oracle Voicemail & Fax you must have the following:

- **Oracle Collaboration Suite with Oracle Email**: Installed, configured, and running on a system other than that where Oracle Voicemail & Fax is installed
- **Windows 2000 Resource Kit**
- **CT Media Server** or **Intel NetMerge Converged Communication Server**
- **S.410 SDK V1.0 for CT Media 2.1**

Installing Oracle Voicemail & Fax Telephony Server

Installing the Oracle Voicemail & Fax Telephony Server is a two part process. The first part of the process installs the Oracle9*i*AS core and the second part installs the Oracle Voicemail & Fax code.

> **Notes:**
>
> - Both parts of the telephony server installation must be performed using a user name that belongs to the `CTMUser` User Group and Administrators Group.
>
> - The running user name of the CT Media or NetMerge servers must be the same as the user name running the installation.
>
>   To change the running user name, select **Start** > **Settings** > **Control Panel** > **Adminstrative Tools** > **Services**. Right click the service. Choose **Properties**. Click the **Log On** tab and change the **Log on as** option.

This section contains these topics:

- Installing the Oracle9iAS Core
- Installing the Oracle Voicemail & Fax Code

Installing the Oracle9*i*AS Core

To install the Oracle9*i*AS core:

1. Insert the Oracle Voicemail & Fax Release 2 (9.0.4.1.0) for Microsoft Windows 2000 (32-bit) CD-ROM.

2. Run `install.bat` located in the `\install\win32` directory to display the Welcome screen of the Oracle Universal Installer.

3. Click **Next** to display the File Locations screen. In the **Destination** section, enter the name of an Oracle home (or select an existing Oracle home from the drop-down list) in the **Name** field.

4. Enter the path to the Oracle home in the **Path** field.

   You can also click **Browse** to locate the Oracle home path.

5. Click **Next** to display the Oracle Internet Directory screen.

6. Enter a user name and a password. The default user name is `cn=orcladmin`.

7. Click **Next** to display the Create Instance Name screen.

8. Enter a name for the Oracle9*i*AS instance in the **Instance Name** field.

9. Enter the ias_admin password for the current host in the **ias_admin Password** field.

10. Click **Next** to display the Summary screen.

11. Click **Install** to display the End of Installation screen.

12. Click **Exit** to display the Exit screen.

13. Select **Yes, restart the system now** and click **OK** to restart the system.

    After the system restarts, the second part of the installation automatically begins.

Installing the Oracle Voicemail & Fax Code

This part of the installation does the following:

- All of the Oracle Voicemail & Fax files are copied to the telephony server

- Prompts are added to the CTMedia Container

- The `sc_vsto.cfg` file is created to configure Oracle Voicemail & Fax Conatiner

- The `rmid`, `rmiregistry`, and `UMProcessMgrService` processes are installed

- The Oracle Voicemail & Fax Media Services Profile is loaded into the CT Media Server. Changes are made to `SCR_AppProfile`, `SCR_ASIMap`, and `SCR_RoutingRules`.

1. Upon completion of the system restart, the Mailstore Selection screen displays.

2. Select an information store from the **Mailstore Selection** drop-down list.

3. If you select an information store other than **<none>** from the **Mailstore Selection** drop-down list, you will be asked to provide a UM password. The default is `welcome`.

   Otherwise the **Password for DB User 'um'** field is inactive.

4. Click **Next** to display the Summary screen.

5. Click **Install** to display the End of Installation screen.

6. Click **Exit**.

   Proceed to the next section to continue the installation.

Running the Oracle Voicemail & Fax Configuration Assistant on the Middle Tier

> **Note:** If you are only adding an additional telephony server to an existing installation of Oracle Collaboration Suite, proceed to "Adding an Oracle Voicemail & Fax Telephony Server" on page 8-6.

The Oracle Voicemail & Fax configuration assistant performs the following tasks:

- Loads Oracle Voicemail & Fax middle tier process entries into Oracle Internet Directory

- Loads all Oracle Voicemail & Fax entries into `targets.xml`, `consoleConfig.xml` for integration with EMD

- Loads the UM schema into the information storage database

1. Run `uminfra_install.bat` on the middle tier system, located in the `%ORACLE_HOME%\um\uminfra` directory to display the Mailstore Selection screen of the configuration assistant.

2. Select an information store from the **Mailstore Selection** drop-down list.

   If you select an information store other than **<none>** from the **Mailstore Selection** drop-down list, you will be asked to provide SYSTEM, ES_MAIL, and UM passwords. The default values are as follows:

   - **SYSTEM**: manager

   - **ES_MAIL**: es

   - **UM**: welcome

   > **Note:** If you created a new SYSTEM password during the creation of the information storage database, and new ES_MAIL and UM passwords during the Oracle Email installation, you must use these new passwords.

3. Click **Next** and select the server where Oracle Voicemail & Fax is installed to be associated with the middle tier.

4. Click **Next** to display the End of Installation screen.

5. Click **Exit**.

6. Restart the Oracle Voicemail & Fax Windows 2000 telephony server upon completion of the configuration assistant.

> **See Also:** *Oracle Voicemail & Fax Administrator's Guide* for further configuration information

This concludes the installation of Oracle Voicemail & Fax. The last two sections of this chapter apply only if you are adding an additional voice mail server or information store.

Adding an Oracle Voicemail & Fax Telephony Server

To add additional telephony servers:

1. Follow the procedures outlined in "Installing Oracle Voicemail & Fax Telephony Server" on page 8-2.

2. Execute `%ORACLE_HOME%\um\uminfra\uminfra_install.bat` on the middle tier.

3. Select **None** for the information store.

4. Select the voice mail server you want to be managed by this Oracle Enterprise Manager Daemon server.

Adding an Additional Information Storage Database to Oracle Collaboration Suite

Any time an additional information storage database is added to the Oracle Collaboration Suite system, you must rerun the Oracle Voicemail & Fax configuration assistant and update the `sc_vsto.cfg` file.

Rerunning the Oracle Voicemail & Fax configuration assistant does the following:

- Creates the UM schema on the information storage database

- Creates the Advanced Queue Message Waiting Indicator process

To set up the new information storage database for Oracle Voicemail & Fax:

1. Execute `%ORACLE_HOME%\um\uminfra\uminfra_install.bat` on the middle tier.

2. Select the new information storage database and supply the necessary passwords.

3. Select **None** for the voice mail server.

4. On each telephony server the `sc_vsto.cfg` file must be updated with the new information storage information.

   Example 8–1 shows the `sc_vsto.cfg` file before it is updated.

Example 8–1 sc_vsto.cfg File

```
{
 Container_ORCL_VPIM: {
    Container_DLGC_DLLName: "orclcont.dll"
    Container_DLGC_Initialize: "StorageInitialize"
    Container_DLGC_Shutdown: "StorageShutdown"
    Container_DLGC_Parameters: {
      Container_ORCL_ESNode:"v2store.v2store"
      Container_ORCL_DBSet: (
          {
               Container_ORCL_DBName: "v2store.v2store"
               Container_ORCL_PoolMax: 10
               Container_ORCL_PoolMin: 1
               Container_ORCL_DBUserid: "um"
               Container_ORCL_DBPassword:
"0495022e8cbe976b4e9156aeff710fdbe6dfeac30dff5ddd81"
               Container_ORCL_DBConnect:
"(DESCRIPTION=(ADDRESS_LIST=(ADDRESS=(PROTOCOL=TCP)(HOST=thintest.us.oracle.com)
(PORT=1521)))(CONNECT_DATA=(SERVICE_NAME=v2store.v2store)))"
          }
      )
      }
 }

   Container_DLGC_FileStrategy: {
      Container_DLGC_DLLName: "std_sto.dll"
      Container_DLGC_Initialize: "StorageInitialize"
      Container_DLGC_Shutdown: "StorageShutdown"
      Container_DLGC_Parameters: {      }
   }
}
```

   Example 8–2 shows an updated `sc_vsto.cfg` file.

Example 8–2   Updated sc_vsto.cfg File

```
{
 Container_ORCL_VPIM: {
    Container_DLGC_DLLName: "orclcont.dll"
    Container_DLGC_Initialize: "StorageInitialize"
    Container_DLGC_Shutdown: "StorageShutdown"
    Container_DLGC_Parameters: {
      Container_ORCL_ESNode:"v2store.v2store"
      Container_ORCL_DBSet: (
          {
                Container_ORCL_DBName: "v2store.v2store"
                Container_ORCL_PoolMax: 10
                Container_ORCL_PoolMin: 1
                Container_ORCL_DBUserid: "um"
                Container_ORCL_DBPassword:
"0495022e8cbe976b4e9156aeff710fdbe6dfeac30dff5ddd81"
                Container_ORCL_DBConnect:
"(DESCRIPTION=(ADDRESS_LIST=(ADDRESS=(PROTOCOL=TCP)(HOST=database_host_name)
(PORT=1521)))(CONNECT_DATA=(SERVICE_NAME=v2store.v2store)))"
          }
          {
                Container_ORCL_DBName: "2nd_information_storage_database_name"
                Container_ORCL_PoolMax: 10
                Container_ORCL_PoolMin: 1
                Container_ORCL_DBUserid: "um"
                Container_ORCL_DBPassword:
"xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx"
                Container_ORCL_DBConnect:
"(DESCRIPTION=(ADDRESS_LIST=(ADDRESS=(PROTOCOL=TCP)(HOST=2nd_database_host_name)
(PORT=1521)))(CONNECT_DATA=(SERVICE_NAME=2nd_information_storage_database_
name)))"
          }
        )
        }
 }

   Container_DLGC_FileStrategy: {
      Container_DLGC_DLLName: "std_sto.dll"
      Container_DLGC_Initialize: "StorageInitialize"
      Container_DLGC_Shutdown: "StorageShutdown"
      Container_DLGC_Parameters: {      }
   }
}
```

In the preceding example, the parameters are defined as follows:

- **ORCL_DBName**: The global database name, which can be retrieved from Oracle Internet Directory

- **PoolMax**, **PoolMin**: The values depend on the system. The default values are 10 and 1

- **DBUserid**: Always um

- **DBPassword**: An encrypted string of the um user password. Obtain this password by executing the following program:

  ```
  %ORACLE_HOME%\um\scripts\encrypt.exe um_password
  ```

  The program will output an encrypted string, which the user can copy and paste into the file.

- **DBConnect**: The connect string of the new database, which can be retrieved from LDAP

9

Silent and Non-Interactive Installation

This chapter guides you through silent and non-interactive installation of Oracle Collaboration Suite.

This chapter contains these topics:

- Introduction to Non-Interactive Installations
- Installation Requirements
- Selecting a Response File
- Editing the Response File
- Specifying a Response File
- Error Handling
- Deinstallation
- Using Configuration Assistants in Non-Interactive Mode

Introduction to Non-Interactive Installations

Oracle Collaboration Suite features two non-interacting methods of installation:

- Silent Installation
- Non-Interactive Installation

Silent Installation

Silent installation of Oracle Collaboration Suite is accomplished by supplying Oracle Universal Installer with a response file and specifying the `-silent` flag. Oracle Universal Installer uses variables and values contained in a text file, called a response file, to provide answers to all of its user prompts. You include responses for all of the prompts in the response file. Silent installation displays no graphical output.

Use silent installation of Oracle Collaboration Suite when you want similar installations on more than one computer. Additionally, use silent installation when performing the Oracle Collaboration Suite installation from a remote location using the command line. Silent installation eliminates the need to monitor the Oracle Collaboration Suite installation because there is no graphical output and no input by the user.

Non-Interactive Installation

Non-interactive installation of Oracle Collaboration Suite is accomplished by supplying Oracle Universal Installer with a response file, but without specifying the `-silent` flag. Oracle Universal Installer uses variables and values contained in a text file, called a response file, to provide answers to some or all of its user prompts. Oracle Universal Installer provides graphical output. If you have not provided responses to all of its prompts, then you may need to enter information during the installation.

> **See Also:** "Specifying a Response File" on page 9-4 for information about executing a response file

Installation Requirements

For a complete list of installation requirements, refer to Chapter 2, "Preparing for Installation".

Selecting a Response File

The Oracle Collaboration Suite CD Pack provides the Oracle Universal Installer response files for the three installations shown in Table 9–1.

Table 9–1   Response Files

For This Installation...	The Filename Is...
Oracle9*i*AS infrastructure	infrastructure.rsp
Oracle Collaboration Suite information storage	storage.rsp
This installation also includes response files for the Oracle Net configuration assistant (netca.rsp) and the database configuration assistant (dbca.rsp).	
Oracle Collaboration Suite middle tier	midtier.rsp
This installation also includes a response file for the Oracle Files configuration assistant (silentconfig.properties).	

Response files are located in the \response directory located at the root of the first CD-ROM in the CD-ROM set of each of the three installations. You must edit the response file to satisfy your silent or non-interactive installation requirements. To use a response file, first copy it from the CD-ROM to your system.

For example:

1. Go to the \response directory (for example, on the first CD-ROM of the Oracle9*i*AS Infrastructure installation CD-ROM set).

2. Copy the infrastructure.rsp file to your system hard drive.

Editing the Response File

Use any text editor to edit the response file to include information specific for your system. The response file text identifies information that you must provide.

You must specify values for variables in your response file. Each variable listed in the response file is associated with a comment. The comment identifies the variable type. For example:

```
string = "Sample Value"
Boolean = True or False
Number = 1000
StringList = {"StringValue 1", "String Value 2"}
```

The values that are given as `<Value Required>` must be specified for silent installation.

Remove the comment from the variable values in the response file before starting the Oracle Collaboration Suite installation.

Specifying a Response File

Before you specify a response file, ensure that you have properly configured the file. Refer to the previous section for more information.

> **See Also:**
> - "Editing the Response File" on page 9-3
> - "Non-Interactive Configuration of Oracle Files" on page 14-29
> - "Starting Oracle Universal Installer" on page 5-4
> - "Installation Session Log Files" on page 5-6

To make Oracle Universal Installer use the response file at installation time, specify the location of the response file as a parameter when starting Oracle Universal Installer:

```
C:\> setup.exe -responseFile absolute_path_and_filename
```

To perform a completely silent installation session, use the -silent parameter:

```
C:\> setup.exe -silent -responseFile absolute_path_and_filename
```

The success or failure of the non-interactive installation is logged in `installActions.log`. The success or failure of the silent installation is logged in `silentInstall.log`. The log files are created in the `SYSTEM_DRIVE:\Program Files\Oracle\Inventory\logs` directory during installation.

> **Important:**   During installation, these response files may be
> copied to subdirectories under Oracle home in order to install
> some Oracle Collaboration Suite components. When the
> installation completes successfully, these copies are removed. If
> the installation fails, however, these copies may not be removed.
> If you have provided passwords or other sensitive information in
> your response files, it is recommended that you delete any copies
> of the response files that remain in your file system.

Error Handling

The success or failure of a silent or non-interactive installation is logged in the
`silentInstall.log` file. This file is created in the `oraInventory` directory.

Values for variables that are of the wrong context, format, or type are treated as if no
value were specified. Variables that are outside any section are ignored.

If you attempt a silent or non-interactive installation with an incorrect or incomplete
response file, or Oracle Universal Installer encounters an error, such as insufficient
disk space, the installation fails.

If you attempt a non-interactive installation without specifying a response file, the
installation fails.

Deinstallation

If your silent or non-interactive installation fails, you must completely deinstall any
files remaining from your Oracle Collaboration Suite installation attempt.

> **See Also:**   Chapter 10, "Deinstalling Oracle Collaboration Suite
> Components"

Using Configuration Assistants in Non-Interactive Mode

To use a configuration assistant in non-interactive mode, do one of the following:

- Configure an Oracle Universal Installer response file to start the non-interactive
  configuration assistant.

- Run the configuration assistant in standalone mode using the following
  command format:

```
prompt> assistant_name [-silent] -responseFile filename
```

where `assistant_name` is the configuration assistant that you want to run and `filename` is the response file for that assistant.

If you perform an Oracle Collaboration Suite information storage installation in non-interactive mode, then Oracle Net configuration assistant does not configure your system at the end of the installation. After the installation, run the Oracle Net configuration with the Oracle Net configuration assistant by executing the `netca` command from the Oracle home directory or use the `netca.rsp` response file.

Note: Oracle Universal Installer or a configuration assistant fails if you attempt a non-interactive session without configuring a response file. See "Response File Error Handling" on page 9-6 for more information about troubleshooting a failed non-interactive installation.

See Also:

- "Non-Interactive Configuration of Oracle Files" on page 14-29

- *Oracle Universal Installer Concepts Guide* for more information about preparing and using non-interactive installation and configuration assistant response file scripts. This manual is available on Oracle Technology Network at

   http://otn.oracle.com

- Oracle*MetaLink* if you are an Oracle Support customer. You can find new bulletins and responses to questions about non-interactive installation and configuration at the following Web site:

   http://metalink.oracle.com

Response File Error Handling

Oracle Universal Installer or the configuration assistant validates the response file at runtime. If the validation fails, the non-interactive installation or configuration process ends. Oracle Universal Installer treats values for parameters that are of the wrong context, format, or type as if no value was specified in the file. Variables that are outside any section are also ignored.

Information about a failure is recorded in the installation session's log file.

> **See Also:** "Installation Session Log Files" on page 5-6 for
> information on the log file that the Oracle Universal Installer
> creates to keep an inventory of components that it installs on your
> system

10

Deinstalling Oracle Collaboration Suite Components

This chapter describes how to deinstall Oracle Collaboration Suite components.

This chapter contains these topics:

- Deinstallation Overview
- Preparing to Deinstall Oracle Components
- Deinstalling Oracle Components

> **Notes:**
>
> - Stop all Oracle services and processes before starting the deinstallation process.
>
> - Oracle Universal Installer does not permit custom deinstallation of select components or Oracle Collaboration Suite instances. Confirm deinstallation objectives before starting deinstallation.

Deinstallation Overview

Oracle Universal Installer does not allow reinstallation of Oracle Collaboration Suite over an installed version. To reinstall Oracle Collaboration Suite over the same version, deinstall and then install the product.

To successfully deinstall Oracle Collaboration Suite from your host, Oracle Corporation recommends deinstalling all secondary (or subsequent) Oracle Collaboration Suite installations before you deinstall the primary (or first) installation.

Oracle Email must be deinstalled before deinstalling Oracle Collaboration Suite.

Preparing to Deinstall Oracle Components

1. Run the following script from each middle tier Oracle home before deinstalling the middle tier:

   ```
   %ORACLE_HOME%\oes\bin\removemidtierfromoid.bat
   ```

   This script removes all e-mail process targets, process instances, and their references from Oracle Internet Directory.

2. Run SQL*Plus on the middle tier if the information storage needs to be deinstalled. Connect to the information storage database as SYSTEM, and run the following script:

   ```
   %ORACLE_HOME%\oes\install\sql\dropschema.sql;
   ```

3. Execute the following command from any Oracle home to delete mail store entries from Oracle Internet Directory:

   ```
   %ORACLE_HOME%\bin\ldapdelete -v -h oid_host -p oid_port
   -Dcn=umadmin,cn=EMailServerContainer,cn=Products,cn=OracleContext -w
   @ password "cn=global_db_name,cn=mailstores,cn=um
   _system,cn=EMailServerContainer,cn=Products,cn=OracleContext"
   ```

   where,

   - *oid_host* is the infrastructure Oracle Internet Directory host name

   - *oid_port* is the infrastructure Oracle Internet Directory port number

   - *password* is the umadmin user password

   - *global_db_name* is the global database name of the mail store database

4. Deinstall the Oracle Collaboration Suite middle tier software using Oracle Universal Installer.

> **See Also:** "Starting Oracle Universal Installer" on page 5-4

Deinstalling Oracle Components

1. Start the Oracle Universal Installer. See "Starting Oracle Universal Installer" on page 5-4.

   The Welcome window appears.

2. Click **Deinstall Products**.

   The Inventory window appears. This window displays all the components installed in Oracle home.

3. Review the installations and select the Oracle home you are deinstalling.

4. Click **Remove**.

   The Confirmation window appears. This window lists all the components you just selected for deinstallation.

5. Scroll down the Confirmation window to verify the components selected for deinstallation.

6. Click **Yes**.

7. If you have multiple Oracle9*i*AS infrastructures installed, and select a secondary Oracle9*i*AS infrastructure installation, the Oracle Universal Installer removes it. If you select the primary infrastructure installation, the Oracle9*i*AS Administration Service window appears. Your next action depends on how many Oracle9*i*AS infrastructures you currently have installed on the host.

8. If you currently have only one infrastructure installed on the host, the Oracle9*i*AS Administration Service window displays the following:

   ```
   The active Oracle9iAS Administration Service is in %ORACLE_HOME%. There are
   no other Administration Services available.
   ```

9. Click **OK** to continue.

10. If you currently have multiple infrastructures installed on the host, the Oracle9*i*AS Administration Service window displays the following:

    ```
    The active Oracle9iAS Administration Service is in %ORACLE_HOME%. You may
    select one of the Administration Services to become the active one.
    ```

Select one of the remaining infrastructures. It becomes the primary installation and the new location for the Oracle9*i*AS Administration Service.

11. Click **OK** to continue.

> **Notes:**
>
> - If you deinstall a component, then all of its dependent components and files are also deinstalled.
>
> - Oracle Universal Installer does not deinstall all the files and directories during deinstallation. Remaining files and directories must be removed manually.

Part III

Oracle Collaboration Suite Component Configuration

Part III contains detailed post-installation instructions that you must perform in order to finish configuring the components of Oracle Collaboration Suite.

Part III contains the following chapters:

- Chapter 11, "Configuring Oracle Calendar"

- Chapter 12, "Installing and Configuring Oracle Email"

- Chapter 13, "Configuring Search Features"

- Chapter 14, "Configuring Oracle Files"

- Chapter 15, "Configuring Oracle Web Conferencing"

> **Note:** Oracle9*i*AS Wireless includes built-in applications that must be configured after installation. The underlying Oracle9*i*AS Wireless stack, then the applications must be configured before use.

> **See Also:** *Oracle9iAS Wireless Administrator's Guide* for information on configuring these applications and other Oracle9*i*AS Wireless components

11

Configuring Oracle Calendar

This chapter discusses how to configure Oracle Calendar.

This chapter contains the following topics:

- Configuring the Oracle Calendar Server
- Starting and Configuring the Oracle Calendar Application System
- Installing the Oracle Calendar Resource Kit
- Provisioning the orclguest Account with Multiple Instances of Oracle Calendar
- Enabling SSL Requests from the Oracle Calendar Portlet

Configuring the Oracle Calendar Server

This section describes configuration changes you might need to make to the Oracle Calendar server after installing and, as the case may be, after upgrading.

This section contains the following topics:

- Checking Port Values
- Opening the Oracle Calendar Administrator
- Setting up Resource Approval
- Enabling Wireless Capability
- Working with the Windows PATH Variable

Checking Port Values

The default ports used by the Oracle Calendar server are:

Port	Function
5730	Calendar Engine
5731	Synchronous network connector
5732	Directory access server
5734	Calendar server manager

If these ports are already in use, the installation will use the next available port. Please verify `unison.ini` for the values used by the Oracle Calendar server.

Opening the Oracle Calendar Administrator

Use the Oracle Calendar Administrator to manage users, events, resources, and public agendas, as well as perform administrative tasks. By default, you can open it at the following URL:

```
https://Web_server_host:https_port/ocad-bin/ocad.cgi?object=nodeadm
```

To log on to the Oracle Calendar Administrator, enter the Oracle Calendar administrative password you chose during installation. Do not enter a user name with this password.

> **See Also:** *Oracle Calendar Administrator's Guide* for information on how to use the Oracle Calendar Administrator

Setting up Resource Approval

If you intend to use resource approval, you need to set it up as follows:

1. Create or modify a resource with `NOTIFY-APPROVER` set to `TRUE` and `APPROVER-EMAIL` set to e-mail of the approver. For example, in `ocal\bin`:

   ```
   uniuser -resource -add R=Resource_Approval/NOTIFY-APPROVER=TRUE
   /APPROVER-EMAIL=approver.email@oracle.com/psw=password -n 4313 -p test1
   ```

2. Assign Resource designate rights; for example, in `ocal\bin`

   ```
   uniaccessrights -mod -designate ALL=TRUE -grantee S=Designate/NODE-ID=4313
   -grantor R=Resource_Approval -n 4313 -p test1
   ```

3. Also make sure that the `RESOURCE_APPROVAL` section exists in `unison.ini` (located in `ocal\misc`) with the `url` parameter; for example:

   ```
   [RESOURCE_APPROVAL]
   url=http://server:port/ocas-bin/ocas.fcgi
   ```

4. If you changed the resource approval URL, restart the Oracle Calendar server.

Enabling Wireless Capability

To make sure your Oracle Calendar server is wireless-enabled and pointing to a valid wireless server that is up and running, open `%ORACLE_HOME%\ocal\misc\unison.ini` and set the following parameters:

```
[CWS]
smtpmail = TRUE
smsnotifyprogramparam = " -host WIRELESS_HOST -port Calendar_listener_port"
smsnotifyprogram = %ORACLE_HOME%\ocal\sbin\sendalert
.
.
.
[NOTIFY]
sms = TRUE
alert_server = "IASW"
```

Save your file and restart your Oracle Calendar server.

Make sure the wireless server is properly configured. For more information, see the documentation included with the wireless server.

Working with the Windows PATH Variable

Any values added to the Windows PATH environment variable, such as to configure security mechanisms, are cleared by the Oracle Calendar server. Instead, add the values to `OCAL_ADDITIONAL_LIBPATH`.

Starting and Configuring the Oracle Calendar Application System

Generally, the Oracle Calendar application system should successfully start when you start the Web server, using the default installation settings. The following sections explain how to check the application system's status and make configuration changes to it if necessary.

This section contains the following topics:

- Checking the Status of the Oracle Calendar Application System
- Configuring the Oracle Calendar Application System

Checking the Status of the Oracle Calendar Application System

To see if the application system and its components are running, open the system page at `http://server_name:port/ocas-bin/ocas.fcgi?sub=sys`. If a component is not running, it will not appear in the system page.

To connect to a component with an appropriate application system, use the following URLs:

Component	URL
Sync Server	`http://host:port/ocst-bin/ocas.fcgi`
Web services	`http://host:port/ocws-bin/ocas.fcgi`
Oracle Calendar Web client	`http://host:port/ocas-bin/ocas.fcgi?sub=web`

Configuring the Oracle Calendar Application System

The Oracle Calendar application system and its components are controlled with the following configuration files under `%ORACLE_HOME%\ocas\conf`:

ocas.conf: client

ocws.conf: web services

ocst.conf: Sync Server

ocwc.conf: Oracle Calendar Web client

ocal.conf: Web server FastCGI directives, included from `httpd.conf`

Consider the following configuration options, depending on your environment:

- Run several instances of `ocas.fcgi` (the number of instances depends on setup and load). You can configure this in `ocal.conf`.

- You need to run one instance of `ochecklet.fcgi` for each installation and host. This is also configured in `ocal.conf`.

- In order to use the Sync Server, set the `KeepAlive` parameter in `httpd.conf` or `apache.conf` to 300 seconds, or turn it off. This is done to correspond to the idle-timeout value of 300 seconds in `ocal.conf`.

- Ensure that the `linkdb` and `sessiondb` variables in all hosts' `ocas` files refer to the same path; for example, the same NFS mount.

- Set Authentication, Compression and Encryption (ACE) values in each component's `conf` file. `AUTH` Web settings for all products must be configured in the `[ACE_PLUGINS_CLIENT]` section of `ocas.conf`.

- If you experience any problems, check for error messages in:

  ```
  %ORACLE_HOME%\ocas\logs\ocas_log
  ```

Ensure that you restart your Web server after any changes to the `conf` files.

Installing the Oracle Calendar Resource Kit

The Oracle Calendar Resource Kit is a tool that administrators can use to provide their end users with information on the Oracle Calendar application system. This information includes product overviews, system requirements, installation instructions, frequently asked questions and troubleshooting for the following clients.

- Oracle Connector for Outlook

- Oracle Calendar Web client

- Oracle Calendar desktop client

- Oracle Calendar Sync
- Oracle Sync Server

The Oracle Calendar Resource Kit can be made available to end users by including it in the Oracle9*i*AS Portal. Currently, the kit is located in *ROOT_OF_CD_ DISK1*\doc\admin\resource_kits directory.

Provisioning the orclguest Account with Multiple Instances of Oracle Calendar

If you install two instances of Oracle Calendar on the same infrastructure, the orclguest account may not be provisioned for the second instance. Follow these steps to create another test user account for the second calendar instance.

> **Note:** These steps should also be followed if orclguest was never created.

1. Create a user in Oracle Internet Directory using Oracle Delegated Administration Services at the following URL:

   ```
   http://Oracle_Internet_Directory_host_name:port_number/oiddas
   ```

2. Provision calendar service to this user using the Oracle Calendar Administrator from the following URL:

   ```
   http://Oracle_Calendar_host_name:port_number/ocad-bin
   /ocad.cgi?object=nodeadm
   ```

   > **See Also:** *Oracle Calendar Administrator's Guide*, Chapter 8, "Calendar Users"

Enabling SSL Requests from the Oracle Calendar Portlet

The following steps describe how to enable SSL requests from the Oracle Calendar portlet of Oracle Collaboration Suite Web client.

1. Include the following JAR files in the Oracle9*i*AS Containers for J2EE instance CLASSPATH:

   ```
   %ORACLE_HOME%\jlib\javax-ssl-1_1.jar
   %ORACLE_HOME%\jlib\jssl-1_1.jar
   ```

For example, you could include JAR files in

```
%ORACLE_HOME%\j2ee\OC4J_Portal\config\application.xml
```

with the following lines

```
<library path="%ORACLE_HOME%\jlib\javax-ssl-1_1.jar"\>
<library path="%ORACLE_HOME%\jlib\jssl-1_1.jar"\>
```

2. Ensure that `njssl9.dll` is in the directory specified in the PATH environment variable.

3. Modify the following file to use HTTPS rather than HTTP when accessing Oracle Calendar Web services:

```
%ORACLE_HOME%\webclient\classes\oracle\collabsuite\webclient\resources\
webclient.properties
```

For example, change the following line

```
calendar=http://<host>:<port>/ocas-bin/ocas.fcgi?sub=web
```

to

```
calendar=https://<host>:<SSL_Port>/ocas-bin/ocas.fcgi?sub=web
```

4. Update `Calendar.jsp` to support SSL requests. In a typical installation, `Calendar.jsp` is found here:

```
%ORACLE_HOME%\j2ee\OC4J_Portal\applications\webclient-calendar
\webclient-calendar-web\portlets\Calendar.jsp
```

Add the following lines to the required packages import section of Calendar.jsp:

```
<%@ page import="javax.net.ssl.SSLSocketFactory"%>
<%@ page import="java.security.Security"%>
<%@ page import="HTTPClient.*"%>
<%@ page import="oracle.security.ssl.OracleSSLCredential"%>
```

Enable SSL requests before the portlet's main routine:

```
System.setProperty("ssl.SocketFactory.provider",
                   "oracle.security.ssl.OracleSSLSocketFactoryImpl");
System.setProperty("java.protocol.handler.pkgs", "HTTPClient");
System.setProperty("javax.net.ssl.KeyStore",
                   "Oracle_Wallet_Client_Certificate_Path");
System.setProperty("javax.net.ssl.KeyStorePassword",
                   "Oracle_Wallet_Password");
```

The `javax.net.ssl.KeyStore` property points to the Oracle wallet Web service client certificate. Since all requests are local to same middle tier, Oracle Web Cache wallet is used.

The `javax.net.ssl.KeyStorePassword` property is the password for the corresponding wallet file.

12

Installing and Configuring Oracle Email

This chapter discusses installation and configuration of Oracle Email, the administration tools, and explains how to start up, shut down, and reinitialize the Oracle Email system.

This chapter contains the following topics:

- Pre-Installation Checklist

- Installing Oracle Email

- Using the Administration Tools

- Starting Up, Shutting Down, and Reinitializing Oracle Email

Pre-Installation Checklist

This section describes preconfiguration procedures that must be done prior to configuring Oracle Email.

This section contains the following topics:

- Verifying the Java and Oracle Text Options on the Information Store Database
- Verifying and Starting the Oracle9iAS Infrastructure and Application Servers
- Registering the Database with Oracle Internet Directory
- Setting the Database init.ora Parameters on the Information Storage Database
- Creating Information Storage Tablespaces and Schema

Verifying the Java and Oracle Text Options on the Information Store Database

Oracle Text is installed by default when Oracle Email is installed. The Oracle Text installation fails, however, if the database user CTXSYS is not present or is locked at the time of installation.

To verify that the Java and Oracle Text Options were installed and configured on the information storage database, run the following SQL query as sysdba:

```
SQL> select comp_id, version, status from dba_registry;
```

If Oracle Text was installed correctly, an output similar to the following displays:

```
COMP_ID                        VERSION                        STATUS
------------------------------ ------------------------------ -----------
...
CONTEXT                        9.2.0.2.0                      VALID
```

If Oracle Text was not installed and configured on the information storage database, it must be configured manually.

Verifying and Starting the Oracle9iAS Infrastructure and Application Servers

To start the infrastructure and application servers:

```
%ORACLE_HOME%\opmn\bin\opmnctl startall
```

Registering the Database with Oracle Internet Directory

> **Note:** This section only applies if you are not using the Oracle Collaboration Suite-installed database. If you installed the information storage database from the Oracle Collaboration Suite Information Storage CD, it is automatically registered and you do not need to register the database with Oracle Internet Directory.

An Oracle9*i* Database Server is required to install the information store. Before a database can be configured as an information store, it must be registered with the Oracle Internet Directory infrastructure. If the database is not already registered with Oracle Internet Directory, it can be registered using the Oracle database configuration assistant. Once the database is registered with Oracle Internet Directory, at a later point any changes to the connect identifier can be made using Oracle Net Manager.

To register the information store database with the Oracle Internet Directory infrastructure, the following procedures must be performed using the Oracle Net configuration assistant and the database configuration assistant:

- Running the Oracle Net Configuration Assistant
- Running the Database Configuration Assistant

Running the Oracle Net Configuration Assistant

To run the Oracle Net configuration assistant:

1. Start the Oracle Net configuration assistant by selecting **Start** > **Programs** > **Oracle** - *HOME_NAME* > **Configuration and Migration Tools** > **Net Configuration Assistant** to display the Welcome screen.

2. Select **Directory Service Usage Configuration**.

3. Click **Next**.

4. Select **Select the directory server you want to use**. The directory server must already be configured for Oracle usage.

5. Click **Next**.

6. Select Oracle Internet Directory as the directory server you want to use.

7. Click **Next**.

8. Enter connect information for the Oracle Internet Directory infrastructure.

9. Click **Next**.

10. Select the root OracleContext (**cn=OracleContext**) as the default Oracle Context in the directory and finish the Oracle Net configuration assistant configuration.

> **Note:** Do not choose **cn=OracleContext,*subscriber_specific_DN***.

This creates an `ldap.ora` file that specifies the Oracle Internet Directory server and port number in the `%ORACLE_HOME%\network\admin` directory.

11. Exit Oracle Net configuration assistant.

Running the Database Configuration Assistant

To run the database configuration assistant:

1. Start the database configuration assistant by selecting **Start** > **Programs** > **Oracle** - *HOME_NAME* > **Configuration and Migration Tools** > **Database Configuration Assistant**.

2. Click **Next**.

3. Select **Configure database options in a database**.

4. Click **Next**.

5. Select the SID of the Oracle Email database to configure.

6. Click **Next**.

7. Select the **Yes, register the database** option.

   a. Enter **cn=orcladmin** in the **User DN** field.

   b. Enter the password for the name entered in the **User DN** field.

8. Click **Finish**.

   The Restart Database screen appears.

9. Click **Yes**.

   The Summary screen appears.

10. Click **OK**.

The progress of database configuration displays in the Database Configuration Assistant screen.

11. Exit Database Configuration Assistant when configuration completes.

Setting the Database init.ora Parameters on the Information Storage Database

Set the database init.ora parameters on the information storage database to the following values:

```
processes=150 or higher
open_cursors=300 or higher
dml_locks=200 or higher
shared_pool_size=32000000 or higher
java_pool_size=40000000 or higher
```

> **See Also:** *Oracle9i Administrator's Guide* for more information about setting these parameters

Creating Information Storage Tablespaces and Schema

The Oracle Email configuration wizard creates tablespaces and the table schema in the information store with default storage parameters. Use the following procedures to precreate or customize tablespace storage parameters or data files before running the Oracle Email configuration wizard.

For the names of information store tablespaces and their default storage parameters, refer to the %ORACLE_HOME%\oes\install\sql\tblspc.sql script. To increase the size of your default e-mail storage, modify the script's default storage parameters.

There is a tablespace named ESTERSTORE that is reserved for tertiary storage of old messages. To enable tertiary storage, pre-create the ESTERSTORE tablespace on a different disk prior to installation. Next, create an instance of the housekeeping server with the TertiaryStore parameter enabled, and set the TertiaryStoreageThreshold parameter to the desired age value in terms of number of days (the default is 30). The housekeeping server instance automatically moves messages periodically.

> **Note:** If you pre-create tablespaces, the Oracle Email configuration wizard log shows some errors indicating tablespace creation failed. These errors can be ignored.

> **See Also:** *Oracle Email Administrator's Guide* for more information on tertiary storage and how to configure server processes

Installing Oracle Email

This section describes how to install Oracle Email.

Installing Oracle Email involves executing the umconfig.bat script two times in order to configure the Oracle Email information store and middle tier servers.

This section contains the following topics:

- Configuring the Oracle Email Information Store
- Configuring the Oracle Email Middle Tier
- Manually Configuring the Oracle Email Middle Tier

Configuring the Oracle Email Information Store

Configuring the information store database does the following:

- Creates tablespaces for the mail schema
- Creates mail tables and indexes
- Loads mail related PL/SQL packages
- Loads mail related stored Java procedures
- Configures the mail store with Oracle Internet Directory

To configure the Oracle Email information store, perform the following steps on the middle tier server:

1. Run the umconfig.bat script located on the application server.

   ```
   %ORACLE_HOME%\oes\bin\umconfig.bat
   ```

   The Unified Messaging Configuration screen displays.

2. Select **Mail Store Database Configuration**.

3. Click **Next**. The Mail Store Database Configuration screen displays.

4. Enter the following information in the corresponding fields:

Field	Description
Database Hostname	The name of the system on which the database is located.
SID	The system identifier of the information store.
Port Number	The port number on which the listener is listening.
system_password	The system password for the host database.

5. Click **Next**. The CTXSYS Password screen displays. If the CTXSYS password is locked and needs to be reset, you will be prompted for password confirmation. Enter the CTXSYS password. The default password is CTXSYS.

> **Note:** The CTXSYS password should have been unlocked during installation of the information storage database, as instructed in "Installing the Oracle Collaboration Suite Information Storage Database" on page 6-4.

6. Click **Next**. The ES_Mail Password screen displays.

7. Enter the ES_MAIL password and confirm it.

> **Note:** The information store schema is owned by the ES_MAIL database user.

8. Click **Next**. The UMADMIN Password screen displays.

> **Note:** UMADMIN is an administrator account created on the Oracle Internet Directory server during the application server installation of Oracle Email. The account owns specific Oracle Email entries in the directory. After installation, administrators should log in to the administration tool using the UMADMIN account and create an initial Oracle Email administration user. Thereafter, that account can delegate system and domain administration responsibilities to other users.

9. Enter the UMADMIN password and confirm it.

10. Click **Next**. The Create Unified Messaging Domain screen displays.

11. Enter a domain name to be used for users' e-mail addresses.

> **Caution:** If you mistype the domain name, the bad domain gets created. If this occurs, run the following command to correct the domain:
>
> ```
> %ORACLE_HOME%\oes\bin\install_createdomain.bat UM_SYSTEM
> domain_name
> ```

12. Click **Next**. The Configuration Tools screen displays and the information store configuration begins.

Once the information store configuration is complete, the End of Installation screen displays.

