Oracle® Collaboration Suite

Upgrade Guide

10g Release 1 (10.1.1) for hp-ux PA-RISC (64-bit), Linux x86 and Solaris Operating Environment (SPARC)

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Oracle Collaboration Suite Upgrade Guide, 10g Release 1 (10.1.1) for hp-ux PA-RISC (64-bit), Linux x86 and Solaris Operating Environment (SPARC)

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Preface

This manual is your primary source of upgrade information for Oracle Collaboration Suite.

This preface contains these topics:

Audience

This manual is intended for administrators, system operators, and other Oracle users who are responsible for the upgrade of Oracle Collaboration Suite. It is assumed that readers of this manual have knowledge of the following:

- administration and configuration of previous releases of Oracle Collaboration Suite
- the operating system on which the upgrade is performed

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For more information, see the following manuals in the Oracle Collaboration Suite 10*g* Release 1 (10.1.1) documentation set:

- *Oracle Collaboration Suite Installation Guide for Solaris Operating System*
- *Oracle Collaboration Suite Installation Guide for Linux*
- *Oracle Collaboration Suite Installation Guide for hp-ux*
- *Oracle Collaboration Suite Administrator's Guide*

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
italic	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
`monospace`	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

1

Overview of the Oracle Collaboration Suite Upgrade

This chapter provides an introduction to the process of upgrading from Oracle Collaboration Suite Release 1 (9.0.3.1), Release 2 (9.0.4.1) and Release 2 (9.0.4.2) to Oracle Collaboration Suite 10*g* Release 1 (10.1.1). It includes the following sections:

1.1 Reviewing the Oracle Collaboration Suite Architecture and Your Current Installations

The Oracle Collaboration Suite Release 1 (9.0.3.1), Release 2 (9.0.4.1) and Release 2 (9.0.4.2) architecture consists of the following components:

- Oracle Application Server Release 2 (9.0.2) Infrastructure (Oracle9*i*AS Infrastructure) provides centralized security and identity management services for Oracle Collaboration Suite. It includes:
  - Oracle Internet Directory: An LDAP-compliant directory service that provides centralized storage of information about users, applications, and resources in your enterprise.
  - Oracle9*i*AS Single Sign-On: An enterprise-wide user authentication process that enables access to multiple accounts and Oracle Collaboration Suite applications.
  - Oracle9*i*AS Metadata Repository: An Oracle9i Release 1 Enterprise Edition database. It is preseeded with metadata and schemas to support Oracle Application Server components and services, including the Oracle Internet Directory and Oracle9*i*AS Single Sign-On and the Oracle9*i*AS Portal and Oracle9*i*AS Wireless middle tier components.
  - Oracle Management Server: Processes system management tasks and administers these tasks across the network using the Oracle Enterprise Manager Console.

  - Other: Components for internal use with Oracle9*i*AS Infrastructure such as Oracle HTTP Server and Oracle Application Server Containers for J2EE.
- Oracle Collaboration Suite Information Storage Database: A preconfigured Oracle9*i* Database for use with Oracle Collaboration Suite middle tier applications such as Oracle Email, Oracle Files, Oracle Web Conferencing.
- Oracle Collaboration Suite middle tier applications include:
  - Oracle Calendar
  - Oracle Email
  - Oracle Files[1]
  - Oracle Web Conferencing
  - Oracle Ultra Search
  - Oracle Voicemail & Fax (installed and upgraded separately)
  - Oracle9*i*AS Wireless
  - Oracle Collaboration Suite Web Client
  - Oracle9*i*AS Portal

To run Oracle Collaboration Suite, you installed the components in at least three Oracle homes, with the the Oracle9*i*AS Infrastructure in one Oracle home, the Oracle Collaboration Suite information storage database in another Oracle home and the Oracle Collaboration Suite middle tier applications in a third Oracle home. This represents the most simple configuration of Oracle Collaboration Suite.

Typically, however, your Oracle Collaboration Suite environment has multiple Oracle homes installed on multiple systems. For example, your Oracle9*i*AS Infrastructure could be distributed across two or three systems, with Oracle Internet Directory and Oracle9*i*AS Single Sign-On configured in separate Oracle homes and an additional Oracle9*i*AS Metadata Repository configured in a third Oracle home. You may also have separate database and middle tier installations for your most heavily used components.

You run the Oracle Collaboration Suite upgrade tools on each Oracle home where an Oracle Collaboration Suite component is installed. As a result, when you upgrade to a new version of Oracle Collaboration Suite, you must upgrade multiple Oracle homes, including the Oracle9*i*AS Infrastructure, Oracle Collaboration Suite information storage database and middle tier Oracle homes you have installed.

Note: In this document, the instructions for Oracle Collaboration Suite Release 2 (9.0.4.2) also apply to Release 2 (9.0.4.1) unless otherwise noted.

1.2 Overview of the Oracle Collaboration Suite 10*g* Release 1 (10.1.1) Upgrade Tools

Table 1–1 summarizes the tools used to upgrade Oracle Collaboration Suite components.

[1] See Chapter 12, "Oracle Content Services Upgrade" for more information before starting the upgrade.

Table 1–1 Summary of the Oracle Application Server Upgrade Tools

Upgrade Tool	Description and Location
Oracle Universal Installer	Use the Oracle Universal Installer to install Oracle Collaboration Suite as well as most other Oracle software products. When you use install any Oracle Collaboration Suite component, the installation procedure checks to see there is a previous version of the component on the same system. If so, it offers you the option to upgrade the component to Oracle Collaboration Suite 10*g* Release 1 (10.1.1). Oracle Universal Installer installs the component in a new Oracle home and starts the appropriate Upgrade Assistant.
Database Upgrade Assistant	Use the Database Upgrade Assistant to upgrade your Oracle Collaboration Suite information storage database. The Database Upgrade Assistant is installed with every Oracle Collaboration Suite Database installation. The Oracle Universal Installer starts the Database Upgrade Assistant automatically after completing the installation of an Oracle Collaboration Suite 10*g* Database in a new Oracle home. It copies configuration data from the source Oracle home to the destination Oracle home.
Oracle Collaboration Suite Upgrade Assistant	Use the Oracle Collaboration Suite Upgrade Assistant to upgrade your middle tier installations. The Oracle Universal Installer starts the Oracle Collaboration Suite Upgrade Assistant automatically after completing the installation of a new middle tier (now called Oracle Collaboration Suite 10*g* Applications). The Oracle Collaboration Suite Upgrade Assistant copies configuration information from the source Oracle home to the destination Oracle home.
Oracle Application Server Metadata Repository Upgrade Assistant (OracleAS Metadata Repository Upgrade Assistant)	Use the OracleAS Metadata Repository Upgrade Assistant to upgrade the Oracle9*i*AS component schemas in the Oracle9*i*AS Metadata Repository to Oracle Application Server 10*g* Release 2 (10.1.2). OracleAS Metadata Repository Upgrade Assistant is distributed on the separate OracleAS Metadata Repository Upgrade Assistant and Utilities CD–ROM, which is part of the Oracle Collaboration Suite 10*g* Release 1 (10.1.1) CD Pack. You run OracleAS Metadata Repository Upgrade Assistant directly from the OracleAS Metadata Repository Upgrade Assistant and Utilities CD–ROM.
Oracle Application Server Backup and Recovery Tool or other backup utilities.	Backup and Recovery Tool is available with Oracle Collaboration Suite 10*g* Release 1 (10.1.1). For other product and releases, see the documentation for that product and release for recommended backup procedures.

1.3 Upgrade Rules to Follow

The following sections describe the basic rules you must follow as you determine a plan for upgrading each of your Oracle Collaboration Suite components:

- Develop an Appropriate Backup Strategy
- Upgrade Components in the Correct Order
- Upgrade All Components to the Same Release

1.3.1 Develop an Appropriate Backup Strategy

Backing up your Oracle Collaboration Suite installations before upgrading them is very important. Some of the upgrade processes overwrite existing files. If something

goes wrong during the upgrade, you may need to restore the component from the backup. For more information on when you need to create backups, see Section 2.3 and Appendix B.

1.3.2 Upgrade Components in the Correct Order

The upgrade process supports **staged upgrade**s provided that you upgrade each tier in the order listed in this section. The upgrade process also supports the **rolling upgrade** of middle tiers, but make sure to review the overview of middle tier upgrade procedures in Section 1.5.4 for any exceptions or extra steps required.

To ensure that all Oracle Collaboration Suite components continue to work during the upgrade process, upgrade the components in the following order:

1. Oracle9*i*AS Infrastructure, including Oracle Internet Directory and Oracle9*i*AS Single Sign-On and the database hosting the Oracle9*i*AS Metadata Repository, but not the Oracle9*i*AS Metadata Repository itself.

   See Chapter 4 for more information.

2. Oracle Collaboration Suite Information Storage Database.

   See Chapter 5 for more information.

3. Oracle Collaboration Suite Middle Tier Applications.

   See Chapter 6 for more information.

4. Oracle9*i*AS Metadata Repository

   See Chapter 7 for more information.

1.3.3 Upgrade All Components to the Same Release

Your ultimate goal should be to upgrade all of your Oracle Collaboration Suite installations to the same release—in this case, Oracle Collaboration Suite 10*g* Release 1 (10.1.1). Running all your Oracle Collaboration Suite instances at the same version level is not mandatory; however, doing so will make it easier to manage, troubleshoot, and maintain your Oracle Collaboration Suite components and applications.

If you choose to maintain previous versions of Oracle Collaboration Suite, consider which combinations of versions are supported. See the compatability matrix in Section 2.2.1 for more information.

1.4 Overview of Upgrade Process

Upgrade each Oracle home where an Oracle Collaboration Suite component is installed.

In general, the order of tasks to upgrade Oracle Collaboration Suite are:

1. Upgrade the Oracle9*i*AS Infrastructure using the Oracle Universal Installer. The Oracle Universal Installer performs two procedures:

   a. Upgrades the Oracle9*i* Database containing the Oracle9*i*AS Metadata Repository from release 9.0.1.3 or 9.0.1.4 to Oracle Database 10*g* (10.1.0.4.2).

   b. Upgrades the Oracle Internet Directory and Oracle9*i*AS Single Sign-On components from Oracle Application Server Release 2 (9.0.2) to Oracle Application Server 10*g* Release 2 (10.1.2) by installing an Oracle Collaboration Suite 10*g* Infrastructure (based on the Oracle Application Server 10*g* Release 2 (10.1.2) Infrastructure) in a new Oracle home and copying configuration

information from the **source Oracle home** to the **destination Oracle home**. It also upgrades the Oracle Internet Directory and Oracle9*i*AS Single Sign-On schemas in the Oracle9*i*AS Metadata Repository.

If Oracle Internet Directory and Oracle9iAS Single Sign-On are configured in different Oracle homes, you upgrade each Oracle home separately, starting with the Oracle home where Oracle Internet Directory is configured.

2. Upgrade the Oracle Collaboration Suite information storage database to Oracle Database 10*g* (10.1.0.4.2) by installing a new Oracle Collaboration Suite Database using the Oracle Universal Installer and then running the Database Upgrade Assistant which copies configuration information from the source Oracle home to the destination Oracle home.
3. Upgrade the Oracle Collaboration Suite middle tiers.
   a. Install Oracle Collaboration Suite 10*g* Applications using the Oracle Universal Installer. The new installation must use the same Oracle9*i*AS Metadata Repository and Oracle Internet Directory as the Release 1 (9.0.3.1) or Release 2 (9.0.4.2) middle tier being upgraded.
   b. The Oracle Universal Installer starts the Oracle Collaboration Suite Upgrade Assistant. The assistant upgrades the Oracle Collaboration Suite Release 1 (9.0.3.1) or Release 2 (9.0.4.2) components to 10*g* Release 1 (10.1.1), copying configuration information from the source Oracle home to the new Oracle home.
4. Upgrade the Oracle9*i*AS Metadata Repository:
   a. If the Oracle9*i*AS Metadata Repository is configured in a separate Oracle9*i*AS Infrastructure than the one configured with Oracle Internet Directory, upgrade the Infrastructure to Oracle Application Server 10*g* Release 2 (10.1.2).
   b. Upgrade the Oracle9*i*AS Metadata Repository from 9.0.2.0.1(Oracle Collaboration Suite Release 1 (9.0.3.1)) or 9.0.2.3.0 (Oracle Collaboration Suite Release 2 (9.0.4.2)) to Oracle Application Server Metadata Repository (10.1.2) using the Oracle Application Server Metadata Repository Upgrade Assistant.

Since Oracle Collaboration Suite Release 1 (9.0.3.1) and Release 2 (9.0.4.2) support many configurations, there are variations in the upgrade procedures based on your particular configuration. See Section 1.5 for guidance on the upgrade process for different configurations.

1.5 Upgrade Paths by Type of Configuration

The following sections describe the upgrade process for typical Oracle Collaboration Suite configurations:

- Upgrading Oracle Collaboration Suite Basic Configurations
- Upgrading Oracle9iAS Infrastructure Configurations
- Oracle Collaboration Suite Database Configurations
- Oracle Collaboration Suite Middle Tier Configurations

1.5.1 Upgrading Oracle Collaboration Suite Basic Configurations

In the most basic configuration, the Oracle9*i*AS Infrastructure, including Oracle Internet Directory, Oracle9*i*AS Single Sign-On and the Oracle9*i*AS Metadata Repository, is running in one Oracle home. There is one Oracle Collaboration Suite

information storage database Oracle home and one Oracle Collaboration Suite middle tier Oracle home.

The variations on this configuration are described in the following sections:

- Single-System Configuration
- Multi-System Configuration
- Oracle9iAS Portal Patching Considerations

1.5.1.1 Single-System Configuration

In the single-system configuration, the three Oracle homes are on the same system. Each Oracle home is upgraded separately.

Table 1–2 Tools and Processes for Upgrading a Single-Box Installation

Step	Description	Tools and Chapter
1	Back up the Oracle9*i*AS Infrastructure, including the Oracle9*i*AS Metadata Repository database.	Use your preferred backup method. See *Oracle9i Backup and Recovery Concepts* for more information.
2	Upgrade the Oracle9*i*AS Infrastructure by installing a new OracleAS Infrastructure installation in a new Oracle home on the same system. Select the option to upgrade the existing Oracle9*i*AS Infrastructure. This process also upgrades the database hosting the Oracle9*i*AS Metadata Repository, but not the Oracle9*i*AS Metadata Repository itself.	Oracle Universal Installer Chapter 4, "Upgrading the Oracle Application Server Infrastructure"
3	Back up the Oracle Collaboration Suite information storage database to be upgraded.	Use your preferred backup method. See *Oracle9i Backup and Recovery Concepts* for more information.
4	Upgrade the existing Oracle Collaboration Suite information storage database to Oracle Collaboration Suite Database 10g (10.1.1).	Oracle Universal Installer Database Upgrade Assistant Chapter 5, "Upgrading the Oracle Collaboration Suite Database"
5	Upgrade the Oracle Collaboration Suite middle tier.	Oracle Universal Installer Oracle Collaboration Suite Upgrade Assistant Chapter 6, "Upgrading the Oracle Collaboration Suite Middle Tier"
6	Back up the upgraded Oracle Database 10*g* (10.1.0.4.2) database hosting the Oracle9*i*AS Metadata Repository	Use your preferred backup method. See *Oracle Database Backup and Recovery Basics* for more information.
7	Upgrade the Oracle9*i*AS Metadata Repository.	OracleAS Metadata Repository Upgrade Assistant Chapter 7, "Upgrading the Oracle9iAS Metadata Repository"

1.5.1.2 Multi-System Configuration

Follow the same steps as for the single-system configuration. Run the Oracle Universal Installer on each system where an Oracle Collaboration Suite component is installed.

1.5.1.3 Oracle9*i*AS Portal Patching Considerations

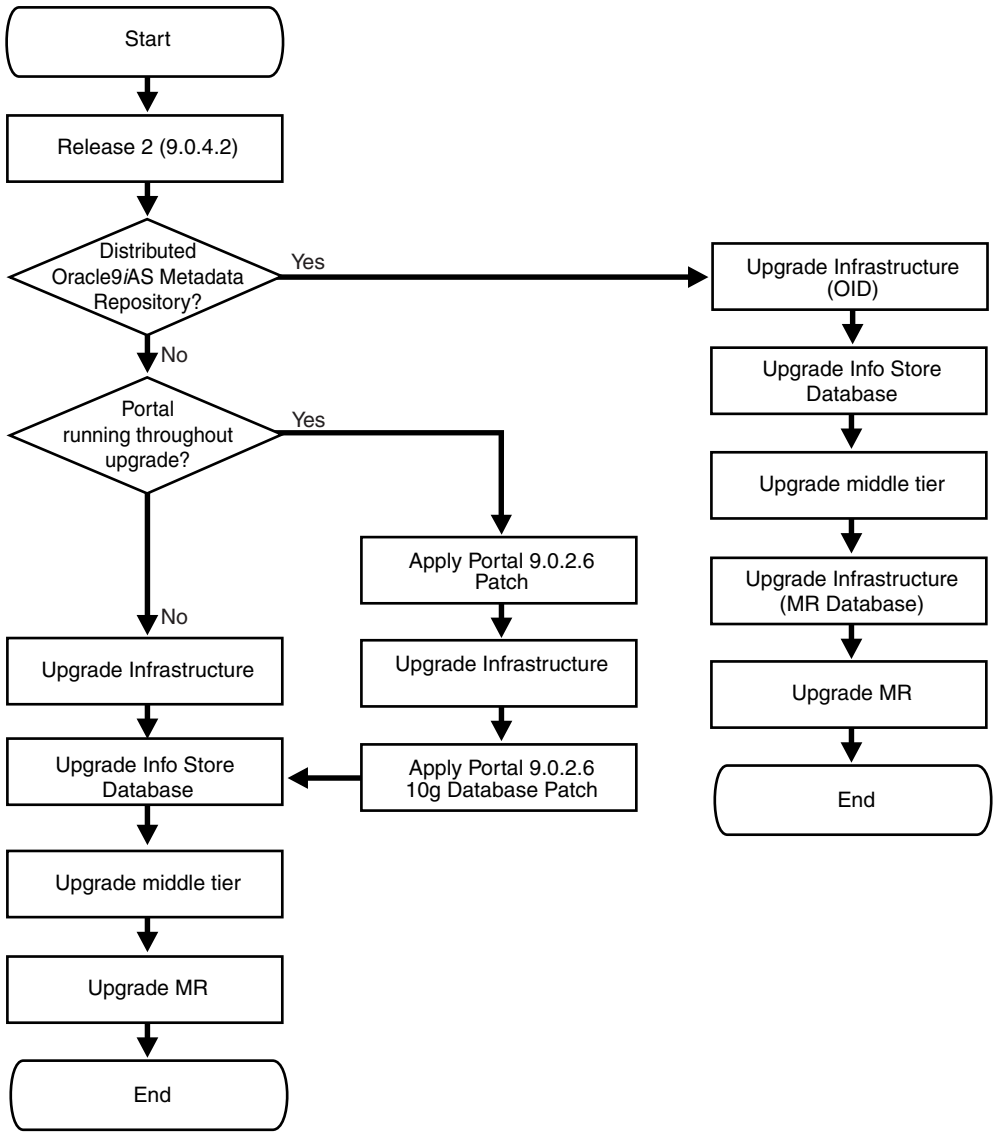
Depending on your Oracle Collaboration Suite version and the configuration of your Oracle9*i*AS Metadata Repository, you may need to apply Oracle9*i*AS Portal patches before beginning the upgrade process.

If you are upgrading from Oracle Collaboration Suite Release 1 (9.0.3.1), apply the Oracle9*i*AS Portal 9.0.2.3 patch before starting the upgrade. See Section 3.1.1 for instructions on applying this patch.

Figure 1–1 illustrates Oracle9*i*AS Portal patching requirements for Release 2 (9.0.4.2). If you have a **distributed Oracle9iAS Metadata Repository**, then you do not need to apply any patches. Otherwise, to guarantee that your Oracle9*i*AS Portal application functions correctly after each stage of the upgrade process, apply the Oracle9*i*AS Portal 9.0.2.6 patch before upgrading the Oracle9*i*AS Infrastructure and apply the Oracle9*i*AS Portal 9.0.2.6 10*g* Database patch after upgrading the Oracle9*i*AS Infrastructure.

See Chapter 10 for instructions on applying the Oracle9*i*AS Portal 9.0.2.6 patch. See Section 4.5.2 for instructions on applying the Oracle9*i*AS Portal 9.0.2.6 10*g* Database patch.

Figure 1–1 Oracle9iAS Portal Patch Requirements for Oracle Collaboration Suite Release 2 (9.0.4.2)

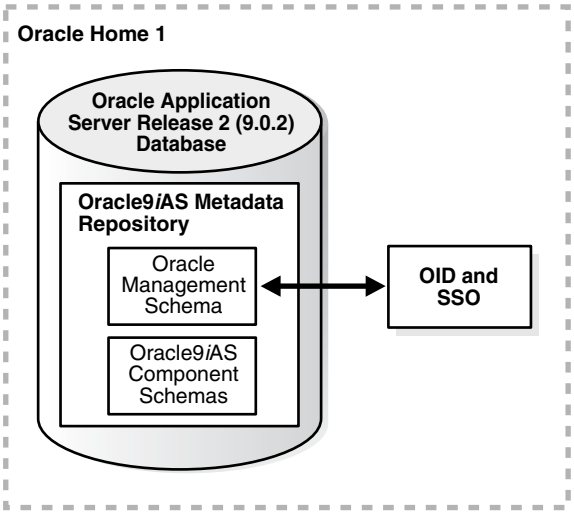


1.5.2 Upgrading Oracle9*i*AS Infrastructure Configurations

The different configurations supported by Oracle Application Server Release 2 (9.0.2) are:

- **non-distributed Oracle9iAS Infrastructure**
- **distributed Oracle9iAS Infrastructure**
- **distributed Oracle9iAS Metadata Repository**

Figure 1–2 Non-Distributed Infrastructure



1.5.2.1 Non-Distributed Oracle9*i*AS Infrastructure

Figure 1–2 illustrates a configuration where Oracle Internet Directory, Oracle9*i*AS Single Sign-On and Oracle9*i*AS Metadata Repository are configured in the same Oracle home.

In a **non-distributed Oracle9iAS Infrastructure**, Oracle Internet Directory and Oracle9*i*AS Single Sign-On are configured in the same Oracle home and share the same Oracle9*i*AS Metadata Repository.

To upgrade this configuration, perform the steps in Table 1–3. After the upgrade of Oracle9*i*AS Single Sign-On, it uses the same Oracle9*i*AS Metadata Repository as Oracle Internet Directory.

Table 1–3 Tools and Process for Upgrading a Non-Distributed Infrastructure

Step	Description	Tools
1	Backup the Oracle9*i*AS Infrastructure, including the Oracle9*i*AS Metadata Repository database.	Use your preferred backup method. See *Oracle9i Backup and Recovery Concepts* for more information.
2	Upgrade the Oracle9*i*AS Infrastructure by installing a new Oracle Collaboration Suite 10*g* Infrastructure in a new Oracle home on the same system. Select the option to upgrade the existing Oracle9*i*AS Infrastructure. This process also upgrades the Oracle9*i*AS Metadata Repository database, but not the Oracle9*i*AS Metadata Repository itself.	Oracle Universal Installer Chapter 4, "Upgrading the Oracle Application Server Infrastructure"
3	Back up the Oracle Collaboration Suite information storage database to be upgraded.	Use your preferred backup method. See *Oracle9i Backup and Recovery Concepts* for more information.
4	Upgrade the existing Oracle Collaboration Suite information storage database to Oracle Collaboration Suite Database 10g (10.1.1).	Oracle Universal Installer Database Upgrade Assistant Chapter 5, "Upgrading the Oracle Collaboration Suite Database"

Table 1–3 (Cont.) Tools and Process for Upgrading a Non-Distributed Infrastructure

Step	Description	Tools
5	Upgrade the Oracle Collaboration Suite middle tier.	Oracle Universal Installer Oracle Collaboration Suite Upgrade Assistant Chapter 6, "Upgrading the Oracle Collaboration Suite Middle Tier"
6	Back up the upgraded database hosting the Oracle9*i*AS Metadata Repository.	Use your preferred backup method. See *Oracle Database Backup and Recovery Basics* for more information.
7	Upgrade the Oracle9*i*AS Metadata Repository.	OracleAS Metadata Repository Upgrade Assistant Chapter 7, "Upgrading the Oracle9iAS Metadata Repository"
8	Optionally, decommission and deinstall source Oracle homes.	Oracle Universal Installer

1.5.2.2 Distributed Oracle9*i*AS Infrastructure

In a **distributed Oracle9iAS Infrastructure**, Oracle Internet Directory and Oracle9*i*AS Single Sign-On are configured in different Oracle homes. Each component uses its own Oracle9*i*AS Metadata Repository. To upgrade this configuration, perform the steps in Table 1–4.

Table 1–4 Tools and Process for Upgrading a Distributed Infrastructure

Step	Description	Tools
1	Backup the Oracle9*i*AS Metadata Repository database in the Oracle home configured with Oracle Internet Directory.	Use your preferred backup method. See *Oracle9i Backup and Recovery Concepts* for more information.
2	Upgrade the Oracle9*i*AS Infrastructure configured with Oracle Internet Directory by installing a new Oracle Collaboration Suite 10*g* Infrastructure in a new Oracle home on the same system. Select the option to upgrade the existing Oracle9*i*AS Infrastructure. This process also upgrades the Oracle9*i*AS Metadata Repository database, but not the Oracle9*i*AS Metadata Repository itself.	Oracle Universal Installer Chapter 4, "Upgrading the Oracle Application Server Infrastructure"
3	Upgrade the Oracle9*i*AS Infrastructure configured with Oracle9*i*AS Single Sign-On by installing a new Oracle Collaboration Suite 10*g* Infrastructure in a new Oracle home on the system. Select the option to upgrade the existing Oracle9*i*AS Infrastructure. After the upgrade, OracleAS Single Sign-On uses the OracleAS Metadata Repository in the Oracle home where Oracle Internet Directory is configured.	Oracle Universal Installer Chapter 4, "Upgrading the Oracle Application Server Infrastructure"
4	Back up the Oracle Collaboration Suite information storage database to be upgraded.	Use your preferred backup method. See *Oracle9i Backup and Recovery Concepts* for more information.

Table 1–4 (Cont.) Tools and Process for Upgrading a Distributed Infrastructure

Step	Description	Tools
5	Upgrade the existing Oracle Collaboration Suite information storage database to Oracle Collaboration Suite Database 10g (10.1.1).	Oracle Universal Installer Database Upgrade Assistant Chapter 5, "Upgrading the Oracle Collaboration Suite Database"
6	Upgrade the Oracle Collaboration Suite middle tier.	Oracle Universal Installer Oracle Collaboration Suite Upgrade Assistant
7	Back up the upgraded database hosting the Oracle9*i*AS Metadata Repository.	Use your preferred backup method. See *Oracle Database Backup and Recovery Basics* for more information.
8	Upgrade the Oracle9*i*AS Metadata Repository.	OracleAS Metadata Repository Upgrade Assistant Chapter 7, "Upgrading the Oracle9iAS Metadata Repository"
9	Optionally, decommission and deinstall source Oracle homes.	Oracle Universal Installer

1.5.2.3 Distributed Oracle9*i*AS Metadata Repository

Oracle recommended this configuration for optimal performance. In this configuration, you installed an Oracle9*i*AS Infrastructure and configured only the Oracle9*i*AS Metadata Repository. This Oracle9*i*AS Metadata Repository is used only by the middle tier applications. There is a separate distributed or non-distributed Oracle9*i*AS Infrastructure installed on a different system which is configured with the Oracle Internet Directory and OracleAS Single Sign-On.

To upgrade a **distributed Oracle9iAS Metadata Repository**, follow the steps in Table 1–5. In the table, Infrastructure 1 refers to the Oracle9*i*AS Infrastructure configured with Oracle9*i*AS Metadata Repository, Oracle Internet Directory and Oracle9*i*AS Single Sign-On. Infrastructure 2 refers to the Oracle9*i*AS Infrastructure configured only with Oracle9*i*AS Metadata Repository.

Table 1–5 Tools and Process for Upgrading a Distributed Oracle9*i*AS Metadata Repository

Step	Description	Tools
1	Upgrade Infrastructure 1 according to your configuration.	Oracle Universal Installer Chapter 4, "Upgrading the Oracle Application Server Infrastructure"
2	Back up the Oracle Collaboration Suite information storage database to be upgraded.	Use your preferred backup method. See *Oracle9i Backup and Recovery Concepts* for more information.
3	Upgrade the existing Oracle Collaboration Suite information storage database to Oracle Collaboration Suite Database 10g (10.1.1).	Oracle Universal Installer Database Upgrade Assistant Chapter 5, "Upgrading the Oracle Collaboration Suite Database"

Table 1–5 (Cont.) Tools and Process for Upgrading a Distributed Oracle9*i*AS Metadata Repository

Step	Description	Tools
4	Back up Infrastructure 2.	Use your preferred backup method. See *Oracle Database Backup and Recovery Basics* for more information.
5	Upgrade Infrastructure 2 by installing a new Oracle Collaboration Suite 10*g* Infrastructure in a new Oracle home on the same system. Select the option to upgrade the existing Oracle9*i*AS Infrastructure. The upgrade process upgrades the database hosting the Oracle9*i*AS Metadata Repository but not the component schemas.	Oracle Universal Installer Chapter 4, "Upgrading the Oracle Application Server Infrastructure"
6	Upgrade the Oracle Collaboration Suite middle tier.	Oracle Universal Installer Chapter 6, "Upgrading the Oracle Collaboration Suite Middle Tier" Oracle Collaboration Suite Upgrade Assistant
7	Upgrade the Oracle9*i*AS Metadata Repository in Infrastructure 2. Optionally, upgrade the Oracle9*i*AS Metadata Repository in Infrastructure 1.	OracleAS Metadata Repository Upgrade Assistant Chapter 7, "Upgrading the Oracle9iAS Metadata Repository"
8	Optionally, decommission and deinstall source Oracle homes.	Oracle Universal Installer

1.5.2.4 Upgrading an Infrastructure with Oracle Application Server 10g (9.0.4) Oracle Identity Management

In Oracle Application Server 10g (9.0.4), Oracle Identity Management is a new product name for security related components such as Oracle Internet Directory, Oracle9*i*AS Single Sign-On, Oracle Delegated Administrative Services and so forth.

If you upgraded the Oracle Internet Directory and Oracle9*i*AS Single Sign-On components in your Oracle9*i*AS Infrastructure to Oracle Application Server 10g (9.0.4), then you can still use the Oracle Universal Installer for Oracle Collaboration Suite to upgrade to Oracle Collaboration Suite 10*g* Release 1 (10.1.1).

To upgrade Oracle Application Server 10g (9.0.4), follow the same procedure to upgrade an Oracle9*i*AS Infrastructure based on your configuration. See Section 4.3.4 for more information.

1.5.3 Oracle Collaboration Suite Database Configurations

The different types of database configurations are:

- Enabling an Existing Oracle Database 10g
- Upgrading a Real Application Clusters Oracle Collaboration Suite Database

1.5.3.1 Enabling an Existing Oracle Database 10*g*

If you previously upgraded an existing Oracle Collaboration Suite information storage database to Oracle Database 10*g*, then the Oracle Universal Installer gives you the

option of enabling it as an Oracle Collaboration Suite Database 10g (10.1.1) and upgrading the Release 1 (9.0.3.1) or Release 2 (9.0.4.2) component schemas to Oracle Collaboration Suite 10*g* Release 1 (10.1.1).

Table 1–6 Tools and Process for Upgrading an Existing Oracle Database 10g

Step	Description	Tools
1	Upgrade the Oracle Application Server Infrastructure according to your configuration.	Oracle Universal Installer
2	Back up the Oracle Collaboration Suite information storage database to be upgraded.	Use your preferred backup method. See *Oracle9i Backup and Recovery Concepts* for more information.
3	Apply the Oracle Database release 10.1.0.4.2 patch set.	Patch on Supplemental DVD
4	Run the Oracle Universal Installer. From the Select Installation Type screen, select **Enable existing Oracle Database 10*g* to Oracle Collaboration Suite Database**.	Oracle Universal Installer Database Upgrade Assistant Section 5.3 in Chapter 5, "Upgrading the Oracle Collaboration Suite Database"
5	Upgrade the Oracle Collaboration Suite middle tier.	Oracle Universal Installer Oracle Collaboration Suite Upgrade Assistant Chapter 6, "Upgrading the Oracle Collaboration Suite Middle Tier"
6	Back up the upgraded database hosting the Oracle9*i*AS Metadata Repository.	Use your preferred backup method. See *Oracle Database Backup and Recovery Basics* for more information.
7	Upgrade the Oracle9*i*AS Metadata Repository.	OracleAS Metadata Repository Upgrade Assistant Chapter 7, "Upgrading the Oracle9iAS Metadata Repository"
8	Optionally, decommission and deinstall source Oracle homes.	Oracle Universal Installer

1.5.3.2 Upgrading a Real Application Clusters Oracle Collaboration Suite Database

In 10*g* Release 1 (10.1.1) , Oracle Collaboration Suite supports upgrading a Real Application Clusters (RAC) database on Linux operating systems only.

The process to upgrade a RAC database is similar to the process of enabling a Oracle Database 10*g* as an Oracle Collaboration Suite 10*g* Database. First, upgrade the existing Oracle Collaboration Suite information storage database (an Oracle9*i* Database) to Oracle Database 10*g* Release 1 (10.1.02). Then follow the same steps for enabling an Oracle Database 10*g*.

The procedure is described in more detail in Section 5.4.

1.5.4 Oracle Collaboration Suite Middle Tier Configurations

The tasks you perform to upgrade your middle tier applications depend on what applications you have configured in each middle tier. This section describes the tasks involved in upgrading the following configurations:

- Upgrading Oracle Files
- Upgrading Oracle Calendar Server
- Upgrading Standalone Installations of Oracle Calendar Release 2 (9.0.4.1) and Release 2 (9.0.4.2) Server or CorporateTime 5.4
- Upgrading Standalone Installations of Oracle Calendar Release 1 (9.0.3.1) or Release 2 (9.0.4.2) Application System
- Upgrading Oracle Ultra Search
- Upgrading Federated Search
- Upgrading Oracle Web Conferencing
- Upgrading Oracle Voicemail & Fax

1.5.4.1 Upgrading Oracle Files

Upgrading Oracle Files is not supported in Oracle Collaboration Suite 10*g* Release 1 (10.1.1). See Chapter 12, "Oracle Content Services Upgrade" for more information.

> **Note:** In 10*g* Release 1 (10.1.1), the name Oracle Files has been changed to Oracle Collaboration Suite 10*g* Content Services.

For information about upgrading Federated Search, see Section 1.5.4.6.

1.5.4.2 Upgrading Oracle Calendar Server

If you have multiple Oracle Calendar server installations, review the steps in Table 1–7 to ensure you understand the implications for your master node setup.

Note that in 10*g* Release 1 (10.1.1), Oracle Calendar server no longer supports a many master node setup.

In addition, Oracle Calendar server no longer supports or ships `aut_sasl`. After the upgrade, clients that were using `sasl:*` to authenticate will no longer be able to do so.

Table 1–7 Tools and Process for Upgrading Multiple Oracle Calendar Server Tiers

Step	Description	Tools
1	Upgrade the Oracle9*i*AS Infrastructure according to your configuration.	Oracle Universal Installer Chapter 4, "Upgrading the Oracle Application Server Infrastructure"
2	Back up the Oracle Collaboration Suite information storage database to be upgraded.	Use your preferred backup method. See *Oracle9i Backup and Recovery Concepts* for more information.

Table 1–7 (Cont.) Tools and Process for Upgrading Multiple Oracle Calendar Server

Step	Description	Tools
3	Upgrade the existing Oracle Collaboration Suite information storage database to Oracle Collaboration Suite 10*g* Database.	Oracle Universal Installer Database Upgrade Assistant Chapter 5, "Upgrading the Oracle Collaboration Suite Database"
4	Upgrade the middle tier Oracle home set up as the Oracle Calendar master node before upgrading other middle tiers configured with Oracle Calendar server. If there are no master nodes in the Oracle Collaboration Suite environment, then the first Oracle home configured with Oracle Calendar server to be upgraded becomes the master node.	Oracle Universal Installer Oracle Collaboration Suite Upgrade Assistant .Chapter 6, "Upgrading the Oracle Collaboration Suite Middle Tier"
5	Upgrade the remaining Oracle Collaboration Suite middle tiers configured with Oracle Calendar server and other components.	Oracle Universal Installer Oracle Collaboration Suite Upgrade Assistant Chapter 6, "Upgrading the Oracle Collaboration Suite Middle Tier"
6	Back up the upgraded database hosting the Oracle9*i*AS Metadata Repository.	Use your preferred backup method. See *Oracle Database Backup and Recovery Basics* for more information.
7	Upgrade the Oracle9*i*AS Metadata Repository.	OracleAS Metadata Repository Upgrade Assistant Chapter 7, "Upgrading the Oracle9iAS Metadata Repository"
8	Optionally, decommission and deinstall source Oracle homes.	Oracle Universal Installer

1.5.4.3 Upgrading Standalone Installations of Oracle Calendar Release 2 (9.0.4.1) and Release 2 (9.0.4.2) Server or CorporateTime 5.4

A standalone installation of Oracle Calendar server does not require Oracle Internet Directory, Oracle9*i*AS Single Sign-On or an Oracle9*i* Database.

To upgrade a standalone installation of Oracle CorporateTime 5.4 or Oracle Calendar Release 2 (9.0.4.2) server, install Oracle Calendar 10*g* Release 1 (10.1.1) server in a new Oracle home and run a script to perform the upgrade. See Section 11.1 for instructions.

You do not need to perform any other procedures in this guide to upgrade a standalone installation.

1.5.4.4 Upgrading Standalone Installations of Oracle Calendar Release 1 (9.0.3.1) or Release 2 (9.0.4.2) Application System

A standalone installation of Oracle Calendar application system does not require Oracle Internet Directory, Oracle9*i*AS Single Sign-On or an Oracle9*i* Database.

To upgrade a standalone installation of Oracle Calendar Release 1 (9.0.3.1) or Release 2 (9.0.4.2) application system, install Oracle Calendar 10*g* Release 1 (10.1.1) application system in a new Oracle home and run a script to perform the upgrade. See Section 11.2 for instructions.

You do not need to perform any other procedures in this guide to upgrade a standalone installation.

1.5.4.5 Upgrading Oracle Ultra Search

In Oracle Collaboration Suite, Oracle Ultra Search is used to search indexed Web content rather than Oracle Collaboration Suite content.

Oracle Ultra Search does not support **staged upgrade**s. When the Oracle9*i*AS Metadata Repository database is upgraded as part of the Oracle9*i*AS Infrastructure upgrade, Oracle Ultra Search no longer works until the middle tiers are upgraded.

In Oracle Collaboration Suite 10*g* Release 1 (10.1.1), the Oracle Ultra Search configuration and index data are stored in the Oracle Collaboration Suite Database, not the Oracle9*i*AS Metadata Repository database as in previous releases. When you upgrade Oracle Ultra Search you have the following options for migrating data:

- Manually migrating the existing index and configuration data to the upgraded Oracle Collaboration Suite 10*g* Database following the steps in Table 1–8. This procedure is recommended if you have a very large index.
- Automatically migrating only the configuration data during the middle tier upgrade as described in Table 1–9.

Table 1–8 Tools and Process for Migrating Oracle Ultra Search Index and Configuration Data

Step	Description	Tools
1	Upgrade the Oracle9*i*AS Infrastructure according to your configuration.	Oracle Universal Installer Chapter 4, "Upgrading the Oracle Application Server Infrastructure"
2	Back up the Oracle Collaboration Suite information storage database to be upgraded.	Use your preferred backup method. See *Oracle9i Backup and Recovery Concepts* for more information.
3	Upgrade the existing Oracle Collaboration Suite information storage database to Oracle Collaboration Suite Database 10g (10.1.1).	Oracle Universal Installer Database Upgrade Assistant Chapter 5, "Upgrading the Oracle Collaboration Suite Database"
4	Perform the steps to migrate the index and configuration data from the Oracle9*i*AS Metadata Repository database to the upgraded Oracle Collaboration Suite Database. The migration procedure uses the transportable tablespace feature so the Oracle Ultra Search index and configuration data must meet the transportable tablespace criteria to use this option.	Oracle Ultra Search migration scripts. (located in the Oracle Collaboration Suite Database 10g (10.1.1) Oracle home) See Chapter 9 for instructions.
5	Upgrade the Oracle Collaboration Suite middle tiers.	Oracle Universal Installer Oracle Collaboration Suite Upgrade Assistant Chapter 6, "Upgrading the Oracle Collaboration Suite Middle Tier"

Table 1–8 (Cont.) Tools and Process for Migrating Oracle Ultra Search Index and Configuration Data

Step	Description	Tools
6	Back up the upgraded database hosting the Oracle9*i*AS Metadata Repository.	Use your preferred backup method. See *Oracle Database Backup and Recovery Basics* for more information.
7	Upgrade the Oracle9*i*AS Metadata Repository.	OracleAS Metadata Repository Upgrade Assistant Chapter 7, "Upgrading the Oracle9iAS Metadata Repository"
8	Optionally, decommission and deinstall source Oracle homes.	Oracle Universal Installer

If you do not perform the Oracle Ultra Search index migration before upgrading the Oracle Collaboration Suite middle tier, then you can migrate the Oracle Ultra Search configuration data from the Oracle9*i*AS Metadata Repository database to the Oracle Collaboration Suite Database as part of the Oracle Collaboration Suite middle tier upgrade, following the steps in Table 1–9.

Table 1–9 Tools and Process for Migrating Oracle Ultra Search Configuration Data

Step	Description	Tools
1	Upgrade the Oracle9*i*AS Infrastructure according to your configuration.	Oracle Universal Installer Chapter 4, "Upgrading the Oracle Application Server Infrastructure"
2	Back up the Oracle Collaboration Suite information storage database to be upgraded.	Use your preferred backup method. See *Oracle9i Backup and Recovery Concepts* for more information.
3	Upgrade the existing Oracle Collaboration Suite information storage database to Oracle Collaboration Suite 10*g* Database.	Oracle Universal Installer Database Upgrade Assistant Chapter 5, "Upgrading the Oracle Collaboration Suite Database"
4	Create a user in the upgraded Oracle Collaboration Suite 10*g* Database to own each migrated Oracle Ultra Search instance. The new user must be granted the `WKUSER` role which gives it general administrative privileges on the Ultra Search instance.	Oracle Database Administration Tools A user with database administrator privileges must perform this step. Section 8.3.3
5	Upgrade the Oracle Collaboration Suite middle tiers. The Oracle Collaboration Suite Upgrade Assistant requests the name and password of the new Oracle Ultra Search instance owner in order to migrate the data.	Oracle Universal Installer Oracle Collaboration Suite Upgrade Assistant Chapter 6, "Upgrading the Oracle Collaboration Suite Middle Tier"
6	Back up the upgraded database hosting the Oracle9*i*AS Metadata Repository.	Use your preferred backup method. See *Oracle Database Backup and Recovery Basics* for more information.

Table 1–9 (Cont.) Tools and Process for Migrating Oracle Ultra Search Configuration

Step	Description	Tools
7	Upgrade the Oracle9*i*AS Metadata Repository.	OracleAS Metadata Repository Upgrade Assistant Chapter 7, "Upgrading the Oracle9iAS Metadata Repository"
8	Optionally, decommission and deinstall source Oracle homes.	Oracle Universal Installer

1.5.4.6 Upgrading Federated Search

In Oracle Collaboration Suite 10*g* Release 1 (10.1.1), Federated Search is renamed Oracle Collaboration Suite 10*g* Search. It is now a separate application, rather than part of Oracle Files as in previous releases. Each middle tier must be upgraded to Oracle Collaboration Suite 10.1.1 to be part of the upgraded Oracle Collaboration Suite 10*g* Search application.

When the middle tier configured with Oracle Files is upgraded, the search capability is lost until a new Oracle Collaboration Suite 10*g* Search application is configured. If you have multiple middle tier applications configured to work together and Federated Search is running in a middle tier configured with Oracle Files, then perform the steps in Table 1–10 to make sure that your middle tier applications keep their search capability throughout the upgrade.

Table 1–10 Tools and Process for Federated Search

Step	Description	Tools
1	Upgrade the Oracle Application Server Infrastructure according to your configuration.	Oracle Universal Installer
2	Back up the Oracle Collaboration Suite information storage database to be upgraded.	Use your preferred backup method. See *Oracle9i Backup and Recovery Concepts* for more information.
3	Upgrade the existing Oracle Collaboration Suite information storage database to Oracle Collaboration Suite 10*g* Database.	Oracle Universal Installer Database Upgrade Assistant Chapter 5, "Upgrading the Oracle Collaboration Suite Database"
4	Install a Oracle Collaboration Suite 10*g* Release 1 (10.1.1) middle tier configured with Oracle Collaboration Suite 10*g* Search.	Oracle Universal Installer
5	Upgrade each middle tier. As you complete each upgrade, restart the Oracle Collaboration Suite 10*g* Search's OC4J container using either the Oracle Enterprise Manager console or the opmnctl command. This step allows each upgraded entity to be searched.	Oracle Universal Installer Oracle Collaboration Suite Upgrade Assistant Chapter 6, "Upgrading the Oracle Collaboration Suite Middle Tier"

Table 1–10 (Cont.) Tools and Process for Federated Search

Step	Description	Tools
6	Upgrade the Oracle Collaboration Suite middle tier configured with Oracle Files last.	Oracle Universal Installer Oracle Collaboration Suite Upgrade Assistant Chapter 6, "Upgrading the Oracle Collaboration Suite Middle Tier"
7	Back up the upgraded database hosting the Oracle9*i*AS Metadata Repository.	Backup and Recovery Tool
8	Upgrade the Oracle9*i*AS Metadata Repository.	OracleAS Metadata Repository Upgrade Assistant Chapter 7, "Upgrading the Oracle9iAS Metadata Repository"
9	Optionally, decommission and deinstall source Oracle homes.	Oracle Universal Installer

See Also: "Managing Oracle Collaboration Suite Search" in Chapter 5 of *Oracle Collaboration Suite Administrator's Guide*.

1.5.4.7 Upgrading Oracle Web Conferencing

Oracle Collaboration Suite provides limited support for **rolling upgrade**s when there are multiple Oracle Collaboration Suite Release 2 (9.0.4.2) middle tiers configured with Oracle Web Conferencing. The upgrade of the Oracle Web Conferencing repository in the Oracle Collaboration Suite information storage database takes place during the upgrade of the first middle tier configured with Oracle Web Conferencing. At that time, the remaining Oracle Web Conferencing instances that use the upgraded repository do not work until they are upgraded.

To avoid loss of service, upgrade all Oracle Web Conferencing Release 2 (9.0.4.2) middle tier instances that use the same repository in the Oracle Collaboration Suite information storage database at the same time according to the steps in Table 1–11.

Oracle Collaboration Suite 10*g* Release 1 (10.1.1) does not support **staged upgrade**s for Oracle Web Conferencing Release 2 (9.0.4.1). After the upgrade of the Oracle Collaboration Suite information storage database used by Oracle Web Conferencing, the Oracle Web Conferencing Release 2 (9.0.4.1) middle tiers do not work until they are upgraded to 10*g* Release 1 (10.1.1).

Note: The Document and Voice Conversion servers which support Oracle Web Conferencing and run only on the Windows platform should be uninstalled before starting the upgrade of any other components.

If you are using these components, before beginning the upgrade, review the upgrade process described in *Oracle Voicemail & Fax and Oracle Web Conferencing Conversion Servers Installation and Upgrade Guide.*

Table 1–11 Tools and Process for Upgrading Oracle Web Conferencing

Step	Description	Tools
1	Uninstall the Document and Voice Conversion servers if Oracle Web Conferencing is using them.	Oracle Universal Installer for Windows See *Oracle Voicemail & Fax and Oracle Web Conferencing Conversion Servers Installation and Upgrade Guide*
2	Upgrade the Oracle Application Server Infrastructure according to your configuration.	Oracle Universal Installer
3	Back up the Oracle Collaboration Suite information storage database to be upgraded.	Use your preferred backup method. See *Oracle9i Backup and Recovery Concepts* for more information.
4	Upgrade the existing Oracle Collaboration Suite information storage database to Oracle Collaboration Suite Database 10g (10.1.1).	Oracle Universal Installer Database Upgrade Assistant Chapter 5, "Upgrading the Oracle Collaboration Suite Database"
5	Shut down all the Oracle Web Conferencing instances that use the same Oracle Collaboration Suite information storage database.	imctl command See Section 8.3.2 for instructions.
6	Upgrade each Oracle Collaboration Suite middle tier configured with Oracle Web Conferencing, keeping the instances which have not been upgraded shut down. The Oracle Web Conferencing repository in the information storage database is upgraded when the first middle tier configured with Oracle Web Conferencing is upgraded. Therefore, the first middle tier upgrade may take considerably longer than the remaining middle tiers, depending on the size of the information storage.	Oracle Universal Installer Oracle Collaboration Suite Upgrade Assistant Chapter 6, "Upgrading the Oracle Collaboration Suite Middle Tier"
7	Back up the upgraded database hosting the Oracle9*i*AS Metadata Repository.	Backup and Recovery Tool
8	Upgrade the Oracle9*i*AS Metadata Repository.	OracleAS Metadata Repository Upgrade Assistant Chapter 7, "Upgrading the Oracle9iAS Metadata Repository"
9	Optionally, install 10*g* Release 1 (10.1.1) Document and Voice Conversion server on Windows.	Oracle Universal Installer for Windows See *Oracle Voicemail & Fax and Oracle Web Conferencing Conversion Servers Installation and Upgrade Guide*
10	Optionally, decommission and deinstall source Oracle homes.	Oracle Universal Installer

1.5.4.8 Upgrading Oracle Voicemail & Fax

In 10*g* Release 1 (10.1.1), the Oracle Voicemail & Fax middle tiers are installed and upgraded separately from the other Oracle Collaboration Suite Applications.

To upgrade Oracle Voicemail & Fax, follow the procedure in Table 1–12.

Table 1–12 Tools and Process for Upgrading Oracle Voicemail & Fax

Step	Description	Tools
1	Upgrade the Oracle9*i*AS Infrastructure according to your configuration.	Oracle Universal Installer Chapter 4, "Upgrading the Oracle Application Server Infrastructure"
2	Back up the Oracle Collaboration Suite information storage database to be upgraded.	Use your preferred backup method. See *Oracle9i Backup and Recovery Concepts* for more information.
3	Upgrade the existing Oracle Collaboration Suite information storage databases hosting the mail stores to Oracle Collaboration Suite 10*g* Database.	Oracle Universal Installer Database Upgrade Assistant Chapter 5, "Upgrading the Oracle Collaboration Suite Database"
4	Reset credentials in the mail store for Oracle Voicemail & Fax Release 2 (9.0.4.2) middle tier access to Oracle Internet Directory.	`UMAdminInfo.set_info` PL/SQL script Section 5.5.3
5	Upgrade the Oracle Collaboration Suite middle tiers configured with Oracle Email.	Oracle Universal Installer Oracle Collaboration Suite Upgrade Assistant Chapter 6, "Upgrading the Oracle Collaboration Suite Middle Tier"
6	Upgrade the Oracle Voicemail & Fax middle tiers by installing Oracle Voicemail & Fax 10*g* Release 1 (10.1.1) and running a script to upgrade sites and users.	Oracle Universal Installer for Windows See *Oracle Voicemail & Fax and Oracle Web Conferencing Conversion Servers Installation and Upgrade Guide*
7	After you upgrade the last Oracle Voicemail & Fax middle tier, reset the Oracle Internet Directory password and restore the Oracle Internet Directory credential in the mail store.	Oracle Internet Directory Manager and `UMAdminInfo.set_info` PL/SQL script See "Restoring the Oracle Internet Directory Credentials in the Mail Store" in *Oracle Voicemail & Fax and Oracle Web Conferencing Conversion Servers Installation and Upgrade Guide.*
8	Back up the upgraded database hosting the Oracle9*i*AS Metadata Repository.	Use your preferred backup method. See *Oracle Database Backup and Recovery Basics* for more information.
9	Upgrade the Oracle9*i*AS Metadata Repository.	OracleAS Metadata Repository Upgrade Assistant Chapter 7, "Upgrading the Oracle9iAS Metadata Repository"

Table 1–12 (Cont.) Tools and Process for Upgrading Oracle Voicemail & Fax

Step	Description	Tools
10	Optionally, decommission and deinstall source Oracle homes.	Oracle Universal Installer

1.6 Additional Upgrade Scenarios

The process of upgrading directly to 10*g* Release 1 (10.1.1) is only supported for Release 1 (9.0.3.1), Release 2 (9.0.4.1) and Release 2 (9.0.4.2). To upgrade from other releases to 10*g* Release 1 (10.1.1), you must first upgrade to Release 1 (9.0.3.1) or Release 2 (9.0.4.1 or 9.0.4.2), and then upgrade to 10*g* Release 1 (10.1.1).

To upgrade to a supported release, follow the instructions in *Oracle Collaboration Suite Installation and Configuration Guide* for your platform and release. This documentation is available on the Oracle Collaboration Suite documentation page on the Oracle Technology Network (OTN):

`http://www.oracle.com/technology/documentation/collab.html`

If you are upgrading from Oracle Application Server Release 2 (9.0.2) or Oracle Application Server 10g (9.0.4) and do not see your configuration described here, refer to the *Oracle Application Server Upgrading to Release 2 (10.1.2)*.

2

Planning an Upgrade

This chapter provides guidelines for planning an upgrade. It consists of the following sections:

2.1 System Requirements for Upgrading Oracle Collaboration Suite

This section discusses system requirements for upgrading Oracle Collaboration Suite.

Since the upgrade process installs a new version of each component in a separate Oracle home, make sure the systems where you are performing the upgrade meet the requirements for installing Oracle Collaboration Suite 10*g* Release 1 (10.1.1). Refer to Chapter 2, "Preparing to Install," of the installation guide for your operating system:

- *Oracle Collaboration Suite Installation Guide for Solaris Operating System*
- *Oracle Collaboration Suite Installation Guide for Linux*
- *Oracle Collaboration Suite Installation Guide for hp-ux*

2.1.1 Planning for Disk Space Requirements

To plan for disk space requirements, review the "Hardware Requirements" in Chapter 2 of the appropriate installation guide. For each component, you need disk space for both the **source Oracle home** and the **destination Oracle home**. This is important because you should not uninstall or delete the source Oracle home until the upgrade is complete.

For example, if you have all Oracle Collaboration Suite Release 2 (9.0.4.2) components installed on a single system (Oracle9*i*AS Infrastructure, Oracle Collaboration Suite information storage database, and an Oracle Collaboration Suite middle tier), you need space for the three source Oracle homes and the three destination Oracle homes. If you have the Oracle Collaboration Suite components on different systems, you need space for the source Oracle home and the destination Oracle home.

2.1.2 Understanding the New Tablespaces Created by the Oracle Collaboration Suite Upgrade

Table 2–1 summarizes the space requirements of the tablespaces created when you upgrade Oracle Collaboration Suite.

Table 2–1 New Tablespaces Created by the Oracle Collaboration Suite Upgrade

Component	Tablespace Name	Default Size
Content Services (Oracle Files)	files_ifs_main	60 MB
	files_ifs_lob_n	270 MB
	files_ifs_lob_i	270 MB
	files_ifs_lob_m	10 MB
	files_ifs_ctx_i	10 MB
	files_ifs_ctx_k	15 MB
	files_ifs_ctx_x	130 MB
Oracle Mail[1] (Oracle Email)	esmrlmnr	50 MB
	esnews	10 MB
	estemp	5 MB
	esoratext	20 MB
Oracle Real-Time Collaboration (Oracle Web Conferencing)	RTC_IM_DATA	256 MB
	RTC_IM_INDEX	64 MB
Oracle Voicemail & Fax	OVFMETRICS	80 MB
Oracle Web Access	IC_SYSTEM	20 MB
	IC_METRIC	20 MB
Oracle Workspaces	cwsys_main_tbs	20 MB
	cwsys_temp_tbs	10 MB

[1] When upgrading from Release 1 (9.0.3.1)

2.2 Understanding Oracle Collaboration Suite 10*g* Release 1 (10.1.1) Version Compatibility

This chapter provides information about how Oracle Collaboration Suite 10*g* Release 1 (10.1.1) operates with previous versions of Oracle Collaboration Suite.

This section provides a compatibility matrix you can use as a quick reference for identifying potential compatibility issues, as well as a comprehensive list of the compatibility problems and solutions you might have to consider.

Oracle Collaboration Suite supports upgrading components in the order described in Section 1.3.2 so that a component that is upgraded earlier is backward compatible with components that are upgraded later. For example, a 10*g* (10.1.1) Oracle Collaboration Suite 10*g* Infrastructure (Oracle Internet Directory and OracleAS Single Sign-On) is compatible with a Release 1 (9.0.3.1) middle tier, but a 10*g* Release 1 (10.1.1) middle tier is not compatible with Release 1 (9.0.3.1) Infrastructure.

Oracle Collaboration Suite includes the Oracle Application Server 10*g* Release 2 (10.1.2) and the Oracle Database 10*g*. Table 2–2 shows the correspondence between the

releases of Oracle Collaboration Suite components and the Oracle Application Server Release 2 (9.0.2) and Oracle Database. The compatibility matrix in Table 2–3 refers to all components by the Oracle Collaboration Suite version.

Table 2–2 Component Versions for Oracle Collaboration Suite Releases

Component	9.0.3.1	9.0.4.2	10*g* (10.1.1)
Infrastructure	Oracle Application Server Release 2 (9.0.2) (9.0.2.0.1)	Oracle Application Server Release 2 (9.0.2) (9.0.2.3.0)	Oracle Application Server 10*g* Release 2 (10.1.2)
Oracle9*i*AS Metadata Repository Database	Oracle9*i* Database (9.0.1.3)	Oracle9*i* Database (9.0.1.4)	Oracle Database 10*g* (10.1.0.4.2)
Information Storage Database	Oracle9*i* Database (9.2.0.1.0)	Oracle9*i* Database (9.2.0.3.0) (patchset)	Oracle Database 10*g* (10.1.0.4.2)
Middle Tier	Oracle Application Server Release 2 (9.0.2) (9.0.2.0.1)	Oracle Application Server Release 2 (9.0.2) (9.0.2.3.0)	Oracle Application Server 10*g* Release 2 (10.1.2)

2.2.1 Using the 10*g* (10.1.1) Compatibility Matrix

The 10*g* (10.1.1) compatibility matrix is shown in Table 2–3. Before you use the compatibility matrix, you should be familiar with the Oracle Collaboration Suite installation types.

The compatability matrix summarizes different combinations of components. For example, if you want to upgrade your Infrastructure installation to the release used in Oracle Collaboration Suite 10*g* Release 1 (10.1.1), you can use the compatibility matrix as follows:

1. Locate the column in the table that represents the Infrastructure.
2. Locate the row that represents the version of the Infrastructure Oracle homes you are currently running. Check the versions of the other components in the other cells in the row. Check the Supported column to see whether that combination is supported.

   For example, if you are running Release 2 (9.0.4.2) middle tiers, locate the cell containing the value 9.0.4.2 in the Middle Tier column of the table.

   There are three rows containing supported scenarios where the Infrastructure is 10.1.1 and the Oracle Collaboration Suite middle tiers are running 9.0.4.2. One supported combination is where all components are at 9.0.4.2. Another is where the Infrastructure is at 10.1.1 and all other components are are 9.0.4.2. The third one is where the Infrastructure and the Oracle Collaboration Suite information storage database are upgraded to 10.1.1, while the middle tiers and the Oracle9*i*AS Metadata Repository are running 9.0.4.2.
3. Review Section 2.2.2 for compatability issues related to specific configurations.

Table 2–3 Oracle Collaboration Suite Compatability Matrix

Infrastructure	Information Storage Database	Middle Tier	Metadata Repository	Supported?
*[1]	9.0.3.1	9.0.3.1	9.0.3.1	Yes
10.1.1	*	9.0.3.1	9.0.3.1	Yes
10.1.1	10.1.1	10.1.1	9.0.3.1	Yes

Table 2–3 (Cont.) Oracle Collaboration Suite Compatability Matrix

Infrastructure	Information Storage Database	Middle Tier	Metadata Repository	Supported?
9.0.4.2	9.0.4.2	9.0.4.2	9.0.4.2	Yes
10.1.1	9.0.4.2	9.0.4.2	9.0.4.2	Yes
10.1.1	10.1.1	9.0.4.2	9.0.4.2	Yes
10.1.1	10.1.1	10.1.1	9.0.4.2	Yes
10.1.1	10.1.1	10.1.1	9.0.4.2	Yes
10.1.1	10.1.1	10.1.1	10.1.1	Yes
*	*	9.0.3.1/9.0.4.2	10.1.1	No
9.0.3.1/9.0.4.2	9.0.3.1/9.0.4.2	10.1.1	*	No
9.0.3.1/9.0.4.2	10.1.1	*	*	No

[1] 9.0.3.1, 9.0.4.2 and 10.1.1.

2.2.2 Compatibility Issues

This section describes compatibility issues with specific components. In the following sections, Release 2 (9.0.4.2) also includes Release 2 (9.0.4.1).

2.2.2.1 Running 10*g* Release 1 (10.1.1) Middle Tiers with Release 1 (9.0.3.1) or Release 2 (9.0.4.2) Middle Tiers

In general, 10*g* Release 1 (10.1.1) middle tier components work with Release 1 (9.0.3.1). and Release 2 (9.0.4.2) components in different Oracle homes. For example, Release 1 (9.0.3.1) Oracle Calendar works with 10*g* Release 1 (10.1.1) Oracle Mail (the new name for Oracle Email) and 10*g* Release 1 (10.1.1) Oracle Calendar works with Release 2 (9.0.4.2) Oracle Email as long as they are installed in different Oracle homes.

There are certain restrictions described in Section 2.2.2.2 and Section 2.2.2.4.

2.2.2.2 Running 10*g* Release 1 (10.1.1) Federated Search with Release 2 (9.0.4.2) Middle Tiers

In 10*g* Release 1 (10.1.1), Federated Search is no longer part of Oracle Files. It is now a separate component named Oracle Collaboration Suite 10*g* Search. Therefore, when Oracle Files is upgraded, the search capability is no longer available for other middle tiers until they are also upgraded to 10*g* Release 1 (10.1.1) and the new Oracle Collaboration Suite 10*g* Search application is configured.

To keep search capability for all your middle tier applications, see Section 1.5.4.6 for the upgrade procedure to use.

2.2.2.3 Running Oracle Collaboration Suite 10*g* Database with Release 2 (9.0.4.1) Oracle Web Conferencing

When the Release 2 (9.0.4.1) Oracle Collaboration Suite information storage database is upgraded to Oracle Collaboration Suite 10*g* Database, the Release 2 (9.0.4.1) Oracle Web Conferencing middle tiers no longer work until they are upgraded to 10*g* Release 1 (10.1.1).

2.2.2.4 Running 10*g* Release 1 (10.1.1) Oracle Web Conferencing with Release 2 (9.0.4.2) Oracle Web Conferencing

Oracle Web Conferencing does not support running Release 2 (9.0.4.2) instances with 10*g* Release 1 (10.1.1) instances if those instances use the same Oracle Collaboration Suite information storage database. When the first middle tier configured with Oracle Web Conferencing is upgraded, the upgraded Oracle Collaboration Suite 10*g* Database is no longer compatible with Release 2 (9.0.4.2) Oracle Web Conferencing. To minimize downtime, plan to upgrade all middle tier Oracle homes configured with Oracle Web Conferencing at the same time.

See Section 1.5.4.7 for the upgrade procedure to use.

2.2.2.5 Running 10*g* Release 1 (10.1.1) Oracle Calendar With Release 2 (9.0.4.2) Oracle Web Conferencing

When any middle tier configured withOracle Calendar server is upgraded to 10*g* Release 1 (10.1.1) and the Oracle Web Conferencing middle tier it uses is not upgraded, some additional configuration is required to enable the integration between the upgraded Oracle Calendar server and the existing Oracle Web Conferencing. In addition, Oracle Calendar clients will not be able to schedule Web conferences until Oracle Web Conferencing is upgraded to 10*g* Release 1 (10.1.1).

See Section 6.6.6.1 or the procedure to use.

2.2.2.6 Running Release 2 (9.0.4.2) Oracle Calendar with 10*g* Release 1 (10.1.1) Oracle Web Conferencing

When any middle tier configured with Oracle Web Conferencing is upgraded to 10*g* Release 1 (10.1.1) and the Oracle Calendar middle tiers that use it are not upgraded, some additional configuration is required to enable the integration between the upgraded Oracle Web Conferencing and the existing Oracle Calendar server.

See Section 6.6.7 for the procedure to use.

2.2.2.7 Running a Oracle Application Server 10*g* Release 2 (10.1.2) Metadata Repository Database with a Release 1 (9.0.3.1) or Release 2 (9.0.4.2) Oracle Ultra Search Middle Tiers

If your environment uses a single Oracle9*i*AS Metadata Repository, then when the Oracle9*i*AS Infrastructure is upgraded to Oracle Application Server 10*g* Release 2 (10.1.2) Infrastructure, the Oracle9*i*AS Metadata Repository database is upgraded to Oracle Database 10*g* (10.1.0.4.2). As part of this upgrade process, the Oracle Ultra Search schemas are upgraded. Therefore, they no longer work with the Oracle Ultra Search middle tier applications until the middle tiers are upgraded to Oracle Collaboration Suite 10*g* Release 1 (10.1.1).

2.3 Determining a Backup Strategy

Before you start the upgrade process, you should have a clear understanding of the backup requirements. These requirements vary somewhat, depending upon whether you are upgrading Oracle9*i*AS Infrastructure components, Oracle9*i*AS Metadata Repository, Oracle Collaboration Suite information storage database or the middle tier applications. They are discussed in the following sections:

- Backup Strategies for Oracle9iAS Infrastructure
- Backup Strategies for the Oracle9iAS Metadata Repository

2.3.1 Backup Strategies for Oracle9*i*AS Infrastructure

The Oracle9*i*AS Infrastructure upgrade involves upgrading the configuration and data files in the Oracle home of the Oracle Internet Directory and Oracle9*i*AS Single Sign-On installation, as well as upgrading their schemas stored in the Oracle9*i*AS Metadata Repository database.

Consider the following backup strategies when upgrading your Oracle9*i*AS Infrastructure installations:

- When you upgrade the Oracle9*i*AS Infrastructure, you use the Oracle Universal Installer and the Oracle Application Server 10*g* Release 2 (10.1.2) installation procedure. The installation procedure automatically installs a new Oracle Application Server 10*g* Release 2 (10.1.2) destination Oracle home and copies configuration data from the source Oracle home to the destination Oracle home.

  The Oracle Internet Directory and Oracle9*i*AS Single Sign-On components in the source Oracle home are not modified by the upgrade process.

- The installation procedure also upgrades the Oracle Internet Directory, Oracle9*i*AS Single Sign-On and other management schemas in the Oracle9*i*AS Metadata Repository.

  The upgrade of these schemas is performed "in place," which means that the procedure alters the schemas that exist in the database. It does not create a new copy of the schemas or the data they contain. The schemas changes made by the upgrade are irreversible.

  As a result, you should back up the Oracle9*i*AS Infrastructure Oracle home that contains the Oracle9*i*AS Metadata Repository database hosting the Oracle Internet Directory and Oracle9*i*AS Single Sign-On schemas and data before you upgrade.

2.3.2 Backup Strategies for the Oracle9*i*AS Metadata Repository

In most cases, when you upgrade a Oracle9*i*AS Metadata Repository, you must first upgrade the database that hosts the repository.

2.3.2.1 Backing Up the Database Before Upgrading the Database Version

As with any database upgrade, standard procedure dictates that you back up your source Oracle9*i*AS Metadata Repository before you upgrade the database version.

2.3.2.2 Backing Up the Database Before Upgrading a Middle Tier Configured with Oracle9*i*AS Wireless

The Oracle9*i*AS Metadata Repository database contains the data and schemas for Oracle9*i*AS Wireless. These datafiles are modified by the middle tier upgrade process so you should back up this database before upgrading the middle tier.

2.3.2.3 Backing Up the Database Before Running Oracle Application Server Metadata Repository Upgrade Assistant

After the database is upgraded, you run the OracleAS Metadata Repository Upgrade Assistant to upgrade the component schemas so they are compatible with your 10*g* (10.1.1) middle tier instances. This upgrade of the schemas is performed "in place," which means that OracleAS Metadata Repository Upgrade Assistant alters the application server component schemas that exist in the database. It does not create a new copy of the schemas or the data they contain. The changes made by OracleAS Metadata Repository Upgrade Assistant are irreversible.

As a result, before you run OracleAS Metadata Repository Upgrade Assistant, you should perform a backup of the database that contains the schemas. This backup will allow you to restore your database to its original state in the event that the upgrade is not successful.

See Also: *Oracle9i Backup and Recovery Concepts* and *Oracle Database Backup and Recovery Basics* for information about backing up your Oracle database.

2.3.3 Backup Strategies for the Information Storage Database

When you upgrade an Oracle Collaboration Suite information storage database installation, you install Oracle Database 10*g* in a new Oracle home. The datafiles remain in the source Oracle home. The upgrade process modifies these files in-place . Therefore, it is important to back up the Oracle Collaboration Suite information storage database before you begin the upgrade.

The middle tier upgrade process also modifies files in the new Oracle Collaboration Suite Database home. Consider backing up this Oracle home before starting the middle tier upgrade so that if something goes wrong, you can restore the Oracle Collaboration Suite Database to a newly installed state without having to reinstall it.

2.3.4 Backup Strategies for the Oracle Collaboration Suite Middle Tier

When you upgrade a middle tier installation, you install Oracle Collaboration Suite 10*g* Release 1 (10.1.1) into a new Oracle home directory and use the Oracle Collaboration Suite Upgrade Assistant to copy your configuration data from the source Oracle home to the new, destination Oracle home. The upgrade process alters only the 10*g* (10.1.1) destination Oracle home; the source instance is always left unchanged. As a result, there is no need to implement additional or new backup strategies for the source Oracle home, other than those you already use to protect your Oracle Collaboration Suite data.

2.3.5 Backup Strategies After Upgrading Your Oracle Collaboration Suite Instances

After you have completed and verified the upgrade of your Oracle Collaboration Suite environment, consider backing up your Oracle Collaboration Suite installations immediately so you can easily restore your environment to the newly upgraded state.

After this initial postupgrade backup, you can begin your regularly scheduled database backup routine. The initial backup after the upgrade will ensure that you can restore your environment to the newly upgraded 10*g* Release 1 (10.1.1) state without repeating the upgrade process.

Be sure to modify your regular backup routine to include the new Oracle Collaboration Suite Oracle homes.

2.3.6 Using the Oracle Collaboration Suite Backup Matrix

To assist you with your backup strategy, Appendix B contains a matrix summarizing the backup recommendations.

2.4 Understanding Transitional, Stable, and Unsupported Configurations

As you begin to upgrade your Oracle Collaboration Suite Release 1 (9.0.3.1) or Release 2 (9.0.4.2) installations, you temporarily transition to configurations that consist of multiple versions of Oracle Collaboration Suite. For example, at some point during the upgrade of your Oracle Collaboration Suite installations:

- Your Oracle Collaboration Suite middle tier and Oracle Collaboration Suite information storage database installations may be running 9.0.x while your Infrastructure is running 10*g* (10.1.1).
- Your Oracle Collaboration Suite middle tier installations may be running 9.0.x while your Infrastructure is running 10*g* (10.1.1) and your Oracle Collaboration Suite Database (known as Information Storage in previous releases) is running 10*g* (10.1.1).
- Some of your Oracle Collaboration Suite middle tier installations may be running 9.0.x while your Infrastructure is running 10*g* (10.1.1), your Oracle Collaboration Suite Database is running 10*g* (10.1.1) and some of the Oracle Collaboration Suite middle tiers are running Oracle Collaboration Suite 10*g* Applications.

During the upgrade process, it is important to understand that each configuration you encounter falls into one of several configuration types. Those configuration types are described in Table 2–4.

Table 2–4 Summary of Transitional, Stable, and Unsupported Upgrade Configurations

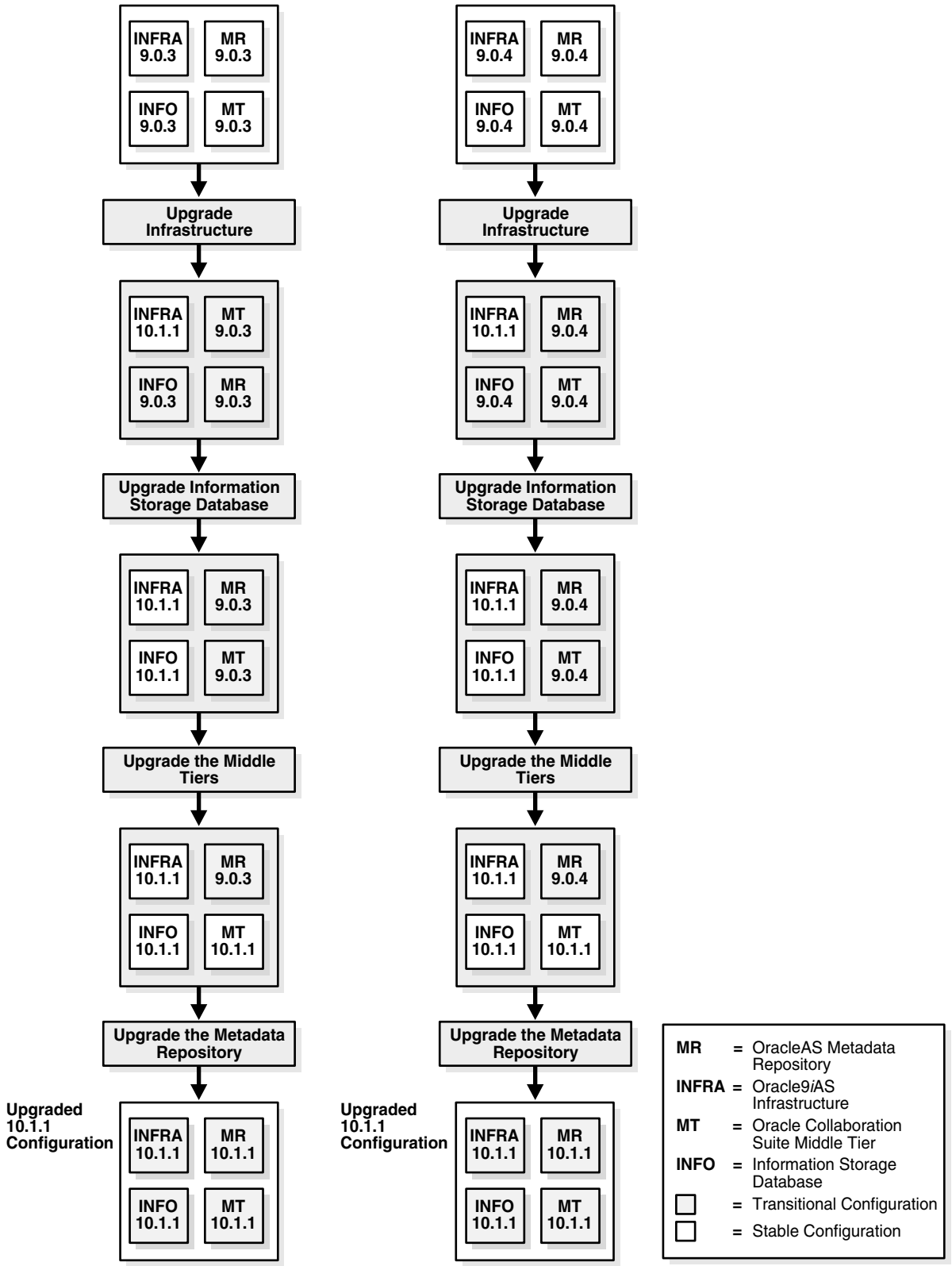
Configuration	Purpose and Expectations	Definition and Examples
Transitional	Transitional configurations are functional and can be used by your Oracle Collaboration Suite middle tiers. However, transitional configurations are supported only as short-term configurations. Transitional configurations should be maintained only while you are performing the overall upgrade process.	A configuration is transitional when: ▪ the Infrastructure has been upgraded to 10*g* (10.1.1) and the Oracle Collaboration Suite information storage databases have been upgraded to Oracle Collaboration Suite Database 10g (10.1.1), but the Oracle Collaboration Suite middle tiers are still 9.0.x. ▪ the Infrastructure has been upgraded to Oracle Collaboration Suite 10*g* Infrastructure and the Oracle Collaboration Suite information storage databases have been upgraded to Oracle Collaboration Suite Database 10g (10.1.1), and one or more (but not all) Oracle Collaboration Suite middle tiers are upgraded to Oracle Collaboration Suite Applications 10*g* (10.1.1), but some of the middle tiers are still version 9.0.x. Not all the 9.0.x Oracle Collaboration Suite middle tier applications will work at full capacity after this upgrade.

Table 2–4 (Cont.) Summary of Transitional, Stable, and Unsupported Upgrade

Configuration	Purpose and Expectations	Definition and Examples
Stable	Stable configurations can be maintained in a production environment for a period of time without any serious performance or management issues. However, your ultimate goal - in order to implement an environment that is easier to manage and to maintain - should be to continue the upgrade process until you have implemented a Final Configuration.	A configuration is stable when the Oracle Collaboration Suite 9.0.x middle tiers and Oracle9*i*AS Metadata Repository are at the same version. For example, a typical stable configuration might include an Infrastructure where Oracle Internet Directory and Oracle9*i*AS Single Sign-On have been upgraded to Oracle Collaboration Suite 10*g* Infrastructure, but the Oracle Collaboration Suite information storage databases, middle tiers and Oracle9*i*AS Metadata Repository are still version 9.0.x.
Final	Final configurations are fully functional and easier to manage and maintain than transitional or stable configurations	A configuration is final when all Oracle Collaboration Suite tiers, including the OracleAS Metadata Repository, have been upgraded to Oracle Collaboration Suite 10*g* Release 1 (10.1.1)
Unsupported	Unsupported configurations are not expected to be functional. Users cannot connect to middle tiers; if they can connect, the middle tiers will likely generate errors.	A configuration is unsupported when the Oracle9*i*AS Metadata Repository is upgraded before the middle tiers that depend on it. For example, in a typical unsupported configuration, the OracleAS Metadata Repository is running Oracle Application Server 10*g* Release 2 (10.1.2) and the middle tiers that use the OracleAS Metadata Repository are still running Oracle Collaboration Suite Release 1 (9.0.3.1) or Release 2 (9.0.4.2).

Figure 2–1 shows how you can encounter transitional and stable configurations during the upgrade process. Your ultimate goal is to upgrade all the Oracle Collaboration Suite components so they represent a final configuration where all components are running Oracle Collaboration Suite 10*g* Release 1 (10.1.1).

Figure 2–1 Typical Stable and Transitional Configurations When Upgrading to Oracle Collaboration Suite 10g Release 1 (10.1.1)



2.5 System Availability During Upgrade

To increase system availability during the upgrade process, you should carefully review Table 2–4 and then plan your upgrade so you can:

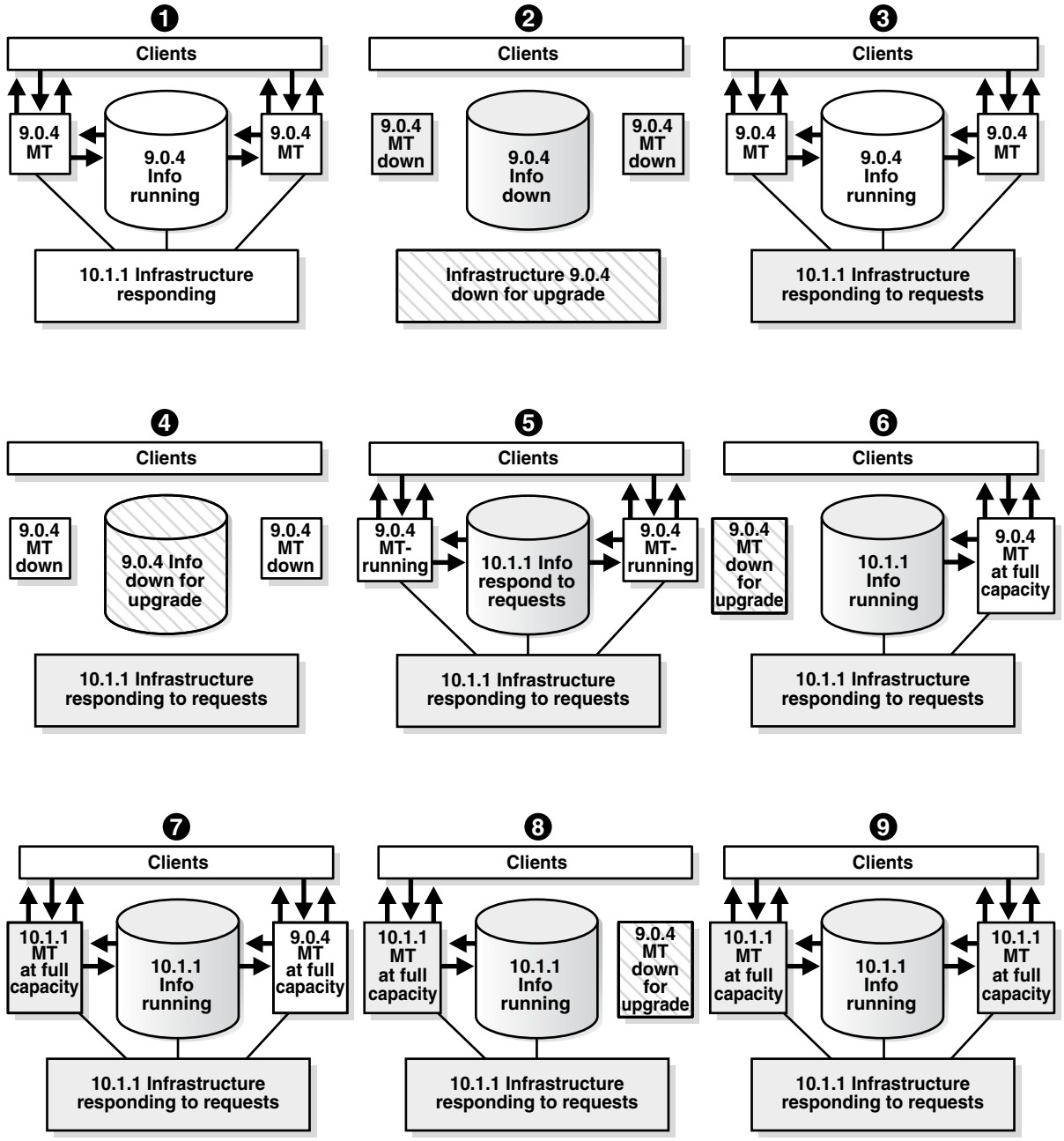
- Avoid implementing any unsupported configurations.
- Reduce as much as possible the amount of time spent using transitional configurations.

As an example of how you can plan for system availability, this section outlines the steps involved in the upgrade process when two or more Release 2 (9.0.4.2) Oracle Collaboration Suite middle tier instances use a single Release 2 (9.0.4.2) Oracle Application Server Infrastructure instance and a single Oracle Collaboration Suite information storage database. As shown in Figure 3-1, full system downtime occurs only in steps 2 and 4 of the process. Step 2 involves stopping the Oracle9*i*AS Infrastructure so it can be upgraded and step 4 involves stopping the Oracle Collaboration Suite information storage database.

The Oracle9*i*AS Infrastructure in this example is non-distributed with a single Oracle9*i*AS Metadata Repository. For simplicity's sake, only two middle tiers and one Oracle Collaboration Suite information storage database are shown in the figure; however, in practice, there may be more. The more middle tiers in service, the lower the system capacity loss in downtime during upgrade. For example, if there are two middle tiers, 50% capacity is lost when one is stopped for upgrade. If there are four middle tiers, only 25% capacity is lost when one is stopped for upgrade. An exception to this is Oracle Web Conferencing where after the first middle tier is upgraded, the remaining middle tiers do not work until they are upgraded.

In the figure, "Clients" may refer to a load balancer. If a load balancer is in use, users need not be aware of middle tier downtime.

Figure 2–2 Example of System Availability



The progression of system states during the upgrade process is detailed below:

1. The Release 2 (9.0.4.2) Oracle Collaboration Suite system is functioning at full capacity, with clients connecting through all middle tiers. (Phase 1 in Figure 2–2)
2. All the middle tiers and the Oracle Collaboration Suite information storage database are stopped in preparation for the Infrastructure upgrade. Applications that are dependent on the Infrastructure are unavailable now.

   The Infrastructure (Oracle Internet Directory, Oracle9*i*AS Single Sign-On and Oracle9*i*AS Metadata Repository database) is upgraded to 10*g* Release 1 (10.1.1). The Oracle9*i*AS Metadata Repository is still Oracle Collaboration Suite Release 2 (9.0.4.2). (Phase 2 in diagram)

This step in the process represents a stable configuration. All the middle tiers and the Oracle Collaboration Suite information storage database Release 2 (9.0.4.2) can be started at this point. (Phase 3)

3. All the middle tiers that use the Oracle Collaboration Suite information storage database Release 2 (9.0.4.2) are stopped in preparation for the Oracle Collaboration Suite information storage database upgrade.
4. The Oracle Collaboration Suite information storage database is upgraded to Oracle Collaboration Suite 10*g* Database. (Phase 4)

   This step in the process represents a transitional configuration. The middle tier applications should work after this configuration. (Phase 5)
5. The first middle tier is stopped, in preparation for the upgrade. Clients can no longer connect through the first middle tier, but they continue to connect through all other middle tiers. (Phase 6)
6. The first middle tier is upgraded to Oracle Collaboration Suite Applications 10*g* (10.1.1). When the upgrade is complete and the middle tier is restarted, all the clients can connect through the upgraded Oracle Collaboration Suite Applications. Most of the clients can still connect through all other Release 2 (9.0.4.2) middle tiers. (Phase 7)

   This step in the process represents a transitional configuration. All of the applications in the upgraded middle tier should work after this configuration. Most of the Release 2 (9.0.4.2) middle tier applications (with the exception of Oracle Web Conferencing) should work after this configuration.
7. Repeat steps 6 and 7 for all other Oracle Collaboration Suite 9.0.x middle tiers. When the upgrade is complete and the middle tiers are started, all the clients can connect through any of the 10*g* (10.1.1) middle tiers. (Phase 8)

   This step in the process represents a stable configuration. All of the middle tier applications on the upgraded middle tiers should work after this configuration. (Phase 9)
8. All the middle tiers are stopped in preparation for the Oracle9*i*AS Metadata Repository upgrade. Applications that are dependent on the OracleAS Infrastructure are unavailable now.
9. The Oracle9*i*AS Metadata Repository in Oracle Collaboration Suite Infrastructure 10.1.1 is upgraded to Oracle Application Server 10*g* Release 2 (10.1.2) OracleAS Metadata Repository using the OracleAS Metadata Repository Upgrade Assistant utility. Once all the Oracle Collaboration Suite 10*g* Release 1 (10.1.1) tiers are started, clients can connect to the fully upgraded system.

   This step in the process represents a final configuration.

2.6 Planning for System Downtime

This section contains information that helps you answer the following questions as you plan the Oracle Collaboration Suite upgrade:

- How much downtime should be allocated to upgrade and to troubleshooting the upgrade?
- What parts of the system are subject to downtime?
- When will the downtime occur?

The duration of upgrade preparation tasks and upgrade processing is of concern when considering downtime. This section provides estimates of the duration of the upgrade of a basic configuration.

2.6.1 System Downtime During an Oracle9*i*AS Infrastructure Upgrade

This section provides estimates for tasks related to upgrading the Oracle9*i*AS Infrastructure. Table 2–6 summarizes the duration estimates by task and component.

Table 2–5 summarizes the resources of the systems used to test the duration of the upgrade.

Table 2–5 Resources of Systems Used to Create Estimates

ID	Operating System	CPU	Memory
Example 1	Linux	3046 MHz	6 GB
Example 2	Solaris	500 Mhz	2 GB

Table 2–6 Infrastructure Upgrade Duration Estimates for Example 1

Operation	Non-Distributed Infrastructure	Distributed Infrastructure
Oracle9*i*AS Metadata RepositoryDatabase Backup	1 hour	1 hour
Oracle Home Backup	1 hour	2 hours
Installation and Upgrade Using Oracle Universal Installer	1 hour, 30 minutes	3 hours[1]
OracleAS Metadata Repository Database Backup	1 hour	1 hour
OracleAS Metadata Repository Upgrade with OracleAS Metadata Repository Upgrade Assistant	1 hour, 15 minutes	1 hour, 15 minutes
OracleAS Infrastructure Postupgrade Tasks	1 hour	1 hour
Total	6 hours, 45 minutes	9 hours, 15 minutes

[1] 1 hour, 30 minutes for each Oracle home.

Table 2–7 Infrastructure Upgrade Duration Estimates for Example 2

Operation	Non-Distributed Infrastructure	Distributed Infrastructure
Oracle9*i*AS Metadata Repository Database Backup	1 hour	1 hour
Oracle Home Backup	1 hour	2 hours
Installation and Upgrade Using Oracle Universal Installer	5 hours	9 hours[1]
OracleAS Metadata Repository Database Backup	1 hour	1 hour

Table 2–7 (Cont.) Infrastructure Upgrade Duration Estimates for Example 2

Operation	Non-Distributed Infrastructure	Distributed Infrastructure
OracleAS Metadata Repository Upgrade with OracleAS Metadata Repository Upgrade Assistant	1 hour, 15 minutes	1 hour, 15 minutes
OracleAS Infrastructure Postupgrade Tasks	1 hour	1 hour
Total	10 hours, 15 minutes	15 hours, 15 minutes

[1] 4 hour, 30 minutes for each Oracle home.

2.6.2 System Downtime During an Information Storage Database Upgrade

Table 2–8 provides estimates for tasks related to upgrading the Oracle Collaboration Suite information storage database.

Table 2–8 Information Storage Database Upgrade Duration Estimates

Operation	Example 1	Example 2
Database Backup[1]	30 minutes	2-3 hours
Installation and Upgrade using Oracle Universal Installer.	1 hour, 15 minutes	3 hours
Total	1 hour, 45 minutes	5-6 hours

[1] Creating archive of Oracle home using tar utility

2.6.3 System Downtime During an Oracle Collaboration Suite Middle Tier Upgrade

Table 2–9 provides estimates for tasks related to upgrading the Oracle Collaboration Suite middle tiers.

Table 2–9 Oracle Collaboration Suite Middle Tier Upgrade Duration Estimates

Operation	Example 1	Example 2
Oracle Collaboration Suite Applications installation and Oracle Collaboration Suite Upgrade Assistant	1 hour	5 hours
Mandatory Postupgrade Tasks	30 minutes	30 minutes
Total	1 hour, 30 minutes	5 hours, 30 minutes

3

Preparing to Upgrade

This chapter discusses steps you perform before starting the upgrade depending on your configuration and the version you have installed. It includes the following sections:

- Preparing to Upgrade from Oracle Collaboration Suite Release 1 (9.0.3.1)
- Preparing to Upgrade from Oracle Collaboration Suite Release 2 (9.0.4.2)

3.1 Preparing to Upgrade from Oracle Collaboration Suite Release 1 (9.0.3.1)

Perform the steps in this section if you are upgrading from Oracle Collaboration Suite Release 1 (9.0.3.1).

3.1.1 Applying the Oracle9*i*AS Portal 9.0.2.3 Patch to the Release 1 (9.0.3.1) Middle Tier

The Oracle9*i*AS Portal 9.0.2.3 patch is required if you are upgrading from Oracle Collaboration Suite Release 1 (9.0.3.1).

Oracle Collaboration Suite Release 1 (9.0.3.1) corresponds to Oracle9*i*AS Portal 9.0.2. This release requires applying patches to the:

- Oracle9iAS Portal schema in the Oracle9*i*AS Metadata Repository database.
- Oracle Collaboration Suite Release 1 (9.0.3.1) middle tier installation. The patch copies files (portal.ear, ptlshare.jar, jpdk.ear and other files) to the appropriate locations in the middle tier Oracle home directory.

You use the Oracle Universal Installer packaged with the patch set to install the patch.

3.1.1.1 Preinstallation Steps

To prepare for installing the patch:

1. Log in to the system running the Oracle Collaboration Suite middle tier as the same user who installed Oracle Collaboration Suite. Make sure the *ORACLE_HOME* environment variable is set to the Oracle Collaboration Suite middle tier installation.
2. Shut down all existing Oracle9iAS processes and instances and all other processes running in or against the Oracle home where this patch is to be installed. See Chapter 8 for instructions.
3. Back up your Oracle9*i*AS Metadata Repository database. To help you recover from any errors that may occur while applying this patch, Oracle recommends that you

perform a database backup of your Oracle9*i*AS Portal schema. The only way to undo the changes is to restore from your backup.

4. Back up the middle tier Oracle home where you are applying the patch.
5. On the system running Oracle Internet Directory, enter the following command to retrieve the Oracle9*i*AS Portal password from Oracle Internet Directory:

```
ORACLE_HOME/bin/ldapsearch -h oidhost -p oidport -D "cn=orcladmin" -w oiduser_
password
-b "cn=IAS Infrastructure Databases,cn=IAS,cn=Products,cn=OracleContext"
 -s sub "orclResourceName=portal" orclpasswordattribute
```

where

- *oidhost* is the name of the system running Oracle Internet Directory
- *oidport* is the port where Oracle Internet Directory is running
- *oiduser_password* is the password for the Oracle Internet Directory administrative user

6. Make sure that a TNS connect string for the Oracle9*i*AS Metadata Repository database is defined in tnsnames.ora. If not, create it by running the `netca` tool. See Section 9.5.1 for instructions.

   The patch installation requires the TNS string.

3.1.1.2 Installing the Oracle9*i*AS Portal Release 2 (9.0.2.3) Patch

To install the patch:

1. Locate the patch on the Supplemental DVD under Patches/Portal/9.0.2.3 .

   Unpack the patch zip file. It will create a directory with the name:

   ```
   portal_patch9023unix
   ```

2. Start the installer packaged with this patch set by entering the following commands:

   ```
   cd portal_patch9023unix/Disk1/install/solaris/
   ./runInstaller
   ```

3. Provide the file locations when prompted. In the Source field, select the products.jar file from the directory where you unpacked the patch zip file.

   ```
   portal_patch9023unix/Disk1/Stage/products.jar
   ```

4. In the Destination field, select your Oracle Collaboration Suite Release 1 (9.0.3.1) middle tier installation.
5. Click **Next**. From the Available Products screen, select the option Oracle Portal Patch Set 9.0.2.3.0.
6. Click **Next**. Answer the remaining questions asked by the installer to install the patch such as the Oracle9*i*AS Portal password and the TNS connect string.

3.1.1.3 Postinstallation Information

Following the patch installation, you should be aware of the following items:

- The installer restarts your Oracle HTTP Server after the patch application completes. If it is still down, restart it manually. See Section 8.1.1 for instructions.

- The log file, patch.log, is located at ORACLE_HOME/portal/patch-9-0-2-3-0/p90230 .
- There is no automatic mechanism for deinstalling the patch set. To undo the patch, restore the middle tier ORACLE_HOME from your backup. Restore the database containing Oracle9*i*AS Metadata Repository from your database backup.
- If your 9.0.2 web.xml file contains a non-default value for the `cacheDir` variable, the value is lost after upgrading to 9.0.2.3. The workaround is to rewrite the `cacheDir` entry manually, ensuring the entry has an absolute path.

3.2 Preparing to Upgrade from Oracle Collaboration Suite Release 2 (9.0.4.2)

Perform the steps to upgrade Oracle9*i*AS Portal 9.0.2 to Oracle9*i*AS Portal 9.0.2.6 if both of the following conditions apply to your environment:

- A Release 2 (9.0.4.2) middle tier configured with Oracle9*i*AS Portal
- A single Oracle9iAS Metadata Repository used by both Oracle Internet Directory and your middle tier applications

Upgrading Oracle9*i*AS Portal guarantees that the Oracle9*i*AS Portal continues to working throughout the upgrade process. To upgrade the existing Oracle9*i*AS Portal 9.0.2 to Oracle9*i*AS Portal 9.02.6, apply the appropriate patches before starting the rest of the upgrade. See Chapter 10 for instructions on applying the patches.

This upgrade is optional, but if you choose not to perform it, the Oracle9*i*AS Portal may not function correctly after the Oracle9*i*AS Infrastructure upgrade until the entire upgrade process is complete.

4

Upgrading the Oracle Application Server Infrastructure

This chapter guides the reader through the steps for upgrading Oracle Application Server Infrastructure. It includes the following sections:

4.1 Understanding the Oracle Application Server Infrastructure Upgrade Process

The Oracle Application Server Infrastructure upgrade process involves upgrading the following components:

- Oracle9*i*AS Metadata Repository database (also referred to as the Oracle9*i*AS Infrastructure database). The Oracle Universal Installer performs the upgrade by installing a Oracle Database 10*g* (10.1.0.4.2) in a new, destination Oracle home. It then copies database configuration information from the source Oracle home to the destination Oracle home.
- Oracle9*i*AS Infrastructure components such as Oracle Internet Directory and Oracle9*i*AS Single Sign-On. The Oracle Universal Installer performs the upgrade by installing new versions of these components in the destination Oracle home. It then copies Infrastructure configuration information from the source Oracle home to the destination Oracle home.
- Oracle Internet Directory and Oracle9*i*AS Single Sign-On schemas in the Oracle9*i*AS Metadata Repository. The Oracle Universal Installer performs the upgrade by modifying the existing schema files. The remaining schemas are upgraded during the Oracle9*i*AS Metadata Repository upgrade.

After you complete the upgrade, there is a new Oracle Collaboration Suite Infrastructure 10.1.1 installed in the destination Oracle home, including the database (now called an Oracle Collaboration Suite Database) and upgraded Oracle Internet Directory and OracleAS Single Sign-On components. The datafiles, including the files containing the upgraded schemas, remain in their original location.

Note: From Oracle Application Server 10*g* (9.0.4), the name Oracle Identity Management is used for the security related components Oracle Internet Directory, OracleAS Single Sign-On, Oracle Delegated Administrative Services, Oracle Directory Integration and Provisioning and OracleAS Certificate Authority.

4.1.1 Reviewing the Oracle9*i*AS Infrastructure Configuration

The steps used to upgrade the Oracle9*i*AS Infrastructure depend on your configuration. The Infrastructure configuration options available in Oracle Application Server Release 2 (9.0.2) were:

- **non-distributed Oracle9iAS Infrastructure**

  In a non-distributed configuration, Oracle9*i*AS Single Sign-On and Oracle Internet Directory are configured in the same Oracle home. They use the same Oracle9*i*AS Metadata Repository which is also configured in the same Oracle home. Figure 4–1 illustrates the non-distributed configuration.

- **distributed Oracle9iAS Infrastructure**

  In a distributed configuration, Oracle9*i*AS Single Sign-On and Oracle Internet Directory are configured in different Oracle homes and each component uses its own Oracle9*i*AS Metadata Repository. Figure 4–2 illustrates the distributed configuration.

Figure 4–1 Non-Distributed Infrastructure

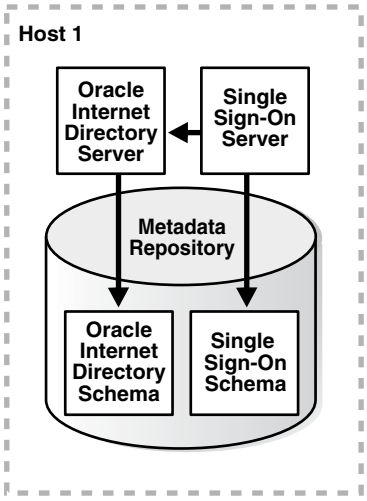
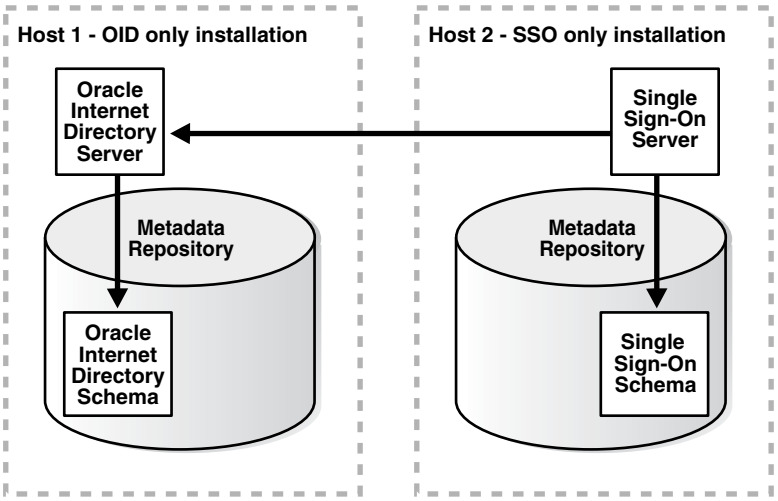


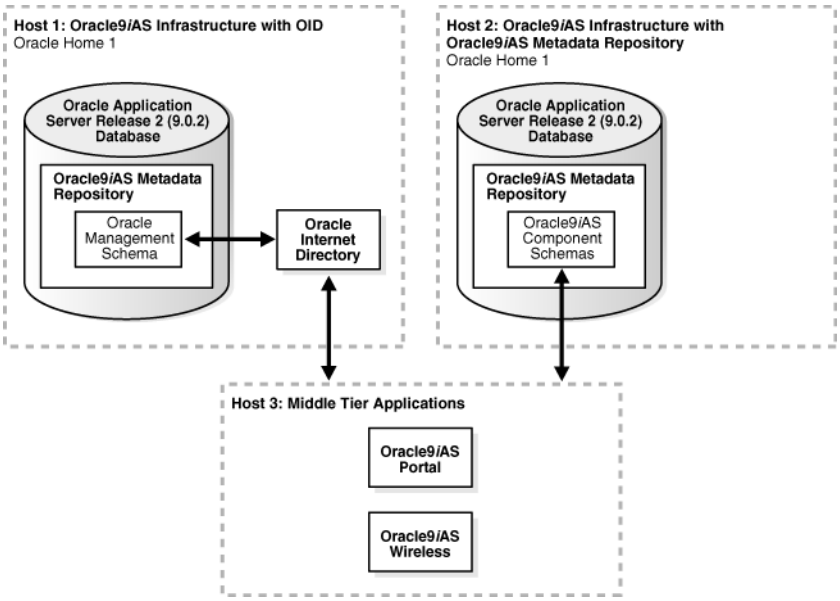
Figure 4–2 Distributed Infrastructure



4.1.1.1 Distributed Oracle9*i*AS Metadata Repository

In addition, Release 1 (9.0.3.1) and Release 2 (9.0.4.2) allowed you to configure a **distributed Oracle9iAS Metadata Repository** by installing an Oracle9*i*AS Infrastructure and configuring only the Oracle9*i*AS Metadata Repository. One or more middle tier applications could then be installed against this Oracle9*i*AS Metadata Repository. Installing and configuring an Oracle9*i*AS Metadata Repository on a separate system was recommended for better performance, especially for extensively used components. Figure 4–3 illustrates this configuration.