Log files for `umconfig.bat` are located in the following directory:

```
%ORACLE_HOME%\oes\log\
```

Additionally, this section contains the following topics:

- Manually Configuring the Oracle Email Information Store
- Installing the umbackend.tar File
- Loading the SQL Scripts for umbackend

Manually Configuring the Oracle Email Information Store

> **Note:** The manual steps described in this section are an alternative to running the `umconfig.bat` script through the user interface.

To manually run the Oracle Email information store configuration scripts:

```
cd %ORACLE_HOME%\oes\bin
install_umconfig.bat connect_str true system_passwd
CTXSYS_passwd SID host_name port_number UM_SYSTEM ORACLE_HOME
es_mail_passwd umadmin_passwd oid_flag domain_name
```

The following table lists the variables and a description of their expected values:

Variable	Description
connect_str	The information store database connect string.
system_passwd	The system password for the host database.
CTXSYS_passwd	The password for the Oracle Text account.
SID	The information storage database SID.
host_name	The information storage database host name.
port_number	The information storage database port number (default 1521).
es_mail_passwd	The password for the ES_MAIL database user. If an ES_MAIL password is not entered, the default is es.
umadmin_passwd	UMADMIN is an administrator account created on the Oracle Internet Directory server during the application server installation of Oracle Email. It account owns specific Oracle Email entries in the directory. After installation, administrators should log in to the administration tool using the UMADMIN account and create an initial Oracle Email user. Thereafter, they can delegate system and domain administration responsibilities to other users. If a password is not entered, the default value welcome is stored in Oracle Internet Directory and the database as the UMADMIN password.

oid_flag	If Oracle Email entries have been created in Oracle Internet Directory, the value is 1. Otherwise, it is 0.
	
	 To determine if the Oracle Internet Directory infrastructure is configured for Oracle Email, run the following commands from the middle tier Oracle home.
	
	 `del %ORACLE_HOME%\oes\log\exists.txt`
	`java -classpath %ORACLE_HOME%\jlib\esinstall.jar;%ORACLE_HOME%\jlib\repository.jar;%ORACLE_HOME%\jlib\esldap.jar;%ORACLE_HOME%\jlib\jndi.jar;%ORACLE_HOME%\jlib\ldap.jar;%ORACLE_HOME%\jlib\providerutil.jar oracle.mail.install.ESDSInstallQuery %ORACLE_HOME% um_system.`
	
	 After running this query, check if the `%ORACLE_HOME%\oes\log\exists.txt` file exists. If the file exists, the oid_flag value should be 1, otherwise, it is 0.

Variable	Description
domain_name	The name of the default domain to be created when the first information store is added. For example, acme.com. If this is not the first information store, this domain name is ignored.
	Note: This domain must exist.

> **Note:** The default INSTALLATION_NAME is UM_SYSTEM.

Installing the umbackend.tar File

> **Note:** If the information storage database is running on a different platform from the Oracle Collaboration Suite installation, the umbackend.tar file must be installed. Download the umbackend.zip file from the Oracle Technology Network Web site at
>
> http://otn.oracle.com/

To install the umbackend.zip file:

1. Copy the umbackend.tar file from %ORACLE_HOME%\oes directory on the application server to the Oracle home directory on the information storage database. If the information store is located on another system, the umbackend.zip file for the database platform must be transferred from the application server to the information storage database as the database owner.

2. Unzip the umbackend.zip file.

3. Run the following command to start the Oracle Universal Installer:

   ```
   cd backend\Disk1\install\win32\setup.exe
   ```

4. Follow the screen prompts to complete the Oracle Email back-end installation.

Loading the SQL Scripts for umbackend

To load the SQL scripts for umbackend:

1. Change directory to %ORACLE_HOME%\oes\install\sql on the information storage database.

2. Run SQL*Plus and log in to the database as `sys`.

3. Load the `install_backend_sys.sql` script.

4. Run SQL*Plus and log in to the database as the `es_mail` user.

5. Load the `install_backend_es_mail.sql` script.

> **Note:** These scripts must be run only if the information store was not installed from the Oracle Collaboration Suite Information Storage CD.

Configuring the Oracle Email Middle Tier

Configuring the middle tier does the following:

- Configures the middle tier with Oracle Internet Directory

- Configures the middle tier with the information storage database

- Creates Oracle Email server instances

To configure the Oracle Email middle tier servers:

1. Shut down any applications that use port 25.

2. Run the `umconfig.bat` script located on the application server:

   ```
   %ORACLE_HOME%\oes\bin\umconfig.bat
   ```

   The Unified Messaging Configuration screen displays.

3. Select **Middle Tier Configuration**.

4. Click **Next**. The Mail Store Database screen displays.

5. Select the global name of the database to be used by this middle from the drop-down list.

> **Note:** If the UMADMIN password and the domain name were specified during the information store configuration, the next screen that displays is the Create Unified Messaging Domain screen. Otherwise, you must specify the UMADMIN password and the domain name.

6. Click **Next**. The UMADMIN Password screen displays.

> **Note:** UMADMIN is an administrator account created in the Oracle
> Internet Directory server during the application server installation
> of Oracle Email. The account owns specific Oracle Email entries in
> the directory. After installation, administrators should log in to the
> administration tool using the UMADMIN account and create an initial
> Oracle Email user. Thereafter, they can delegate system and domain
> administration responsibilities to other users.

7. Enter and confirm the UMADMIN password. If a password is not entered, the
    default value welcome is stored in both Oracle Internet Directory and the
    database as the UMADMIN password.

8. Click **Next**. The Create Unified Messaging Domain screen displays.

9. Enter the domain name to be created. This domain is used for users' e-mail
    addresses.

    > **Caution:** If you mistype the domain name, the bad domain gets
    > created. If this occurs, run the following command to correct the
    > domain:
    >
    > ```
    > %ORACLE_HOME%\oes\bin\install_createdomain.bat UM_SYSTEM
    > domain_name
    > ```

    > **Note:** If you are configuring an additional middle tier, you must
    > provide the local domain name for SMTP and the list server.

10. Click **Next**. The Start Processes screen displays.

11. Select **Yes** to automatically start the Oracle Email server processes after the
    configuration is complete. Otherwise, select **No**.

12. Click **Next**. The Configuration Tools screen displays and the middle tier
    configuration begins.

Once the middle tier configuration is complete, the End of Installation screen
displays.

Log files for umconfig.bat and umconfig.bat are located in the following
directories:

```
%ORACLE_HOME%\oes\log\
```

Manually Configuring the Oracle Email Middle Tier

> **Note:** The manual steps described in this section are an alternative to running the umconfig.bat script through the user interface.

To manually run the Oracle Email middle tier configuration scripts:

```
cd %ORACLE_HOME%\oes\bin
install_umconfig.bat true true UM_SYSTEM ORACLE_HOME umadmin_passwd
oid_flag global_db_name domain_name start_proc
```

The following table lists the variables and a description of their expected values:

Variable	Description
umadmin_passwd	UMADMIN is an administrator account created on the Oracle Internet Directory server during the application server installation of Oracle Email. This account owns specific Oracle Email entries in the directory. After installation, administrators should log in to the administration tool using the UMADMIN account and create an initial Oracle Email user. Thereafter, they can delegate system and domain administration responsibilities to other users.
	If a password is not entered, the default value welcome is stored in Oracle Internet Directory and the database as the UMADMIN password.

Variable	Description
oid_flag	If Oracle Email entries have been created in Oracle Internet Directory, the value is 1. Otherwise, it is 0.
	To determine if the Oracle Internet Directory infrastructure is configured for Oracle Email, run the following commands from the middle tier Oracle home.
	del %ORACLE_HOME%\oes\log\exists.txt java -classpath %ORACLE_HOME%\jlib\esinstall.jar;%ORACLE_HOME%\jlib \repository.jar;%ORACLE_HOME%\jlib\esldap.jar; %ORACLE_HOME%\jlib\jndi.jar;%ORACLE_HOME%\jlib \ldap.jar;%ORACLE_HOME%\jlib\providerutil.jar oracle.mail.install.ESDSInstallQuery %ORACLE_HOME% um_system.
	After running this query, check if the %ORACLE_HOME%\oes \log\exists.txt file exists. If the file exists, the oid_flag value should be 1, otherwise, it is 0.
global_db_name	The database global name. For example, acmedb.foo.acme.com.
domain_name	The local domain name. For example, acme.com.
start_proc	Starts the protocol servers. Acceptable values are 1 and 0.

Using the Administration Tools

This section describes the different administration tools used to administer the Oracle Email system.

This section contains the following topics:

- Oracle Enterprise Manager
- Oracle Email Webmail Client

Oracle Enterprise Manager

> **See Also:** *Oracle9i Application Server Administrator's Guide* for more information about Oracle Enterprise Manager

Oracle Enterprise Manager is a Web-based tool that enables administrators to perform some of the management tasks for the Oracle9*i* Database Server and

Oracle9*i* Application Server. The Oracle Enterprise Manager can be used to administer Oracle Email service processes.

Through Oracle Enterprise Manager, administrators can perform the following tasks on an Oracle Email system:

- Startup
- Shutdown
- Reinitialize
- Modify default parameters

To perform administration tasks for Oracle Email through Oracle Enterprise Manager, navigate to the following URL:

```
http://host_name:1810
```

Oracle Email Webmail Client

> **See Also:** *Oracle Email Administrator's Guide* for more information on domain and user provisioning

Using the Oracle Email Webmail client, administrators can perform domain and user provisioning tasks. Through the Oracle Email Webmail client, administrators can do the following:

- Create and modify domain settings for users and distribution lists
- Create, delete, modify, and view e-mail, fax users, voice mail users, and distribution lists
- Add and delete members to and from distribution lists
- View all the distribution lists of which a specific user is a member
- Create, delete, modify, and view server-side filters
- Create, delete, and modify lists

To perform administration tasks for Oracle Email using the Webmail client, navigate to the following URL:

```
http://host_name:port_number/um/traffic_cop
```

Starting Up, Shutting Down, and Reinitializing Oracle Email

This section explains how to start, stop, and reinitialize the Oracle Email system.

This section contains the following topics:

- Verifying and Starting the Oracle Net Listener for the Information Store
- Verifying and Starting the SMTP Listener for the Middle Tier
- Starting the Oracle Email System
- Stopping the Oracle Email System
- Reinitializing the Oracle Email System
- Creating a Public User

> **See Also:** *Oracle Email Administrator's Guide* for more information on how to start up, shut down, and reinitialize individual processes

Verifying and Starting the Oracle Net Listener for the Information Store

Oracle Net Listener must be running on the information store database so that the system can establish database connections from the Oracle Email system and clients.

To verify that the listener is running:

```
%ORACLE_HOME%\bin\lsnrctl status
```

If the computer returns a message that contains the line `no listener`, the listener must be started:

To start the listener, you must log in as an administrator with administrative privileges and do the following:

1. Click the **Services** icon.
2. In the list of local services, locate the service ending with `listener`.
3. If the service is not running, right click the listener name and choose **Start** or **Restart**.

To start the listener manually:

```
%ORACLE_HOME%\bin\lsnrctl start
```

> **See Also:** *Oracle9i Net Services Administrator's Guide* for additional information on starting the listener

Verifying and Starting the SMTP Listener for the Middle Tier

To verify that the SMTP listener is running:

```
%ORACLE_HOME%\bin\lsnrctl status listener_es
```

If the computer returns a message that contains the line `no listener`, the listener must be started.

To start the listener:

1. Configure the listener with protocol addresses and other configuration parameters, using the Oracle Net configuration assistant or Oracle Net Manager.

    > **See Also:** *Oracle9i Net Services Administrator's Guide*, for listener configuration information

2. Log in as an administrator with administrative privileges and set file ownership and access permissions for the listener executable (`tnslsnr`) and its dependent shared libraries so that these files can be modified only by the administrator. The `tnslsnr` is located in the `%ORACLE_HOME%\bin` directory.

3. Verify that the permissions of the individual directories found in the path names to these files, starting with the root directory, are modified in the same way.

4. Click the **Services** icon.

5. In the list of local services, locate the service ending with `listener_es`.

6. If the service is not running, right click the listener name and choose **Start** or **Restart**.

To start the listener manually:

```
%ORACLE_HOME%\bin\lsnrctl start listener_es
```

> **See Also:** *Oracle9i Net Services Administrator's Guide* for additional information on starting the listener

Starting the Oracle Email System

Starting an Oracle Email service starts all the processes comprising that service type, such as IMAP4 and SMTP.

Using Oracle Enterprise Manager, perform the following procedure to start an Oracle Email system:

1. Navigate to the Oracle9*i* Application Server home page

2. Select **Unified Messaging**.

3. Click **Start**.

Stopping the Oracle Email System

Stopping an Oracle Email system sends a request to the operating system to shut down all of the Oracle Email processes. One reason an administrator would want to stop the Oracle Email system is to perform maintenance on the system, such as upgrading the server hardware or software. It is not possible for the processes to be running while certain kinds of upgrades are performed.

Using Oracle Enterprise Manager, perform the following procedure to stop an Oracle Email system:

1. Navigate to the Oracle9*i* Application Server home page.

2. Select **Unified Messaging**.

3. Click **Stop**.

Reinitializing the Oracle Email System

Reinitializing an Oracle Email process informs the operating system to reload its operational settings from the Oracle Internet Directory server. The process does not stop running, which means that users continue to receive uninterrupted service. Whenever an Oracle Email process parameter is modified, it must be reinitialized for the changes take effect.

Using Oracle Enterprise Manager, perform the following procedure to reinitialize an Oracle Email process:

1. Navigate to the Oracle9*i* Application Server home page.

2. Select **Unified Messaging**.

3. Click **Reinitialize**.

Creating a Public User

After configuring Oracle Email, administrators must create a public user account on Oracle Internet Directory using Oracle Delegated Administration Services. To do this, navigate to `http://infrastructure_host:port_number/oiddas`.

This public user corresponds with the initial user that will be created using the Webmail client administration tool.

> **See Also:** *Oracle Internet Directory Application Developer's Guide* for more information on using Oracle Delegated Administration Services

Once the public user has been created, navigate to `http://host_name:port_number/um/admin/UMAdminLogin.uix`, to create the initial domain and user.

> **See Also:** *Oracle Email Administrator's Guide* for more information on creating the initial domain and user

13

Configuring Search Features

This chapter guides you through the process of configuring search for Oracle Collaboration Suite.

This chapter contains the following topics:

- Default Oracle Ultra Search Instance
- Creating an Oracle Ultra Search Database User
- Default Oracle Ultra Search Instance
- Configuring the Oracle Ultra Search Crawler
- Creating a Web Source
- Creating a Schedule
- Scheduling the Oracle Ultra Search Crawler
- Setting Oracle Collaboration Suite Search Properties
- Making E-mail Searchable
- Restarting OC4J_iFS_files
- Testing Oracle Ultra Search

Default Oracle Ultra Search Instance

The Oracle Ultra Search installer creates a default out of the box Oracle Ultra Search instance based on the default Ultra Search test user, so users can test Oracle Ultra Search functionality based on the default instance after installation.

The default instance name is `WK_INST`. It is created based on the database user `WK_TEST`. In other words, `WK_TEST` is the instance administrator for `WK_INST`. The default user password is `WK_TEST`.

For security purposes, `WK_TEST` is locked after the installation. The Oracle Collaboration Suite administrator should login to the database as DBA role, unlock the `WK_TEST` user account, and set the password to be `WK_TEST`. (The password expires after the installation.) If the password is changed to anything other than `WK_TEST`, then you must also update the cached schema password using the administration tool Edit Instance page after you change the password in the database.

The default instance is also used by the Oracle Ultra Search sample query application. You must update the `data-sources.xml` file, as described in the "Configuring the Middle Tier Component" section of the *Oracle Ultra Search User's Guide*.

Creating an Oracle Ultra Search Database User

Oracle Corporation recommends that Oracle Ultra Search use its own tablespace to store its own data, as follows:

```
SQL> create tablespace ultra datafile 'file_location' size x_MB
```

Log in to the infrastructure host and create an Oracle Ultra Search schema with the following commands:

```
sqlplus system/password@iasdb
SQL> CREATE USER ocs_us IDENTIFIED BY password DEFAULT TABLESPACE ultra
TEMPORARY TABLESPACE temp QUOTA UNLIMITED ON ultra;
User created.
SQL> GRANT resource, connect, wkuser TO ocs_us;
Grant succeeded.
SQL> exit
```

The `WKUSER` role gives the user access to Oracle Ultra Search.

Configuring the Oracle Ultra Search Crawler

This section explains how to configure the Oracle Ultra Search crawler.

> **Note:** Follow these steps when a new instance is created. In step 10 of this section, the paths for **Cache Directory Location** and **Crawler Logging** must be applied to the default instance WK_TEST.

To configure the Oracle Ultra Search crawler:

1. Create directories on the infrastructure machine where Oracle Ultra Search is installed to hold the temporary and log files.

2. Go to the Oracle Ultra Search administration tool at the following URL:

   ```
   http://middletier_host:middletier_port/ultrasearch/admin_sso/index.jsp
   ```

3. When the Single Sign-On page displays, enter the Oracle Internet Directory administrator's username and password and click **Login** to display the Welcome page.

4. Click the **Create** subtab to display the Create Instance page.

5. Click **Create instance**.

6. Enter a **New Instance Name** and enter the name of the database schema created in "Creating an Oracle Ultra Search Database User" on page 13-2 in the **Ultra Search Schema Name** field.

7. Click **Apply** and wait for the page to refresh. A confirmation message displays to confirm the creating of the new instance and the Welcome page displays.

8. Select the instance you just created from the **Select Instance to Manage** drop-down list and click **Apply** to select this instance as your current instance. You receive a confirmation message.

9. Click the **Crawler** tab.

10. Enter the following information:

    - **Crawling Depth**: The maximum number of nested links the crawler will follow. You can limit the depth by selecting the **Limit** radio button and entering a number in associated field.

    - **Default Character Set**: Choose Standard UTF8 as the default for HTML documents

- **Cache Directory Location**: Enter the path to the temporary directory you created in Step 1 of this task

- **Crawler Logging**: Enter the path to the log directory you created in Step 1 of this task

- Note the value in the **Database Connect String** field. This value is required when you configure Oracle Files for Oracle Ultra Search in "Setting Oracle Collaboration Suite Search Properties" on page 13-5.

11. Click **Apply**.

Creating a Web Source

To create a Web source:

1. Click the **Sources** tab to display the Create Web Source: Step 1 page.

2. Click **Create Web Source**.

3. Choose a small Web site to index as a test site for Oracle Ultra Search and enter it in the **Source Name** field.

4. Click **Proceed to Step 2** to display the Create Web Source: Step 2 page.

5. Click **Proceed to Step 3** to accept the defaults and display the Create Web Source: Step 3 page.

6. In the **Starting Address** section, enter a URL for a starting address for indexing.

7. Click **Add** to add the new address to the Starting Address List.

8. Click **Proceed to Step 4** to display the Create Web Source: Step 4 page.

9. Click **Proceed to Step 5** to accept the defaults and display the Create Web Source: Step 5 page.

10. Click **Proceed to Step 6** to accept the defaults and display the Create Web Source: Step 6 page.

11. Click **Finish** to accept the defaults.

The new Web source appears in the **Web Source List**.

Creating a Schedule

To create a schedule:

1. Click the **Schedules** tab to display the Synchronization Schedules page.

2. Click **Create New Schedule** to display the Create Schedule: Step 1 of 3 page.

3. Enter a schedule name in the **Name** field.

4. Click **Proceed to Step 2** to display the Create Schedule: Step 2 of 3 page.

5. Click **Proceed to Step 3** to accept the default schedule. This schedules the crawl to execute once a month.

6. Choose a data source for the schedule to crawl, by doing the following:

   a. Select `Web` from the **Get Available Sources for Type** drop-down list and click **Get Sources**.

   b. The source that you created in "Creating a Web Source" on page 13-4 appears in the **Available Sources** list.

   c. Select the source and click >> to move the source to the **Assigned Sources** list.

   d. Click **Finish** to return to the Synchronization Schedules page.

The new schedule displays in the **Schedules** column.

Scheduling the Oracle Ultra Search Crawler

To schedule the Oracle Ultra Search Crawler:

1. Click **Scheduled** in the **Status** column to display the Synchronization Schedule Status page.

2. Click **Execute Immediately** to start the crawler.

3. In the **Crawler Progress Summary and Log Files by Data Source** section, click the pencil icon in the **Statistics** column to display the status and summary for the crawl.

   Click the **Refresh Status** link if you do not see the pencil icon.

4. To determine if the crawl was successful, verify that **Documents Indexed** in the **Name** column has a value other than zero.

Setting Oracle Collaboration Suite Search Properties

After you index documents, you must set the search properties in Oracle Collaboration Suite.

To set the Oracle Ultra Search properties:

1. Start Oracle Enterprise Manager and navigate to the Oracle Files domain page.

2. Click **Federated Search Configuration** to display the Federated Search Configuration page.

3. Select the **Yes** radio button for **Mail Configured**.

4. Select the **Yes** radio button for **Ultra Search Configured**.

5. Set the Webmail Base URL to

   ```
   http://middletier_host:middletier_port/um/traffic_cop
   ```

6. Enter the name of the database schema that you created in "Configuring the Oracle Ultra Search Crawler" on page 13-3 in the **Ultra Search Schema Name** field.

7. Enter and confirm the password that you chose for the database schema in "Configuring the Oracle Ultra Search Crawler" on page 13-3 in the **Ultra Search Schema Password** and **Confirm Password** fields.

8. Enter the value that was displayed in step 10 of the "Configuring the Oracle Ultra Search Crawler" section on page 13-3 in the **Ultra Search Connect String** field, prepended with `jdbc:oracle:thin:@`. For example, `jdbc:oracle:thin:@infrastructure_host:1521:iasdb`.

9. Click **Apply** to receive a confirmation message that the Federated Search configuration has been successfully updated.

10. After modifying the Federated Search Configuration, you must restart the `OC4J_iFS_files` instance. You can either restart it from Oracle Enterprise Manager, or execute the following command from the command line:

    ```
    opmnctl restartproc gid=OC4J_iFS_files
    ```

Making E-mail Searchable

In order to enable Oracle Ultra Search to search e-mail, you must index e-mail and configure the HouseKeeping process to regularly synchronize the e-mail text index.

This section contains the following topics:

- Indexing E-mail
- Configuring the HouseKeeping Process

Indexing E-mail

To index e-mail for users as they are created, do so at the domain level, as follows:

1. Log in to the Webmail client as a user with administrator privileges.

2. Click the **Administration** tab.

3. Click the **Domain** tab.

4. Click **Default New User**.

5. Choose the appropriate **Installation** and **Domain** from their respective drop-down lists and click **Submit**.

6. Set **Mail User Index Type** to **Indexed for Text** and click **Submit**.

To index e-mail for users that have been created prior to making the preceding change at the domain level, you must do it on an individual basis, as follows:

> **Note:** Only new e-mail is indexed. E-mail sent prior to enabling Text Synchronization is not indexed.

1. Log in to the Webmail client as an e-mail administrator with administrator privileges.

2. Click the **Administration** tab.

3. Click the **User** tab.

4. Click **Modify User**.

5. Enter the search criteria for the existing user(s) and specify the appropriate e-mail domain from the drop-down list and click **Go**.

6. Click the user ID.

7. Set **Mail User Index Type** to **Indexed for Text** and click **Modify**.

Configuring the HouseKeeping Process

To configure the `HouseKeeping` process:

1. Using Oracle Enterprise Manager, navigate to the HouseKeeping page.

2. Clicking **Create or Create Like** to create a new Oracle Email housekeeping instance.

3. Click the new housekeeping instance to bring up the parameters screen and set **Text Synchronization** to **Enabled**.

4. Disable the **Pruning** and **Collection** options.

5. In the **Process Sleep Duration** field, enter how often the housekeeper should queue messages for indexing, in minutes. For example, if you want the housekeeper to queue messages for indexing every three minutes, enter 3 in the field.

> **Note:** Set the HouseKeeper to index messages as frequently as clients check for new mail, such as five minutes.

6. Set **Execution Mode** to **Daemon**.

7. Click **Apply**.

8. Return to the HouseKeeping page.

9. Click **Start**.

   As an ongoing process, housekeeping periodically collects newly arrived messages to Oracle Text for indexing.

Restarting OC4J_iFS_files

The new Federated Search settings are not used until the OC4J_iFS_files system component is restarted.

To restart the OC4J_iFS_files system component:

1. On the Federated Search Configuration page in Oracle Enterprise Manager, click the first link in the navigation path under the subtab bar.

2. Select the radio button next to the **OC4J_iFS_files** system component.

3. Click **Restart**.

4. Click **Yes** to confirm that you want to restart.

5. Click **OK** to confirm the restart message.

Testing Oracle Ultra Search

To test Oracle Ultra Search:

1. Go to the following URL to display the Oracle Files Search window:

   ```
   http://middletier_host:middletier_port/files/app/FederatedSearch
   ```

2. Log in as the test user to display the General Search page.

3. In the **Item Name** field, enter a name for which to search.

4. In the **Content** field, enter content for which to search.

5. In the **User Name** field, enter the name of the owner of the content to search.

6. Choose a comparison operator from the **Date** drop-down list and enter a date string in the associated field against which to search.

7. Choose **Files**, **Web**, or both in the **Look In** field to indicate which source or sources to search.

8. After entering the search criteria, click **Search**.

To search Oracle Files content or Oracle Email, configure them as sources in Oracle Ultra Search.

14

Configuring Oracle Files

This chapter guides you through the process of configuring Oracle Files.

This chapter contains these topics:

- Overview of the Oracle Files Configuration Process
- Recommended Protocol Configurations
- Recommended and Optional Preconfiguration Tasks for Oracle Files
- Configure Oracle Files
- Non-Interactive Configuration of Oracle Files
- Setting Up Oracle Files Runtime
- Additional Post-Configuration Tasks

Overview of the Oracle Files Configuration Process

The following steps are required to configure and run Oracle Files:

1. Run the Oracle Files configuration assistant.

    See "Configure Oracle Files" on page 14-7.

2. Start the Oracle Files processes.

    See "Starting All Necessary Processes" on page 14-31.

3. Create the Oracle Files subscriber.

    See "Creating the Oracle Files Subscriber" on page 14-33.

4. Log in to Oracle Files as `orclguest` (or as an existing Oracle Internet Directory user).

    See "Validating Basic Operations" on page 14-37.

See "Setting Up Oracle Files Runtime" on page 14-29 for more information about post-configuration tasks. See "Additional Post-Configuration Tasks" on page 14-38 for additional post-configuration tasks.

Recommended Protocol Configurations

The following describes security considerations for the protocols used to access Oracle Files.

1. FTP and AFP protocols send unencrypted user passwords across the network.

    This is the defined behavior of these industry-standard protocols. Oracle has no control over this behavior, and it does not represent a defect in Oracle software. Sites unwilling to accept this behavior should either a) disable these protocols; or b) configure Oracle Files to use Oracle Files-specific user passwords for these protocols, so that users' Oracle9*i*AS Single Sign-On passwords are not compromised if FTP or AFP passwords are compromised.

    To set Oracle Files-specific passwords, use the Protocol Access page in Oracle Files. See the Oracle Files online help for details.

2. The HTTP/DAV protocol allows both "basic" (unencrypted) and "digest" (encrypted) authentication.

    "Basic" authentication sends unencrypted user passwords across the network unless HTTP/DAV uses SSL (Secure Sockets Layer). Apache configuration (performed separately from Oracle Files configuration) determines whether or

not HTTP/DAV uses SSL. Sites concerned about HTTP/DAV "basic" authentication should configure Apache to use SSL.

3. The HTTP/DAV, FTP, SMB, AFP, NTFS, and NFS protocols do not encrypt the network channel by default.

   Files transferred using these protocols are susceptible to interception. This is the defined behavior of these protocols. Oracle has no control over this behavior and it does not represent a defect in Oracle software. Sites unwilling to accept this behavior should disable these protocols and configure Apache to use SSL (HTTP/DAV only).

4. If authentication is performed using the Oracle Files Web User Interface HTML form, instead of Oracle9*i*AS Single Sign-On, unencrypted passwords are transmitted over the network unless Apache is configured to use SSL.

5. To administer Oracle Files using Oracle Enterprise Manager, a user authenticates using an HTML form. Unless Oracle Enterprise Manager is configured for SSL, unencrypted passwords are transmitted over the network.

6. By default, JDBC does not encrypt network connections between Oracle Files processes and the Oracle9*i* database. This means that passwords and files being transferred are susceptible to interception. Either a) secure the network connection between the middle tier machines running Oracle Files (if any), or b) use Oracle Advanced Security to encrypt these connections.

7. When configuring Oracle Files to use Oracle Internet Directory for user authentication, the administrator must choose whether or not to use SSL for connections between Oracle Files and Oracle Internet Directory. If SSL is not used, unencrypted passwords can be sent over network connections between Oracle Files processes and Oracle Internet Directory. Either a) secure the network connection between Oracle Files and Oracle Internet Directory or b) use SSL.

Recommended and Optional Preconfiguration Tasks for Oracle Files

The Oracle Files configuration assistant starts automatically if you chose to configure Oracle Files as part of the installation process and guides you through the process of identifying the Oracle database to use for the Oracle Files schema and various other configuration tasks.

Before you configure Oracle Files, there are a number of preconfiguration tasks you might want to complete, depending on your planned deployment. To perform any of these tasks, either deselect the Oracle Files check box in the Oracle Universal

Installer, which stops the Oracle Files configuration assistant from starting, or cancel the Oracle Files configuration assistant when it starts.

After performing the desired preconfiguration task(s), you can then run the Oracle Files configuration assistant again and configure Oracle Files.

This section contains these topics:

- Create Custom Tablespaces (Recommended)
- Set Up Oracle Files to Use Real Applications Clusters Database (Optional)

Table 14–1 lists recommended and optional preconfiguration tasks and provides information to help you determine whether or not a task is necessary to your deployment of Oracle Files.

Table 14–1   Optional Preconfiguration Tasks for Oracle Files

Optional Preconfiguration Task	Purpose
"Create Custom Tablespaces (Recommended)" Steps for this task begin on page 14-5	For a production environment, Oracle recommends creating custom tablespaces for the various tables and indexes that comprise the system. If you choose to create custom tablespaces, you must do so before configuring Oracle Files. You cannot use custom tablespaces that you create after configuring Oracle Files.
"Set Up Oracle Files to Use Real Applications Clusters Database (Optional)" Steps for this task begin on page 14-7	If you know that you want to use a Real Application Clusters database with your initial deployment of Oracle Files, it is recommended that you perform this preconfiguration task prior to configuring Oracle Files.

Table 14–2 lists additional configuration and usage information for Oracle Files.

Table 14–2   Important Information for Configuring and Running Oracle Files

Topic	Location
Creating users in Oracle Internet Directory	"Creating Users in Oracle Internet Directory" on page 14-35
Provisioning users in Oracle Files	"Creating Users in Oracle Internet Directory" on page 14-35, and *Oracle Files Administrator's Guide*

Table 14–2   (Cont.) Important Information for Configuring and Running Oracle Files

Topic	Location
Integrating Oracle Workflow With Oracle Files	"Integrating Oracle Workflow with Oracle Files (Optional)" on page 14-39
Oracle Files configuration tasks involving Oracle Enterprise Manager	*Oracle Files Administrator's Guide*
Oracle Files Site Administrator and Subscriber Administrator information	"Creating the Oracle Files Subscriber" on page 14-33; *Oracle Files Administrator's Guide* and Oracle Files online help
Configuring the NFS Server	*Oracle Files Administrator's Guide*
Installing the Oracle FileSync client	*Oracle Files Administrator's Guide*
Other client access paths and software	*Oracle Files Administrator's Guide*
Creating a Return to Portal link	"Adding the Return to Portal Link in the Oracle Files Web UI (Required)" on page 14-48
Setting up the NTFS server	"Configuring the NTFS Protocol Server (Optional)" on page 14-50
Enabling Windows users to map Oracle Files as network drives	"Enabling Windows Users to Map Oracle Files as Network Drives (Optional)" on page 14-52

Create Custom Tablespaces (Recommended)

During Oracle Files configuration, you must select whether to store all schema objects in the USERS tablespace, or in custom tablespaces. For a production environment, the USERS tablespace is not optimal. Oracle recommends creating custom tablespaces for the various tables and indexes that comprise the system (see Table 14–3) before attempting to configure Oracle Files.

To create custom tablespaces for Oracle Files, Oracle recommends that you create tablespaces as **locally managed tablespaces**.

Locally managed tablespaces track all extent information in the tablespace itself, using bitmaps, resulting in simplified space allocation, ease of management, and performance benefits.

Locally managed tablespaces have been available since Oracle8*i*, and beginning with the Oracle9*i* Database Server, locally managed is the default for all non-SYSTEM permanent tablespaces whenever the type of extent management is not explicitly specified.

An example of the SQL syntax is:

```
CREATE TABLESPACE "tbspname"
    LOGGING
    DATAFILE 'D:\oradata\sidname\tbspname_01.dbf' SIZE 50M EXTENT
    MANAGEMENT LOCAL
```

In this example, the EXTENT MANAGEMENT LOCAL clause is extraneous, since this is the default, but the full syntax is shown to highlight the fact that you need not provide segment, extent, and other sizing parameters.

- If you create locally managed custom tablespaces, the default options are recommended. Specifically, be aware that you should not specify automatic segment-space management for the tablespaces, because almost all Oracle Files data is stored as LOBs, and AUTO SEGMENT SPACE MANAGEMENT does not support LOBs. (The default segment-space management type is MANUAL. By default, locally managed tablespaces are created correctly for use with Oracle Files.)

- Create custom tablespaces on disk storage appropriate for your implementation. See the *Oracle9i Database Performance Tuning Guide and Reference* for more information.

Table 14–3 contains additional information about custom tablespaces. This table can be used to note the names and specifics of any custom tablespaces you create.

For more information about creating tablespaces and about locally managed tablespaces, see the *Oracle9i Database Administrator's Guide, Volume 1.*

Table 14–3   Custom Tablespace Definitions for Oracle Files

Tablespace	Description (default size)	Your Custom Tablespace Name
Primary	Stores metadata for documents, information about users and groups, and other Oracle Files object data. (50 MB)	
Non-Indexed Media	Stores LOB data for documents that are not indexed by Oracle Text, such as zip files. (50 MB)	
Indexed Media	Stores LOB data for documents indexed by Oracle Text, such as text and word processing files. (50 MB)	
interMedia Media	Stores LOB data for documents indexed by Oracle interMedia, such as image, audio, and video files. (50 MB)	
Oracle Text Index	Stores the Oracle Text tokens table. (50 MB)	
Oracle Text Keymap	Stores the index on the Oracle Text tokens table. (50 MB)	
Oracle Text Data	Stores other Oracle Text tables. (150 MB)	

Set Up Oracle Files to Use Real Applications Clusters Database (Optional)

You can choose to run Oracle Files against a Real Application Clusters database at any time, either preconfiguration or post-configuration.

However, if you know that you want to point to a Real Application Clusters database for your initial Oracle Files deployment, performing the following preconfiguration steps enables you to specify a Real Application Clusters database during the Oracle Files configuration process. Note that there are additional post-configuration tasks that must also be completed.

> **Important:** In order to use Real Application Clusters, configuration of Oracle Files must be performed against a specific node in the target Real Application Clusters configuration, and this node must have load balancing disabled during the Oracle Files configuration process.

1. Set the following system parameter in the Real Application Clusters database:

   MAX_COMMIT_PROPAGATION_DELAY=1

2. Ensure that the JOB_QUEUE_PROCESSES parameter is set to a value of 10 or higher.

3. Make a TNS entry in the tnsnames.ora file for load balancing and connection failover options in each Oracle home used by Oracle Files. Please see *Oracle9i Real Application Clusters Administration* for more information on making a TNS entry for these options.

4. Configure Oracle Files, specifying the name of the Real Application Clusters database on the Database Selection screen of the Oracle Files configuration assistant.

5. Perform required post-configuration steps.

   See "Post-Configuration Steps for Using Oracle Files with a Real Application Clusters Database (Optional)" on page 14-47 for details.

Configure Oracle Files

The Oracle Files configuration assistant is started automatically by the Oracle Universal Installer, and guides you through the configuration options listed in

Table 14–4. The Oracle Files configuration assistant always begins with the Oracle Files CA - Welcome screen.

Using the Oracle Files configuration assistant, make your choices on each screen and click **Next** to continue. You can click **Cancel** to stop the assistant and configure Oracle Files at a later time by executing ifsca.bat from the following location:

```
%ORACLE_HOME%\ifs\files\bin
```

Table 14–4 describes the types of configurations you can perform:

Table 14–4   Configuration Assistant Options

Configuration Type	Description	See Also...
Creating a New Oracle Files Domain	Creates a new Oracle Files schema in the database. Optionally configures the software required to include the computer as a middle tier in the **domain**.	"Creating a New Oracle Files Domain" on page 14-8
Setting Up a Computer to Use an Existing Domain	Configures Oracle Files software on the system for integration with an existing domain. Select this option if you are adding additional middle tiers.	"Setting Up a Computer to Use an Existing Domain" on page 14-25

To monitor the Oracle Files configuration assistant as it progresses, you can view the log as it is being written to the following file:

```
%ORACLE_HOME%\ifs\files\log\FilesConfig.log
```
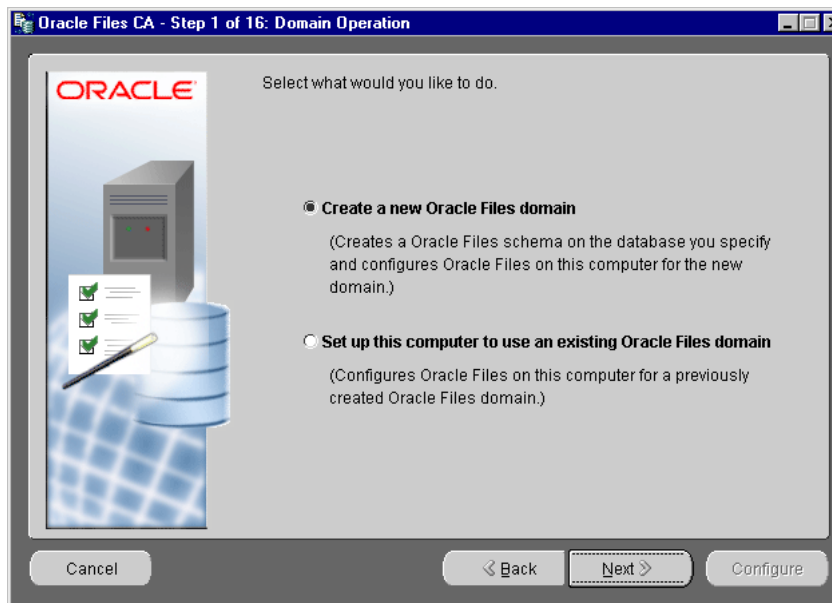
Creating a New Oracle Files Domain

These instructions guide you through the process of configuring the Oracle Files domain controller computer, which is typically the first computer in the domain that you are configuring.

The instructions begin from the Oracle Files configuration assistant Welcome screen.

1. Click **Next**.

    The Domain Operation screen displays.

Figure 14–1   Domain Operation Screen

2. Select the **Create a new Oracle Files domain** option.

> **Important:**   If you upgraded your Oracle Files schema from Oracle
> Collaboration Suite Release 1 (9.0.3) to Oracle Collaboration Suite
> Release 2 (9.0.4.1.1), you must choose **Set up this computer to use
> an existing Oracle Files domain** on the Domain Operation screen,
> and reference the instructions for "Setting Up a Computer to Use an
> Existing Domain" on page 14-25.

3. Click **Next**.

The Database Selection screen displays.

Figure 14–2   Database Selection Screen

4. Enter the name of the host on which the database is running, the listener port number, the database service name, and the password for the database SYS user account.

5. Click **Next**.

   The Database Login Verifications message box displays while the CLASSPATH, database connection to the Oracle9*i* database, initialization parameters, Oracle JServer installation, and other important requirements are verified.