Figure 4–3 Distributed Oracle9iAS Metadata Repository Configuration



Determine the type of configuration that you have and follow the instructions in the corresponding sections:

- Upgrading a Non-Distributed Infrastructure

- Upgrading a Distributed Infrastructure
- Upgrading a Distributed Oracle9iAS Metadata Repository
- Upgrading a Oracle Application Server 10g (9.0.4) Infrastructure

4.2 Backing Up the Oracle9*i*AS Infrastructure

Before you begin upgrading the Oracle9*i*AS Infrastructure, back up your Oracle9*i*AS Infrastructure Oracle homes, including the the Oracle9*i*AS Metadata Repository database that hosts the Oracle Internet Directory and Oracle9*i*AS Single Sign-On schemas. If errors occur during the upgrade, then you may need to restore the database from the backup.

See Also: *Oracle Database Backup and Recovery Basics* and *Oracle Application Server Administrator's Guide*.

4.3 Upgrading the Oracle9*i*AS Infrastructure

The Oracle Universal Installer performs the upgrade for all Oracle9*i*AS Infrastructure configurations. If you have multiple Oracle homes as in a distributed Infrastructure or distributed Oracle9*i*AS Metadata Repository, then run the Oracle Universal Installer once for each Oracle home.

4.3.1 Upgrading a Non-Distributed Infrastructure

If your Oracle9*i*AS Infrastructure has a non-distributed configuration, then the Oracle Universal Installer upgrades the database hosting the Oracle9*i*AS Metadata Repository, the Oracle Internet Directory and Oracle9*i*AS Single Sign-On program, configuration, data files and schemas at the same time.

To upgrade the Oracle9*i*AS Infrastructure:

1. Shut down all Oracle Collaboration Suite middle tier applications and Oracle Collaboration Suite information storage databases that use the Oracle9*i*AS Infrastructure.
2. Log in to the system on which the Oracle9*i*AS Infrastructure is installed as the same operating system user that performed the installation. This user must be part of the `DBA` operating system group.
3. Verify that the Oracle9*i*AS Metadata Repository database and database listener are up and running. For more information see Section 8.2.1.
4. Verify that the Oracle Internet Directory server is up and running. For more information, see Section 8.1.3.
5. Set or unset any environment variables according to the Section 2.7, "Environment Variables," in the installation guide for your platform:
   - *Oracle Collaboration Suite Installation Guide for Solaris Operating System*
   - *Oracle Collaboration Suite Installation Guide for Linux*
   - *Oracle Collaboration Suite Installation Guide for hp-ux*

   In particular, make sure the following environment variables do not reference any Oracle home directories:
   - PATH

- CLASSPATH
- Shared library path environment variables such as LD_LIBRARY_PATH (Linux and hp-ux), SHLIB_PATH (hp-ux)

Make sure the following environment variables are not set:

- TNS_ADMIN
- ORACLE_HOME
- ORACLE_SID
- LD_BIND_NOW and ORA_NLS (Linux only)

6. Shut down Oracle Enterprise Manager. For more information, see Section 8.1.2.
7. Mount the installation DVD and start the installer.

> **Note:** Refer to Chapter 3, "Starting the Oracle Collaboration Suite Installation" of the appropriate installation guide listed in step 5 for detailed instructions about starting Oracle Universal Installer on your platform.

8. Run the Oracle Universal Installer and refer to Table 4–1 for information on the options you should select on each screen.
9. After the End of Installation screen appears, exit Oracle Universal Installer and then perform the steps to complete and verify the upgrade described in Section 4.5 and Section 4.6.
10. Start the Oracle Collaboration Suite information storage database and Oracle Collaboration Suite middle tier instances and verify that they are working correctly.

Table 4–1 Summary of the Oracle Universal Installer ***Screens During the*** OracleAS Infrastructure ***Upgrade in a Non-Distributed Infrastructure***

Screen	Description and Recommended Options to Select
Welcome	Welcomes you to Oracle Universal Installer and the Oracle Collaboration Suite 10*g* Release 1 (10.1.1) installation procedure. Click **Advanced Installation**.
Specify File Locations	Enter a name and path for the destination Oracle home for your Oracle Collaboration Suite 10*g* Release 1 (10.1.1) upgrade.
Select a Product to Install	Select **Oracle Collaboration Suite Infrastructure 10.1.1.0.1**.
Select Installation Type	Select **Identity Management and Collaboration Suite Database**.
Prerequisite Checks	This screen displays the results of checking that the system meets the minimum requirements for installing and configuring the product. If the screen displays any warnings or failures, manually correct the problem and click **Retry.** Depending on the problem, you may need to exit the Oracle Universal Installer, fix the problem and start Oracle Universal Installer again. If you need to modify the kernel parameters on Solaris, for example, you may need to exit, change the parameters, and restart the system.
Oracle Enterprise Manager Warning	This dialog appears when Oracle Enterprise Manager is still running. If you have not already done so, shut it down.

Table 4–1 (Cont.) Summary of the Oracle Universal Installer ***Screens During the*** OracleAS Infrastructure ***Upgrade in a Non-Distributed Infrastructure***

Screen	Description and Recommended Options to Select
Language Selection	Select the languages used in the Oracle9*i*AS Infrastructure you are upgrading. If you are not sure which languages were installed, but want languages other than English, click the double arrow button (>>) to select all languages.
Upgrade Existing Oracle9*i*AS Infrastructure Infrastructure	This screen appears when Oracle Universal Installer detects an existing Oracle Collaboration Suite installation of the same type as the one you selected on the Select Installation Type screen. Select **Upgrade an Existing OracleAS Infrastructure**, and then select the Oracle home you want to upgrade from the list. (If there is only one Infrastructure of the selected type on the system, then the list is inactive.)
Specify Login for Oracle Internet Directory	In the Username field enter the Oracle Internet Directory superuser distinguished name (DN). The default value is `cn=orcladmin`. In the Password field, enter the password for the superuser DN.
Specify Infrastructure Database Connection Information	In the Password field, enter the `SYS` user's password.
Warning	This dialog warns you to stop all clients of the Oracle9*i*AS Metadata Repository and all processes in the source Oracle home, including Oracle HTTP Server, Oracle Application Server Web Cache, Oracle Internet Directory, and the Oracle9*i*AS Metadata Repository database listener. The database, however, must remain up and running. For instructions, see Section 8.1.2. If you do not stop these processes, then Oracle Universal Installer attempts to do so when you click **OK**.
Database Listener Warning	This dialog warns you that the Oracle9*i*AS Metadata Repository database listener is running. Review the instructions on the screen for whether you need to stop the database listener. Make sure you stop the listener if you are instructed or you will encounter problems later in the upgrade. For instructions, see Section 8.1.2.
Guest Account Password	Enter a password consisting of at least five alphanumeric characters. At least one character must be a number. The default value of the guest account name is `orclguest`.
Privileged Operating System Groups	This screen appears if you are not a member of the DBA group. In the Database Administrator (`OSDBA`) Group field, enter the name of an operating system group with DBA privileges. In the Database Operator (`OSOPER`) Group field, enter the name of an operating system group with operator privileges.
Specify Instance Name and `ias_admin` Password	Enter a name for the new Oracle Application Server 10*g* Release 2 (10.1.2) instance and a password for the `ias_admin` Administrator account. You use the `ias_admin` password to log in to Application Server Control Console to manage Oracle Application Server. In general, the minimum length of the `ias_admin` password is five alphanumeric characters. At least one of the characters must be a number.

Table 4–1 (Cont.) Summary of the Oracle Universal Installer ***Screens During the*** OracleAS Infrastructure ***Upgrade in a Non-Distributed Infrastructure***

Screen	Description and Recommended Options to Select
Summary	Use this screen to confirm the choices you've made. Click Install to begin upgrading to the new 10.1.1 Oracle home.
Setup Privileges Dialog	This dialog instructs you to run the `root.sh` script as the root user. When the script completes, return to this dialog and click **OK**.
The Configuration Assistants	After the initial software is installed, a set of configuration assistants automatically set up the components in the new 10*g* (10.1.1) Oracle home. Use this screen to follow the progress of each assistant and to identify any problems during this phase of the installation.
End of Installation	When the installation and upgrade is complete, this screen provides important details about the Oracle Collaboration Suite 10*g* Infrastructure Oracle home, such as the URL for the Application Server Control Console and the location of the setupinfo.txt file. After you review the information on this screen, you can exit Oracle Universal Installer and proceed to the postupgrade tasks.

4.3.2 Upgrading a Distributed Infrastructure

If your configuration of Oracle Application Server Infrastructure is distributed, then you upgrade each component separately using the Oracle Universal Installer. First, upgrade the Oracle home where Oracle Internet Directory is configured and then upgrade the Oracle home where Oracle9*i*AS Single Sign-On is configured.

To upgrade the Oracle9*i*AS Infrastructure configured with Oracle Internet Directory:

1. On the system running Oracle Internet Directory, perform the steps described in Section 4.3.1.

To upgrade the Oracle9*i*AS Infrastructure configured with Oracle9*i*AS Single Sign-On, perform the following steps:

1. Verify that the Oracle9*i*AS Metadata Repository database and database listener used by Oracle9*i*AS Single Sign-On are up and running. For more information see Section 8.2.1.
2. Verify that the upgraded Oracle Internet Directory server is up and running. For instructions, see Section 8.1.3.
3. Log on to the system on which the Oracle9*i*AS Single Sign-On is configured as the same operating system user that performed the installation. This user must be part of the `DBA` operating system group.
4. Set or unset any environment variables as described in step 5 of Section 4.3.1.
5. Shut down Oracle Enterprise Manager. For more information, see Section 8.1.2.
6. Mount the installation DVD and start the installer.

Note: Refer to Chapter 3, "Starting the Oracle Collaboration Suite Installation Guide," of the appropriate installation guide listed in step 5 for detailed instructions about starting Oracle Universal Installer on your platform.

- *Oracle Collaboration Suite Installation Guide for Solaris Operating System*
- *Oracle Collaboration Suite Installation Guide for Linux*
- *Oracle Collaboration Suite Installation Guide for hp-ux*

7. Run the Oracle Universal Installer and refer to Table 4–2 for information on the options you should select on each screen.
8. After the End of Installation screen appears, exit Oracle Universal Installer and then perform the steps to complete and verify the upgrade described in Section 4.5 and Section 4.6.
9. Start the Oracle Collaboration Suite information storage database and Oracle Collaboration Suite middle tier instances and verify that they are working correctly.

Table 4–2 Summary of the Oracle Universal Installer Screens During the Oracle9iAS Single Sign-On Upgrade in a Distributed infrastructure

Screen	Description and Recommended Options to Select
Welcome	Welcomes you to Oracle Universal Installer and the Oracle Collaboration Suite 10*g* Release 1 (10.1.1) installation procedure. Click **Advanced Installation**.
Specify File Locations	Enter a name and path for the destination Oracle home for your Oracle Collaboration Suite 10*g* Release 1 (10.1.1) upgrade.
Select a Product to Install	Select **Oracle Collaboration Suite Infrastructure 10.1.1.0.0**.
Select Installation Type	Select **Identity Management and Collaboration Suite Database**.
Prerequisite Checks	This screen displays the results of checking that the system meets the minimum requirements for installing and configuring the product. If the screen displays any warnings or failure, manually correct the problem and click **Retry.** Depending on the problem, you may need to exit the Oracle Universal Installer, fix the problem and start Oracle Universal Installer again. If you need to modify the kernel parameters on Solaris, for example, you may need to exit, change the parameters, and restart the system.
Oracle Enterprise Manager Warning	This dialog appears when Oracle Enterprise Manager is still running. If you have not already done so, shut it down.
Language Selection	Select the languages used in the Oracle Collaboration Suite Infrastructure you are upgrading, If you are not sure which languages were installed, but want languages other than English, click the double arrow button (>>) to select all languages.

Table 4–2 (Cont.) Summary of the Oracle Universal Installer Screens During the Oracle9*i*AS Single Sign-On Upgrade in a Distributed infrastructure

Screen	Description and Recommended Options to Select
Upgrade Existing Oracle9*i*AS Infrastructure	This screen appears when Oracle Universal Installer detects an existing Oracle Collaboration Suite installation of the same type as the one you selected on the Select Installation Type screen. Select **Upgrade Selected OracleAS Infrastructure** , and then select the Oracle home you want to upgrade from the list. If there is only one Infrastructure of the selected type on the system, then the list is inactive.
Specify Login for Oracle Internet Directory	In the Username field enter the Oracle Internet Directory superuser distinguished name (DN). The default value is `cn=orcladmin`. In the Password field, enter the password for the superuser DN.
Specify Infrastructure Database Connection Information	In the Password field enter the `SYS` user's password for the database in the Oracle home where Oracle9*i*AS Single Sign-On is configured.
Specify Oracle Internet Directory Database Login	In the Password field, enter the `SYS` password for the Oracle Internet Directory database.
Warning	This dialog warns you to stop all clients of the Oracle9*i*AS Metadata Repository and all processes in the source Oracle home, including Oracle HTTP Server, Oracle Application Server Web Cache, Oracle Internet Directory, and the Oracle9*i*AS Metadata Repository database listener. The database, however, must remain up and running. For instructions, see Section 8.1.2. If you do not stop these processes, then Oracle Universal Installer attempts to do so when you click **OK**.
Database Listener Warning	This dialog warns you that the Oracle9*i*AS Metadata Repository database listener is running. Review the instructions on screen for whether you need to stop the database listener. Make sure to stop the listener if instructed or you will have problems later in the upgrade. For instructions on stopping the database listener, see Section 8.1.2.
Specify Instance Name and `ias_admin` Password	Enter a name for the new Oracle Application Server 10*g* Release 2 (10.1.2) instance and a password for the `ias_admin` Administrator account. You use the `ias_admin` password to log in to Application Server Control Console to manage Oracle Application Server. In general, the minimum length of the `ias_admin` password is five alphanumeric characters. At least one of the characters must be a number.
Summary	Use this screen to confirm the choices you have made. Click **Install** to begin upgrading to the new 10*g* Release 1 (10.1.1) Oracle home.
Setup Privileges Dialog	This dialog instructs you to run the `root.sh` script as the root user. When the script completes, return to this dialog and click **OK**.

Table 4–2 (Cont.) Summary of the Oracle Universal Installer Screens During the Oracle9iAS Single Sign-On Upgrade in a Distributed infrastructure

Screen	Description and Recommended Options to Select
The Configuration Assistants	After the initial software is installed, a set of configuration assistants automatically set up the components in the new 10*g* Release 1 (10.1.1) Oracle home. Use this screen to follow the progress of each assistant and to identify any problems during this phase of the installation.
End of Installation	When the installation and upgrade is complete, this screen provides important details about the Oracle Collaboration Suite Oracle home, such as the URL for the Application Server Control Console and the location of the setupinfo.txt file. After you review the information on this screen, you can exit Oracle Universal Installer and proceed to the postupgrade tasks in Section 4.5.

After the upgrade is complete, OracleAS Single Sign-On shares the Oracle9*i*AS Metadata Repository used by Oracle Internet Directory.

4.3.2.1 Enabling Secure Sockets Layer (SSL) for Distributed OracleAS Identity Management Components

If you are upgrading distributed OracleAS Identity Management components that were configured to use SSL, you must re-enable SSL for the OracleAS Single Sign-On and Oracle Delegated Administrative Services after the upgrade.

- Enabling SSL for Oracle Internet Directory After Upgrade
- Enabling SSL for OracleAS Single Sign-On After Upgrade
- Enabling SSL for Oracle Delegated Administrative Services After Upgrade

4.3.2.1.1 Enabling SSL for Oracle Internet Directory After Upgrade There is no need to enable SSL for Oracle Internet Directory, since the upgrade procedure automatically re-enables SSL for Oracle Internet Directory in the destination Oracle home if you were using SSL with Oracle Internet Directory in the source Oracle home.

4.3.2.1.2 Enabling SSL for OracleAS Single Sign-On After Upgrade To enable SSL for OracleAS Single Sign-On, use the procedure described in the section "Enabling SSL" in the "Advanced Deployment Options" chapter of the *Oracle Application Server Single Sign-On Administrator's Guide*.

In particular, you must perform the following steps as described in that section of the *Oracle Application Server Single Sign-On Administrator's Guide*:

1. Enable SSL on the Single Sign-On middle tier.
2. Update `targets.xml`.
3. Protect Single Sign-On URLs.
4. Restart the Oracle HTTP Server and the Single Sign-On Middle Tier.
5. Register `mod_osso` with the SSL virtual host as documented in the section "Configuring mod_osso with Virtual Hosts" in the *Oracle Application Server Single Sign-On Administrator's Guide*.

4.3.2.1.3 Enabling SSL for Oracle Delegated Administrative Services After Upgrade If you have also configured Oracle Delegated Administrative Services in the upgraded Oracle home, you must reconfigure the Oracle Delegated Administrative Services URL.

To reconfigure the Oracle Delegated Administrative Services URL:

1. Start the Oracle Directory Manager in the Oracle Delegated Administrative Services Oracle home.

   ORACLE_HOME/bin/oidadmin

2. Use the Navigator Pane to expand the directory tree until you locate the following entry:

   cn=OperationUrls,cn=DAS,cn=Products,cn=OracleContext

3. Select the entry in the tree.

   Oracle Directory Manager displays the attributes of the entry in the right pane of the Directory Manager window.

4. Change the `orcldasurlbase` attribute so it references the HTTPS, SSL URL for the Oracle Delegated Administrative Services:

   https://*hostname*:*http_ssl_port_number*/

   For example:

   https://mgmt42.acme.com:4489/

> **See Also:** "Using Oracle Directory Manager" in the *Oracle Internet Directory Administrator's Guide*

4.3.3 Upgrading a Distributed Oracle9*i*AS Metadata Repository

If your Oracle9*i*AS Metadata Repository is distributed, you need to upgrade the Oracle home with the Oracle9*i*AS Metadata Repository used by your middle tier applications before running the Oracle Application Server Metadata Repository Upgrade Assistant. You use the Oracle Universal Installer to perform this procedure.

To upgrade the Oracle9*i*AS Infrastructure:

1. Shut down all Oracle Collaboration Suite 10*g* Applications instances that use this Oracle9*i*AS Infrastructure.

   > **See Also:** "Stopping an Applications Tier" in Chapter 2 of *Oracle Collaboration Suite Administrator's Guide*.

2. Log in to the system on which the Oracle9*i*AS Infrastructure is installed as the same operating system user that performed the installation. This user must be part of the `DBA` operating system group.
3. Verify that the Oracle9*i*AS Metadata Repository database and database listener are up and running. For more information see Section 8.2.1.
4. Verify that the Oracle Internet Directory server is up and running. For more information, see Section 8.1.3.
5. Set or unset any environment variables according to the Section 2.7, "Environment Variables," in the installation guide for your platform:
   - *Oracle Collaboration Suite Installation Guide for Solaris Operating System*

- *Oracle Collaboration Suite Installation Guide for Linux*
- *Oracle Collaboration Suite Installation Guide for hp-ux*

In particular, make sure the following environment variables do not reference any Oracle home directories:

- PATH
- CLASSPATH
- Shared library path environment variables such as LD_LIBRARY_PATH (Linux and hp-ux), SHLIB_PATH (hp-ux)

Make sure the following environment variables are not set:

- TNS_ADMIN
- ORACLE_HOME
- ORACLE_SID
- LD_BIND_NOW and ORA_NLS (Linux only)

6. Shut down Oracle Enterprise Manager. For more information, see Section 8.1.2.
7. Mount the installation DVD and start the installer.

See Also: Chapter 3, "Starting the Oracle Collaboration Suite Installation Guide," of the appropriate installation guide listed in step 5 for detailed instructions about starting Oracle Universal Installer on your platform.

See Also: Chapter 3, "Starting the Oracle Collaboration Suite Installation Guide," of .

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8. Run the Oracle Universal Installer and refer to Table 4–3 for information on the options you should select on each screen.
9. After the End of Installation screen appears, exit Oracle Universal Installer and then perform the postupgrade and verification steps as described in Section 4.5 and Section 4.6.
10. Start the Oracle Collaboration Suite Applications instances and verify that they are working correctly. See "Starting an Applications Tier" in Chapter 2 of *Oracle Collaboration Suite Administrator's Guide*.

Table 4–3 Summary of the Oracle Universal Installer Screens During the Distributed Oracle9iAS Metadata Repository Upgrade

Screen	Description and Recommended Options to Select
Welcome	Welcomes you to Oracle Universal Installer and the Oracle Collaboration Suite 10*g* Release 1 (10.1.1) installation procedure. Click **Advanced Installation**.
Specify File Locations	Enter a name and path for the destination Oracle home for your Oracle Collaboration Suite 10*g* Release 1 (10.1.1) upgrade.
Select a Product to Install	Select **Oracle Collaboration Suite Infrastructure 10.1.1**.
Select Installation Type	Select **Identity Management and Collaboration Suite Database**

Table 4–3 (Cont.) Summary of the Oracle Universal Installer Screens During the Distributed Oracle9iAS Metadata Repository Upgrade

Screen	Description and Recommended Options to Select
Prerequisite Checks	This screen displays the results of checking that the system meets the minimum requirements for installing and configuring the product. If the screen displays any warnings or failures, manually correct the problem and click **Retry.** Depending on the problem, you may need to exit the Oracle Universal Installer, fix the problem and start Oracle Universal Installer again. If you need to modify the kernel parameters on Solaris, for example, you may need to exit, change the parameters, and restart the system.
Language Selection	Select the languages used in the Oracle9*i*AS Infrastructure you are upgrading, If you are not sure which languages were installed, but want languages other than English, click the double arrow button (>>) to select all languages.
Upgrade Existing Infrastructure	This screen appears when Oracle Universal Installer detects an existing Oracle Collaboration Suite installation of the same type as the one you selected on the Select Installation Type screen. Select **Upgrade an Existing Oracle Collaboration Suite Infrastructure**, and then select the Oracle home you want to upgrade from the list. (If there is only one Infrastructure of the selected type on the system, then the list is inactive.)
Specify Login for Oracle Internet Directory	In the Username field enter the Oracle Internet Directory superuser distinguished name (DN) . The superuser DN `cn=orcladmin` is the default for this field; change this value if the Oracle Internet Directory superuser DN is not `cn=orcladmin`. In the Password field, enter the password for the superuser DN.
Specify Infrastructure Database Connection Information	In the Password field enter the `SYS` user's password.
Warning	This dialog warns you to stop all clients of the OracleAS Metadata Repository and all processes in the source Oracle home, including Oracle HTTP Server, Oracle Application Server Web Cache, Oracle Internet Directory, and the OracleAS Metadata Repository database listener. The database, however, must remain up and running. For more information, see Section 8.1.2. If you do not stop these processes, Oracle Universal Installer attempts to do so when you click **OK**.
Database Listener Warning	This dialog warns you that the OracleAS Metadata Repository database listener is running. Review the instructions on screen for whether you need to stop the database listener. For more information, see Section 8.1.2.
Guest Account Password	Enter a password consisting of at least five alphanumeric characters. At least one character must be a number. The default value of the guest account name is `orclguest`.
Privileged Operating System Groups	This screen appears if you are not a member of the DBA group. In the Database Administrator (`OSDBA`) Group field, enter the name of an operating system group with DBA privileges. In the Database Operator (`OSOPER`) Group field, enter the name of an operating system group with operator privileges.

Table 4–3 (Cont.) Summary of the Oracle Universal Installer Screens During the Distributed Oracle9*i*AS Metadata Repository Upgrade

Screen	Description and Recommended Options to Select
Specify Instance Name and `ias_admin` Password	Enter a name for the new Oracle Application Server 10*g* Release 2 (10.1.2) instance and a password for the `ias_admin` Administrator account. You use the `ias_admin` password to log in to Application Server Control Console to manage Oracle Application Server. In general, the minimum length of the `ias_admin` password is five alphanumeric characters. At least one of the characters must be a number. For more information, see the *Oracle Application Server Installation Guide*.
Summary	Use this screen to confirm the choices you've made. Click Install to begin upgrading to the new 10*g* (10.1.1) Oracle home.
Setup Privileges Dialog	This dialog instructs you to run the `root.sh` script as the root user. When the script completes, return to this dialog and click **OK**.
The Configuration Assistants	After the initial software is installed, a set of configuration assistants automatically set up the components in the new 10*g* (10.1.1) Oracle home. Use this screen to follow the progress of each assistant and to identify any problems during this phase of the installation.
End of Installation	When the installation and upgrade is complete, this screen provides important details about the OracleAS Infrastructure Oracle home, such as the URL for the Application Server Control Console and the location of the setupinfo.txt file. After you review the information on this screen, you can exit the Oracle Universal Installer and proceed to the optional tasks in Section 7.1.2 and Section 7.1.3.

This process installs an Oracle Collaboration Suite Infrastructure 10.1.1 in a new Oracle home. The database version is also upgraded, but the schemas in the Oracle9*i*AS Metadata Repository still need to be upgraded using the Oracle Application Server Metadata Repository Upgrade Assistant.

4.3.4 Upgrading a Oracle Application Server 10g (9.0.4) Infrastructure

In this configuration, the original Oracle Internet Directory and Oracle9*i*AS Single Sign-On in the Oracle9*i*AS Infrastructure was upgraded to Oracle Application Server 10g (9.0.4). The procedure to upgrade this configuration is the same as for an Oracle Application Server Release 2 (9.0.2) configuration.

To upgrade a Oracle Application Server 10g (9.0.4) Infrastructure:

1. Perform the steps described in Section 4.3.1 or Section 4.3.2 depending on whether your configuration is distributed or non-distributed. Make sure to shut down the processes running in the 9.0.4 Oracle home.
2. From the Upgrade Existing Infrastructure screen, select the Oracle Application Server 10g (9.0.4) instance to upgrade.

4.4 Performing an Oracle Internet Directory Multi-Master Replication Upgrade

This section describes how to upgrade Oracle Internet Directory in a replicated environment. You can upgrade one computer at a time, or all of the computers at one time. Instructions are provided for each method in the following sub-sections:

- Preparing for an Oracle Internet Directory Multi-Master Replication Upgrade
- Upgrading Oracle Internet Directory on One Replica
- Upgrading Oracle Internet Directory on Multiple Replicas Simultaneously

Oracle Corporation recommends that during upgrade, in order to prevent conflicts, the replication environment be a Single Master (that is, only one replica is read/write and all others are read only).

> **See Also:** *Oracle Internet Directory Administrator's Guide* for information about managing and configuring Oracle Internet Directory replication configurations

4.4.1 Preparing for an Oracle Internet Directory Multi-Master Replication Upgrade

Before you begin upgrading Oracle Internet Directory 9.0.4.x.x in a replicated environment, you must perform the following steps for all replicas other than Master Definition Site (MDS) Replica or Primary supplier replica:

1. Locate the database registration entry of the database of replica to be upgraded.

   ```
   SOURCE_ORACLE_HOME/bin/ldapsearch -h host -p port -D cn=orcladmin -w superuser_
   password -b "cn=oraclecontext" -s one "(objectclass=orcldbserver)" dn
   ```

   This will return a list of Distinguished Names (DNs) corresponding to all the Databases registered in Oracle Internet Directory in the following form:

   ```
   cn=database_name,cn=oraclecontext
   ```

   Of these entries, locate the DN of the following entry, which will be used in Step 3 of this procedure:

   ```
   cn=dbname_of_replica_to_be_upgraded,cn=oraclecontext
   ```

2. Identify the replica ID of the replica to be upgraded by issuing following command:

   ```
   SOURCE_ORACLE_HOME/bin/ldapsearch -h hostname_of_replica_being_upgraded -p port
   -D cn=orcladmin -w superuser_password -b "" -s base "(objectclass=*)"
   orclreplicaid
   ```

3. Modify the `seealso` attribute of Replica Subentry of the replica to be upgraded as given below:

   a. Create a file, for example `mod.ldif`, with following contents:

      ```
      #File Name : mod.ldif
      dn: orclreplicaid=replicaid_from_step_2,cn=replication configuration
      changetype: modify
      replace: seeAlso
      #The DN used in seealso attribute is obtained in Step #1.
      seeAlso: cn=dbname_of_replica_being_upgraded,cn=oraclecontext
      ```

   b. Modify replica subentry using ldapmodify command.

```
SOURCE_ORACLE_HOME/bin/ldapmodify -h hostname_of_replica_being_upgraded -p
port -D superuser_DN -w superuser_password -v -f mod.ldif
```

4. Navigate to the following directory and locate `ias.properties` file:

   ```
   SOURCE_ORACLE_HOME/config
   ```

5. Open the `ias.properties` file and modify properties as shown in Table 4–4.

6. Make sure the Oracle Internet Directory server is upgraded to Oracle Application Server 10*g* Release 2 (10.1.2) and that it is up and running.

   To verify that Oracle Internet Directory is running, enter one of the following commands.

   Note: You may have to temporarily set the ORACLE_HOME environment variable to the Oracle Internet Directory Oracle home before running the `ldapbind` command.

   After you verify that the Oracle Internet Directory is running, you must then make sure the ORACLE_HOME environment variable is not defined before you start the Oracle Application Server 10*g* Release 2 (10.1.2) installer, as directed in Step 5.

   If you are running Oracle Internet Directory on a non-secure port:

   ```
   SOURCE_ORACLE_HOME/bin/ldapbind -p Non-SSL_port
   ```

   If you are running Oracle Internet Directory on a secure port:

   ```
   SOURCE_ORACLE_HOME/bin/ldapbind -p SSL_port -U 1
   ```

   These commands should return a "bind successful" message.

7. Create an ldif file, for example `add.ldif`, with the contents shown in Example 4–1.

8. Start a second instance of LDAP server with "change log generation disabled" as shown below.

   Note that this example assumes that the second instance is not in use and port 4444 is not used by any process.

   ```
   oidctl connect=connect_string_of_db server=oidldapd instance=2 flags="-p 4444
   -l false" start
   ```

9. Add the entries defined in the `ldif` file you created in Step 7 by using `ldapadd` tool as shown below.

   To add these entries, you must use the port used for the LDAP server you started in Step 8. This example assumes that the LDAP server you started in step 7 is listening at port 4444.

   ```
   ldapadd -p 4444 -h hostname -D cn=orcladmin -w password -f ldif_filename -c
   ```

   For example:

   ```
   ldapadd -p 4444 -h mgmt42.acme.com -D cn=orcladmin -w m03kslj -f add.ldif -c
   ```

10. Stop the second LDAP server as shown below.

This example assumes that the instance number used for the second instance was 2.

```
oidctl connect=<connect_string_of_db> server=oidldapd instance=2 stop
```

Table 4–4 Properties to Modify in ias.properties Before Replication Upgrade

Property Name	Original Value	Change to This Value
OID.LaunchSuccess	False	True
InstallType	Infrastructure	Infrastructure
OIDhost	*host name of supplier*	*host name of replica*
OIDport	*port of supplier*	*port of replica*
OIDsslport	*SSL port for supplier*	*SSL port for replica*

Example 4–1 Contents of LDIF File Used to Prepare for Replication Upgrade

```
#File Name : add.ldif
################################
# Event Type Configuration
################################

dn: cn=ProvisioningEventTypeConfig,cn=odi,cn=oracle internet directory
changetype: add
cn: ProvisioningEventTypeConfig
orclaci: access to entry by group="cn=Provisioning Admins,
  cn=changelog subscriber,cn=oracle internet directory" (browse,add,delete)
orclaci: access to attr=(*) by group="cn=Provisioning Admins,
  cn=changelog subscriber,cn=oracle internet directory"
  (read,search,write,compare)
objectclass: orclContainer

dn: orclODIPProvEventObjectType=ENTRY,cn=ProvisioningEventTypeConfig,cn=odi,
  cn=oracle internet directory
changetype: add
orclODIPProvEventObjectType: ENTRY
orclODIPProvEventLDAPChangeType: Add
orclODIPProvEventLDAPChangeType: Modify
orclODIPProvEventLDAPChangeType: Delete
orclODIPProvEventCriteria: objectclass=*
objectclass: orclODIPProvEventTypeConfig

dn: orclODIPProvEventObjectType=USER,cn=ProvisioningEventTypeConfig,cn=odi,
  cn=oracle internet directory
changetype: add
orclODIPProvEventObjectType: USER
orclODIPProvEventLDAPChangeType: Add
orclODIPProvEventLDAPChangeType: Modify
orclODIPProvEventLDAPChangeType: Delete
orclODIPProvEventCriteria: objectclass=InetOrgPerson
orclODIPProvEventCriteria: objectclass=orclUserV2
objectclass: orclODIPProvEventTypeConfig

dn: orclODIPProvEventObjectType=IDENTITY,cn=ProvisioningEventTypeConfig,cn=odi,
  cn=oracle internet directory
changetype: add
orclODIPProvEventObjectType: IDENTITY
orclODIPProvEventLDAPChangeType: Add
orclODIPProvEventLDAPChangeType: Modify
```

```
orclODIPProvEventLDAPChangeType: Delete
orclODIPProvEventCriteria: objectclass=InetOrgPerson
orclODIPProvEventCriteria: objectclass=orclUserV2
objectclass: orclODIPProvEventTypeConfig

dn: orclODIPProvEventObjectType=GROUP,cn=ProvisioningEventTypeConfig,cn=odi,
   cn=oracle internet directory
changetype: add
orclODIPProvEventObjectType: GROUP
orclODIPProvEventLDAPChangeType: Add
orclODIPProvEventLDAPChangeType: Modify
orclODIPProvEventLDAPChangeType: Delete
orclODIPProvEventCriteria: objectclass=orclGroup
orclODIPProvEventCriteria: objectclass=orclPrivilegeGroup
orclODIPProvEventCriteria: objectclass=groupOfUniqueNames
orclODIPProvEventCriteria: objectclass=groupofNames
objectclass: orclODIPProvEventTypeConfig

dn: orclODIPProvEventObjectType=SUBSCRIPTION,cn=ProvisioningEventTypeConfig,
  cn=odi,cn=oracle internet directory
changetype: add
orclODIPProvEventObjectType: SUBSCRIPTION
orclODIPProvEventLDAPChangeType: Add
orclODIPProvEventLDAPChangeType: Modify
orclODIPProvEventLDAPChangeType: Delete
orclODIPProvEventCriteria: objectclass=orclServiceSubscriptionDetail
objectclass: orclODIPProvEventTypeConfig

dn: orclODIPProvEventObjectType=SUBSCRIBER,cn=ProvisioningEventTypeConfig,
  cn=odi,cn=oracle internet directory
changetype: add
orclODIPProvEventObjectType: SUBSCRIBER
orclODIPProvEventLDAPChangeType: Add
orclODIPProvEventLDAPChangeType: Modify
orclODIPProvEventLDAPChangeType: Delete
orclODIPProvEventCriteria: objectclass=orclSubscriber
objectclass: orclODIPProvEventTypeConfig

########################################################################
# DIPADMIN Account
########################################################################

dn: cn=dipadmin,cn=odi,cn=oracle internet directory
changetype: add
cn: dipadmin
sn: dipadmin
description: DIP Administrator Idenitity in OID
objectclass: person

########################################################################
# DIPADMIN Group
########################################################################

dn: cn=dipadmingrp,cn=odi,cn=oracle internet directory
changetype: add
cn: dipadmin
owner: cn=dipadmin,cn=odi,cn=oracle internet directory
uniquemember: cn=orcladmin
uniquemember: cn=dipadmin,cn=odi,cn=oracle internet directory
description: DIP Administrator Group in OID
```

```
objectclass: groupOfUniqueNames
objectclass: orclprivilegegroup

########################################################################
# ODIPGROUP getting recreated here from 904 (Had been removed in 902*)
########################################################################

dn: cn=odipgroup,cn=odi,cn=oracle internet directory
changetype: add
cn: odipgroup
objectclass: top
objectclass: groupofUniquenames
objectclass: orclprivilegegroup
uniquemember: cn=orcladmin
orclaci: access to entry by group="cn=dipadmingrp,cn=odi,cn=oracle internet
  directory" (browse) by * (none)
orclaci: access to attr=(uniquemember) by  group="cn=dipadmingrp,cn=odi,
  cn=oracle internet directory" (search,read,write,compare) by * (none)

dn: cn=odisgroup,cn=odi,cn=oracle internet directory
changetype: add
cn: odisgroup
objectclass: top
objectclass: groupofUniquenames
objectclass: orclprivilegegroup
uniquemember: cn=orcladmin
orclaci: access to entry by * (none)
orclaci: access to attr=(*) by * (none)
```

4.4.2 Upgrading Oracle Internet Directory on One Replica

Upgrading one computer at a time in a replicated environment ensures that Oracle Internet Directory available during the upgrade for additions, modifications, and searching.

The following sections describe how to upgrade one replica at a time:

- Upgrading the Oracle Internet Directory Replica
- Completing the Upgrade of a Oracle Application Server 10g (9.0.4) Replica
- Completing the Upgrade of a Oracle Application Server Release 2 (9.0.2) Replica

4.4.2.1 Upgrading the Oracle Internet Directory Replica

Follow these steps to upgrade one replica at a time:

1. If you are upgrading from Oracle Application Server Release 2 (9.0.2), make sure you have applied the latest Release 2 (9.0.2) patchsets.

   The OracleAS Identity Management upgrade procedures have been tested using the latest patchsets available from Oracle*MetaLink*. As a result, before you upgrade Release 2 (9.0.2) OracleAS Identity Management, apply the latest Oracle Application Server 10*g* (9.0.4) 9.0.2 patchsets.

   The Oracle*MetaLink* Web site is at the following URL:

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

   At the time this document was published the most recent Oracle9*i*AS patchset release was the Oracle9*i*AS 9.0.2.3 patchset (3038037). To locate this patchset, search for patch number `3038037` on Oracle*MetaLink*.

> **Note:** After applying Oracle9*i*AS 9.0.2.3 patchset (3038037), verify that the patchset was applied successfully before proceeding with the Oracle Application Server 10*g* Release 2 (10.1.2) upgrade. For example, verify that the Application Server Control, your deployed applications, and the components you use are functioning properly after you apply the patchset.

2. Make sure you have completed the procedure in Section 4.4.1, "Preparing for an Oracle Internet Directory Multi-Master Replication Upgrade".
3. Identify the replica to be upgraded.

   The replica can be an LDAP-based partial or fan-out replica, or it can be an Oracle Advanced Replication (ASR) based multimaster replica.

   > **See Also:** "Directory Replication Concepts" in the *Oracle Internet Directory Administrator's Guide*

4. Stop the replication server on the replica to be upgraded.

   Make sure that the LDAP server, the Oracle Internet Directory database, and the database listener are up and running.
5. If you are upgrading an ASR-based replica, then delete all ASR jobs on other replicas by issuing the following command:

   ```
   SOURCE_ORACLE_HOME/ldap/admin/oidrdjob.sql
   ```

   All ASR jobs on other master sites that transfer changes to this replica are deleted. This has the effect of taking the replica currently being upgraded out of the replication environment, so that no changes come to it, while other replicas continue to operate and replicate changes.
6. Upgrade the replica as described in Section 4.3, "Upgrading the Oracle9iAS Infrastructure".
7. Start the replication server database and listener in the upgraded replica Oracle home.
8. Test the connectivity to the other replicas.

   The Net Services Upgrade assistant might have modified `listener.ora` and `tnsnames.ora`, breaking connectivity. If connectivity is broken, identify the entries that were modified in the files, and restore the entries from the corresponding files in the source Oracle home.

   For example, copy the original entries from the following files in the source Oracle home:

   ```
   SOURCE_ORACLE_HOME/network/admin/listener.ora
   SOURCE_ORACLE_HOME/network/admin/sqlnet.ora
   ```

   Copy the values for the entries from these files to the corresponding files in the destination Oracle home:

   ```
   DESTINATION_ORACLE_HOME/network/admin/listener.ora
   DESTINATION_ORACLE_HOME/network/admin/sqlnet.ora
   ```
9. If you are upgrading a Oracle Advanced Replication (ASR) based Replica, recreate jobs on each replica, after it is upgraded, by issuing the following command:

```
DESTINATION_ORACLE_HOME/bin/remtool -asrrectify
```

The jobs that were deleted in Step 5 are re-created. They will begin transferring the existing changes and new changes from other replicas to the upgraded replicas.

10. Perform the Oracle Internet Directory post-upgrade procedures.

> **See Also:** Section 4.5.5, "Completing the Oracle Internet Directory Upgrade"

4.4.2.2 Completing the Upgrade of a Oracle Application Server 10g (9.0.4) Replica

After you upgrade a 10*g* (9.0.4) replica, reset the replication DN password of the upgraded replica by issuing following command:

```
DESTINATION_ORACLE_HOME/bin/remtool -presetpwd -v -bind host:port
```

Then, you can then start `oidmon`, LDAP server, and replication server. The replica is upgraded to Oracle Application Server 10*g* Release 2 (10.1.2) and you can then proceed to upgrade the other replicas in the directory replication group.

4.4.2.3 Completing the Upgrade of a Oracle Application Server Release 2 (9.0.2) Replica

After you upgrade a Release 2 (9.0.2) replica, you must perform the following steps before restarting and using the upgraded replica:

1. After upgrading the infrastructure to Oracle Application Server 10g Release, use a text editor to open the following configuration file in the destination Oracle home:

   ```
   DESTINATION_ORACLE_HOME/opmn/conf/opmn.xml
   ```

2. Locate the entry that identifies the Oracle Internet Directory component entry in the `opmn.xml` file.
3. Add the ORACLE_SID environment variable within an environment element, as shown in Example 4–2.
4. Make sure that the value of the ORACLE_SID is set to the System Identifier (SID) of the Oracle Application Server 10*g* Release 2 (10.1.2) database.
5. Save and exit the `opmn.xml` file.
6. Start the LDAP server and `oidmon` for the replica you are upgrading.
7. Use the following command to change the password of the replication distinguished name (DN) of upgraded replica:

   ```
   DESTINATION_ORACLE_HOME/bin/remtool -presetpwd -v -bind host:port
   ```

8. Start the replication server.
9. Proceed with upgrading the remaining master site replicas as described in Section 4.4.2.1, "Upgrading the Oracle Internet Directory Replica".
10. Upgrade the database replication table by performing the following steps:
    a. Stop the replication server on all replicas.
    b. Quiesce the replication environment by issuing this command on the MDS replica:

       ```
       DESTINATION_ORACLE_HOME/bin/remtool -suspendasr
       ```

c. Connect as REPADMIN (the database replication administrator) on the MDS replica and issue the following command:

```
execute DBMS_REPCAT.ALTER_MASTER_REPOBJECT (sname=> 'ODS', oname=> 'ASR_
CHG_LOG', type=> 'TABLE', ddl_text=> 'alter table ods.asr_chg_log modify
target_dn varchar2 (1024)')
```

d. Execute the following SQL command repeatedly until the "no rows selected" message appears:

```
SELECT * from dba_repcatlog WHERE request = 'ALTER_MASTER_REPOBJECT';
```

e. Generate replication support for the ASR_CHG_LOG table by issuing the command:

```
execute DBMS_REPCAT.GENERATE_REPLICATION_SUPPORT (sname=> 'ODS', oname=>
'ASR_CHG_LOG', type=> 'TABLE');
```

f. Execute the following SQL command repeatedly until the "no rows selected message appears:

```
SELECT * from dba_repcatlog WHERE request = 'ALTER_MASTER_REPOBJECT';
```

g. Resume the database replication by issuing the following command:

```
DESTINATION_ORACLE_HOME/bin/remtool -resumeasr
```

h. Start the replication server on all replicas.

Example 4–2 Adding the ORACLE_SID Environment Variable to the opmn.xml file when Upgrading a Oracle Application Server Release 2 (9.0.2) Oracle Internet Directory Replica

```
<?xml version = '1.0' encoding = 'UTF-8'?>
<opmn xmlns="http://www.acme.com/ias-instance">
   ...
   <ias-component id="OID" status="enabled">
      <process-type id="OID" module-id="OID">
          <environment>
              <variable id="ORACLE_SID" value="value_of_oracle_sid"/>
          </environment>
          <stop timeout="1800"/>
          <process-set id="OID" numprocs="1">
          <dependencies>
          ...
   </ias-component>
   ...
</opmn>
```

4.4.3 Upgrading Oracle Internet Directory on Multiple Replicas Simultaneously

Upgrading multiple replicas simultaneously ensures that the entire network is upgraded without a transient stage. The procedure is simpler than upgrading one replica at a time, but involves directory service downtime.

The following sections describe how to upgrade multiple replicas at the same time:

- Upgrading the Oracle Internet Directory Replica
- Completing the Upgrade of a Oracle Application Server 10g (9.0.4) Replica
- Completing the Upgrade of a Oracle Application Server Release 2 (9.0.2) Replica

4.4.3.1 Simultaneously Upgrading Multiple Oracle Internet Directory Replicas

Use the following procedure to upgrade all the replicas simultaneously:

1. In all replicas other than MDS replica or primary supplier replica, make sure you have completed the pre-upgrade steps provided in Section 4.4.1, "Preparing for an Oracle Internet Directory Multi-Master Replication Upgrade".
2. Stop the replication server on all replicas in the Directory Replication Group (DRG).
3. Upgrade all replicas as described in Section 4.3, "Upgrading the Oracle9iAS Infrastructure".
4. Start the database and the listener on all the upgraded replicas.
5. Test the connectivity to the other replicas.

   The Net Services Upgrade assistant might have modified `listener.ora` and `tnsnames.ora`, breaking connectivity. If connectivity is broken, identify the entries that were modified in the files, and restore the entries from the corresponding files in the source Oracle home.

   For example, copy the original entries from the following files in the source Oracle home:

   SOURCE_ORACLE_HOME`/network/admin/listener.ora`
   SOURCE_ORACLE_HOME`/network/admin/sqlnet.ora`

   Copy the values for the entries from these files to the corresponding files in the destination Oracle home:

   DESTINATION_ORACLE_HOME`/network/admin/listener.ora`
   DESTINATION_ORACLE_HOME`/network/admin/sqlnet.ora`

6. Perform the Oracle Internet Directory post-upgrade procedures.

   See Also: Section 4.5.5, "Completing the Oracle Internet Directory Upgrade"

4.4.3.2 Completing the Simultaneous Upgrade of Oracle Application Server 10g (9.0.4) Replicas

After you upgrade all the 10*g* (9.0.4) replicas, reset the replication DN password of the upgraded replica by issuing following command:

DESTINATION_ORACLE_HOME`/bin/remtool -presetpwd -v -bind` *host*`:`*port*

Then, you can then start the `oidmon`, LDAP server, and replication server for each replica. All replicas are then upgraded to Oracle Application Server 10*g* Release 2 (10.1.2).

4.4.3.3 Completing the Simultaneous Upgrade of Oracle Application Server Release 2 (9.0.2) Replicas

After you upgrade a Release 2 (9.0.2) replica, you must perform the procedure described in Section 4.4.2.3, "Completing the Upgrade of a Oracle Application Server Release 2 (9.0.2) Replica". After you complete that procedure, all the replicas will then be upgraded to Oracle Application Server 10*g* Release 2 (10.1.2).

Important: This step should be performed only when all the nodes in the directory replication group are upgraded. Do not repeat this step after each replica upgrade.

4.5 Completing the Infrastructure Upgrade

This section discusses the following topics:

- Delegating User Provisioning Privileges
- Applying a Oracle Application Server Portal Patch in a Non-Distributed Oracle9iAS Metadata Repository
- Preparing for the Oracle Email Upgrade
- Configuring Oracle Delegated Administrative Services for a Distributed Infrastructure
- Completing the Oracle Internet Directory Upgrade
- Completing the OracleAS Single Sign-On Upgrade
- Assigning Change Password Privilege to OracleAS Wireless
- Specifying URL Query Parameters for Wireless Services That Use the HTTP Adapter

4.5.1 Delegating User Provisioning Privileges

Perform the steps in this section only if the `orcladmin` user does not exist in the Oracle9*i*AS Infrastructure. For example, you may have chosen to delete this user after installing Release 1 (9.0.3.1) or Release 2 (9.0.4.2). By default, this user is given provisioning privileges in the upgraded Oracle Collaboration Suite 10*g* Infrastructure, but if this user does not exist, you need to assign these privileges to another user.

In Oracle Collaboration Suite 10*g* Release 1 (10.1.1), only users with user provisioning privileges can view the user provisioning controls in the Self Service Console. After the Infrastructure upgrade, delegate these privileges to some user in Oracle Internet Directory using the Oracle Directory Manager tool to create the appropriate entry.

To delegate user provisioning privileges to `orcladmin`:

1. Make sure that Oracle Internet Directory is running. See Section 8.1.3 and Section 8.1.1 for instructions.
2. Start Oracle Directory Manager.

   ```
   $ORACLE_HOME/bin/oidadmin
   ```

   When prompted, enter the user name, password, the name of the server and port where Oracle Internet Directory is running. By default, the user name is `cn=orcladmin` and the port is 389.
3. Click **Login**. The Oracle Directory Manager appears.
4. In the navigator pane on the left side, locate the `Entry Management` tree item and click the plus (+) sign next to it to view its subcomponents. Repeat this step for the `cn=OracleContext, cn=Groups` and `cn=User Provisioning Admins` tree items.
5. Select the `User Provisioning Admins` tree item. The properties panel for this item appears in the right pane.

6. Scroll down to the **uniquemember** field. Add a new line after any existing entries and enter the following text:

   ```
   cn=username,cn=Users,realmDN
   ```

   where *realmDN* is the distinguished name of the realm. For example:

   ```
   cn=admin,cn=Users,dc=us,dc=oracle,dc=com
   ```

7. Click **Apply**.
8. Exit Oracle Directory Manager by selecting **File** then **Exit**.
9. Verify that you can view the Self Service Console by accessing the following URL:

   ```
   http://hostname:port/oiddas
   ```

   For example:

   ```
   http://infra.oracle.com:7777/oiddas
   ```

10. Click **Login** and enter the user name and password.

4.5.2 Applying a Oracle Application Server Portal Patch in a Non-Distributed Oracle9*i*AS Metadata Repository

Perform the steps in this section if the following conditions apply to your configuration:

- An Oracle Collaboration Suite Release 2 (9.0.4.1) or Release 2 (9.0.4.2) middle tier configured with Oracle9*i*AS Portal.
- A single Oracle9iAS Metadata Repository database used by both Oracle Internet Directory and your middle tier applications
- Your Oracle9*i*AS Portal application needs to continue working after each stage of the upgrade process.

Apply patch 3923448 to make Oracle9*i*AS Portal compatible with Oracle Database 10*g*. The patch is located on the Supplemental DVD under Patches/Portal/db_3923448. .

4.5.3 Preparing for the Oracle Email Upgrade

Upgrading Oracle Email requires executing the Catalog Management tool (catalog.sh) in the upgraded Oracle Internet Directory. This tool creates indexes to make existing attributes available for searches.

1. Log on to the system running the Oracle Internet Directory for the Oracle Collaboration Suite 10*g* Infrastructure.
2. Make sure that the system PATH variable includes the bin directory in *DESTINATION_ORACLE_HOME* where *DESTINATION_ORACLE_HOME* is the 10*g* Release 1 (10.1.1) Oracle home configured with Oracle Internet Directory.
3. Set the ORACLE_HOME environment variable to the 10*g* Release 1 (10.1.1) Oracle home configured with Oracle Internet Directory.
4. Shut down the Oracle Internet Directory server by entering the following command:

   ```
   DESTINATION_ORACLE_HOME/opmn/bin/opmnctl stopproc ias-component=OID
   ```

5. From the destination Oracle home, enter the following commands where *connect_string* is the Oracle Collaboration Suite 10*g* Infrastructure database connect string. The script prompts you for the Oracle Internet Directory schema user (`ODS`) password.

   Note: When you upgrade Oracle Internet Directory to Oracle Application Server 10*g* Release 2 (10.1.2), the password for the Oracle Internet Directory schema (ODS) is reset to the password for the `ias_admin` password.

   Note: If you are upgrading from Release 2 (9.0.4.2), you will see the following error message after running the second command:

   ```
   Errors encountered while creating Catalog for attribute ::
   orclmailnntpoutboundpeers
   orclmailnntpoutboundpeers may already be indexed
   ```

   You can ignore this message.

```
cd $ORACLE_HOME/ldap/bin

./catalog.sh -connect connect_string -add -attr orclmailnntpinboundpeers

./catalog.sh -connect connect_string -add -attr orclmailnntpoutboundpeers

./catalog.sh -connect connect_string -add -attr
orclmailnntpdefaultsubscriptions

./catalog.sh -connect connect_string -add -attr orclmailnntpdistributions

./catalog.sh -connect connect_string -add -attr
orclmailnntpdefaultdistributions

./catalog.sh -connect connect_string -add -attr orclmailgroupeditorslist

./catalog.sh -connect connect_string -add -attr orclmailgroupmoderatorslist

./catalog.sh -connect connect_string -add -attr orclmailgroupautoreconfirmtext
```

For example, if the net service name of the database is `iasdb`, then the first command is:

```
./catalog.sh -connect iasdb -add -attr orclmailnntpinboundpeers
```

You can also use the database service name or net service alias; for example, if the service name is `iasdb.us.oracle.com`, then the first command is:

```
./catalog.sh -connect iasdb.us.oracle.com -add -attr orclmailnntpinboundpeers
```

The Catalog Management tool prompts you for the Oracle Internet Directory password:

```
This tool can only be executed if you know database user password for OiD
Enter OiD password ::
```

If the password you enter is correct and the command executes successfully, then it displays the following messages:

```
ADDING CATALOG INDEXES
This tool can only be executed if you know database user password for OiD
Enter OiD Password ::
Creating Catalog for Attribute :: orclmailnntpinboundpeers
done
```

6. Start the Oracle Internet Directory server using the `opmnctl` command:

   ```
   DESTINATION_ORACLE_HOME/opmn/bin/opmnctl startproc ias-component=OID
   ```

> **Note:** For more information about using the Catalog Management tool, see *Oracle Internet Directory Administrator's Guide*.

4.5.4 Configuring Oracle Delegated Administrative Services for a Distributed Infrastructure

The steps in this section apply to a distributed Infrastructure only. Perform these steps after upgrading the Oracle home where OracleAS Single Sign-On is configured.

To configure Oracle Delegated Administrative Services:

1. In a browser, access the Oracle Enterprise Manager on the system where OracleAS Single Sign-On is configured by entering the URL. For example:

   ```
   http://infrahost.mycompany.com:1812
   ```

2. From the Login dialog box, enter the user name and password for Oracle Enterprise Manager. The default user name is `ias_admin`.
3. From the Oracle Enterprise Manager Application Server Control page, select the upgraded OracleAS Single Sign-On instance. The Oracle Application Server instance page appears.
4. From the System Components table, click **Configure Components**.
5. From the Select Component page, select **DAS** if it is not already selected.
6. Click **Continue**.
7. From the Login page, enter the user name and password for the Oracle Internet Directory administrative user. The default user name is `cn=orcladmin`.
8. Click **Finish**. A progress message appears. When the configuration process is complete, a confirmation message appears.
9. Click **OK**.
10. From the Oracle Enterprise Manager Application Server Control page, select each component and click **Restart**.

Oracle Delegated Administrative Services is now configured for a distributed environment.

4.5.5 Completing the Oracle Internet Directory Upgrade

To complete the Oracle Internet Directory Upgrade, you must perform the following tasks:

- Running the oidpu904.sql Script to Re-Create the orclnormdn Catalog
- Running the Certificate Upgrade Tool (upgradecert.pl)

- Modifying Access Policy on the Groups Container
- Resetting the Replication Wallet Password
- Completing the Upgrade for the Oracle Directory Integration and Provisioning
- Oracle Internet Directory Post-Upgrade Steps Required for OracleAS Portal

4.5.5.1 Running the oidpu904.sql Script to Re-Create the orclnormdn Catalog

After you upgrade Oracle Internet Directory from Oracle Application Server Release 2 (9.0.2) to Oracle Application Server 10*g* (9.0.4), you must run the `oidpu904.sql` script and recreate the `orclnormdn` catalog in the Oracle Internet Directory; otherwise, some Oracle Application Server 10*g* Release 2 (10.1.2) components will not work correctly with the Oracle Internet Directory server.

Note that this procedure is not necessary if you have upgraded from Oracle Internet Directory 10*g* (9.0.4).

To perform this procedure:

1. Ensure that the ORACLE_HOME environment variable is set to destination Oracle home and the ORACLE_SID environment variable is set to the system identifier (SID) of the Infrastructure database.
2. Run following command:

   ```
   sqlplus ods/ods_password@net_service_name_for_OID_database @DESTINATION_ORACLE_HOME/ldap/admin/oidpu904.sql
   ```

   For example:

   ```
   sqlplus ods/welcome1@iasdb @DESTINATION_ORACLE_HOME/ldap/admin/oidpu904.sql
   ```

   Note: When you upgrade Oracle Internet Directory to Oracle Application Server 10*g* Release 2 (10.1.2), the password for the Oracle Internet Directory schema (ODS) is reset to the password for the `ias_admin` password.

3. Re-create the index for the `orclnormdn` attribute by executing the `catalog.sh` script, which drops and re-creates the catalog for the `orclnormdn` attribute.
   a. Ensure that the Oracle Internet Directory server is operating in read-only mode. See Section 4.5.5.1.1 for instructions.
   b. Run the Catalog Management Tool to re-create the index for the `orclnormdn` attribute:

      ```
      DESTINATION_ORACLE_HOME/ldap/bin/catalog.sh -connect oid_database_net_service_name -delete -attr orclnormdn

      DESTINATION_ORACLE_HOME/ldap/bin/catalog.sh -connect oid_database_net_service_name -add -attr orclnormdn
      ```

4. Reset the Oracle Internet Directory server to operate in read-write mode. See Section 4.5.5.1.1 for instructions.

4.5.5.1.1 Changing the Oracle Internet Directory Server Mode

To change the server mode:

1. Create an LDIF file containing the following entries:

```
Dn:
Changetype: modify
Replace: orclservermode
Orclservermode: mode
```

where *mode* is either `r` for read-only mode or `rw` for read-write mode.

2. Enter the following command from the upgraded Oracle Collaboration Suite 10*g* Infrastructure Oracle home bin directory:

```
ldapmodify -D "cn=orcladmin" -w administrator_password \
           -h hostname -p port -f name_of_LDIF_file
```

> **See Also:** *Oracle Internet Directory Administrator's Guide*, for instructions on how to make the server operate in read or read-write mode.

4.5.5.2 Running the Certificate Upgrade Tool (upgradecert.pl)

Starting with Oracle Application Server 10*g* Release 2 (10.1.2), a certificate hash value can be used to bind to Oracle Internet Directory. The introduction of this hash value requires that user certificates issued before release 10.1.2 be updated in the directory. This is a post-upgrade step and it is required only if user certificates are provisioned in the directory. The `upgradecert.pl` tool is used for this purpose.

Complete instructions for running the Certificate Upgrade Tool are available in Appendix A, "Syntax for LDIF and Command-Line Tools," in the *Oracle Internet Directory Administrator's Guide*.

4.5.5.3 Modifying Access Policy on the Groups Container

The upgrade process for Oracle Internet Directory cannot modify the Access Control List (ACL) policies on the public groups container. The default ACL policies on this container may have been changed to suit the security needs of your deployment environment. Hence, after upgrading, you should combine the existing policies with the new 10*g* (10.1.2) default policies and apply them on the public groups container.

The ACL policy required is described in the Oracle Internet Directory Administrator's Guide, in Chapter 17 in the section on "Default Privileges for Reading Common Group Attributes". The policy should allow members of the group `cn=Common Group Attributes, cn=groups, Oracle_Context_DN` browse, search, and read access on private and public groups, that is on groups where `orclIsVisible` is either not set or is set to `TRUE` or `FALSE`.

4.5.5.4 Resetting the Replication Wallet Password

If you upgrade a 9.0.x node to 10*g* (10.1.2) and then try to set up replication for this node, the replication server will fail to come up and the replication setup itself may fail. Therefore, before setting up replication, reset the replication wallet password on the upgraded 10*g* (10.1.2) node by using the following command:

```
DESTINATION_ORACLE_HOME/bin/remtool -presetpwd -v -bind host:port
```

This step ensures that the upgrade node can be configured in replication, if required.

4.5.5.5 Completing the Upgrade for the Oracle Directory Integration and Provisioning

If you had an older version (9.0.2 or 9.0.4) of the Directory Integration Platform (DIP) operating in a different Oracle home, on a different computer, and using the Oracle Internet Directory you are currently upgrading, and you want to continue using the DIP, you must re-register the DIP server.

> **See Also:** *Oracle Identity Management Integration Guide* for instructions on registering the DIP server.

4.5.5.6 Oracle Internet Directory Post-Upgrade Steps Required for OracleAS Portal

The following post-upgrade steps are required if you have configured OracleAS Portal against this Identity Management and Oracle Internet Directory was upgraded directly from Release 2 (9.0.2):

- Apply Interoperability Patches for Oracle9iAS Portal Release 2 (9.0.2)
- Reconfigure the OracleAS Portal Instances for the Oracle Internet Directory Server
- Refresh the Oracle Delegated Administrative Services (DAS) URL Cache

4.5.5.6.1 Apply Interoperability Patches for Oracle9*i*AS Portal Release 2 (9.0.2) If Oracle Internet Directory was upgraded directly from Release 2 (9.0.2), and you are operating Oracle9iAS Portal Release 2 (9.0.2 or 9.0.2.3), an interoperability patch must be applied to the Oracle9*i*AS repository, as explained below. This step can be skipped if the Oracle9*i*AS Portal version is 9.0.2.6 or later:

- **If you are operating Portal version 9.0.2.0 or 9.0.2.2 (Oracle9iAS 9.0.2.0.1):** You must apply Patch `3238095`, which corrects problems with registering users and groups in Oracle9*i*AS Release 2 (9.0.2) Identity Management configuration, and resolves interoperability issues.
- **If you are operating Portal 9.0.2.3 (Oracle9iAS 9.0.2.3)**: You must apply Patch `3076511` to resolve interoperability issues.

To apply the patches:

1. Log in to Oracle MetaLink at:

   `http://metalink.oracle.com`

2. Locate the patch specified for the Portal version you are operating.
3. Follow the instructions in the patch Readme file.

4.5.5.6.2 Reconfigure the OracleAS Portal Instances for the Oracle Internet Directory Server If Oracle Internet Directory was upgraded directly from Oracle Application Server Release 2 (9.0.2), and if there are any OracleAS Portal instances using the upgraded Oracle Internet Directory server, they should be reconfigured. Follow these steps to reconfigure OracleAS Portal from a middle tier whose version is 10g (10.1.2):

1. Change directory to the following location in the destination middle tier Oracle home:

   DESTINATION_ORACLE_HOME`/portal/conf`

2. Run the following command:

   `ptlconfig -dad` *`portal_DAD`* `-oid`

> **See Also:** *Oracle Application Server Portal Configuration Guide*

If the version of your middle-tier is lower than 10.1.2, you must use the Oracle Portal Configuration Assistant command line utility `ptlasst` to reconfigure OracleAS Portal instances to work with Oracle Internet Directory. Refer to the appropriate version of the *Oracle Application Server Portal Configuration Guide* for instructions on how to use ptlasst.

4.5.5.6.3 Refresh the Oracle Delegated Administrative Services (DAS) URL Cache

The URLs for the Delegated Administration Services are different in Oracle9*i*AS Release 2 (9.0.2) Oracle Internet Directory server and the Oracle Application Server 10*g* (10.1.2) Oracle Internet Directory server. When the Oracle Internet Directory server is upgraded, these URLs are updated to the correct values. However, OracleAS Portal maintains a cache of these URLs, which does not get upgraded, and is therefore inconsistent with the set of URLs in 10*g* (10.1.2).

If Oracle Internet Directory was upgraded directly from Release 2 (9.0.2), the DAS URL cache will have to be refreshed. The procedure for refreshing the cache is dependent on the OracleAS Portal version you have. To refresh the cache, follow the steps in one of the sections below:

To refresh the URL cache in Version 9.0.2.6 or later:

1. Log in to the Portal as a Portal administrator.
2. Click the **Administer** tab.
3. Click the **Global Settings** link in the **Services** portlet.
4. Click the **SSO/OID** tab.
5. Note the values that appear under the section **Cache for OID Parameters**.
6. Click the check box next to **Refresh Cache for OID Parameters**.
7. Click **Apply**.
8. Verify that the values displayed under **Cache for OID Parameters** have changed.
9. Click **OK**.

To refresh the URL cache in versions prior to 9.0.2.6:

1. Apply the one-off patch 3225970. This patch is available at:

   `http://metalink.oracle.com`.
2. Clear the Web Cache by performing these steps:
   a. Log in to the Portal as a Portal Administrator.
   b. Click the **Administer** tab.
   c. Click the **Global Settings** link in the **Services** portlet.
   d. Click the **Cache** tab.
   e. Click the check box next to **Clear the Entire Web Cache**.
   f. Click **OK**.
3. Clear the middle tier cache by performing a recursive delete of all the files and subdirectories inside the following directory:

   DESTINATION_ORACLE_HOME`/Apache/modplsql/cache`

4.5.6 Completing the OracleAS Single Sign-On Upgrade

To complete the OracleAS Single Sign-On upgrade, depending on the configuration upgraded, you may need to perform the tasks described in the following sections:

- Reconfiguring the OracleAS Single Sign-On Middle Tier
- Configuring Third-party Authentication
- Installing Customized Pages in the Upgraded Server
- Converting External Application IDs
- Setting Up OracleAS Single Sign-On Replication
- Upgrading the OracleAS Single Sign-On Server with a Customized Middle Tier
- Troubleshooting Wireless Voice Authentication
- Installing Languages in the OracleAS Single Sign-On Server
- Reregistering OracleAS Portal with the Upgraded OracleAS Single Sign-On Server
- Reregistering mod_osso with the Upgraded OracleAS Single Sign-On Server
- Using an Upgraded Identity Management Configuration with Oracle9iAS Discoverer Release 2 (9.0.2)
- Inactivity Timeout Issues When Upgrading From Release 2 (9.0.2) to 10g (10.1.2)

4.5.6.1 Reconfiguring the OracleAS Single Sign-On Middle Tier

If the Release 2 (9.0.2) or 10*g* (9.0.4) middle tier for the Single Sign-On server had custom configurations (for example, Oracle HTTP Server configured for SSL, or the OracleAS Single Sign-On server Database Access Descriptor had any custom configuration), then you must reconfigure the upgraded 10*g* (10.1.2) middle tier in a like manner.

> **See Also:** *Oracle Application Server Single Sign-On Administrator's Guide*, Chapter 9, for instructions on configuring the middle tier.

4.5.6.2 Configuring Third-party Authentication

If the Release 2 (9.0.2) or 10*g* (9.0.4) middle tier was configured to authenticate with a user certificate or third party authentication mechanism, then you must re-configure the 10*g* (10.1.2) OracleAS Single Sign-On server in a like manner.

> **See Also:** *Oracle Application Server Single Sign-On Administrator's Guide*, Chapter 13, for instructions on configuring the middle tier.

4.5.6.3 Installing Customized Pages in the Upgraded Server

If you have customized the login, password and the sign-off pages in the Release 2 (9.0.2) or 10g (9.0.4) Single Sign-On server, then you must update those pages with 10g Release 2 (10.1.2) specifications. This is also applicable if you have enabled support for Application Service Providers and updated the deployment login page to enable the company field.

> **See Also:** *Oracle Application Server Single Sign-On Administrator's Guide*, Chapter 12, for instructions on configuring the middle tier.

4.5.6.4 Converting External Application IDs

> **Note:** You do not need to perform this task if you upgraded from an OracleAS Single Sign-On version of 9.0.2.5 or later.
>
> You can verify the version of OracleAS Single Sign-On you are running by running the following SQL statement against the OracleAS Single Sign-On database:
>
> ```
> select version from orasso.wwc_version$;
> ```
>
> It should return a value like 9.0.2.5.x.

To avoid ID conflicts while exporting and importing external application data among multiple OracleAS Single Sign-On server instances, external application IDs must be unique. In the Release 2 (9.0.2) release, external application IDs were sequential, and not unique across instances. If you are upgrading from Release 2 (9.0.2) directly to 10*g* (10.1.2), then you must convert existing short external application IDs to the longer format in the OracleAS Single Sign-On schema. Follow the steps below to convert the IDs:

1. Set the ORACLE_HOME environment variable to the Oracle home of the OracleAS Single Sign-On instance.
2. Execute the following script from the OracleAS Single Sign-On Oracle home, by using the following commands:

   ```
   sqlplus orasso/password
   spool extappid.log
   @?/sso/admin/plsql/sso/ssoupeid.sql
   spool off
   ```

   > **See Also:** "Obtaining the Single Sign-On Schema Password" in the *Oracle Application Server Single Sign-On Administrator's Guide*

   > **Note:** The `ssoupeid.sql` script generates and displays the SSO_IDENTIFIER. You might need the `SSO_IDENTIFIER` value to apply the patches to the OracleAS Portal schema if the value cannot be generated in the OracleAS Portal schema automatically or if the OracleAS Single Sign-On server used a randomly selected value for the SSO_IDENTIFIER.

3. If you are not upgrading OracleAS Portal to 10g Release 2 (10.1.2), but you have upgraded OracleAS Single Sign-On from Release 2 (9.0.2) directly to 10g Release 2 (10.1.2), you must apply a patch to each OracleAS Portal instance that is not going to be upgraded to 10g Release 2 (10.1.2).

   Refer to Table 4–5 for the appropriate patch number. Patches are available at:

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

Table 4–5 OracleAS Portal Patches for Converting to Long Format Application IDs

OracleAS Portal Version	Patch Number
3.0.9.8.4	2769007
3.0.9.8.5	2665597

Table 4–5 (Cont.) OracleAS Portal Patches for Converting to Long Format Application

OracleAS Portal Version	Patch Number
9.0.2, 9.0.2.3	2665607
9.0.2.6	4029584
9.0.4	4037687
9.0.4.1	4029587

4.5.6.5 Setting Up OracleAS Single Sign-On Replication

If you are using Oracle Internet Directory replication and want to also use OracleAS Single Sign-On replication, add the upgraded 10*g* (10.1.2) tables in the replication group along with 9.0.4 Oracle Internet Directory. Follow the steps below to add OracleAS Single Sign-On tables for replication:

1. Stop the Oracle Internet Directory replication server on all replicas of the Directory Replication Group.
2. On the Master Directory replica, in ORACLE_HOME/ldap/admin, issue the following command:

   ```
   sqlplus repadmin/password@<mds connect id> @oidrssou.sql
   ```

3. Start the Oracle Internet Directory replication server on all replicas of the Directory Replication Group.

> **See Also:** Oracle Internet Directory Administrator's Guide, Chapter 25, "Managing Directory Replication", for instructions.

4.5.6.6 Upgrading the OracleAS Single Sign-On Server with a Customized Middle Tier

If the Release 2 (9.0.2) or 10*g* (9.0.4) OracleAS Single Sign-On server was using a middle tier other than the default mid-tier installation along with the OracleAS Single Sign-On server, then you must configure that middle tier to point to the upgraded OracleAS Single Sign-On server.

For example, if there was a reverse proxy configured in the Release 2 (9.0.2) or 10*g* (9.0.4) OracleAS Single Sign-On server middle tier, then you must configure it on the 10*g* (10.1.2) OracleAS Single Sign-On server middle tier.

4.5.6.7 Troubleshooting Wireless Voice Authentication

If you want to use wireless voice authentication with the 10*g* (10.1.2) OracleAS Single Sign-On server, and it doesn't work, verify that the OracleAS Single Sign-On server entry is a member of the Verifier Services Group in Oracle Internet Directory (`cn=verifierServices,cn=Groups,cn=OracleContext`). This is a requirement for the wireless voice authentication feature. Follow the steps below to verify membership:

1. Issue the following command:

   ```
   ldapsearch -h <host> -p <port> -D "cn=orcladmin" -w
   <password> -b "cn=verifierServices, cn=Groups,
   cn=OracleContext" "objectclass=*"
   ```

   The OracleAS Single Sign-On server is a member of the Verifier Services Group if it is listed as a `uniquemember` in the entry, as shown in Example 4–3.

Example 4–3 OracleAS Single Sign-On Server uniquemember Listing

```
cn=verifierServices, cn=Groups,cn=OracleContext
.
.
.
uniquemember=orclApplication
CommonName=ORASSO_SSOSERVER,cn=SSO,cn=Products,cn=OracleContext
.
.
.
```

4.5.6.8 Installing Languages in the OracleAS Single Sign-On Server

If you did not select any languages during the OracleAS Single Sign-On upgrade, or you want to install additional languages after the upgrade, you can install the necessary languages by following the steps below.

1. Copy the necessary language files from the Repository Creation Assistant CD-ROM to the OracleAS Single Sign-On server Oracle home:

   ```
   copy repCA_CD/portal/admin/plsql/nlsres/ctl/lang\*.* DESTINATION_ORACLE_
   HOME/sso/nlsres/ctl/lang
   ```

   In this example, *lang* is the language code. For example, the language code for Japanese is `ja`.

2. Load the languages into the server.

   > **See Also:** *Oracle Application Server Single Sign-On Administrator's Guide*, Chapter 2, "Configuring Globalization Support" section, for instructions on loading the languages.

4.5.6.9 Reregistering OracleAS Portal with the Upgraded OracleAS Single Sign-On Server

After performing a distributed Oracle9*i*AS Infrastructure upgrade (depicted in Figure 4–2) from Oracle9*i*AS Release 2 (9.0.2) to Oracle Application Server 10*g* Release 2 (10.1.2), the OracleAS Single Sign-On schemas are relocated in the Oracle Internet Directory database. OracleAS Portal keeps a database link reference to the OracleAS Single Sign-On server password store schema `ORASSO_PS`. This link reference must be updated.

To re-register OracleAS Portal with the upgraded OracleAS Single Sign-On server from a middle tier whose version is 10g (10.1.2):

1. Change directory to the following location in the destination middle tier Oracle home:

   ```
   DESTINATION_ORACLE_HOME/portal/conf
   ```

2. Run the following command:

   ```
   ptlconfig -dad portal_DAD -sso
   ```

   > **See Also:** *Oracle Application Server Portal Configuration Guide*, for more information about the `ptlconfig` tool

If the version of your middle-tier is lower than 10.1.2, you must use the Oracle Portal Configuration Assistant command line utility `ptlasst` to reregister OracleAS Portal with Oracle Single Sign-On. Refer to the appropriate version of the *Oracle Application Server Portal Configuration Guide* for instructions on how to use `ptlasst`.

4.5.6.10 Reregistering mod_osso with the Upgraded OracleAS Single Sign-On Server

After performing a distributed Identity Management upgrade (depicted in Figure 4–2) from Oracle9*i*AS Release 2 (9.0.2) to Oracle Application Server 10*g* Release 2 (10.1.2) , you may need to re-register `mod_osso` in order for an Oracle9*i*AS Release 2 (9.0.2) middle tier to operate with the upgraded OracleAS Single Sign-On server.

You will need to do this if the Oracle HTTP Server host and port information for `mod_osso` was changed. Before re-registering `mod_osso`, you must first set the value of the `ColocatedDBCommonName` attribute in the following configuration file to the global database name of the new OracleAS Single Sign-On server database shared with Oracle Internet Directory (for example, `iasdb.host.mydomain`).

SOURCE_ORACLE_HOME`/config/ias.properties`

4.5.6.11 Using an Upgraded Identity Management Configuration with Oracle9*i*AS Discoverer Release 2 (9.0.2)

If you upgraded an Identity Management configuration that was in use by Oracle9*i*AS Discoverer Release 2 (9.0.2), and you want to continue operating Oracle9*i*AS Discoverer Release 2 (9.0.2) with the upgraded Identity Management, then you must change the value of the `ColocatedDBCommonName` attribute in the following configuration file:

SOURCE_ORACLE_HOME`/config/ias.properties`

The value must be changed to the global database name of the database used by the upgraded Oracle Internet Directory (for example, `iasdb.oid_host_name.domain`).

4.5.6.12 Inactivity Timeout Issues When Upgrading From Release 2 (9.0.2) to 10*g* (10.1.2)

If you are upgrading OracleAS Single Sign-On server from Release 2 (9.0.2) to 10*g* (10.1.2) and you are using the inactivity timeout feature, then you must do the following:

1. Upgrade associated mid-tiers used by other applications, such as Portal, to 10*g* (10.1.2).
2. Re-register `mod_osso` to ensure that inactivity timeout cookie issued by 10*g* (10.1.2) OracleAS Single Sign-On server can be interpreted and used by associated mid-tiers to enforce inactivity timeout.

4.5.7 Assigning Change Password Privilege to OracleAS Wireless

In Oracle Application Server 10*g* Release 2 (10.1.2), by default, the OracleAS Wireless application entity does not have the privileges to change the user password. Consequently, upon installation, users cannot change the password to the OracleAS Wireless server. However, you can enable functionality to change passwords by assigning the `UserSecurityAdmins` privilege to the OracleAS Wireless application entity.

To do this, execute the following script:

DESTINATION_ORACLE_HOME`/wireless/bin/assignUserSecurityAdminsPrivilege.sh`

The syntax is:

`assignUserSecurityAminsPrivilege.sh` *`oid_super_user_dn user_password`*

In this example:

- *oid_super user_dn* is the Distinguished Name of the Oracle Internet Directory super user. This user should have privileges to grant UserSecurityAdmins privileges to application entities.
- *user_password* is the password of the Oracle Internet Directory super user.

For example:

```
assignUserSecurityAdminsPrivilege.sh "cn=orcladmin" welcome1
```

> **See Also:** "Resetting the Password" in *Oracle Application Server Wireless Administrator's Guide*

4.5.8 Specifying URL Query Parameters for Wireless Services That Use the HTTP Adapter

When you use the HTTP adapter to build Wireless services, one of the service parameters that you must specify is the URL to a back-end application. In some cases, you may send some query parameters to the back-end application. There are two ways to do this from OracleAS Wireless, shown in Example 4–4 and Example 4–5. In Example 4–4, the parameter name is `fn` and the value is `Joe`.

Example 4–4 URL Using a Query Parameter

```
http://localhost:7777/myapp/home.jsp?fn=Joe
```

The query parameter is sent only in the request for the first page of that service. If there is a link from the first page to some other pages, then the parameter is not added to the request for those pages.

Example 4–5 URL Using an Extra Service Parameter

```
http://localhost:7777/myapp/home.jsp
```

Instead of modifying the URL, you add an extra service parameter with name `fn` and value `Joe`. The the parameter is sent to all pages, not just the first one. The parameter is also sent with all HTTP redirect requests. However, this method also sends extra URL parameters to the OracleAS Single Sign-On server, which causes the server to return an error.

The error occurs when the back-end application is protected by mod_osso. In that case, the request to that application is intercepted and redirected to the Oracle SSO server for user authentication. The OracleAS Single Sign-On server has restrictive rules concerning query parameters that can be sent to it. Consequently, for back-end applications protected by mod_osso, you must change the Wireless service and add the query parameter to the URL as shown in Example 4–4.

4.6 Verifying the Upgrade to Oracle Collaboration Suite 10*g* Infrastructure

This sections contains information about the following topics:

- Executing the utlrp.sql Utility
- Checking for Invalid Database Objects
- Verifying the Upgrade of OracleAS Single Sign-On
- Verifying the Upgrade of Delegated Administrative Services

- Verifying the Upgrade of Oracle Internet Directory
- Starting the Information Storage Database and Oracle Collaboration Suite Middle Tier Instances

4.6.1 Executing the utlrp.sql Utility

The `utlrp.sql` utility is a PL/SQL procedure that recompiles all PL/SQL packages that may have been invalidated during the upgrade.

To run the `utlrp.sql` utility:

1. Ensure that the upgraded OracleAS Metadata Repository database is running. For more information, see Section 8.1.1.
2. Ensure that the `ORACLE_HOME` environment variable is set to the Oracle Collaboration Suite 10*g* Infrastructure Oracle home and the `ORACLE_SID` environment variable is set to the Oracle Collaboration Suite 10*g* Infrastructure database `SID`.
3. Connect to the database in the destination Oracle Collaboration Suite Infrastructure Oracle home as `SYS as SYSDBA` in single user mode.
4. Enter the following command at the SQL*Plus prompt:

```
@?/rdbms/admin/utlrp.sql
```

4.6.2 Checking for Invalid Database Objects

To ensure that none of the database objects that are required by Oracle Collaboration Suite are invalid:

1. Enter the following command at the SQL*Plus prompt:

```
SELECT owner, object_type, object_name
FROM all_objects
WHERE status='INVALID';
```

The query should not return any database objects that have an Oracle Application Server component schema (such as PORTAL and WIRELESS) in the 'owner' column.

4.6.3 Verifying the Upgrade of OracleAS Single Sign-On

Verify that the upgrade of OracleAS Single Sign-On was successful by logging into the OracleAS Single Sign-On administration page.

To access the OracleAS Single Sign-On administration page:

1. In a browser, access the Oracle Enterprise Manager in the destination Oracle Collaboration Suite Infrastructure Oracle home by entering its URL. Ensure that you provide the correct host name and port number. For example:

   ```
   http://infrahost.mycompany.com:1156
   ```

   The Oracle Enterprise Manager page appears, with the Oracle Identity Management instance in the Standalone Instances section.
2. Click the Oracle Identity Management instance link.

   The System Components page appears.
3. Verify that the status of the Oracle HTTP Server, Oracle Internet Directory, and OracleAS Single Sign-On components is Up.

4. In the browser, access the ORASSO page by entering its URL. Ensure that you enter the correct host name and port number for the upgraded Oracle HTTP Server. For example:

   ```
   http://infrahost.mycompany.com:7777/pls/orasso/ORASSO.home
   ```

   The ORASSO page appears.

5. Click the Login link.

   A page appears with User Name and Password fields.

6. In the User Name field, enter `orcladmin`. In the Password field, enter the password for `orcladmin`.

7. Click Login.

   The OracleAS Single Sign-On Server Administration page appears, validating the basic operation of the upgraded Oracle Identity Management components.

4.6.4 Verifying the Upgrade of Delegated Administrative Services

Verify that you can access the Oracle Delegated Administrative Services and that it is working.

To access Oracle Delegated Administrative Services:

1. In a browser, access the Oracle Delegated Administrative Services in the destination Oracle Collaboration Suite Infrastructure Oracle home by entering its URL. Ensure that you provide the correct host name and port number. They are the same as those used in the previous version. For example:

   ```
   http://infrahost.mycompany.com:7777/oiddas
   ```

2. In the Directory Administrative Services page, create a new user.

3. Log in as the new user.

4.6.5 Verifying the Upgrade of Oracle Internet Directory

To verify that you can access the Oracle Internet Directory instance using the Oracle Internet Directory Manager:

1. Verify that the Oracle Internet Directory server is running. For more information, see Section 8.1.3.

2. Start the Oracle Internet Directory Manager. Enter the following command:

   DESTINATION_ORACLE_HOME`/bin/oidadmin`

   where *DESTINATION_ORACLE_HOME* is the location of the upgraded Oracle Collaboration Suite 10*g* Infrastructure.

   Enter the host name and port of the upgraded Oracle Internet Directory if prompted.

4.6.6 Starting the Information Storage Database and Oracle Collaboration Suite Middle Tier Instances

Start the Oracle Collaboration Suite information storage database and Oracle Collaboration Suite middle tier instances and verify that the middle tier applications are working correctly. Any exceptions are noted in Section 1.5. For

information on starting Oracle Collaboration Suite information storage database and Oracle Collaboration Suite middle tier instances, see Chapter 8.

4.7 Decommissioning the Source Oracle Home

After verifying that the upgrade to Oracle Collaboration Suite 10*g* Release 1 (10.1.1) is successful, you can decommission the source Oracle home. Decomissioning the source Oracle home involves the following procedures:

- Relocating Data, Control, and Log Files
- Backing Up the Set Up Information File in Source Oracle Home
- Deinstalling a Source Oracle Home
- Deleting the Source Oracle Home

> **WARNING:** **If you have all three Oracle Collaboration Suite components installed on a single system, then do not deinstall or delete the source Oracle home before completing the entire upgrade. The middle tier upgrade process uses files from the existing Oracle9*i*AS Infrastructure so you should not uninstall this component before completing the entire upgrade.**

4.7.1 Relocating Data, Control, and Log Files

After you complete the Oracle Identity Management upgrade, the database files remain in the original location. By default, this location is the source Oracle home. If you decide to deinstall the source Oracle home, these database files remain there unless you take steps to relocate them. It is a good idea to relocate the files to a location outside of the source Oracle home as a safeguard against inadvertently deleting them. In addition, there may be performance benefits to moving the database files outside of the source Oracle home.

This procedure is intended to be performed by a database administrator, and is described in greater detail in the *Oracle Collaboration Suite Administrator's Guide*.

To relocate data, control, and log files:

1. Create a directory for the relocated files in a location that is separate from the source Oracle home.
2. Relocate all datafiles, log files and control files to the directory created in Step 1.

> **See Also:** "Renaming and Relocating OracleAS Metadata Repository Datafiles" in Chapter 6 in *Oracle Collaboration Suite Administrator's Guide* .

3. Relocate all log files to the directory created in Step 1.

> **See Also:** "Relocating and Renaming Redo Log Members" in Chapter 6 of *Oracle Database Administrator's Guide* for instructions.

4. Relocate all control files to the directory created in Step 1.

See Also: "Creating Additional Copies, Renaming, and Relocating Control Files" in Chapter 5 of *Oracle Database Administrator's Guide* for instructions.

4.7.2 Backing Up the Set Up Information File in Source Oracle Home

During the upgrade to 10*g* Release 1 (10.1.1), a new set up information file is created in *DESTINATION_ORACLE_HOME*/install/setupinfo.txt. However, this file only lists the URLs and ports that were modified during the upgrade, such as the URL for Oracle Enterprise Manager 10*g*. The URLs and ports preserved by the upgrade are only stored in *SOURCE_ORACLE_HOME*/install/setupinfo.txt. Therefore, move this file to a new location before you delete the source Oracle home directory structure.

4.7.3 Deinstalling a Source Oracle Home

When you are certain that the upgrade was successful, you have all of the necessary backups, and you have no plans to revert to the source Oracle home, you may elect to deinstall the instance in the source Oracle home. Use the Oracle Universal Installer to deinstall the instance.

However, deinstalling an instance from a previous release when there is also an Oracle Collaboration Suite 10*g* Release 1 (10.1.1) instance on the computer requires a patch. Before you begin deinstalling an instance, review and perform the required steps the following sections:

- Deinstallation of Release 1 (9.0.3.1) or Release 2 (9.0.4.2) Instances from a Computer that Also Contains 10g Release 1 (10.1.1) Instances
- Issue: 10g Release 1 (10.1.1) Instance Must Not Contain the Active Oracle Enterprise Manager
- If a 10g Release 1 (10.1.1) Instance Becomes the Active Oracle Enterprise Manager

See Also: *Oracle Collaboration Suite Installation and Configuration Guide* in the Release 1 (9.0.3.1) or Release 2 (9.0.4.2) documentation library for instructions on deinstalling the instance.

4.7.3.1 Deinstallation of Release 1 (9.0.3.1) or Release 2 (9.0.4.2) Instances from a Computer that Also Contains 10*g* Release 1 (10.1.1) Instances

If you want to deinstall a Release 1 (9.0.3.1) or Release 2 (9.0.4.2) instance, perform these steps:

1. Apply patch 3234681 to your Release 1 (9.0.3.1) or Release 2 (9.0.4.2) instances. You can download the patch from Oracle*MetaLink* (`http://metalink.oracle.com`).

   See Section 4.7.3.2 for details on why you need this patch.

2. Stop all processes associated with the instance you want to deinstall.

3. Run the installer to deinstall the 9.0.3.1 or 9.0.4.2 instance. Make sure you run the version of Oracle Universal Installer that was used to install the Release 1 (9.0.3.1) or Release 2 (9.0.4.2) instance.

   The installer you need to use is located in the `oui/install` directory at the same level as the Oracle home directory. For example, if the Release 1 (9.0.3.1) or Release 2 (9.0.4.2) Oracle home is `/opt/oracle/orahome902`, then the installer would be `/opt/oracle/oui/install/runInstaller`.

4.7.3.2 Issue: 10*g* Release 1 (10.1.1) Instance Must Not Contain the Active Oracle Enterprise Manager

If you have multiple Release 1 (9.0.3.1) or Release 2 (9.0.4.2) instances on the same computer, these instances share an Oracle Enterprise Manager. This is the "active Oracle Enterprise Manager". When you deinstall the instance that contains the active Oracle Enterprise Manager using the installer, the installer needs to switch the active Oracle Enterprise Manager to one of the remaining instances. If there is only one remaining instance, then the installer automatically makes it the active Oracle Enterprise Manager. If more than one instance remain, the installer prompts you to select the instance to contain the active Oracle Enterprise Manager.

Unlike Release 1 (9.0.3.1) or Release 2 (9.0.4.2) instances, Oracle Collaboration Suite 10*g* Release 1 (10.1.1) instances on the same computer do not share an Oracle Enterprise Manager. Each 10*g* Release 1 (10.1.1) instance has its own Oracle Enterprise Manager.

Because 10*g* Release 1 (10.1.1) instances do not share an Oracle Enterprise Manager, do not select a 10*g* Release 1 (10.1.1) instance to contain the active Oracle Enterprise Manager. You must select a Release 1 (9.0.3.1) or Release 2 (9.0.4.2) instance to contain the active Oracle Enterprise Manager.

If you select a 10*g* Release 1 (10.1.1) instance, or if the installer automatically switches the active Oracle Enterprise Manager to a remaining instance that happens to be a 10*g* Release 1 (10.1.1) instance, the installer overwrites files in the 10*g* Release 1 (10.1.1) Oracle home with files from the Release 1 (9.0.3.1) or Release 2 (9.0.4.2) home. This causes Oracle Enterprise Manager to stop working.

The patch described in Section 4.7.3.1 prevents the installer from automatically switching the active Oracle Enterprise Manager to a 10*g* Release 1 (10.1.1) instance in the case where the only remaining instances are 10*g* Release 1 (10.1.1) instances. It also prevents the installer from displaying 10*g* Release 1 (10.1.1) instances in the list where you select the instance to contain the active Oracle Enterprise Manager.

4.7.3.3 If a 10*g* Release 1 (10.1.1) Instance Becomes the Active Oracle Enterprise Manager

If a 10*g* Release 1 (10.1.1) instance becomes the active Oracle Enterprise Manager, Oracle Enterprise Manager will stop working.

To fix this, perform these steps in the 10*g* Release 1 (10.1.1) Oracle home:

1. Shut down the Oracle Enterprise Manager Application Server Control:

   ```
   DESTINATION_ORACLE_HOME/bin/emctl stop iasconsole
   ```

2. Rename the following files. Do not delete the files, because you might need them in step 5. You can rename them with an "`active`" suffix (for example, `iasadmin.properties.active`):

   ```
   DESTINATION_ORACLE_HOME/sysman/config/iasadmin.properties
   DESTINATION_ORACLE_HOME/sysman/emd/targets.xml
   DESTINATION_ORACLE_HOME/sysman/j2ee/config/jazn-data.xml
   DESTINATION_ORACLE_HOME/sysman/webapps/emd/WEB-INF/config/consoleConfig.xml
   ```

3. Copy the backup files for the files listed in the preceding step.

   The backup files are in the same directory as the listed files. The names of the backup files are suffixed with a digit such as `iasadmin.properties.1`. Check the timestamp or the content of the backup files to determine the most recent backup file.

4. Start the Oracle Enterprise Manager Application Server Control.

```
DESTINATION_ORACLE_HOME/bin/emctl start iasconsole
```

5. If you have remaining Release 1 (9.0.3.1) or Release 2 (9.0.4.2) instances on the computer, you need to designate one of them to contain the active Oracle Enterprise Manager.
   a. Copy the files listed in step 2 (which you renamed with the `active` suffix) to the Release 1 (9.0.3.1) or Release 2 (9.0.4.2) instance Oracle home. Rename them back to the original names by removing the `active` suffix.
   b. Edit `/var/opt/oracle/emtab` (or `/etc/emtab` on some UNIX platforms) to set the `DEFAULT` property to refer to the new active Oracle Enterprise Manager Web site.

4.7.4 Deleting the Source Oracle Home

After you relocate the database files and deinstall the software in the source Oracle home, then you may safely delete the entire source Oracle home directory tree.

5

Upgrading the Oracle Collaboration Suite Database

This chapter guides the reader through the steps for upgrading Oracle Collaboration Suite information storage databases. You can use the procedures here to upgrade your Oracle Collaboration Suite information storage databases. The chapter contains information about the following topics:

- Preparing to Upgrade the Information Storage Database
- Upgrading the Oracle Collaboration Suite Information Storage Database
- Enabling an Existing Customer Oracle Database 10g to be an Oracle Collaboration Suite Database
- Completing the Upgrade to Oracle Collaboration Suite 10g Database
- Verifying the Upgrade to Oracle Collaboration Suite 10g Database
- Additional Information About Selecting Install and Upgrade Options

5.1 Preparing to Upgrade the Information Storage Database

This section contains the following topics:

- Backing Up the Information Storage Database
- Specifying a Directory for the Oracle Collaboration Suite 10g Content Services Datafiles

5.1.1 Backing Up the Information Storage Database

Oracle strongly recommends that you back up your database before the upgrade. If errors occur during the upgrade, then you may need to restore the database from the backup.

See Also: *Oracle Database Backup and Recovery Basics*

5.1.2 Specifying a Directory for the Oracle Collaboration Suite 10*g* Content Services Datafiles

This step is required, even if you do not have Oracle Files configured. If you do not perform this step, then some configuration assistants will fail during the upgrade.

To specify a directory for the Oracle Content Services datafiles:

1. Log in to the Oracle Collaboration Suite information storage database being upgraded.
2. Enter the following command:

   ```
   alter system set DB_CREATE_FILE_DEST='path' scope=spfile;
   ```

   where *path* is the absolute path to the directory where you want to create the datafiles.
3. Restart the database. See Section 8.2 for instructions.

During the upgrade, the datafiles are written to the directory specified by *path*.

5.1.3 Checking the Oracle Email Text Index

Determine whether the text index is empty by logging in to the information storage database as the `es_mail` user and running the following query:

```
select count(1) from es_imt_msgbody;
```

If the result is greater than 0, then the index is not empty. After the Oracle Collaboration Suite information storage database upgrade, perform the steps in Section 5.5.4.

5.2 Upgrading the Oracle Collaboration Suite Information Storage Database

To upgrade an Oracle Collaboration Suite information storage database, install Oracle Collaboration Suite Database 10g (10.1.1) in a new Oracle home and then run the Database Upgrade Assistant to perform the upgrade. The steps to upgrade are described in the following sections:

- Installing the Oracle Collaboration Suite 10g Database
- Performing the Information Storage Database Upgrade

5.2.1 Installing the Oracle Collaboration Suite 10*g* Database

To install Oracle Collaboration Suite 10*g* Database:

1. Make sure that the database you are upgrading is running.
2. Shut down all Oracle Collaboration Suite middle tier applications that use this database. For more information, see Section 8.3.2.
3. Verify that the Oracle Internet Directory server is up and running. For more information, see Section 8.1.3.
4. Log on to the computer on which the Oracle Collaboration Suite information storage database is installed, as the same operating system user that performed the installation. This user must be part of the `DBA` operating system group.
5. Set or unset any environment variables according to the Section 2.7, "Environment Variables," in the installation guide for your platform:
   - *Oracle Collaboration Suite Installation Guide for Solaris Operating System*
   - *Oracle Collaboration Suite Installation Guide for Linux*
   - *Oracle Collaboration Suite Installation Guide for hp-ux*

In particular, make sure the following environment variables do not reference any Oracle home directories:

- PATH
- CLASSPATH
- Shared library path environment variables such as LD_LIBRARY_PATH (Linux and hp-ux), SHLIB_PATH (hp-ux)

Make sure the following environment variables are not set:

- TNS_ADMIN
- ORACLE_HOME
- ORACLE_SID
- LD_BIND_NOW and ORA_NLS (Linux only)

6. Mount the installation DVD and start the installer.

> **Note:** Refer to Chapter 3, "Starting the Oracle Collaboration Suite Installation" of the appropriate installation guide listed in step 5 for detailed instructions about starting Oracle Universal Installer on your platform.

7. Run the Oracle Universal Installer and refer to Table 5–1 for information on the options you should select on each screen.

   When installation is complete, Oracle Universal Installer starts one or more assistants.

8. After the End of Installation screen appears, exit the Oracle Universal Installer.

Table 5–1 Summary of the* Oracle Universal Installer *Screens During the Oracle Collaboration Suite Database Upgrade

Screen	Description and Recommended Options to Select
Welcome	Welcomes you to Oracle Universal Installer and the Oracle Collaboration Suite 10*g* Release 1 (10.1.1) installation procedure. Click **Advanced Installation**.
Specify File Locations	Enter a name and path for the new Oracle home. This new Oracle home will be the destination Oracle home for your Oracle Collaboration Suite Database upgrade.
Select a Product to Install	Select **Oracle Collaboration Suite Infrastructure 10.1.1**.
Select Installation Type	Select **Collaboration Suite Database**.
Prerequisite Checks	This screen displays the results of checking that the system meets the minimum requirements for installing and configuring the product. If the screen displays any warnings or failure, manually correct the problem and click **Retry.** Depending on the problem, you may need to exit the Oracle Universal Installer, fix the problem and start Oracle Universal Installer again. If you need to modify the kernel parameters on Solaris, for example, you may need to exit, change the parameters, and restart the system.

Table 5–1 (Cont.) Summary of the Oracle Universal Installer ***Screens During the Oracle Collaboration Suite Database Upgrade***

Screen	Description and Recommended Options to Select
Language Selection	If multiple languages are used in the Oracle Collaboration Suite information storage database you are upgrading, then select those languages. If you are not sure which languages were installed, but want languages other than English, click the double arrow button (>>) to select all languages.
Upgrade an Existing Collaboration Suite Database	This screen appears when Oracle Universal Installer detects an existing Oracle Collaboration Suite installation of the same type as the one you selected on the Select Installation Type screen. Select **Upgrade an Existing Oracle Collaboration Suite Database**, and then select the Oracle SID and Oracle home of the database you want to upgrade from the table.
Specify Oracle Internet Directory	Enter the name of the host and the port of the Oracle Internet Directory instance where the database you are upgrading is registered. Select **Use Only SSL Connections with this Oracle Internet Directory** if the Oracle Internet Directory server instance is running with SSL enabled.
Specify Login for Oracle Internet Directory	Enter the user name and password to connect to Oracle Internet Directory at the host name and port where the database is registered. You must either be the Oracle Internet Directory super user or a OracleAS Single Sign-On user with appropriate install privileges. The default Oracle Internet Directory super user name is `cn=orcladmin`.
Specify Collaboration Suite Database Information	Enter the database administrator user name, password, port and service name of the database being upgraded. The service name is the global name of the form `Oracle_SID.domain name`. The database administrator user name is `SYS`.
Database Listener Warning	This dialog warns you that the Oracle9*i*AS Metadata Repository database listener is running. Review the instructions on screen for whether you need to stop the database listener. Make sure you stop the listener if required or you will encounter problems later in the upgrade. For more information, see Section 8.1.2.
Privileged Operating System Groups	This screen appears if you are not a member of the DBA group. In the Database Administrator (`OSDBA`) Group field, enter the name of an operating system group with DBA privileges. In the Database Operator (`OSOPER`) Group field, enter the name of an operating system group with operator privileges.
Specify Database Schema Passwords	Enter the existing passwords for the users for Oracle Collaboration Suite Applications schema accounts. Select the option to use the same password for all accounts only if you are currently using the same password for all accounts.
Summary	Use this screen to confirm the choices you have made. Click **Install** to begin upgrading to the new Oracle Collaboration Suite 10*g* Database Oracle home.

Table 5–1 (Cont.) Summary of the Oracle Universal Installer Screens During the Oracle Collaboration Suite Database Upgrade

Screen	Description and Recommended Options to Select
Setup Privileges Dialog	This dialog instructs you to run the `root.sh` script as the root user. When the script completes, return to this dialog and click **OK**.
Install	This screen displays the status of the installation process. When the installation completes the Oracle Universal Installer automatically starts the Network Configuration Assistant and Database Upgrade Assistant. The screens that appear in these assistants are explained in Section 5.2.2.
Configuration Assistants	This screen displays the status of each component's configuration assistant. If any component fails, check the error log, correct the problem and click **Retry.** You can ignore the red X next to the Spatial component.
End of Installation	When the installation and upgrade are complete, this screen provides important details about the Oracle Collaboration Suite Database 10*g* (10.1.1) home, such as the location of the setupinfo.txt file. After you review the information on this screen, exit Oracle Universal Installer and proceed to the postupgrade tasks.

When the installation completes the Oracle Universal Installer automatically starts the Network Configuration Assistant and Database Upgrade Assistant.

5.2.2 Performing the Information Storage Database Upgrade

This section describes the Network Configuration and Database Upgrade Assistant screens. Refer to Table 5–2 for information on the options you should select on each screen.

Table 5–2 Summary of the Database Upgrade Screens During the Oracle Collaboration Suite Database Upgrade

Screens	Description and Recommended Options to Select
Network Configuration	The Network Configuration screen has two tabs: The Listeners tab is displayed if you have more than one listener in the 10*g* Release 1 (10.1.1) Oracle home. Select the listeners in the 10*g* Release 1 (10.1.1) Oracle home for which you would like to register the upgraded database. The Directory Service tab shows up if you have directory services configured in the release 10*g* (10.1.1) Oracle home. You can select to either register or not register the upgraded database with the directory service.
Available Databases	In the **Available Databases** table, select the database that you are upgrading. You can only select one database at a time. Make sure that the database is running.
Creating the SYSAUX Tablespace	Specify the attributes for the `SYSAUX` tablespace, which is added automatically to all new Oracle Database 10*g* databases you create. You can specify the location of the datafile, the default size of the `SYSAUX` tablespace, and its autoextend attributes. See *Oracle Database Administrator's Guide* for more information.