   If an error occurs (for example, if JServer is not installed in the database, you see an error message related to the DBMS_JAVA package), you must cancel the Oracle Files configuration process, fix the error, then restart the Oracle Files configuration assistant by executing ifsca.bat from the following location:

   ```
   %ORACLE_HOME%\ifs\files\bin
   ```

   The Oracle Files configuration assistant attempts to make a connection as SYS AS SYSDBA using a database string, and therefore needs the database to be configured with a password file. If the following error message displays, then it is likely due to a missing password file on the database server:

```
Invalid password for Oracle user SYS
```

> **See Also:** *Oracle9i Database Administrator's Guide* for more information about password file administration.

If additional errors occur, more information on why verification failed can be found in the `FilesConfig.log` file at the following location:

```
%ORACLE_HOME%\ifs\files\log\FilesConfig.log
```

The Schema Name screen displays when the verification process completes.

Figure 14–3   Schema Name Screen
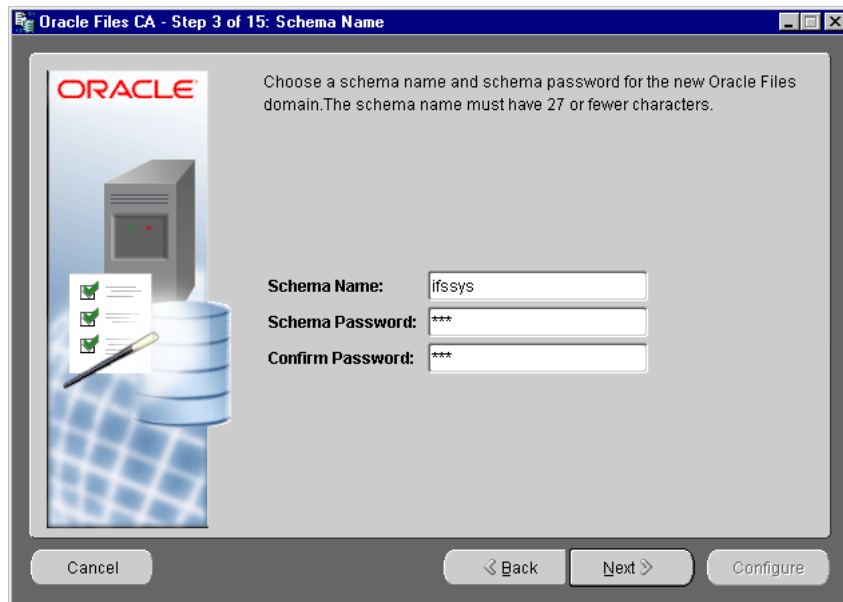
6. Enter a name to use for the Oracle Files schema. You must also provide a password for the schema. Enter the password in both fields to confirm.

7. Click **Next**.

   The Oracle Files configuration assistant checks to see if the schema name exists in the database. If it does exist, or if related schema names based on this schema name exist, a message box displays requesting further clarification.

8. In this message box:

   - Clicking **No** returns you to the Schema Name screen, where you can enter a new name for the schema.

   - Clicking **Yes** drops this schema and all related objects from the database, such as tables and views, and create a new schema.


   Caution: Do not click **Yes** unless you are sure you want to drop this schema and all related objects from the database, and create a new schema. If you are upgrading Oracle Files, exit from the Configuration Assistant and run `ocsua.bat`. Follow the instructions in "Setting Up a Computer to Use an Existing Domain" on page 14-25.

   The Tablespaces screen displays after you close the message box.

   Figure 14–4   Tablespaces Screen
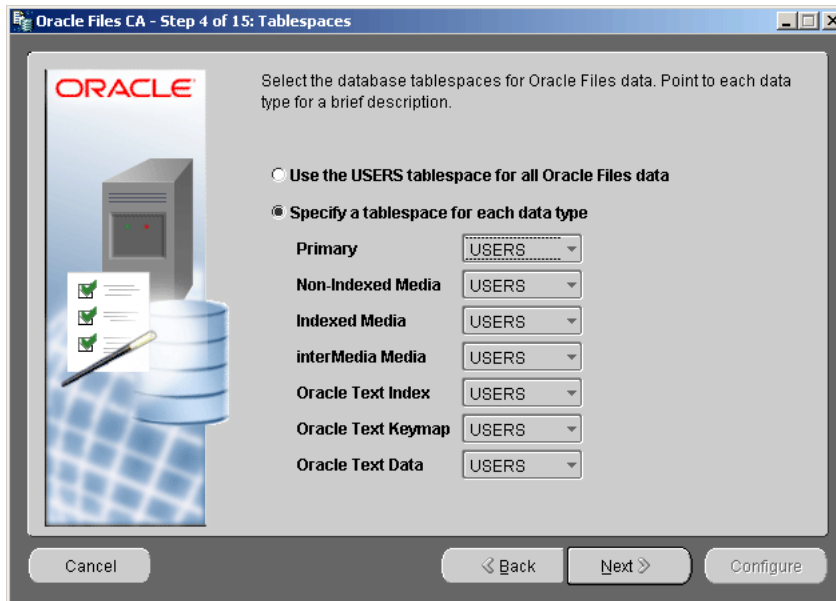
9. Select one of the following options:

- Select **Use the USERS tablespace for all Oracle Files data** if you have *not* created custom tablespaces for Oracle Files content.

  > **Important:** Oracle corporation recommends that you create custom tablespaces for Oracle Files if you are configuring a production system. Create custom tablespaces as a preconfiguration step. See "Create Custom Tablespaces (Recommended)" on page 14-5 for more information.

- Select **Specify a tablespace for each data type** and choose the tablespaces you want to use for each type of content from the drop-down lists if you have created tablespaces specifically for Oracle Files content. The tablespaces must exist in order to select them for each data type; the Oracle Files configuration assistant does not create them.

10. Click **Next**. The Character Set and Language screen displays.

Figure 14–5   Character Set and Language Screen
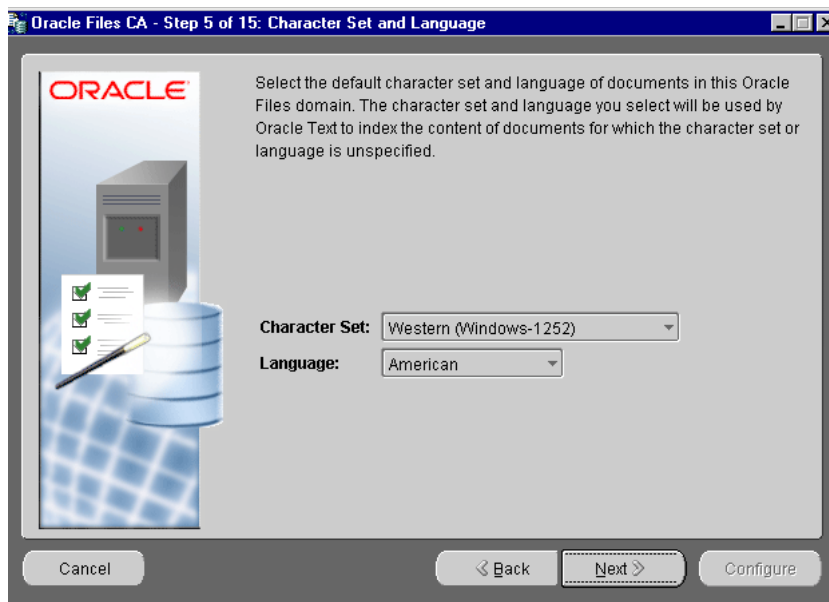
11. Select the default character set and indexing language to use when storing documents in Oracle Files. The document character set defaults are used by

client applications that do not specify a language or character set for documents being transferred to Oracle Files. The default character set is also used by non-Unicode enabled protocols, such as FTP and WebDAV, to determine the character set for these protocol servers to use.

Oracle Corporation recommends setting the character set to the character set used by the majority of users in your Oracle Files domain.

> **See Also:** "Multi_Lexer" in *Oracle Text Reference* for more information

12. Click **Next**.

    The Default Port Numbers screen displays. The default port number settings are stored as an object for use by all middle tier computers that use the Oracle Files schema. After configuration of Oracle Files is complete, to change the configuration on any single middle tier computer, you must use the Enterprise Manager Web Site.

Figure 14–6   Default Port Numbers Screen
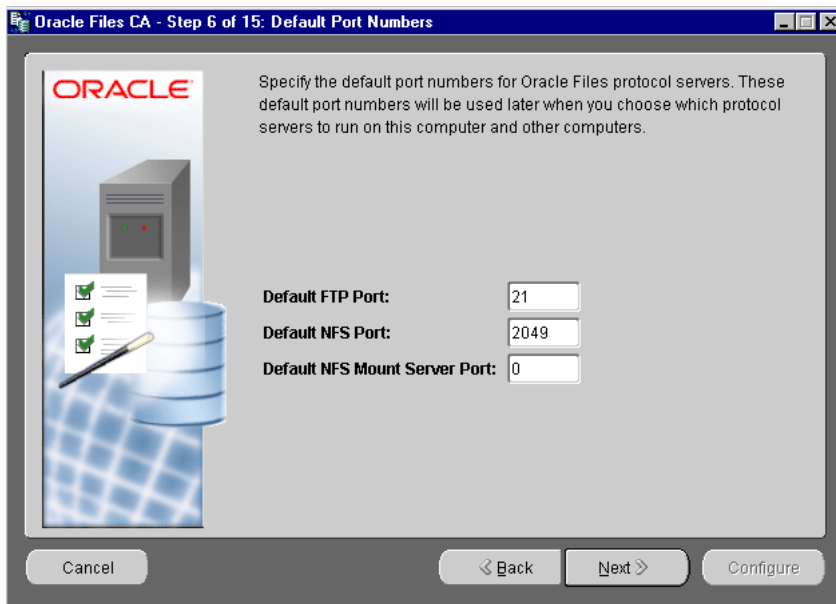
13. Change any of the port numbers as needed.

- If you change the main port for the NFS protocol server, you must also change the mount server port to a number other than 0. A value of 0 indicates that the mount server port number should be dynamically allocated by the port mapper, and should only be used when the NFS protocol server is on the standard NFS port number 2049.

    See Also: *Oracle Files Administrator's Guide* for detailed information about setting up the NFS protocol server

14. Click **Next**.

    The Website Information screen displays.

Figure 14–7   Website Information Screen
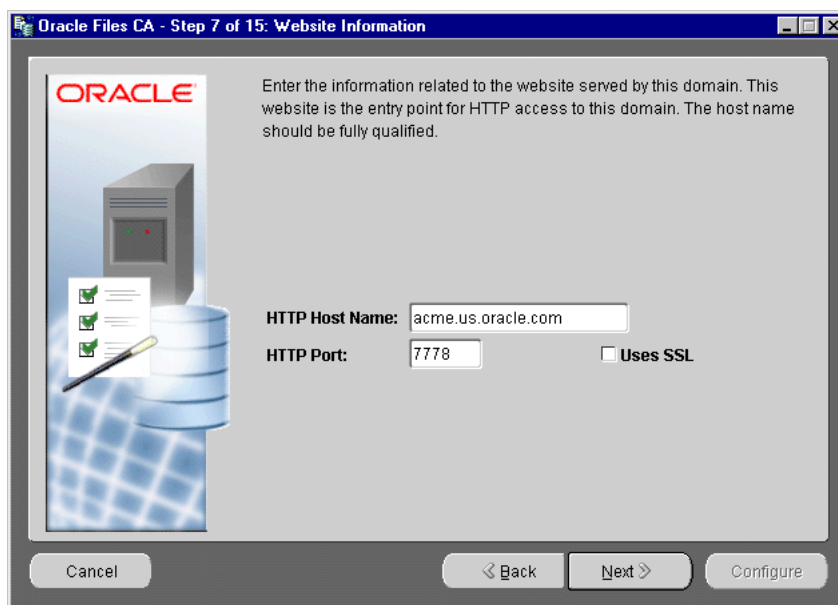
15. Enter the following information:

    - **HTTP Host Name**: Enter the fully-qualified host name and port number of the computer through which you want the domain to provide HTTP listener services. This information should match the values you entered during Oracle Collaboration Suite middle-tier installation.

■ **HTTP Port**: Enter a value for the HTTP port. Port information can be found in the following file:

```
%ORACLE_HOME%\install\portlist.ini
```

For example:

– `4443`: Enter this value if you have configured SSL and are not using Oracle9*i*AS Web Cache.

– `4444`: Enter this value if you have configured SSL and are using Oracle9*i*AS Web Cache.

– `7777`: Enter this value if you have not configured SSL and are not using Oracle9*i*AS Web Cache.

– `7778`: Enter this value if you have not configured SSL and are using Oracle9*i*AS Web Cache.

■ **Uses SSL**: Select this only if you have configured SSL on that computer.

Note: If you have a load balancer in front of your middle-tiers, then the hostname and port number should match that of the load balancer.
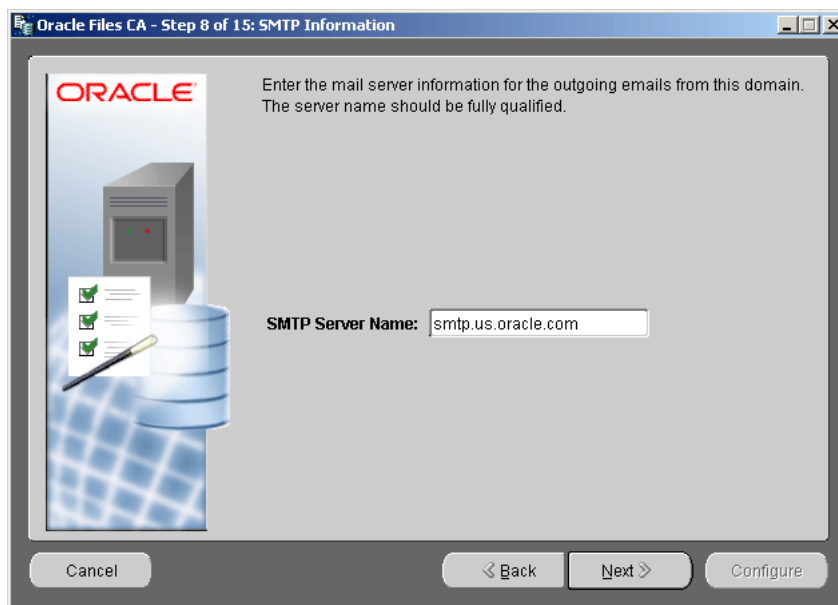

See Also: *Oracle9i Application Server Security Guide* for detailed information about using SSL.

16. Click **Next**.

The SMTP Information screen displays.

Figure 14–8   SMTP Information Screen

17. Enter the e-mail server information. This can be any valid SMTP server name. Enter the full host name of the SMTP server, in the form *hostname.domain*. Alternatively, you can enter the IP address of the SMTP server.

    This information is used to send e-mail to the Subscriber Administrator regarding their respective passwords and to users regarding Oracle Files account provisioning.

    > **Important:**   This information must be correct in order for the Subscriber Administrator to receive a password and for users to be notified when their accounts are provisioned. If the information is not correct, the Subscriber Administrator cannot log in to Oracle Files and users will not know when their accounts are provisioned.

> **Note:** If you need to change this information after configuring
> Oracle Files, you must:
>
> - Edit the `IFS.SERVER.APPLICATION.UIX.SmtpHost`
>   property of the `FilesBaseServerConfiguration` server
>   configuration object through Oracle Enterprise Manager. You
>   must restart the `OC4J_iFS_files` instance.
>
> - Reset the password on the Subscriber Name page (see
>   "Creating the Oracle Files Subscriber" on page 14-33 for more
>   information).

18. Click **Next**.

The Administrator Information screen displays.

Figure 14–9   Administrator Information Screen
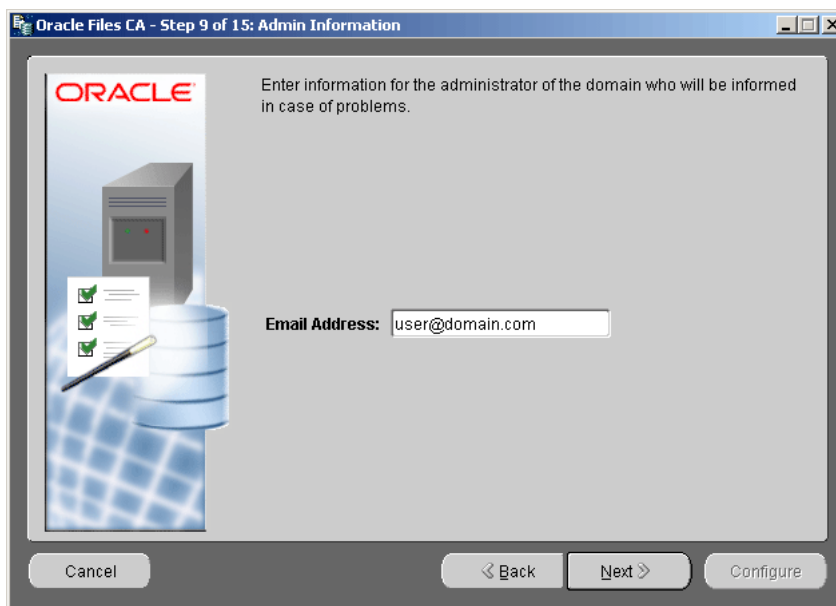
19. Enter the fully-qualified e-mail address to use for sending notifications and
other messages to the Oracle Files `site_admin` user.

20. Click **Next**.

The Users screen displays. The Oracle Files configuration assistant creates three new users: system, guest, and site_admin. The Site Administrator is used to create the **Subscriber** in Oracle Files.

Figure 14–10   Users Screen
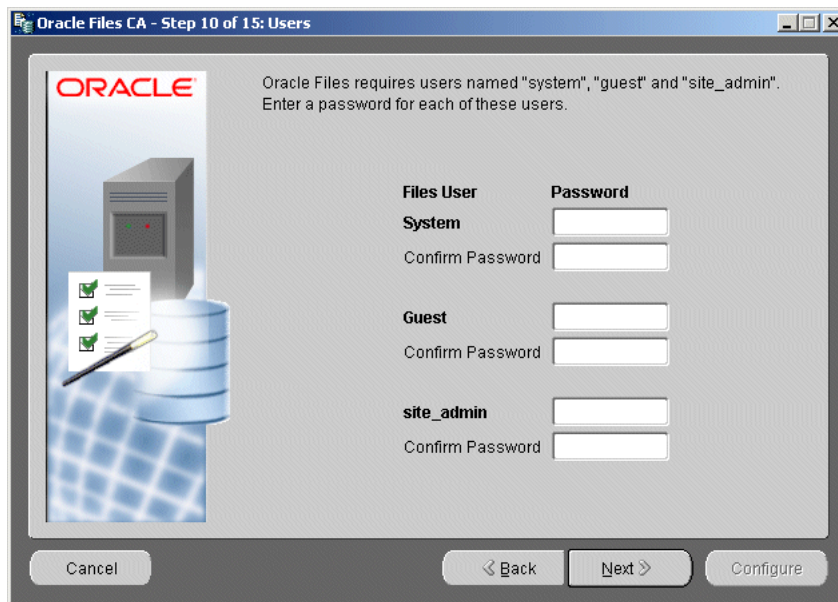
21. Assign passwords to each of the default users.

The site_admin user is necessary for creating the Oracle Files subscriber post-configuration.

22. Click **Next**.

The Oracle Internet Directory Login screen displays.

Figure 14–11   Oracle Internet Directory Login Screen

23. Enter the login information for the Oracle Internet Directory instance that you want to use for credential management. Enter the following information:

- **Server**: Enter the fully-qualified **host name** for the computer running Oracle Internet Directory.

- **Port**: Enter the port number where the Oracle Internet Directory server is listening.

  – Typically, the port number is 389. If port 389 is unavailable during the installation, port 4032 is used.

  – If you have SSL-enabled Oracle Internet Directory, select Uses SSL and change the port number. Typically, the port number for SSL-enabled Oracle Internet Directory is 636 or 4031.

  See Also: *Oracle Internet Directory Administrator's Guide* for detailed information about setting up Oracle Internet Directory for use with SSL

- **Super User**: Enter the Oracle Internet Directory super user name.

The default Oracle Internet Directory super user name is `cn=orcladmin`.

- **Super User Password**: Enter the Oracle Internet Directory super user password.

  The password is whatever was entered when Oracle Internet Directory was installed.

- **Root Oracle Context**: Enter the root **Oracle Context**.

  The default Oracle Internet Directory root Oracle Context is set to `cn=OracleContext`. Typically, you can leave this unchanged. If the Oracle Internet Directory administrator changed the root context, you must enter the correct value. The concept of a root context is specific to LDAP directory services.

24. Click **Next**.

The Set Up Local Machine screen displays.

Figure 14–12   Set Up Local Machine
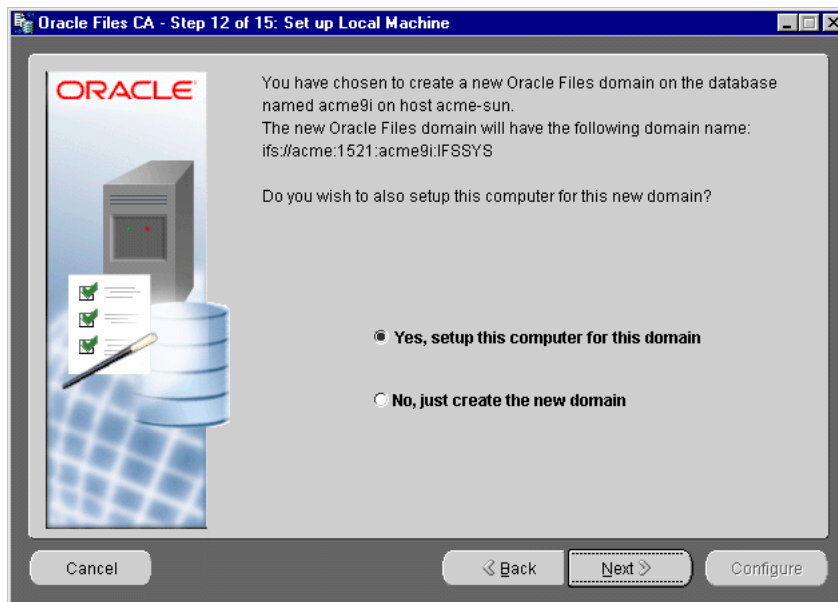
25. Select one of the following options:

- Select **Yes** to create the Oracle Files schema and configure this host to run a domain controller, node, or HTTP node.

- Select **No** to create the new schema without configuring this host.

26. Click **Next**.

    The Domain Components screen displays.

Figure 14–13   Domain Components Screen
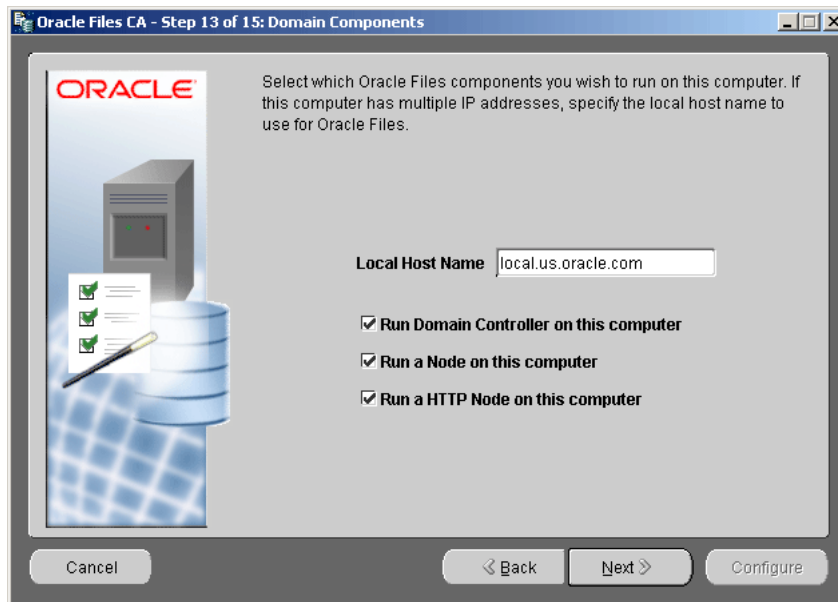
27. Enter the fully qualified host name that you want to use for Oracle Files. If the computer contains multiple network interface cards (NICs), enter the IP address of the host computer.

28. Select **Run Domain Controller on this computer** and all other processes that you want to configure for the domain. By default, the following processes are selected on this screen:

    - **Run Domain Controller on this computer** configures the Oracle Files Domain Controller process. Only one computer should run this process.

    - **Run a Node on this computer** configures an Oracle Files node to run on this computer. Protocol servers and agents run on this node.

- **Run an HTTP Node on this computer** configures an HTTP node to run the Oracle Files DAV server for HTTP and WebDAV access on this computer.

29. Click **Next**.

The Node Configuration screen displays. This screen lists all the protocol servers and agents that you can choose to run in the domain:

- **Node Name** is the name by which you want the node to be known. It can include the name of the computer (host name), but it need not. The name must be unique across all of the nodes on this domain.

- **Run Oracle Files Agents** configures all the Oracle Files system agents to run on this computer. Note that agents run on only one node in the domain. If agents are already configured to run on another node, this box must be unchecked.

- **Run Protocol Servers** configures the Oracle Files protocol servers to run on this computer. Protocol Servers include FTP, AFP, NFS, and NTFS.

  See Also: Chapter 1, "Oracle Files Concepts" in *Oracle Files Administrator's Guide*

Figure 14–14   Node Configuration Screen
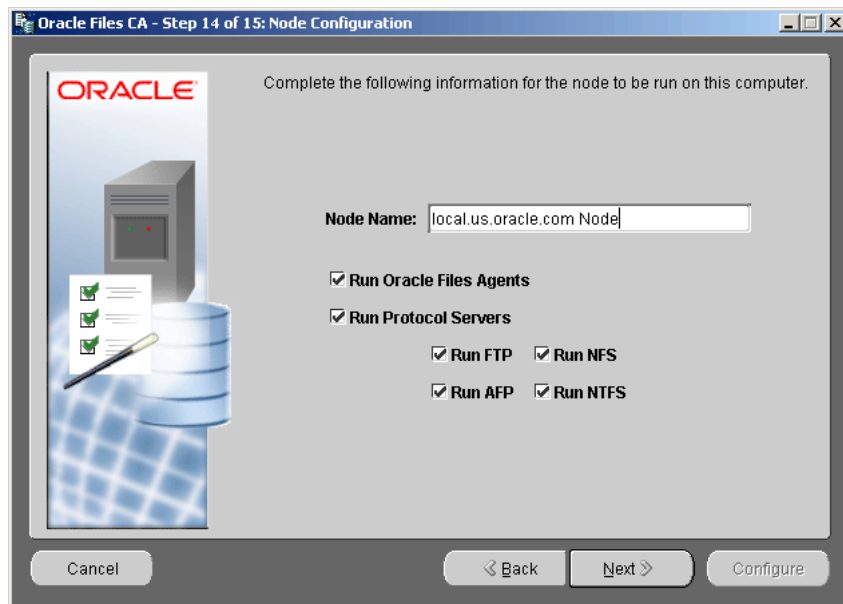
30. Enter a node name and configure protocol servers and agents as needed.

31. Click **Next**.

The HTTP Node Configuration screen displays, if you selected **Run an HTTP Node on this computer** on the Domain Components screen. This screen enables you to provide a name for the HTTP Node. Continue to step 32.

Otherwise, the Summary screen displays. Continue to step 34.

Figure 14–15   HTTP Node Configuration Screen
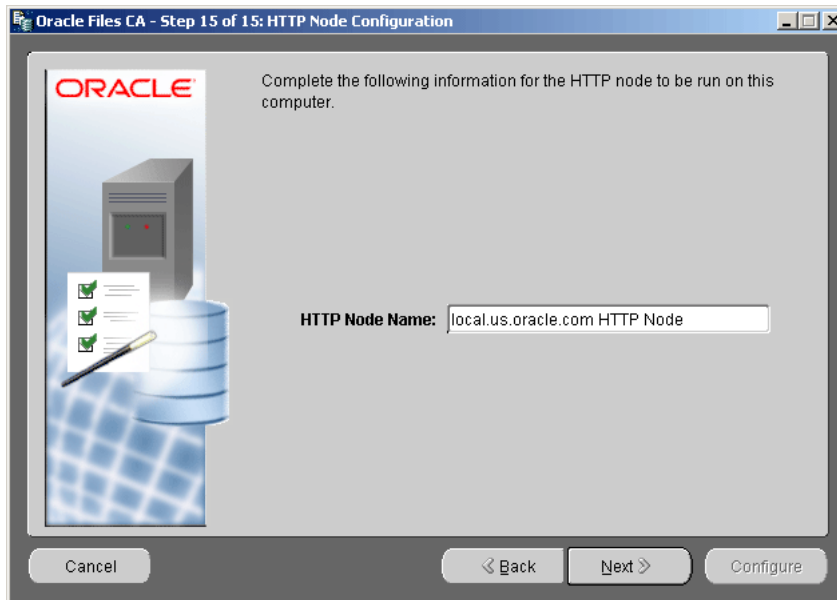
32. Enter the name for the HTTP Node.

- **HTTP Node Name** is the name by which you want the HTTP node to be known. It can include the name of the computer (host name), but this is not a requirement. The name must be unique across all of the nodes on this domain.

33. Click **Next**.

The Summary screen displays. The Oracle Files configuration assistant now has all the information needed to create a new Oracle Files schema and configure

the node and other processes. Note the name and location of the log file and any other important information on this screen.

34. Click **Configure** to execute the configuration process.

A progress window displays. If an error occurs, check the following log file for more information:

```
%ORACLE_HOME%\ifs\files\log\FilesConfig.log
```

When the process is complete, a message informs you that the configuration was successful. Click **OK** to close the message. Oracle Files and the Oracle Enterprise Manager Web Site are integrated automatically.

If the Oracle Files configuration assistant was started by Oracle Universal Installer, then any remaining configuration tools are run.

Setting Up a Computer to Use an Existing Domain

These instructions guide you through the process of setting up a computer to use an existing domain. Perform these steps if you upgrade your Oracle Files schema from Oracle Collaboration Suite Release 1 (9.0.3) to Oracle Collaboration Suite Release 2 (9.0.4.1.1), or if you want to add additional Oracle Collaboration Suite middle tiers for your existing Oracle Files domain.

The instructions begin from the Oracle Files configuration assistant Welcome screen.

1. Click **Next** to begin the configuration process.

The Domain Operation screen displays

2. Select the **Set up this computer to use an existing Oracle Files domain** option and click **Next**.

The Database Selection screen displays.

3. Enter the name of the host on which the database is running (database host name), the listener port number, the database service name, and the password for the database SYS user account.

4. Click **Next**.

The Database Login Verifications message box displays as the CLASSPATH, database connection to the Oracle database, initialization parameters, Oracle JServer installation, and other important requirements are verified.

If an error occurs, you must correct the problem before configuration can continue. For example, if JServer is not installed in the database, you see an error message related to the DBMS_JAVA package.

If additional errors occur, more information on why verification failed can be found in the FilesConfig.log file at the following location:

```
%ORACLE_HOME%\ifs\files\log\FilesConfig.log
```

The Schema Name screen displays when the verification process completes.

5. Select the schema name of the existing Oracle Files domain from the list and enter the schema password.

> **Important:** If you select the name of an existing Oracle Files schema from Oracle Collaboration Suite Release 1 (9.0.3), and you have not previously upgraded this schema to Oracle Collaboration Suite Release 2 (9.0.4.1.1), a dialog box displays with the following text:
>
> "You have selected an Oracle Collaboration Suite Release 1 (9.0.3) Files schema which must first be upgraded to Oracle Collaboration Suite Release 2 (9.0.4.1.1) Files schema before configuring Oracle Files against it. To perform this upgrade, cancel the configuration process and run the Oracle Collaboration Suite Upgrade Assistant. You can also choose another schema by entering new schema information in the Oracle Files Configuration Assistant."
>
> For step-by-step information about upgrading your Oracle Files schema from Oracle Collaboration Suite Release 1 (9.0.3) to Oracle Collaboration Suite Release 2 (9.0.4.1.1), see "Oracle Files Post-Upgrade Tasks" on page 3-35.

6. Click **Next**.

   The Domain Components screen displays after the database connection and schema are verified.

7. Enter the host name that you want to use for Oracle Files. If the computer contains multiple network interface cards (NICs), enter the IP address of the host computer.

8. Select **Run Domain Controller on this computer** and all other processes that you want to configure to run on this computer. By default, the following processes are selected:

   ■ **Run Domain Controller on this computer** configures the Oracle Files Domain Controller process. Only one computer should run this process. To reuse an existing schema, uncheck this box. If a Domain Controller is already running on a different node, leave this box checked ONLY if you want to move the Domain Controller to this middle tier.

   ■ **Run a Node on this computer** configures an Oracle Files node to run on this computer. Select this option if you want to run protocol servers or agents on this middle tier.

   ■ **Run an HTTP Node on this computer** configures an HTTP node to run the Oracle Files DAV server for HTTP and WebDAV access on this computer.

9. Click **Next**.

   The Node Configuration screen displays.

   The Node Configuration screen lists all the protocol servers and agents that you can choose to run in the domain:

   ■ **Node Name** is the name by which you want the node to be known. It can include the name of the computer (host name), but it need not. Use any string that makes sense to you.

   ■ **Run Oracle Files Agents** configures all the Oracle Files system agents to run on this computer. Note that agents run on only one node in the domain. If agents are already configured to run on another node, this box must be unchecked. If this box is checked, it inactivates agents running on other nodes and enables them on this node. If you are upgrading an existing Oracle Files schema, this box must be unchecked.

   ■ **Run Protocol Servers** configures the Oracle Files protocol servers to run on this computer. Protocol Servers include FTP, AFP, NFS, and NTFS.

   See Also: "Oracle Files Concepts" in Chapter 1 of *Oracle Files Administrator's Guide*

10. Enter a node name and configure protocol servers and agents as needed.

11. Click **Next**.

The HTTP Node Configuration screen displays if you selected **Run an HTTP Node on this computer** on the Domain Components screen. This screen enables you to provide a name for the HTTP Node. Continue to step 12.

Otherwise, the Summary screen displays. Continue to step 14.

12. Enter the name for the HTTP Node.

    HTTP Node Name is the name by which you want the HTTP node to be known. It can include the name of the computer (host name), but it need not. Use any string that makes sense to you.

13. Click **Next**.

    The Summary screen displays. The Oracle Files configuration assistant now has all the information needed to configure the computer. Note the name and location of the log file and any other important information on this screen.

14. Click **Configure** to execute the configuration process.

    A progress window displays. If an error occurs, check the following log file for more information:

    ```
    %ORACLE_HOME%\ifs\files\log\FilesConfig.log
    ```

15. When the process completes, a message informs you that the initial configuration was successful. Click **OK** to close the message.

    If the Oracle Files configuration assistant was started by the Oracle Universal Installer, then the remaining configuration tools are started.

    > **Note:** After configuring Oracle Files to reuse a previously created schema, you must edit the following Oracle Files Base Server Configuration properties so that they point to the appropriate computer:
    >
    > ```
    > IFS.SERVER.APPLICATION.UIX.ApplicationHost
    > IFS.SERVER.APPLICATION.UIX.ApplicationPort
    > ```
    >
    > Alternatively, you can override these properties in the server-specific configurations.

Non-Interactive Configuration of Oracle Files

You can configure the Oracle Files domain non-interactively by passing a response file containing all the configuration settings to the Oracle Files configuration assistant as a parameter at the command line. The location of the response file is:

```
%ORACLE_HOME%\ifs\files\settings\silentconfig.properties
```

The file contains instructions about how to modify and use it. Modify the response file to meet your specific needs.

1. Open the `silentconfig.properties` file in a text editor.

2. Make any required changes to the settings in the file, and close the file when you are finished.

   The file itself contains instructions about how to modify and use it. Modify the response file to meet your specific needs. For example, you can specify a name for the schema, or disable the Run Domain Controller, if you are installing and configuring an additional middle-tier machine to work with an existing instance.

3. Run the Oracle Files configuration assistant using your modified response file by entering the following two commands:

   ```
   cd %ORACLE_HOME%\ifs\files\bin
   ```

   ```
   ifsca -file %ORACLE_HOME%\ifs\files\settings\silentconfig.properties -silent
   ```

   Oracle Files is configured on the computer according to the specifications defined in the response file. If an error occurs, check the following log file for more information:

   ```
   %ORACLE_HOME%\ifs\files\log\FilesConfig.log
   ```

   > **Note:** The response file contains sensitive information, such as passwords. After you have used the response file to configure Oracle Files, you should delete password information from file.

Setting Up Oracle Files Runtime

You must perform the following tasks to set up Oracle Files for runtime, and to ensure that your system is operational and secure:

- Granting Privileges to the Administrator Account

- Starting All Necessary Processes
- Creating the Oracle Files Subscriber
- Creating Users in Oracle Internet Directory
- Accessing the Protocol Servers
- Validating Basic Operations

Granting Privileges to the Administrator Account

You must grant the Windows NT, 2000, and 2003 Administrator account (or other account that you are using to install and configure Oracle Collaboration Suite) the Logon as Batch Job privilege in order for the local user to be able to start the Domain Controller and Nodes from the Oracle Enterprise Manager Web Site:

These instructions assume that you are logged on to the Windows NT or Windows 2000 computer as the Administrator (or other user account with administration privileges).

Granting Privileges on Windows NT

1. Select **Start** > **Programs** > **Administrative Tools (Common)** > **User Manager**.

   User Manager (or User Manager for Domains on Windows NT Server) appears.

2. Select **Policies** > **User Rights**.

   The User Rights Policy screen appears.

3. Select **Show Advanced User Rights**, located in the lower-left corner of the display.

4. Select **Logon as Batch Job** from the drop-down menu of rights.

5. Click **Add**.

6. Add the user account that was used to install Oracle Collaboration Suite. This is typically the Administrator user or another user account from the Administrators group.

7. Click **OK** to close the dialog.

8. Click **OK** to save the change and exit the User Rights Policy dialog.

Granting Privileges on Windows 2000 and 2003 Server

1. Select **Start** > **Programs** > **Administrative Tools** > **Local Security Policy**.

The Local Security Settings window appears.

2. From the tree on the left side pane, open **Local Policies** and select **User Rights Assignment**.

   A list of policies appears in the right side panel.

3. Select **Logon as Batch Job**.

4. Click **Add**.

5. Add the user account that was used to install Oracle Collaboration Suite. This is typically the Administrator user or another user account from the Administrators group.

6. Click **OK** to close the dialog.

7. Click **OK** to save your changes and exit the Local Security Settings window.

Starting All Necessary Processes

These instructions assume that Oracle Files has been installed and configured, and that the database and listener are running.

Oracle Files uses the *Oracle9iAS Containers for J2EE* (OC4J) component of the Oracle Collaboration Suite Infrastructure to support the DAV Servlet, which is deployed to OC4J automatically during the configuration process.

1. Verify that Oracle Enterprise Manager Web Site is running by using the following command:

   ```
   %ORACLE_HOME%\bin\emctl status
   ```

2. From a Web browser on the server computer or from another computer on the network, access the URL to connect to the Oracle Enterprise Manager Web Site on the computer where the Oracle Files domain controller is configured:

   ```
   http://hostname:port
   ```

   The *hostname* should be a fully qualified domain name. The *port* is typically 1810.

   A User name and Password Required or Enter Network Password prompt displays.

3. Enter `ias_admin` as the user name with the appropriate password for the Oracle Collaboration Suite middle-tier.

The Web page displays a list of all Oracle Collaboration Suite Infrastructure components, or Targets, running on the specified host, as well as any Oracle Collaboration Suite-associated middle tiers.

4. Click the name of the Oracle Collaboration Suite instance that is hosting the Oracle Files software. If you are prompted for the Oracle Collaboration Suite instance user name and password again, enter `ias_admin` and the appropriate password to continue.

   The Application Server page displays all of the system components running on the instance. The list should include the Oracle Files domain, which appears as a concatenation of `iFS_` and the database instance's host name, port number, service name, and the name of the schema for Oracle Files. For example:

   `iFS_myMachineHostname.mycompany.com:1521:myDBServiceName:myFILESSchemaName`

   > **Note:** Although you see **Start** and **Stop** buttons on this page, you cannot control Oracle Files from this page. The radio button is not active.