Table 5–2 (Cont.) Summary of the Database Upgrade Screens During the Oracle Collaboration Suite Database Upgrade

Screens	Description and Recommended Options to Select
Recompiling Invalid Objects	Select **Recompile Invalid Objects** if you want the Database Upgrade Assistant to recompile all invalid PL/SQL modules after the upgrade is complete. Selecting this option improves the performance of the upgraded database but increases the amount of time required to perform the upgrade. See Section 5.7.2.1 for more information.
Choosing a Database Backup Procedure	Specify whether or not you want the Database Upgrade Assistant to back up your database for you. If you choose not to use the Database Upgrade Assistant for your backup, then Oracle assumes you have already backed up your database using your own backup procedures. See Section 5.7.2.2 for more information.
Management Options	Optionally, set up your database so it can be managed with Enterprise Manager. Enterprise Manager provides Web-based management tools for managing individual database instances, as well as central management tools for managing your entire Oracle environment. See Section 5.7.2.3 for more information.
Database Credentials	Secure your database with passwords for the Enterprise Manager accounts. You can set a single password, which will be applied to each of the listed Enterprise Manager user accounts, or enhance the security of the accounts by providing unique passwords for each user.
Recovery Configuration	Specify a flash recovery area and enable archiving. When you are managing your database, it is important to configure the database so you can recover your data in the event of a system failure. The Flash Recovery Area can be used to recover data that would otherwise be lost during a system failure; this location is also used by Enterprise Manager if you have enabled local management and daily backups on the Management Options screen shown previously in the Database Upgrade Assistant.
Summary	Use this screen to confirm the choices you've made. Perform the steps in Section 5.2.2.1 before you proceed. Click **Finish** to begin upgrading the database. The Progress screen displays the status of the components being upgraded.
Upgrade Results	Displays the results of the upgrade. Optionally configure database passwords by clicking **Configure Database Passwords**. You can restore the database to its newly installed state by clicking **Restore.**

5.2.2.1 Enabling Collaboration Suite Schema Creation in the Database Upgrade Assistant

The steps in this section are required so that the Collaboration Suite Schema Creation Configuration Assistant suceeds.

When the Database Upgrade Assistant displays the Summary screen, perform the following steps:

1. Open a command window and connect to the upgraded Oracle Collaboration Suite 10*g* Database as `SYS`:

```
$ORACLE_HOME/bin/sqlplus sys/sys_password
```

2. Execute the following commands where *ORACLE_HOME* is the destination Oracle home of the Oracle Collaboration Suite 10*g* Database:

```
shutdown immediate;
startup;
@ORACLE_HOME/ctx/admin/ctxpatch.sql;
shutdown immediate;
startup;
```

3. Click **Finish**.

5.2.3 Applying a Patch for Oracle Ultra Search

If you are going to upgrade an Applications tier configured with Oracle Ultra Search, apply a patch following the Oracle Collaboration Suite information storage database upgrade. Download patch 4493920 from Oracle MetaLink and follow the instructions in the README.txt file to apply the patch.

5.2.4 Checking the Database Initialization Parameters

When the database upgrade completes, verify that your database intialization parameters in the Oracle Collaboration Suite 10*g* Database are set to at least the minimum required values. The upgrade preserves the existing values from the database being upgraded. However, the minimum required values for Oracle Collaboration Suite 10*g* Database may be more than the existing values.

Refer to Table 5–3 and increase the value of the parameter if necessary.

Table 5–3 Database Initialization Parameter Values

Parameter	Minimum Required Value
PROCESSES	250
SESSIONS	400
SGA_MAX_SIZE	629145600
SGA_TARGET	629145600
SHARED_POOL_SIZE	184549376
DB_CACHE_SIZE	150994944
OPEN_CURSORS	400
JOB_QUEUE_PROCESSES	10
PGA_AGGREGATE_TARGET	203423744
AQ_TM_PROCESSES	1

See Also: "Using SQL*Plus to Start Up an Oracle Collaboration Suite Database" in Chapter 6 of *Oracle Collaboration Suite Administrator's Guide*.

Oracle Database Administrator's Guide and *Oracle Database Reference* contain descriptions of initialization parameters and instructions on modifying them.

5.3 Enabling an Existing Customer Oracle Database 10*g* to be an Oracle Collaboration Suite Database

If you previously upgraded your Oracle Collaboration Suite information storage database from Oracle9*i* Database to Oracle Database 10*g*, you can use the Oracle Universal Installer to enable the Oracle Database 10*g* to be an Oracle Collaboration Suite Database.

The procedure for enabling an Oracle Database 10*g* to be an Oracle Collaboration Suite 10*g* Database is different than the procedure for upgrading an Oracle Collaboration Suite information storage database described in Section 5.2. If you upgraded the Oracle Collaboration Suite information storage database to Oracle Database 10*g*, you installed a Oracle Database 10*g* in a new Oracle home. The Oracle Universal Installer does not recognize this Oracle home as containing an Oracle Collaboration Suite component. It does recognize it as a customer Oracle Database. When you select the "Enable" option, the Oracle Universal Installer modifies the database in-place, upgrading the existing Oracle Collaboration Suite schemas to 10*g* Release 1 (10.1.1) and updating the inventory to identify this Oracle home as an Oracle Collaboration Suite 10*g* Database.

5.3.1 Prerequisites for Enabling a Customer Oracle Database 10*g* to be an Oracle Collaboration Suite Database

To use the Oracle Universal Installer to enable a customer database to be a Oracle Collaboration Suite Database, your Oracle Collaboration Suite environment should be upgraded to the following configuration:

1. Upgrade the original Oracle Collaboration Suite information storage database (an Oracle9*i* Database) to Oracle Database 10*g* using the Oracle Database 10*g* installer and upgrade assistant. This upgrade process installs a Oracle Database 10*g* Release 1 (10.1.0.2) in a new Oracle home.

   See Also: *Oracle Database Upgrade Guide* for Oracle Database 10*g* Release 1 (10.1)

2. Apply the 10.1.0.4.2 patchset to the Oracle Database 10*g* Release 1 (10.1.0.2). It is located on the Supplemental DVD under Patches/RDBMS/10.1.0.4.2.
3. Back up the database. Since the existing database is modified in-place, the existing files are overwritten. If something goes wrong during the enabling process, you may need to restore the database from your backup.

5.3.1.1 Setting the Required Parameters in the Customer Database

Set the database initialization parameters summarized in Table 5–4 to at least the minimum value required.

Table 5–4 Database Initialization Parameter Values

Parameter	Minimum Required Value
PROCESSES	250
SESSIONS	400
SGA_MAX_SIZE	629145600
SGA_TARGET	629145600

Table 5–4 (Cont.) Database Initialization Parameter Values

Parameter	Minimum Required Value
SHARED_POOL_SIZE	184549376
DB_CACHE_SIZE	150994944
OPEN_CURSORS	400
JOB_QUEUE_PROCESSES	10
PGA_AGGREGATE_TARGET	203423744
AQ_TM_PROCESSES	1

See Also: "Using SQL*Plus to Start Up an Oracle Collaboration Suite Database" in Chapter 6 of *Oracle Collaboration Suite Administrator's Guide*.

Oracle Database Administrator's Guide and *Oracle Database Reference* contain descriptions of initialization parameters and instructions on modifying them.

5.3.1.2 Execute wk0config.sql for Oracle Ultra Search

Perform this step if the current release of your Oracle Database 10*g* is earlier than Release 10.1.0.4.

Before you enable the Oracle Database 10*g*, configure Oracle Ultra Search by running the `wk0config.sql` script.

1. Set the ORACLE_HOME environment variable to the Oracle Database 10*g* Oracle home.
2. Set the ORACLE_SID environment variable to the SID of the Oracle Database 10*g*.
3. Log into the database using the following command:

   ```
   $ORACLE_HOME/bin/sqlplus "sys/sys_password as sysdba"
   ```

4. Unlock the `wksys` account, if it is locked.
5. At the SQL*Plus prompt, enter the following command:

   ```
   wk0config.sql welcome jdbc_connection_string launch_anywhere ""
   ```

   where:

   - welcome can be replaced by any non-empty string
   - *jdbc_connection_string* is the JDBC connection string. See the examples in this section for the format to use.
   - *launch_anywhere* is `TRUE` or `FALSE` depending on whether the Oracle Ultra Search crawler can be launched from any node. Set the value to TRUE only if the database is a Real Application Clusters (RAC) database on a cluster file system (CFS).

   For example, if the database is not a RAC database, the value of *jdbc_connection_string* has the format *hostname:port:sid* and *launch_anywhere* is set to `FALSE`:

   ```
   @?/ultrasearch/admin/wk0config.sql welcome mysystem.oracle.com:1521:store false
   ""
   ```

If the database is a RAC database the value of *jdbc_connection_string* has the TNS keyword-value format to allow connection to any node of the system:

```
@?/ultrasearch/admin/wk0config.sql welcome "(DESCRIPTION=(ADDRESS_
LIST=(ADDRESS=(PROTOCOL=TCP)(HOST=cls02a)(PORT=3001))(CONNECT_DATA=(SERVICE_
NAME=sales.us.acme.com)))" FALSE ""
```

If the database is a RAC database using a Cluster File System, then the following steps are required due to a 240-character limitation on the length of the *jdbc_connection_string*:

1. At the SQL*Plus prompt, enter the `wk0config.sql` command as `sysdba`, specifying only one node from the cluster in the *jdbc_connection_string*'s address list and setting the *launch_anywhere* flag to `TRUE`:

   ```
   @?/ultrasearch/admin/wk0config.sql welcome "(DESCRIPTION=(ADDRESS_
   LIST=(ADDRESS=(PROTOCOL=TCP)(HOST=cls02a)(PORT=3001))(CONNECT_
   DATA=(SERVICE_NAME=sales.us.acme.com)))" TRUE ""
   ```

2. Modify the value of *jdbc_connection_string* to include all the nodes of the cluster in the *jdbc_connection_string*'s address list by running the following commands from the SQL*Plus prompt as `sysdba`:

   ```
   alter session set current_schema=wksys;
   update wk$crawler_config_default set ccd_pvalue = 'full_jdbc_connect_
   string' where ccd_pname = 'CC_DATABASE';
   commit;
   exec wk_adm.use_instance('wk_inst') update wk$crawler_config set cc_pvalue
   = 'full_jdbc_connect_string' where cc_pname = 'CC_DATABASE';
   commit;
   ```

   where *full_jdbc_connection_string* is the JDBC connection string which includes the addresses of all the nodes. For example:

   ```
   (DESCRIPTION=(ADDRESS_LIST=(ADDRESS=(PROTOCOL=TCP)(HOST=cls02a)(PORT=
   1521))(ADDRESS=(PROTOCOL=TCP)(HOST=cls02b)(PORT=1521))(LOAD_BALANCE=yes))
   (CONNECT_DATA=(SERVICE_NAME = sales.us.acme.com)))
   ```

See Also: "Ultra Search on Real Application Clusters" in Chapter 9 of *Oracle Ultra Search User's Guide* for more information about using the JDBC connection string.

5.3.2 Using the Oracle Universal Installer to Enable a Customer Oracle Database 10*g* to be an Oracle Collaboration Suite Database

To enable a customer database to be an Oracle Collaboration Suite Database:

1. Make sure that the database you are upgrading is running.
2. Shut down all Oracle Collaboration Suite middle tier applications that use this database. For more information, see Section 8.3.2.
3. Verify that the Oracle Internet Directory server is up and running. For more information, see Section 8.1.3.
4. Log on to the computer on which the Oracle Collaboration Suite information storage database is installed, as the same operating system user that performed the installation. This user must be part of the `DBA` operating system group.

5. Set or unset any environment variables according to the Section 2.7, "Environment Variables," in the installation guide for your platform:
   - *Oracle Collaboration Suite Installation Guide for Solaris Operating System*
   - *Oracle Collaboration Suite Installation Guide for Linux*
   - *Oracle Collaboration Suite Installation Guide for hp-ux*

   In particular, make sure the following environment variables do not reference any Oracle home directories:
   - PATH
   - CLASSPATH
   - Shared library path environment variables such as LD_LIBRARY_PATH (Linux and hp-ux), SHLIB_PATH (hp-ux)

   Make sure the following environment variables are not set:
   - TNS_ADMIN
   - ORACLE_HOME
   - ORACLE_SID
   - LD_BIND_NOW and ORA_NLS (Linux only)
6. Mount the installation DVD and start the installer.

   Note: Refer to Chapter 3, "Starting the Oracle Collaboration Suite Installation" of the appropriate installation guide listed in step 5 for detailed instructions about starting Oracle Universal Installer on your platform.

7. Run the Oracle Universal Installer and refer to Table 5–5 for information on the options you should select on each screen.
8. After the End of Installation screen appears, exit the Oracle Universal Installer.

Table 5–5 Summary of the Database Upgrade Screens During the Oracle Collaboration Suite Database Upgrade

Screen	Description and Recommended Options to Select
Welcome	Welcomes you to Oracle Universal Installer and the Oracle Collaboration Suite 10*g* Release 1 (10.1.1) installation procedure. Select **Advanced Installation.**
Specify File Locations	In the Destination name and path, enter the existing Oracle Database 10*g* Oracle home. The database in the Oracle home will be enabled as a Oracle Collaboration Suite Database.
Select a Product to Install	Select **Oracle Collaboration Suite Infrastructure 10.1.1** If multiple languages are used in the database, then click **Product Languages**.
Select Installation Type	Select **Enable existing Oracle Database 10*g* to Collaboration Suite Database.**

Table 5–5 (Cont.) Summary of the Database Upgrade Screens During the Oracle Collaboration Suite Database Upgrade

Screen	Description and Recommended Options to Select
Prerequisite Checks	This screen displays the results of checking that the system meets the minimum requirements for installing and configuring the product. If the screen displays any warnings or failure, manually correct the problem and click **Retry.** Depending on the problem, you may need to exit the Oracle Universal Installer, fix the problem and start Oracle Universal Installer again. If you need to modify the kernel parameters on Solaris, for example, you may need exit, change the parameters, and restart the system.
Language Selection	If multiple languages are used in the Oracle Collaboration Suite Database you are upgrading, then select those languages. If you are not sure which languages were installed, but want languages other than English, click the double arrow button (>>) to select all languages.
Specify Oracle Internet Directory	Enter the name of the host and the port of the Oracle Internet Directory instance where the database you are upgrading is registered. Select **Use Only SSL Connections with this Oracle Internet Directory** if the Oracle Internet Directory server instance is running with SSL enabled and is not running any non-secure connections.
Oracle Internet Directory	Enter the user name and password to connect to Oracle Internet Directory at the host name and port where the database is registered. You must either be the Oracle Internet Directory super user or a OracleAS Single Sign-On user with appropriate install privileges. The default Oracle Internet Directory super user name is `cn=orcladmin`.
Specify Database Identification	This screen requests information about the exiting Oracle Database 10*g* that you want to enable as an Oracle Collaboration Suite Database. Enter the name and password of a database administrator such as `SYS`. Enter the host name and port, the service name and Oracle System Identifier (SID) of this database.
Configuration Requirements Error Dialog	This dialog appears if the database parameters are not set as required in Section 5.3.1.1. Click **OK** and set the parameters.
Specify Database File Storage Option	Select one of the following options for storing your database files: ■ File System ■ Automatic Storage Mechanism ■ Raw Devices
Specify Raw Device Mapping File	This screen appears if you select the Raw Device storage option. Enter the location that contains the mappings for the tablespaces to a raw device.
Select ASM Diskgroup	This screen appears if you select the Automatic Storage Mechanism storage option. Select an ASM diskgroup from the list.
Database File Location	Enter the path of the directory where you want to install the database files. Oracle recommends that you install database files on a different disk than the software.

Table 5–5 (Cont.) Summary of the Database Upgrade Screens During the Oracle Collaboration Suite Database Upgrade

Screen	Description and Recommended Options to Select
Specify Database Schema Passwords	Enter the passwords for the users for Oracle Collaboration Suite Applications schema accounts. Oracle recommends creating distinct passwords for enhanced security, but you can opt to use the same password for all accounts.
Summary	Use this screen to confirm the choices you have made. Click Install to begin enabling the existing database to a Oracle Collaboration Suite Database.
Install	This screen displays the status of the installation process.
Configuration Assistants	This screen displays the status of each component's configuration assistant. If any component fails, check the error log, correct the problem and click **Retry.**

5.4 Upgrading a Real Application Clusters Database

If your Oracle Collaboration Suite information storage database is running in a Real Application Clusters (RAC) environment, follow the steps in this section to upgrade to Oracle Collaboration Suite 10*g* Database.

Currently, the upgrade is supported on Linux only.

On one node of the cluster, perform the following steps:

1. Upgrade the Cluster Ready Services Clusterware to 10.1.0.4.
2. Upgrade the original Oracle Collaboration Suite information storage database (an Oracle9*i* Database) to Oracle Database 10*g* using the Oracle Database 10*g* installer and upgrade assistant. This upgrade process installs a Oracle Database 10*g* Release 1 (10.1.0.2) in a new Oracle home.

   See Also: *Oracle Database Upgrade Guide* for Oracle Database 10*g* Release 1 (10.1)

3. Apply the 10.1.0.4.2 patchset to the Oracle Database 10*g* Release 1 (10.1.0.2). It is located on the Supplemental DVD under Patches/RDBMS/10.1.0.4.2.
4. Back up the database. Since the existing database is modified in-place, the existing files are overwritten. If something goes wrong, you may need to restore the database from your backup.
5. Perform the steps to enable a customer database in the following sections:
   a. Section 5.3.1.1, "Setting the Required Parameters in the Customer Database"
   b. Section 5.3.1.2, "Execute wk0config.sql for Oracle Ultra Search"
   c. Section 5.3.2, "Using the Oracle Universal Installer to Enable a Customer Oracle Database 10g to be an Oracle Collaboration Suite Database"

Proceed to sections Section 5.5 and Section 5.6.

5.5 Completing the Upgrade to Oracle Collaboration Suite 10*g* Database

This section identifies tasks which should be performed after the Database Upgrade Assistant completes. These tasks are:

- Relocating the Database Datafiles, Control Files, and Log Files
- Migrating Oracle Ultra Search
- Resetting Credentials in the Mail Store for Oracle Voicemail & Fax Access to Oracle Internet Directory

5.5.1 Relocating the Database Datafiles, Control Files, and Log Files

By default, after you upgrade your database, the datafiles, control files, and log files associated with the database remain in their original location. Oracle recommends that you relocate these files as a safeguard against inadvertently deleting them (for example, by deleting or decommissioning the entire source Oracle home directory tree). In addition, there may be performance benefits to moving the database files outside of the source Oracle home.

> **See Also:** "Renaming and Relocating OracleAS Metadata Repository Datafiles" in Chapter 6 in *Oracle Collaboration Suite Administrator's Guide* .

> **See Also:** "Creating Additional Copies, Renaming, and Relocating Control Files" in the *Oracle Database Administrator's Guide.*

5.5.2 Migrating Oracle Ultra Search

This task is optional.

In Oracle Collaboration Suite, Oracle Ultra Search is used to index Web content. In 10*g* Release 1 (10.1.1), the Oracle Ultra Search configuration data and index are stored in the Oracle Collaboration Suite Database, not the Oracle9*i*AS Metadata Repository database as in previous releases. To preserve the existing configuration and index data, perform the migration steps using the Migration Kit. The configuration and index data must meet the criteria for using transportable tablespace. See Chapter 9 for instructions.

If the existing Oracle Ultra Search instance cannot use transportable table space or you choose not to perform the migration, then you can still migrate the configuration data to the Oracle Collaboration Suite Database during the middle tier applications upgrade. However, the index cannot be migrated after the database upgrade and will be rebuilt when the crawling schedule is executed.

5.5.3 Resetting Credentials in the Mail Store for Oracle Voicemail & Fax Access to Oracle Internet Directory

Perform the steps in this section if the Oracle Collaboration Suite information storage database you just upgraded is a mail store, a database used by the Oracle Email and Oracle Voicemail & Fax middle tiers.

In 10*g* Release 1 (10.1.1), the default e-mail administrative user, `umadmin`, has been deprecated. The Oracle Voicemail & Fax Release 2 (9.0.4.2) middle tiers will not be able to use this username and password to connect to Oracle Internet Directory. To enable the Oracle Voicemail & FaxRelease 2 (9.0.4.2) middle tiers to access Oracle Internet Directory, you need to give the `cn=orcladmin` user privileges in the mail store.

To give the `cn=orcladmin` user Oracle Internet Directory privileges:

1. Log in to the upgraded Oracle Collaboration Suite 10*g* Database mail store as the `es_mail` user.
2. At the SQL*Plus prompt, enter the following command:

```
begin
  UMAdminInfo.set_info ('cn=orcladmin','password', 'ldaphost', ldapport);
end;
```

where:

- *password* is the password for the Oracle Internet Directory superuser `cn=orcladmin`
- *ldaphost* is the name of the host where Oracle Internet Directory is running
- *ldapport* is the port where the upgraded Oracle Internet Directory is running

After completing the upgrade of all the Oracle Voicemail & Fax middle tiers, you should restore the 10*g* Release 1 (10.1.1) user.

See Also: Oracle Voicemail & Fax and Oracle Web Conferencing Conversion Servers Installation and Upgrade Guide

---

5.5.4 Upgrading the Text Index

Perform the steps in this section if you deteremined your text index was not empty in Section 5.1.3. When the text index is not empty, the upgrade process does not upgrade the text index as this process could be very time consuming.

To upgrade the text index:

1. Start SQL*Plus and enter the following command at the prompt:

```
ORACLE_HOME/bin/sqlplus es_mail/password @ ORACLE_
HOME/oes/install/sql/recreate_text_index.sql
```

where:

- *ORACLE_HOME* is the upgraded Oracle Collaboration Suite 10*g* Database Oracle home.
- *password* is the password for the `es_mail` user.

2. Follow the prompts on the screen. The script prompts you for the primary language and the default character set. When it runs, it displays the following messages:

```
Setting default character set and recreating the text index...
(this may take a while, please wait...)
Setting default character set...
Creating text index...

PL/SQL procedure successfully completed.
```

5.6 Verifying the Upgrade to Oracle Collaboration Suite 10*g* Database

To verify that the upgrade was successful:

1. Set the ORACLE_SID environment variable to the SID name of your Oracle Collaboration Suite Database 10g (10.1.1).

Run SQL*Plus from the Oracle Collaboration Suite 10*g* Database home and connect as `SYSTEM`.

2. Start the Oracle Collaboration Suite middle tier instances and verify that the Oracle Collaboration Suite middle tier applications work correctly. Any exceptions are noted in Section 1.5.

5.7 Additional Information About Selecting Install and Upgrade Options

This section contains additional information about the options in the Oracle Universal Installer and the Database Upgrade Assistant.

5.7.1 Selecting Options in the Oracle Universal Installer

This section explains the options that appear on the **Upgrade an Existing Collaboration Suite Database** screen.

5.7.1.1 Upgrade an Existing Collaboration Suite Database

You can select only one database at a time. If you are running the Database Upgrade Assistant from a user account that does not have `SYSDBA` privileges, then you must enter the user name and password credentials to enable `SYSDBA` privileges for the selected database.

The Database Upgrade Assistant analyzes the database, performing prerequisite checks and displaying warnings as necessary. It checks for any redo log files whose size is less than 4 MB. If such files are found, then the Database Upgrade Assistant gives the option to drop and create new redo log files. It checks the parameter file for any obsolete or deprecated initialization parameters.

5.7.2 Selecting Options in the Database Upgrade Assistant

This section explains the options that appear on the following screens:

- Recompiling Invalid Objects
- Choosing a Database Backup Procedure
- Management Options

5.7.2.1 Recompiling Invalid Objects

When you upgrade a database to the new Oracle Database 10g release, many of the PL/SQL modules in your database become invalid. By default, the Oracle Database recompiles invalid PL/SQL modules as they are used. The time it takes to recompile the module can result in poor performance as you begin to use your newly upgraded database.

To eliminate these performance issues, select **the option to recompile invalid objects** at the end of upgrade. When you select this option, the Database Upgrade Assistant recompiles all the invalid PL/SQL modules immediately after the upgrade is performed. This step ensures that you do not experience any performance issues as you begin using your newly upgraded database. The task of recompiling all the invalid PL/SQL modules in your database can take a significant amount of time and increase the time it takes to complete your database upgrade. If you have multiple CPUs, then you can reduce the time it takes to perform this task by taking advantage of parallel processing on your available CPUs. If you have multiple CPUs available, then the Database Upgrade Assistant automatically adds an additional section to the

Recompile Invalid Objects screen and automatically determines the number of CPUs you have available.

For example, if you have three CPUs available for processing, then the Database Upgrade Assistant selects 2 from the Degree of Parallelism menu. You can adjust this default value by selecting a new value from the Degree of Parallelism menu.

The Database Upgrade Assistant also provides a recommended degree of parallelism, which determines how many parallel processes are used to recompile your invalid PL/SQL modules. Specifically, the Database Upgrade Assistant sets the degree of parallelism to one less than the number of CPUs you have available.

5.7.2.2 Choosing a Database Backup Procedure

If you use the Database Upgrade Assistant to back up your database, then the Database Upgrade Assistant makes a copy of all your database files in the directory you specify in the Backup Directory field. The Database Upgrade Assistant performs this cold backup automatically after it shuts down the database and before it begins performing the upgrade procedure. The cold backup does not compress your database files and the backup directory must be a valid file system path. You cannot specify a raw device for the cold backup files.

In addition, the Database Upgrade Assistant creates a batch file in the specified directory. You can use this batch file to restore the database files. On UNIX platforms, the file is called db_name_restore.sh.

5.7.2.3 Management Options

This section describes the options available to manage your upgraded Oracle Collaboration Suite Database. On the Management Options screen, select from the following options depending on your configuration:

- Grid Control

  The Database Upgrade Assistant checks to see if the Oracle Management Agent has been installed on the host computer. If the assistant locates an Oracle Management Agent, select **Grid Control** and select an Oracle Management Service from the list. When you finish installing the Oracle Database, the database is automatically available as a managed target within the Oracle Enterprise Manager Grid Control.

- Database Control

  If you are not centrally managing your Oracle environment, you can still use Enterprise Manager to manage your database. When you install an Oracle Database, you automatically install the Oracle Enterprise Manager Database Control, which provides Web-based features for monitoring and administering the single-instance or cluster database you are installing.

  To configure the database so it can be managed with the Oracle Enterprise Manager Database Control, select **Database Control**.

  – Enable E-mail Notifications

    When you select Database Control, you can configure Enterprise Manager so that e-mail notifications are enabled immediately upon installation.

    Select **Enable E-mail Notifications** if you want the `SYSMAN` user (the default Super Administrator and owner of the Management Repository schema) to receive e-mail notification when a metric for a specified condition reaches a critical or warning threshold. For example, Enterprise Manager can send an

e-mail when a target goes down or when there are database space usage problems.

– Enable Daily Backups

  If you select the Database Control management option, you can also enable automatic daily backups of your entire database.

  Select **Enable Daily Backups** to use the Oracle-suggested backup strategy to back up your entire database with a minimum amount of configuration. Later, you can use Enterprise Manager to customize your backup strategy further.

  When you select this option, Enterprise Manager is configured to back up your database, based on the scheduled start time you enter on this page, immediately after you finish installing the Oracle Database. Enterprise Manager backs up the database to the Flash Recovery Area that you specify on the Recovery Configuration screen of the Database Upgrade Assistant.

6

Upgrading the Oracle Collaboration Suite Middle Tier

This chapter guides the reader through the steps for upgrading Oracle Collaboration Suite's middle tier applications. It includes the following sections:

6.1 Understanding the Oracle Collaboration Suite Middle Tier Upgrade Process

Upgrade the middle tier applications after upgrading the following components:

- Oracle Application Server Infrastructure
- Oracle Collaboration Suite Information Storage Database

To upgrade a Oracle Collaboration Suite middle tier, use the Oracle Universal Installer to install Oracle Collaboration Suite 10*g* Applications in a new Oracle home. When the Oracle Universal Installer detects an existing middle tier installation on the same system, it offers you the option to upgrade. When the installation completes, the installer starts the Oracle Collaboration Suite Upgrade Assistant to perform the upgrade. The upgrade assistant copies configuration information from the source Oracle home to the destination Oracle home.

The general rules for upgrade are:

- Oracle Universal Installer installs all the applications in Oracle Collaboration Suite 10*g* Applications in the destination Oracle home. The Oracle Collaboration Suite Upgrade Assistant configures all middle tier applications configured in the source Oracle home. If an application was not configured in the source Oracle home, then

it is not configured in the destination Oracle home. You can configure additional applications after the upgrade is complete.

- Select the option to upgrade at the time you install Oracle Collaboration Suite Applications. Oracle does not support installing a new Oracle Collaboration Suite Applications and running the Oracle Collaboration Suite Upgrade Assistant after the installation completes.

6.1.1 Understanding Component Name Changes in Oracle Collaboration Suite 10*g* Applications

Some component names have changed in 10*g* Release 1 (10.1.1). This chapter uses the Release 1 (9.0.3.1) and Release 2 (9.0.4.2) component names to refer to the component in the source Oracle home. The 10*g* Release 1 (10.1.1) name refers to the upgraded component in the destination Oracle home. Table 6–1 summarizes the component names changes.

Table 6–1 Component Name Changes

9.0.x Component Name	10*g* Release 1 (10.1.1) Component Names
Oracle Collaboration Suite (middle tier)	Oracle Collaboration Suite 10*g* Applications (Applications tier)
Oracle Email	Oracle Collaboration Suite 10*g* Mail
Oracle Files	Oracle Collaboration Suite 10*g* Content Services
Federated Search	Oracle Collaboration Suite 10*g* Search
Oracle Web Conferencing	Oracle Real-Time Collaboration (Oracle Collaboration Suite 10*g* Web Conferencing and Oracle Collaboration Suite 10*g* Messenger)
Oracle Wireless and Voice	Oracle Collaboration Suite 10*g* Mobile Collaboration

6.2 Prerequisites for Upgrading Specific Components

The following applications have prerequisite steps to be performed prior to starting the upgrade process:

- Prerequisites for Upgrading Oracle Calendar
- Prerequisites for Upgrading Oracle Ultra Search
- Prerequisites for Upgrading Oracle Web Conferencing
- Prerequisites for Upgrading Oracle9iAS Wireless

Perform the steps described in these sections if required and proceed to Section 6.3 for additional required steps.

6.2.1 Prerequisites for Upgrading Oracle Calendar

The steps in this section are optional.

Before the upgrade, user address books are stored in a local Oracle Calendar database. By default, after the upgrade, these address books are migrated to a Common Address Book in Oracle Internet Directory so that they can be shared with Oraclel Collaboration Suite 10*g* WebMail and Oracle Collaboration Suite 10*g* Web Access Client. The migration, or synchronization, occurs at intervals specified by the `[CWS]cabsynctime` parameter in DESTINATION_ORACLE_HOME/ocal/misc/unison.ini.

If you are concerned about the load on Oracle Internet Directory because of the size and number of the user's address books or system performance issues, you can disable the synchronization before starting the upgrade. If you disable the synchronization, then the Oracle Calendar clients address books remain independent of the other address books. However, you can enable synchronization any time after the upgrade is complete.

To disable Common Address Book synchronization, in the SOURCE_ORACLE_HOME/ocal/misc/unison.ini file, locate the `[ENG]` section and add the following line:

```
cab_enable = FALSE
```

This value is copied to the unison.ini file in the destination Oracle home so that the Oracle Calendar server does not perform synchronization with the Common Address Book. See Section 6.6.6.2 for information about enabling synchronization after the upgrade.

6.2.2 Prerequisites for Upgrading Oracle Ultra Search

This section discusses your two options for migrating Oracle Ultra Search data.

6.2.2.1 Migrating Index and Configuration Data

To migrate the Oracle Ultra Search index and configuration data, perform the steps in Chapter 9. before proceeding Otherwise, you can still migrate the Oracle Ultra Search configuration data from the Oracle9*i*AS Metadata Repository to the Oracle Collaboration Suite Database as part of the Oracle Collaboration Suite middle tier upgrade.

6.2.2.1.1 Verifying the WKSYS Password Before proceeding with the upgrade, verify that the WKSYS password stored in Oracle Internet Directory matches the WKSYS password in the Oracle9*i*AS Metadata Repository database because the Oracle9*i*AS Infrastructure upgrade may have changed it.

To verify the password:

1. Look up the WKSYS password in Oracle Internet Directory. From the system running Oracle Internet Directory enter the following command from the ORACLE_HOME/bin directory:

   ```
   ldapsearch -h oidhost -p oidport -D "cn=orcladmin" -w oiduser_password
   -b "cn=IAS Infrastructure Databases,cn=IAS,cn=Products,cn=OracleContext"
    -s sub "orclResourceName=wksys" orclpasswordattribute
   ```

   where

   - *oidhost* is the name of the system running Oracle Internet Directory
   - *oidport* is the port where Oracle Internet Directory is running
   - *oiduser_password* is the password for the Oracle Internet Directory administrative user

   The utility returns the password as the value of `orclpasswordattribute`. For example:

   ```
   OrclResourceName=WKSYS,orclReferenceName=asdb.oracle.com,cn=IAS Infrastructure
   Databases,cn=IAS,cn=Products,cn=OracleContext
   orclpasswordattribute=T8l7Q155
   ```

If the value of orclpasswordattribute does not match the value of the WKSYS password in the Oracle9*i*AS Metadata Repository database, then performs steps 2 and 3 to reset the password in the Oracle9*i*AS Metadata Repository database.

2. On the system running the Oracle9*i*AS Metadata Repository, start SQL*Plus and log into the database as `SYSDBA`:

   ```
   $ORACLE_HOME/bin/sqlplus sys/sys_password as sysdba
   ```

3. Change the `WKSYS` password to the password obtained from Oracle Internet Directory by entering the following command at the SQL*Plus prompt:

   ```
   ALTER USER WKSYS IDENTIFIED BY orclpasswordattribute;
   ```

   where *orclpasswordattribute* is the password returned by the ldapsearch utility. For example:

   ```
   ALTER USER WKSYS IDENTIFIED BY T8l7Q155;
   ```

6.2.2.2 Migrating Configuration Data

To prepare for the migrating the configuration data, create a user in the upgraded database to own each migrated Oracle Ultra Search instance. The new user must be granted the `WKUSER` role which gives it general administrative privileges on the Ultra Search instance. See Section 8.3.3 for instructions.

The Oracle Collaboration Suite Upgrade Assistant performs the migration during the upgrade process. It prompts you for the user names and passwords that you create in this section.

6.2.3 Prerequisites for Upgrading Oracle Web Conferencing

Shut down all Oracle Web Conferencing instances that use the same Oracle Collaboration Suite information storage database as the instance being upgraded. Leave them shut down until each one is upgraded.

See Section 8.3.2 for instructions on shutting down a middle tier.

6.2.4 Prerequisites for Upgrading Oracle9*i*AS Wireless

To upgrade Oracle9*i*AS Wireless configured on multiple middle tiers which use the same Oracle9*i*AS Metadata Repository:

1. Shut down all the middle tiers configured with Oracle9*i*AS Wireless that use the Oracle9*i*AS Metadata Repository. See Section 8.3.2 for instructions.

2. Back up the WIRELESS schema in the Oracle9*i*AS Metadata Repository.

   This step is recommended because when you install the OracleAS Wireless middle tier (in the next step), the Wireless Configuration Assistant upgrades the WIRELESS schema in the Oracle9*i*AS Metadata Repository to Oracle Application Server 10*g* (9.0.4).

   During the Oracle9*i*AS Metadata Repository upgrade, the Oracle Application Server Metadata Repository Upgrade Assistant (MRUA) will upgrade the 10*g* (9.0.4) WIRELESS schema to Oracle Application Server 10*g* Release 2 (10.1.2).

   You can back up the WIRELESS schema by using the Export database utility.

   ```
   exp system/password@service_name file=iasw902.dmp owner=WIRELESS
   ```

where:

- *password* is the password of the SYSTEM account.
- *service_name* is the local net service name that points to the Oracle9*i*AS Metadata Repository such as `asdb`.

This command creates a database export file called `iasw902.dmp` with the contents of the WIRELESS schema.

3. Upgrade the first middle tier to upgrade the Oracle9*i*AS Wireless schema in the Oracle9*i*AS Metadata Repository.
4. Start the upgraded middle tier and the remaining middle tiers. To upgrade the remaining middle tiers, shut down only the middle tier being upgraded.

   If you install additional OracleAS Wireless middle tiers against the same Oracle9*i*AS Metadata Repository, the configuration assistant detects that the WIRELESS schema is already upgraded and does not upgrade it again.

Note: If you plan to continue using Oracle9*i*AS Wireless in any Release 2 (9.0.4.2) middle tiers after the OracleAS Wireless schema has been upgraded to 10*g* (9.0.4), you must be running one of the following patches on the middle tier:

- Oracle9*i*AS Wireless 9.0.2.8.0 patch (2831134)
- Oracle9*i*AS Wireless 9.0.2.10.0 patch (3174514)
- Oracle9*i*AS 9.0.2.2.0 bundled patch set (2926973)
- Oracle9*i*AS 9.0.2.3.0 patch set (3038037)

Otherwise, the Oracle9*i*AS Wireless middle tier will not be able to function with the upgraded WIRELESS schema. You can download patches from Oracle*MetaLink*:

`http://metalink.oracle.com`

6.3 Prerequisites for Upgrading All Components

To prepare for the middle tier upgrade:

1. Back up the Oracle Collaboration Suite 10*g* Database.
2. Verify that you have sufficient Oracle Internet Directory credentials to upgrade Oracle Email, Oracle Calendar, Oracle9*i*AS Wireless and Oracle Ultra Search.
3. Verify that Oracle Internet Directory is running. See Section 8.1.3 for instructions.
4. Verify that the Oracle Collaboration Suite Database is running. See Section 8.2.1 for instructions.
5. Log on to the system on which the Oracle Collaboration Suite middle tier is installed as the same operating system user that performed the installation.
6. Shut down all processes in the middle tier Oracle home you are upgrading.

   See Section 8.3.2 for instructions.
7. Set or unset any environment variables according to Section 2.7, "Environment Variables," in the installation guide for your platform:
   - *Oracle Collaboration Suite Installation Guide for Solaris Operating System*

- *Oracle Collaboration Suite Installation Guide for Linux*
- *Oracle Collaboration Suite Installation Guide for hp-ux*

In particular, make sure the following environment variables do not reference any Oracle home directories:

- PATH
- CLASSPATH
- Shared library path environment variables such as LD_LIBRARY_PATH (Linux and hp-ux), SHLIB_PATH (hp-ux)

Make sure the following environment variables are not set:

- TNS_ADMIN
- ORACLE_HOME
- ORACLE_SID
- LD_BIND_NOW and ORA_NLS (Linux only)

You are now ready to perform the upgrade.

6.4 Performing the Upgrade Using Oracle Universal Installer

To upgrade a Oracle Collaboration Suite middle tier, you first install Oracle Collaboration Suite Applications 10*g* Release 1 (10.1.1) in a new Oracle home using the Oracle Universal Installer. If the Oracle Universal Installer detects another middle tier installation, then it offers you the option to upgrade to 10*g* (10.1.1). It then runs the Oracle Collaboration Suite Upgrade Assistant to perform the upgrade once the installation completes.

The following sections describe the installation and upgrade procedures:

- Installing Oracle Collaboration Suite 10g Applications
- Using the Oracle Collaboration Suite Upgrade Assistants

6.4.1 Installing Oracle Collaboration Suite 10*g* Applications

1. Verify that you have performed the prerequisite steps described in Section 6.2 and Section 6.3 before continuing.
2. Mount the installation DVD and start the Oracle Universal Installer.

   Note: Refer to Chapter 3, "Starting the Oracle Collaboration Suite Installation Guide," of the appropriate installation guide listed in step 7 of Section 6.3 for detailed instructions about starting Oracle Universal Installer on your platform.

3. Run the installer and refer to Table 6–2 for information on the options you should select on each screen.
4. The installer automatically starts the Oracle Collaboration Suite Upgrade Assistant if you are upgrading Oracle Email, Oracle Web Conferencing or Oracle Ultra Search. See Section 6.4.2 for more information.
5. After the End of Installation screen appears, exit the Oracle Universal Installer.

Table 6–2 Summary of the Oracle Universal Installer Screens During the Oracle Collaboration Suite Applications Upgrade

Screen	Description and Recommended Options to Select
Welcome	Welcomes you to Oracle Universal Installer and the Oracle Application Collaboration Suite 10.1.1 installation procedure. Select **Advanced Installation**.
Specify File Locations	Enter a name and path for the new Oracle home. This new Oracle home is the destination Oracle home for the upgraded Oracle Collaboration Suite Applications.
Select a Product to Install	Select **Oracle Collaboration Suite Applications 10.1.1**.
Prerequisite Checks	This screen displays the results of checking that the system meets the minimum requirements for installing and configuring the product. If the screen displays any warnings or failure, manually correct the problem and click **Retry.** Depending on the problem, you may need to exit the Oracle Universal Installer, fix the problem and start Oracle Universal Installer again. If you need to modify the kernel parameters on Solaris, for example, you may need to exit, change the parameters, and restart the system.
Oracle Enterprise Manager Warning	This dialog appears when Oracle Enterprise Manager is still running. If you have not already done so, shut it down.
Language Selection	If multiple languages are used in the Collaboration Suite Database you are upgrading, select those languages. If you are not sure which languages were installed, but want languages other than English, click the double arrow button (>>) to select all languages.
Upgrade Existing Oracle Collaboration Suite	This screen appears when Oracle Universal Installer detects an existing Oracle Collaboration Suite middle tier installation. Select **Upgrade Selected Oracle Collaboration Suite**, and then select the Oracle home of the installation you want to upgrade from the list. You may only select one installation at a time.
Oracle Files Error	The following error appears if Oracle Files is configured on the system where you are performing the upgrade: `ATTENTION: You cannot proceed with this upgrade because an Oracle Files 9.0.3 or 9.0.4 instance was configured as part of this Oracle Collaboration Suite installation. If you still want to upgrade, please refer to Metalink note 315692.1.` The Oracle Universal Installer will not let you proceed with the upgrade process. See Chapter 12, "Oracle Content Services Upgrade" for more information.
Specify Username and Password for Oracle Internet Directory	Enter the user name and password to connect to the Oracle Internet Directory at the host name and port where the database is registered. You must either be the Oracle Internet Directory super user or a Single Sign-On user with appropriate install privileges. The default Oracle Internet Directory super user name is `cn=orcladmin`.

Table 6–2 (Cont.) Summary of the Oracle Universal Installer Screens During the Oracle Collaboration Suite Applications Upgrade

Screen	Description and Recommended Options to Select
Oracle Files Error	The following error appears if Oracle Files is configured on another system in your Oracle Collaboration Suite environment and the installer detects that it is registered in Oracle Internet Directory: `ATTENTION: You cannot proceed with this upgrade because an Oracle Files 9.0.3 or 9.0.4 instance has been found to be configured as part of your Oracle Collaboration Suite deployed system. If you still want to upgrade, please refer to Metalink note 315692.1.` The Oracle Universal Installer will not let you proceed with the upgrade process. See Chapter 12, "Oracle Content Services Upgrade" for more information.
Select OracleAS Metadata Repository	Select the database hosting the Metadata Repository used by the middle tier being upgraded. If there is only one Metadata Repository available, then this list is inactive. If there is more than one Metadata Repository available, then make sure you choose the right one. To verify the Metadata Repository used by the middle tier, check the SOURCE_ORACLE_HOME/config/ias.properties file and locate the `InfrastructureDBCommonName` property. Select this value from the list.
Oracle Collaborative Portlets Configuration Assistant Warning	If this warning appears, then click **OK** and continue with the upgrade. When the upgrade completes, follow the instructions in Section 6.4.2.4.
Select Database for Components	The screen lists Oracle Calendar server and Oracle Search, if these applications are configured in the Oracle home being upgraded. From the table, select the name of the database that each application will use.
Create Instance Name	In the Instance Name field, enter a unique name for the upgraded Oracle Collaboration Suite Applications instance. In the `ias_admin` password field, enter the password for the `ias_admin` user.
Run root.sh	When you see this dialog, run the root.sh script in a different shell as the root user. The script is located in the Oracle home directory. If you have Oracle Ultra Search configured in the middle tier being upgraded and the instance name uses multibyte characters, perform the step in Section 6.4.1.1.
Oracle Collaboration Suite Upgrade Assistants	The Oracle Universal Installer starts the upgrade assistants for the applications configured in the middle tier. See Section 6.4.2 for more information.
Summary	Use this screen to confirm the choices you've made. Click **Install** to begin installing the new 10*g* Release 1 (10.1.1) Oracle home.

6.4.1.1 Upgrading Multibyte Oracle Ultra Search Instance Names

If your Oracle Ultra Search instance names use multibyte characters, then perform the steps in this section before running the root.sh script.

Open the DESTINATION_ORACLE_HOME/upgrade/response/ocsua.resp file and replace any Oracle Ultra Search instance names that use multi-byte characters with the Unicode value using the hexadecimal format '\uxxxx' where xxxx is the hexadecimal representation of the character.

For example:

```
US_MIGRATE_INST_4=\u6e2c\u8a661
```

6.4.2 Using the Oracle Collaboration Suite Upgrade Assistants

If the Oracle Collaboration Suite Applications installation has a component configured, that component is upgraded automatically. Oracle Web Conferencing, Oracle Ultra Search and Oracle Email require information from the user in order to perform the upgrade.

6.4.2.1 Upgrading Oracle Web Conferencing to Oracle Real-Time Collaboration

The Oracle Web Conferencing repository is modified when the first middle tier is upgraded. This screen appears during the upgrade of the first middle tier configured with Oracle Web Conferencing. Make sure to follow the procedure outlined in Section 1.5.4.7.

Table 6–3 Summary of the Oracle Collaboration Suite Upgrade Assistant for Oracle Real-Time Collaboration

Screen	Description and Recommended Options to Select
Specify SYS Password for Oracle Real-Time Collaboration	Enter the password for the SYS user in the database used by Oracle Web Conferencing (renamed Oracle Real-Time Collaboration).

6.4.2.2 Upgrading Oracle Ultra Search

If you did not perform the Oracle Ultra Search index and configuration data migration before the Oracle Collaboration Suite information storage database upgrade, you can still migrate the configuration data to the upgraded Oracle Ultra Search application by selecting the appropriate options in the upgrade assistant. Table 6–4 summarizes these options.

Table 6–4 Summary of the Oracle Collaboration Suite Upgrade Assistant Screens for Oracle Ultra Search

Screen	Description and Recommended Options to Select
Migrating Ultra Search Configuration Data	Select **Yes** to migrate the configuration data to the new Ultra Search application. From the table, select each instance of Ultra Search that you want to migrate. Enter the name of the schema user and password that you created manually in the Oracle Collaboration Suite database with the role of WKUSER as described in Section 1.5.4.5. Select **No** if you have already performed the index and configuration data migration.

Table 6–4 (Cont.) Summary of the Oracle Collaboration Suite Upgrade Assistant Screens for Oracle Ultra Search

Screen	Description and Recommended Options to Select
Ultra Search Indexing	Select **Yes** to use the existing index in the Oracle9*i*AS Metadata Repository database until a new index is created when the crawling schedule is executed. If you select this option, the upgraded Oracle Ultra Search application will point to the existing index and you can use it to perform searches right away. The Instance Names list displays the instances in the Oracle9*i*AS Metadata Repository database. Select the instance used by the Oracle Ultra Search application and enter its schema password.

The reason to continue using the existing index is that, after the upgrade, users may experience some down time when performing a Web search using the Oracle Collaboration Suite 10*g* Search application. You can avoid down time by selecting **Yes** in the Ultra Search Indexing screen to use the existing index until the new index is ready. When the new index is ready, modify the oc4j-ra.xml configuration file to point Oracle Collaboration Suite 10*g* Search to the new index. See Section 6.6.5 for more information.

6.4.2.3 Upgrading Oracle Email to Oracle Collaboration Suite 10*g* Mail

The Oracle Email Upgrade Assistant gives you the option to migrate contacts data as part of the upgrade process. You can also perform the migration manually after the upgrade of all middle tiers configured with Oracle Email.

Table 6–5 Summary of the Oracle Collaboration Suite Upgrade Assistant Screens for Oracle Email

Screen	Description and Recommended Options to Select
Contacts Upgrade	Review the information in Section 6.4.2.3.1 and select **Yes** or **No**.

6.4.2.3.1 Selecting a Contacts Upgrade Option The behavior of the Oracle Collaboration Suite Upgrade Assistant depends on the total number of e-mail entries in Oracle Internet Directory. If the number of entries is less than 10,000, then the Oracle Email Upgrade Assistant displays the following message:

```
The Contacts can be migrated to Oracle Collaboration Suite 10g during this upgrade
install. Do you want to perform address book migration?
```

If the number of entries in Contacts is greater than 10,000, the Oracle Email Upgrade Assistant displays the following message where *X* is the current number of entries in Contacts:

```
The Contacts can be migrated to the Oracle Collaboration Suite 10g version during
this upgrade install. Currently there are over X contact entries, migration could
be time consuming. Do you want to perform contacts migration at this time?
```

If the number of entries is more than 10,000, Oracle recommends that you perform the address book migration after the upgrade. From the Contacts Upgrade screen, select **No** and see Section 6.6.4.3 for instructions on performing the migration.

If you choose to migrate the contacts data during the upgrade, the Upgrade Assistant also checks the entry limit and search size limit parameters set for the Oracle Internet Directory server. Depending on these limits and the current number of address book entries, the Upgrade Assistant may prompt you for a `orcladmin` credential because these limits do not apply to the `orcladmin` user.

6.4.2.4 Upgrading Oracle Collaborative Portlets

If the Oracle Universal Installer displays a warning to manually run the Oracle Collaborative Portlets after the install, then run the Oracle Collaborative Portlets Configuration Assistant after you have completed the Oracle9*i*AS Metadata Repository as described in Section 7.8.

6.5 Resolving Oracle Collaboration Suite Upgrade Assistant Errors

If errors occur at either stage of the upgrade process, you must correct the conditions that caused them before you try the upgrade again. The following sections provide some guidance in resolving upgrade errors:

- Resolving Common Errors
- Examining the Log File
- Restarting the Oracle Collaboration Suite Upgrade Assistants

6.5.1 Resolving Common Errors

Under certain conditions, the Oracle Collaboration Suite Upgrade Assistant cannot perform an upgrade. Among these are that the starting configuration is unsupported, processes are running in the Oracle homes, the Infrastructure services are unavailable, or there is insufficient memory for a large-scale OC4J application upgrade.

This section identifies each condition and its cause(s), and explains how to resolve it.

6.5.1.1 Source Oracle Home Not Provided by Oracle Collaboration Suite Upgrade Assistant

If the source Oracle home does not appear as expected in the list on the Oracle Homes, suspect one of these conditions: wrong installation type, Oracle homes are on different computers, or the Oracle home is not identified in the inventory of Oracle products. The solution for each of these is detailed below.

Wrong Installation Type The source Oracle home does not appear if the installation type of the source middle tier is not compatible with the installation type of the destination middle tier instance. If this is the case, make sure you have selected the Oracle Collaboration Suite Applications option from the **Select A Product to Install** screen.

Oracle Homes on Different Computers Another case in which the source middle tier does not appear as a selection is that the source middle tier instance is installed on a different computer from the destination middle tier instance. If this is the case, you must install the destination middle tier instance on the same computer as the source instance to be upgraded.

Oracle Home Not Identified in the Oracle Inventory The Oracle Collaboration Suite Upgrade Assistant locates Oracle Collaboration Suite Oracle homes on your system by analyzing the contents of the Oracle inventory.

Every time you install an Oracle software product on a host computer, Oracle Universal Installer saves information about the software installation on your hard disk. The directories and files that contain this software configuration information are referred to as the Oracle Universal Installer inventory.

In some cases, a particular installation may not appear in the inventory. It could be that the inventory directory was deleted or damaged, or it could be that multiple inventories are installed on the computer.

> **See Also:** *Oracle Universal Installer Concepts* for information about the Oracle Universal Installer inventory.
>
> *Oracle Universal Installer Concepts* is available as part of the Oracle Database 10*g* (10.1.0.2) documentation library available on OTN:
>
> `http://www.oracle.com/technology/documentation/database10g.html`

6.5.1.2 Upgrade Fails During OPMN, OC4J, or Oracle HTTP Server Upgrade

If the upgrade fails during the OPMN, OC4J or Oracle HTTP Server upgrade, it is probably because OPMN is still running in one or both instances (source and destination). You must stop OPMN before starting the Oracle Collaboration Suite Upgrade Assistant.

See Section 8.3.2 for instructions on shutting down processes in a source middle tier Oracle home.

> **See Also:** "Stopping an Application Tier" in Chapter 2 of Oracle Collaboration Suite Administrator's Guide.

6.5.1.3 Upgrade Fails During the Examination

If the upgrade fails during the examination phase, it is probably because the Infrastructure is unavailable. The Oracle Collaboration Suite Upgrade Assistant needs the Infrastructure services for certain operations, so the Infrastructure must be started before you start the Oracle Collaboration Suite Upgrade Assistant.

> **See Also:** "Starting the Infrastructure Tier" in Chapter 2 of Oracle Collaboration Suite Administrator's Guide.

6.5.2 Examining the Log File

You can use the Oracle Collaboration Suite Upgrade Assistant log file to determine the cause of examination and upgrade failures.

The Oracle Collaboration Suite Upgrade Assistant log file is located at:

DESTINATION_ORACLE_HOME`/upgrade/log/ocsua.log`

> **Note:** The Oracle Collaboration Suite Upgrade Assistant appends logging data to the existing log file.

6.5.2.1 Investigating Examination Failures

To determine the cause of an examination failure:

1. Note the name of the failed component in the Oracle Collaboration Suite Upgrade Assistant dialog or command-line output.
2. Open the following Oracle Collaboration Suite Upgrade Assistant log file:

   DESTINATION_ORACLE_HOME`/upgrade/log/ocsua.log`

3. Search for the message `Starting to examine` *`component_name`*.
4. Refer to Appendix D for information about specific error messages in the Upgrade log files.

6.5.2.2 Investigating Upgrade Failures

To determine the cause of an upgrade failure:

1. Note the name of the failed component in the Oracle Collaboration Suite Upgrade Assistant dialog or command-line output.
2. Open the Upgrade log file:

   `DESTINATION_ORACLE_HOME``/upgrade/log/ocsua.log`

3. Search for the message `Starting to upgrade` *`component_name`*.
4. Refer to Appendix D for information about specific error messages in the Upgrade log files.

6.5.3 Restarting the Oracle Collaboration Suite Upgrade Assistants

If the upgrade fails for any Oracle Collaboration Suite application, you can run the Oracle Collaboration Suite Upgrade Assistant again.

To resolve upgrade errors:

1. Look in the log file specified in the Oracle Collaboration Suite Upgrade Assistant screen for any errors that occurred.
2. Fix the problems listed in the log file.
3. Restart the Upgrade Assistant by selecting the application and clicking **Retry.**

If these steps do not resolve the error, see Appendix D.

6.6 Completing the Upgrade to Oracle Collaboration Suite Applications

This section explains how to perform the tasks that may be necessary to make the newly upgraded 10*g* Release 1 (10.1.1) instance functional after the Oracle Collaboration Suite Upgrade Assistant has finished executing.

When the upgrade completes, the following applications have additional tasks to perform to complete the upgrade:

- About Port Values and the portlist.ini File After Upgrade
- About Administration and Schema Passwords After Upgrade
- Completing the Oracle Mail (Oracle Email) Upgrade
- Completing the Oracle HTTP Server Upgrade
- Completing the Oracle Ultra Search Upgrade
- Completing the Oracle Calendar Upgrade
- Completing the OracleAS Web Cache Upgrade
- Completing the OracleAS Portal Middle Tier Upgrade
- Completing the OracleAS Wireless Upgrade
- Updating the OracleAS Portal Provider Information
- Refreshing the Event/Parameter Passing Samples Provider for OracleAS Portal

6.6.1 About Port Values and the portlist.ini File After Upgrade

After you upgrade a middle tier to Oracle Collaboration Suite 10*g* Release 1 (10.1.1), the upgraded instance is configured by Oracle Collaboration Suite Upgrade Assistant to use the same ports that were used by the source instance. For this reason, after the upgrade, you cannot start both the source and destination middle tier instances at the same time; otherwise, port conflicts will occur.

Further, note that the `portlist.ini` file does not reflect the upgraded port settings; instead, it lists the port values assigned by the installer when the destination instance was initially installed. The `portlist.ini` file can be found in the following location in the destination Oracle home:

DESTINATION_ORACLE_HOME`/install/portlist.ini`

To illustrate how ports are initially assigned to the new 10*g* Release 1 (10.1.1) Oracle home and then modified by the Oracle Collaboration Suite Upgrade Assistant, Table 6–6 lists examples of pre- and post-upgrade values for Oracle HTTP Server, Oracle Enterprise Manager 10*g* Application Server Control Console, and Oracle Application Server Web Cache.

Another way to review the current port settings for the upgraded middle tier is to use the Ports page in the Application Server Control Console for Collaboration Suite. The Ports page lists all the ports that were in use by the Release 1 (9.0.3.1) or Release 2 (9.0.4.2) instance.

> **See Also:** "Using Application Server Control Console for Collaboration Suite" in Chapter 3 of *Oracle Collaboration Suite Administrator's Guide*.

To display the Application Server Control Console, enter the following URL in your browser:

`http://`*ocs_host_name*`:`*ocs_control_port_number*

If you do not know the Application Server Control Console port, you can locate the port number by checking the `StandaloneConsoleURL` entry in the following configuration file in the upgraded 10*g* Release 1 (10.1.1) Applications tier Oracle home:

DESTINATION_ORACLE_HOME`/sysman/emd/targets.xml`

> **See Also:** "Changing Applications Tier Ports" in Chapter 14 of *Oracle Collaboration Suite Administrator's Guide*.

Table 6–6 Sample Port Values Before and After Upgrade

Component	Port in Source Oracle Home	Port Value in Destination Oracle Home Assigned by Installer and Recorded in portlist.ini File	Post-Upgrade Port Value
Oracle HTTP Server	Port: 7777 Listen: 7778	Port: 7783 Listen: 7784	Port: 7777 Listen: 7778

Table 6–6 (Cont.) Sample Port Values Before and After Upgrade

Component	Port in Source Oracle Home	Port Value in Destination Oracle Home Assigned by Installer and Recorded in portlist.ini File	Post-Upgrade Port Value
Oracle Enterprise Manager 10*g* Application Server Control Console	1810	1812	1156
Oracle Application Server Web Cache	Administration: 4000 Invalidation: 4001 Statistics: 4002	Administration: 4003 Invalidation: 4004 Statistics: 4005	Administration: 4000 Invalidation: 4001 Statistics: 4002

6.6.2 About Administration and Schema Passwords After Upgrade

After you upgrade a middle tier, use the following passwords in the destination Oracle home:

- To log in to the Application Server Control Console, use the `ias_admin` password you defined during the installation of the destination Oracle home.
- To log in to the OracleAS Web Cache Manager, use the OracleAS Web Cache `Administrator` password you used in the OracleAS Web Cache source Oracle home.

Note: The upgrade process does not change the passwords for the Oracle Collaboration Suite Applications schemas.You may want to change them after completing the upgrade. In previous releases, there was no enforcement of rules for creating secure passwords. Oracle Collaboration Suite 10*g* Release 1 (10.1.1) does enforce rules. If your passwords do not conform to these rules, Oracle recommends that you change them so they are more secure.

For more information, see the following documentation:

- "Password Complexity Verification" in Chapter 4 of *Oracle Collaboration Suite Security Guide*
- "Changing Oracle Collaboration Suite Schemas Passwords" in Chapter 6 of *Oracle Collaboration Suite Administrator's Guide*

6.6.3 Completing the Oracle HTTP Server Upgrade

The following sections describe tasks for completing the upgrade of Oracle HTTP Server:

- Verifying the Secure Sockets Layer (SSL) Configuration After Upgrade
- Manual Upgrade Tasks You May Need to Perform

6.6.3.1 Verifying the Secure Sockets Layer (SSL) Configuration After Upgrade

If you enabled SSL in the source Oracle home, verify that the component is still configured for secure communications after you have used the Oracle Collaboration Suite Upgrade Assistant.

To verify the proper configuration of your secure Oracle HTTP Server, use the following procedure to check the required values in the `opmn.xml` and `httpd.conf` configuration files. Unless both of these files are configured as described in this procedure, you could encounter problems with your SSL configuration:

1. Use a text editor to open the following OPMN configuration file:

   DESTINATION_ORACLE_HOME`/opmn/conf/opmn.xml`

2. Locate the following `ias-component` entry in the `opmn.xml` file:

```
<ias-component id="HTTP_Server">
   <process-type id="HTTP_Server" module-id="OHS">
       <module-data>
           <category id="start-parameters">
               <data id="start-mode" value="ssl-enabled"/>
           </category>
       </module-data>
```

3. Within the `start-parameters` category tag, be sure the `start-mode` parameter is set to `ssl-enabled`.

   This ensures that OPMN starts Oracle HTTP Server in SSL mode.

4. Use a text editor to open the following Oracle HTTP Server configuration file:

   DESTINATION_ORACLE_HOME`/Apache/Apache/conf/httpd.conf`

5. Locate the following entry in the `httpd.conf` file:

```
<IfDefine SSL>
    LoadModule ossl_module libexec/mod_ossl.so
</IfDefine>
```

   In particular, be sure that the `LoadModule ossl_module` command is surrounded by the `<IfDefine SSL>` tag. This ensures that Oracle HTTP Server will be started in SSL mode if and only if OPMN directs it to start in SSL mode. Without the surrounding `<IfDefine SSL>` tag, Oracle HTTP Server starts in SSL mode regardless of whether OPMN has been configured to do so.

   In 10*g* Release 1 (10.1.1), the SSL configuration is controlled by OPMN so it is important that the settings in both the `opmn.xml` file and `httpd.conf` file be consistent.

6.6.3.2 Manual Upgrade Tasks You May Need to Perform

The Oracle Collaboration Suite Upgrade Assistant upgrades the standard settings for the Oracle HTTP Server. If you have configuration files or documents that are in non-standard locations or referenced in non-standard ways, you must upgrade these manually. These, and other specific cases for manual upgrade, are detailed below.

- **If mod_osso was configured:** If mod_osso was configured, then after the upgrade, the osso.conf file continues to use the source Oracle home partner entry in the OracleAS Single Sign-On server. The 10*g* Release 1 (10.1.1) partner entry in the OracleAS Single Sign-On server is not being used, and will cause a broken link (invalid URL) when the application logs out. You should remove the 10*g* Release 1 (10.1.1) partner entry. In addition, if the name of the entry in use is obsolete (in that it refers in some way to the source Oracle home), you may wish to rename it.
- **If there are configuration files in non-default locations:** If `httpd.conf`, `mod_oc4j.conf`, `mod_osso.conf` and `moddav.conf` files are not in the default

location, you must upgrade them manually by applying the customizations in the files in the source Oracle home to the files in the destination Oracle home.

- **If there are custom files and directories referenced by Oracle HTTP Server configuration files:** Because the Oracle Collaboration Suite Upgrade Assistant only upgrades the items listed in Appendix C.2 there could be files or directories referred to by directives such as `Alias`, `mod_rewrite`, and log directives, such as `ErrorLog`, that are not present after the upgrade. Ensure that all such items are upgraded manually and exist in the locations expected by the directives. If these files or directives are missing after the upgrade, the Oracle HTTP Server may not start. You can identify errors by starting the Oracle HTTP Server individually after the upgrade, and examining the following file for errors associated with these items:

  DESTINATION_ORACLE_HOME`/Apache/Apache/logs/error_log`

- **If there are Dynamic Monitoring Service (DMS) configuration elements in the httpd.conf and mod_oc4j.conf files**: You must relocate these configuration elements into the `dms.conf` file.

- **If Oracle Application Server Web Cache is the first listener:** If OracleAS Web Cache is configured as the first listener, ensure that the Oracle HTTP Server directives listed in Table 6–7 have the same values as the corresponding OracleAS Web Cache elements. In particular, note that the Oracle HTTP Server Port directive specifies the port number of a front-end load balancer or reverse proxy. Thus, if OracleAS Web Cache is used, then the Oracle HTTP Server Port directive should have the value of the port on which OracleAS Web Cache is listening.

Table 6–7 Oracle HTTP Server and Oracle Application Server Web Cache Port Settings

Oracle HTTP Server Directive	Oracle Application Server Web Cache Element
VirtualHost	Site definitions
Listen	Origin server ports
VirtualHost, Listen	Site-to-server mappings
Port	Listen

- **If you have static documents in the default DocumentRoot directory that you want to upgrade:** The Oracle Collaboration Suite Upgrade Assistant locates static document files and directories for upgrade in the location specified in the `DocumentRoot` directive. The `DocumentRoot` directive defines the location for static documents and related directories. The base server has a document root location, and each virtual host has one. The Oracle Collaboration Suite Upgrade Assistant copies files under these directories to the destination Oracle home. The default DocumentRoot directory contains demonstration programs and release notes placed there by the installer, so the Oracle Collaboration Suite Upgrade Assistant does not upgrade this directory. You must upgrade this directory manually:

  SOURCE_ORACLE_HOME`/Apache/Apache/htdocs`

6.6.4 Completing the Oracle Mail (Oracle Email) Upgrade

To complete the upgrade to Oracle Collaboration Suite 10*g* Mail, perform the following steps:

- Modifying Oracle Mail Attributes in Oracle Internet Directory

- Starting the Listener and Oracle Collaboration Suite 10*g* Mail Server
- Performing Manual Contacts Migration

6.6.4.1 Modifying Oracle Mail Attributes in Oracle Internet Directory

Perform the steps in this section if you are upgrading from Release 1 (9.0.3.1) and have Oracle Email configured in the source Oracle home.

After upgrading from Release 1 (9.0.3.1), the values of the `orclmailsmtpauthentication` attribute for the `smtp_in` and `smtp_out` processes in Oracle Internet Directory are not valid. Before starting Oracle Mail, perform the following steps to modify the values of this attribute:

1. Make sure that Oracle Internet Directory is running.
2. Start Oracle Internet Directory Manager.

   Enter the following command from the Oracle Collaboration Suite 10*g* Infrastructure Oracle home:

   ```
   DESTINATION_ORACLE_HOME/bin/oidadmin
   ```

   When prompted, enter the user name, password, the name of the server and port where Oracle Internet Directory is running. By default, the user name is `cn=orcladmin` and the port is 389.
3. Click **Login**. The Oracle Directory Manager appears.
4. In the navigator pane on the left side, locate the `Entry Management` tree item and click the plus (+) sign next to it to view its subcomponents. Repeat this step for the `cn=OracleContext, cn=Computers, cn=host, cn=apps_tier_Oracle_home, cn=EMailServer` and `cn=mailProcessConfig` tree items.

   where

   - *host* is the name of the system where the Applications tier is running.
   - *apps_tier_Oracle_home* is the Oracle home of the upgraded Applications tier.
5. Select the entry of the `smtp_in` process. The entry has the form "`cn=host:um_system:smtp_in`".
6. In the `orclmailsmtpauthentication` attribute field, change the value from "false" to "none."
7. Repeat steps 5 and 6 for the `smtp_out` process.
8. Click **Apply**.
9. Exit Oracle Directory Manager by selecting **File** then **Exit**.
10. Start the Oracle Mail listener and server processes as described in Section 6.6.4.2.

6.6.4.2 Starting the Listener and Oracle Collaboration Suite 10*g* Mail Server

When the Oracle Universal Installer completes the installation and upgrade, start the e-mail listener and Oracle Collaboration Suite 10*g* Mail server processes.

To start the listener and server:

1. Get the user and group IDs of the user who installed Oracle Collaboration Suite 10*g* Applications. At the command prompt, enter the following command:

   ```
   id
   ```

An example of the output is:

```
uid=25317(oracle) gid=42424(dba)
```

2. Log in as the root user.
3. Enter the following command:

   ```
   DESTINATION_ORACLE_HOME/bin/tnslsnr listener_es -user userid -group groupid &
   ```

   where *userid* and *groupid* are the numeric values of `uid` and `gid` from the output of the `id` command in step 1.
4. Start the Oracle Collaboration Suite 10*g* Mail server processes by entering the following command from the upgraded Applications tier opmn/bin directory:

   ```
   opmnctl startproc process-type=type
   ```

   where type is one of the following, depending on which processes you are using:

   - email_housekeeper
   - email_imap
   - email_listserver
   - email_nntp_in
   - email_nntp_out
   - email_pop
   - email_smtp_in
   - email_smtp_out
   - email_virus_scrubber

   For example:

   ```
   opmnctl startproc process-type=email_imap
   ```

In addition to starting the e-mail listener and server processes, if you do not perform the contacts data migration during the middle tier upgrade, then perform the migration after upgrading all the middle tiers configured with Oracle Email.

6.6.4.3 Performing Manual Contacts Migration

Migrating contacts data involves exporting the address book to LDAP Data Interchange Format (LDIF) files and loading the data in the LDIF files to the Oracle Internet Directory database.

> **Note:** Before you migrate contacts data, you can continue to use the existing address book. Once you complete the contacts migration, do not use the old address book. If you have more than one middle tier configured with Oracle Email using the same address book, perform the contacts migration during or after the upgrade of the last middle tier configured with Oracle Email.

To migrate e-mail contacts to the Oracle Collaboration Suite common address book, perform the steps in the following sections:

- Exporting Contacts Data to an LDIF File

- Loading the Exported Contacts Data into Oracle Internet Directory

6.6.4.3.1 Exporting Contacts Data to an LDIF File

Export contacts data to LDIF files using one of the following methods:

1. To export contacts for all users, enter the following command:

   ```
   ORACLE_HOME/oes/bin/migrate_emailaddressbook.pl  -manual
   ```

   where *ORACLE_HOME* is the destination middle tier Oracle home. Follow the on-screen instructions.

2. Alternatively, to export address book entries for a list of given users:

   a. Create an input file containing the fully qualified e-mail addresses of the users whose contacts data you want to migrate. For example:

      ```
      user1@oracle.com
      user2@oracle.com
      ```

   b. Enter the following command:

      ```
      ORACLE_HOME/oes/bin/migrate_emailaddressbook.pl -manual -users_file
      filename
      ```

      where *ORACLE_HOME* is the destination middle tier Oracle home and *filename* is the name of the input file created in step a. This script exports the contacts data for each user in the input file.

The script prints additional instructions and information to the screen which are based on the type and amount of contacts data. Read these instructions to determine the number of LDIF files generated, the files names and locations, and the method to use to load the data into Oracle Internet Directory.

These instructions use the name ocsv2emailaddressbook_bulkload.ldif and ocsv2emailaddressbook_ldapmodify.ldif for the LDIF file, but there could be multiple files which use different names.

6.6.4.3.2 Loading the Exported Contacts Data into Oracle Internet Directory

There are two alternative methods for loading the data into the Oracle Internet Directory database using either the `bulkload` tool or the `ldapmodifymt` tool. If the `migrate_emailaddressbook.pl` script prompts you to run `bulkload.sh`, then perform step 2. If the script prompts you to run the `ldapmodifymt` command-line tool, then perform step 3.

To load the contacts data from the LDIF file into the Oracle Internet Directory database:

1. From the destination middle tier Oracle home, use the `ftp` utility to copy the LDIF files (such as ocsv2emailaddressbook_bulkload.ldif or ocsv2emailaddressbook_ldapmodify.ldif) to the system where Oracle Internet Directory is running.

   Perform either step 2 or step 3, depending on the instructions provided by the migration script.

2. Use the bulkload tool by performing the following steps:

   a. Shut down Oracle Internet Directory. See Section 8.1.2 for instructions.

   b. Check the input from the LDIF file schema and inconsistency violations and generate the input files by running bulkload.sh with the following options:

```
ORACLE_HOME/ldap/bin/bulkload.sh -connect oid_connect_string -check
-generate path_to_ldif/ocsv2emailaddressbook_bulkload.ldif
```

where *ORACLE_HOME* is the destination Infrastructure Oracle home, *oid_connect_string* is the connect string for the database used by Oracle Internet Directory and *path_to_ldif* is the absolute path of the LDIF file.

c. To load the data into the database, run the `bulkload.sh` command a second time using the `-load` option:

```
ORACLE_HOME/ldap/bin/bulkload.sh -connect oid_connect_string -load path_to_
ldif/ocsv2emailaddressbook_bulkload.ldif
```

where *ORACLE_HOME* is the destination Infrastructure Oracle home, *oid_connect_string* is the connect string for the Infrastructure database and *path_to_ldif* is the absolute path of the LDIF file.

d. Restart Oracle Internet Directory. See Section 8.1.1 for instructions.

3. Alternatively, use the `ldapmodifymt` tool to modify entries concurrently. From the destination Infrastructure Oracle home, enter the following command:

```
ORACLE_HOME/bin/ldapmodifymt -T no_of_threads -h host -p port -D userdn -w
password -f path_to_ldif/ocsv2emailaddressbook_ldapmodify.ldif
```

where:

- *ORACLE_HOME* is the Infrastructure destination Oracle home.
- *no_of_threads* is the number of threads for concurrently processing entries. The value depends on the number of entries. In general, five to ten should be sufficient.
- *host* is the name of the host where Oracle Internet Directory is running.
- *port* is the port where Oracle Internet Directory is running.
- *userdn* is the DN of the Oracle Internet Directory administrator user.
- *password* is the password of the Oracle Internet Directory administrator user.
- *path_to_ldif* is the absolute path to the LDIF file.

4. Verify the migration by checking the output of the tools for any error messages. You can also log into Oracle Collaboration Suite 10*g* WebMail as an existing user and check the address book to make sure the contacts have been migrated.

5. Optionally, after you complete and verify the migration, delete the old email address book entries by entering the following command:

```
ORACLE_HOME/oes/bin/migrate_emailaddressbook.pl -delete
```

where *ORACLE_HOME* is the destination middle tier Oracle home.

See Also: *Oracle Internet Directory Administrator's Guide 10g Release 2 (10.1.2)* for more information about the `ldapmodifymt` and `bulkload` tools.

6.6.5 Completing the Oracle Ultra Search Upgrade

If you chose to continue using the existing Oracle Ultra Search index, a new index will be rebuilt when the crawling schedule is executed. Use the Oracle Ultra Search

Administrative Console to check when the crawl is complete then configure Oracle Collaboration Suite 10*g* Search to use the new index.

To configure Oracle Collaboration Suite 10*g* Search to use the new index:

1. Modify the file ORACLE_HOME/j2ee/OC4J_OCSClient/connectors/UltraSearch/UltraSearch/META-INF/oc4j-ra.xml where *ORACLE_HOME* is the 10*g* Release 1 (10.1.1) Applications tier Oracle home by setting the value of all variables to the empty string. For example:

   ```
   variable1=""
   variable2=""
   ```

2. Remove the cached file ORACLE_HOME/j2ee/OC4J_OCSClient/application-deployments/default/UltraSearch/oc4j-ra.xml from the 10*g* Release 1 (10.1.1) Applications tier Oracle home.

3. Restart the OC4J_OCSClient instance by entering the following commands from the Applications tier Oracle home:

   ```
   $ORACLE_HOME/opmn/bin/opmnctl stopproc process-type=OC4J_OCSClient
   $ORACLE_HOME/opmn/bin/opmnctl startproc process-type=OC4J_OCSClient
   ```

For more information, see the *Oracle Ultra Search User's Guide*.

6.6.5.1 Manually Migrating Oracle Ultra Search Index and Configuration Data

These steps are required if you migrated Oracle Ultra Search data using the manual migration scripts. If you want to point your Web search to an instance other than the default `WK_INST` instance, you should also follow this procedure.

After the Applications tier upgrade, perform the following steps:

1. In Oracle Internet Directory Service Registry, set the WK_INST instance as the default instance by changing its `orclstatus` to 'default' and changing the `orclstatus` of the other entries to the empty string.

2. Update the `oc4j-ra.xml` file of the Oracle Ultra Search searchlet to point to the manually migrated instance. In the `$ORACLE_HOME/j2ee/OC4J_OCSClient/connectors/UltraSearch/UltraSearch/META-INF/oc4j-ra.xml` file, modify the following lines:

   ```
   <config-property name="virtualServiceDn" value="<INSTANCE_DN>"/>
   <config-property name="connectionURL" value="<JDBC_CONN>"/>
   <config-property name="userName" value="<USERNAME>"/>
   <config-property name="password" value="<PASSWORD>"/>
   <config-property name="instanceName" value="<INST_NAME"/>
   ```

   Where:

   - *INSTANCE_DN* is the Oracle Ultra Search instance's dn string in Oracle Internet Directory
   - *JDBC_CONN* is the JDBC connection string to the Oracle Ultra Search instance
   - *USERNAME* is Oracle Ultra Search instance schema name
   - *PASSWORD* is Oracle Ultra Search instance schema password
   - *INSTANCE_NAME* is the Oracle Ultra Search instance name

   For example:

   ```
   <config-property name="virtualServiceDn" value="cn=store:ocs_inst,
   ```

```
cn=VirtualServices,cn=UltraSearch,cn=Services,cn=OracleContext>"/>
<config-property name="connectionURL"
value="<jdbc:oracle:thin:@stana08:1521:store>"/>
<config-property name="userName" value="<ocs_us>"/>
<config-property name="password" value="<ocs_us>"/>
<config-property name="instanceName" value=="ocs_inst"/>
```

3. Delete the cached version of the file in `$ORACLE_HOME/j2ee/OC4J_OCSClient/application-deployments/default/UltraSearch/oc4j-ra.xml`.
4. Restart the OC4J_OCSClient instance.

6.6.5.2 Performing Searches With the Query Application

When you choose to use the existing index, you can perform searches right away using Oracle Collaboration Suite Search. However, you cannot perform searches right away using the Query application at `http://host:port/ultrasearch/query/search.jsp`. This is because this application points to the new system and searches will not return correct results until the crawling is completed.

To verify that the crawling is complete:

1. Access the administrator page at

   `http://host:port/ultrasearch/admin`

2. Select the instance and click the Schedules tab.
3. Check every schedule to see if the crawling has completed.

6.6.6 Completing the Oracle Calendar Upgrade

The steps in the following sections are optional:

- Enabling Integration Between Oracle Calendar 10g Release 1 (10.1.1) and Oracle Web Conferencing Release 2 (9.0.4.2)
- Enabling Common Address Book Synchronization
- Migrating Custom Oracle Calendar User Interface Elements

6.6.6.1 Enabling Integration Between Oracle Calendar 10*g* Release 1 (10.1.1) and Oracle Web Conferencing Release 2 (9.0.4.2)

Perform the steps in this section if all of the following conditions are true:

- Oracle Calendar Release 2 (9.0.4.1) or Release 2 (9.0.4.2) server was integrated with Oracle Web Conferencing before the upgrade and Oracle Calendar server and Oracle Web Conferencing are configured in different middle tiers.
- Oracle Web Conferencing middle tiers accessed by the upgraded Oracle Calendar server have not been upgraded and remain at Release 2 (9.0.4.2).
- You are not upgrading the Oracle Web Conferencing middle tiers immediately after the Oracle Calendar server middle tier upgrade and want to keep the integration between the two working in the interim.

If these conditions are true, then to keep the integration between Oracle Calendar 10*g* Release 1 (10.1.1) server and Oracle Web Conferencing Release 2 (9.0.4.2) working, then modify the `[CONFERENCING]` parameters in Oracle Calendar's unison.ini file so that they use the Release 2 (9.0.4.2) authentication information to

communicate with Oracle Web Conferencing Release 2 (9.0.4.2). When the Oracle Web Conferencing middle tier is upgraded, you revert to the 10*g* Release 1 (10.1.1) values.

> **Note:** Oracle Calendar clients are not able to create new Web conferences until Oracle Web Conferencing is upgraded to Oracle Real-Time Collaboration 10*g* Release 1 (10.1.1). At that time, restarting Oracle Calendar server enables integration between Oracle Calendar and Oracle Real-Time Collaboration. Alternatively, you can perform the steps in this section, if you do not plan to upgrade Oracle Web Conferencing immediately and want to continue to provide this functionality to users.

To restore the Release 2 (9.0.4.2) value for `siteauthkey`:

1. Back up the initialization file DESTINATION_ORACLE_HOME/ocal/misc/unison.ini where *DESTINATION_ORACLE_HOME* is the 10*g* Release 1 (10.1.1) Oracle home.
2. Set the autodiscovery values to FALSE in the `[CONFERENCING]` section in `unison.ini`:

```
siteauthkey_auto=FALSE
enable_auto=FALSE
siteid_auto=FALSE
url_auto=FALSE
actinghostenable_auto=FALSE
allowconfuntil_auto=FALSE
```

3. From the SOURCE_ORACLE_HOME/ocal/misc/unison.ini file, copy all the values in the [CONFERENCING] section to the same section in DESTINATION_ORACLE_HOME/ocal/misc/unison.ini. For example:

```
walletfile = file:/private/test/ocs9041_mid/mid/ocal/etc/default_wallet
walletpassword =
"{STD}647oe8bISXaS7MrwiGpYYKnYvD9L37EltmElzUWwtbkM4PffMh9xmEKspKibAjhD"
enable = TRUE
siteid = 101
siteauthkey =
"{STD}VAZswSuEgrk3HqC7NzSHCx/7TQpdYYuamBw6quS1G+Zecl+RvqIw60jXA2igkEW0"
url = "https://dsunrdd17.us.oracle.com:4443/imtapp/OracleRTCService"
```

4. In the DESTINATION_ORACLE_HOME/ocal/misc/unison.ini, change the value of the `walletfile` parameter to point to the default_wallet directory in the destination Oracle home:

```
walletfile = file:DESTINATION_ORACLE_HOME/ocal/etc/default_wallet
```

5. Copy all the files that are in the ocal/etc/default_wallet directory in the source Oracle home into the same directory in the destination Oracle home.
6. Restart Oracle Calendar server by entering the following commands where *ORACLE_HOME* is the 10*g* Release 1 (10.1.1) Oracle home configured with Oracle Calendar:

```
$ORACLE_HOME/opmn/bin/opmnctl restartproc ias-component=CalendarServer
```

7. Restart Oracle Calendar application system by entering the following commands where ORACLE_HOME is the 10*g* Release 1 (10.1.1) Oracle home configured with Oracle Calendar:

```
$ORACLE_HOME/ocas/bin/ocasctl -stopall
$ORACLE_HOME/ocas/bin/ocasctl -start
$ORACLE_HOME/ocas/bin/ocasctl -start -t ochecklet
```

Later, when you have upgraded the middle tier configured with Oracle Web Conferencing to 10*g* Release 1 (10.1.1), restore the `[CONFERENCING]` settings from the backup copy of the unison.ini file in the 10*g* Release 1 (10.1.1) Oracle home or set the values listed in step 2 to `TRUE`. Restart Oracle Calendar using the command in step 6.

6.6.6.2 Enabling Common Address Book Synchronization

If you disabled synchronization of Oracle Calendar address books with the Common Address Book in Oracle Internet Directory as described in Section 6.2.1, you can enable it using one of the following methods.

To perform an incremental synchronization:

1. In the DESTINATION_ORACLE_HOME/ocal/misc/unison.ini file, locate the [ENG] section and change the value of `cab_enable`:

```
cab_enable=TRUE
```

2. Restart the Oracle Calendar 10*g* Release 1 (10.1.1) server by entering the following command:

```
$ORACLE_HOME/opmn/bin/opmnctl restartproc ias-component=CalendarServer
```

Alternatively, to perform the synchronization immediately, from the DESTINATION_ORACLE_HOME/ocal/misc/unison.ini directory, enter the following command:

```
./unidssync -absync
```

Note: If you see an increase in CPU usage after the upgrade, it may be due to the Common Address Book synchronization. Check the value of the `[CWS]cabsynctime` parameter in unison.ini to see if the increase in CPU usage occurs at the times specified by this parameter.

If you find the incremental process is too slow, you can modify the value of the `[ENG]cab_syncinterval` parameter.

See "About the Common Address Book" in Chapter 5 of *Oracle Calendar Administrator's Guide*.

6.6.6.3 Migrating Custom Oracle Calendar User Interface Elements

If you customized the user interface of your Oracle Calendar application system, you need to migrate any custom elements listed in ORACLE_HOME/ocas/conf/ocwc.conf such as images, help documents, banners, style sheets and coloring definition to the new Oracle home. However, due to changes in the Oracle Calendar user interface in Oracle Collaboration Suite 10*g* Release 1 (10.1.1), reusing these elements in the upgraded Oracle Calendar application may not have the same layout as in the previous version.

6.6.7 Completing the Oracle Real-Time Collaboration Upgrade

Complete the steps in this section if Oracle Calendar server was integrated with Oracle Web Conferencing before the upgrade and Oracle Calendar and Oracle Web Conferencing were configured in different middle tiers.

If any middle tiers that are configured with Oracle Calendar server and use the upgraded Oracle Real-Time Collaboration have already been upgraded to 10*g* Release 1 (10.1.1), then restart each Oracle Calendar server using the following command:

```
$ORACLE_HOME/opmn/bin/opmnctl restartproc ias-component=CalendarServer
```

If you modified the 10*g* Release 1 (10.1.1) unison.ini file as described in Section 6.6.6.1, then make sure to restore the settings in the `[CONFERENCING]` section from the backup copy of the file before you restart the server.

Otherwise, perform the remaining steps in this section if all the following conditions are true:

- Oracle Calendar server middle tiers that use the upgraded Oracle Real-Time Collaboration have not been upgraded and remain at Release 2 (9.0.4.2).
- You are not upgrading the Oracle Calendar server middle tiers immediately after the Oracle Web Conferencing middle tier upgrade and want to keep the integration between the two working in the interim.

When Oracle Real-Time Collaboration is upgraded to 10*g* Release 1 (10.1.1), the upgrade process generates a new authentication token for Oracle Calendar server. The value of the new token is registered with Oracle Internet Directory.

In order for Oracle Calendar Release 2 (9.0.4.2) to communicate with the upgraded Oracle Real-Time Collaboration, it must provide this new authentication token. Oracle Calendar stores this value as the `[CONFERENCING]siteauthkey` parameter in the unison.ini file. You need to reconfigure Oracle Calendar so that this parameter contains the new value.

Completing these steps ensures that Web conferences scheduled in Oracle Calendar are propagated to Oracle Real-Time Collaboration. Make sure you perform this step immediately after the upgrade or the meeting ID's of Web conferences will be set to PENDING.

6.6.7.1 Updating SITEAUTHKEY in Oracle Calendar Release 2 (9.0.4.2)

To update the value of `siteauthkey`:

1. Access the upgraded Oracle Real-Time Collaboration Web client at the following URL and log in as an administrative user:

   ```
   http://hostname:port/imtapp/app/prelogin.uix
   ```

2. Click on the **Sites** tab. In the **Sites** table, locate the entry for Calendar and click the **Details** icon.
3. Copy the value from the **Authentication Token** field.
4. Log on to a system running Oracle Calendar Release 2 (9.0.4.2) server. Set the *ORACLE_HOME* environment variable to the path of the Oracle Collaboration Suite middle tier Oracle home configured with the Oracle Calendar Release 2 (9.0.4.2) server.
5. Change to the ORACLE_HOME/ocal/bin directory and enter the following command where *token* is the value copied from the **Authentication Token** field:

   ```
   ./uniencrypt -s token
   ```

For example:

```
./uniencrypt -s
MTAxOldDRjE4RFpGT1dBQTlTQVAyRFFBT0RUQzQ2UVBCSkU3UTM5UUVVSUIwN1NCUkk4MzNaQTlWS0w
wSTZRS1dETUUwSjFPTVQxMktJTEdXMUc3
```

The output of the command is the encrypted authentication token. In this case, the result is:

```
{STD}NTVaClCfZ/bOu8SyyY5BozlztTekUObd1WsRQZ7sTZfcpbYayqCXhBP+HLiIVEIVOkEwDAgXMs
rkuOnXXQeBKreS+gJPsGgBpfmvZ5kwgqndW6YVN2UOHZVVhBKI+cIIQ92CTpiNSFUuksswTJAMOyElK
jdchHTlRPmgPYnUIpaIa2mA7gbygzDa+Cim+DLvQ01qUVmny/Q=
```

6. In the ORACLE_HOME/ocal/misc/unison.ini file, replace the value of [CONFERENCING]`siteauthkey` with the new encrypted value. For example:

```
siteauthkey="{STD}NTVaClCfZ/bOu8SyyY5BozlztTekUObd1WsRQZ7sTZfcpbYayqCXhBP+HLiIV
EIVOkEwDAgXMsrkuOnXXQeBKreS+gJPsGgBpfmvZ5kwgqndW6YVN2UOHZVVhBKI+cIIQ92CTpiNSFUu
kssswTJAMOyElKjdchHTlRPmgPYnUIpaIa2mA7gbygzDa+Cim+DLvQ01qUVmny/Q="
```

7. Restart Oracle Calendar by entering the following commands where *ORACLE_HOME* is the Release 2 (9.0.4.2) Oracle home configured with Oracle Calendar:

```
$ORACLE_HOME/ocal/bin/unistop -y
$ORACLE_HOME/ocal/bin/unistart
```

8. Repeat steps 6 and 7 for all Oracle Calendar Release 2 (9.0.4.2) installations that use the upgraded Oracle Real-Time Collaboration

6.6.7.2 Granting Oracle Real-Time Collaboration Users BUSINESSADMIN and BUSINESSMONITOR Roles

To grant `businessadmin` and `businessmonitor` roles to the users who had them before the upgrade, perform the following steps:

1. Log in to the Oracle Collaboration Suite Database 10g (10.1.1) used by Oracle Real-Time Collaboration as the `rtc_app` user. Run the following query to find out which Oracle Real-Time Collaboration users have `businessadmin` and `businessmonitor` roles:

```
select user_name, CASE WHEN default_role_id IN(6,7) THEN 'businessmonitor'
WHEN default_role_id IN(4,8) THEN 'businessadmin' END "Role Name" from rtc_
users where default_role_id in (6,7,4,8);
```

For example, if you have a user `RTCBADMIN` with the `businessadmin` role and a user `RTCBMONITOR` with the `businessmonitor` role, the query returns the following response:

```
USER_NAME            Role Name
-------------------- ---------------
RTCBADMIN            businessadmin
RTCBMONITOR          businessmonitor

2 rows selected.
```

2. Grant these users the `businessadmin` or `businessmonitor` role by entering the following command from the Oracle Collaboration Suite Applications tier Oracle home imeeting/bin directory:

```
rtcctl> modifyRole -username username -rolename {businessadmin|businessmonitor}
```

where *username* is the name of the Oracle Real-Time Collaboration user with `businessadmin` or `businessmonitor` privileges before the upgrade. For example:

```
rtcctl> modifyRole -username RTCBADMIN -rolename businessadmin
```

3. Log in to Oracle Real-Time Collaboration as the user and verify that the correct administrative or monitor tabs are visible.

6.6.8 Completing the OracleAS Web Cache Upgrade

The following sections describe procedures to consider when upgrading the middle tiers that are part of an OracleAS Web Cache Cluster:

- Enabling OracleAS Web Cache to Run On a Port Number Lower Than 1024
- Using Multiple Versions of OracleAS Web Cache within an OracleAS Web Cache Cluster
- Synchronizing the Upgraded OracleAS Web Cache Cluster Configuration
- Upgrading an OracleAS Web Cache Cluster from Release 1 (9.0.3.1) or Release 2 (9.0.4.2) to 10g Release 1 (10.1.1)

6.6.8.1 Enabling OracleAS Web Cache to Run On a Port Number Lower Than 1024

OracleAS Web Cache will not start after upgrade if the port settings of 80 and 443 were upgraded from the Release 1 (9.0.3.1) or Release 2 (9.0.4.2) to the OracleAS Web Cache 10*g* (10.1.2) used in Oracle Collaboration Suite 10*g* Release 1 (10.1.1).

This is because on UNIX systems, port numbers under 1024 are reserved for privileged processes. As a result, the `webcached` executable in 10*g* (10.1.2) must run as root in order to start the cache server process and bind to these ports.

OracleAS Web Cache is designed to work in concert with Oracle HTTP Server. If both components are using port numbers less than 1024, you can use the following script to configure both components accordingly:

1. Log in to the host as the root user.
2. Run the following command in the 10*g* Release 1 (10.1.1) destination middle tier Oracle home:

   ```
   DESTINATION_ORACLE_HOME/upgrade/iasuasetroot.sh appserver_userID
   ```

   In this command, replace *appserver_userID* with the user name of the user who installed the Oracle Collaboration Suite Applications tier instance.
3. Log out of the root account.

Alternatively, if the Oracle HTTP Server is not using port numbers less than 1024, you can use the following procedure to enable only the `webcached` executable to run as the root user:

1. Log in to the OracleAS Web Cache host as root.
2. Enter the following command:

   ```
   DESTINATION_ORACLE_HOME/webcache/bin/webcache_setuser.sh appserver_userID
   ```

   In this command, replace *appserver_userID* with the user name of the user who installed the Oracle Collaboration Suite Applications tier instance.
3. Log out of the root account.

6.6.8.2 Using Multiple Versions of OracleAS Web Cache within an OracleAS Web Cache Cluster

When upgrading an OracleAS Web Cache cluster, you can upgrade one cache cluster member at a time. The caches will continue to function, but because the other cluster members have a different version of the configuration, the caches will not forward requests to cache cluster members operating with a different version.

For example, if you upgrade `Cache_A` to the current version, but have not yet upgraded `Cache_B` and `Cache_C`, `Cache_A` will not forward requests to the cache cluster members `Cache_B` and `Cache_C`.

In this situation, the Operations page in Web Cache Manager indicates that the Operation Needed is Incompatible software version.

Note: When the cache cluster members are not running the same version of OracleAS Web Cache, you can still invalidate documents and you can propagate the invalidation to other cluster members.

However, the invalidation requests must originate with the cache that is operating with the earlier version of OracleAS Web Cache, such as Release 2 (9.0.2) or Release 2 (9.0.3).

6.6.8.3 Synchronizing the Upgraded OracleAS Web Cache Cluster Configuration

After you upgrade each cache cluster member to 10*g* Release 1 (10.1.1), you must perform the following additional steps to synchronize the configuration for the members of the cluster:

1. If the caches have not been started, for each upgraded cache, start OracleAS Web Cache and OracleAS Web Cache Manager. On the command line, enter:

   ```
   opmnctl startproc ias-component=WebCache
   ```

   This command starts the OracleAS Web Cache cache server process and admin server process.

2. In a browser, enter the URL for the OracleAS Web Cache Manager for one of the upgraded caches, and, when prompted, enter the username and password for the `ias_admin` or `administrator` user.

   Note that after you upgrade an OracleAS Web Cache instance, you log into the OracleAS Web Cache Manager using the `Administrator` password defined when you installed and configured OracleAS Web Cache source Oracle home.

   See Also: Section 6.6.2, "About Administration and Schema Passwords After Upgrade"

3. In the navigator frame, select **Administration -> Operations**.

   The **Operations** page appears.

4. In the Operations page, click **Retrieve Configuration**.

   Web Cache retrieves the cache-specific configuration information from the remote cache cluster members. Then, Web Cache Manager indicates that the Operation Needed is Propagate Configuration.

5. To propagate the configuration to all cache cluster members, select **All caches** and an **Interval** of **Immediate**. Then, click **Propagate**.

6. Restart the caches by selecting **All caches** and an Interval. Then, click **Restart**. (Note that you can perform this operation as you upgrade each cache, or you can perform this operation after all of the cache cluster members have been upgraded.)

6.6.8.4 Upgrading an OracleAS Web Cache Cluster from Release 1 (9.0.3.1) or Release 2 (9.0.4.2) to 10*g* Release 1 (10.1.1)

A Release 1 (9.0.3.1) or Release 2 (9.0.4.2) cache cannot accept invalidation messages from a 10*g* Release 1 (10.1.1) cache. In a configuration that uses a OracleAS Web Cache cluster with a mixture of Release 1 (9.0.3.1) or Release 2 (9.0.4.2) and 10*g* Release 1 (10.1.1) cluster members, you must configure the Load Balancer to send invalidation messages only to the Release 1 (9.0.3.1) or Release 2 (9.0.4.2) members.

When upgrading a cache cluster from Release 2 (9.0.2) to 10*g* Release 1 (10.1.1), remove cluster members one at a time from the invalidation pool for the Load Balancer prior and upgrade them. Once all the cluster members are upgraded, add them back to the invalidation pool. As an example, assume a configuration with a Load Balancer in front of a cache cluster that is comprised of four members, webche1-host, webche2-host, webche3-host, and webche4-host, all running Release 2 (9.0.4.2).

To upgrade this cache cluster:

1. In the Load Balancer configuration, remove webche1-host from the pool that is responsible for invalidation.
2. Upgrade webche1-host from Release 2 (9.0.4.2) to 10*g* Release 1 (10.1.1).
3. In the Load Balancer configuration, remove webche2-host from the pool that is responsible for invalidation.
4. Upgrade webche2-host from Release 2 (9.0.4.2) to 10*g* Release 1 (10.1.1).
5. In the Load Balancer configuration, remove webche3-host from the pool that is responsible for invalidation.
6. Upgrade webche3-host from Release 2 (9.0.4.2) to 10*g* Release 1 (10.1.1).
7. Upgrade webche4-host from Release 2 (9.0.4.2) to 10*g* Release 1 (10.1.1). As this is the last cache member in the Load Balancer configuration, it is not necessary to remove it from the invalidation pool.
8. In the Load Balancer configuration, add webche1-host, webche2-host, and webche3-host back into the pool that is responsible for invalidation.

6.6.9 Completing the OracleAS Portal Middle Tier Upgrade

This section explains how to perform the manual procedures required to complete the Portal upgrade after the Oracle Collaboration Suite Upgrade Assistant has finished processing. It discusses the following topics:

- Verifying Oracle Internet Directory Properties for Custom Portals in the OracleAS Portal Dependency File
- Updating Deployment Properties for Portal Development Kit Services for Java (JPDK) Web Providers

6.6.9.1 Verifying Oracle Internet Directory Properties for Custom Portals in the OracleAS Portal Dependency File

In cases where a Portal instance accessed through the middle-tier is not using the same Oracle Internet Directory that the middle-tier is registered with, some additional steps need to be carried out after upgrade of the middle tier. These steps validate that the

Oracle Internet Directory details stored in the OracleAS Portal Dependency Settings File are correct. When you perform an upgrade, not all of the values are available to the upgrade tool and are simply set to a default value.

To verify the Oracle Internet Directory properties:

1. Open the following file in a text editor:

   DESTINATION_ORACLE_HOME/portal/conf/iasconfig.xml

2. Review the contents of the file for entries that apply to OracleAS Portal.

   In particular, note each occurrence of the `PortalInstance` element within the file. Example 6–1 shows the contents of a typical `iasconfig.xml` file.

3. For each `PortalInstance` element that refers to an Oracle Internet Directory other than the one with which the middle tier is registered, do the following:

   a. Set the `LDAPSSLPort` property in the `OIDDependency` element to the SSL port for the Oracle Internet Directory.

   b. Verify that the `AdminDN` property of the corresponding `OIDComponent` element is set to the Administration DN of the Oracle Internet Directory.

   c. Verify that the `AdminPassword` property of the corresponding `OIDComponent` element is correctly set to the password of the Oracle Internet Directory.

4. Save your changes and close the `iasconfig.xml` file.

5. Encrypt all manually entered password properties using the following command:

   DESTINATION_ORACLE_HOME/portal/conf/ptlconfig -encrypt

   Refer to the *Oracle Application Server Portal Configuration Guide* for more information about the `iasconfig.xml` and the `ptlconfig` tool.

Example 6–1 Sample Contents of the OracleAS Portal iasconfig.xml File

```
<IASInstance Name="midtier.abc.company.com" Host="abc.company.com">
         <WebCacheComponent AdminPort="4000" ListenPort="80"
             InvalidationPort="4001" InvalidationUsername="invalidator"
             InvalidationPassword="@BdS/zVGJHrElbOMohqLzurxsPR1au77peA=="
             SSLEnabled="false"/>
         <EMComponent ConsoleHTTPPort="1811" SSLEnabled="false"/>
       </IASInstance>
       <IASInstance Name="infra.xyz.company.com" Host="xyz.company.com">
         <OIDComponent AdminPassword="welcome1"
            AdminDN="cn=orcladmin" SSLEnabled="false" LDAPPort="389"/>
       </IASInstance>
       <PortalInstance DADLocation="/pls/portal30" SchemaUsername="portal30"
          SchemaPassword="welcome1"
                connectString="dbserver.company.com:1521:orcl">
             <WebCacheDependency ContainerType="IASInstance"
                 Name="midtier.abc.company.com"/>
             <OIDDependency ContainerType="IASInstance" LDAPSSLPort="4339"
                 Name="infra.xyz.company.com"/>
             <EMDependency ContainerType="IASInstance"
               Name="midtier.abc.company.com"/>
       </PortalInstance>
```

6.6.9.2 Updating Deployment Properties for Portal Development Kit Services for Java (JPDK) Web Providers

Any new deployment property files added in the source Oracle home will be copied to the destination Oracle home. However, any property file that is modified from its original installation time values will not be copied. Any changes in those files must be manually applied to the destination Oracle home.

The location of the property file will vary among web providers, and can be located using the service identifier of the web provider. The service identifier identifies a provider within an application. The deployment property files are named according to the following convention:

SOURCE_ORACLE_HOME/j2ee/OC4J_Portal/applications/application_name/*web_application_name*/WEB-INF/deployment/*service_identifier*.properties

For example, the deployment properties for the JPDK sample web provider, whose identifier is sample, reside in:

SOURCE_ORACLE_HOME/j2ee/OC4J_Portal/applications/jpdk/jpdk/WEB-INF/deployment/sample.properties

To migrate modified deployment properties from the source to the destination Oracle home:

1. Identify all customized property files (files in which new properties were added or whose default property values were changed) in the source Oracle home.
2. Copy the customized properties from these property files in the source Oracle home to the corresponding files in the destination Oracle home.

6.6.10 Completing the OracleAS Wireless Upgrade

The following sections provide information on upgrading the Oracle Application Server Wireless Middle Tier from Release 2 (9.0.2) or 10*g* (9.0.4) to 10*g* (10.1.2):

- Upgrading Oracle Application Server Wireless
- Operating OracleAS Wireless Release 2 (9.0.2), 10g (9.0.4), and 10g (10.1.2) Middle Tiers Together
- Configuring Site-Level Drivers in a Mixed Mode Environment

> **See Also:** *Oracle Application Server Wireless Developer's Guide* for information on any unfamiliar concepts introduced here, and for information on configuration and development of OracleAS Wireless applications

6.6.10.1 Upgrading Oracle Application Server Wireless

To complete the upgrade of Oracle Application Server Wireless, perform the steps in this section after the Oracle Universal Installer and Oracle Collaboration Suite Upgrade Assistants complete. During the upgrade, a unique constraint is added to Oracle Internet Directory. The unique constraint is set on the `orclWirelessAccountNumber` attribute of the `orclUserV2` object class which enables wireless voice authentication. Restarting Oracle Internet Directory enables the changes made by the upgrade to take affect.

To restart Oracle Internet Directory:

1. On the system running Oracle Internet Directory, set the *ORACLE_HOME* environment variable to the upgraded Infrastructure Oracle home.

2. Restart the Oracle Internet Directory server and the OC4J instance:

```
$ORACLE_HOME/opmn/bin/opmnctl restartproc ias-component=OID
$ORACLE_HOME/opmn/bin/opmnctl restartproc ias-component=OC4J
```

6.6.10.2 Operating OracleAS Wireless Release 2 (9.0.2), 10*g* (9.0.4), and 10*g* (10.1.2) Middle Tiers Together

You can operate an environment with Oracle9iAS Wireless Release 2 (9.0.2) and OracleAS Wireless 10*g* (10.1.2) middle tiers using the same Infrastructure services. However, this configuration is subject to some restrictions, as described below.