5. Click the Oracle Files domain name link. On the subsequent page, click **Start Local Components**. A page prompting you for the host credential to start the Oracle Files node displays.

6. Enter the operating system account name and password for the computer. This is typically the Windows administrator user name and password, or the name and password of the user who installed Oracle Files.

7. Click **OK**.

   If your Oracle Files domain comprises multiple nodes across multiple computers, repeat steps 1 through 7 of this section for each computer. You must enter the operating system account name and password on each computer running a node that you want to start.

   > **Note:** In place of steps 1 through 7, you can run the `ifsctl start` command from the `%ORACLE_HOME%\ifs\files\bin` location. However, following steps 1 through 7 enables you to use a browser to manage Oracle Files from any location.

8. Click the link that takes you back to the Application Server page.

Select `OC4J_iFS_files` and click **Start** or **Restart**.

9. Start the OC4J instance.

   ■ To start the OC4J service, select Start > Settings > Control Panel > Administrative Tools > Services. In the Services dialog, select the service `Oracle`*`instance_name`*`ProcessManager`, and select Action > Start.

   ■ To start the OC4J instance from the command line, navigate to the `%ORACLE_HOME%\opmn\bin` directory and use the following command:

   ```
   opmnctl startproc gid=OC4J_iFS_files
   ```

   The Oracle Files domain starts. You must start the OC4J instance on every middle tier computer that is running the HTTP Node.

10. Check the status of the Oracle Files domain. To do this, run the `ifsctl status -n` command from the following location:

    ```
    %ORACLE_HOME%\ifs\files\bin\
    ```

11. Check the log files to make sure the node and the HTTP node appear. The log files are located in the following directories:

    ```
    %ORACLE_HOME%\ifs\files\log\
    %ORACLE_HOME%\j2ee\OC4J_iFS_files\application-deployments\files
    \OC4J_iFS_files_default_island_1\
    ```

Creating the Oracle Files Subscriber

> **Note:** Ensure that the SMTP server is running before creating a subscriber. The SMTP server must be running in order for the Subscriber administrator and users to receive e-mail regarding their respective passwords.

In the following steps, you must log in to Oracle Files as the Site Administrator and create the **Subscriber**. You must create the Oracle Files subscriber in order for Oracle Internet Directory users to be able to log in to Oracle Files.

1. Go to:

   ```
   http://http_host:port/files/app/AdminLogin
   ```

   The *http_host* should be a fully qualified domain name. For example:

```
http://acme.us.oracle.com:7778/files/app/AdminLogin
```

The Administrator Login page displays.

2. Log in as `site_admin` and use the same `site_admin` password you used during configuration.

3. Click **New Subscriber**.

   The Subscriber Name page displays. Note that the Subscriber Name is the default subscriber for the Oracle Internet Directory server. The Oracle Internet Directory server is the value entered in step 23 in the "Creating a New Oracle Files Domain" section on page 14-20 during Oracle Files configuration.

4. Accept the defaults.

   > **Important:** Multiple subscribers are not currently supported due to Oracle9*i*AS Single Sign-On limitations.

5. Click **Next**.

   The Subscriber Information page displays.

6. Set the quota and maximum number of users. For example, 1 GB total quota, 10 MB quota for each user, and 10 MB quota for each Workspace.

7. Click **Next**.

   The Create Subscriber Administrator Account page displays.

8. Enter the Subscriber Administrator user login ID. The e-mail address is where the subscriber's password is sent. Specify the Default User Account Settings and Default Workspace Settings.

9. Click **Next**.

   The New Subscriber Confirmation page displays.

10. Review your information, then click **Submit**.

    The Browse Subscribers page displays. You can see that the Subscriber has been created and the Subscriber's password has been automatically e-mailed.

11. To log in as the Subscriber Administrator, navigate to the following URL:

```
http://http_host:port/files/app/AdminLogin
```

The Administrator Login page displays.

12. Log in as *subscriberadmin_user_login_ID/password* using the subscriber user login ID that you entered when creating the subscriber in step 8 of this section, and the subscriber password that you received by e-mail.

13. Click the **USERS** tab to view the Users page. Refresh this page to see an updated list of Oracle Files users.

> **See Also:** "Creating Users in Oracle Internet Directory" on page 14-35 for more information about creating users in Oracle Files

Creating Users in Oracle Internet Directory

In order for users to access Oracle Files, they must first be created as users in Oracle Internet Directory, Oracle's LDAP server.

To create users in Oracle Internet Directory:

1. Make sure that the OC4J_DAS instance has been started on the Infrastructure host.

2. Connect to your infrastructure host, typically:

   ```
   http://oidserver.us.oracle.com:7777/oiddas
   ```

   The *hostname* should be a fully qualified domain name.

3. Log in as the Oracle Internet Directory Administrator (typically orcladmin).

4. Click the **Directory** tab.

5. Click **Create**.

   The Create User page displays.

6. Fill in the fields. You must specify an e-mail address.

7. Select **Oracle Collaboration Suite Users** to add this user to the group.

8. Click **Submit**.

> **Caution:** If you use spaces at the end of user names, or any of the following characters, the user is not provisioned from Oracle Internet Directory into Oracle Files: **& ' % ? \ / + = ( ) * ^ , ; | ~**

Once users are created in Oracle Internet Directory, and the Oracle Files Site Administrator has created the Oracle Files Subscriber Administrator, they are automatically provisioned in Oracle Files every 15 minutes (the default setting) by the `FilesOidUserSynchronizationAgent`.

Additionally, once a user has been created in Oracle Internet Directory, logging on to Oracle Files as that user immediately provisions the user in Oracle Files, irrespective of the time interval specified for the Agent (this feature is new in this release).

You can reset the default interval for auto-provisioning by the `FilesOidUserSynchronizationAgent` from 15 minutes to any interval of your choosing.

> **See Also:** *Oracle Files Administrator's Guide* for information about how to change this default interval

> **Note:** Although Oracle Files supports multibyte character sets, some protocols, such as WebDAV, do not support multibyte user names. For this reason, when you create users for Oracle Files in Oracle Internet Directory, you should create the names using single-byte characters only. Users whose names are created with multibyte characters are unable to access content through Oracle Files protocol servers. Similarly, you should create user passwords in ASCII since the protocols only accept ASCII passwords.
>
> Users whose passwords are created with non-ASCII characters are unable to access content through the Oracle Files protocol servers.

Accessing the Protocol Servers

To access the protocol servers running on your Oracle Files Domain, each end user must perform the following steps:

1. Connect to the Protocol Access page:

   `http://`*ocs_midtier_hostmachine*`:`*port*`/files/app/ProtocolAccess`

   The value supplied for `ocs_midtier_hostmachine` should be a fully qualified domain name. The value supplied for *port* should be the port number of the middle tier computer.

   The Single Sign-On page displays.

2. Log in using the Oracle Internet Directory user and password.

   The Protocol Access page displays.

3. Enter the Oracle9*i*AS Single Sign-On password and the Oracle Files-specific password and password confirmation to create these passwords for the user.

4. Click **Continue** to save.

   Now that you have configured the Oracle Internet Directory user using the Protocol Access page, you can access the protocol servers that are running on your Oracle Files Domain.

   > **Note:** To access FTP and AFP, use the Oracle Files-specific password. To access NTFS, Oracle FileSync, WebFolders, or the Oracle Files Web interface, use the Oracle Internet Directory password.

   > **See Also:** *Oracle Files Administrator's Guide* for more information about creating users and accessing protocol servers running on your Oracle Files Domain

Validating Basic Operations

To validate that the domain and node started and the core Oracle Files components are working, perform the following steps:

1. Check the status of the Oracle Files domain. Run the `ifsctl status -n` command from the following location:

   ```
   %ORACLE_HOME%\ifs\files\bin\
   ```

2. Check the HTTP log at the following location:

   ```
   %ORACLE_HOME%\j2ee\OC4J_iFS_files\application-deployments\files
   \OC4J_iFS_files_default_island_1\application.log
   ```

3. If the HTTP log contains a "503 Service Temporarily Unavailable" message, attempt to connect to the system from another computer on the network.

Table 14–5   Basic Functionality

Protocol or Server	Access Address or Method	Expected Result
HTTP	`http://`*ocs_middle_tier_host_*`name:`*port_number*`/files/app`	Log in as a user created in the Oracle Internet Directory server.
NTFS	Map a network drive from Windows Explorer. `\\`*middle_tier_host_name*`\myhome`	A Windows file share appears.

If you attempt to connect to the HTTP Web server and receive a 503 Service Temporarily Unavailable message, the HTTP node has not fully started. You must start the HTTP node (the OC4J instance).

- To start the OC4J service, select **Start** > **Settings** > **Control Panel** > **Administrative Tools** > **Services**. In the Services dialog, select the service `Oracle`*instance_name*`ProcessManager`, and select **Action** > **Start** (or **Restart**).

- To start the OC4J instance from the command line, navigate to the `%ORACLE_HOME%\opmn\bin` directory and use the following command:

  ```
  opmnctl restartproc gid=OC4J_iFS_files
  ```

Additional Post-Configuration Tasks

Depending on your planned deployment, some or all of the following tasks are required after configuring Oracle Files.

- Integrating Oracle Workflow with Oracle Files (Optional)
- Post-Configuration Steps for Using Oracle Files with a Real Application Clusters Database (Optional)
- Adding the Return to Portal Link in the Oracle Files Web UI (Required)
- Editing the Oracle Internet Directory Return Query Limit (Optional)
- Configuring the NTFS Protocol Server (Optional)
- Enabling Windows Users to Map Oracle Files as Network Drives (Optional)
- Registering the Oracle Files and Search Portlets (Required)

Integrating Oracle Workflow with Oracle Files (Optional)

If you want to integrate Oracle Workflow with Oracle Files, perform the following categories of tasks, in the order given:

- Configuring Net Service Names
- Configuring Oracle Workflow
- Integrating Oracle Workflow with the Oracle Files Schema
- Enabling Additional Languages in the Oracle Workflow Schema (Optional)

Configuring Net Service Names

Configure net service names using Oracle Net Configuration Assistant as follows:

1. Run the Oracle Net Configuration Assistant by executing the NetCA utility. Select **Start** > **Programs** > **Oracle** - *ORACLE_HOME* > **Configuration and Migration Tool** > **Net Configuration Assistant**.

   Oracle_Home is the name of the Oracle home that you specified when installing Oracle Collaboration Suite.

   The Welcome screen displays.

2. Select **Net Service Name configuration**, and click **Next**.

   The Net Service Name Configuration screen displays.

3. Click **Add**, and then click **Next**.

   The Net Service Name Configuration, Database Version screen displays.

4. Select **Oracle8*i* or later database or service**.

5. Click **Next**.

   The Service Name screen displays. Enter a **Service Name** for the database instance, such as db1.us.acme.com.

6. Click **Next**.

   The Select Protocols screen displays.

7. Select **TCP (default)**.

8. Click **Next**.

   The TCP/IP Protocol screen displays. Enter values for the **DB Hostname** and **DB Port**. The default value for the database port is 1521.

9. Click **Next**.

   The Test screen displays.

10. Click **Yes** to perform a test.

    The Connecting screen displays with the result of the test connection. The test attempts to connect using the default user scott. Because the user scott is locked during database creation, the test connection might fail. If the test connection fails, the Oracle Net configuration assistant returns to the Service Name screen. Change the user to system, enter the values for your database and perform the test connection again.

11. If the Connection screen returns the result OK, click **Next**.

    The Net Service Name screen displays. Enter a service name for this database connection in the **TNS Alias Name** field, such as db1.

12. Click **Next**.

    The Net Service Name screen displays. Accept the default value of **No.**

13. Click **Next**.

    The NetCA Done screen displays.

14. Click **Next**.

    The Summary screen displays.

15. Click **Finish**.

Configuring Oracle Workflow

The steps detailed in this section must be performed to properly configure Oracle Workflow for use with Oracle Files.

Configuring Oracle Workflow primarily involves setting up the Oracle Workflow schema, and only needs to be done for the first middle tier, not for any additional middle tiers that are added.

> **Note:** The Oracle Workflow scripts automatically set the Oracle Workflow administrator as the orcladmin user.

1. Run Oracle Workflow Configuration Assistant in the first middle tier computer by executing the following script:

```
%ORACLE_HOME%\wf\install\wfinstall.bat
```

The Oracle Workflow Configuration Assistant displays.

2. Enter the user information listed in Table 14–6:

Table 14–6   Oracle Workflow Configuration Assistant Values

Field	Value
Workflow Account	The user name of your Oracle Workflow database account. The default Workflow account is OWF_MGR. If you are creating more than one Oracle Workflow instance on the same information storage database, enter a descriptive name for this account.
Workflow Password	The password for your Oracle Workflow database account.
SYS Password	Enter the SYS password for the database in which you are creating the Oracle Workflow account. See your Oracle DBA if you need more information.
SYSTEM Password	Enter your SYSTEM password for the database in which you are creating the Oracle Workflow account. See your Oracle DBA if you need more information.
Install Option	Select **Install** to perform a fresh installation of Oracle Workflow.
Language Selection	If you selected the **Add language** install option, select the language abbreviation for the language you want to add. Otherwise, accept the default. **See Also**: Table 14–8, " Language Codes" for a list of standard language abbreviations
Connect Method	Select **Local** to connect to a local database using the Oracle SID, or **Remote** to connect to a remote database through Oracle Net. Select **Remote** if you performed the steps listed in "Configuring Net Service Names" on page 14-39.
Connect String	If you select the **Remote** connect method, enter the service name that you specified in step 11 of "Configuring Net Service Names" on page 14-39 for the remote database. **Important**: To ensure that the Oracle Workflow schema is created on the same database where the Oracle Files schema is to be created, use the Oracle Collaboration Suite information store CONNECT_STRING.

3. Click **Submit** to begin Oracle Workflow configuration.

When Oracle Workflow configuration is complete, a confirmation window displays.

4. Click **OK**.

Oracle Workflow configuration is now complete. You can check the status of the Oracle Workflow configuration by reviewing the `workflow.log` log file located in the following directory:

```
%ORACLE_HOME%\wf\install\
```

Important: The `workflow.log` file produced during installation and configuration of Oracle Workflow can contain sensitive information. To protect this sensitive information, delete this file after the installation is complete or change the permissions for the file so that only authorized administrators can access it.

Integrating Oracle Workflow with the Oracle Files Schema

Before integrating Oracle Workflow with the Oracle Files schema, you must apply the following patches:

- ARU 4920260 (for issue 2183448)
- ARU 4909037 (for issue 3180908)
- ARU 5126488 (for issue 3279810)

Download the patches from `http://metalink.oracle.com`.

To integrate Oracle Workflow with the Oracle Files schema, perform the following steps. These steps assume you have already configured Oracle Workflow per the instructions on page 14-40:

Notes: If you are using an external 9.2.0.3 database instead of the information storage database included with Oracle Collaboration Suite Release 2 (9.0.4.1.1), you must run the `catldap.sql` configuration script as the database `SYS` user on the database host system from `\rdbms\admin`. Then, run the `ifswfsetup` script to integrate Oracle Files with Oracle Workflow.

---

1. If you are integrating Oracle Files with Oracle Workflow in a locale other than English, you must change the NLS_LANG environment variable to the English

locale before running the `ifswfsetup` script. Type the following at a command prompt:

> **Note:** Before changing the value of NLS_LANG, use the command `set NLS_LANG` at a command prompt and record the current value of the environment variable.

```
SET NLS_LANG = american_america.we8iso8859p1
```

2. Once you have successfully configured Oracle Workflow, edit the `ifswfsetup.properties` file using the values provided in Table 14–7. This table describes the parameters that are used by the `ifswfsetup` script. Edit these parameters based on your requirements. **These edits are mandatory if you want to integrate Oracle Workflow with Oracle Files.** The `ifswfsetup.properties` file is located at:

```
%ORACLE_HOME%\ifs\files\settings
```

> **Important:** Back up the `ifswfsetup.properties` file before modifying it. Do not edit any parameters other than the ones listed in Table 14–7.

Table 14–7   Values for ifswfsetup.properties File

Field # and Name	Structure	Example[1]
(1) Oracle home	`ORACLE_HOME=ORACLE_HOME`	`ORACLE_HOME=D:\ocsmid`
(2) Database Host	`DB_HOST_NAME=dbhost.us.oracle.com`	`DB_HOST_NAME=acme.us.oracle.com`
(3) Database Port	`DB_LISTENER_PORT=port_number`	`DB_LISTENER_PORT=1521`
(4) Database Service Name	`DB_SERVICE_NAME=db_service_name`	`DB_SERVICE_NAME=acme9i`
(5) Database TNS Alias Name	`DB_TNS_ALIAS=db_tns_aliasname`	`DB_TNS_ALIAS=my_files_instance` This is the database service that you are using for Oracle Files, created with the Oracle Net Configuration Assistant. See "Configuring Net Service Names" on page 14-39 for more information.
(6) Database SID	`DB_SID=db_sid`	`DB_SID=my_files_sid`

Table 14–7   (Cont.) Values for ifswfsetup.properties File

Field # and Name	Structure	Example[1]
(7) Oracle Files Schema Name	`IFS_SCHEMA_NAME=`*`ifssys`*	`IFS_SCHEMA_NAME=`*`ifssys`*
(8) Oracle Workflow Schema Name	`IFS_WORKFLOW_SCHEMA_NAME=`*`workflow`* *`_schema_name`*	`IFS_WORKFLOW_SCHEMA_NAME=owf_mgr`
(9) Oracle Workflow URL	`WF_URL=http://midtier:port_number`	`WF_URL=http://`*`midtier`*`.us.oracle.com:7777`
(10) Oracle LDAP Host	`OID_HOST_NAME=`*`ldaphost.us.oracle.com`*	`OID_HOST_NAME=oidserver.us.oracle.com`
(11) Oracle LDAP Port	`OID_PORT=`*`port_number`*	`OID_PORT=4032`
(12) Oracle LDAP Admin User Name	`OID_SUPER_USER_NAME=cn=orcladmin`	**Enter the exact value specified in the Structure column.**
(13) Oracle LDAP Changelog	`LDAP_CHANGELOG=cn=changelog`	**Enter the exact value specified in the Structure column.**
(14) Oracle LDAP Baselog	`LDAP_BASELOG=` `cn=Users,dc=us,dc=oracle,dc=com`	**Values should match those specified for LDAP searchbase during Oracle Internet Directory configuration.**
(15) Language Upload Script	`LANGONLY=false`	**Enter either** `true` **or** `false`.

(16) Language Files to Upload
 	
See Table 14–8, " Language Codes" for a complete list of language codes. Multiple codes can be entered, separated by a comma.
	`LANG=`*`language_code`*	`LANG=`
		When `LANGONLY=false` **(see Field 15), this value should be left empty.**
		
		`LANG=es`
		When `LANGONLY=true` **(see Field 15), enter a language code.**

(17) OID Sync Interval	`INTERVAL=`*`interval_duration`*	`INTERVAL=10` **Specifies, in minutes, how often an Oracle Internet Directory user is provisioned in Oracle Files.**

[1]   Values for fields 2-7 and should be identical with information entered during Oracle Files configuration.
Values for fields 8-9 should be identical with information entered during Oracle Workflow configuration.
Values for fields 10-14 should be identical with LDAP information entered during Oracle Files configuration.

3.   Save and exit from the `ifswfsetup.properties` file.

4. Execute the `ifswfsetup` script by entering the following two commands:

```
cd \ifs\files\bin
ifswfsetup
```

This executes the script and creates the `ifswfsetup.log` log file in the following directory:

```
\ifs\files\log\
```

> **Important:** The `ifswsetup.properties` file and the `ifswfsetup.log` file contain sensitive information. To protect this sensitive information, delete these files after the installation is complete or change the permissions for the files so that only authorized administrators can access them.

> **Note:** If you changed the value of NLS_LANG, you must use the `set NLS_LANG` command at a command prompt to set the value of the environment variable to its previous value.

5. Enable additional languages in the Oracle Workflow schema, if necessary.

Enabling Additional Languages in the Oracle Workflow Schema (Optional)

To enable additional languages in the Oracle Workflow schema, perform the following steps:

1. Edit the `ifswfsetup.properties` file (located at `%ORACLE_HOME%\ifs\files\settings`), as follows:

   - **Field 15**: Language Upload Script

     `LANGONLY=true`

   - **Field 16**: Language Files to Upload

     `LANG=`[Enter language codes from column 2 of Table 14–8 that match the languages that you want to upload to Oracle Workflow. Separate multiple language codes with a comma.]

     If you want to enable all languages, use the following syntax:

     `LANG=all`

2. When you have completed edits to the `ifswfsetup.properties` file, execute the `ifswfsetup` script by entering the following two commands:

```
cd \ifs\files\bin
ifswfsetup.bat
```

This executes the script and creates the `ifswfenablelang.log` log file in the following directory:

```
\ifs\files\log\
```

> **Important:** The `ifswfenablelang.log` file contains sensitive information. To protect this sensitive information, delete this file after the installation is complete or change the permissions for the file so that only authorized administrators can access it.

Table 14–8   Language Codes

Language	Code[1]
Danish	da
German	de
Greek	el
Spanish	es
Finnish	fi
French	fr
Italian	it
Japanese	ja
Korean	ko
Dutch	nl
Norwegian	no
Portuguese	pt
Brazilian Portuguese	pt_BR
Russian	ru
Swedish	sv
Turkish	tr

Table 14–8 (Cont.) Language Codes

Language	Code[1]
Simplified Chinese	zh_CN
Traditional Chinese	zh_TW

---

[1] These codes can also be found in the `ifswfsetup.properties` file.

Post-Configuration Steps for Using Oracle Files with a Real Application Clusters Database (Optional)

The following tasks are required after configuring Oracle Files if you are using Oracle Files with a Real Application Clusters database.

In addition to the required preconfiguration tasks for setting up Oracle Files to use a Real Application Clusters database (see "Set Up Oracle Files to Use Real Applications Clusters Database (Optional)" on page 14-7), you must perform the following post-configuration steps:

1. On each middle tier, back up and then edit the `registry.xml` file (located in the `\ifs\common\` directory) to add a `DatabaseUrl` entry.

   You can add the `DatabaseUrl` entry anywhere under the `<Instance>` tag. In the following example, the entry is added directly under the tag. Note that the value for `tnsentry` should be the same as that specified in the Real Application Clusters pre-configuration steps.

   For example:

   ```
   <Instance>
     <DatabaseUrl>jdbc:oracle:oci8:@tnsentry</DatabaseUrl>
     <Domain>ifs://DBHOME:1521:dbservice:ifssys</Domain>
     <DomainType>files</DomainType>
     <Registered>1018925008096</Registered>
     <LastStarted>1028329087966</LastStarte>d
     <LastModified>1028330926700</LastModified>
     <Ports>
   </Instance>
   ```

2. Modify the `IFS.SERVICE.JDBC.DatabaseUrl` Service Configuration Property in the Service Configuration used for the system. Enter the same value specified in the `DatabaseUrl` specified in step 1 of this section:

   ```
   jdbc:oracle:oci8:@tnsentry
   ```

You can view Service Configuration Properties through Oracle Enterprise Manager by navigating to `http://hostname:1810` (where *hostname* is the computer where the Oracle Files domain controller is configured).

The property that shows your default service configuration is:

```
IFS.DOMAIN.LIBRARYOBJECT.SERVICECONFIGURATION.DefaultServiceConfiguration
```

Your default service configuration is one of the following:

- `SmallServiceConfiguration`
- `MediumServiceConfiguration`
- `LargeServiceConfiguration`

Caution: Be sure to specify a correct value for the DatabaseUrl parameter. If you specify an incorrect value, Oracle Files processes cannot connect to the Oracle Files schema.

Adding the Return to Portal Link in the Oracle Files Web UI (Required)

If you have configured Oracle9*i*AS Portal, you can add a Return to Portal link that displays in the Oracle Files Web UI, so that you can navigate from Oracle Files to the Oracle Collaboration Suite Home page.

To add the Return to Portal link to the Oracle Files Web UI, perform the following steps:

1. Access the Oracle Enterprise Manager Web site by entering the following URL in a Web browser:

    ```
    http://hostname:1810/
    ```

2. Log in as `ias_admin`, using the password you specified during installation, and click **OK**.

3. From the Oracle9*i*AS Home page, navigate to the Oracle Files top-level page by clicking on the Oracle Files domain link. For example:

    ```
    iFS_dbhost.us.oracle.com:1521:ifsdbservice.us.oracle.com:FilesSchema
    ```

4. In the Configuration section, click **Server Configurations**

5. From the Server Configuration page, click **FilesBaseServerConfiguration**. The Edit page displays.

6. In the Properties section, select
   `IFS.SERVER.APPLICATION.FILES.PortalUrl` and click **Edit**.

7. Change the value to specify the Oracle Collaboration Suite Home page URL.
   For example:

   `http://hostname.us.foo.com:7777/pls/portal`

8. Click **OK** on the Edit Properties page.

9. Click **OK** on the Edit Server page.

10. Return to the Oracle9*i*AS Home page.

11. Select `OC4J_iFS_files` and click **Restart**.

    The Return to Portal link now displays in the Oracle Files Web UI. It also
    displays in the Federated Search pages.

Editing the Oracle Internet Directory Return Query Limit (Optional)

If your Oracle Internet Directory server has more than 1000 Oracle Internet
Directory user accounts, the following error message can occur in your node log
when the Oracle Files `OidUserSynchronizationAgent` attempts to synchronize
users from the Oracle Internet Directory server:

```
8/13/02 7:39 PM Files: [oidsync-2107123 OidUserSynchronizationAgent] Exception
oracle.ifs.common.IfsException: IFS-12988: Count limit exceededUIDs
```

To avoid this error, complete the following steps before starting the Oracle Files
`OidUserSynchronizationAgent`:

1. Run Oracle Directory Manager by selecting **Start** > **Programs** > *Oracle9i
   Application Server - OCSMidtier_home* > **Integrated Management Tools** >
   Oracle Directory Manager.

2. Log in to the infrastructure Oracle Internet Directory server using the Oracle
   Internet Directory administrator's user name and password.

3. Select the Oracle Internet Directory server into which you just logged in from
   the tree. The server is represented in the tree with the account name, Oracle
   Internet Directory host, and Oracle Internet Directory port. Oracle Directory
   Manager displays the properties of the Oracle Internet Directory server in the
   right part of the window.

4. Locate and change the value in the **Query Entry Return Limit** field so that it is
   greater than the number of Oracle Collaboration Suite users.

   5. Click **OK** to save.

Configuring the NTFS Protocol Server (Optional)

The NTFS protocol server creates a virtual disk drive on a Windows server which provides access to Oracle Files from the Window server's file system. This virtual disk drive can be shared using Windows network file sharing to provide Windows clients network access to files in Oracle Files (see "Enabling Windows Users to Map Oracle Files as Network Drives (Optional)" on page 14-52 for more information).

The NTFS protocol server controls access from the Windows server by matching the Windows server user name to an Oracle Files user name. After Oracle Files is initially installed and started, a virtual disk is created and assigned the drive letter "O". Initially, no files are accessible on the "O" drive because all file access requires an authenticated user, and initially an Oracle Files installation does not have any users.

To access the "O" drive, you must provision an Oracle Files user with the same user name as the Windows server user (the "Windows server administrator") that is used to start Oracle Files. Once this Oracle Files user is provisioned, the Windows server administrator is able to access files on the "O" drive.

To provision an Oracle Files user, you must first create the user in Oracle Internet Directory. Once they are created in Oracle Internet Directory, they are automatically provisioned in Oracle Files by the `FilesOidUserSynchronizationAgent`. This agent runs by default every 15 minutes, but this default time period can be reset to run the agent more frequently. For more information about creating users in Oracle Internet Directory and automatically provisioning those users in Oracle Files, see "Creating Users in Oracle Internet Directory" on page 14-35.

After the Oracle Files user has been created, verify that the Windows server administrator can access the "O" drive.

Steps for Configuring the NTFS Protocol Server

After running the Oracle Files Configuration Assistant, the Windows server administrator must perform the following steps in order to properly configure the NTFS protocol server:

1. Reboot to complete the installation of the Oracle Files NTFS driver.

2. Create an Oracle Files user in Oracle Internet Directory. This user must have the same name as a Windows user who is in the Windows Administrators group (the "Windows server administrator"), or this user cannot start the NTFS driver.

3. Start all Oracle Files servers by using `ifsctl start` in a command window. All the Oracle Files protocol servers and agents start up, although the NTFS server cannot yet be used to access Oracle Files.

4. Wait for the `FilesOidUserSynchronizationAgent` to provision the user created in Oracle Internet Directory as an Oracle Files user. By default, this process occurs every 15 minutes. For detailed information on how to change the default sync time to a shorter interval, see the Oracle Files Administrator's Guide.

5. Once the user has been provisioned, the "O" drive is accessible and the default mountpoints are created. If the mountpoints are not created, you can create them by restarting the NTFS server. Restart the Oracle Files NTFS server using the Oracle Enterprise Manager Web site. Alternatively, you can restart all Oracle Files servers using `ifsctl stop` and `ifsctl start` at a command line. The NTFS server can now be used to access Oracle Files.

By default, the NTFS protocol creates Windows network shares called `MyHome` and `AllPublic` for the root ("O:\") and `AllPublic` directories, respectively, on the "O" drive. These directories must be accessible to the local Windows server administrator in order for the network shares to be created. If these directories are not accessible to the Windows server administrator, the creation of these shares fails. After you have verified that you can access the "O" drive, restart the NTFS protocol server to create the default network shares. You can restart the server using Oracle Enterprise Manager Web site or you can stop and start all servers using `ifsctl stop` and `ifsctl start`.

Configuring Access to the Local "O" Drive

By default, access to the "O" drive on the Windows server is based on the Windows user that was used to start the Oracle Files servers. The Windows user is mapped to an Oracle Files user of the same name. For example, if the Oracle Files servers are started by the Windows user `Administrator`, then access to the "O" drive is based on an Oracle Files user named `Administrator`.

You can change the default Oracle Files user that is used to access the "O" drive on the Windows server by setting a property in the NTFS server configuration. Edit the NTFS server configuration properties and add a string property with the name `IFS.SERVER.PROTOCOL.NTFS.SystemUserName`. Set the value of this property to the Oracle Files user name to be used to access the "O" drive on the Windows server. After changing the NTFS server configuration, you must stop and restart the node by using the `ifsctl stop` and `ifsctl start` commands at a command line.

Enabling Windows Users to Map Oracle Files as Network Drives (Optional)

The Oracle Files Web Interface enables Oracle Files users to logon using their Oracle Files accounts without requiring Windows user accounts. However, Windows NT/2000/2003 drive mapping is controlled independently from Oracle Files, by the native Windows security mechanisms. Before users can access an Oracle Files instance on a Windows NT/2000/2003 server as a Windows file share, Oracle Files users must be authenticated by the native Windows security mechanism. Perform the following steps to allow users to map Oracle Files NTFS protocol servers as Windows network drives:

1. Windows server administrators must create Windows user accounts for all authorized Oracle Files users.

   - If your organization is using the Microsoft Windows domain security model, the Windows server administrator should create the user accounts in the Windows domain (by using User Manager for Domains), not on the local machine. (Oracle Files ignores the domain prefix and looks at the user name only. For this reason, Windows server administrators should ensure that Windows user names that map to Oracle Files user names are unique across all Windows domains.)

   - If the Windows user accounts already exist, the Windows server administrator must provision corresponding Oracle Files accounts. For more information about creating users in Oracle Internet Directory and automatically provisioning those users in Oracle Files, see "Creating Users in Oracle Internet Directory" on page 14-35.

2. Users in a Windows NT/2000/2003 domain must enter valid Windows NT/2000/2003 user names and passwords if prompted when they attempt to map a drive to an Oracle Files server.

   - Windows NT/2000/2003 domain users might be prompted to supply the Windows domain name as part of their user name in the logon prompt, as follows:

     ```
     windows-nt/2000/2003_domainname\username
     ```

     For example:

     ```
     MyDomain\gking
     ```

Once users have authenticated using the native Windows security mechanism, they gain access to Oracle Files as the user of the same name as the Windows account.

Oracle Files administrators and Windows NT/2000/2003 administrators should ensure that appropriate user accounts have been created on Windows and in Oracle Internet Directory, and therefore provisioned in Oracle Files. To avoid inappropriate access to information, the individuals associated with Oracle Files user accounts should be the same individuals associated with Windows NT/2000/2003 accounts.

Troubleshooting a Windows NT/2000/2003 File Share

If users are unable to map a network drive to an Oracle Files instance, you (or the Windows NT/2000/2003 administrator) can create a separate Windows NT/2000/2003 file share (independent of Oracle Files), and have users attempt to map to this "test" drive to determine if the problem is with Windows NT/2000/2003. If users cannot map to the native Windows NT/2000/2003 file share, see the Windows documentation to resolve the problem.

Registering the Oracle Files and Search Portlets (Required)

After configuring Oracle Files and starting the domain, you must run the Web client installer in order to configure the Oracle Files and Search portlets. After registering the portlets, they become available from the Oracle Collaboration Suite Web client page.

> **See Also:** Chapter 6, "Installing Oracle Collaboration Suite" for information about running the Web client installer

15

Configuring Oracle Web Conferencing

This chapter discusses post-installation configuration tasks for Oracle Web Conferencing.

This chapter contains the following sections:

- Overview of Oracle Web Conferencing Configuration
- Oracle Real-Time Collaboration Core Components Post-Installation Tasks
- Installing the Document and Voice Conversion Servers
- Configuring Time Zones
- Properties

Overview of Oracle Web Conferencing Configuration

This section contains the following topics:

- imtctl Command-Line Utility

- Starting the Oracle Real-Time Collaboration Instance

A standard configuration is a deployment in which corporate intranet users can hold online meetings with voice streaming and document conversion service. This is the simplest deployment and is generally used to create a pilot deployment. In this deployment, users can access Oracle Web Conferencing from the Internet, through their proxy across the Internet, and through the intranet.

> **See Also:** *Oracle9i Application Server Administrator's Guide* for information about `dcmctl`

As shown in Figure 15–1, Host 1 and Host 2 are deployed in the DMZ, while Host 3 and Host 4 are deployed in the corporate intranet.

Figure 15–1 Oracle Real-Time Collaboration Basic Deployment
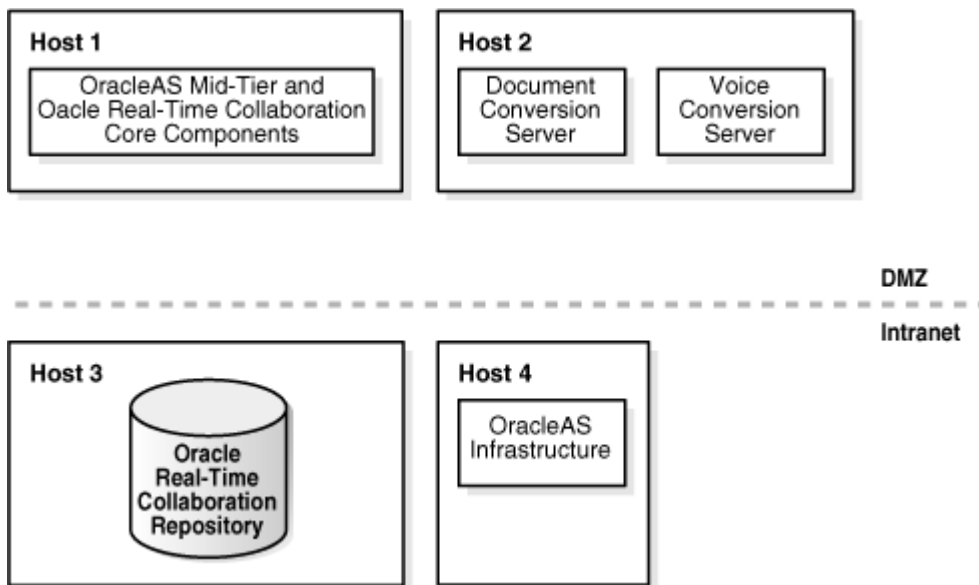
The following are the mandatory associations that must be made for the various parts of Oracle Web Conferencing to work:

- **Oracle Real-Time Collaboration Core Components to Oracle Real-Time Collaboration Repository**: This association is made during installation

- **Oracle Real-Time Collaboration Core Components to Oracle9*i*AS Infrastructure**: This association is made during installation

- **Document and Voice Conversion Servers to Oracle Real-Time Collaboration Repository**: This association is made during installation

- **Document and Voice Conversion Servers to Oracle Real-Time Collaboration Core Components**: This is a mandatory post-installation step

imtctl Command-Line Utility

The `imtctl` utility provides a command-line interface for administering and configuring the Oracle Real-Time Collaboration system. The utility supports a variety of commands to support actions such as starting and stopping Oracle Real-Time Collaboration components, viewing their current state, and configuring them. You can run `imtctl` in an interactive shell mode, or you can issue a single command as a command-line argument, in which case `imtctl` executes the command and exits.

The utility is available on all platforms under `%ORACLE_HOME%\imeeting\bin`. It is invoked as `imtctl` on all platforms. Invoking `imtctl` without any arguments opens the interactive shell.

```
%ORACLE_HOME%\imeeting\bin> imtctl
```

To display a list of supported commands, invoke the `help` command:

```
imtctl> help
```

To display specific instructions for a particular command, invoke the command followed by the `-help` option:

```
imtctl> COMMAND -help
```

The exit command ends the shell session:

```
imtctl> exit
```

imtctl Scripts

You can write simple scripts for the `imtctl` utility. These scripts consist of commands that are executed by `imtctl`, as well as optional comments. The advantage of these scripts over standard operating system scripts is that `imtctl` scripts are platform-independent and do not require multiple invocations of the utility to perform multiple commands.

Oracle Web Conferencing comes with a set of standard scripts you can use to perform typical post-installation configuration tasks. These scripts reside in the `IMT_HOME\bin\scripts` directory and end with the extension `.imt`. Each script has been templated to indicate the values that must be set before running the script. Invoke the scripts using standard input redirection as in the following example:

```
%ORACLE_HOME%\imeeting\bin> imtctl < \scripts\sample.imt
```

> **Note:**   The command line might vary slightly across platforms, but the same basic usage is supported.

You can create new scripts, as needed. The scripts can contain any supported `imtctl` commands, plus comment lines (any line that begins with #) and the special `echo [on/off]` command for echoing commands executed by scripts.

Starting the Oracle Real-Time Collaboration Instance

At installation time, all the processes are automatically started by the installer.

Any other time, start the system by using the `imtctl` utility. Invoke the following `start` command:

```
%ORACLE_HOME%\imeeting\bin\imtctl start
```

Alternatively, you can invoke `imtctl` in shell mode and then issue the `start` command. The second option makes it easier to verify the state of Oracle Real-Time Collaboration after the `start` command is completed:

```
%ORACLE_HOME%\imeeting\bin\imtctl
imtctl> start
imtctl> getState
```

Stopping the Oracle Real-Time Collaboration Instance

Stop the system by invoking the following `stop` command:

```
imtctl> stop
```

Oracle Real-Time Collaboration Core Components Post-Installation Tasks

When you install the Oracle Web Conferencing Core Components, you are installing the Oracle Web Conferencing Server and other related components. Every time you perform a new installation that results in the creation of an instance, you must perform the following two types of tasks:

- **System tasks**: These tasks must be done once for the system. In most cases, there is no need to repeat these steps when a new instance is added to the system. However, you can use the global settings or override them for specific instances.

- **Instance tasks**: These must be done for every instance. The set of specific tasks that must be completed is determined by the deployment scenario (for example, Internet-facing and SSL-enabled).

Table 15–1 lists the various tasks you must perform and information pertinent to each.