- J2ME download and XHTML/XForms based applications should not be used in a mixed environment. These features are new in OracleAS Wireless 10*g* (10.1.2), and would cause errors when attempting to access them from any of the Oracle9iAS Wireless Release 2 (9.0.2) middle tiers. If you wish to use these features, then it is necessary to upgrade all middle tiers to OracleAS Wireless 10*g* (10.1.2).
- The Notification Engine cannot be used in a mixed environment. Instead, you should use the Alert Engine.
- Service access point (service-level address) should be created through an OracleAS Wireless 10*g* (10.1.2) middle tier, in order for them to be visible to both the OracleAS Wireless 10*g* (10.1.2) middle tiers and Oracle9iAS Wireless Release 2 (9.0.2) middle tiers.
- OracleAS Wireless 10*g* (10.1.2) supports user name case sensitivity. However, this requires that you upgrade the Oracle Internet Directory to Oracle Application Server 10*g* (10.1.2).
- If you change (add, delete, or update) a 10*g* (10.1.2) ASK Access point, the changes you make will not be reflected in the Release 2 (9.0.2) Enterprise Manager Web site until the Release 2 (9.0.2) Enterprise Manager Web site and the `OC4J_Wireless` OC4J instance is restarted.

  Specifically, a driver account (for example, an e-mail account for an e-mail driver) that is removed from an instance and subsequently added to another instance that is a different release version (for example, from Release 2 (9.0.2) to 10*g* (10.1.2)) may cause messages to be lost. Restarting the OC4J_Wireless OC4J instance resolves this problem.
- The Notification Engine introduced in OracleAS Wireless 10*g* (10.1.2) replaces the Alert Engine, which was part of Oracle9iAS Wireless Release 2 (9.0.2). Although the Alert Engine is still available in OracleAS Wireless 10*g* (10.1.2), Oracle Corporation recommends that after all middle tiers have been upgraded to OracleAS Wireless 10*g* (10.1.2), you switch to the Notification Engine, as the Alert Engine may not be available in future versions of OracleAS Wireless.

  Upgrade scripts are available to help you with this task. See the Oracle Application Server Wireless Developer's Guide for details. The Oracle9iAS Wireless Release 2 (9.0.2) Alert APIs have been deprecated, and you must upgrade your applications to use the OracleAS Wireless 10*g* (10.1.2) APIs instead.

6.6.10.3 Configuring Site-Level Drivers in a Mixed Mode Environment

In a mixed mode environment, Oracle9*i*AS Wireless Release 2 (9.0.2) and OracleAS Wireless 10*g* (10.1.2) may have transport drivers configured to receive incoming messages. The two sets of entry points, Oracle9iAS Wireless Release 2 (9.0.2) and OracleAS Wireless 10*g* (10.1.2), should not be exposed to a device at the same time. A user issuing a request to the Release 2 (9.0.2) instance should not subsequently send

another request, within an 3 hour period, to the entry point defined in the transport driver of the OracleAS Wireless 10*g* (10.1.2) instance. The same user may not receive any response for requests addressed to the latter entry point, if it is violated.

Since the driver configuration is different in Release 2 (9.0.2) and 10*g* (10.1.2), when a Oracle9*i*AS Wireless Release 2 (9.0.2) instance is upgraded to OracleAS Wireless 10*g* (10.1.2), the transport drivers must be managed such that requests are processed as expected.

In 10*g* (10.1.2), a site level driver can be enabled or disabled. By default, it is enabled. If a driver is disabled, it is not recognized by the routing algorithm, and therefore is not used by the messaging system. However, in Release 2 (9.0.2), all site level drivers are recognized by the routing algorithm.

If a Release 2 (9.0.2) instance has two middle tiers, after one of the middle tiers and the Infrastructure are upgraded to 10*g* (10.1.2), the upgraded middle tier may enable or disable a site level driver. However, middle tiers that are not yet upgraded recognize all drivers as enabled. For this reason, it is prudent to remove, rather than disable, a driver in this type of environment.

InRelease 2 (9.0.2), the transport mechanism can route a message to only one driver, and it does not matter whether there is an instance configured for it. This means that a message will not be delivered if it is indeed routed to a driver that has no instance configured. For this reason, the best practice is to remove all drivers that do not have an instance configured in any Release 2 (9.0.2) environment, including a Release 2 (9.0.2) and 10*g* (10.1.2) mixed environment.

6.6.11 Reconfiguring OracleAS Portal To Work With OracleAS Single Sign-On

If you have configured OracleAS Portal and you want to keep it working after the upgrade, follow these steps to reconfigure OracleAS Portal for OracleAS Single Sign-On:

1. Set the ORACLE_HOME environment variable to the destination middle tier Oracle home.
2. Change directory to the following location in the destination middle tier Oracle home:

   DESTINATION_ORACLE_HOME/portal/conf

3. Run the following command:

   ./ptlconfig -dad *portal_DAD* -sso

   In this command, *portal_DAD* is the DAD of the OracleAS Portal repository that you just upgraded.

> **See Also:** *Oracle Application Server Portal Configuration Guide* for more information about the `ptlconfig` tool

6.6.12 Updating the OracleAS Portal Provider Information

Portal instances access web providers via a URL. The process of specifying this URL is referred to as provider registration. If the destination Oracle home will be accessed using a hostname and/or port number different from that of the source Oracle home, or the web providers have been deployed to a different URL path, then you need to update the URLs used to access the upgraded web providers. Web providers can be referenced by multiple portal instances; all of these must be updated.

Follow these steps to update the web provider URL:

1. Log on to OracleAS Portal as an administrator.
2. Click the **Navigator** link.

   The **Portal Navigator** page appears.
3. Click the **Providers** tab.
4. Click **Registered Providers**.

   A sorted list of registered providers appears.
5. Locate the provider to update, using the **Next** and **Previous** links if necessary.
6. Click the **Edit Registration** link for the provider to update.

   The **Edit Provider** page appears.
7. Click the **Connection** tab.
8. Update the URL to reflect the new location of the provider.
9. Click **OK** or **Apply** to save the changes.

6.6.13 Refreshing the Event/Parameter Passing Samples Provider for OracleAS Portal

The Event/Parameter Passing Samples Provider definition has changed since Release 2 (9.0.2). Consequently, if you are upgrading a Release 2 (9.0.2) middle tier, the provider must be refreshed in the OracleAS Portal repository.

Repeat these steps for each Release 2 (9.0.2) OracleAS Portal instance that references this provider.

Follow these steps to update the web provider URL:

1. Log on to OracleAS Portal as an administrator.
2. Click the **Navigator** link.

   The **Portal Navigator** page appears.
3. Click the **Providers** tab.
4. Click **Registered Providers**.

   A sorted list of registered providers appears.
5. Locate the JPDK V2 Sample Event Web Provider, using the **Next** and **Previous** links, if necessary.
6. Click the **Refresh** link for the JPDK V2 Sample Event Web Provider.

6.7 Verifying the Upgrade to Oracle Collaboration Suite 10*g* Applications

This section provides steps the user can perform to verify that each component in Oracle Collaboration Suite 10*g* Applications has been upgraded and is working properly.

> **Note:** In 10*g* Release 1 (10.1.1), the name of Oracle Collaboration Suite middle tier is changed to Oracle Collaboration Suite 10*g* Applications.

- Checking the Upgrade Log Files

- Verifying the Upgrade of Oracle Enterprise Manager
- Verifying the Upgrade of Oracle9iAS Portal and Oracle Collaborative Portlets
- Verifying the Upgrade of Oracle Collaboration Suite 10g Mail (Oracle Email)
- Verifying the Upgrade of Oracle Real-Time Collaboration (Oracle Web Conferencing)
- Verifying the Upgrade of Oracle Calendar
- Verifying the Upgrade of OracleAS Wireless
- Verifying the Upgrade of Oracle Collaboration Suite 10g Mobile Collaboration (Oracle Wireless and Voice)
- Verifying the Upgrade of Federated Search
- Verifying the Upgrade of Oracle Ultra Search

6.7.1 Checking the Upgrade Log Files

The Oracle Collaboration Suite Upgrade Assistant creates a ocsua.log log file. Some application write to this log file during the upgrade and others create their own log file as summarized in Table 6–8. Check these log files for any errors once the upgrade completes.

Table 6–8 Upgrade Log Files

Component	Log File and Path from Destination Oracle Home
Oracle Collaboration Suite Upgrade Assistant	upgrade/log/ocsua.log
Oracle Calendar	upgrade/log/ocsua.log
Oracle Collaborative Portlets	ocsprovs/logs/ocsprovs.log
Oracle Mail	oes/log/emailupgrade.log
OracleAS Portal	portal/logs/ptlconfig.log
Oracle Real-Time Collaboration	imeeting/install/logs/ca/rtcupgrade*timestamp*.log
Oracle Ultra Search	upgrade/log/ocsua.log
Oracle Collaboration Suite 10*g* Mobile Collaboration	upgrade/log/ocsua.log

6.7.2 Verifying the Upgrade of Oracle Enterprise Manager

To verify that the upgrade to Oracle Enterprise Manager 10*g* was successful:

1. In a browser, access Oracle Enterprise Manager 10*g* Application Server Control for Collaboration Suite in the destination middle tier Oracle home by entering its URL:

   `http://hostname:port/`

   where:

   - *hostname* is the name of the system running the upgraded Applications tier
   - *port* is the port number used to access Oracle Enterprise Manager in the Release 1 (9.0.3.1) or Release 2 (9.0.4.2) Oracle Collaboration Suite middle tier.

The port number is changed from the port number used before the upgrade. The default port is 1156.

For example:

```
http://midtierhost.mycompany.com:1156/
```

Oracle Enterprise Manager 10*g* prompts you to log in to the Application Server Control Console for Collaboration Suite.

2. Enter the `ias_admin` credentials that you used when upgrading the destination Oracle home.

   Oracle Enterprise Manager 10*g* displays the Farm page in your browser window. A link for the Application tier instance appears in the Standalone Instances section of the page.

3. Click the name of the Application tier instance in the Standalone Instances section.

   The **System Components** page appears.

4. Verify that the components are running.

5. Verify that the configuration information for the components in use is reflected in the 10*g* Release 1 (10.1.1) Oracle home.

6. From the Application Server Control Console for Collaboration Suite, stop and start all Applications by stopping and starting all OC4J instances.

6.7.3 Verifying the Upgrade of Oracle9*i*AS Portal and Oracle Collaborative Portlets

To verify that the upgrade was successful:

1. In a browser, access OracleAS Portal in the destination middle tier Oracle home by entering the following URL:

   `http://`*`hostname:port`*`/pls/portal`

   where:

   - *hostname* is the name of the system running the upgraded Applications tier
   - *port* is the port number used to access the Oracle9*i*AS Portal in the Release 1 (9.0.3.1) or Release 2 (9.0.4.2) Oracle Collaboration Suite middle tier. The same port number is used for Oracle Collaboration Suite 10*g* Applications.

   For example:

   ```
   http://midtierhost.mycompany.com:7777/pls/portal
   ```

2. Enter the `orclguest` user name and password when prompted. The new Oracle Collaboration Suite portal page with portlets for all the Oracle Collaboration Suite 10*g* Applications appears.

3. Verify that you can access all the applications through the portal.

6.7.3.1 Removing Portlets from the Upgraded Portal

The Oracle Collaboration Suite portal page displays portlets for all Oracle Collaboration Suite 10*g* Applications. Applications which have not been configured may display a "Service temporarily unavailable due to maintenance" error message. You can remove these portlets from the portal page.

To remove a portlet:

1. Log in to the Oracle Collaboration Suite portal page as an administrator.
2. Click **Edit** in the top right hand side. The portal now appears in edit mode.
3. Locate the portlet that you want to delete and click its Actions icon (next to the pencil icon). The Select Action page appears.
4. Click **Delete** then click **Yes** to confirm.
5. Return to the portal page and verify that the application no longer appears.

6.7.4 Verifying the Upgrade of Oracle Collaboration Suite 10*g* Mail (Oracle Email)

In Oracle Collaboration Suite 10*g* Release 1 (10.1.1), the name Oracle Email has been changed to Oracle Collaboration Suite 10*g* Mail.

To verify the upgrade of Oracle Email to Oracle Collaboration Suite 10*g* Mail, make sure you can access both the administrator and user URLs.

To verify the upgrade of the Oracle Collaboration Suite 10*g* Mail:

1. In a browser, access Oracle Mail in the destination Applications tier Oracle home by entering the following URL:

   `http://`*`hostname`*`:port/um/`

   where:

   - *hostname* is the name of the system running the upgraded Applications tier
   - *port* is the port number used to access the Oracle HTTP Server in the existing Oracle Collaboration Suite middle tier. The same port number is used for Oracle Collaboration Suite 10*g* Applications.

   For example:

   ```
   http://midtierhost.mycompany.com:7777/um/
   ```

2. Enter the name of an administrative user and password when prompted. The new Oracle Mail page appears.

   Note: There is no default administrative user provisioned for Oracle Mail in 10*g* Release 1 (10.1.1). `The umadmin` user created during the installation of previous releases does not exist in the upgraded Oracle Mail. The `orcladmin` user is not provisioned as an administrator. Log in as another existing user with administrator privileges or create a new user using the Provisioning Console at http://`host:port`/oiddas/ and provision the user as a domain administrator for Oracle Mail.

3. Select each tab and verify that all of them work.

To verify the upgrade of the Oracle Mail user URL:

1. In a browser, access Oracle Mail in the destination middle tier Oracle home by entering the following URL:

   `http://`*`hostname`*`:port/um/`

   where:

   - *hostname* is the name of the system running the upgraded Applications tier

- *port* is the port number used to access the Oracle HTTP Server in the existing Oracle Collaboration Suite middle tier. The same port number is used for Oracle Collaboration Suite 10*g* Applications.

For example:

```
http://midtierhost.mycompany.com:7777/um/
```

2. Enter the `orclguest` user name and password when prompted. The new Oracle Mail page appears.
3. Send an e-mail from the `orclguest` user to user B. Verify that user B receives the e-mail.

6.7.5 Verifying the Upgrade of Oracle Real-Time Collaboration (Oracle Web Conferencing)

Upgrading Oracle Real-Time Collaboration Server automatically configures both Oracle Collaboration Suite 10*g* Web Conferencing and the new Oracle Collaboration Suite 10*g* Messenger.

To verify the upgrade of the Oracle Collaboration Suite 10*g* Web Conferencing:

1. In a browser, access Oracle Collaboration Suite 10*g* Web Conferencing in the Applications tier Oracle home by entering the following URL:

   `http://`*`hostname:port`*`/imtapp/app/prelogin.uix`

   where:

   - *hostname* is the name of the system running the upgraded Applications tier
   - *port* is the port number used to access the Oracle HTTP Server in the existing Oracle Collaboration Suite middle tier. The same port number is used for Oracle Collaboration Suite 10*g* Release 1 (10.1.1).

   For example:

   ```
   http://midtierhost.mycompany.com:7777/imtapp/app/prelogin.uix
   ```

2. Enter the `orclguest` user name and password when prompted. The new Oracle Collaboration Suite Real-Time Collaboration page appears.
3. Set up a Web conferencing session. Log in to the Web conference. Have a participant log in to the Web conference. Verify that you can share and unshare the desktop and that both users can view documents.
4. Verify that the Oracle Collaboration Suite 10*g* Messenger is working by clicking the **Download RTC Messenger** link and installing Oracle Collaboration Suite 10*g* Messenger. Have another user do the same and ensure the you can send messages back and forth.

6.7.6 Verifying the Upgrade of Oracle Calendar

To verify the upgrade of Oracle Calendar, verify both the Oracle Calendar administrator and Oracle Calendar Web client.

To verify the upgrade of the Oracle Calendar administrator:

1. In a browser, access the Oracle Calendar administrator in the destination Applications tier Oracle home by entering the following URL:

   `http://`*`hostname:port`*`/ocad-bin/ocad.cgi?object=nodeadm`

where:

- *hostname* is the name of the system running the upgraded Applications tier
- *port* is the port number used to access the Oracle HTTP Server in the existing Oracle Collaboration Suite middle tier. The same port number is used for Oracle Collaboration Suite 10*g* Release 1 (10.1.1).

For example:

```
http://midtierhost.mycompany.com:7777/ocad-bin/ocad.cgi?object=nodeadm
```

2. If you are not logged into Oracle Collaboration Suite, then the Oracle Collaboration Suite login page appears. Enter the user name and password of a user with administrative privileges when prompted. The Oracle Calendar login page appears.
3. Follow the instructions on the screen to log in as the `SYSOP` user. The Oracle Calendar administrator page appears.
4. Use the tabs in the Calendar Management section to verify that existing users, resources and event calendars are listed correctly with the same attribute information as before the upgrade.

To verify the upgrade of the Oracle Calendar Web client:

1. In a browser, access the Oracle Calendar Web client in the destination middle tier Oracle home by entering the following URL:

   `http://`*`hostname:port`*`/ocas-bin/ocas.fcgi?sub=web`

   where:

   - *hostname* is the name of the system running the upgraded Applications tier
   - *port* is the port number used to access the Oracle HTTP Server in the Release 1 (9.0.3.1) or Release 2 (9.0.4.2) Oracle Collaboration Suite middle tier. The same port number is used for Oracle Collaboration Suite 10*g* Release 1 (10.1.1).

   For example:

   ```
   http://midtierhost.mycompany.com:7777/ocas-bin/ocas.fcgi?sub=web
   ```

2. Enter the `orclguest` user name and password when prompted. The new Oracle Calendar Web client appears.
3. Schedule a meeting and create a daily note. Verify that both items appear in the Oracle Calendar Web client.

6.7.7 Verifying the Upgrade of OracleAS Wireless

To verify that the upgrade was successful:

1. Access the Oracle Enterprise Manager console as described in Section 6.7.2.
2. Select the link for the applications instance. The Application Server Control Console for Collaboration Suite page for the Application tier appears.
3. In the System Components table, make sure that there is a Wireless entry and that its status is **Up**.
4. Click **Wireless** to view the Wireless instance page. The standalone processes in Table 6–9 should be running.

5. Back in the System Components table, make sure that there is a Mobile Collaboration entry and that its status is **Up**.
6. Click **Mobile Collaboration**. The Mobile Collaboration page appears.

Table 6–9 Standalone Processes in a OracleAS Wireless Upgrade

Name	Type
lbevent_srv_1004	Location Event Server
messaging_gtwy_1000	Messaging Server
notification_eng_1003	Notification Engine
notification_evtcol_1002	Notification Event Collector
perfmonitor_1001	Performance Monitor

6.7.8 Verifying the Upgrade of Oracle Collaboration Suite 10*g* Mobile Collaboration (Oracle Wireless and Voice)

In Oracle Collaboration Suite 10*g* Applications, the name Oracle Wireless and Voice has been changed to Oracle Collaboration Suite 10*g* Mobile Collaboration.

To verify the upgrade to Oracle Collaboration Suite 10*g* Mobile Collaboration:

1. In a browser, access the Oracle Collaboration Suite 10*g* Mobile Collaboration Web client in the destination middle tier Oracle home by entering the following URL:

   `http://`*`hostname:port`*`/ocsmobile/welcome.uix`

   where:

   - *hostname* is the name of the system running the upgraded Applications tier
   - *port* is the port number used to access the Oracle HTTP Server in the Release 1 (9.0.3.1) or Release 2 (9.0.4.2) Oracle Collaboration Suite middle tier. The same port number is used for Oracle Collaboration Suite 10*g* Release 1 (10.1.1).

   For example:

   ```
   http://midtierhost.mycompany.com:7777/ocsmobile/welcome.uix
   ```

2. In a browser, access the OracleAS Wireless and Voice Tool in the destination application tier Oracle home by entering the following URL:

   `http://`*`hostname:port`*`/webtool/login.uix`

   where:

   - *hostname* is the name of the system running the upgraded Applications tier
   - *port* is the port number used to access the Oracle HTTP Server in the Release 1 (9.0.3.1) or Release 2 (9.0.4.2) Oracle Collaboration Suite middle tier. The same port number is used for Oracle Collaboration Suite 10*g* Release 1 (10.1.1).

   For example:

   ```
   http://midtierhost.mycompany.com:7777/webtool/login.uix
   ```

   Enter the user name and password of a user with administrative privileges. Verify that the users, roles and groups are the same as in the application in the source Oracle home.

3. In a browser, access the OracleAS Wireless server in the destination middle tier Oracle home by entering the following URL:

   ```
   http://hostname:port/ptg/rm
   ```

   where:

   - *hostname* is the name of the system running the upgraded Applications tier
   - *port* is the port number used to access the Oracle HTTP Server in the Release 1 (9.0.3.1) or Release 2 (9.0.4.2) Oracle Collaboration Suite middle tier. The same port number is used for Oracle Collaboration Suite 10*g* Release 1 (10.1.1).

   For example:

   ```
   http://midtierhost.mycompany.com:7777/ptg/rm
   ```

   Enter the name and password of an existing user with administrative privileges. From the OracleAS Wireless page, click the links for Mail, Contacts, Calendar and so forth and verify that you can access each page.

6.7.9 Verifying the Upgrade of Federated Search

In Oracle Collaboration Suite 10*g* Applications, the name Federated Search has been changed to Oracle Collaboration Suite 10*g* Search.

To verify the upgrade of Federated Search to Oracle Collaboration Suite 10*g* Search:

1. In a browser, access the Oracle Collaboration Suite 10*g* Search in the Applications tier Oracle home by entering the following URL:

   ```
   http://hostname:port/search
   ```

   where:

   - *hostname* is the name of the system running the upgraded Applications tier
   - *port* is the port number used to access the Oracle HTTP Server in the existing Oracle Collaboration Suite middle tier. The same port number is used for Oracle Collaboration Suite 10*g* Release 1 (10.1.1).

   For example:

   ```
   http://midtierhost.mycompany.com:7777/search
   ```

2. Enter the `orclguest` user name and password when prompted. The new Oracle Collaboration Suite Search page appears.
3. Perform a search on a word that appears in an e-mail and in a file that is stored in Oracle Content Services (formerly named Oracle Files). Verify that the search finds all occurrences of the word in both applications.

6.7.10 Verifying the Upgrade of Oracle Ultra Search

To verify that the upgrade of Oracle Ultra Search was successful:

1. Access the following URL from a browser:

   ```
   http://hostname:port/ultrasearch/query/search.jsp
   ```

   where:

   - *hostname* is the name of the system running the upgraded Applications tier

- *port* is the port number used to access the Oracle HTTP Server in the existing Oracle Collaboration Suite middle tier. The same port number is used for Oracle Collaboration Suite 10*g* Release 1 (10.1.1).

For example:

```
http://midtierhost.mycompany.com:7777/ultrasearch/query/search.jsp
```

If you performed the index and configuration data migration, perform a search for words that are stored in existing data sources. Verify that the search finds all occurrences of the word. The search should have the same results after the upgrade as before the upgrade.

If you performed the configuration data migration, when all the crawling schedules are completed, perform a search for words that are stored in existing data sources. Verify that the search finds all occurrences of the word as it did before the upgrade.

2. Access the administrator page from a browser:

```
http://hostname:port/ultrasearch/admin/control/login.jsp
```

where:

- *hostname* is the name of the system running the upgraded Applications tier
- *port* is the port number used to access the Oracle HTTP Server in the existing Oracle Collaboration Suite middle tier. The same port number is used for Oracle Collaboration Suite 10*g* Release 1 (10.1.1).

For example:

```
http://midtierhost.mycompany.com:7777/ultrasearch/admin/control/login.jsp
```

Enter the name and password of a user with administrator privileges.

If you performed the index and configuration data migration, verify that all sources and schedules are migrated correctly. All configuration data should remain the same as before the upgrade.

Verify that all sources and schedules are migrated correctly. All configuration data should remain the same as before the upgrade. Manually start all schedules to build a new index. When the crawling completes, perform a search from the query page.

See Also: *Oracle Ultra Search Administrator's Guide*

6.8 Deinstalling the Source Oracle Home After the Upgrade

After you have verified that the upgraded Oracle Collaboration Suite Applications is working, you can deinstall the old Oracle Collaboration Suite middle tiers and delete their Oracle home directories.

6.9 Decommissioning the Source Oracle Home

The upgrade process leaves the source Oracle home unchanged. Depending on the type of installation you have, and your future needs, you may elect to remove the source Oracle home, or to retain it for specific reasons.

Note: If you retain the source Oracle home, you cannot operate it simultaneously with the destination Oracle home, because certain components have the same port values after upgraded. See Section 6.6.1, "About Port Values and the portlist.ini File After Upgrade".

The following sections provide more information about decommissioning an upgraded source Oracle home:

- Preserving Application Files and Log Files
- Retaining the Source Home for Future Language Loading
- Deinstalling a Release 1 (9.0.3) or Release 2 (9.0.4) Source Oracle Home

6.9.1 Preserving Application Files and Log Files

If there are application files or log files in the source Oracle home that are being referenced or used by the destination Oracle home, you should move them to another location before you decommission the source Oracle home, and, in the destination Oracle home, change any references to the files to the new location.

6.9.2 Retaining the Source Home for Future Language Loading

If you continue to operate a Release 1 (9.0.3.1) or Release 2 (9.0.4.2) Portal repository, you should not decommission the source Oracle home if there is a possibility that you might later want to load additional languages into the Release 1 (9.0.3.1) or Release 2 (9.0.4.2) Portal repository. The utilities for loading languages in Oracle Collaboration Suite 10*g* Release 1 (10.1.1) are not compatible with OracleAS Portal in Release 1 (9.0.3.1) or Release 2 (9.0.4.2).

6.9.3 Deinstalling a Release 1 (9.0.3) or Release 2 (9.0.4) Source Oracle Home

Refer to Section 4.7.3 for information about deinstalling a source Oracle home.

6.10 Configuring Additional Oracle Collaboration Suite Applications

The upgrade process configures only those applications that were configured in the source Oracle home. You can configure additional applications through Oracle Enterprise Manager.

See Also: "Adding Applications to your Oracle Collaboration Suite Deployment" in Chapter 5 of the *Oracle Collaboration Suite Administrator's Guide*.

6.10.1 Configuring Oracle Real-Time Collaboration When Upgrading From Release 1 (9.0.3.1)

Oracle Real-Time Collaboration and Oracle Web Conferencing were not available in Release 1 (9.0.3.1) so they are not configured automatically when you upgrade from this release.

To configure Oracle Real-Time Collaboration in the upgraded Applications tier, perform the following steps:

1. Create a directory named imeeting/install/logs/ca in the upgraded Applications tier Oracle home.
2. Configure Oracle Real-Time Collaboration using Oracle Enterprise Manager 10*g*.
3. Enter the following commands from the upgraded Applications tier Oracle home directory:

```
ORACLE_HOME/imeeting/bin/rtcctl setproperty -pname ApacheWebPort -pvalue 7777
ORACLE_HOME/opmn/bin/opmnctl stopproc ias-component=OC4J process-type=OC4J_
imeeting
ORACLE_HOME/imeeting/bin/rtcctl stop
ORACLE_HOME/imeeting/bin/rtcctl start
ORACLE_HOME/opmn/bin/opmnctl startproc ias-component=OC4J process-type=OC4J_
imeeting
```

6.10.2 Configuring Oracle Workflow for Oracle Content Services

Before configuring Oracle Content Services, configure Oracle Workflow by performing the following steps:

1. Log in to the Oracle Collaboration Suite Database 10g (10.1.1) as a user with appropriate privileges and enter the following command:

```
drop user owf_mgr cascade;
```

2. From the Oracle Collaboration Suite 10*g* Release 1 (10.1.1) Applications tier Oracle home, run the following script:

```
$ORACLE_HOME/wf/install/wfinstall.csh
```

   The Oracle Workflow Configuration Assistant starts.

3. Enter the following parameters in the appropriate fields.
   - Install Option: Select Server Only
   - Workflow Account: Leave the default, `owf_mgr`.
   - Workflow Password: Provide the same password as the Oracle Content Services schema password.
   - SYS Password: Provide the password for the database user SYS. You must supply this value.
   - TNS Connect Descriptor: Copy this value from the `tnsnames.ora` file, located in ORACLE_HOME/network/admin. For example:

```
(DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(HOST=myhost.mydomain.com)(PORT=1521))(
CONNECT_DATA=(SERVER=DEDICATED)(SERVICE_NAME=orcl.mydomain.com)))
```

   Do not select the **Enter LDAP Parameters**, **Enter Mailer Parameters**, or **Change Tablespace** options.
4. Click **Submit**.
5. Proceed with configuring Oracle Content Services using the Oracle Collaboration Suite Control Console.

7

Upgrading the Oracle9*i*AS Metadata Repository

This chapter explains how to upgrade the Oracle Application Server Metadata Repository. The major steps in upgrading the Oracle9*i*AS Metadata Repository are described in the following sections:

- Upgrading the Database That Hosts the Oracle9iAS Metadata Repository
- Backing Up the Oracle9iAS Metadata Repository Before Upgrade
- Special Considerations When Upgrading the OracleAS Portal and Oracle Ultra Search Schemas
- Using the Oracle Application Server Metadata Repository Upgrade Assistant (MRUA)
- Completing the Oracle9iAS Metadata Repository Upgrade for OracleAS Portal and OracleAS Wireless
- Starting the Application Tiers That Use the Oracle9iAS Metadata Repository
- Performing a Backup of the Newly Upgraded OracleAS Metadata Repository
- Completing the Upgrade of Oracle Collaborative Portlets

7.1 Upgrading the Database That Hosts the Oracle9*i*AS Metadata Repository

Before you can upgrade the Oracle9*i*AS Metadata Repository, you must be sure the database that hosts the repository is upgraded to a version supported by Oracle Database 10*g* (10.1.0.5). This is also the version of the database that Oracle Universal Installer creates and configures when you install a new Oracle Collaboration Suite Infrastructure 10.1.1 using the Identity Management and Collaboration Suite Database or Collaboration Suite Database installation type.

Similarly, this is the version of the database that results when you use Oracle Universal Installer to upgrade a Oracle9*i*AS Infrastructure database.

7.1.1 Determining Your Oracle9*i*AS Metadata Repository Database Upgrade Path

Depending on your Oracle9*i*AS Infrastructure and Oracle9*i*AS Metadata Repository configuration, you may need to upgrade the database that hosts the Oracle9*i*AS Metadata Repository:

- If your Oracle Collaboration Suite environments uses a single Oracle9*i*AS Metadata Repository and your Oracle Collaboration Suite middle tier applications

share a Oracle9*i*AS Metadata Repository with Oracle Internet Directory, then your Oracle9*i*AS Metadata Repository database was upgraded as part of the Oracle9*i*AS Infrastructure upgraded. This is true whether your Oracle9*i*AS Infrastructure was distributed or non-distributed.

You do not need to upgrade the database in this case.

- Your environment uses a distributed **distributed Oracle9iAS Metadata Repository** where Oracle Collaboration Suite middle tier applications use their own Oracle9*i*AS Metadata Repository.

  In this case, you need to upgrade the Oracle9*i*AS Infrastructure where the Oracle9*i*AS Metadata Repository is configured before the middle tier upgrade as described in Section 4.3.3.

7.1.2 Relocating the Database Datafiles, Control Files, and Log Files

By default, after you upgrade your database, the datafiles, control files, and log files associated with the database remain in their original location. For example, if you used Oracle Universal Installer to upgrade a Oracle9*i*AS Metadata Repository database, the datafiles for the Oracle9*i*AS Metadata Repository database remain in the source Oracle home.

As a result, Oracle recommends that you relocate these files as a safeguard against inadvertently deleting them (for example, by deleting or decommissioning the entire source Oracle home directory tree). In addition, there may be performance benefits to moving the database files outside of the source Oracle home.

See Also: "Renaming and Relocating OracleAS Metadata Repository Datafiles" in Chapter 6 in *Oracle Collaboration Suite Administrator's Guide* .

See Also: "Creating Additional Copies, Renaming, and Relocating Control Files" in Chapter 5 of *Oracle Database Administrator's Guide* for instructions.

7.1.3 Configuring Oracle Enterprise Manager 10*g* Database Control

The Oracle Enterprise Manager 10*g* Database Control provides a Web-based console you can use to manage Oracle Database 10*g*. When your Oracle9*i*AS Metadata Repository is installed in an Oracle Database 10*g* instance, you can use the Database Control to manage your Oracle9*i*AS Metadata Repository database.

> **See Also:** "Using the Oracle Enterprise Manager 10*g* Database Control Console" in Chapter 6 of *Oracle Collaboration Suite Administrator's Guide*

However, after you use Oracle Universal Installer to upgrade your Oracle9*i*AS Metadata Repository database to Oracle Database 10*g* (10.1.0.5), the Database Control is not configured automatically. Instead, if you want to use the Database Control to manage your upgraded Oracle9*i*AS Metadata Repository database, you must configure the Database Control manually using the Enterprise Manager Configuration Assistant (EMCA).

See Also: "Configuring the Database Control with EMCA" in *Oracle Enterprise Manager Advanced Configuration*

7.2 Backing Up the Oracle9*i*AS Metadata Repository Before Upgrade

Before you begin upgrading your Oracle9*i*AS Metadata Repository installation, perform a backup of the Oracle9*i*AS Metadata Repository Oracle home, and perform a backup of the database that hosts the Oracle9*i*AS Metadata Repository schemas.

See Also: Section 2.3.2 for information on backup strategies for the Oracle9*i*AS Metadata Repository.

7.3 Special Considerations When Upgrading the OracleAS Portal and Oracle Ultra Search Schemas

The following sections describe special instructions to consider before using OracleAS Metadata Repository Upgrade Assistant to upgrade the Oracle9*i*AS Portal, Oracle9*i*AS Wireless, and Oracle Ultra Search schemas in the Oracle9*i*AS Metadata Repository:

- Special Instructions Before Upgrading the OracleAS Portal Schemas
- Stopping All Middle Tier Instances That Use the OracleAS Metadata Repository
- Preparing to Upgrade the Oracle Ultra Search Component Schema
- Applying Required Release 2 (9.0.2) Patchsets

7.3.1 Special Instructions Before Upgrading the Oracle9*i*AS Portal Schemas

The following instructions describe required tasks you must perform before upgrading the Oracle9*i*AS Portal schemas in the Oracle9*i*AS Metadata Repository:

- Installing the OracleAS Portal 10g (9.0.4) Repository Upgrade Software

7.3.1.1 Installing the OracleAS Portal 10*g* (9.0.4) Repository Upgrade Software

If you are using OracleAS Portal, then you must perform the following task before running OracleAS Metadata Repository Upgrade Assistant.

This procedure installs a required patch in the Oracle home of the database that contains the Oracle9*i*AS Portal schemas:

1. Log in to the computer where your Oracle9*i*AS Metadata Repository or Oracle9*i*AS Portal repository is installed.

   Be sure to log in as the same user who installed the repository.

2. Set the ORACLE_HOME environment variable to the database Oracle home for the Oracle9*i*AS Metadata Repository or Oracle9*i*AS Portal repository.

3. Verify that your DISPLAY environment variable is set correctly.

4. Run the Oracle Universal Installer to copy the Portal upgrade scripts to the Oracle home using this command:

   ```
   $ORACLE_HOME/oui/bin/runInstaller
   ```

   Table 6–2 describes the options you should select on each screen of the Oracle Universal Installer.

   The installation procedure creates the following directory in the Oracle home:

ORACLE_HOME/portal/upg/plsql

It contains the programming code originally required to upgrade your repository from version 9.0.2 to version 10*g* (9.0.4). These files will automatically be used as part of the repository upgrade to Oracle Application Server 10*g* Release 2 (10.1.2).

Table 7–1 Summary the Oracle Universal Installer ***Screens When Installing the*** OracleAS Portal 10*g* ***(9.0.4) Repository Upgrade Patch***

Screen	Description and Recommended Options to Select
Welcome	Welcomes you to Oracle Universal Installer.
Specify File Locations	In the **Source** field, specify the complete path to the `products.xml` file in the Portal patch directory on the Supplemental DVD: `Patches/Portal/9.0.4/portal_patch_904/Disk1/stage/products.xml` In the **Destination** fields, enter the name and path to the database Oracle home that hosts your Oracle9*i*AS Metadata Repository. This Oracle home is the upgraded Oracle home that you installed when upgrading the Infrastructure to 10*g* (10.1.1).
Summary	Use this screen to confirm the choices you've made. Click **Install** to begin installing the patch.
End of Installation	This screen appears when the installation is complete. Click **Exit** to quit Oracle Universal Installer.

7.3.2 Preparing to Upgrade the Oracle Ultra Search Component Schema

If you are using Oracle Ultra Search, log in to the Oracle Ultra Search administration tool and stop and disable all crawler synchronization schedules in every Oracle Ultra Search instance before you run OracleAS Metadata Repository Upgrade Assistant.

After you run OracleAS Metadata Repository Upgrade Assistant, you can enable all crawler synchronization schedules.

See Also: *Oracle Ultra Search Administrator's Guide*

7.4 Using the Oracle Application Server Metadata Repository Upgrade Assistant (MRUA)

After you have upgraded the middle tiers that depend upon this Oracle9*i*AS Metadata Repository and after you have upgraded the database to a supported version, you can then use OracleAS Metadata Repository Upgrade Assistant to upgrade the application server component schemas in the Oracle9*i*AS Metadata Repository.

Note: The Oracle9*i*AS Metadata Repository contains schemas for all the Oracle Application Server Release 2 (9.0.2) components. However, only a subset of those component schemas must be updated by OracleAS Metadata Repository Upgrade Assistant. Other schemas, such as the Oracle Internet Directory and OracleAS Single Sign-On component schemas, are upgraded during the Oracle9*i*AS Infrastructure upgrade. Still others do not require any upgrade from previous versions.

Also, Oracle Application Server Certificate Authority is an OracleAS Identity Management component, but its schemas are upgraded by OracleAS Metadata Repository Upgrade Assistant.

The following sections describe how to use MRUA to upgrade your component schemas:

- Stopping All Middle Tier Instances That Use the Oracle9iAS Metadata Repository
- Setting the JOB_QUEUE_PROCESSES Parameter in the Oracle9iAS Metadata Repository Database
- Verifying That the Oracle Internet Directory and Database Processes Are Running
- Running the Oracle Application Server Metadata Repository Upgrade Assistant (OracleAS Metadata Repository Upgrade Assistant)
- Example Execution Times for the Oracle Application Server Metadata Repository Upgrade Assistant
- Reviewing the OracleAS Metadata Repository Upgrade Assistant Log Files
- Reviewing the OracleAS Portal Repository Upgrade Log Files
- Using a SQL Query to Verify the Success of the Oracle9iAS Metadata Repository Upgrade

7.4.1 Stopping All Middle Tier Instances That Use the Oracle9*i*AS Metadata Repository

Before you use MRUA, you must stop all processes associated with each Application tier that uses the Oracle9*i*AS Metadata Repository.

Note that at this point in the upgrade process, as a prerequisite for running OracleAS Metadata Repository Upgrade Assistant, all the existing middle tier instances should have been upgraded to Oracle Collaboration Suite Applications 10*g* Release 1 (10.1.1).

You can list the Applications tier instances that use the Oracle9*i*AS Metadata Repository by using the following Distributed Configuration Management command:

```
METADATA_REPOSITORY_ORACLE_HOME/dcm/bin/dcmctl listinstances
```

See Also: *Distributed Configuration Management Administrator's Guide* for more information about `dcmctl` commands

See Also: "Stopping an Applications Tier" in Chapter 2 of *Oracle Collaboration Suite Administrator's Guide*.

7.4.2 Setting the JOB_QUEUE_PROCESSES Parameter in the Oracle9*i*AS Metadata Repository Database

Before you use OracleAS Metadata Repository Upgrade Assistant, make sure that the maximum number of job processes allowed for the database instance is greater than zero. Do this by setting the database initialization parameter `JOB_QUEUE_PROCESSES` to a value greater than zero.

See Also: "Using SQL*Plus to Start Up an Oracle Collaboration Suite Database" in Chapter 6 of Oracle Collaboration Suite Administrator's Guide.

Oracle Database Administrator's Guide and *Oracle Database Reference* contain descriptions of initialization parameters and instructions on modifying them.

See Also: *Oracle Database Administrator's Guide 10g Release 1 (10.1)* and *Oracle Database Reference 10g Release 1 (10.1)* for more information about the `JOB_QUEUE_PROCESSES` parameter.

7.4.3 Verifying That the Oracle Internet Directory and Database Processes Are Running

Before you use OracleAS Metadata Repository Upgrade Assistant, make sure that the following processes are up and running:

- The database that hosts the Oracle9*i*AS Metadata Repository
- The database listener for the Oracle9*i*AS Metadata Repository database
- The upgraded Oracle Internet Directory instance where the Oracle9*i*AS Metadata Repository database is registered

Log in to the Application Server Control Console for Collaboration Suite to verify that the necessary processes are running and that the required components are configured properly. For example, you can use the Application Server Control Console for Collaboration Suite to verify that the Farm page displays correctly and that the Oracle Internet Directory and OracleAS Single Sign-On components are up and running.

From the Oracle Collaboration Suite Home page in the Application Server Control Console for Collaboration Suite, click **Ports** to view a list of the ports currently in use by the application server instance, and to verify that the components are configured properly.

See Also: "Oracle Collaboration Suite Management Tools" in Chapter 3 of *Oracle Collaboration Suite Administrator's Guide* .

7.4.4 Running the Oracle Application Server Metadata Repository Upgrade Assistant (OracleAS Metadata Repository Upgrade Assistant)

After you have upgraded the Oracle9*i*AS Metadata Repository database, backed up the database, and stopped the dependent Application tier instances, you can use OracleAS Metadata Repository Upgrade Assistant to upgrade the component schemas in the Oracle9*i*AS Metadata Repository, which now reside in the upgraded database.

Note: Log in to the computer where the Oracle9*i*AS Metadata Repository is running as the same user who installed the Oracle9*i*AS Metadata Repository. Run OracleAS Metadata Repository Upgrade Assistant on the computer that hosts the Oracle9*i*AS Metadata Repository that you are about to upgrade.

To run OracleAS Metadata Repository Upgrade Assistant:

1. Mount the Oracle Application Server Metadata Repository Upgrade Assistant and Utilities CD–ROM.

   The OracleAS Metadata Repository Upgrade Assistant and Utilities CD–ROM is part of the Oracle Collaboration Suite 10*g* Release 1 (10.1.1) CD–ROM Pack that you receive when you order the Oracle Collaboration Suite 10*g* Release 1 (10.1.1) software.

2. Start OracleAS Metadata Repository Upgrade Assistant by entering the following command, with the following required arguments, which are described in Table 6–4:

   ```
   MRUA_CD_ROOT_DIRECTORY/mrua/mrua.sh
   -oracle_home metadata_repository_oracle_home
   -oid_host Oracle_Internet_Directory_host
   -oid_ssl_port Oracle_Internet_Directory_SSL_port
   ```

Table 7–2 Summary of the Required OracleAS Metadata Repository Upgrade Assistant Command Line Arguments

Argument	Description
-oracle_home	The Oracle home of the database hosting the Oracle9*i*AS Metadata Repository. database home directory. This is the destination Oracle home where you installed the Oracle Collaboration Suite 10*g* Infrastructure as part of the Infrastructure upgrade, not the source, 9.0.x Oracle home. The upgraded database points to the existing schemas used by the middle tiers of previous release.
-oid_host	The name of the computer that hosts the Oracle Internet Directory where the Oracle9*i*AS Metadata Repository is registered.
-oid_ssl_port	The secure port for the Oracle Internet Directory. For the purposes of upgrading the Oracle9*i*AS Metadata Repository, you must use a secure connection to the Oracle Internet Directory.

Note: The value of the `-oid_host` argument and `-oid_ssl_port` arguments must match the value of the corresponding properties defined in following configuration file in the Oracle Collaboration Suite 10*g* Infrastructure Oracle home:

```
DESTINATION_ORACLE_HOME/config/ias.properties
```

For example:

```
OIDhost=sys42.acme.com
OIDsslport=636
```

3. When you are prompted, enter the password for the database `SYS` user account.

   OracleAS Metadata Repository Upgrade Assistant needs the SYS password so it can access and modify the component schemas in the database.

4. When you are prompted, enter the Oracle Internet Directory `cn=orcladmin` administrator password.

   OracleAS Metadata Repository Upgrade Assistant needs the Oracle Internet Directory password to connect to the Oracle Internet Directory in which the Oracle9*i*AS Metadata Repository is registered.

   After you provide the required passwords, OracleAS Metadata Repository Upgrade Assistant checks to be sure the Oracle Internet Directory is running and does one of the following:

   - If Oracle Internet Directory is down or unavailable, OracleAS Metadata Repository Upgrade Assistant displays an error message and exits.
   - If Oracle Internet Directory is up and running, OracleAS Metadata Repository Upgrade Assistant connects to the directory service and obtains additional information required to upgrade the component schemas.
   - If multiple instances of the Oracle9*i*AS Metadata Repository are registered with the directory, OracleAS Metadata Repository Upgrade Assistant prompts you to select the Oracle9*i*AS Metadata Repository you want to upgrade.

     You can upgrade only one Oracle9*i*AS Metadata Repository at a time. You must select the Oracle9*i*AS Metadata Repository on your local machine that corresponds to the value of the `-oracle_home` parameter.

5. If you are prompted to select a Oracle9*i*AS Metadata Repository, select the Oracle9*i*AS Metadata Repository you want to upgrade.

   OracleAS Metadata Repository Upgrade Assistant starts the upgrade process. As each step in the upgrade is executed, information messages appear on the screen to show the progress of the upgrade.

   Example 6–1 shows an example of a typical OracleAS Metadata Repository Upgrade Assistant upgrade session.

Example 7–1 Sample Output from an OracleAS Metadata Repository Upgrade Assistant Session

```
mrua.sh -oracle_home /dua1/oracle10g -oid_host dserv1.acme.com -oid_ssl_port 3130

Executing mrua.pl
Running on UNIX

OracleAS Metadata Repository Upgrade Assistant 10.1.2.0.0

Enter the password for SYS:
Enter the password for cn=orcladmin:

Upgrading the OracleAS Metadata Repository to release 10.1.2.0.0

Calling upgrade plugin for MRUA
Component  upgraded successfully MRUA

Calling upgrade plugin for UDDI
Component  upgraded successfully UDDI

Calling upgrade plugin for WCS
```

```
Component  upgraded successfully WCS

Calling upgrade plugin for OCA
Component  upgraded successfully OCA

Calling upgrade plugin for ULTRASEARCH
Component  upgraded successfully ULTRASEARCH

Calling upgrade plugin for WIRELESS
Component  upgraded successfully WIRELESS

Calling upgrade plugin for WORKFLOW
Component  upgraded successfully WORKFLOW

Calling upgrade plugin for PORTAL
Component  upgraded successfully PORTAL

Calling upgrade plugin for DISCOVERER
Component  upgraded successfully DISCOVERER

Calling upgrade plugin for B2B
Component  upgraded successfully B2B

Calling upgrade plugin for MRC
Component  upgraded successfully MRC

SUCCESS: All OracleAS plug-ins report successful upgrade

Finished mrua.pl
```

7.4.5 Example Execution Times for the Oracle Application Server Metadata Repository Upgrade Assistant

The time required to run OracleAS Metadata Repository Upgrade Assistant will vary, depending upon your hardware and the amount of data in your Oracle9*i*AS Metadata Repository. However, testing of OracleAS Metadata Repository Upgrade Assistant has shown the following typical execution times on the following hardware and software platforms:

- 1 hour, 40 minutes on a Sun UltraSPARC 60, dual CPU, running Solaris 2.9
- 45 minutes on a 2.4GHz Pentium 4, running Windows 2000 Service Pack 4

See Section 2.6 for more information.

7.4.6 Reviewing the OracleAS Metadata Repository Upgrade Assistant Log Files

When you run OracleAS Metadata Repository Upgrade Assistant, the utility generates a set of log files that you can use to troubleshoot, verify, or analyze the Oracle9*i*AS Metadata Repository upgrade process.

7.4.6.1 Guidelines for Using the OracleAS Metadata Repository Upgrade Assistant Log Files

If the OracleAS Metadata Repository Upgrade Assistant output indicates that one or more of the component upgrades failed, review the OracleAS Metadata Repository Upgrade Assistant log files, or any component log files referenced from the OracleAS Metadata Repository Upgrade Assistant log files.

If the OracleAS Portal upgrade fails, then see Section 7.4.7 for information on how to proceed.

Otherwise, refer to Appendix D for information about specific component error messages you might find in the log files.

If, by reviewing the log files and troubleshooting information, you are able to identify a solution to the upgrade failure, you can implement your solution and then rerun OracleAS Metadata Repository Upgrade Assistant. When you rerun OracleAS Metadata Repository Upgrade Assistant, any components that were upgraded successfully during the previous run will not be affected. However, OracleAS Metadata Repository Upgrade Assistant will attempt to upgrade any components that were not upgraded successfully during a previous run of the utility.

Contact Oracle Support for any errors that are not documented or that cannot be resolved by following documented actions. Note that some errors that occur will require the repository to be restored from backup, the problem to be resolved, and another upgrade to be run.

7.4.6.2 Locating the OracleAS Metadata Repository Upgrade Assistant Log Files

The log files are located in the following directory in the Oracle home of the Oracle9*i*AS Metadata Repository you are upgrading:

```
METADATA_REPOSITORY_ORACLE_HOME/upgrade/logs
```

OracleAS Metadata Repository Upgrade Assistant generates three log files that are of particular interest when you are troubleshooting upgrade issues. The name of the log file includes the exact time the OracleAS Metadata Repository Upgrade Assistant session was run. This makes it easy to identify a log file for a particular OracleAS Metadata Repository Upgrade Assistant session.

For example, the three log files generated when you run OracleAS Metadata Repository Upgrade Assistant at 12:36 PM on September 16, 2004 would appear as follows in the logs directory:

```
mrua2004-09-16_12-36-36PM.log
mrua2004-09-16_12-36-36PM.err
mrua2004-09-16_12-36-36PM.out
```

Table 6–5 shows the three log file types and the content you can expect to find in each one.

Table 7–3 Summary of the Log Files Generated by OracleAS Metadata Repository Upgrade Assistant

OracleAS Metadata Repository Upgrade Assistant Log File	Description
`mrua<timestamp>.log`	The log file is a good place to start if you are troubleshooting a particular problem with the Oracle9*i*AS Metadata Repository upgrade. This file contains a high-level summary of all the actions performed by OracleAS Metadata Repository Upgrade Assistant; as a result, it can help you isolate a specific component that was not upgraded successfully.
`mrua<timestamp>.err`	The error file contains any errors or stack traces generated during the upgrade process. These errors should contain information that help you diagnose and address specific upgrade errors.

Table 7–3 (Cont.) Summary of the Log Files Generated by OracleAS Metadata Repository Upgrade Assistant

OracleAS Metadata Repository Upgrade Assistant Log File	Description
`mrua<timestamp>.out`	The output file is the largest of the three OracleAS Metadata Repository Upgrade Assistant log files and it contains the most comprehensive data about the OracleAS Metadata Repository Upgrade Assistant session. Use this log file to determine exactly when a particular problem occurred to and see the output generated by the OracleAS Metadata Repository Upgrade Assistant subcomponents.

7.4.7 Reviewing the OracleAS Portal Repository Upgrade Log Files

This section provides information about the OracleAS Portal upgrade log files. If the OracleAS Portal upgrade fails, carefully review this section in its entirety before attempting to troubleshoot the upgrade failure.

Note that if the OracleAS Portal components were upgraded to 10g (10.1.2) successfully, then there is no need to examine the log files.