Table 15–1   Task Checklist

Task	Reason it is Required	Nature of Task
Integrate with existing proxy server	Oracle Web Conferencing must be integrated with the existing proxy settings for use by Oracle Web Conferencing Console. This includes cobrowsing functionality, and cross-instance HTTP-based diagnostics.	System task
Integrate with existing e-mail	Oracle Web Conferencing must be integrated with the e-mail infrastructure in order to send e-mail invitations for conferences.	System task
Integrate with Oracle HTTP Server	Oracle Web Conferencing must be integrated with the Oracle HTTP Server associated with that instance. This allows access to intranet users behind remote firewalls.	Instance task
Configure Oracle Web Conferencing for reports	Oracle Web Conferencing provides automatic generation and sending reports by e-mail. Oracle Web Conferencing must be configured for this functionality.	System task

Table 15–1   Task Checklist

Task	Reason it is Required	Nature of Task
Set up for periodic monitoring	The instance can be monitored periodically and the results plugged into an alert management system.	Instance task
Assign `businessadmin` role to an administrator	This allows an administrator to view the administration pages in the Oracle Web Conferencing Application.	System task

This section contains the following topics:

- System Tasks
- Instance Tasks
- Verification

System Tasks

Integrate with existing proxy servers: The Oracle Web Conferencing Cobrowse mode accesses Web sites using the HTTP/S protocols from the Oracle Real-Time Collaboration Core Components instance system. Depending on network topologies and firewall configurations, it might require an HTTP/S proxy server to access some sites. The following script provides a template for enabling proxy functionality:

```
%ORACLE_HOME%\imeeting\bin\scripts\proxy.imt
```

Before executing the script, edit it to replace templated-values with actual deployment values. See the instructions in the script for details.

Set the following properties:

- `UserAgentProxyHost`
- `UserAgentProxySSLHost`
- `UserAgentProxyPort` (only if it is not 80)
- `UserAgentProxySSLPort` (only if it is not 443)
- `UserAgentProxyExclusions`
- `UserAgentProxyEnabled`

> **See Also:** "Properties" on page 15-17 for more details on these
> properties

Integrate with existing e-mail: The Oracle Web Conferencing Application can
generate outbound e-mail for various purposes, such as inviting users to a
conference. The Oracle Real-Time Collaboration system must be configured with
certain e-mail-related properties to enable this feature. See the following `imtctl`
script for details:

```
%ORACLE_HOME%\imeeting\bin\scripts\mail.imt
```

Before executing the script, edit it to replace templated-values with actual
deployment values. See the instructions in the script for details.

Set the following properties:

- `SmtpHost`
- `SmtpPort` (only if it is not 25)
- `EmailEnabled`

> **See Also:** "Properties" on page 15-17 for more details on these
> properties

Set up reports: Oracle Real-Time Collaboration supports various reporting
capabilities, Oracle Web Conferencing reports can be generated and sent by e-mail
using the `imtreport` script. The script is located in the `%ORACLE_HOME%\imeeting\bin` directory and is invoked as `imtreport` on all platforms.
The actual script file is `imtreport` for UNIX, and `imtreport.cmd` for Microsoft
Windows. Mandatory report options, such as the recipient list, are set by editing
variables at the top of the report script. The script contains comments on the options
provided. Be sure to edit the proper script for the platform you are using. You may
want to send out automated weekly reports by using some operating system
provided mechanism for invoking the script on a weekly basis (for example, `cron
job` on UNIX or the Task Scheduler on Windows).

Set up the administrator role:

```
imtctl> modifyRole -username "firstname.lastname@acme.com" -rolename
"businessadmin"
```

Instance Tasks

Integrate Oracle Real-Time Collaboration with Oracle HTTP Server on this Oracle Real-Time Collaboration Core Components system: Enable the mod_ imeeting.

Make the necessary configuration changes to the Oracle HTTP Server in which mod_imeeting is configured. mod_imeeting is included through the %ORACLE_HOME%\imeeting\conf\mod_imeeting.conf file, which in turn is included in %ORACLE_HOME%\Apache\Apache\conf\oracle_apache.conf file for Apache.

To activate the mod_imeeting:

1. Add the following line for mod_imeeting.conf in oracle_apache.conf line:

   ```
   Include "%ORACLE_HOME%\imeeting\conf\mod_imeeting.conf"
   ```

2. Update the Apache configuration using DCM.

   ```
   %ORACLE_HOME%\dcm\bin\dcmctl updateConfig -ct ohs
   ```

   > **See Also:** *Oracle9i Application Server Administrator's Guide* for information on dcmctl

3. Restart Apache through DCM.

   ```
   %ORACLE_HOME%\dcm\bin\dcmctl restart -ct ohs
   ```

4. Set up mod_imeeting/mx redirect.

   See the following imtctl script for details:

   ```
   %ORACLE_HOME%\imeeting\bin\scripts\redirect.imt
   ```

   Before executing the script, edit it to replace templated-values with actual deployment values. See the instructions in the script for details.

   Set the MxRedirectPort property.

   > **See Also:** "Properties" on page 15-17 for more details on this property

5. Configure Oracle Real-Time Collaboration to use basic Apache settings.

The Oracle Real-Time Collaboration installer assumes that the actual host name configured for the Oracle Real-Time Collaboration Core Components computer is used by clients to access Oracle Real-Time Collaboration resources. This might not be true in some deployments where DNS aliasing and other advanced network deployment scenarios might require customization of the names used to access Oracle Real-Time Collaboration resources from external locations. The following script provides examples on how to support such configurations:

```
%ORACLE_HOME%\imeeting\bin\scripts\hostname.imt
```

Before executing the script, edit it to replace templated-values with actual deployment values. See the instructions in the script for details.

Set the following properties:

- `ApacheWebHost`

- `ApacheWebPort`

- `ApacheWebSecurePort`

- `ApacheProtocolSecure`

Set up service availability tests for periodic monitoring: Set up your monitoring infrastructure to periodically ping the following URLs. The following examples assume the URL for the instance (`ApacheWebHost`) is `imeeting1.company.com`.

For meeting service availability monitoring:

```
http://imeeting1.company.com/imtapp/servlet/ImtTestServlet?mtgtest=true
```

For Voice Conversion Server availability monitoring:

```
http://imeeting1.company.com/imtapp/servlet/ImtTestServlet?voiceconvtest=true
```

For Document Conversion Server availability monitoring:

```
http://imeeting1.company.com/imtapp/servlet/ImtTestServlet?docconvtest=true
```

> **See Also:** *Oracle Web Conferencing Administrator's Guide* for more information

Verification

To verify that the instance tasks have been done correctly, invoke:

```
imtctl> runtests
```

For each test that fails, verify that the post-installation steps have been done correctly.

> **Note:** The voice conversion server availability test and the document conversion server availability test will fail on the Core Components instance if the document and voice conversion servers have not been configured to serve the Oracle Real-Time Collaboration cluster to which the Core Components instance belongs.

Installing the Document and Voice Conversion Servers

When you install the document conversion server or voice conversion server, a new instance of the newly installed server is created.

Configuring the Voice Conversion Server

This section explains how to configure and start the voice conversion server.

VoiceDialInPrefix Property

Description: This property sets the dial-in prefix for an instance of the voice conversion server. This prefix is added to all dial-in numbers received by the voice conversion server before dialing out. Typically, corporations have a dial-in prefix (**9**, for example) for dialing numbers outside the company's internal phone network.

Default Value: None

Valid Value: Any valid dialing sequence. In most cases, it would be a number (**9**, for example). A valid dialing sequence contains numbers **0**-**9** and any of the following characters: **,** * #.

Scope: Instance

To configure the dial-in prefix for a voice conversion server instance to **9**, invoke:

```
imtctl> setProperty -i instance_name -pname "VoiceDialinPrefix" -pvalue "9"
```

System Dial-Ins

System dial-ins are system-wide dial-ins that an administrator creates. They are available to all Oracle Web Conferencing users. Typically, system administrators create system dial-ins for phone conference vendors that are used commonly by the

users of the system. System dial-ins serve as templates for users to create their own dial-ins; however, users cannot edit them. In many cases, system dial-ins are incomplete dialing sequences in that they contain information that is common to all users and indicate the information a user must add to make it a usable dial-in. Users should make the recommended addition to the system dial-in and save it as a user-defined dial-in for use in a conference.

For example, phone conference vendors typically provide a PIN or conference ID to its users. A system administrator might create a system wide dial-in for the particular conference vendor that contains the toll-free number for the vendor, followed by a placeholder for the PIN/Conference ID and the required separators, such as ',', '#', or '*'. Users would then modify the system dial-in by adding their PIN/Conference ID and then save it under a different name.

Table 15–2 lists two examples of dial-ins.

Table 15–2   Example Dial Ins

Dial-in Name	Dial-in Sequence
Audio Conferencing Vendor (US)	`18005555555,`*`ADD_CONF_ID_HERE`*`#,,,,,,,,,,#,,,,,,,,,#`
Joe's account with Audio Conferencing Vendor	`18005555555,8282828#,,,,,,,,,,, #,,,,,,,,,#`

System dial-ins can be managed through the `imtctl` utility.

Creating a New System Dial-In

To create a new system dial-in:

```
imtctl> addSysDialin -name dialin_name -sequence dialin_sequence -default
true/false
```

The `-default` indicates whether the system dial-in should be made the default for all users. Users can override the default, from the Oracle Web Conferencing Console, if they choose.

Deleting a System Dial-In

To delete a system dial-in:

```
imtctl> deleteSysDialin -name dialin_name -id dialin_id
```

The dial-in name or ID is required. If both are specified, the dial-in name is used. To get the name or ID, invoke `getSysDialins`.

Viewing Existing System Dial-Ins

Invoke `getSysDialins`. It lists the dial-in ID, name, and sequence for existing system dial-ins.

Configuring the Voice Conversion Server to Serve Instances in a Specific Oracle Real-Time Collaboration Cluster

Invoke the following:

```
imtctl> setProperty -pname InstanceLocation -pvalue
"[\"cluster1locationvalue\",\"cluster2locationvalue\"]"
```

Starting the Voice Conversion Server

Invoke `imtctl> start` to start the voice conversion server.

Verification

To verify that this Voice Conversion Server is set up correctly, shut down the other Voice Conversion Servers, if any, that are assigned to serve the same Oracle Real-Time Collaboration Core Components to which the new server is assigned. Then, on a set of Oracle Real-Time Collaboration Core Components invoke:

```
imtctl> runtests -testlist voiceconvtest
```

Verify that the Core Components computer is able to connect to the Voice Conversion Server.

Configuring Time Zones

Oracle Web Conferencing users can set their time zone by logging in to the Oracle Web Conferencing Application and clicking **Preferences**. A list of available time zones displays.

After users have set their time zone, all date and time references in the Oracle Web Conferencing application and Oracle Web Conferencing Console are automatically converted to their time zone.

Example: User A sets his time zone to "(-05:00) US Eastern Time." He then schedules a conference for 30-Mar-2004 5:00 PM. He intends to have the conference at 5 pm Eastern Time. User B, whose time zone is set to "(-08:00) US Pacific Time," is invited to this conference. When User B sees the invitation in her **Upcoming Conferences** tab, it displays as 30-Mar-2004 2:00 PM. The time has been converted to Pacific Time for User B.

Setting the Default System-Level Time Zone

When a user registers with Oracle Web Conferencing for the first time, the user's default time zone is set based on the system-level property `DefaultTimeZoneName`. The default value of this property is UTC. An administrator might want to change this value. For example, if the Oracle Real-Time Collaboration system is deployed in New York, you can change the property as follows:

```
imtctl> setProperty -system -pname DefaultTimeZoneName -pvalue America/New_York
```

This only affects the default time zones for users who have not set their time zone yet. Encourage users to set their time zones.

Time Zones

Table 15–3 contains a listing of time zones supported by Oracle Real-Time Collaboration.

Table 15–3   Oracle Real-Time Collaboration Time Zones

Internal Name	External User Visible Name
Pacific/Pago_Pago	(-11:00) Pago Pago
Pacific/Honolulu	(-10:00) Hawaii
America/Anchorage	(-09:00) Alaska
America/Vancouver	(-08:00) Canada Pacific Time
America/Los_Angeles	(-08:00) US Pacific Time
America/Tijuana	(-08:00) Tijuana
America/Edmonton	(-07:00) Canada Mountain Time
America/Denver	(-07:00) US Mountain Time
America/Phoenix	(-07:00) Arizona
America/Mazatlan	(-07:00) Mazatlan
America/Winnipeg	(-06:00) Canada Central Time
America/Regina	(-06:00) Saskatchewan
America/Chicago	(-06:00) US Central Time
America/Mexico_City	(-06:00) Mexico City
America/Guatemala	(-06:00) Guatemala

Table 15–3   Oracle Real-Time Collaboration Time Zones

Internal Name	External User Visible Name
America/El_Salvador	(-06:00) El Salvador
America/Managua	(-06:00) Managua
America/Costa_Rica	(-06:00) Costa Rica
America/Montreal	(-05:00) Canada Eastern Time
America/New_York	(-05:00) US Eastern Time
America/Indianapolis	(-05:00) East Indiana
America/Panama	(-05:00) Panama
America/Bogota	(-05:00) Bogota
America/Lima	(-05:00) Lima
America/Halifax	(-04:00) Canada Atlantic Time
America/Puerto_Rico	(-04:00) Puerto Rico
America/Caracas	(-04:00) Caracas
America/Santiago	(-04:00) Santiago
America/St_Johns	(-03:30) Newfoundland
America/Sao_Paulo	(-03:00) São Paulo
Atlantic/Azores	(-01:00) Azores
Etc/UTC	(00:00) Universal Time
UTC	(00:00) Universal Time
Atlantic/Reykjavik	(00:00) Reykjavik
Europe/Dublin	(00:00) Dublin
Europe/London	(00:00) London
Europe/Lisbon	(00:00) Lisbon
Africa/Casablanca	(00:00) Casablanca
Africa/Nouakchott	(00:00) Nouakchott
Europe/Oslo	(+01:00) Oslo
Europe/Stockholm	(+01:00) Stockholm
Europe/Copenhagen	(+01:00) Copenhagen

Table 15–3   Oracle Real-Time Collaboration Time Zones

Internal Name	External User Visible Name
Europe/Berlin	(+01:00) Berlin
Europe/Amsterdam	(+01:00) Amsterdam
Europe/Brussels	(+01:00) Brussels
Europe/Luxembourg	(+01:00) Luxembourg
Europe/Paris	(+01:00) Paris
Europe/Zurich	(+01:00) Zurich
Europe/Madrid	(+01:00) Madrid
Europe/Rome	(+01:00) Rome
Africa/Algiers	(+01:00) Algiers
Africa/Tunis	(+01:00) Tunis
Europe/Warsaw	(+01:00) Warsaw
Europe/Prague	(+01:00) Prague Bratislava
Europe/Vienna	(+01:00) Vienna
Europe/Budapest	(+01:00) Budapest
Europe/Sofia	(+02:00) Sofia
Europe/Istanbul	(+02:00) Istanbul
Europe/Athens	(+02:00) Athens
Asia/Nicosia	(+02:00) Nicosia
Asia/Beirut	(+02:00) Beirut
Asia/Damascus	(+02:00) Damascus
Asia/Jerusalem	(+02:00) Jerusalem
Asia/Amman	(+02:00) Amman
Africa/Tripoli	(+02:00) Tripoli
Africa/Cairo	(+02:00) Cairo
Africa/Johannesburg	(+02:00) Johannesburg
Europe/Moscow	(+03:00) Moscow
Asia/Baghdad	(+03:00) Baghdad

Table 15–3   Oracle Real-Time Collaboration Time Zones

Internal Name	External User Visible Name
Asia/Kuwait	(+03:00) Kuwait
Asia/Riyadh	(+03:00) Riyadh
Asia/Bahrain	(+03:00) Bahrain
Asia/Qatar	(+03:00) Qatar
Asia/Aden	(+03:00) Aden
Africa/Khartoum	(+03:00) Khartoum
Africa/Djibouti	(+03:00) Djibouti
Africa/Mogadishu	(+03:00) Mogadishu
Asia/Dubai	(+04:00) Dubai
Asia/Muscat	(+04:00) Muscat
Asia/Yekaterinburg	(+05:00) Yekaterinburg
Asia/Tashkent	(+05:00) Tashkent
Asia/Calcutta	(+05:30) India
Asia/Novosibirsk	(+06:00) Novosibirsk
Asia/Almaty	(+06:00) Almaty
Asia/Dacca	(+06:00) Dacca
Asia/Krasnoyarsk	(+07:00) Krasnoyarsk
Asia/Bangkok	(+07:00) Bangkok
Asia/Saigon	(+07:00) Vietnam
Asia/Jakarta	(+07:00) Jakarta
Asia/Irkutsk	(+08:00) Irkutsk
Asia/Shanghai	(+08:00) Beijing, Shanghai
Asia/Hong_Kong	(+08:00) Hong Kong
Asia/Taipei	(+08:00) Taipei
Asia/Kuala_Lumpur	(+08:00) Kuala Lumpur
Asia/Singapore	(+08:00) Singapore
Australia/Perth	(+08:00) Perth

Table 15–3   Oracle Real-Time Collaboration Time Zones

Internal Name	External User Visible Name
Asia/Yakutsk	(+09:00) Yakutsk
Asia/Seoul	(+09:00) Seoul
Asia/Tokyo	(+09:00) Tokyo
Australia/Darwin	(+09:30) Darwin
Australia/Adelaide	(+09:30) Adelaide
Asia/Vladivostok	(+10:00) Vladivostok
Australia/Brisbane	(+10:00) Brisbane
Australia/Sydney	(+10:00) Sydney Canberra
Australia/Hobart	(+10:00) Hobart
Asia/Magadan	(+11:00) Magadan
Asia/Kamchatka	(+12:00) Kamchatka
Pacific/Auckland	(+12:00) Auckland

Properties

This section explains the properties that must be set in order to configure Oracle Web Conferencing functionality.

This section contains the following topics:

- Setting Up a Proxy
- Configuring E-mail
- Synchronize Oracle Real-Time Collaboration Properties with Apache Settings

Setting Up a Proxy

The following properties configure proxy settings used by all Oracle Real-Time Collaboration HTTP client code. This includes cobrowsing functionality and cross-instance HTTP-based diagnostics. This is important for firewall considerations.

UserAgentProxyHost

Description: This property sets the host name of the HTTP proxy

Default value: None

Valid values: host name

Scope: Component

Examples:

- To set the proxy to `www-proxy.company.com` for the entire system, invoke:

  ```
  imtctl> setProperty -system true -pname UserAgentProxyHost -pvalue
  "www-proxy.company.com"
  ```

- To set the proxy to `www-proxy.company.com` for the current instance, invoke:

  ```
  imtctl> setProperty -pname UserAgentProxyHost -pvalue
  "www-proxy.company.com"
  ```

UserAgentProxySSLHost
Description: This property sets the host name of the HTTPS proxy

Default value: None

Valid values: valid host name

Scope: Component

Examples:

- To set the proxy to `www-proxy.company.com` for the entire system, invoke:

  ```
  imtctl> setProperty -system true -pname UserAgentProxySSLHost -pvalue
  "www-proxy.company.com"
  ```

- To set the proxy to `www-proxy.company.com` for the current instance, invoke:

  ```
  imtctl> setProperty -pname UserAgentProxySSLHost -pvalue
  "www-proxy.company.com"
  ```

UserAgentProxyPort
Description: This property sets the proxy port

Default value: 80

Valid values: Any port

Scope: Component

Examples:

■ To set the proxy port to 8080 for the entire system, invoke:

```
imtctl> setProperty -system true -pname UserAgentProxyPort -pvalue 8080
```

■ To set the proxy port for the current instance, invoke:

```
imtctl> setProperty -pname UserAgentProxyPort -pvalue 8080
```

UserAgentProxySSLPort

Description: Set this to the SSL proxy port

Default value: 443

Valid values: Any port

Scope: Component

Examples:

■ To set the SSL proxy port to 4443 for the entire system, invoke:

```
imtctl> setProperty -system true -pname UserAgentProxySSLPort -pvalue 4443
```

■ To set the SSL proxy port for the current instance, invoke:

```
imtctl> setProperty -pname UserAgentProxySSLPort -pvalue 4443
```

UserAgentProxyExclusions

Description: This property sets a list of URLs for domains/hosts that should not be proxied.

Default value: None

Valid values: (simple tail-matching algorithm). The format of the value must be `"[\"domain1\", \"domain2\"]"`

Scope: System, Instance. The property can be set at system scope but can be overridden for a specific component.

Examples:

■ To set the exclusions for the whole system for domains company.com and companycorp.com, invoke:

```
imtctl> setProperty -system true -pname UserAgentProxyExclusions -pvalue
"[\".company.com\", \".companycorp.com\"]"
```

■ To set the exclusions for the current instance for domains company.com and companycorp.com, invoke:

```
imtctl> setProperty -pname UserAgentProxyExclusions -pvalue
"[\".company.com\", \".companycorp.com\"]"
```

UserAgentProxyEnabled

Description: This property enables the proxy settings. None of the other proxy settings take effect unless this is set to true.

Default value: true

Valid values: true/false

Scope: Component

Example: To enable the proxy setting, invoke:

```
imtctl> setProperty -system true -pname UserAgentProxyEnabled -pvalue true
```

Configuring E-mail

Oracle Web Conferencing can generate outbound e-mail for various purposes, such as inviting users to a conference. To enable this feature, you must configure the Oracle Real-Time Collaboration system with certain e-mail-related properties.

SmtpHost

Description: This is the host name of the SMTP server Oracle Real-Time Collaboration should use

Default value: None

Valid values: a host name

Scope: System, Instance. The property can be set at system scope but can be overridden for a specific instance.

Examples:

- To set SmtpHost for the whole system to mail-net.company.com, invoke:

  ```
  imtctl> setProperty -system true -pname SmtpHost -pvalue
  "mail-net.company.com"
  ```

- To set SmtpHost for the current instance to mail-net.company.com, invoke:

  ```
  imtctl> setProperty -pname SmtpHost -pvalue "mail-net.company.com"
  ```

SmtpPort

Description: This is the port on which the SMTP server listens

Default value: 25

Scope: System, Instance. The property can be set at system scope but can be overridden for a specific instance.

Examples:

- To set `SmtpPort` for the whole system to 3000, invoke:

  ```
  imtctl> setProperty -system true -pname SmtpPort -pvalue 3000
  ```

- To set `SmtpPort` for the current instance to 3000, invoke:

  ```
  imtctl> setProperty -pname SmtpPort -pvalue 3000
  ```

MxRedirectPort

Description: Internet end-users connecting through the Oracle Web Conferencing Console typically connect to the `Apache/mod_imeeting`. Ultimately, the socket is handed off to the MX by `mod_imeeting`, and this property is used to facilitate the communication between `mod_imeeting` and the MX process on the instance. This parameter has the following platform-specific connotations:

- **UNIX**: It is not a port, but a name. The socket is handed off using Domain Name Sockets.

- **Windows NT**: It is a port

- **Linux x86**: It is not a port, but a name

Default value: None

Valid values: Integer within the range 2400-2700

Scope: Component

Examples:

- For one MX process (installer default), invoke:

  ```
  imtctl> setProperty -ct mxcomm -pname MxRedirectPort -pvalue "[\"2420\"]"
  ```

- For two MX processes, invoke:

  ```
  imtctl> setProperty -ct mxcomm -pname MxRedirectPort -pvalue
  "[\"2420\",\"2421\"]"
  ```

Typically, these two examples are enough to support all modes of connections if Oracle Web Cache is not present on the Oracle Real-Time Collaboration core components computer, and Oracle HTTP Server is the listener.

Synchronize Oracle Real-Time Collaboration Properties with Apache Settings

Change the following properties to synchronize with the Apache settings.

ApacheWebHost

Description: The Oracle Real-Time Collaboration installer assumes that the actual host name configured for the Oracle Real-Time Collaboration core components computer is used by clients to access Oracle Real-Time Collaboration resources. This might not be true in some deployments where DNS aliasing and other advanced network deployment scenarios might require customization of the names used to access Oracle Real-Time Collaboration resources from external locations.

Default value: Actual host name derived at installation by the installer

Valid values: Any host name

Scope: Instance

Example: If the actual host name is `host1.company com`, but if the name to be used is `"webconferencing.company.com"`, invoke:

```
imtctl> setProperty -pname ApacheWebHost -pvalue "webconferencing.company.com"
```

ApacheWebPort

Description: The port on which Apache is listening for HTTP requests

Default value: 80

Valid values: Any legal port value

Scope: Instance

Example: If the Apache on the instance is listening on port 7777 instead of 80 for HTTP requests, invoke:

```
imtctl> setProperty -pname ApacheWebPort -pvalue 7777
```

> **Note:** Setting the port to a value other than 80 may prevent access to users coming behind remote proxies.

ApacheWebSecurePort

Description: The port on which Apache is listening for HTTPS requests

Default value: 443

Valid values: Any legal port value

Scope: Instance

Example: If the Apache on the instance is listening on port 4443 instead of 443 for HTTPS requests, invoke:

```
imtctl> setProperty -pname ApacheWebSecurePort -pvalue 4443
```

> **Note:** Setting this to something other than 443 may prevent access to users behind remote proxies.

ApacheProtocolSecure

Description: Whether the `ApacheWebHost` is using SSL

Default value: false

Valid values: true/false

Scope: System

Example: If the Apache Web host is using SSL, this property needs to be set to `true`, as shown in the following example:

```
imtctl> setProperty -pname ApacheProtocolSecure -pvalue true
```

A

Java Access Bridge Installation

This appendix describes the procedures required for installation of Java Access Bridge.

This appendix contains these topics:

- Setting Up Java Access Bridge
- Setup for JRE 1.3.1
- Setup for JRE 1.1.8

Setting Up Java Access Bridge

This section contains setup information for enabling Oracle components to use a screen reader.

Java Access Bridge enables assistive technologies, such as the JAWS screen reader, to read Java applications running on the Windows platform. Assistive technologies can read Java-based interfaces, such as Oracle Universal Installer and Oracle Enterprise Manager.

Your Oracle Collaboration Suite installation CD-ROMs contain two different versions of Java Runtime Environment (JRE) that are used by Oracle Universal Installer during installation. The CD-ROMs contain JRE 1.3.1 and JRE 1.1.8. The JREs enable use of Java Access Bridge during installation.

Complete the following procedures to install and configure Java Access Bridge for each of the JREs.

> **Note:** Java Access Bridge is available on the first CD-ROM of the following installation CDs:
>
> - Oracle9*i*AS Infrastructure
>
> - Oracle Collaboration Suite information storage
>
> - Oracle Collaboration Suite

Setup for JRE 1.3.1

To set up Java Access Bridge with JRE 1.3.1, run the batch file on the first Oracle Collaboration Suite CD-ROM. The batch file is located at:

```
first_install_CD-ROM\install\win32\access_setup.bat
```

Setup for JRE 1.1.8

The following sections describe how to use Java Access Bridge with JRE 1.1.8:

- Setup for Oracle Universal Installer
- Setup for Oracle Installed Components

Setup for Oracle Universal Installer

Install and configure Java Access Bridge before installing Oracle components to enable assistive technologies to read Oracle Universal Installer screens.

To install Java Access Bridge:

1. Exit any assistive technology software that is running before you begin Java Access Bridge installation.

2. Insert the first Oracle Collaboration Suite component CD-ROM.

3. Copy `\AccessBridge\accessbridge1_0_2.zip` to a location on your hard drive.

4. Extract the files onto your computer hard drive. For example:

   `c:\`

5. Add `access-bridge.jar` and `jaccess-1_1.jar` information to the `CLASSPATH` user environment variable.

   a. Open the Windows System Control Panel. For Windows NT or Windows 2000, choose **Start** > **Settings** > **Control Panel** > **System**.

      – On Windows NT, click the **Environment** tab.

      – On Windows 2000, click the **Advanced** tab. Then, click **Environment Variables**.

   b. Add the following to the `CLASSPATH` user environment variable:

      ```
      c:\AccessBridge-1_0_2fcs\installer\installerFiles\access-bridge.jar
      c:\AccessBridge-1_0_2fcs\installer\installerFiles\jaccess-1_1.jar
      ```

      where `c:\AccessBridge-1_0_2fcs` is the full path to the Java Access Bridge location on your computer hard drive.

6. Copy `JavaAccessBridge.dll` and `WindowsAccessBridge.dll` from:

   `c:\AccessBridge-1_0_2fcs\installer\installerFiles\`

   to

   `%SystemRoot%\system32\`

   Following successful installation, Java Access Bridge documentation is located at:

   `\AccessBridge-1_0_2fcs\doc`

Setup for Oracle Installed Components

Install and configure Java Access Bridge for Windows after installing Oracle components to enable assistive technologies to read Oracle component screens.

To install Java Access Bridge:

1. Insert the first Oracle Collaboration Suite component CD-ROM.

2. Copy `\AccessBridge\accessbridge1_0_2.zip` to a location on your hard drive.

3. Extract the files onto your computer hard drive. For example:

    ```
    c:\
    ```

4. Install Java Access Bridge into the subdirectory of JRE 1.1.8 used by Oracle components. By default, the JRE 1.1.8 used by Oracle is installed in:

    ```
    SYSTEM_DRIVE:\Program Files\Oracle\jre\1.1.8
    ```

Table A–1 lists the files to copy from the Java Access Bridge location on your computer hard drive to the appropriate subdirectory of the JRE used by Oracle components.

Table A–1   Copy Files To Subdirectory

Copy...	To...
`\AccessBridge-1_0_2fcs\installer\installerFiles\` `jaccess-1_1.jar`	`\lib\`
`\AccessBridge-1_0_2fcs\access-bridge.jar`	`\lib\`
`\AccessBridge-1_0_2fcs\JavaAccessBridge.dll`	`\bin\`
`\AccessBridge-1_0_2fcs\WindowsAccessBridge.dll`	`\bin\`

1. Rename `jaccess-1_1.jar` to `jaccess.jar` in the destination folder.

2. Use a text editor to open the `\lib\awt.properties` file located in the subdirectory of JRE 1.1.8 used by Oracle components.

3. Add the following lines to the `awt.properties` file:

    ```
    AWT.EventQueueClass=com.com.java.accessibility.util.EventQueueMonitor
    AWT.assistive_technologies=com.sun.java.accessibility.AccessBridge
    ```

Following successful installation, Java Access Bridge documentation is located at:

```
\AccessBridge-1_0_2fcs\doc
```

To configure Oracle components to use Java Access Bridge:

Set the system environment variable *ORACLE_OEM_CLASSPATH* to point to the installed Java Access Bridge files.

1. Open System Properties. For Windows NT or Windows 2000, choose **Start > Settings > Control Panel > System**.

   On Windows NT:

   a. Click the **Environment** tab.

   b. Select a variable in the **System Variables** list.

   c. Enter *ORACLE_OEM_CLASSPATH* in the **Variable** field.

   d. Enter the full path of `jaccess.jar` and `access-bridge.jar` in the **Value** field. For example, if JRE 1.1.8 is installed in the default location, then the paths are:

   ```
   SYSTEM_DRIVE:\Program Files\Oracle\jre\1.1.8\lib\jaccess.jar;
   SYSTEM_DRIVE:\Program Files\Oralce\jre\1.1.8\lib\access-bridge.jar
   ```

   e. Click **Set**.

   f. Click **OK**.

   On Windows 2000:

   a. Click the **Advanced** tab.

   b. Click **Environment Variables**.

   The Environment Variables dialog appears.

   c. Click the **New** button under the **System Variable** list.

   The New System Variable dialog appears.

   d. Enter the *ORACLE_OEM_CLASSPATH* in the **Variable Name** field.

   e. Enter the full path of `jaccess.jar` and `access-bridge.jar` in the **Variable Value** field. For example, if JRE 1.1.8 is installed in the default location, then the paths are:

   ```
   SYSTEM_DRIVE:\Program Files\Oracle\jre\1.1.8\lib\jaccess.jar;
   ```

```
SYSTEM_DRIVE:\Program Files\Oralce\jre\1.1.8\lib\access-bridge.jar
```

   f.   Click **OK** until you exit System Properties.

B

Installation Checklists

This appendix provides checklists for the three installations of Oracle Collaboration Suite and the Oracle Files Configuration Assistant. These checklists identify the types of information you are prompted to enter for each installation and configuration.

This appendix contains these topics:

- Oracle9iAS Infrastructure Installation Checklist

- Oracle Collaboration Suite Information Storage Installation Checklist

- Oracle Collaboration Suite Installation Checklist

- Oracle Files Configuration Checklist

Oracle9*i*AS Infrastructure Installation Checklist

Table B–1 lists required information for Oracle9*i*AS Infrastructure installation. Enter your values for the listed installation information in the Your Information column before beginning.

Table B–1   Oracle9iAS Infrastructure Installation Information

Information	Example Values	Your Information
Instance Name	`instance1`	
`ias_admin` Password	`oracle1`	
Oracle9*i*AS Single Sign-On Server Host Name[1]	`ocs.us.oracle.com`	
Oracle9*i*AS Single Sign-On Port Number[1] (See Appendix D, "Default Port Numbers and Port Ranges")	`7777`	
Oracle Internet Directory Host Name	`ocs.us.oracle.com`	
Oracle Internet Directory Port Number (See Appendix D, "Default Port Numbers and Port Ranges")	`4032`	
Oracle Internet Directory Username	`cn=orcladmin`	
Oracle Internet Directory Password	`oracleadmin`	
Database Character Set	UTF8	

[1]   Required for Oracle Collaboration Suite installations.

Oracle Collaboration Suite Information Storage Installation Checklist

Table B–2 lists required information for Oracle Collaboration Suite information storage installation. Enter your values for the listed installation information in the Your Information column before beginning.

Table B–2   Information Storage Installation Information

Information	Example Values	Your Information
Global database name and SID name	instance1	
Database Character Set	UTF8	UTF8[1]
SYSTEM user's password		
SYS user's password		
CTXSYS user's password		
Database service name	myService	
Database host name	dbHost	
Database listener port		

[1]   For this release of Oracle Collaboration Suite, the default character set for the information storage database is UTF8.

Oracle Collaboration Suite Installation Checklist

Table B–3 lists required information for Oracle Collaboration Suite installation. Enter your values for the listed installation information in the Your Information column before beginning.

Table B–3   Oracle Collaboration Suite Installation Information

Information	Example Values	Your Information
Instance Name		
ias_admin Password	oracle1	
Oracle9*i*AS Single Sign-On Server Host Name[1]	ocs.us.oracle.com	
Oracle9*i*AS Single Sign-On Port Number[1] (See Appendix D, "Default Port Numbers and Port Ranges")	7777	
Oracle Internet Directory Host Name	ocs.us.oracle.com	

Table B–3   Oracle Collaboration Suite Installation Information (Cont.)

Information	Example Values	Your Information
Oracle Internet Directory Port Number (See Appendix D, "Default Port Numbers and Port Ranges")	4032	
Oracle Internet Directory Username	cn=orcladmin	
Oracle Internet Directory Password	oracleadmin	

[1]   Required for Oracle Collaboration Suite installations.

Oracle Files Configuration Checklist

Table B–4 lists required information for Oracle Files configuration. Enter your values for the listed configuration information in the Your Information column before beginning.

Table B–4   Oracle Files Configuration Information

Information	Example Values	Your Information
Schema Name	IFSSYS	
Schema Password		
Oracle Files system User Password		
Oracle Files site_admin User Password		
Database Host Name	deploy.mycompany.com	
Database Listener Port	1521	
Database Service Name	storage.deploy.mycompany.com	
Database SYS User Password		
HTTP Host Name	files.mycompany.com	
SMTP Server Name	smtphost.domainname	
Site Administrator E-mail Address	admin@mycompany.com	

Table B–4   Oracle Files Configuration Information (Cont.)

Information	Example Values	Your Information
Oracle Internet Directory Root Oracle Context	`cn=OracleContext`	
Local Host Name	`local.mycompany.com`	
Node Name	`local.mycompany.com Node`	
HTTP Node Name	`local.mycompany.com HTTP Node`	
Oracle Files Protocol Servers		❏ FTP ❏ NFS ❏ AFP ❏ NTFS

C

Troubleshooting

This appendix describes common installation problems and solutions.

This appendix contains these topics:

- Troubleshooting Oracle Collaboration Suite Web Client Configuration
- Troubleshooting Oracle Files Installation
- Troubleshooting Real Application Clusters

Troubleshooting Oracle Collaboration Suite Installation

The Oracle9*i*AS infrastructure and the Oracle Collaboration Suite middle tier require several files in the Windows system folder. During these installations, the system files are examined to ensure that they meet the requirements for Oracle Collaboration Suite. All older files are replaced with the required version. Normally, replacement is completed during the middle tier installation, but if the file is in use by another process at the time of installation, the installation stops and an error screen appears.

The infrastructure and the middle tier CD-ROMs include a supplementary installation for the required Windows system files. This installation automatically reboots the system if necessary at the conclusion of the installation.

If you encounter an error installing either the Oracle9*i*AS infrastructure or the Oracle Collaboration Suite middle tier, click **OK** to close the error dialog, then perform the following steps to run the Windows System Files installation. You cannot proceed with the Oracle9*i*AS infrastructure or the Oracle Collaboration Suite middle tier installation if you do not run the Windows System Files installation.

To run the Windows System Files installation:

1. Click **Exit** to quit the current installation.

2. Run `wsf.exe` from the root directory on the Oracle9*i*AS Infrastructure or the Oracle Collaboration Suite Middle Tier CD-ROM.

   The Windows System Files installation runs with a response file that utilizes an existing Oracle home or creates the home, `OUIHome`, if none is available. Windows restarts automatically, if it is required; otherwise the Windows System Files installation ends without displaying additional screens.

3. Restart the Oracle9*i*AS infrastructure or the Oracle Collaboration Suite middle tier installation.

Troubleshooting Oracle Collaboration Suite Web Client Configuration

If a user logs into Oracle Collaboration Suite and sees a generic Oracle9*i*AS Portal page instead of the Oracle Collaboration Suite Home page, do the following:

1. Ensure that the user is a member of the Oracle Collaboration Suite Users group, as follows:

   a. Log into Oracle Delegated Administration Services as `orcladmin` at the following URL:

```
http://host_name:port_number/oiddas/
```

> **Note:** In a typical installation, Oracle Delegated Administration
> Services is located where the infrastructure is installed.

   b. Click the **Directory** tab.

   c. Search for the user by user ID (`orclguest`, for example).

   d. Select the user from the search results, and click **Edit**.

   e. Scroll down to the **Public Groups Assignment** section, and ensure that the
   user is a member of the Oracle Collaboration Suite Users group.

   If the user is not a member, select the **Oracle Collaboration Suite Users**
   box, and click **Apply**.

   f. Log out of Oracle Delegated Administration Services.

2. Ensure that the Oracle Collaboration Suite Users group is the user's default
group, as follows:

   a. Log into Oracle9*i*AS Portal as the user in question. For example, go to
   `http://host_name:port_number/`, click **End User Login**, and log in as
   `orclguest`.

   b. If the Oracle Collaboration Suite Home page displays, the user is now
   correctly provisioned and the rest of this procedure is unnecessary.

   c. If the Oracle9*i*AS Portal Welcome page displays, click **Account Info**.

   d. On the Account Info page, ensure that the user's default group is set to
   `OCS_PORTAL_USERS`.

   If it is not, manually enter `OCS_PORTAL_USERS` for the user's default
   group, and click **Apply**.

   e. Ensure the user's **Default Home Page** is blank.

   f. Click the **Home** global button. You should see the Oracle Collaboration
   Suite Home page. If not, proceed to step 3.

3. If the Oracle Collaboration Suite Home page still does not display, do the
following:

    a. Log into Oracle9*i*AS Portal as the user in question. For example, go to `http://host_name:port_number/`, click **End User Login**, and log in as `orclguest`.

    b. When the Oracle9*i*AS Portal Welcome page displays, click **Account Info**.

    c. On the Account Info page, ensure that the user's default group is set to `OCS_PORTAL_USERS`.

       If it is not, manually enter `OCS_PORTAL_USERS` for the user's default group, and click **Apply**.

    d. Click the **Browse Pages** icon next to the **Default Home Page** field.

    e. Locate the **OCS_V2_PAGE_GROUP** page group, and click to expand it.

    f. Locate the Oracle Collaboration Suite Home page, and click **Return Object**.

    g. Click **Apply**.

    h. Click the **Home** global button and the correct home page should display.

Troubleshooting Oracle Files Installation

Most configuration errors involve failure to carefully follow preinstallation instructions. The following section describes some common installation problems, their possible causes, and how to correct the problem. Installation and configuration information for both Oracle Files and Oracle Workflow are captured in the following log files:

```
%ORACLE_HOME%\ifs\files\log\FilesConfig.log
%ORACLE_HOME%\wf\install\workflow.log
%ORACLE_HOME%\ifs\files\log\ifswfsetup.log
%ORACLE_HOME%\ifs\files\log\ifswfuploadlang.log
```

This section describes the following problems:

- Error Creating Database Objects

- Database-Related Installation Error Messages

- Determining if Oracle Text is Operating Properly

- Server is Slow

- Cannot Connect to Protocol Servers

- "503 Service Unavailable" Message

- Oracle Files Configuration Assistant "session_max_open_files must be set to 50" Error Message

Error Creating Database Objects

The database is not running or is not available, or the listener is not running. Start the database and listener prior to configuration.

Database-Related Installation Error Messages

The database is not running or Oracle Text is not correctly configured. Start the database prior to installation and check the tnsnames.ora and listener.ora files.

Determining if Oracle Text is Operating Properly

The Oracle Files configuration assistant performs a series of operations to determine if Oracle Text is operating correctly. These steps involve the following:

- Creating and logging in as an IFSCTXTEST0 user

- Creating an Oracle Text preference

- Creating a table with a blob column

- Creating an Oracle Text index based on this blob column

- Loading a Word document into the table

- Synching the Oracle Text index

If any of these steps fail, the Oracle Files configuration assistant notifies you that Oracle Text is not operating properly. The cause of the problem can be related to a number of issues. To find out in which step the test fails, use the following procedure.

> **Note:** Oracle Files configuration against Windows 64-bit Oracle9*i* Database Server 9.2 database fails because the database is missing the `ctxhx` executable that is required to enable Oracle Text on the schema.
>
> There are two possible solutions to this problem:
>
> - If you receive an error message during Oracle Files configuration that states "Oracle Text Verification Failed," click **OK** to create a schema without Oracle Text enabled.
>
> - Build your own `ctxhx` executable. For more information, read the *Building a Filter Server for Oracle Text* document on OTN at
>
>   `http://otn.oracle.com/products/text/htdocs/FilterServer.htm`

Perform the following to do a manual step-by-step check of Oracle Text:

1. Log in as a DBA user and create a test user called `ifsctxtest0`, as follows:

   ```
   SQL> CREATE USER IFSCTXTEST0 IDENTIFIED BY IFSCTXTEST0 DEFAULT TABLESPACE
   USERS TEMPORARY TABLESPACE TEMP;

   SQL> GRANT CONNECT,RESOURCE,CTXAPP TO IFSCTXTEST0;
   ```

2. Create the directory to load the `ifsctxtest.doc` file from:

   ```
   SQL> create or replace directory DIR_TESTCASE as 'ORACLE_
   HOME\ifs\files\admin\binaries'
   ```

3. Allow the `IFSCTXTEST0` user to read from this directory:

   ```
   SQL> grant read on directory DIR_TESTCASE to IFSCTXTEST0;
   ```

4. Connect as `IFSCTXTEST0` and create a `lexer` preference:

   ```
   SQL> exec ctx_ddl.create_preference('mylexer', 'basic_lexer');
   ```

5. Disable theme indexing for this preference:

   ```
   SQL> exec ctx_ddl.set_attribute('mylexer', 'index_themes', 'NO');
   ```

6. Create a temporary table to store the Word document:

   ```
   SQL> create table ifs_basic_lob_table( id NUMBER PRIMARY KEY, name
   VARCHAR2(64),content BLOB );
   ```

7. Create an Oracle Text index on the BLOB column:

```
SQL> create index content_i on ifs_basic_lob_table(content) indextype is
ctxsys.context parameters ('lexer mylexer');
```

8. Insert a row into the temporary table containing the lob locator and load the document using the following PL/SQL block:

```
SQL> DECLARE
       Dest_loc BLOB;
       Src_loc  BFILE := BFILENAME('DIR_TESTCASE', 'ifsctxtest.doc');
     BEGIN
       INSERT INTO ifs_basic_lob_table (id,name,content)
        VALUES (1,'ifsctxtest.doc',EMPTY_BLOB())
        RETURN content INTO dest_loc;
       DBMS_LOB.FILEOPEN(Src_loc, DBMS_LOB.LOB_READONLY);
       DBMS_LOB.LOADFROMFILE(Dest_loc, Src_loc, DBMS_LOB.GETLENGTH(Src_
loc));
       DBMS_LOB.FILECLOSE(Src_loc);
       COMMIT;
     END;
     /
```

9. Synchronize the index:

```
SQL> alter index content_i rebuild parameters('sync');
```

10. Perform a content-based query on the table containing the Word document:

```
SQL> SELECT id, name FROM ifs_basic_lob_table WHERE CONTAINS
(content,'Protocol') > 0;
```

If Oracle Text is operating properly, this should return the following row:

```
    ID NAME
------ ----------------------------------------------------------------
     1 ifsctxtest.doc
```

Any error messages that are returned should give you an indication of what could be causing the problem. If synchronizing the index or searching on the content fails, ensure you check the CTX_USER_INDEX_ERRORS for supplemental information, as ifsctxtest0:

```
SQL> select * from ctx_user_index_errors;
```

This information can be used to search Oracle*MetaLink* for possible solutions or supply support analysts with better diagnostic information.

Remember to review the Oracle Text documentation and the troubleshooting sections in the *Oracle Files Administrator's Guide* for information on configuring Oracle Text.

> **Note:** Remember to drop the `IFSCTXTEST0` user after these tests have been performed.

Server is Slow

Tuning is required.

> **See Also:** The Oracle Files troubleshooting and performance chapter in *Oracle Files Administrator's Guide*

Cannot Connect to Protocol Servers

If you can log in to the Oracle Files Web Interface but cannot connect to some of the Oracle Files protocol servers, you must set the Oracle Files-specific password. Protocols with which to associate an Oracle Files-specific password were selected during Oracle Files configuration. By default, FTP and AFP require users to log in with an Oracle Files-specific password rather than a Single Sign-On password.

Connect to `http://host_name:port/files/app/ProtocolAccess` and set the Oracle Files-specific password for users.

> **See Also:** *Oracle Files Administrator's Guide* for more information about configuring protocol servers

"503 Service Unavailable" Message

There are two possible causes for this:

- The `OC4J_iFS_files` instance is not running. You must restart the `OC4J_ifs_files` process after starting the Oracle Files domain (use the command `ifstl start` to start the Oracle Files domain).

  Check the HTTP log for errors and start the `OC4J_iFS_files` instance. Then connect to `http://hostname:port/files/app`.

  To start the `OC4J_ifs_files` process, run the following command in the `%ORACLE_HOME%/opmn/bin directory`:

```
opmnctl startproc gid=OC4J_iFS_files
```

If you had previously started the OC4J_iFS_files process, use the following command to restart the process:

```
opmnctl restartproc gid=OC4J_iFS_files
```

- The OC4J_iFS_files instance is running, but the interface is still loading. Wait approximately one minute after starting OC4J_iFS_files before connecting.

Oracle Files Configuration Assistant "session_max_open_files must be set to 50" Error Message

The session_max_open_files value in the init*sid*.ora file is not set correctly. Modify the init*sid*.ora file and set the value of the session_max_open_files parameter to 50.

Edit the file and add the following line:

```
session_max_open_files=50
```

After editing the file, shut down the database and then restart it with the new init*sid*.ora file. Use the following command in SQL*Plus to start the database:

```
startup pfile="%ORACLE_HOME%\pfile\initsid.ora"
```

Run the Oracle Files configuration assistant.

Troubleshooting Real Application Clusters

To ensure that the installation succeeds on the remote nodes you choose, select a path for Oracle home that is the same on all chosen nodes and is writable. Otherwise, installation on the remote nodes fails. No error message indicates this failure.

D

Default Port Numbers and Port Ranges

This appendix describes the port numbers automatically assigned by Oracle Universal Installer.

This appendix contains these topics:

- Port Allocation Overview
- Component Port Numbers
- Oracle Port Usage (Sorted by Component)
- Oracle Port Usage (Sorted by Port Number)

Port Allocation Overview

Oracle9*i*AS Infrastructure and Oracle Collaboration Suite automatically assign port numbers to a component when it is configured. The port number is assigned from a preallocated set of default port numbers and port ranges.

The following method is used to assign port numbers:

1. It is determined if the default port number is already in use by an Oracle or non-Oracle process.

2. If the default port number is not in use, it is assigned to the component.

3. If the default port number is already in use, an attempt is made to assign a number from the port range, starting with the lowest number and going up until a free port number is found.

Component Port Numbers

Oracle Universal Installer creates a file called `portlist.ini` showing the ports assigned during installation of Oracle9*i*AS Infrastructure and Oracle Collaboration Suite. The installation process automatically detects any port conflicts and chooses an alternate port in the range allocated for that component. The file is located at:

```
%ORACLE_HOME%\install\portlist.ini
```

The `portlist.ini` file lists component entries using the `port_name = port_value` format. For example:

```
Oracle HTTP Server port = 7777
Oracle HTTP Server SSL port = 4443
Oracle HTTP Server listen port = 7778
Oracle HTTP Server SSL listen port = 4444
Oracle HTTP Server Jserv port = 8007
Enterprise Manager Servlet port = 1810
```

You can also view the port numbers by pointing your browser to the Oracle Collaboration Suite Welcome page and selecting the Ports tab.

```
http://hostname:port_number/
```

where the default `port_number` is 7777.

> **Note:** Oracle Universal Installer uses the port numbers for select components during installation of Oracle Collaboration Suite. If you are planning on adding additional Oracle Collaboration Suite instances, make sure the installed instances are running at the time of additional installation.

Oracle9*i*AS Infrastructure Port Usage

Installation of the Oracle9*i*AS Infrastructure requires exclusive use of port 1521 on your computer. If one of your current system applications uses this port, then complete one of the following actions before installing Oracle9*i*AS Infrastructure:

- If you have an existing application using port 1521, then reconfigure the existing application to use another port.

- If you have an existing Oracle Net listener and an Oracle9*i* database, then proceed with the installation of Oracle9*i*AS Infrastructure. Your Oracle9*i*AS Infrastructure uses the existing Oracle Net listener.

Oracle Port Usage (Sorted by Component)

Table D–1 lists Oracle ports by components names.

Table D–1   Oracle Port Usage (Sorted by Component)

Component	Default Port Number	Port Number Range
Oracle9*i*AS Clickstream Intelligence		
Oracle9*i*AS Clickstream Collector Server	6675	Fixed
Oracle9*i*AS Clickstream Collector Agent	6666	Fixed
Oracle9*i*AS Clickstream Intelligence Collector Agent	6666	6666-6674
Oracle9*i*AS Clickstream Execution Engine	6676	Fixed
Oracle9*i*AS Clickstream Intelligence Viewer	Same as Oracle HTTP Server	Same as Oracle HTTP Server
Oracle9*i*AS Clickstream Runtime Administrator	Same as Oracle HTTP Server	Same as Oracle HTTP Server

Table D–1   Oracle Port Usage (Sorted by Component) (Cont.)

Component	Default Port Number	Port Number Range
Oracle9*i*AS Containers for J2EE		
Oracle9*i*AS Containers for J2EE AJP	3001	3001-3100
Oracle9*i*AS Containers for J2EE RMI	3101	3101-3200
Java Message Service (JMS) for Oracle9*i*AS Containers for J2EE	3201	3201-3300
Oracle9*i*AS Containers for J2EE HTTP Listener	3301	3301-3400
Oracle9*i*AS Forms Services		
Oracle9*i*AS Forms Services	Same as Oracle HTTP Server	Same as Oracle HTTP Server
Oracle HTTP Server		
Oracle HTTP Server- non-SSL	7777	7777-7877
Oracle HTTP Server- SSL	4443	4443-4543
Oracle HTTP Server Listen- non-SSL	7777	7777-7877
Oracle HTTP Server Listen- non-SSL if Oracle9*i*AS Web Cache is installed and configured	7778	7777-7877
Oracle HTTP Server- SSL	4443	4443-4543
Oracle HTTP Server- SSL- Oracle9*i*AS Web Cache is installed and configured	4444	4443-4543
Oracle HTTP Server JServ Servlet Engine	8007	8007-8107
Oracle HTTP Server- Oracle Notification Service Requested Port	6003	6003-6099
Oracle HTTP Server- Oracle Notification Service Local Port	6100	6100-6199
Oracle HTTP Server- Oracle Notification Service Remote Port	6200	6200-6299
Oracle HTTP Server- Java Object Cache	7000	7000-7010

Table D–1   Oracle Port Usage (Sorted by Component) (Cont.)

Component	Default Port Number	Port Number Range
Oracle9*i*AS Portal		
Oracle9*i*AS Portal	Same as Oracle HTTP Server	Same as Oracle HTTP Server
Oracle9*i*AS Single Sign-On	5000	5000-5099
Oracle9*i*AS Reports Services		
Oracle9*i*AS Reports Services	3000	3000-3010
SQL*Net- For 6*i* Backward Compatibility Only	1950	1950-1960
Visigenics CORBA- Reports 9*i*	14000	14000-14010
Oracle Email		
Oracle Email	5100	5100-5200
IMAP4	143	Fixed
IMAP4- SSL	993	Fixed
POP3	110	Fixed
POP3- SSL	995	Fixed
SMTP	25	Fixed
NNTP	119	Fixed
NNTP- SSL	563	Fixed
Oracle9*i*AS Web Cache		
Oracle9*i*AS Web Cache HTTP Listen- non-SSL	7777	7777-7877
Oracle9*i*AS Web Cache HTTP Listen- SSL	4443	4443-4543
Oracle9*i*AS Web Cache Administration	4000	4000-4030
Oracle9*i*AS Wireless		
Oracle9*i*AS Wireless	Same as Oracle HTTP Server	Same as Oracle HTTP Server
Oracle9*i*AS Wireless PIM Notification Dispatcher	9000	9000-9100

Table D–1   Oracle Port Usage (Sorted by Component) (Cont.)

Component	Default Port Number	Port Number Range
Oracle Enterprise Manager		
Oracle Enterprise Manager Application Server Administration Service	1810, 1811	1812-1820
Oracle Enterprise Manager Intelligent Agent	1748, 1754, 1808, 1809	Fixed
Oracle Management Server	7771, 7772, 7773	7771-7773
Oracle Internet Directory		
Oracle Internet Directory	389, 4031-4040	4031-4040
Oracle Internet Directory- non-SSL	4032	
Oracle Internet Directory- SSL	636, 4031-4040	4031-4040
Oracle Calendar		
Oracle Calendar server manager	5734	
Oracle Files		
Oracle Files Domain Controller	53000 range (auto-assigned)	Dynamic
Main Oracle Files Node	53000 range (auto-assigned)	Dynamic
Oracle Files HTTP Node	53000 range (auto-assigned)	Dynamic
LDAP- non-SSL	Same as Oracle Internet Directory	Same as Oracle Internet Directory
LDAP- SSL	Same as Oracle Internet Directory	Same as Oracle Internet Directory
AFP	548	Fixed
FTP	21	Other typical values: 2100 or 21000
NFS	2049	4048 and 4049 for Mount Server
Oracle Workflow		
TNS	1521	Fixed

Oracle Port Usage (Sorted by Port Number)

Table D–2 lists Oracle ports in ascending order.

Table D–2   Oracle Port Usage (Sorted By Port Number)

Port Number	Component
21	Oracle Files - FTP (default value)
110	Oracle Email - POP
119	Oracle Email - NNTP
389	LDAP (Oracle Internet Directory)
548	Oracle Files - AFP
563	Oracle Email NNTP- SSL
636	Oracle Internet Directory- SSL
995	Oracle Email POP- SSL
1521	Oracle Workflow - TNS
1748	Oracle Enterprise Manager Intelligent Agent
1754	Oracle Enterprise Manager Intelligent Agent
1808	Oracle Enterprise Manager Intelligent Agent
1809	Oracle Enterprise Manager Intelligent Agent
1810	Oracle Enterprise Manager Application Server Service
1811	Oracle Enterprise Manager Application Server Service
1950	Oracle9*i*AS Reports Services SQL*Net
2049	Oracle Files - NFS (default value)
2070	Oracle9*i*AS Syndication Server (OSS); To access OSS
3001	Oracle9*i*AS Containers for J2EE - AJP
3101	Oracle9*i*AS Containers for J2EE - RMI
3201	Oracle9*i*AS Containers for J2EE - JMS
3301	Oracle9*i*AS Containers for J2EE HTTP Listener
4000	Oracle9*i*AS Web Cache Administration Port
4001	Oracle9*i*AS Web Cache Invalidation Port

Table D–2   Oracle Port Usage (Sorted By Port Number) (Cont.)

Port Number	Component
4002	Oracle9*i*AS Web Cache Statistics
4031	Oracle Internet Directory SSL
4032	Oracle Internet Directory non-SSL
4443	Oracle HTTP Server- SSL, Oracle HTTP Server Listen- SSL, Oracle9*i*AS Web Cache Listen- SSL
4444	Oracle HTTP Server Listen- SSL if Oracle9*i*AS Web Cache is installed and configured
5000	Oracle9*i*AS Single Sign-On
5100	Oracle Email
5730	Oracle Calendar
5731	Oracle Calendar
5732	Oracle Calendar
5734	Oracle Calendar server manager
6003	Oracle HTTP Server- Oracle Notification Service Request Port
6100	Oracle HTTP Server- Oracle Notification Service Local Port
6200	Oracle HTTP Server- Oracle Notification Service Remote Port
6666	Oracle9*i*AS Clickstream Collector Agent
6675	Oracle9*i*AS Clickstream Collector Server
6676	Oracle9*i*AS Clickstream Execution Engine
7000	Oracle HTTP Server Java Object Cache
7771	Oracle Management Server
7772	Oracle Management Server
7773	Oracle Management Server
7777	Oracle HTTP Server- non-SSL, Oracle HTTP Server Listen- non-SSL, Oracle9*i*AS Web Cache Listen- non-SSL
7778	Oracle HTTP Server Listen- non-SSL if Oracle9*i*AS Web Cache is installed and configured
8007	Oracle HTTP Server JServ Servlet Engine
9000	Oracle9*i*AS Wireless PIM Notification Dispatcher

Table D–2   Oracle Port Usage (Sorted By Port Number) (Cont.)

Port Number	Component
14000	Oracle9*i*AS Reports Services Visigenics - CORBA
16001	IIOP
53000 range	Oracle Files Domain Controller and Nodes
53000 range	Oracle Files Main Node
53000 range	Oracle Files HTTP Node

E

Windows Services

This appendix lists the services that the Oracle Collaboration Suite for Windows installation creates during installation.

This appendix includes these topics:

- Accessing Windows Services

- Services for Oracle Collaboration Suite Installations

- Services for Oracle Voicemail & Fax Installation

Accessing Windows Services

To open Services on Windows NT, choose **Start** > **Settings** > **Control Panel** > **Services**.

To open Services on Windows 2000 and Windows XP, choose **Start** > **Programs** > **Administrative Tools** > **Services**.

Services for Oracle Collaboration Suite Installations

Table E–1 shows the Windows services created during the three Oracle Collaboration Suite installations.

ORACLE_HOME represents the Oracle home name.

Table E–1   Windows Services for Oracle Collaboration Suite

Install Type	Windows Services
Oracle9*i*AS Infrastructure	■ `Oracle OLAP 9.0.1.0.1` (Online Analytical Processing)
	■ `Oracle OLAP Agent`
	■ `Oracle``ORACLE_HOME``Agent`
	■ `Oracle``ORACLE_HOME``ClientCache`
	■ `Oracle``ORACLE_HOME``EMWebsite`
	■ `Oracle``ORACLE_HOME``InternetDirectory_``SID``[1]`
	■ `Oracle``ORACLE_HOME``ManagementServer``[2]`
	■ `Oracle``ORACLE_HOME``PagingServer`
	■ `Oracle``ORACLE_HOME``ProcessManager``[5]`
	■ `Oracle``ORACLE_HOME``TNSListener`
	■ `Oracle``ORACLE_HOME``WebCache`
	■ `Oracle``ORACLE_HOME``WebCacheAdmin`
	■ `Oracle``ORACLE_HOME``WebCacheMon`
	■ `OracleService``SID``[3]`

Table E–1 Windows Services for Oracle Collaboration Suite (Cont.)

Install Type	Windows Services
Oracle Collaboration Suite information storage	■ Oracle*ORACLE_HOME*Agent ■ Oracle*ORACLE_HOME*ClientCache ■ Oracle*ORACLE_HOME*SNMPPeerEncapsulator ■ Oracle*ORACLE_HOME*SNMPPeerMasterAgent ■ Oracle*ORACLE_HOME*TNSListener[4] ■ OracleService*SID*[4]
Oracle Collaboration Suite	■ Calendar Corporate-Wide Services ■ Calendar Directory Access Server ■ Calendar Engine ■ Calendar Lock Manager ■ Calendar Synchronous Network Connections ■ Oracle*ORACLE_HOME*Agent ■ Oracle*ORACLE_HOME*ClientCache ■ Oracle*ORACLE_HOME*EMWebsite (Oracle Enterprise Manager Web Site) ■ Oracle*ORACLE_HOME*ProcessManager[5] ■ Oracle*ORACLE_HOME*TNSListener ■ Oracle*ORACLE_HOME*WebCache ■ Oracle*ORACLE_HOME*WebCacheAdmin (Web Cache Administrator) ■ Oracle*ORACLE_HOME*WebCacheMon (Web Cache Monitor)

[1] Not created if Oracle Internet Directory is deselected during Oracle9*i*AS Infrastructure installation.

[2] Not created if Oracle Management Server is deselected during Oracle9*i*AS Infrastructure installation.

[3] Created during Oracle9*i*AS Metadata Repository installation.

[4] Not created if Software Only was selected as the database configuration type.

[5] Created during Oracle HTTP Server installation.

Services for Oracle Voicemail & Fax Installation

Table E–2 shows the Windows services created during the Oracle Voicemail & Fax installation.

Table E–2   Windows Services for Oracle Voicemail & Fax

Install Type	Windows Service
Oracle Voicemail & Fax	■ `Oracle Unified Messaging-Attendant`
	■ `Oracle Unified Messaging-FaxRecv` (Fax)
	■ `Oracle Unified Messaging-MWI` (Message Waiting Indicator)
	■ `Oracle Unified Messaging-Process Manager`
	■ `Oracle Unified Messaging-Recording`
	■ `Oracle Unified Messaging-Retrieval`
	■ `Oracle Unified Messaging-Routing`
	■ `Oracle Unified Messaging-Recovery`

F

Installing Oracle Calendar Standalone

This chapter describes requirements and procedures for installing the components of Oracle Calendar standalone, including:

- **Oracle Calendar server**: Required in order to run the remaining components of Oracle Calendar. Complemented by the Oracle Calendar Administrator.

- **Oracle Calendar application system**: The application framework that controls the following components:

    - Oracle Calendar Web client

    - Oracle Calendar Web services

    - Oracle Sync Server

Instructions in this chapter apply to Windows-based systems.

You can install Oracle Calendar server and the Oracle Calendar application system on the same host or on multiple, separate hosts across a network.

> **Note:** If you install Oracle Calendar Release 2 (9.0.4) on a Windows computer that has an earlier version of Oracle Calendar installed, the earlier version will become unusable. If you want to try a test installation of Oracle Calendar standalone first, install it on a different Windows computer.

This appendix contains these topics:

- System Requirements
- Preinstallation
- Installation

- Upgrades

- Postinstallation Configuration

- Oracle Calendar Deinstallation

- General Issues and Workarounds

System Requirements

Since you can install Oracle Calendar server and the application system together or separately, the following sections list requirements common to both components and separate to each.

This section contains the following topics:

- Common Requirements

- Oracle Calendar Server Requirements

- Oracle Calendar Application System Requirements

Common Requirements

- **Operating system**: Windows-based systems, as described in the requirements for Oracle Collaboration Suite

- **CPU**: 300 MHz

- **Colors**: A minimum of 256 display colors

- **Disk space**: Up to 150 MB free disk space may be necessary for installation

- **Patches**: On Windows NT, the same patches apply as are listed in the requirements for Oracle Collaboration Suite

Oracle Calendar Server Requirements

- **Privileges**: During installation, the Oracle Universal Installer requires that you be a local administrator of the computer on which you are installing Oracle Calendar. For more information, see the documentation included with Oracle Universal Installer.

- **RAM**: An estimated 512 MB of RAM or more is needed for computers handling a large number of users or services. For further information on memory requirements, see Appendix A, "Disk Space and Memory," in the *Oracle Calendar*

Administrator's Guide. Although this appendix is UNIX-specific, the requirements for Windows are similar.

- **Disk space**: 400 MB of disk space, plus space for the Oracle Calendar database and log files

- **Messaging server**: An SMTP messaging server for mail notifications

- **Web browser**: One of the following Web browsers, in order to use the Oracle Calendar Administrator:

    - Internet Explorer 5.5 or 6.0 (Windows only)

    - Netscape 7.0

    - Mozilla 1.2

Oracle Calendar Application System Requirements

- **Web server**: Oracle HTTP Server or Apache Web server. On Apache Web servers, you must have Apache 1.3.27 with mod-fastcgi 2.2.12. Find the latter through FTP access, as it is not readily available from the Apache Web site. Oracle Calendar standalone does not work with Apache 2.x and mod-fastcgi 2.4.x.

- **RAM**: 256 MB RAM or more is recommended for computers handling a large number of users.

- **Disk space**: 100 MB of disk space for installation, plus 200 MB for operation (linkdb and sessiondb disk space; more space may be required for heavy deployments).

- **Oracle Calendar Web client browsers**: Users must have one of the following browsers in order to use the Oracle Calendar Web client component of the Oracle Calendar application system:

    - Internet Explorer 5.x, 6.x (Windows)

    - Internet Explorer 5.x (Macintosh OS 9 only)

    - Netscape 6.x, 7.x (Linux x86, Macintosh, Windows)

    - Mozilla 1.1 - 1.2 on Linux, UNIX and Windows, Mozilla 1.0 on Macintosh

    - Safari (Macintosh OS X only)

    - Lynx 2.8.4 Pre5 (for Accessible mode, standalone only)

Preinstallation

This section contains important information you need to know before installing Oracle Calendar server and the Oracle Calendar application system, including:

- Setting up your Directory Server
- Planning Separate Installations of the Oracle Calendar Application System and Server
- Oracle Calendar Application System Considerations.

> **Note:** If you have a previous version of Oracle Calendar installed, please see "Upgrades" on page F-14, for information on working with other versions.

Setting up your Directory Server

When installed in standalone mode, the Oracle Calendar server can be used with a third party external directory server. Support for the Lightweight Directory Access Protocol (LDAP) is offered through separate connectors:

- LDAP Connector 9.0.4 for Sun ONE Directory Server
- LDAP Connector 9.0.4 for OpenLDAP
- LDAP Connector 9.0.4 for Syntegra Aphelion Directory Server
- LDAP Connector 9.0.4 for Critical Path InJoin Directory Server

Before installing Oracle Calendar server, you must use your LDAP connector to extend the directory schema. Directory servers have schemas that define the information they store. These schemas consist, among other things, of objects and attributes. The directory server schema needs to be extended to include objects and attributes needed by the Calendar server. For a list of the extensions to the Oracle Calendar server schema, see Appendix H, "Calendar Extensions to Directory Server Schema," of the *Oracle Calendar Reference Manual*.

This section contains the following topics:

- Sun ONE Directory Server
- OpenLDAP
- Syntegra Aphelion Directory Server
- Critical Path InJoin Directory Server

- Terminology for Directory Servers

Sun ONE Directory Server

These steps apply to the Sun ONE and iPlanet 5.x Directory Servers.

> **Note:** You must have the open source `ldapmodify` utility in order to do this procedure.

1. Extract the files from the tar file `ldapc0904000_SunOne_win_en_rtm1.zip` included in the Oracle Calendar server package.

2. Find the file `SunOne/calendar-schema.ldif`.

3. Use this file with the `ldapmodify` utility to modify the directory entries:

```
% ldapmodify -h host -p port -D Directory_Manager_DN -w Directory_Manager
_Password -f "calendar-schema.ldif"
```

4. Verify that no error is reported.

OpenLDAP

These steps apply to the OpenLDAP Directory Servers version 2.x, and later.

1. Extract the files from the tar file `ldapc0904000_openldap_win_en_rtm1.zip` included in the Oracle Calendar server package.

2. Find the file `openldap/calendar.schema`.

3. Locate the OpenLDAP configuration directory. On UNIX, it is usually set to `/usr/local/etc/openldap`. This directory will be used in the next examples.

4. Copy the file `calendar.schema` to `/usr/local/etc/openldap/schema`, assuming that the configuration directory is in `/usr/local/etc/openldap`.

5. Edit the file `/usr/local/etc/openldap/slapd.conf`.

6. Locate the line that contains

```
include /usr/local/etc/openldap/schema/cosine.schema
```

7. If it has not been already been added, add the line:

```
include /usr/local/etc/openldap/schema/inetorgperson.schema
```

8. Add the line:

```
include /usr/local/etc/openldap/schema/calendar.schema
```

9. In the database section, add the line

```
index ctcalxitemid pres,eq
```

10. Restart the `slapd` server.

Syntegra Aphelion Directory Server

These steps apply to the Syntegra Aphelion Directory Server.

1. Extract the files from the tar file `ldapc0904000_syntegra_win_en_rtm1.zip`, included in the Oracle Calendar server package, to a temporary directory.

The temporary directory should contain the following three files:

```
syntegra/oidtable.gen_cst
syntegra/oidtable.oc_cst
syntegra/oidtable.at_cst
```

2. To prepare the directory server, you will need to install these files to configure `ctCal` directory objects. Append the content of these files (containing the Oracle Calendar server schema's object identifier numbers, the object classes, and the attributes) to the corresponding Syntegra Aphelion (object identifier) table files:

```
/usr/var/osi/oidtable.gen
/usr/var/osi/oidtable.oc
/usr/var/osi/oidtable.at
```

3. Restart the directory server to allow the configuration changes to take effect.

Critical Path InJoin Directory Server

These steps apply to the Critical Path InJoin Directory Server version 4.x and include:

- Extending the Schema
- Creating Name Bindings
- Setting the Oracle Calendar Base DN
- Granting Anonymous Read Access (optional)

Extending the Schema

1. Extract the files from the tar file `ldapc0904000_injoin_win_en_rtm1.zip`, included in the Oracle Calendar server package, in a staging directory. The directory should contain the following files:

   ```
   injoin/calendar_acsp
   injoin/calendar_admin_aci
   injoin/calendar_anonymous_aci
   injoin/calendar-attribute.schema
   injoin/calendar_local
   injoin/calendar-objc.schema
   ```

2. Type `http://iCon_host:iCon_port` in the location field to go to the iCon administration page. The iCon port is set to 1500 by default.

3. On the left tab, click the **Schema** navigational tab.

4. On the right windows, click **Schema Import**.

5. Copy the content of the file `calendar-attribute.schema` to the New attributes in LDAPv3 format text area.

6. Click **Schema Import**.

7. On the left tab, click the **Schema** navigational tab and on the right window, click **Schema Import**.

8. Copy the content of the file `calendar-objc.schema` to the New object classes in LDAPv3 format text area.

9. Click **Schema Import**.

Creating Name Bindings

The Oracle Calendar server introduces two types of structural object classes, `ctCalAdmin` and `ctCalResource`. The name binding registry must be updated to allow these types of entries to exist under an `organizationalUnit` entry.

To create a name binding for `ctCalAdmin`:

1. Type `http://iCon_host:iCon_port` in the location field to go to the iCon administration page. The iCon port is set to 1500 by default.

2. On the left tab, click the **Schema** navigational tab.

3. Click **Create a new name binding**.

4. Select **organizationalUnit** from the **Superior** list box.

5. Select **ctCalAdmin** from the **Subordinate** list box.

6. Select **ctCalXItemId** from the **Naming attributes** list box.

7. Click **Create Name Binding**.

Creating a name binding for `ctCalResource`:

1. Type `http://iCon_host:iCon_port` in the location field to go to the iCon administration page. The iCon port is set to 1500 by default.

2. On the left tab, click the **Schema** navigational tab.

3. Click **Create a new name binding**.

4. Select **organizationalUnit** from the **Superior** list box.

5. Select **ctCalResource** from the **Subordinate** list box.

6. Select **commonName** from the **Naming attributes** list box.

7. Click **Create Name Binding**.

Setting the Oracle Calendar Base DN

The subtree where the Oracle Calendar server will be installed must be set as an Access Control Specific Point (ACSP) subtree. In most installations, this is already the case. The following procedure shows how to do this.

1. Copy the files `calendar_acsp`, `calendar_anonymous_aci`, `calendar_local` and `calendar_admin_aci` to the working directory of your dsa.

2. Edit the `calendar_local` to match your deployment.

    Set the value of the macro `ctBaseDN` to the location where the Oracle Calendar server will be installed (BASEDN). For example:

    ```
    BASEDN: o=acme,c=us
    =ctBaseDN Rc("us") Ro("acme")
    BASEDN: ou=School of Law, o=ABC University,c=us
    =ctBASEDN Rc("us") Ro("ABC University") Rou("Shool of Law")
    ```

3. Go to the `dsa` working directory. For example: `/opt/ids/ICon/dsa1`

4. Start the `odsadmin` directory access tool by typing `odsadmin` at the command prompt.

5. Type `bman` to bind as the directory manager:

    ```
    odsadmin> bman
    ```

6. Enter the directory manager password when prompted.

7. Make the Oracle Calendar BASEDN an ACSP (unless it is already set up).

```
odsadmin> run calendar_acsp ~
```

Granting Anonymous Read Access (optional)

The Oracle Calendar server binds anonymously or as a "bind user" when performing a search operation. If your directory server does not allow anonymous read access, you need to create an entry that has read access to the subtree where the Oracle Calendar server will be installed. You will need to supply the distinguished name (DN) of this entry and its password during the Oracle Calendar server installation. The following procedure shows how to grant read access for anonymous searches.

1. If you have already closed the odsadmin session, open it again by typing odsadmin from the dsa working directory.

2. Type bman to bind as the directory manager:

```
odsadmin> bman
```

3. Enter the directory manager password when prompted.

4. Run the command file which will set the ACI to permit anonymous read-only access. This will modify your directory server's security.

```
odsadmin> run calendar_anonymous_aci ~
```

Terminology for Directory Servers

Use Table F–1 to determine the correlation between the directory server parameters required during installation and the terminology used for each separate product.

Table F–1 Calendar server / directory server concordance

Definition of concept	Oracle Calendar Server	Sun ONE Directory Server	Syntegra Aphelion Directory Server	Critical Path InJoin Directory Server
Computer on which Directory Server is installed	LDAP Host	Directory Server host		Directory Server host
Port number for Directory Server (LDAP) connections	LDAP Port	Directory Server port number	LDAP daemon port	Directory Server address port number
The point in the directory hierarchy from which searches are performed	Base DN	BaseDN / Directory suffix / search root	DN located beneath context prefix	Entry Starting Point / context prefix

Table F–1   Calendar server / directory server concordance

Definition of concept	Oracle Calendar Server	Sun ONE Directory Server	Syntegra Aphelion Directory Server	Critical Path InJoin Directory Server
"Superuser" for the directory (user with unrestricted access)	SuperUserDN	RootDN or Unrestricted user	Manager DN	Directory Administrator's DN
Password for unrestricted access	SuperUserDN Password	RootDN or Unrestricted user password	Manager DN Password	Directory Administrator's Password
The "parent" entry, offset from the baseDN, for the 6 reserved Oracle Calendar users	Oracle Calendar server Administrators' Parent DN	n/a	n/a	n/a
A new group, offset from the baseDN, for the 6 reserved Oracle Calendar users	Oracle Calendar server Administrators' Group DN	n/a	n/a	n/a

Planning Separate Installations of the Oracle Calendar Application System and Server

The Oracle Universal Installer enables you to install and configure the Oracle Calendar application system and server on the same host. Both components are configured to see one another's host and port. However, for large deployments, it is best to install the server and application system on separate hosts. You can do this by running the Installer on each host and selecting which component or components you want to install.

Generally, you should start by installing the server. You will need to enter a temporary value when prompted for the application system's host name and port. When you install the application system, you will need to enter information on the server you've just installed. Afterwards, you should edit the server's configuration file to enable resource approval, as described in "Installation" on page F-11.

For more information on editing Oracle Calendar configuration files, see the *Oracle Calendar Reference Manual*.

Oracle Calendar Application System Considerations

For security reasons, it is best that the Sync Server component only be accessible through SSL (`https`) connections. You may also want to install Oracle Sync Server on a separate host for easier accessibility from phones. Keep in mind that some phones support VPN access through a firewall, while others do not.

It is also best to only use Web services through SSL connections.

Installation

This section explains how to install Oracle Calendar standalone components on UNIX-based systems. This section contains the following topics:

- Installing Oracle Calendar Server and Oracle Calendar Application System
- Installing Oracle Calendar Server Only
- Installing Oracle Calendar Application System Only
- Working with Multiple Instances of Oracle Calendar

Installing Oracle Calendar Server and Oracle Calendar Application System

> **Note:**   In Windows, if you install Oracle Calendar Release 2 (9.0.4) on a computer that has an earlier version of Oracle Calendar installed, the earlier version will become unusable. If you want to try a test installation of Oracle Calendar standalone first, you should consider installing it on a different Windows computer. Also, Oracle Calendar Release 2 (9.0.4) cannot be installed over itself. If you need to reinstall Oracle Calendar Release 2 (9.0.4), you must remove the existing installation first.

1. Extract or copy the Oracle Calendar installation files to a temporary directory.

2. In your temporary directory, go to the subdirectory

   ```
   Disk1\install\win32
   ```

3. Run `Setup.exe` to start the Oracle Universal Installer.

4. Click **Next** on the Welcome screen and follow the installation instructions.

5. For Windows platforms, in the Specify File Locations screen, select

   ```
   \Source_Path\Disk1\calendar_standalone\Disk1\stage\products.jar
   ```

   as the path of the product you want to install. You must select this path to install the standalone version of Oracle Calendar.

6. Also in the Specify File Locations screen, enter an `ORACLE_HOME` name and path, then click **Next**. The path you enter can be up to 74 characters long. If you have a previous version of Oracle Calendar installed and you want to upgrade it, do not overwrite it.

7. Select the components you want to install and click **Next**. Note that Oracle Calendar Web client, Sync Server and Web services cannot be installed unless you select **Oracle Calendar application system**. Oracle Calendar will be installed in the following locations:

Component	Location
Oracle Calendar server	`%ORACLE_HOME%\ocal\`
Oracle Calendar Administrator	`%ORACLE_HOME%\ocad\`
Oracle Calendar application system	`%ORACLE_HOME%\ocas\`

8. Select the time zone in which Oracle Calendar users will be working and click **Next**.

9. Enter Windows Services information, including your Windows password and network domain.

10. Enter the fully qualified domain name of your SMTP server.

11. Select the directory server you will be using. (Select **Internal** if you do not have a directory server.) Click **Next**. You will be prompted for directory server configuration information such as **Host**, **Port** and **Base DN**, as described in "Setting up your Directory Server" on page F-4.

> **Notes:** If you select **Critical Path InJoin Directory Server**:
>
> - When you are prompted for the BASEDN subtree, ensure that you are setting it to the same location you set in `calendar_local`, as described in "Setting the Oracle Calendar Base DN" on page F-8.
>
> - If your directory server has anonymous access disabled, clear the **Anonymous binding permitted** check box. Enter a DN and password of an entry that has read access on the Oracle Calendar BASEDN subtree.
>
> - When prompted for the Oracle Calendar admin group name, leave it to the default value, unless you have changed the value in the `calendar_local` file.

12. After entering your directory server information, enter a password in the fields of the Oracle Calendar Administrative Password screen.

13. In the Oracle Calendar Node-ID screen, enter a Node-ID. This must be a unique value between 1 and 4999.

14. If this is your first installation of the Oracle Calendar server, select **Yes** in the Oracle Calendar Master Node screen to make the current installation the master node. You must have one master node on your network in order for Web services and Sync Server to work.

15. Click **Next** and follow the remaining instructions to complete the installation.

16. If you want to upgrade data from a previous version of Oracle Calendar, go to "Upgrades" on page F-14. Otherwise, go to "Postinstallation Configuration" on page F-20.

Installing Oracle Calendar Server Only

The procedure for installing just the Oracle Calendar server is similar to that described in "Installing Oracle Calendar Server and Oracle Calendar Application System" on page F-11, with the differences being:

- In step 7 of the "Installing Oracle Calendar Server and Oracle Calendar Application System" section on page F-12, you must select the **Oracle Calendar server** and *not* the **Oracle Calendar application system**.

- You will be prompted for the application system's host and port. If you do not know these yet, you can enter temporary values and, later, edit the unison.ini file server with the correct values. For example:

```
[RESOURCE_APPROVAL]
url=http://Web_server_host:port/ocas-bin/ocas.fcgi
```

Installing Oracle Calendar Application System Only

The procedure for installing just the Oracle Calendar application system and its components is similar to that described in "Installing Oracle Calendar Server and Oracle Calendar Application System" on page F-11, with the differences being:

- In step 7 of the "Installing Oracle Calendar Server and Oracle Calendar Application System" section on page F-12, you must select **Oracle Calendar application system** (and any of its components), *not* **Oracle Calendar server** or the **Oracle Calendar Administrator**.

- After step 7, you will only be prompted to enter the **Host**, **Port** and **Node-ID** for the Oracle Calendar server. If you do not know these values, you can enter temporary values and, later, edit the `ocas.conf` file in the application system with the correct values. For example:

```
[CONNECTION]
mnode=Calendar_server_host:Engine_Port,master_node_id
```

Working with Multiple Instances of Oracle Calendar

If you install two instances of Oracle Calendar (two instances each of the Oracle Calendar server and the Oracle Calendar application system), you must point the second instance of the Oracle Calendar application system to the first instance of the Oracle Calendar server.

To do this, edit the Oracle Calendar application system configuration file on the second instance (`%ORACLE_HOME%\ocas\conf\ocas.conf`) as follows:

```
[CONNECTION]
mnode=Calendar_server_host_name:engine_port,node
```

Where `host_name` is the first instance of the Oracle Calendar server and `node` is the master node.

Upgrades

This section explains how to upgrade your data for Oracle Calendar and the Oracle Calendar application system. Make sure you read and follow these directions before removing your previous installation of Oracle Calendar.

This section includes these topics:

- Server Upgrade
- Oracle Calendar Application System Upgrade

> **Note:** Before performing an upgrade, you are advised to re-evaluate your sizing calculations based on the requirements provided for the new software. See Appendix A, "Disk Space and Memory" in the *Oracle Calendar Administrator's Guide* to calculate disk space and memory requirements. For CPU usage, the hardware requirements have changed as a result of added functionality. If in your current Oracle Calendar installation you track regular peaks in CPU usage at 60%, or greater, several times a day, you may require additional CPU for a new installation. You will also notice increased CPU usage if your deployment contains previous versions of the Oracle Calendar application system working against a new Oracle Calendar server.

Server Upgrade

You can upgrade to Oracle Calendar server Release 2 (9.0.4) from:

- CorporateTime Server 5.3
- CorporateTime Server 5.4 (Oracle branded)
- Oracle Calendar server 5.5 standalone (part of Oracle Collaboration Suite Release 1 (9.0.3))

If your installation is older than 5.3, you must upgrade it to 5.4 before you can upgrade to Release 2 (9.0.4).

Depending on the version you have, you may be able to do an automatic upgrade, or you may have to perform a manual upgrade. You can also install Oracle Calendar to coexist with your previous version.

This section contains the following topics:

- Supported Automated Upgrade Paths
- Supported Manual Upgrade Path
- Coexistence
- Upgrading the Server

Supported Automated Upgrade Paths

You can automatically upgrade Oracle Calendar from:

- 5.4 (or 5.3) internal to standalone 9.0.4 internal

- 5.4 (or 5.3) external to standalone 9.0.4 external (with supported 9.0.4 directory servers only)

Supported Manual Upgrade Path

You must do a manual upgrade when upgrading from standalone 9.0.4 internal to standalone 9.0.4 external. This involves a manual migration of the LDAP directory, with supported third-party directory servers only.

Coexistence

Coexistence can be useful for a large organization that needs to upgrade its current installation to a new version. The ability to have nodes and servers of different versions connected and running at the same time can help reduce the down time required to achieve the upgrade.

It is important to note that coexistence between Oracle Calendar servers of different versions is viewed as a migration step toward having a uniform (same version) network of Oracle Calendar servers. It is not recommended that a mix of different versions be sustained for a long period of time or permanently. There are limitations in having two servers of different versions co-exist. For example, the right version of utilities must be used on the corresponding server; also, Web services 9.0.4 will only work when all connected servers are upgraded to version 9.0.4.

Supported coexisting version combinations include:
- Standalone 9.0.4 with 5.3 or 5.4 (all internal, or all external to the same directory)

Unsupported coexisting version combinations include:
- Standalone 9.0.4 with pre-5.3
- Standalone 9.0.4 with 5.5 Oracle Collaboration Suite Release 1 (9.0.3)

Supported coexisting external/internal installations include:
Coexistence is supported for the following external (LDAP) and internal (no LDAP) combinations:

- Oracle Collaboration Suite Release 2 (9.0.4.1.1) with standalone 9.0.4 (internal or external using DIP)
- Standalone 9.0.4 external with standalone 9.0.4 internal
- Standalone 9.0.4 internal with Oracle Collaboration Suite Release 2 (9.0.4.1.1)

Upgrading the Server

> **Notes:**
>
> Before you start, it is recommended that you back up your data in case you want to restore your previous version at a later time. For details, see Chapter 15, "Node Maintenance," in the *Oracle Calendar Administrator's Guide*.
>
> If you install Oracle Calendar Release 2 (9.0.4) on a Windows computer that has an earlier version of Oracle Calendar installed, the earlier version will become unusable. If you want to try a test installation of Oracle Calendar standalone first, install it on a different Windows computer.

1. If your previous version is 5.2 or earlier, you must upgrade to version 5.4. For instructions on how to do this, see the version 5.4 README.

2. Stop the server you are upgrading.

3. Install Oracle Calendar server standalone as described in "Installation" on page F-11.

4. Stop Oracle Calendar server 9.0.4.

5. From `%ORACLE_HOME%\ocal\upgrade`, run `ocalPreUpg.cmd` to prepare the upgrade.

6. Run `ocalUpg.cmd` from `%ORACLE_HOME%\ocal\upgrade` using the following syntax:

   ```
   ocalUpg.cmd -srcpath <current source location> -dstpath %ORACLE_HOME%
   ```

   Where:

   - `-srcpath`: Location of your Oracle Calendar 5.x installation (/users/unison)

   - `-dstpath`: Location of the new Oracle Calendar installation (`ORACLE_HOME`)

7. If your server is coexisting with previous versions, you need to add the following parameters to `%ORACLE_HOME%\ocal\misc\unison.ini` on the 9.0.4 calendar server.

```
Section: [ENG]
Parameter: usermailmap
Value: "o"

Section: [ENG]
Parameter: coexist_cwsbasicauth
Value: TRUE

Section: [ACE_PLUGINS_SERVER]
Parameter: cs-standard_coexistence
Value: TRUE
```

> **Important:**   As a security precaution, you must remove the
> preceding parameters from `%ORACLE_HOME%\ocal\misc`
> `\unison.ini` **immediately after all calendar servers are**
> **upgraded to 9.0.4.**

If you have any problems during the upgrade, please refer to the log file `%ORACLE_`
`HOME%\ocal\upgrade\log`.

Oracle Calendar Application System Upgrade

You can automatically upgrade CorporateTime/Oracle Calendar 3.x data to the new
version of the Oracle Calendar application system.

> **See Also:**   "General Issues and Workarounds" on page F-28 for
> known issues related to upgrading the application system

This section contains the following topics:

- Before You Start

- Upgrading the Oracle Calendar Application System

Before You Start

- Check for known upgrade issues in "General Issues and Workarounds" on
  page F-28

- Ensure that the following files have the appropriate permissions for the new
  version's Oracle home user:

- Read access for the version 3.x configuration file, `webcal.ini`, generally found in the `\`*`APACHE_ROOT`*`\fcgi-bin\lexacal-private\ini\` directory

- Read and write access for the Web server's configuration file, `httpd.conf` (or `Apache.conf`), generally found in `\`*`APACHE_ROOT`*`\conf/`

- Ensure the Oracle Calendar Web server and version 3.x FastCGI processes are stopped

Upgrading the Oracle Calendar Application System

1. Install the Oracle Calendar application system in standalone mode as described in "Installation" on page F-11.

2. Set the Oracle home and `PATH` environment variables for Windows.

3. Stop the CorporateTime and Oracle Calendar Web servers.

4. From the new installation directory `%ORACLE_HOME%\ocas\upgrade\`, run the upgrade assistant with the command `ocasua.bat`, using the following optional syntax:

   ```
   ocasua.bat [ -appdir appdir ] [ -resdir resdir ] [ -confdir confdir ]
   ```

   Where:

   - **`-appdir`** is the CorporateTime binary directory, such as:

     ```
     \Apache_home\fcgi-bin\owc
     ```

   - **`-resdir`** is the CorporateTime base directory, such as:

     ```
     \Apache_home\fcgi-bin\lexacal-private
     ```

   - **`-confdir`** is the Web server configuration directory, such as:

     ```
     \Apache_home\conf
     ```

   A log of the process is generated in:

   ```
   %ORACLE_HOME%\ocas\upgrade\log\
   ```

5. Remove the FastCGI Server directives in the old version found in `httpd.conf`. They have been replaced by directives inserted in

   ```
   %ORACLE_HOME%\ocas\conf\ocal.conf
   ```

6. Some sections and keys are not migrated from `webcal.ini` into `ocas.conf` and `ocwc.conf`. You will need to migrate these manually. For more information see "Upgrades" on page F-31.

Postinstallation Configuration

This section describes procedures necessary to configure your standalone installation of Oracle Calendar.

This section contains the following topics:

- Configuring the Web Server
- Configuring the Directory Server
- Configuring the Oracle Calendar Server
- Configuring the Oracle Calendar Application System

Configuring the Web Server

If you are using an Apache server or Oracle HTTP Server, add the following to the Web server's `httpd.conf` file in order to recognize the Oracle Calendar Administrator:

```
include %ORACLE_HOME%\ocad\config\ocad.conf
```

(Ensure there is read access to `ocad.conf`)

In addition, make the following changes to your `httpd.conf` file so that you can use the Oracle Calendar application system:

- Include `%ORACLE_HOME%\ocas\conf\ocal.conf`
- Set the system library search path to include `%ORACLE_HOME%\lib` on Solaris and Linux, or `%ORACLE_HOME%\lib32` on HP
- Set the `ORACLE_HOME` environment variable to `%ORACLE_HOME%\bin`

Keep in mind that you may have to resolve conflicting settings if you customized your original server in a similar manner.

In some cases, you may want to run the Oracle Calendar Administrator on a non-Apache Web server. If so, you should make the following changes to your Web server:

- Set the system library search path to include `%ORACLE_HOME%\lib` (lib32 for other platforms such as hp-ux PA-RISC (64-bit)) and `%ORACLE_HOME%\ocad\bin`.

- Set the `ORACLE_HOME` environment variable to the directory where Oracle Calendar is installed.

- Configure a script alias, such as `ocad-bin`, to `Set the system library search path to include\ocad\bin\ocad.cgi`. This alias must have the permissions to run `ocad.cgi`.

- Configure the `ocad-templates` script alias to `%ORACLE_HOME%\ocad\templates`. This alias *must* be named `ocad-templates`, and must have the permissions to read HTML, `.js`, and `.css` files.

The Web server identity must have access to server directories as follows:

Folder	Permissions
`%ORACLE_HOME%\ocad\bin\`	Read, Write, Execute
`%ORACLE_HOME%\ocad\sessions\`	Read, Write
`%ORACLE_HOME%\ocad\temp\`	Read

The `%ORACLE_HOME%\ocad\bin\ocad.cgi` program must have the permissions needed to read or write files in `%ORACLE_HOME%\ocad\sessions` (this can be configured in `%ORACLE_HOME%\ocad\bin\ocad.ini`).

You can find required settings for your server in `%ORACLE_HOME%\ocad\config\ocad.conf`.

Restart the Web server after you make the changes.

If your Web server is running Internet Information Services, you need to configure it to work with the Oracle Calendar Administrator. The following steps describe how to do this.

1. Open the Internet Information Services Administrator from Windows Control Panel.

2. Right-click **Default Website** and select **New** > **Virtual Directory**.

3. Enter `ocad-bin` as the alias.

4. Point the shortcut to the full path of ocad-bin, for example `C:\ORACLE_HOME\ocad\bin`. Make sure permissions are set for scripts and executables.

5. Once again, right-click **Default Website** and select **New** > **Virtual Directory**.

6. Enter `ocad-templates` as the shortcut.

7. Point the shortcut to the full path of the templates directory, for example `C:\ORACLE_HOME\ocad\templates`.

8. Modify the Windows PATH environment variable to include `%ORACLE_HOME%\bin` and `%ORACLE_HOME%\ocad\bin`.

9. Restart the computer.

10. Check to see if the Oracle Calendar Administrator opens at `http://webservername:port/ocad-bin/ocad.cgi?object=nodeadm`

Configuring the Directory Server

If, during installation, you selected a directory server to use with Oracle Calendar server, the Oracle Calendar Administrator must be granted certain access rights.

This section contains the following topics:

- Sun ONE Directory Server
- OpenLDAP
- Syntegra Aphelion Directory Server
- Critical Path InJoin Directory Server

Sun ONE Directory Server

To grant access rights to the Oracle Calendar Administrator, run the `unidsacisetup` utility with the `-w` option. For more details on this utility, see Appendix E, "Calendar Server Utilities," in the *Oracle Calendar Reference Manual.*

OpenLDAP

Use the base DN (example: "`dc=acme,dc=com`") and the Oracle Calendar Administrator parent DN (example: "`ou=OracleCalendarAdministrator`"). For example:

1. Edit the file `\usr\local\etc\openldap\slapd.conf`.

2. In the `database` section, add this information with the correct base DN and Oracle Calendar Administrator parent DN:

```
access to dn="(.*,)?dc=acme,dc=com"
by dn="(.*,)?ou=OracleCalendarAdministrator,dc=acme,dc=com" write
```

Syntegra Aphelion Directory Server

1. Use the Syntegra Aphelion Web application and sign in as a directory manager.

2. Click the "LDE" where the Oracle Calendar server is installed.

3. Click **Manage**.

4. Expand the **Access Control** folder.

5. Click **Advance Access Control**.

6. On the right pane, click **Add New Access Control Policy**.

7. In the Modify Access Control Policy text area, type the following:

   ```
   to dn=.*BASEDN by dn=.*,ADMINDN,BASEDN write
   ```

   where the BASEDN is the value of the [LDAP]basedn parameter and ADMINDN is the value of the [LDAP]admin parameter in the %ORACLE_HOME%\ocal\misc\unison.ini configuration file. For more details on these parameters see Appendix C, "Calendar Server Parameters," in the *Oracle Calendar Reference Manual*.

8. Click **Apply** for the change to take effect.

Critical Path InJoin Directory Server

1. If you have already closed the odsadmin session, open it again by running odsadmin from the dsa working directory.

2. Type bman to bind as the directory manager.

   ```
   odsadmin> bman
   ```

3. Enter the directory manager password when prompted.

4. Run the command file to set the ACI to grant access rights to the Oracle Calendar Administrator.

   ```
   odsadmin> run calendar_admin_aci ~
   ```

5. Exit the odsadmin session.

Configuring the Oracle Calendar Server

This section describes configuration changes you might need to make to the Oracle Calendar server after installing and, as the case may be, after upgrading.

This section contains the following topics:

- Starting and Stopping the Oracle Calendar Server
- Checking Port Values
- Opening the Oracle Calendar Administrator
- Setting up Resource Approval
- Working with the Windows PATH variable
- Working with Security Mechanisms

Starting and Stopping the Oracle Calendar Server

Start the Oracle Calendar server with the following command:

```
%ORACLE_HOME%\ocal\bin\unistart
```

Stop the Oracle Calendar server with the following command:

```
%ORACLE_HOME%\ocal\bin\unistop -y
```

Checking Port Values

The default ports used by the Oracle Calendar server are:

Port	Function
5730	Oracle Calendar Engine
5731	Synchronous network connector
5732	Directory access server
5734	Oracle Calendar server manager

If these ports are already in use, the installation will use the next available port. Please verify unison.ini for the values used by the Oracle Calendar server.

Opening the Oracle Calendar Administrator

Use the Oracle Calendar Administrator to manage users, events, resources, and public agendas, as well as perform administrative tasks. By default, open it at the following URL:

```
https://Web_server_host:https_port/ocad-bin/ocad.cgi?object=nodeadm
```

To log on to the Oracle Calendar Administrator, enter the Oracle Calendar administrative password you chose during installation. Do not enter a user name with this password.

Setting up Resource Approval

If you intend to use the resource approval feature (on any Web server), you must set it up as follows:

1. Create or modify a resource with NOTIFY-APPROVER set to TRUE and APPROVER-EMAIL set to e-mail of the approver. For example, in ocal/bin:

```
uniuser -resource -add R=Resource
_Approval/NOTIFY-APPROVER=TRUE/APPROVER-EMAIL=approver.email@oracle.com
/psw=password -n 4313 -p test1
```

2. Assign Resource designate rights; for example, in ocal/bin:

```
uniaccessrights -mod -designate ALL=TRUE -grantee S=Designate/NODE-ID=4313
-grantor R=Resource_Approval -n 4313 -p test1
```

3. Also make sure that the RESOURCE_APPROVAL section exists in unison.ini (located in ocal/misc) with the URL parameter; for example:

```
[RESOURCE_APPROVAL]
url=http://server:port/ocas-bin/ocas.fcgi
```

4. If you changed the resource approval URL, restart the Oracle Calendar server.

Working with the Windows PATH variable

Any values added to the Windows PATH environment variables, for example to configure security mechanisms, are cleared by the Oracle Calendar server. Instead, add the values to OCAL_ADDITIONAL_LIBPATH.

Working with Security Mechanisms

Some security mechanisms require that you set the OCAL_ADDITIONAL_LIBPATH environment variable to include the paths to their libraries.

If you are using GSSAPI/Kerberos 5, you must include the path to the five shared libraries required by libaut_gssapi.so.

If you are using SASL/Kerberos 4 or SASL/GSSAPI, you must include the paths to:

- The same libraries as GSSAPI/Kerberos 5

- The Kerberos and SASL shared libraries required by `libaut_sasl.so`, `libsasl.so` and the SASL plug-in.

Each path must be separated by a colon (`:`). For example:

```
setenv OCAL_ADDITIONAL_LIBPATH
\usr\local\kerberos\krb5\lib:\usr\local\sasl\sasl-1.5.27\lib
```

Configuring the Oracle Calendar Application System

Generally, the Oracle Calendar application system successfully starts when you start the Web server, using the default installation settings. This section explains how to check the status of the application system and make configuration changes to it, if necessary.

This section contains the following topics:

- Checking the Status of the Oracle Calendar Application System
- Configuring the Oracle Calendar Application System

Checking the Status of the Oracle Calendar Application System

To see if the application system and its components are running, open the system page at `http://server:port/ocas-bin/ocas.fcgi?sub=sys`. If a component is not running, it will not appear in the system page.

To connect to a component with an appropriate client, use the following URLs:

Component	URL
Sync Server	`http://host:port/ocst-bin/ocas.fcgi`
Web services	`http://host:port/ocws-bin/ocas.fcgi`
Oracle Calendar Web client	`http://host:port/ocas-bin/ocas.fcgi?sub=web`

Configuring the Oracle Calendar Application System

The Oracle Calendar application system and its components are controlled with the following configuration files under `%ORACLE_HOME%\ocas\conf`:

ocas.conf: Oracle Calendar application system

ocws.conf: Web services

ocst.conf: Sync Server

ocwc.conf: Oracle Calendar Web client

ocal.conf: Web server FastCGI directives, included from `httpd.conf`

Consider the following configuration options, depending on your environment:

- Run several instances of `ocas.fcgi` (the number of instances depends on setup and load). You can configure this in `ocal.conf`.

- You must run one instance of `ochecklet.fcgi` for each installation or host. This is also configured in `ocal.conf`.

- In order to use the Sync Server, set your `KeepAlive` parameter in `httpd.conf` or `apache.conf` to 300 seconds, or turn it off. This is done to correspond to the idle-timeout value of 300 seconds in `ocal.conf`.

- Make sure that the `linkdb` and `sessiondb` variables in all hosts' ocas files refer to the same path; for example, the same NFS mount.

- Set Authentication, Compression and Encryption (ACE) values in each component's `conf` file. AUTH Web settings for all products should be configured in the `[ACE_PLUGINS_CLIENT]` section of `ocas.conf`.

- If you experience any problems, check for error messages in:

  `%ORACLE_HOME%\ocas\logs\ocas_log`

Make sure you restart Oracle HTTP Server or Apache after any changes to the `conf` files.

Oracle Calendar Deinstallation

The following steps describe how to deinstall the Oracle Calendar server and application system from a host.

1. Stop the Oracle Calendar server using the `unistop` command.

2. Stop the Web server.

3. In the directory server, remove the Oracle Calendar server attributes from your Oracle Calendar users. This is done by using LDIF update commands.

4. In the directory server, remove all `ctCal` objects for the Oracle Calendar server nodes that were on this server. Use the `ldapsearch` and `ldapdelete` commands and refer to your directory server administrator's guide for proper syntax.

5. In the directory server remove all the relevant Oracle Calendar server administrative groups and ACLs from the database. Clean up your `LDIF` file with a manual edit LDIF or use LDIF update statements.

6. Remove Oracle Calendar components using the Oracle Universal Installer. Start the Oracle Universal Installer with the command:

   ```
   setup.exe
   ```

7. Delete your *calendar_server_path*.

8. Delete your *client_path*.

General Issues and Workarounds

This section describes general issues and their workarounds for Oracle Calendar server and the Oracle Calendar application system. Issues are broken down into the following sections:

- Server Issues
- Oracle Calendar Application System Issues

Server Issues

This section includes the following topics:

- Installation
- Reinstallation
- Coexistence and Upgrades
- Designates
- Various

Installation

- **Blank sections in unison.ini**: Blank [LCK] and [LIC] sections will be added to the `unison.ini` file of a fresh installation of a standalone Oracle Calendar server and/or upgraded standalone server. Do not remove these sections.

Reinstallation

- When reinstalling components of Oracle Calendar, make sure to install the Oracle Calendar server component in a fresh directory. Other components can be installed or added to their existing paths.

Coexistence and Upgrades

- **Clients**: Versions of the Oracle Calendar application system that work with the Oracle Calendar server 9.0.4 include:

    - Oracle Calendar desktop client for Windows 6.0.5

    - Oracle Calendar desktop client for Mac version 5.2.3

    - Oracle Calendar desktop client for Linux x86/Solaris Operating Environment (SPARC 32-bit) version 5.0.2

    - Oracle Connector for Outlook version 3.3 and up

    > **Note:** Users of older clients should upgrade to the latest versions, available at
    >
    > `http://metalink.oracle.com`

    The preceding clients only support passwords of 15 characters or less. If a password longer than 15 characters is assigned by the administrator, the user will not be able to sign in.

    If you only wish to support new clients, set `cs-standard_coexistence` in `unison.ini` to `false`.

- **Servers**:

    - Coexistence may cause odd error messages on an old Oracle Calendar server (5.x). This is because the old server may not understand the features introduced by the new server.

    - There is no event Oracle Calendar coexistence between Oracle Calendar server versions. Release 1 (9.0.3) users will only see Release 1 (9.0.3) event calendars and Release 2 (9.0.4.1.1) users will only see Release 2 (9.0.4.1.1) event calendars.

- **Node networks**:

    - Node networks can only be created with version 5.3 and up of Oracle Calendar server.

- If you need to create a node network, the `nodes.ini` and the use of `uninode` commands must be done on the most recent version (9.0.4) of the server within the network.

- **Administration utilities**:

  - Do not use 9.0.4 utilities to administer a 5.x Oracle Calendar server. The only exception to this is when moving users; the `moveuser` utility must be from the latest server version (9.0.4), even if moving a user between two nodes that are both on old server nodes (5.x).

  - Do not use 5.x utilities to administer a 9.0.4 Oracle Calendar server.

- **Mapping parameters**: Mapping parameters have been added to the 9.0.4 server `unison.ini` for coexistence and upgrades. 5.x servers map O for EMAIL and P for UID. However, 9.0.4 servers do not need this mapping anymore. Parameters added to a 9.0.4 server do not affect it.

  The new parameters include:

  ```
  [ENG]
  usermailmap = O
  itemuidmap = P
  resourcemailmap = O
  usersmscprefmap = OU3
  usermobiletypemap = N
  usermobilemap = R
  ```

For version coexistence, these parameters should be added manually to the 9.0.4 `unison.ini` file. They are added automatically during an upgrade.

Designates

- **Listing designates**: Windows clients cannot list designates of remote resources

- **Creating events as a designate**: Users may get an error when creating an event while working as a Designate. However, the event will be properly created.

- **Remote Designate**: The Remote Designate feature can only be used with the Oracle Calendar Web client and the Oracle Calendar SDK

Various

- **Moving users**: Do not move users that have at some point used the Oracle Calendar Web client. Trying to move such a user may fail and cause some events to be duplicated.

- **UIDs**: A numeric UID will be created by the system for a user without an existing UID.

- **Remote users**: When a remote user is invited to meeting, the meeting owner's status is not correctly displayed to the remote user. The owner's status will be shown as `will confirm later` instead of `will attend`. This is a server issue. (2892129)

Oracle Calendar Application System Issues

This section includes the following topics:

- Installation

- Upgrades

- Configuration

Installation

- **No prompt for server information**: When installing the standalone package of the application system on a computer where Oracle Calendar server is already installed, you will not be prompted to enter server information during the installation. Once the application system is installed, you must open the `[connection]` section of `ocas.conf` and replace

  `mnode=,`

  with

  `mnode=host:engine_port,node`

  (2844399)

Upgrades

- **Multiple upgrades**: When the application system upgrade assistant is run more than once, multiple `include` lines may be inserted in `httpd.conf`, causing the Web server to not start properly. (#2978880). Suggested work-around: Remove the duplicated `include` lines from the `conf` file. Typically, the lines look like this:

  `include full_path_of_install_home/ocas/conf/ocal.conf`

- **Blank lines in ocas.conf and ocwc.conf**: Blank lines in `ocas.conf` and `ocwc.conf` in your R2 installation will be removed by the upgrade assistant. To preserve them, replace them with # prior to running the assistant.

- **Missing keys**: The upgrade assistant only migrates the following keys. Your installation will still work, but you may need to make changes to the new parameters to get the look and feel you want. For information on editing parameters, see the *Oracle Calendar Reference Manual.*

```
[system]
connection

[servers]
(All keys migrated to "connection" section of ocas.conf. If the old
installation was a masternode, 'mnode' will be the only entry.)

[ACE_PLUGINS_CLIENT]
(All keys into ocas.conf)

[admin]
ssn_timeout
sso_user_env_key
max_login_attempts
login_fail_timeout
secure_login
cache

[ADA]
enable
hide_toggle_link

[modules]
logout
prefs
chgpwd
accrights
userlist_login
hide_eventcal
hide_global
hide_taskview
hide_managegroups
hide_suggesttime
hide_show_unconfirmed
hide_updateall
enable_designate
```

```
hide_viewpub

[file_attachment]
download_enable
upload_enable

[taskview]
quickCreateStartTime
quickCreateEndTime
showQCCompletion

[calendar_view]
default_view
default_dayview_mode
default_weekview_mode
hide_dayview_toggle
hide_weekview_toggle
pdv_notes_top_task_bottom
default_color_mgt_by

[cookies]
domain

[sms]
enable

[sched]
userlist_login (becomes same key in "modules" section of ocwc.conf)
serverlist_login (becomes same key in "modules" section of ocwc.conf).
enable_autologin (becomes same key in "modules" section of ocwc.conf).
modify_emailadd  (becomes same key in "modules" section of ocwc.conf).
showicalvcal (becomes same key in "modules" section of ocwc.conf).

[ACE]
authentication (becomes 'Authentication' of ocwc.conf).
```

Configuration

- **Slow performance – `signinmaxattempts`**: In a standalone installation of
  Oracle Calendar, the signinmaxattempts parameter in the [LIMITS]
  section of the unison.ini file is not currently set by default. The result is that
  each time a user performs any action with the Oracle Calendar Web client, an
  error is written to ocas_log, which can result in a large log file and slow
  performance. Manually set a limit (such as 5) in unison.ini. (2985693)

G

Oracle Collaboration Suite Client Installations

The Oracle Collaboration Suite Client CD-ROM contains the client products.

This appendix contains these topics:

- Oracle Connector for Outlook
- Oracle Calendar Desktop Client for Windows
- Oracle Calendar Desktop Client for Linux
- Oracle Calendar Desktop Client for Macintosh
- Oracle Calendar Desktop Client for Solaris
- Oracle Calendar Sync for Palm for Windows
- Oracle Calendar Sync for Pocket PC
- Oracle Calendar Sync for Palm for Macintosh
- Oracle FileSync

Oracle Connector for Outlook

This section contains these topics:

- System Requirements for Oracle Connector for Outlook
- Preinstallation Requirements for Oracle Connector for Outlook
- Installing Oracle Connector for Outlook
- Silent Installation of Oracle Connector for Outlook
- Deinstalling Oracle Connector for Outlook

System Requirements for Oracle Connector for Outlook

Table G–1 contains the Oracle Connector for Outlook system requirements.

Table G–1   Oracle Connector for Outlook System Requirements

Requirement	Value
Operating Systems	- Windows NT 4.0 - Windows 98 - Windows 2000 - Windows XP Professional Administrative privileges are required to install Oracle Connector for Outlook on Windows NT, 2000, and XP.
Disk Space	Free disk space equivalent to the approximate size of the user's IMAP4 mailbox
RAM	Refer to the RAM requirements of your Microsoft Outlook client.
Outlook	- Outlook 98 - Outlook 2000 - Outlook 2002 **Note**: Native Language version or Multilingual User Interface Pack (MUI) is required for non-English version localization (see supported languages)
Calendar server	- Oracle Calendar server 5.5 - Oracle Calendar server 9.0.4 (required for most of the new Oracle Calendar functionality)

Table G–1   Oracle Connector for Outlook System Requirements

Requirement	Value
E-mail Servers	SMTP server for outgoing mail included with Oracle Collaboration Suite.
	Oracle IMAP4 Server 9.0.3 and later.
	Other IMAP4 servers whose implementation is based upon the IMAP4 reference implementations Cyrus and University of Washington.
Conduits for PDA Synchronization	■ PocketMirror 2.04 or 3.0 (3.0 recommended)
	■ PocketJournal
	■ Desktop To Go 2.5
	■ Desktop To Go 2.509 (for Outlook 2002 only)
	■ PSIWIN 2.3 or 2.31
	■ ActiveSync 3.0, 3.1, or 3.5
	■ HotSync Manager 4.0 (for Windows XP only)

Preinstallation Requirements for Oracle Connector for Outlook

- A supported Outlook version must be installed on a supported platform

- Windows NT, 2000, and XP require you to have administrative privileges on your computer in order to install Oracle Connector for Outlook

- Outlook 98 and Outlook 2000 must be installed in Corporate/Workgroup mode. Verify the Outlook configuration by choosing **Tools** > **Options** > **Mail Services** > **Reconfigure Mail Support**.

- To avoid losing information, Oracle Corporation recommends that you synchronize your offline folders before upgrading

Installing Oracle Connector for Outlook

1. Exit all Windows applications before installing Oracle Connector for Outlook.

2. If you are upgrading from a previous version and want to add or change the languages installed, run con_outlook_904x.exe followed by the switch /Lang. Otherwise, just double-click the con_outlook_904x.exe file. Follow the on-screen installation instructions.

> **Note:** To avoid conflict between POP3 and IMAP4 protocols, do not set up Microsoft's Internet Mail or Exchange service providers in the same profile as Oracle Connector for Outlook.

Silent Installation of Oracle Connector for Outlook

When run in silent mode, the Oracle Connector for Outlook installer consults a preset configuration file for all the information normally provided by the user through the installation dialogs. Available with Oracle Connector for Outlook is a sample file, called `ctoc.ini`. Use this file as a template, changing its parameter values to suit your installation. For more details on the parameters available, see Table G–2. Any parameters for which you do not supply a value and that do not have default values are prompted for at first startup.

To install Oracle Connector for Outlook from the command line without requiring any user interaction, run the product self-extracting executable with the `-s` option, and specify the configuration file to use with the `-cfg` option.

For example, where both the installer and configuration file exist in the root directory of drive `C:`, and the installer file name is `OC_03040_WIN.exe`, perform the following:

```
C:\> con_outlook_904x.exe -s -cfg ctoc.ini
```

Two optional flags can also be specified:

- `-f`

  If you specify `-f` in your command line, the Oracle Connector for Outlook installer attempts to remove any older versions of the product it finds before installing the current version.

- `-1`

  If you specify `-1` (the numeral 1) in your command line, only the first part of the Oracle Connector for Outlook installation runs, copying necessary files and registering Oracle Connector for Outlook as an available service provider. The second part of the installation, in which Oracle Connector for Outlook is added to a profile, is not run.

> **Note:** After running the silent install once, subsequent silent installations that do not specify the -f option only perform the first part of the installation, copying necessary files and registering Oracle Connector for Outlook as an available service provider. The installer does not continue with the second part of the installation.

For more information about large-scale deployments of Oracle Connector for Outlook, contact Oracle Consulting.

Oracle Connector for Outlook Silent Installation Configuration File Parameters

Table G–2 contains a list of available parameters for Oracle Connector for Outlook silent installation, organized alphabetically by section. Listed default values are applied when the value of the parameter in question is blank or the parameter is left out of the configuration file completely.

All lines beginning with a semicolon (;) in the configuration file are comments not read by the installer.

Table G–2   Oracle Connector for Outlook Silent Installation Configuration Parameters

Component	Parameter	Accepted Values	Default	Description
[Calendar]	AccountName	A valid calendar server user name	None	Specifies this user's calendar account name
[Calendar]	DomainID	A valid Domain ID	None	Specifies the Domain ID representing your organization. The [Calendar] UseDNS and [Calendar] HostName parameters must also be specified.
[Calendar]	HostName	A valid host name, or list of names in the format: *host1;host2; hostN.* For example: scooter;kermit	None	Specifies the host name or network address of the Calendar Domain Service host or hosts. The [Calendar] UseDNS and [Calendar] DomainID parameters must also be specified.

Table G–2   Oracle Connector for Outlook Silent Installation Configuration Parameters (Cont.)

Component	Parameter	Accepted Values	Default	Description
[Calendar]	NoAccount	0 (Configure a calendar server connection using the [Calendar] parameters) 1 (Skip configuring the calendar server connection and ignore any values set by other parameters in the [Calendar] section)	0	Specifies that this user has no calendar server account, and ignores any values set by other parameters in the [Calendar] section
[Calendar]	Password	The valid password for this user's calendar account	None	Specifies this user's calendar password
[Calendar]	Port	0 (use the default) A valid port	None	Specifies the port to use to connect to the calendar server specified by the [Calendar] ServerName parameter
[Calendar]	ServerName	A valid host name, followed by a comma, followed by a valid node-ID. For example: kermit,1200	None	Specifies the host name or network address of the calendar server, and the node-ID to which to connect, if desired
[Calendar]	UseDNS	0 or empty ("Corporate Mode") 1 (Use DNS)		Use Calendar Domain Service
[E-Mail]	AccountName	A valid user name	None	The account name of this user on the IMAP4 server
[E-Mail]	DisplayName	Any alphanumeric string	None	Sets the name to be displayed for all e-mail this user sends
[E-Mail]	EmailAddress	A valid e-mail address	None	Specifies the current user's e-mail address

Table G–2   Oracle Connector for Outlook Silent Installation Configuration Parameters (Cont.)

Component	Parameter	Accepted Values	Default	Description
[E-Mail]	Imap4ServerName	A valid host name	None	The host name or network address of the IMAP4 e-mail server
[E-Mail]	ImapNoAccount	0 (Configure an IMAP4 server connection using the other IMAP4 configuration parameters in the [E-Mail] section) 1 (Skip configuring the IMAP4 server connection and ignore any values set by other IMAP4 configuration parameters in the [E-Mail] section)		Specifies that this user has no IMAP4 account, and ignores any values set by other IMAP4 configuration parameters in the [E-Mail] section
[E-Mail]	ImapPort	A valid port	143	The port for the IMAP4 server
[E-Mail]	ImapSameAsCTime	0 (Do not use the same values set for the calendar server account name and password) 1 (Use the same values set for the calendar server account name and password)	0	Instructs the installer to use the same user name and password specified by the [Calendar] AccountName and [Calendar] Password parameters for the IMAP4 server. If this parameter is set to 1, the installer ignores any values set in the [E-Mail] AccountName and [E-Mail] Password parameters.
[E-Mail]	ImapSSL	0 (Do not use SSL) 1 (Use SSL)	0	Instructs the installer to use Secure Sockets Layer (SSL) for all communications with the IMAP4 e-mail server

Table G–2   Oracle Connector for Outlook Silent Installation Configuration Parameters (Cont.)

Component	Parameter	Accepted Values	Default	Description
[E-Mail]	Organization	Any alphanumeric string	None	Specifies the current user's organization to be included with outgoing e-mail (optional)
[E-Mail]	Password	The valid password for this user's e-mail account	None	The password for this user on the IMAP4 server
[E-Mail]	ReplyTo	A valid e-mail address	None	Specifies the destination e-mail address that mail is sent to when a user replies to mail sent by the current user (optional)
[E-Mail]	SmtpAccount	A valid host name	None	Specifies the host name or network address of the SMTP e-mail server
[E-Mail]	SmtpAuthentication	0 (No authentication required) 1 (User name and password required)	0	Instructs the installer that the specified SMTP e-mail server requires a user name and password
[E-Mail]	SmtpNoAccount	0 (Configure an SMTP server connection using the other SMTP configuration parameters in the [E-Mail] section) 1 (Skip configuring the SMTP server connection and ignore any values set by other SMTP configuration parameters in the [E-Mail] section)	0	Specifies that this user has no SMTP account, and ignores any values set by other SMTP configuration parameters in the [E-Mail] section

Table G–2   Oracle Connector for Outlook Silent Installation Configuration Parameters (Cont.)

Component	Parameter	Accepted Values	Default	Description
[E-Mail]	SmtpPassword	The valid password for the current user account	None	Specifies the password to use when connecting to the SMTP e-mail server, if the [E-Mail] SMTPAuthentication parameter is set to 1
[E-Mail]	SmtpPort	A valid port	25	The port for the SMTP server
[E-Mail]	SmtpSameAsImap	0 (Do not use the same values set for the IMAP4 server account name and password) 1 (Use the same values set for the IMAP4 server account name and password)	0	Instructs the installer to use the same user name and password specified by the [E-Mail] AccountName and [E-Mail] Password parameters for the SMTP server. If this parameter is set to 1, the installer ignores any values set in the [E-Mail] SmtpAccount and [E-Mail] SmtpPassword parameters.
[E-Mail]	SmtpServerName	A valid user name on the SMTP server	None	Specifies the account name to use when connecting to the SMTP e-mail server, if the [E-Mail] SMTPAuthentication parameter is set to 1
[E-Mail]	SmtpSSL	0 (Do not use SSL) 1 (Use SSL)	0	Instructs the installer to use SSL for all communications with the SMTP e-mail server
[General]	CompanyName	Any alphanumeric string	None	Specifies the name of the company employing the registered user

Table G–2   Oracle Connector for Outlook Silent Installation Configuration Parameters (Cont.)

Component	Parameter	Accepted Values	Default	Description
[General]	InstallPath	A valid path name	*current_drive*: \Program Files \Oracle \Connector_for _Outlook	Specifies the path in which to install Oracle Connector for Outlook
[General]	UserName	Any alphanumeric string	None	Specifies the name of the registered user. Also used as default values for the [Calendar] AccountName and [E-Mail] DisplayName parameters.
[Install]	ShowError	0 (Hide error messages) 1 (Show error messages)	0	Displays a button used to open a log file containing error messages encountered during the installation. If ShowOutput is 1, the button appears in the installation progress box. If ShowOutput is 0, the button appears in a separate dialog box.
[Install]	ShowOutput	0 (Hide output) 1 (Show output)	0	Displays the output of the Oracle Connector for Outlook installer as it progresses through the silent installation
[Install]	ShowSuccess	0 (Hide success message) 1 (Show success message)	0	Displays a status message when installation is completed successfully

Table G–2   Oracle Connector for Outlook Silent Installation Configuration Parameters (Cont.)

Component	Parameter	Accepted Values	Default	Description
[Install]	ShutdownOutlook	0 (Do not shut down Outlook automatically) 1 (Shut down Outlook automatically)	0	Instructs the installer to close Outlook automatically before installing Oracle Connector for Outlook, if Outlook is running. Outlook must not be running in order for the installer to function correctly.
[Languages]	(None)	Acceptable language values, such as: 1031=d 1036=fr 1041=ja 1042=ko Where the number represents the language, and the string is the same as that appended to the Oracle Connector for Outlook DLL and help files for that language.	None. Unless a value is specified, Oracle Connector for Outlook installs in English.	Sets the language used by Oracle Connector for Outlook
[MAPIProfile]	Name	Any alphanumeric string	Oracle Connector for Outlook	Specifies the profile in which to add Oracle Connector for Outlook. If the profile name specified does not already exist, the installation creates a new profile with this name and adds Oracle Connector for Outlook to that profile.

Table G–2   Oracle Connector for Outlook Silent Installation Configuration Parameters (Cont.)

Component	Parameter	Accepted Values	Default	Description
[Off-line]	Path	A valid path	A default path determined by the current platform and profile name	Specifies a location for the current user's offline storage
[Off-line]	Use	0 (Offline access disabled) 1 (Offline access enabled)	0	Instructs the installer to enable offline access and synchronization for the current user
[Settings]	DisableCfgUI	0 (Show the configuration dialog box normally) 1 (Disable the configuration dialog box)	0	Hides the Oracle Connector for Outlook configuration dialog box normally available through the Windows Mail control panel, so that users cannot modify their sign-in and offline settings
[Settings]	DisablePwd	0 (Allow password saving) 1 (Disable password saving)	0	Instructs the installer to ignore passwords set for the calendar, IMAP4, and SMTP server, and requires the current user to provide an account password at each login
[Settings]	ForceReboot	0 (No reboot) 1 (Force reboot)	0	Instructs the installer to restart the operating system after the first part of the installation (copying files and installing Oracle Connector for Outlook as a service provider)

Table G–2   Oracle Connector for Outlook Silent Installation Configuration Parameters (Cont.)

Component	Parameter	Accepted Values	Default	Description
[Settings]	HideCTimePwdMenu	0 (Show the Change Password option) 1 (Hide the Change Password option)	0	Hides the Change Password option in the Tools menu, to prevent users from changing their calendar server passwords through Outlook
[Settings]	NoServerMail	0 (Enable connections to mail servers normally) 1 (Skip connections to both IMAP4 and SMTP servers) 2 (Skip connection to the IMAP4 server) 3 (Skip connection to the SMTP server)	0	Skips connecting to the IMAP4 and SMTP servers. Use this parameter if you want to use another service provider such as Microsoft's Internet E-Mail for mail instead of Oracle Connector for Outlook. If 1, 2 or 3 is specified, the corresponding server properties page in Outlook will be hidden.
[Settings]	ShowSrvIcon	0 (Do not show the unavailable servers icon) 1 (Show the unavailable servers icon)	0	Shows a small information icon in the lower right corner of the main Outlook window when a calendar or mail server is unavailable

Deinstalling Oracle Connector for Outlook

To remove Oracle Connector for Outlook:

1. Double-click **Add/Remove Programs** from the Control Panel.

2. Choose Oracle Connector for Outlook and click **Add/Remove**.

Oracle Calendar Desktop Client for Windows

This section contains these topics:

- System Requirements for Oracle Calendar Desktop Client for Windows

- Installing Oracle Calendar Desktop Client for Windows

- Silent Installation of Oracle Calendar Desktop Client for Windows
- Deinstalling Oracle Calendar desktop client for Windows

System Requirements for Oracle Calendar Desktop Client for Windows

Table G–3 contains the Oracle Calendar desktop client for Windows system requirements.

Table G–3   Oracle Calendar desktop client for Windows System Requirements

Requirement	Value
Operating Systems	- Windows 98
	- Windows ME
	- Windows NT
	- Windows 2000
	- Windows XP Home
	- Windows XP Professional
	If you are installing Oracle Calendar desktop client for Windows on a Windows NT computer, you must install Microsoft Windows Service Pack 6 or later.
	Administrative privileges are required to install Oracle Calendar desktop client for Windows on Windows NT, 2000, and XP.
Disk Space	25 MB
RAM	30 MB minimum
Calendar server	- Oracle CorporateTime server 5.4
	- Oracle Calendar server 5.5
	- Oracle Calendar server 9.0.4

Installing Oracle Calendar Desktop Client for Windows

This section describes how to install Oracle Calendar desktop client for Windows.

1. Log in with administrative privileges if you are installing on Windows NT, 2000, or XP.

2. Run the self-extracting executable `cal_win_904x.exe` and follow the on-screen instructions.

Silent Installation of Oracle Calendar Desktop Client for Windows

Instructions on how to perform a silent installation of Oracle Calendar desktop client for Windows are available on Oracle*MetaLink* at

```
http://metalink.oracle.com
```

Deinstalling Oracle Calendar desktop client for Windows

To remove Oracle Calendar desktop client for Windows:

1. Double-click **Add/Remove Programs** from the Control Panel.

2. Choose **Oracle Calendar 9.0.4** and click **Add/Remove**.

Oracle Calendar Desktop Client for Linux

This section covers these topics:

- System Requirements for Oracle Calendar Desktop Client for Linux x86

- Installing Oracle Calendar Desktop Client for Linux x86

- Silent Installation of Oracle Calendar Desktop Client for Linux x86

- Deinstalling Oracle Calendar Desktop Client for Linux x86

System Requirements for Oracle Calendar Desktop Client for Linux x86

Table G–4 contains the Oracle Calendar Desktop Client for Linux system requirements.

Table G–4   Oracle Calendar Desktop Client for Linux System Requirements

Requirement	Value
Operating Systems	■ Red Hat Linux 7.x, to 9.0 ■ SuSE Linux 7.1 ■ Linux x86 with kernel 2.4.x or later
Disk Space	33 MB
RAM	15 to 20 MB
Calendar server	■ Oracle CorporateTime server 5.4 ■ Oracle Calendar server 5.5 ■ Oracle Calendar server 9.0.4

Installing Oracle Calendar Desktop Client for Linux x86

This section describes how to install Oracle Calendar Desktop Client for Linux.

1. Unpack the distribution archive in a temporary directory. `/tmp` is the sample directory used in the following instructions.

```
cd /tmp
gtar zxvf /tmp/cal_linux_904x.tar.gz
```

2. Change to the `OracleCalendar_inst` directory.

```
cd OracleCalendar_inst
```

3. To install using a full graphical interface, run `gui_install.bat`. To install using a text mode interface, run `text_install.bat`. You will be prompted for installation and shortcut directories.

Silent Installation of Oracle Calendar Desktop Client for Linux x86

To run a silent installation of Oracle Calendar Desktop Client for Linux, follow the steps described in "Installing Oracle Calendar Desktop Client for Linux x86" on page G-16, except run the file `silent_install.bat`. This file reads the following parameters from the `ocal_conf/silent.properties` file:

- `USER_INSTALL_DIR`: Where the application will be installed
- `USER_SHORTCUTS`: Where the shortcut used to start Oracle Calendar will be placed

Both values must be fully-qualified paths, such as `/local/OracleCalendar`. Relative paths may not be used.

Deinstalling Oracle Calendar Desktop Client for Linux x86

To deinstall Oracle Calendar Desktop Client for Linux, remove the `OracleCalendar` directory:

```
rm -rf /OracleCalendar
```

Oracle Calendar Desktop Client for Macintosh

This section contains these topics:

- System Requirements for Oracle Calendar Desktop Client for Macintosh

- Installing Oracle Calendar Desktop Client for Macintosh
- Deinstalling Oracle Calendar Desktop Client for Macintosh

System Requirements for Oracle Calendar Desktop Client for Macintosh

Table G–5 contains the Oracle Calendar desktop client for Macintosh system requirements.

Table G–5   Oracle Calendar desktop client for Macintosh System Requirements

Requirement	Value
Operating Systems	Mac OS 9.x (with CarbonLib 1.6), Mac OS X 10.1.4 to 10.2.6
Disk Space	20 MB minimum
RAM	12 MB
Calendar server	■ Oracle Calendar server Oracle CorporateTime server 5.4
	■ Oracle Calendar server 5.5
	■ Oracle Calendar server 9.0.4

Installing Oracle Calendar Desktop Client for Macintosh

Mac OS 9.x

This section describes how to install Oracle Calendar desktop client for Macintosh for Mac OS 9.x.

1. Ensure that you have administrative privileges.

2. Ensure that the `CarbonLib` file is installed in the `Extensions` folder of your active System Folder to run the installer.

3. Double-click `cal_mac_OS9_904x.hqx` and follow the on-screen instructions.

   The installer extracts the application and copies the `Readme.htm` file into the destination folder you have selected. It also extracts all shared libraries to the `Extensions` folder and `Oracle Calendar Help` to the Help folder of your active System Folder.

   If your `CarbonLib` file is prior to version 1.6, it is updated. Restart the computer for the new file version to take effect.

4. Double-click the Oracle Calendar desktop icon to start the application when installation is completed.

Mac OS X

This section describes how to install Oracle Calendar desktop client for Macintosh for Mac OS X.

1. Ensure that you have administrative privileges.

2. Double-click `cal_mac_OSX_904x.hqx` and follow the on-screen instructions.

   The installer extracts the application and copies the `Readme.htm` file into a destination folder you select. It also extracts all shared libraries to the `/Library/CFMSupport/` folder and the `Oracle Calendar Help` folder to the `/Library/Documentation/Help/` folder.

3. Double-click the Oracle Calendar desktop icon to start the application when installation is complete.

Deinstalling Oracle Calendar Desktop Client for Macintosh

Mac OS 9.x

This section describes how to deinstall Oracle Calendar desktop client for Macintosh for Mac OS 9.x.

1. To remove the Oracle Calendar desktop client for Macintosh, you must delete these components:

   - Shared libraries and ACE plug-ins
   - Help
   - Preferences
   - Oracle Calendar Desktop Client application
   - Oracle Calendar data (offline files)

2. To remove the shared libraries and ACE plug-ins, go to your hard disk and open the `System` folder. Open the `Extensions` folder and delete these files:

   - `OCALACipher1EncrLib`
   - `OCALLightEncrLib`
   - `OCALSimpleCompLib`
   - `OCALStdAuthLib`
   - `OCALSASLAuthLib`

- `OCALGssapiAuthLib`

- `Unison Library`

3. To remove the Help, go to your hard disk and open the `System` folder. Open the `Help` folder, select the `Oracle Calendar Help` folder, and delete it.

4. To remove your Preferences, go to your hard disk and open the `System` folder. Open the `Preferences` folder, select the `Oracle Calendar Prefs` file, and delete it.

5. To remove the Oracle Calendar data files, go to your hard disk and open the `Applications (Macintosh OS 9)` folder. Select the `Oracle Calendar` folder and delete it.

Mac OS X

This section describes how to deinstall Oracle Calendar desktop client for Macintosh for Mac OS X.

1. To remove the Oracle Calendar desktop client for Macintosh, you must delete these components:

   - Shared libraries and ACE plug-ins

   - Help

   - Preferences

   - Oracle Calendar Desktop Client application

   - Oracle Calendar data (offline files)

2. To remove the shared libraries and ACE plug-ins, go to your hard disk and open the `Library` folder. Open the `CFMSupport` folder and delete these files:

   - `OCALACipher1EncrLib`

   - `OCALLightEncrLib`

   - `OCALSimpleCompLib`

   - `OCALStdAuthLib`

   - `OCALSASLAuthLib`

   - `OCALGssapiAuthLib`

   - `Unison Library`

3. To remove the Help, go to your hard disk and open the `Library` folder. Open the `Documentation` folder, and then open the `Help` folder. Select the `Oracle Calendar Help` folder and delete it.

4. To remove your Preferences, go to your hard disk and open the `Users` folder and go to the `User` folder that has your name on it. Open the `Library` folder, and then open the `Preferences` folder. Select the following files and delete them:

   - `com.Oracle.Oracle Calendar.plist`

   - `Oracle Calendar Prefs`

5. To remove the Oracle Calendar application, go to your hard disk and open the `Applications` folder. Select the `Oracle Calendar` folder and delete it.

Oracle Calendar Desktop Client for Solaris

This section contains these topics:

- System Requirements for Oracle Calendar Desktop Client for Solaris Operating Environment (SPARC 32-bit)

- Installing Oracle Calendar Desktop Client for Solaris Operating Environment (SPARC 32-bit)

- Deinstalling Oracle Calendar Desktop Client for Solaris Operating Environment (SPARC 32-bit)

- Silent Installation of Oracle Calendar Desktop Client for Solaris Operating Environment (SPARC 32-bit)

System Requirements for Oracle Calendar Desktop Client for Solaris Operating Environment (SPARC 32-bit)

Table G–6 contains the Oracle Calendar desktop client for Solaris system requirements.

Table G–6   Oracle Calendar desktop client for Solaris System Requirements

Requirement	Value
Operating Systems	Solaris 8, 9 (SPARC only)
	Netscape Navigator or Netscape Communicator release 4.0 or later is required to use the Oracle Calendar Desktop Client online Help. The directory that contains the Netscape executable must be set in your path.
Disk Space	40 MB
RAM	20 to 25 MB

Installing Oracle Calendar Desktop Client for Solaris Operating Environment (SPARC 32-bit)

This section describes how to install the Oracle Calendar desktop client for Solaris.

1. Untar the distribution archive into a temporary directory. `/tmp` is the sample directory used in the following commands.

    ```
    cd /tmp
    gtar zxvf /tmp/cal_sun_os_904x.tar.gz
    ```

2. Change to the `OracleCalendar_inst` directory.

    ```
    cd OracleCalendar_inst
    ```

3. To install using a full graphical interface, run `gui_install.bat`. To install using a text mode interface, run `text_install.bat`. You will be prompted for installation and shortcut directories.

Deinstalling Oracle Calendar Desktop Client for Solaris Operating Environment (SPARC 32-bit)

To deinstall the Oracle Calendar desktop client for Solaris, remove the `OracleCalendar` directory:

```
rm -rf /OracleCalendar
```

Silent Installation of Oracle Calendar Desktop Client for Solaris Operating Environment (SPARC 32-bit)

To run a silent installation of Oracle Calendar Desktop Client for Solaris Operating Environment (SPARC 32-bit), follow the steps described in "Installing Oracle Calendar Desktop Client for Solaris Operating Environment (SPARC 32-bit)" on page G-21, except run the file silent_install.bat. This file reads the following parameters from the ocal_conf/silent.properties file:

- USER_INSTALL_DIR: Where the application will be installed
- USER_SHORTCUTS: Where the shortcut used to start Oracle Calendar will be placed

Both values must be fully-qualified paths, such as /local/OracleCalendar. Relative paths may not be used.

Oracle Calendar Sync for Palm for Windows

This section contains these topics:

- System Requirements for Oracle Calendar Sync for Palm for Windows
- Installing Oracle Calendar Sync for Palm for Windows
- Deinstalling Oracle Calendar Sync for Palm for Windows

System Requirements for Oracle Calendar Sync for Palm for Windows

Table G–7 contains the Oracle Calendar Sync for Palm for Windows system requirements.

Table G–7   Oracle Calendar Sync for Palm for Windows System Requirements

Requirement	Value
Operating Systems	- Windows 98 - Windows 2000 - Windows ME - Windows XP - Windows NT 4.0
Disk Space	75 MB
RAM	64 MB

Table G–7   Oracle Calendar Sync for Palm for Windows System Requirements

Requirement	Value
Calendar server	■ CorporateTime server 5.4
	■ Oracle Calendar server 5.5
	■ Oracle Calendar server 9.0.4
Palm Desktop	Palm Desktop 3.1 to 4.1
Device	■ Palm m100, m500, m505, III, IIIx, V, Vx, Tungsten *T*, *W*
	■ Handspring Visor

Installing Oracle Calendar Sync for Palm for Windows

This section describes how to install Oracle Calendar Sync for Palm for Windows.

If you have a previous version of Oracle Calendar Sync (CorporateSync) installed, Oracle Corporation recommends that you perform a synchronization before you install Oracle Calendar Sync for Palm for Windows.

1. Ensure HotSync is installed on your computer.

2. Run the `cal_syncpalm_win_904x.exe` setup program provided with the distribution package and follow the on-screen InstallShield instructions.

3. Choose an installation type. If you choose **Custom**, there is no difference between **This feature will be installed on local hard drive** and **This feature, and all subfeatures**, **will be installed on your local hard drive**. Select the conduits you want to install.

4. Enter your user information, including user name, password, calendar server, and node ID.

5. Follow the rest of the on-screen instructions to complete the installation.

6. Ensure that your device is in its cradle, then perform a synchronization. The first time you do this after installation, a full synchronization will take place.

Deinstalling Oracle Calendar Sync for Palm for Windows

To remove Oracle Calendar Sync:

1. Double-click **Add/Remove Programs** from the Control Panel.

2. Choose **Oracle Calendar Sync 9.0.4 for Palm** and click **Add/Remove**.

Oracle Calendar Sync for Pocket PC

This section contains these topics:

- System Requirements for Oracle Calendar Sync for Pocket PC
- Installing Oracle Calendar Sync for Pocket PC
- Deinstalling Oracle Calendar Sync for Pocket PC

System Requirements for Oracle Calendar Sync for Pocket PC

Table G–8 contains the Oracle Calendar Sync for Pocket PC system requirements.

Table G–8   Oracle Calendar Sync for Pocket PC System Requirements

Requirement	Value
Operating Systems	- Windows 98 - Windows 2000 - Windows ME - Windows XP - Windows NT 4.0
Disk Space	75 MB
RAM	64 KB
Calendar server	- CorporateTime server 5.4 - Oracle Calendar server 5.5 - Oracle Calendar server 9.0.4
Pocket PC	Pocket PC (Windows CE 3.0) with MIPS, SH3, ARM or XScale processor
Device	- HPC 2000 - Compaq iPAQ - HP iPAQ H1910 - HP Jornada 500 series - HP Jornada 700 series - Handheld PC - Pocket PC 2002 If you are running an older version of Microsoft ActiveSync, check your manufacturer's site for updates.

Installing Oracle Calendar Sync for Pocket PC

This section describes how to install Oracle Calendar Sync for Pocket PC.

If you have a previous version of Oracle Calendar Sync (CorporateSync) installed, Oracle Corporation recommends that you perform a synchronization before you install Oracle Calendar Sync for Pocket PC.

1. Ensure that ActiveSync is installed on your computer.

2. Run the `cal_syncppc_win_904x.exe` setup program provided with the distribution package and follow the on-screen InstallShield instructions.

3. Choose an installation type. If you choose **Custom**, there is no difference between **This feature will be installed on local hard drive** and **This feature, and all subfeatures, will be installed on your local hard drive**. Select the conduits you want to install.

4. Ensure that you install Oracle Calendar Sync Helper files when prompted by the application. Your device must be connected to install these files.

   > **Note:** To connect at a later time and install the files, click **Start** > **Programs** > **Oracle Calendar Sync for Pocket PC** > **Install Device Files**.

5. Enter your user information, including user name, password, calendar server, and node ID.

6. Follow the rest of the on-screen instructions to complete the installation.

7. Remove your device from its cradle.

8. If you are upgrading from a previous version, select **File** > **Delete Partnership**.

9. Return your device to the cradle. The ActiveSync Partnership Wizard starts.

10. Follow the on-screen instructions to create a new ActiveSync Partnership. Select **Oracle Calendar** as your plug-in for Calendar, Tasks and Contacts.

11. Open Microsoft ActiveSync if it does not open automatically.

12. Click **Sync** if synchronization is not automatically initiated. The first time you synchronize, a full synchronization will occur.

Deinstalling Oracle Calendar Sync for Pocket PC

To remove Oracle Calendar Sync for Pocket PC:

1. Double-click **Add/Remove Programs** from the Control Panel.

2. Choose **Oracle Calendar Sync 9.0.4 for Pocket PC** and click **Add/Remove**.

To remove Oracle Calendar Sync Helper files from your mobile device:

1. On your device, choose **Start** > **Settings**.

2. Under **System**, click **Remove Programs**.

3. Select **Oracle Calendar Sync Helper Files** and click **Remove**.

Oracle Calendar Sync for Palm for Macintosh

This section contains these topics:

- System Requirements for Oracle Calendar Sync for Palm for Macintosh

- Preparing to Install Over Previous Versions

- Installing Oracle Calendar Sync for Palm for Macintosh

- Troubleshooting the Oracle Calendar Sync for Palm for Macintosh Installation

- Deinstalling Oracle Calendar Sync for Palm for Macintosh

System Requirements for Oracle Calendar Sync for Palm for Macintosh

Table G–9 contains the Oracle Calendar Sync for Palm for Macintosh system requirements.

Table G–9   Oracle Calendar Sync for Palm for Macintosh System Requirements

Requirement	Value
Operating Systems	Macintosh OS 9 or Mac OS X 10.1.4 to 10.2.6
RAM	8 MB (64 MB recommended)
Calendar server	■ Oracle CorporateTime Server 5.4
	■ Oracle Calendar server 5.5
	■ Oracle Calendar server 9.0.4
Palm Desktop	Palm Desktop version 4.0 and 4.1

Table G–9   Oracle Calendar Sync for Palm for Macintosh System Requirements

Requirement	Value
Device	■ Handspring Visor
	■ Palm M500 series

Preparing to Install Over Previous Versions

If you already have Sync software installed on your computer and you have data stored in Palm Desktop, perform a HotSync.

If you have a Beta version of Oracle Calendar Sync installed, or if you have version 2.1.4 or earlier of Oracle Corporate Sync installed, you must do the following before installing Oracle Calendar Sync for Palm for Macintosh, in order to protect your data.

1. Remove the Oracle Calendar Sync application (also known as CS Setup) from your Palm organizer.

2. Purge all items from your Date Book and To Do List. If you do not do this, duplicates of the items will be created when you perform your first HotSync after installing Oracle Calendar Sync for Palm for Macintosh. Note the following when purging data:

   ■ Ensure that **Save archive copy on PC** is selected.

   ■ To Do items that have not been marked as completed must be manually deleted.

   ■ To delete the majority of, or all, Date Book events, advance the date on your organizer by several years, then do your purge. For example, change your organizer's date to 2015, then purge all events **older than 1 week** to delete all events from the past up until the year 2015.

Installing Oracle Calendar Sync for Palm for Macintosh

This section describes how to install Oracle Calendar Sync for Palm for Macintosh.

1. Double-click the `cal_syncpalm_macOS9_904.hqx` (`cal_syncpalm_macOSX_904.hqx` if you are using Mac OS X) file. This creates the Oracle Calendar Sync installer.

2. Double-click **Oracle Calendar Sync Install**. The installer checks for existing Sync files and installs the program. Depending on your setup, this may take

several minutes. Some error messages may be generated and saved to the install log; you can ignore these messages.

3. Copy `Oracle Calendar Sync.prc` from the `/Applications/Palm /Add-on/` directory to the `/Users/`*user*`/Documents/Palm/Users/`*user* `/Files to Install/` directory. *user* is the name of the relevant Mac user.

If you have recently installed Palm Desktop and the Files to Install folder does not exist, create this folder manually.

> **Note:** The installer will move the Datebook and ToDo conduits to a folder entitled Disabled Conduits.

4. Turn on the Palm organizer and place it in its cradle.

5. Press the **HotSync** button on the front of the Palm organizer cradle. The Oracle Calendar Sync application will be installed on your Palm organizer.

> **Note:** You may get error messages in the HotSync log saying that Oracle Calendar Sync cannot be located. Ignore these messages.

6. If the HotSync Manager is running, the installer will ask if you want to close it. Click **Yes** to exit the HotSync Manager.

7. Click the **HotSync** icon in your HotSync folder and select **HotSync Manager**.

8. From the HotSync menu, choose **Conduit Settings**. A list of synchronizable items appears. Choose how you want Oracle Calendar Events and Tasks to be synchronized by double-clicking each item. A dialog box appears with the following choices:

- **Synchronize the files**: Synchronizes all information that exists on both your Palm organizer and in Oracle Calendar

- **Macintosh overwrites hand-held**: Information in your Oracle Calendar Agenda overwrites Events, Tasks, or Addresses on the Palm organizer

- **Do Nothing**: The specified Entry type is not synchronized

9. Select a user name from the top of the Conduit Settings dialog box. If there is only one user name, it is selected automatically.

10. Open Oracle Calendar Sync on your Palm organizer and enter your Oracle Calendar user name, password, server and node ID. If you do not know this information, ask your Network Administrator.

Oracle Calendar Sync is now installed but no Entry information has been synchronized.

Troubleshooting the Oracle Calendar Sync for Palm for Macintosh Installation

Occasionally, after installing Oracle Calendar Sync for Palm for Macintosh, you may have difficulty performing a HotSync. This can be due to a conflict with Palm Desktop files. To fix the problem, do the following:

1. Delete the Users folder located in your Documents Folder under `/Users` `/your_user_name/Documents/Palm/Users`.

2. Delete the `com.palm.Desktop.plist` file, located in the `/Users` `/your_user_name/Library/Preferences/` directory.

3. Delete the following files located in the `/Users` `/your_user_name/Library/Preferences/ByHost/` directory:

   - `com.palm.HS.T.S.xxxxxxxx.plist`

   - `com.palm.HS.T.PC.xxxxxxxx.plist`

   - `com.palm.HS.T.USB.xxxxxxxx.plist`

4. Start HotSync Manager. You will be prompted for a user name, provided you deleted the files and folders as described in the preceding steps.

5. Enter your user name and any other necessary HotSync information.

6. Close HotSync Manager and perform a HotSync.

Deinstalling Oracle Calendar Sync for Palm for Macintosh

This section describes how to deinstall Oracle Calendar Sync for Palm for Macintosh.

1. Remove the Oracle Calendar Events and Oracle Calendar Tasks conduits from the HotSync Conduits folder:

2. Remove the `Unison Library` shared library from the active (Mac OS 10.2.1) `Library\CFM Support` folder.

3. Return the contents of the Disable Conduits folder to the HotSync conduits folder.

Oracle FileSync

This section contains these topics:

- Installing Oracle FileSync for Windows
- Deinstalling Oracle FileSync for Windows

Installing Oracle FileSync for Windows

Oracle FileSync is a Windows client software application that enables users to keep files synchronized between their local machine and Oracle Files. To install Oracle FileSync, users should follow these steps:

1. Save and exit all Windows applications.

2. Log in to Oracle Files and click **Help**. On the main online help page, click the link in the Oracle FileSync section.

3. Save the install executable to your hard drive.

4. Double-click FileSync.exe to run the installation program.

5. Follow the instructions and accept the defaults. The application is installed in the Windows client machine in the following directory:

    ```
    c:\Program Files\Oracle\Oracle FileSync
    ```

6. To start the Oracle FileSync application, select **Oracle FileSync** from the Windows **Start** -> **Programs** menu.

7. Edit the update URL. Select **File** > **Preferences** > **Updates** and enter the correct URL in the **Update URL** field.

    Contact your administrator for the correct URL to use. Alternatively, you can deselect **Check for Updates**. See the Oracle FileSync online help for more information.

Deinstalling Oracle FileSync for Windows

To remove Oracle FileSync for Windows:

1. Double-click **Add/Remove Programs** from the Control Panel.

2. Select **Oracle FileSync** and click **Add/Remove**.

Glossary

Debian

A free operating system using the Linux kernel and basic operating system tools from the GNU project.

domain

Any tree or subtree within the **Domain Name System (DNS)** namespace. Domain most commonly refers to a group of computers whose host names share a common suffix, the domain name.

For Oracle Files, a domain is a logical grouping of Oracle Files **nodes** and HTTP nodes, an **Oracle Files Domain Controller**, and an Oracle9*i* database instance that contains all Oracle Files data.

Domain Name System (DNS)

A system for naming computers and network services that is organized into a hierarchy of domains. DNS is used in TCP/IP networks to locate computers through user-friendly names. DNS resolves a friendly name into an IP address, which is understood by computers.

host name

The unique identity for each computer within a domain.

ias_admin password

The password used to administer any installation on the host where Oracle9*i*AS Infrastructure and Oracle Collaboration Suite are installed. This password is required for installing additional Oracle Collaboration Suite instances. If you are configuring **Oracle Internet Directory**, the default administrative user orcladmin,

is assigned the same password as the `ias_admin` user by default. The `orcladmin` user is an **Oracle Internet Directory super user**.

instance name

Identifies the installation instance of Oracle9*i*AS Infrastructure and Oracle Collaboration Suite on a single host.

node

An Oracle Files node is a particular set of processes running on a host computer. One or more node processes can run on a host computer. An Oracle Files node is essentially the application software that comprises the product and the underlying processes, such as the Java VM (virtual machine), that support the software at runtime.

LDAP

See Lightweight Directory Access Protocol (LDAP).

LDIF

See LDAP Data Interchange Format (LDIF).

Lightweight Directory Access Protocol (LDAP)

A standard, extensible directory access protocol. It is a common language that LDAP clients and servers use to communicate. The framework of design conventions supporting industry-standard directory products, such as Oracle Internet Directory.

LDAP Data Interchange Format (LDIF)

The set of standards for formatting an input file for any of the LDAP command-line utilities.

Oracle Calendar

An Oracle Collaboration Suite application that provides calendaring, scheduling, and personal information management (PIM) capabilities through desktop clients, the Web, and any mobile device. The scalable calendar architecture allows companies to use sophisticated group calendars and resource scheduling across an entire enterprise.

Oracle Calendar Web Client

A convenient, accessible calendaring service that can be used either on its own or as a complement to any of the Oracle Calendar desktop clients. Users can work across

time zones, operating systems, and languages with an interface that adapts to the needs of your organization through a user interface that you can customize. With a flexible, intuitive layout and organization, users can collaborate easily with the people around them.

Oracle Cluster Setup Wizard

The Oracle Cluster Setup Wizard performs the following tasks on all nodes:

- Installs and starts Oracle9*i* operating system dependent clusterware

- Optionally, installs and starts the OracleClusterFileSystem service and creates one or two shared file systems.

- Optionally, installs Object Link Manager and starts the Oracle Object Service on all nodes. This tool creates persistent symbolic links to logical drives. The service updates all nodes when symbolic links are modified, and is set to Automatic, so that it starts whenever you shut down and restart your computer.

- Preserves existing symbolic link information created by previous invocations of Oracle Object Link Manager

- Installs other disk management tools on all nodes

- Adds a node to an existing cluster

Oracle Collaboration Suite Web Client

Oracle Collaboration Suite provides an integrated Web client for browser-enabled computers, using the underlying Oracle9*i*AS Infrastructure to provide a secure, single sign-on environment for accessing messages (e-mail, voice mail, and fax), calendar and directory information, and content stored in **Oracle Files**, a file server designed for large-scale collaboration.

Oracle Context

The root of a directory subtree with a relative distinguished name of `cn=OracleContext`, under which all Oracle software information is kept. There may be one (or more than one) Oracle Context in a directory. An Oracle Context can be associated with a directory naming context.

The Oracle Context can contain the following Oracle entries:

- Connect identifiers for use with Oracle Net Services directory naming to make database connections

- Enterprise user security for use with Oracle Advanced Security

Oracle Calendar Sync

Synchronize your **Oracle Calendar** meetings, tasks, and address book with the entries on your handheld device. With Oracle Calendar Sync, you can take your calendar everywhere you go, make any changes you want on your device, then synchronize with the latest information about the Oracle Calendar server. Available for Palm (Windows and Macintosh) and Pocket PC devices (Windows only).

Oracle Calendar desktop client

With the **Oracle Calendar** desktop client, users can create and manage meetings, notes, events, and tasks, either on their own behalf or for other users. They can easily compare schedules or verify the availability of other users by means of a convenient combined Group View, and they can check scheduling conflicts before creating meetings. Users can keep track of their contacts with an online Address Book and classify them according to categories that you can configure. The Oracle Calendar desktop client is available for Windows, Macintosh, and Motif.

Oracle Email

A single message store used for voice mail, e-mail, and fax messages that provides storage, management, and access to all types of information. The message store provides delivery, telephone processing, wireless notification, browser-based clients (both Web and wireless), and administration utilities. Oracle Email provides access to all message types using any access method. Voice mail, e-mail, fax, and any other mail type are available to users through their choice of access channel and device.

Oracle Enterprise Manager Console

The client interface to Oracle Enterprise Manager, which provides a wide view of your Oracle environment. Use Oracle Enterprise Manager Console to automatically discover and manage Oracle databases, application servers, and Oracle applications across your entire network. The Console and its related tools are installed as part of the Oracle9*i*AS Infrastructure installation.

Oracle Enterprise Manager Web Site

A Web site providing management tools designed specifically for Oracle Collaboration Suite. You can use this Web site to monitor and configure the components of Oracle9*i*AS Infrastructure and Oracle Collaboration Suite. You can deploy applications, manage security, and create and manage Oracle Collaboration Suite clusters. The Oracle Enterprise Manager Web Site is installed on every host as part of the Oracle9*i*AS Infrastructure installation.

Oracle Files

A content management application that supports user collaboration and file sharing through a consolidated, scalable, and reliable file server. Oracle Files provides a sophisticated, Web-based user interface and industry standard protocol support that enables users to easily share files of any kind with others in a workspace or across an enterprise. Self-service management features allow users to create Workspaces to secure, author, and publish content using preferred productivity tools and network protocol servers. Oracle Files can manage files systems for both data centers and users.

Oracle Files Domain Controller

A process used to control the **nodes** that make up a **domain**.

Oracle FileSync

Oracle FileSync synchronizes all file changes between a local computer and **Oracle Files** and replaces older files with newer versions so that the content in both locations matches.

Oracle HTTP Server

Oracle HTTP Server, which is built on Apache Web server technology, supports Oracle9*i*AS Infrastructure and offers scalability, stability, speed, and extensibility. It also supports Java Servlets, Java Server Pages, Perl, PL/SQL, and CGI applications.

Oracle Internet Directory

An implementation of Lightweight Directory Access Protocol (LDAP), version 3. It enables sharing information about dispersed users and network resources.

Oracle Internet Directory super user

A special directory administrator who must be a member of the `IASAdmins` group and who typically has full access to directory information. The default user name of the super user is `orcladmin`; the default password is `welcome`. Oracle Corporation recommends that you change the password immediately. This user name is also a member of the `IASAdmins` group by default. If the Oracle Internet Directory administrator does not want to give out the `orcladmin` password, then the administrator can create a different username and password for a member of the `IASAdmins` group.

Oracle Management Server

Processes system management tasks and administers the distribution of these tasks across the network using the **Oracle Enterprise Manager Console**. The Console and

its three-tier architecture can be used with the **Oracle Enterprise Manager Web Site** to manage your entire Oracle environment.

Oracle Connector for Outlook

Oracle Connector for Outlook provides e-mail and real-time calendaring through the familiar, integrated interface of Microsoft Outlook. With access to information both online and offline, full-featured mail functionality, and PDA synchronization, Oracle Connector for Outlook takes advantage of all of Microsoft Outlook's most popular features. In addition, users benefit from enhanced calendaring capabilities through real-time access to information and up-to-date free/busy time lookups with **Oracle Calendar**.

Oracle Ultra Search

Oracle Ultra Search provides uniform search-and-locate capabilities over multiple repositories: Oracle databases, other ODBC compliant databases, IMAP mail servers, HTML documents served up by a Web server, files on disk, and more. It is built on the Oracle database server and Oracle Text technology and uses a crawler to index documents. The documents stay in their own repositories, and the crawled information is used to build an index that stays within your firewall in a designated Oracle database. Oracle Ultra Search also provides APIs for building content management solutions.

Oracle Voicemail & Fax

A reliable, highly scalable voice mail and fax system that provides centralized and secure message storage and retrieval for voice mails and faxes. Using the highly scalable and reliable **Oracle Email** message store as a foundation, Oracle Voicemail & Fax provides telephone processing, delivery, browser-based clients, and administration utilities.

Oracle Web Conferencing

Oracle Web Conferencing brings real-time online collaboration to any enterprise, enabling customers, employees, teams, and partners to meet online within the context provided by the content, commerce, and comprehensive business flows of e-business. It consists of client and server applications that let you create and participate in online conferences. Oracle Web Conferencing features multiple ways to collaborate in conferences, including desktop sharing, whiteboarding, chat, polling, and cobrowsing.

Oracle9*i*AS Wireless

A portal service for delivering information and applications to mobile devices. Using Oracle9*i*AS Wireless, you can create custom portal sites that use different kinds of content, including Web pages, custom Java applications, and XML-based applications. Oracle9*i*AS Wireless sites make this diverse information accessible to mobile devices without you having to rewrite the content for each target device platform.

Oracle9*i*AS Containers for J2EE

A complete set of Java 2 Enterprise Edition (J2EE) containers, provided by Oracle9*i*AS Infrastructure and written entirely in Java, that execute on the Java Virtual Machine (JVM) of the standard Java Development Kit (JDK). You can run Oracle9*i*AS Containers for J2EE (OC4J) on the standard JDK that exists on your operating system.

Oracle9*i*AS Metadata Repository

A preseeded database containing metadata needed to run Oracle Collaboration Suite instances. It can also store **Oracle Internet Directory** and **Oracle9iAS Single Sign-On** information.

Oracle9*i*AS Portal

Oracle9*i*AS Portal is a complete solution for building, deploying, and monitoring Web database applications and content-driven Web sites. Oracle9*i*AS Portal enables you to create and view database objects through an easy-to-use, HTML-based interface, and provides tools for creating HTML-based interfaces. It also enables you to resolve performance problems using performance tracking facilities, and enables you to manage database security through its interface.

Oracle9*i*AS Single Sign-On

An enterprise-wide user authentication process enabling access to multiple accounts and Oracle Collaboration Suite applications.

Oracle9*i*AS Web Cache

A server accelerator caching service that improves the performance, scalability, and availability of frequently used e-business Web sites that run on Oracle9*i*AS Infrastructure and Oracle databases. By storing frequently accessed URLs in virtual memory, Oracle9*i*AS Web Cache eliminates the need to repeatedly process requests for those URLs on the Web server, and it caches both static and dynamically-generated HTTP content from one or more Web applications.

port

The number used to route transmitted data to and from a particular program.

schema

A collection of database objects, including logical structures such as tables, views, sequences, stored procedures, synonyms, indexes, clusters, and database links. A schema has the name of the user who controls it.

Subscriber

In Oracle Files, a Subscriber is an organizational entity where users collaborate. An Oracle Files subscriber maps to a subscriber on the Oracle Internet Directory LDAP server. Users on the Oracle Internet Directory server are provisioned in Oracle Files.

Each Subscriber has its own Subscriber Administrator. The Subscriber Administrator, an enhanced user, is responsible for the management of quota, the specification of Subscriber settings, the administration of users, the restoration of files, folders, and workspaces, and the administration of categories.

The Subscriber is managed by the Site Administrator. The Site Administrator creates, modifies, and deletes Subscribers.

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