The OracleAS Portal upgrade is made up of two underlying paths:

- Oracle Application Server Release 2 (9.0.2) to Oracle Application Server 10g (9.0.4) as described in Section 7.3.1.
- Oracle Application Server 10g (9.0.4) to Oracle Application Server 10*g* Release 2 (10.1.2) (which uses software included in the Metadata Repository Upgrade Assistant and Utilities CD–ROM)

Each of these two paths generates its own set of log files and temporary directories. When upgrading from Release 2 (9.0.2) to 10*g* (10.1.2) in a single step, log files for both paths are created.

When upgrading OracleAS Portal by running MRUA, the log files are generated into a single directory:

ORACLE_HOME`/upgrade/temp/portal`

Any already existing log files in the relevant directory will be renamed to include a time stamp, so that they are not overwritten.

Table 7–4 Summary of the Repository Upgrade Log Files Generated by OracleAS Portal

Log File	Description
upgrade.log	The log file generated by the 9.0.4 to 10.1.2 OracleAS Portal upgrade. This file will always be generated if the starting version is 10*g* (9.0.4), as long as the checks performed at the beginning of the upgrade succeed. It will also be generated when the starting version is Release 2 (9.0.2), as long as the 9.0.2 to 9.0.4 portion of the upgrade succeeds. If this file exists and has an "Upgrade completed successfully" message at the end, the upgrade was successful, regardless of the starting version.

Table 7–4 (Cont.) Summary of the Repository Upgrade Log Files Generated by OracleAS

Log File	Description
precheck.log	The log file generated for the checks performed before the 9.0.4 to 10.1.2 upgrade. This file is generated before the script begins making modifications to the repository, or when a manual upgrade from 10*g* (9.0.4) is run in -precheck mode. This file will always be generated if the starting version is 10*g* (9.0.4). It will not be generated if the starting version is Release 2 (9.0.2); `precheck902.log` is generated in this case instead. If there are errors in `precheck.log`, the 9.0.4 to 10.1.2 upgrade will not run and the `upgrade.log` file will not be generated.
upgrade902.log	The log file generated by the 9.0.2 to 9.0.4 OracleAS Portal upgrade. This file will always be generated if the starting version is Release 2 (9.0.2), as long as the checks performed at the beginning of the upgrade succeed. It will not be generated if the starting version is 10*g* (9.0.4) or if there are errors in `precheck902.log`. If there are errors in `upgrade902.log`, the 9.0.4 to 10.1.2 upgrade will not run and the `upgrade.log` file will not be generated.
precheck902.log	The log file generated for the checks performed before the 9.0.2 to 9.0.4 upgrade begins making modifications to the repository, or when a manual upgrade from 9.0.2 is run in -precheck mode. This file will always be generated if the starting version is Release 2 (9.0.2). It will not be generated if the starting version is 10*g* (9.0.4); `precheck.log` is generated in this case instead. If there are errors in this file, none of the other log files will be generated.

At the end of each one of these log files, there is either a success message or a summary of all the errors that occur earlier in the file. These summary messages include references to line numbers. You can go to those lines earlier in the log file to see the errors in their context.

> **Caution:** Any portals running after an upgrade that was not clean are not supported by Oracle.

Looks up any errors found in the log files using Section D.6.2. Resolve any errors and warnings that have documented actions. Any errors that occur after the precheck phase require the repository to be restored from backup, the problem resolved and another upgrade run. Contact Oracle Support for any errors that are not documented or that cannot be resolved by following documented actions. When undocumented errors are found, do not attempt to run the upgrade again, run any further steps, alter any files, modify the OracleAS Portal schema, or access the OracleAS Portal instance in your browser.

The following is an example of the end of the log file after a successful upgrade (note the "Upgrade completed successfully" message and the lack of error messages):

```
>>> Running upg/common/popinv.pl
### Upgrade completed successfully
>>> Running tmp/popinv.sql
Portal SQL script started at Thu Apr 22 20:56:23 2004
Connected.
Updating patch inventory.
Upgrade Ended at Thu Apr 22 20:56:24 2004
```

7.4.8 Using a SQL Query to Verify the Success of the Oracle9*i*AS Metadata Repository Upgrade

Besides the OracleAS Metadata Repository Upgrade Assistant log files, you can optionally query the database to verify the success of the Oracle9*i*AS Metadata Repository upgrade. Specifically, you can use a SQL command to view the status of each component schema that OracleAS Metadata Repository Upgrade Assistant upgrades.

> **Note:** The Oracle9*i*AS Metadata Repository contains schemas for all the Oracle Application Server Release 2 (9.0.2) components. However, only a subset of those component schemas must be updated by OracleAS Metadata Repository Upgrade Assistant. Other schemas, such as the Oracle Identity Management schemas, are upgraded during the Oracle9*i*AS Infrastructure installation. Still others, do not require any upgrade from previous versions.

To see the current status of each component schema in the repository that is upgraded by OracleAS Metadata Repository Upgrade Assistant:

1. Connect to the Oracle9*i*AS Metadata Repository database.

   For example:

   ```
   METADATA_REPOSITORY_ORACLE_HOME/bin/sqlplus "connect sys as sysdba"
   ```

2. When prompted, enter the `SYS` password.
3. Enter the following SQL command to verify the status of the component schemas:

   ```
   SELECT comp_id,version,status FROM APP_REGISTRY;
   ```

   Refer to the following example and tables for an explanation of the output of the query:

   - Example 7–2 shows an example of the output displayed from the component schema SQL query.
   - Table 7–5 describes the possible values in the COMP_ID column of the SQL query results.
   - Table 7–6 describes the possible values in the STATUS column of the SQL query results.

Example 7–2 Sample Output of the Component Schema SQL Query

```
prompt> SELECT comp_id,version,status FROM APP_REGISTRY;

COMP_ID                        VERSION                        STATUS
------------------------------ ------------------------------ -----------
WIRELESS                       10.1.2.0.2                     VALID
PORTAL                         10.1.2.0.2                     VALID
WCS                            10.1.2.0.2                     VALID
DISCOVERER                     10.1.2.0.2                     VALID
MRUA                           10.1.2.0.2                     VALID
B2B                            10.1.2.0.2                     VALID
WORKFLOW                       10.1.2.0.2                     VALID
OCA                            10.1.2.0.2                     VALID
UDDI                           10.1.2.0.2                     VALID
MRC                            10.1.2.0.2                     VALID
```

```
10 rows selected.
```

Table 7–5 Component IDs in the Oracle9iAS Metadata Repository

Component ID	Description
WIRELESS	OracleAS Wireless
PORTAL	Oracle Application Server Portal
WCS	Oracle Application Server Web Clipping
DISCOVERER	Oracle Application Server Business Intelligence Discoverer
MRUA	Oracle Application Server Oracle Application Server Metadata Repository Upgrade Assistant
B2B	Oracle Application Server Integration B2B
WORKFLOW	Oracle Workflow
OCA	Oracle Application Server Certificate Authority
UDDI	Oracle Application Server UDDI Registry
MRC	Oracle Application Server Metadata Repository Container

Table 7–6 Component Status Indicators in the Oracle9iAS Metadata Repository

Status	Description
LOADING	OracleAS Metadata Repository Upgrade Assistant has begun creating the component database objects, but not all the component objects are created and loaded into the database.
LOADED	OracleAS Metadata Repository Upgrade Assistant has created all the component database objects and loaded them into the database. OracleAS Metadata Repository Upgrade Assistant can now begin upgrading the component schemas.
UPGRADING	OracleAS Metadata Repository Upgrade Assistant has begun upgrading the schemas for this component, but the upgrade is not complete.
UPGRADED	OracleAS Metadata Repository Upgrade Assistant has finished upgrading the schemas for this component.
VALID	The component schemas have been upgraded and are valid. This is the expected status after a successful upgrade to Oracle Application Server 10*g* Release 2 (10.1.2).
INVALID	The component schemas have been upgraded, but the database component schemas are invalid. This state can be caused by a non-recoverable error or invalid data. See Section 6.4.6 for information about reviewing the OracleAS Metadata Repository Upgrade Assistant log files.

7.5 Completing the Oracle9*i*AS Metadata Repository Upgrade for OracleAS Portal and OracleAS Wireless

The following sections describe the tasks to perform after running OracleAS Metadata Repository Upgrade Assistant to upgrade your Oracle9*i*AS Metadata Repository component schemas:

- Completing the Oracle9iAS Portal Schema Upgrade Process

7.5.1 Completing the Oracle9*i*AS Portal Schema Upgrade Process

The following sections describe how to complete the upgrade of the Oracle9*i*AS Portal schema:

- Reconfiguring OracleAS Portal to Work with Oracle Internet Directory and OracleAS Single Sign-On
- Starting all Applications Tiers That Use The Upgraded Portal Instance
- Moving the Portlet Repository to the New Format (Optional)
- Accessing the Upgraded OracleAS Portal
- Impact of Shutting Down the Oracle9iAS Metadata Repository Database on OracleAS Portal Oracle Text Indexes

7.5.1.1 Reconfiguring OracleAS Portal to Work with Oracle Internet Directory and OracleAS Single Sign-On

Follow these steps to reconfigure OracleAS Portal for Oracle Internet Directory and OracleAS Single Sign-On:

1. Set the ORACLE_HOME environment variable to the destination middle tier Oracle home.
2. Change directory to the following location in the destination middle tier Oracle home:

   ```
   DESTINATION_ORACLE_HOME/portal/conf
   ```

3. Run the following command:

   ```
   ./ptlconfig -dad portal_DAD
   ```

   In this command, *portal_DAD* is the DAD of the OracleAS Portal repository that you just upgraded.

> **See Also:** *Oracle Application Server Portal Configuration Guide* for more information about the `ptlconfig` tool

7.5.1.2 Starting all Applications Tiers That Use The Upgraded Portal Instance

After the script has executed successfully, start each Applications tier that is using the upgraded Portal instance.

> **See Also:** "Starting an Applications Tier" in Chapter 2 of *Oracle Collaboration Suite Administrator's Guide*.

7.5.1.3 Moving the Portlet Repository to the New Format (Optional)

By default, the portlet repository is upgraded in-place in the OracleAS Portal schema. The existing pages, templates, items, and so on, in the portlet repository are upgraded, and the new portlets are added into the repository. Since the old settings are preserved, the pages look very similar to the way they did before the upgrade was run.

Note: If your starting version is Oracle9*i*AS Portal 9.0.2 and you had rendered the Portlet Repository as grouped by Provider names, then after the upgrade, the folders in the repository will be grouped by category, because the Group by Provider Name option has been deprecated since OracleAS 10g (9.0.4).

To create a similar organization, assign the portlet names to categories representing the Provider names.

If you want the repository to have the appearance of a newly installed instance, a script is available to re-create the upgraded portlet repository. The script removes the existing portlet repository and re-creates it. Use the script only if you do not wish to preserve customizations, settings, styles, banners, and so on in the portlet repository.

To re-create the portlet repository, follow these steps after starting the Applications tiers as described in Section 7.5.1.2:

1. Perform a backup of the database, since the script overwrites the repository and is not reversible.
2. Navigate to the following directory on the OracleAS Metadata Repository Upgrade Assistant and Utilities CD–ROM, which contains the `prrpplc.sql` script:

   ```
   MRUA_CDROM_ROOT/portal/admin/plsql/upg/common
   ```

3. Log in to the Oracle9*i*AS Metadata Repository database as Portal schema user from SQL*Plus.
4. Run the `prrplc.sql` script with no arguments.

7.5.1.4 Accessing the Upgraded OracleAS Portal

If there were no errors in the OracleAS Portal Repository upgrade, you can access your upgraded Portal. Open a browser and navigate to the following URL:

```
http://host.domain:port/pls/portal_DAD
```

For example:

```
http://portalhost42.acme.com:7777/pls/portal
```

7.5.1.5 Impact of Shutting Down the Oracle9*i*AS Metadata Repository Database on OracleAS Portal Oracle Text Indexes

Missing Oracle Text indexes are created during the OracleAS Portal upgrade process, but they are not populated, as this can be very time consuming. The new indexes are populated once the upgrade is complete, when the next synchronization job is scheduled.

If you need to shut down the database after the upgrade (to back up) and the Oracle Text index synchronization job has started, consider the impact of the following shutdown commands on the synchronization process:

- Shutdown Immediate or Abort

  The indexing job stops immediately and is rolled back.

- Shutdown Normal

  Entire indexing job finishes before the database shuts down.

- Shutdown Transactional

  Synchronization of the current index is allowed to finish before the database shuts down. If one or more indexes still need to be synchronized, synchronization of the next index is not started.

7.6 Starting the Application Tiers That Use the Oracle9*i*AS Metadata Repository

After you complete the Oracle9*i*AS Metadata Repository upgrade process, you can start the Applications tiers associated with the Oracle9*i*AS Metadata Repository.

See Also: "Starting an Applications Tier" in Chapter 2 of *Oracle Collaboration Suite Administrator's Guide*.

7.7 Performing a Backup of the Newly Upgraded OracleAS Metadata Repository

After you have upgraded the OracleAS Metadata Repository and verified that it is working successfully with the Applications tier installations and Oracle Collaboration Suite 10*g* Infrastructure, consider a full backup of the Oracle9*i*AS Metadata Repository.

A full backup of the newly upgraded Oracle9*i*AS Metadata Repository will provide you with the ability to restore your environment to this newly upgraded state and avoid the prospect of having to perform the upgrade procedures a second time to return to this state.

See Also: for information about the Backup and Recovery Tool, see *Oracle Collaboration Suite Administrator's Guide*.

7.8 Completing the Upgrade of Oracle Collaborative Portlets

Perform this step if you received a warning to run the Oracle Collaborative Portlets Configuration Assistant manually during the middle tier upgrade.

To run the Oracle Collaborative Portlets Configuration Assistant, enter the following command on the system running the upgraded Oracle Collaboration Suite 10*g* Applications:

```
ORACLE_HOME/ocsprovs/bin/ocsprovs_installer.sh  -mode complete -ouser cn=orcladmin
-opass oid_admin_password  -ipass ias_admin_password
```

where:

- ORACLE_HOME is the path to the upgraded Applications tier Oracle home
- `ias_admin_password` is the `ias_admin` user password

8

Frequently Performed Tasks

This chapter contains instructions for tasks performed frequently during the upgrade process using the command line tools. They include:

- Commands for Oracle9iAS Infrastructure
- Commands for Information Storage Database
- Oracle Collaboration Suite Middle Tier Release 1 (9.0.3.1) and Release 2 (9.0.4.2) Tasks

8.1 Commands for Oracle9*i*AS Infrastructure

This section contains instructions for performing the following tasks:

- Starting an Oracle9iAS Infrastructure Instance
- Shutting Down an Oracle9iAS Infrastructure Instance
- Verifying that Oracle Internet Directory is Running

8.1.1 Starting an Oracle9*i*AS Infrastructure Instance

To start an Oracle9*i*AS Infrastructure instance, perform the following steps:

1. Set the ORACLE_HOME environment variable to the location of the Oracle9*i*AS Infrastructure.

   For example:

   ```
   (Bourne or Korn shell) ORACLE_HOME=/opt/oracle/infra9042; export ORACLE_HOME
   (C shell) setenv ORACLE_HOME /opt/oracle/ocs/infra9042
   ```

2. Start the Oracle9*i*AS Metadata Repository.

   a. Start the Oracle9*i*AS Metadata Repository listener:

      ```
      ORACLE_HOME/bin/lsnrctl start
      ```

   b. Set the ORACLE_SID environment variable to the Oracle9*i*AS Metadata Repository system identifier. The default ORACLE_SID is `iasdb`.

      ```
      (Bourne or Korn shell) ORACLE_SID=iasdb; export ORACLE_SID
      (C shell) setenv ORACLE_SID iasdb
      ```

   c. Start the Oracle9*i*AS Metadata Repository instance using SQL*Plus:

      ```
      ORACLE_HOME/bin/sqlplus /nolog
      sql> connect sys/password_for_sys as sysdba
      sql> startup
      ```

```
sql> quit
```

3. Start Oracle Internet Directory.
   a. Make sure the ORACLE_SID is set to the Oracle9*i*AS Metadata Repository system identifier as in the previous step.
   b. Start the Oracle Internet Directory monitor:

      ```
      ORACLE_HOME/bin/oidmon start
      ```

   c. Start the Oracle Internet Directory server:

      ```
      ORACLE_HOME/bin/oidctl server=oidldapd configset=0 instance= n start
      ```

      where *n* is any instance number (1, 2, 3...) that is not in use. For example:

      ```
      ORACLE_HOME/bin/oidctl server=oidldapd configset=0 instance=1 start
      ```

4. Start the Oracle Enterprise Manager Web site.

   Even though you are using command-line, the Web site is required because it provides underlying support for the command-line tools. The Web site must be started after every system boot.

   You can run the following commands in the Oracle home of the primary installation (the first installation on the host) to get status and start the Web site:

   ```
   ORACLE_HOME/bin/emctl status
   ORACLE_HOME/bin/emctl start
   ```

   Note: Do not start the Oracle Enterprise Manager if you are going to run the Oracle Universal Installer. If the Oracle Enterprise Manager is running, the Oracle Universal Installer requires you to shut it down.

5. Start Oracle HTTP Server.

   ```
   ORACLE_HOME/dcm/bin/dcmctl start -ct ohs
   ```

   Starting Oracle HTTP Server also makes Oracle9*i*AS Single Sign-On available.

6. Start the OC4J_DAS instance.

   ```
   ORACLE_HOME/dcm/bin/dcmctl start -co OC4J_DAS
   ```

7. Start Oracle Application Server Web Cache (optional).

   Oracle Application Server Web Cache is not configured in the infrastructure by default, but if you have configured it, start it as follows:

   ```
   ORACLE_HOME/bin/webcachectl start
   ```

8.1.2 Shutting Down an Oracle9*i*AS Infrastructure Instance

This section describes how to shut down an Oracle9*i*AS Infrastructure using command-line tools.

1. Stop all Oracle Collaboration Suite middle tier instances that use the infrastructure.
2. Stop the Oracle Enterprise Manager Web site (for system shutdown only).

If you are preparing to shut down your system, stop the Oracle Enterprise Manager Web site by running the following command in the Oracle home of the primary installation (the first installation on the system):

```
ORACLE_HOME/bin/emctl stop

ORACLE_HOME\bin\emctl stop
```

Provide the `ias_admin` password when prompted.

3. Stop Oracle Application Server Web Cache (optional).

   Oracle Application Server Web Cache is not configured in the infrastructure by default, but if you have configured it, stop it as follows:

   ```
   ORACLE_HOME/bin/webcachectl stop

   \\
   ```

4. Stop OC4J instances and Oracle HTTP Server.

   If you are preparing to shut down your system, stop all running OC4J instances, Oracle HTTP Server, and OPMN as follows:

   ```
   ORACLE_HOME/dcm/bin/dcmctl shutdown

   \\\
   ```

   Otherwise, if you are not preparing to shut down your system, stop all running OC4J instances and Oracle HTTP Server (leave OPMN running):

   ```
   ORACLE_HOME/dcm/bin/dcmctl stop

   \\\
   ```

   Note that stopping Oracle HTTP Server also makes Oracle9*i*AS Single Sign-On unavailable.

5. Stop Oracle Internet Directory.

   a. Make sure the ORACLE_SID is set to the Oracle9*i*AS Metadata Repository system identifier (refer to the next step).

   b. Stop the Oracle Internet Directory server:

      ```
      ORACLE_HOME/bin/oidctl server=oidldapd configset=0 instance=n stop

      \\
      ```

      where *n* is the instance number that was used to start the server (1, 2, 3...). For example:

      ```
      ORACLE_HOME/bin/oidctl server=oidldapd configset=0 instance=1 stop

      ORACLE_HOME\bin\oidctl server=oidldapd configset=0 instance=1 stop
      ```

   c. Stop the Oracle Internet Directory monitor:

      ```
      ORACLE_HOME/bin/oidmon stop

      \\
      ```

6. Stop the Oracle9*i*AS Metadata Repository.

   a. Set the ORACLE_SID environment variable to the metadata repository system identifier. The default ORACLE_SID is `iasdb`.

      ```
      (Bourne or Korn shell) ORACLE_SID=iasdb; export ORACLE_SID
      (C shell) setenv ORACLE_SID iasdb
      ```

b. Stop the Oracle9*i*AS Metadata Repository instance using SQL*Plus:

```
ORACLE_HOME/bin/sqlplus /nolog
\\
sql> connect sys/password_for_sys as sysdba
sql> shutdown
sql> quit
```

7. Stop the Oracle9*i*AS Metadata Repository listener:

```
ORACLE_HOME/bin/lsnrctl stop
\\
```

8.1.3 Verifying that Oracle Internet Directory is Running

Verify that the Oracle Internet Directory server is up and running, using the following commands where *ssl_port* and *non_ssl_port* are the port numbers used by SSL and non-SSL. Port numbers are listed in *ORACLE_HOME*/install/port.ini file.

```
ORACLE_HOME/bin/ldapbind -p non_ssl_port
ORACLE_HOME/bin/ldapbind -p ssl_port -U 1

ORACLE_HOME\bin\ldapbind -p
ORACLE_HOME\bin\ldapbind -p  -U 1
```

If Oracle Internet Directory server is running, each command returns the message `"bind successful."`

8.2 Commands for Information Storage Database

This section covers the following topics:

- Starting an Information Storage Database Instance
- Shutting Down an Information Storage Database Instance

8.2.1 Starting an Information Storage Database Instance

Start the Oracle Collaboration Suite information storage database by performing the following steps.

1. Set the ORACLE_HOME environment variable to the location of the Oracle Collaboration Suite information storage database Oracle home.

```
(Bourne or Korn shell) ORACLE_HOME=/opt/oracle/infra9042; export ORACLE_HOME
(C shell) setenv ORACLE_HOME /opt/oracle/ocs/infra9042
```

2. Start the Oracle Collaboration Suite information storage database instance.

   a. Start the Oracle Collaboration Suite information storage database listener:

```
ORACLE_HOME/bin/lsnrctl start
```

   b. Set the ORACLE_SID environment variable to the Oracle Collaboration Suite information storage database system identifier.

```
(Bourne or Korn shell) ORACLE_SID=infodb; export ORACLE_SID
(C shell) setenv ORACLE_SID infodb
```

   c. Start the Information Storage Database instance using SQL*Plus:

```
ORACLE_HOME/bin/sqlplus /nolog
```

```
sql> connect sys/password_for_sys as sysdba
sql> startup
sql> quit
```

8.2.2 Shutting Down an Information Storage Database Instance

Shut down the Oracle Collaboration Suite information storage database by performing the following steps.

1. Set the ORACLE_HOME environment variable to the location of theOracle Collaboration Suite information storage database Oracle home.

   ```
   (Bourne or Korn shell) ORACLE_HOME=/opt/oracle/info9042; export ORACLE_HOME
   (C shell) setenv ORACLE_HOME /opt/oracle/ocs/info9042
   ```

2. Set the ORACLE_SID environment variable to the Oracle Collaboration Suite information storage database system identifier.

   ```
   (Bourne or Korn shell) ORACLE_SID=infodb; export ORACLE_SID
   (C shell) setenv ORACLE_SID infodb
   ```

3. Stop the database instance using SQL*Plus:

   ```
   ORACLE_HOME/bin/sqlplus /nolog
   sql> connect sys/password_for_sys as sysdba
   sql> shutdown
   sql> quit
   ```

   There are four options you can use with the `SHUTDOWN` command: `NORMAL`, `IMMEDIATE`, `TRANSACTIONAL` and `ABORT`. For more information about these options, refer to *Oracle9i Database Administrator's Guide Release 2 (9.2)*.

4. Stop the database listener.

   ```
   ORACLE_HOME/bin/lsnrctl stop
   ```

8.3 Oracle Collaboration Suite Middle Tier Release 1 (9.0.3.1) and Release 2 (9.0.4.2) Tasks

This section covers the following topics:

- Starting a Middle Tier Instance
- Shutting Down a Middle Tier Instance

8.3.1 Starting a Middle Tier Instance

Start the middle tier instance by setting the appropriate variables and running the commands listed below.

1. Set the environment variables for your operating system's library search path (such as LD_LIBRARY_PATH, ORACLE_HOME and PATH) as appropriate for your platform and version of Oracle Collaboration Suite.
2. Start OPMN and the processes it controls:

   ```
   ORACLE_HOME/opmn/bin/opmnctl startall
   ```

3. Start the Oracle Calendar server:

   ```
   $ORACLE_HOME/ocal/bin/unistart
   ```

4. Start the OracleAS Web Cache:

```
$ORACLE_HOME/webcache/bin/webcachectl start
```

5. Start the Oracle Enterprise Manager

```
$ORACLE_HOME/bin/emctl start
```

6. Start Oracle Email and the Oracle Email listener:

```
$ORACLE_HOME/oes/bin/oesctl startup $machine:um_system:smtp_in
$ORACLE_HOME/oes/bin/oesctl startup $machine:um_system:smtp_out
$ORACLE_HOME/oes/bin/oesctl startup $machine:um_system:imap
$ORACLE_HOME/oes/bin/oesctl startup $machine:um_system:gc
$ORACLE_HOME/oes/bin/oesctl startup $machine:um_system:list
$ORACLE_HOME/oes/bin/oesctl startup $machine:um_system:pop
$ORACLE_HOME/oes/bin/oesctl startup $machine:um_system:nntp_in
$ORACLE_HOME/oes/bin/oesctl startup $machine:um_system:nntp_out
$ORACLE_HOME/oes/bin/oesctl startup $machine:um_system:vs
$ORACLE_HOME/bin/lsnrctl start listener_es
```

   where $*machine* is the fully qualified host name of the system running the middle tier.

7. Start Oracle Files:

   where *password* is the Oracle Files schema password.

   Note: You must have root privileges to start Oracle Files.

8. Start Oracle Real-Time Collaboration:

```
$ORACLE_HOME/imeeting/bin/imtctl start
```

9. Start Oracle9*i*AS Wireless from the Oracle Enterprise Manager console:

   a. Enter the URL of the Oracle Enterprise Manager console in a browser:

```
http://servername:port
```

      where *servername* and *port* are the name of the system and the port where Oracle Enterprise Manager is running. The default ports are 1810 and 1811.

   b. Enter your user name and password. The Oracle Enterprise Manager Home Page appears.

   c. From the System Components table, select **Wireless**. The Wireless page appears and defaults to the Wireless Server tab.

   d. From the Wireless Server tab, click **Start All**.

8.3.2 Shutting Down a Middle Tier Instance

Shut down the middle tier instance by setting the appropriate variables and running the commands listed below.

1. Shut down Oracle Email:

```
$ORACLE_HOME/oes/bin/oesctl shutdown $machine:um_system:smtp_in
$ORACLE_HOME/oes/bin/oesctl shutdown $machine:um_system:smtp_out
$ORACLE_HOME/oes/bin/oesctl shutdown $machine:um_system:imap
```

```
$ORACLE_HOME/oes/bin/oesctl shutdown $machine:um_system:gc
$ORACLE_HOME/oes/bin/oesctl shutdown $machine:um_system:list
$ORACLE_HOME/oes/bin/oesctl shutdown $machine:um_system:pop
$ORACLE_HOME/oes/bin/oesctl shutdown $machine:um_system:nntp_in
$ORACLE_HOME/oes/bin/oesctl shutdown $machine:um_system:nntp_out
$ORACLE_HOME/oes/bin/oesctl shutdown $machine:um_system:vs
$ORACLE_HOME/bin/lsnrctl start listener_es
```

where $*machine* is the fully qualified host name of the system running the middle tier.

After the new Oracle Collaboration Suite Applications is installed you can stop Oracle Email in the source Oracle home using the following command. The value of $DEST_ORACLE_HOME is the location of the new Oracle home and $SOURCE_ORACLE_HOME is the location of the Oracle home you are upgrading:

```
$DEST_ORACLE_HOME/oes/bin/install_shutdown_all.pl $SOURCE_ORACLE_HOME
```

2. Shut down the Oracle Calendar server:

```
$ORACLE_HOME/ocal/bin/unistop -y
```

3. Shut down Oracle Files:

```
$ORACLE_HOME/ifs/files/bin/ifsctl stop DOMAIN_NAME password
```

where password is the Oracle Files schema password.

> **Note:** You must have root privileges to stop Oracle Files.

4. Shut down Oracle Web Conferencing:

```
$ORACLE_HOME/imeeting/bin/imtctl stop
```

> **Note:** Perform this step on all middle tiers that have Oracle Web Conferencing configured

5. Shut down OPMN and the processes it controls:

```
$ORACLE_HOME/opmn/bin/opmnctl stopall
```

Shut down the Oracle Application Server Web Cache:

```
$ORACLE_HOME/webcache/bin/webcachectl stop
```

6. Shut down Oracle9*i*AS Wireless from the Oracle Enterprise Manager console:
   a. Enter the URL of the Oracle Enterprise Manager console in a browser:

      ```
      http://servername:port
      ```

      where *servername* and *port* are the name of the system and the port where Oracle Enterprise Manager is running. The default ports are 1810 and 1811.
   b. Enter your user name and password. The Oracle Enterprise Manager Home Page appears.

c. From the System Components table, select **Wireless**. The Wireless page appears and defaults to the Wireless Server tab.

d. From the Wireless Server tab, click **Stop All**.

7. Shut down Oracle Enterprise Manager:

```
$ORACLE_HOME/bin/emctl stop
```

Provide the `ias_admin` password when prompted.

8.3.3 Creating a Database User for an Ultra Search Instance

Use the following procedure to create a new schema users in the upgraded Oracle Collaboration Suite Database. Perform this step before running the Oracle Universal Installer as part of the middle tier upgrade which migrates the existing instances from the Oracle9*i*AS Metadata Repository to the Oracle Collaboration Suite Database.

> **Note:** Make sure you have sufficient system privileges to perform these procedures.

1. Log into the upgraded Oracle Collaboration Suite Database 10g (10.1.1) as the `WKSYS`, `SYS`, or `SYSTEM` database user.

2. Optionally, create a default tablespace for each instance user. The tablespace must be large enough to contain all data obtained during the crawling and indexing processes. This amount depends on the amount of data you intend to crawl and index. For example:

```
CREATE TABLESPACE lmtbsb DATAFILE '/u02/oracle/data/lmtbsb01.dbf' SIZE 500M
AUTOEXTEND ON;
```

3. Enter the following command:

```
@ORACLE_HOME/ultrasearch/admin/wk0create_user.sql username password tablespace
default_tablespace_string
```

where:

- *username* is the name of the Ultra Search schema owner.
- *password* is the password of the Ultra Search instance owner.
- *tablespace* is the name of the default tablespace created in step 2. If you do not specify a tablespace, the default is the same tablespace as UltraSearch schema `WK_TEST`.
- *default_tablespace_string* is the string "default tablespace" and the name of the default tablespace created in step 2. You can also use a temporary tablespace name. If *default_tablespace_string* is not specified, then the default and temporary tablespace settings for the `WK_TEST` user will be used. If `WK_TEST` does not exist, then the script uses the default settings for the database.

Some examples are:

```
$ORACLE_HOME/bin/sqlplus "/ as sysdba"@$ORACLE_
HOME/ultrasearch/admin/wk0create_user.sql my_test my_test

$ORACLE_HOME/bin/sqlplus "/ as sysdba"@$ORACLE_
HOME/ultrasearch/admin/wk0create_user.sql my_test my_test 'default tablespace
lmtbsb temporary tablespace TEMP'
```

```
$ORACLE_HOME/bin/sqlplus "/ as sysdba"@$ORACLE_
HOME/ultrasearch/admin/wk0create_user.sql my_test my_test 'default tablespace
lmtbsb'
```

4. Grant the user `WKUSER` privileges by entering the following command:

   ```
   grant wkuser,resource,connect to username;
   ```

   where *username* is the same user name provided in step 3.

The script creates a new user and assigns it the tablespaces created in the step 2. Now `WKSYS` or an Ultra Search superuser can create an Ultra Search instance on this user schema. See the *Oracle Ultra Search User's Guide* for more information.

9

Migrating the Oracle Ultra Search Index

This chapter describes the procedure for migrating Oracle Ultra Search index and configuration data from the Oracle9*i*AS Metadata Repository to the Oracle Collaboration Suite information storage database. In Oracle Collaboration Suite, Oracle Ultra Search is used for Web content indexes, not Oracle Collaboration Suite content indexes.

To migrate both index and configuration data, perform the procedures in this chapter after upgrading the Oracle Collaboration Suite information storage database and before upgrading the Oracle Collaboration Suite middle tier. Oracle recommends using this procedure if you have a very large index.

If you do not perform this procedure, you can migrate only the configuration data during the middle tier upgrade. If you use the second method, Oracle Ultra Search re-creates the index in the upgraded database when the data source is recrawled. Oracle recommends using the second procedure for most cases as it is simpler. See Chapter 8.3.3 for more information on the second option.

The following sections describe how to perform the migration:

- Oracle Ultra Search Instance Migration Requirements and Limitations
- Preparing to Migrate the Oracle Ultra Search Instance
- Exporting the Oracle Ultra Search Instance from the Oracle9iAS Metadata Repository
- Importing the Oracle Ultra Search Instance to the Information Storage Database
- Registering Imported Instance Data With Oracle Ultra Search
- Completing the Oracle Ultra Search Migration

9.1 Oracle Ultra Search Instance Migration Requirements and Limitations

Make sure you understand the following requirements and limitations of the migration process before proceeding with the migration:

- The migration process uses the transportable tablespace feature to move the index and configuration data from the Oracle9*i*AS Metadata Repository database to the Information Storage database. Review the following limitations on using transportable tablespace:
  - The transportable set must be self-contained.
  - A tablespace with the same name as the table space being exported from the Oracle Collaboration Suite information storage database must not already exist in the target database.

  - The two databases do not have to be on the same release.
  - The source and target databases must be on the same type of hardware and operating-system platform.
  - The source and target databases must have the same database block size.
  - The source and target databases must have the same character set.
  - Materialized views, function-based indexes, scoped REFs, 8.0 compatible advanced queues with multiple-recipients, and domain indexes can't be transported in this manner.
  - Users with tables in the exported tablespace should exist in the target database prior to initiating the import. If the user does not already exist, you will get an error message.

    The metadata exported from the target database does not contain enough information to create the user in the target database. The reason is that, if the metadata contained the user details, it might overwrite the privileges of an existing user in the target database. For example, a user with the same name may already exist in the target database.

    By not maintaining the user details, we preserve the security of the database.

  If the tablespace containing the Oracle Ultra Search configuration and index data does not meet the requirements, you cannot migrate your data using this procedure. The premigration script described in Section 9.2 performs some but not all of the checks.

  See *Oracle9i Database Administrator's Guide* for more information about transportable tablespace.

- One step of the migration, explained in Section 9.5, is to create a schema to hold the migrated instance. This schema cannot already hold an existing instance. If the schema does hold an existing instance, drop that instance before performing the migration.
- The procedure does not support migration of the following data:
  - Oracle Ultra Search instances in the Oracle9*i*AS Metadata Repository whose tablespace name already exists in the Oracle Collaboration Suite information storage database. If a tablespace name already exists, use the instance migration procedure described in Section 8.3.3.
  - Remote crawler registration information. An existing schedule assigned to a remote crawler will be reassigned to a local crawler after the migration.
  - Table data source.
  - E-mail data source, unless the e-mail archive directory is accessible from the Information Storage Database
- If the Oracle9*i*AS Metadata Repository database and the Oracle Collaboration Suite information storage database are on different systems, there may be problems with the migrated file data source unless it has the same access directory path on the Oracle Collaboration Suite information storage database system.
- You must re-enter security information such as the HTTP authentication and e-mail passwords
- The migrated instance is not available until the Oracle Collaboration Suite middle tier is upgraded. The middle tier upgrade process will also upgrade the migrated instance to be used in Oracle Ultra Search 10.1.0.3 environment.

9.2 Preparing to Migrate the Oracle Ultra Search Instance

The Oracle home of the Oracle Collaboration Suite Database 10g (10.1.1) contains the premigration script that prepares the system for the migration.

To run the premigration script:

1. Log into the Oracle9*i*AS Metadata Repository database as `SYS`. For example:

   ```
   sqlplus "sys/password as sysdba"
   ```

2. Enter the following command:

   ```
   @ORACLE_HOME/ultrasearch/admin/wkpremig.sql
   ```

   where ORACLE_HOME is the location of the upgraded Oracle Collaboration Suite Database 10g (10.1.1) database

   The premigration script performs the following tasks:

   - Sets all Oracle Ultra Search instances in the Oracle9*i*AS Metadata Repository to READ-ONLY mode. This mode means that:
     - Any executing schedule is stopped.
     - All schedules are disabled.
     - Instance data can no longer be modified.
   - Makes an inventory of the Oracle Ultra Search instances to be migrated from the Oracle9*i*AS Metadata Repository database. It displays the instance name, instance owner schema name, and the tablespace used by the schema.
   - Determines whether the tablespace used by the instances is self-contained by executing the `transport_set_check` procedure in the Oracle package DBMS_TTS.

     Note that this check is a necessary but not sufficient condition for using the transportable tablespace feature. You must meet the other criteria for using transportable tablespace.

   Rerunning the script toggles Ultra Search instances between UPDATABLE state and READ-ONLY state.

3. Review the results of the premigration script which are displayed on your standard output. The premigration script executes the `transport_set_check` procedure as well as the following SQL command:

   ```
   select * from transport_set_violations;
   ```

4. If there are violations, then run `wkpremig.sql` again to set the instance back to UPDATABLE mode. You cannot use this procedure to migrate the your instance and index data. You can migrate your instance data only using the procedure described in Section 8.3.3.

5. If there are no violations, and you have verified that your instance meets the hardware compatibility and other criteria for transportable tablespace, then rerun wkpremig.sql again to set the instance back to UPDATABLE mode. Proceed with the steps in Section 9.3.1.

9.3 Exporting the Oracle Ultra Search Instance from the Oracle9*i*AS Metadata Repository

Before exporting the Oracle Ultra Search instances from the Oracle9*i*AS Metadata Repository, perform the prerequisites for using the Export utility.

To prepare to use Export:

1. Log into the Oracle9*i*AS Metadata Repository database as `SYS` and run the following command:

   ```
   ORACLE_HOME/rdbms/admin/catexp.sql

   ORACLE_HOME\rdbms\admin\catexp.sql
   ```

2. Ensure there is sufficient disk or tape storage to write the export file
3. Verify that you have the required access privileges.

> **See Also:** *Oracle9i Database Utilities Release 1 (9.0.1)* for more information on using the Export utility.

9.3.1 Performing the Transportable Tablespace Export

Perform the export for each instance that can be migrated using transportable tablespace:

1. Set the tablespace to READ-ONLY mode by entering the following commands from the Oracle home bin directory:

   ```
   sqlplus "sys/password as sysdba"
   alter tablespace tablespace_name read only;
   ```

2. Run the Export utility from the Oracle home bin directory:

   ```
   exp \'sys/<password of sys user> as sysdba\'
   transport_tablespace=y
   tablespaces=list_of_transportable_tablespaces
   file=export_file_name
   ```

   where

   - `list_of_transportable_tablespaces` is the list of names of transportable tablespaces separated by commas
   - `export_file_name` is the name of the export file (also called the structural information file)

   For example, if there is one tablespace:

   ```
   exp \'sys/manager as sysdba\' transport_tablespace=y tablespaces=us_data
   file=us_data.dmp
   ```

   For another example, if there is more than one tablespace:

   ```
   exp \'sys/manager as sysdba\' transport_tablespace=y tablespaces=(us_data1,us_
   data2) file=us_data.dmp
   ```

9.4 Importing the Oracle Ultra Search Instance to the Information Storage Database

Before exporting the Oracle Ultra Search instances from the Oracle9*i*AS Metadata Repository, perform the prerequisite steps.

1. Copy the datafiles and the export file to a place accessible to the Information Storage database. Use any utility for copying flat files, such as FTP binary, an operating system utility or CD_ROM publishing.
2. Prepare the Information Storage database to use the Import utility by running the catexp.sql script as described in Section 9.3.
3. Create a new database schema for each Oracle Ultra Search instance to be migrated. The new schema name must be identical to the exported one. Since this schema will hold the migrated instance, it cannot already hold an existing instance. If the schema does hold an existing instance, drop that instance before performing the migration.

   See Section 8.3.3 for instructions on creating schemas for Oracle Ultra Search instances.

> **Note:** If a schema with the same name already exists, make sure it is permissible to import Oracle Ultra Search instance data into that schema.

To import the transportable tablespaces into the Oracle Collaboration Suite information storage database:

1. Run the Import utility from the Oracle home bin directory:

```
imp \'sys/password as sysdba\'
transport_tablespace=y
file=import_file
datafiles=list_of_data_files
tablespaces=list_of_transportable_tablespaces
tts_owners=ultrasearch_schema_name
fromuser=ultrasearch_schema_name
touser=ultrasearch_schema_name
```

   For example, if you have a schema named 'adam' with a tablespace 'us_data':

```
imp \'sys/manager as sysdba\' transport_tablespace=y file=us_data.dmp
datafiles='/info/oracle/dbs/us_data.dbf' tablespaces=us_data tts_owners=adam
fromuser=adam touser=adam
```

2. Enter the following commands to set the tablespace in the Oracle9*i*AS Metadata Repository database back to READ-WRITE mode:

```
sqlplus "sys/sys_password as sysdba"
alter tablespace tablespace_name read write;
```

9.5 Registering Imported Instance Data With Oracle Ultra Search

There are two procedures involved in registering imported instance data with Oracle Ultra Search. These procedures are described in the following sections:

- Creating a TNS Name for the Oracle9iAS Metadata Repository Database
- Performing the Instance Data Registration

9.5.1 Creating a TNS Name for the Oracle9*i*AS Metadata Repository Database

Before performing the instance data registration, you need to create a TNS alias for the Oracle9*i*AS Metadata Repository database in the Oracle Collaboration Suite information storage database. If a TNS alias already exists, you can reuse the alias name and skip the steps in this section.

To create a TNS name for the Oracle9*i*AS Metadata Repository database:

1. Set the ORACLE_HOME environment variable to the Oracle home of the upgraded Oracle Collaboration Suite Database.
2. Start the Oracle Net Configuration Assistant by entering the following command:

   ```
   $ORACLE_HOME/bin/netca
   ```

3. Select **Local Net Service Name Configuration**. Click **Next**.
4. Select **Add**. Click **Next**.
5. Select Oracle8i or later database or service. Click **Next**.
6. In the Service Name field, enter the service name of the Oracle9*i*AS Metadata Repository database. Click **Next**.
7. Select TCP. Click **Next**.
8. In the **Host Name** field, enter the name of the system running the Oracle9*i*AS Metadata Repository database. Click **Next**.
9. Select **Use Standard Port Number of 1521** if the Oracle9*i*AS Metadata Repository database listener is listening on port 1521. Otherwise select **Use Another Port Number** and enter the port number where the Oracle9*i*AS Metadata Repository database listener is listenering. Click **Next**.
10. Select Yes, perform a test to test the connection. If the connection is successful, click **Next**.
11. In the **Net Service Name** field, leave the default service name or enter a different name. Click **Next**.
12. On the screen with the message "Would you like to configure another net service name", select No. The message "Net Service name complete" appears. Click **Next** and then Finish.

You use the net service name created in step 11 during the next procedure.

9.5.2 Performing the Instance Data Registration

To register the imported instance data with Oracle Ultra Search:

1. Log into the Oracle Collaboration Suite Database as `SYS`.
2. Create a public, fixed `WKSYS` database link to the Oracle9*i*AS Metadata Repository:

   ```
   create public database link mrlink connect to wksys identified by wksys_
   password using 'mr_db_tns_name_entry';
   ```

   where:

   - `wksys_password` is the `WKSYS` password in the Oracle9*i*AS Metadata Repository database
   - `mr_db_tns_name_entry` is the net access descriptor or the TNS alias specified in the tnsname.ora file. This is the same name created in Section 9.5.1.

3. Verify the database link by running the following query as the Oracle Collaboration Suite Database `WKSYS` user:

   ```
   select inst_name from wk$instance@mrlink;
   ```

   The query should return a list of instances in the Oracle9*i*AS Metadata Repository database.

4. For each Oracle Ultra Search instance, run the migration script on the Oracle Collaboration Suite information storage database:

   ```
   @ ORACLE_HOME/ultrasearch/admin/wkreginst.sql mrlink old_inst new_inst new_
   inst_owner password
   ```

   where:

   - ORACLE_HOME is the location of the Oracle Collaboration Suite Database 10g (10.1.1)
   - `mrlink` is the database link created in step 2
   - `old_inst` is the original name of the instance exported from the Oracle9*i*AS Metadata Repository database
   - `new_inst` is the name the instance has after the migration. You can choose the same name as the original instance or use a new name.
   - `new_inst_owner` is the name of the schema that imports the instance data
   - `password` is the password of the schema that imports the instance data

   For example:

   ```
   @ ORACLE_HOME/ultrasearch/admin/wkreginst.sql mrlink old_inst new_inst adam
   smith
   ```

5. Repeat step 4 for each instance you are importing.
6. Drop the public database link after migrating all the instances:

   ```
   drop public database link mrlink;
   ```

9.6 Completing the Oracle Ultra Search Migration

After the migration, the upgrade is not yet complete:

1. All instances remain in a READ-ONLY mode. To change the instance back to UPDATABLE mode, perform the following steps:
   a. Log in to the Oracle Ultra Search administration tool. This takes you to the Instances page.
   b. From the Instances page, click **Edit**.
   c. Select the box corresponding to UPDATABLE.
   d. Click **Apply**.

> **See Also:** "Instances Page" in Chapter 8 of *Oracle Ultra Search Administrator's Guide.*

2. Performing the middle tier upgrade using the Oracle Universal Installer automatically points Oracle Ultra Search on the middle tier to the upgraded Oracle Collaboration Suite Database.

10

Upgrading Oracle Application Server Portal

This chapter explains how to upgrade Oracle9*i*AS Portal 9.0.2 to Oracle9*i*AS Portal 9.02.6. These steps are applicable your configuration meets the following criteria:

- A Release 2 (9.0.4.2) middle tier configured with Oracle9*i*AS Portal.
- A single Oracle9*i*AS Metadata Repository database used by both Oracle Internet Directory and your middle tier applications.
- You want Oracle9*i*AS Portal to continue to work after each tier is upgraded.

10.1 Preparing to Upgrade

Perform the steps in the following section before starting the upgrade:

- Update your Oracle9iAS Single Sign-On Server

10.1.1 Update your Oracle9*i*AS Single Sign-On Server

To upgrade your Oracle9*i*AS Single Sign-On Server from release 9.0.2 to 9.0.2.6:

1. Log into Oracle MetaLink (http://metalink.oracle.com).
2. Locate patch 2995671 for your operating system.
3. Follow the instructions in the Readme file and in the *Oracle9i*AS Single Sign-On *Migration Guide* (doc/sso_patch_902.html file). These two documents are both contained with the patch. The patch is applied to the Oracle9*i*AS Single Sign-On Server schema in your Oracle9*i*AS Infrastructure Release 9.0.2.

10.2 Upgrading Oracle9*i*AS Portal

To upgrade Oracle9*i*AS Portal, perform the steps in the following sections:

- Download the Oracle9iAS Portal 9.0.2.6 Patch and Extract the Contents
- Back up the Middle Tier Oracle Home
- Run the Oracle Universal Installer
- Download the Latest Oracle9iAS Portal Repository Upgrade Patch
- Run the Repository Upgrade Script
- Check the Log
- Access Your Upgraded Oracle9iAS Portal

10.2.1 Download the Oracle9*i*AS Portal 9.0.2.6 Patch and Extract the Contents

To download and extract the Oracle9*i*AS Portal Release 9.0.2.6 patch:

1. Log into Oracle MetaLink (http://metalink.oracle.com).
2. Locate patch 2974042 for your operating system.
3. On the middle tier system, download the ZIP file into a temporary directory and extract its contents. The file contains the following items:
   - Disk1 - a directory containing the scripts used to run the Oracle9*i*AS Portal middle tier updates and the repository upgrade
   - Readme.html - A readme file
4. Examine the Readme.html file for any changes that could affect the remaining procedures.

10.2.2 Back up the Middle Tier Oracle Home

Before proceeding to the next steps, back up the middle tier Oracle home.

10.2.3 Run the Oracle Universal Installer

To run the Oracle Universal Installer:

1. Verify you are logged in to the machine where your middle tier Oracle home is located. The installer cannot be run from any other machine since it needs access to the middle tier processes.
2. Set your ORACLE_HOME environment variable to point to your Oracle9*i*AS 9.0.2 middle tier Oracle home.
3. On UNIX, verify that your DISPLAY environment variable is set correctly. The Oracle Universal Installer brings up the user interface that requires this setting.
4. Verify the Oracle9*i*AS Infrastructure processes:
   - If installing the patch on an Oracle9*i*AS middle tier, verify the Infrastructure processes are up and running. This is required by the OC4J Configuration Assistant to deploy the Oracle9*i*AS Portal applications in the Oracle9*i*AS middle tier.
5. Shut down the active Oracle Enterprise Manager services of the machine.
6. Shut down the Oracle9*i*AS middle tier services.
7. Go to the temporary directory where you extracted the contents of the ZIP file.
8. Run the following command from that directory to extract the Oracle9*i*AS Portal upgrade scripts and the new middle tier files:

   ```
   Disk1/install/platform/runInstaller
   ```

   where `platform` is the name of your operating system.
9. Click Next on the Welcome screen to proceed to the File Locations screen.
10. In the source path field on the File Locations screen, specify the products.jar file that was included in the download. For example, if you unzipped the downloaded file into your /tmp directory, you would specify /tmp/Disk1/stage/products.jar as the file.
11. Verify the destination Oracle home name and path.

12. Click **Next** to proceed to the Summary screen.
13. Verify that, under the New Installations heading, there are several Oracle9*i*AS Portal 9.0.2.6.x products listed.
14. Click **Install**. It generally takes from 15 to 30 minutes to distribute the files to the appropriate locations under your Oracle home and to start up the necessary processes. For the first few minutes, the user interface may seem frozen. However, the progress bar will soon become active.
15. Check the Configuration Tools page. It now shows the status of the Oracle9*i*AS Portal Application deployment.
16. Click Exit on the End of Installation screen.

10.2.4 Download the Latest Oracle9*i*AS Portal Repository Upgrade Patch

To download the Oracle9*i*AS Portal repository upgrade patch:

1. Log into Oracle MetaLink (http://metalink.oracle.com).
2. Locate patch 2981297 for your operating system.
3. Download the ZIP file onto a temporary directory in your machine. This is a generic download that contains scripts that will run on all supported platforms.
4. Change directories to the root of the Oracle9*i*AS Portal source code. This is under the middle tier Oracle home under portal/admin/plsql.
5. Extract the contents of the downloaded ZIP file into the current directory. When unzipping, choose to overwrite all existing files.

10.2.5 Run the Repository Upgrade Script

To run the repository upgrade script:

1. Verify that the middle tier configured with Oracle9*i*AS Portal 9.0.2 is not running.
2. Change directories to the root of the Oracle9*i*AS Portal source code. This is in the middle tier Oracle home under portal/admin/plsql.

   The source code under this directory was updated in the previous steps when the installer was run and the upgrade patch contents were extracted.

   > **Note:** This root directory is also where the main upgrade script is located. Elsewhere in the documentation it is referred to as `upgrade_directory`.
   >
   > If the file upgrade.pl is not located in the portal/admin/plsql directory under your middle tier Oracle home, verify that the steps for extracting patch 2981297 have been followed accurately.

3. Run the upgrade script in precheck mode until there are no errors found.

   ```
   perl upgrade.pl -precheck [-l log-file] [-t tmp-directory] [-ssoid sso-id]
   ```

4. Run the upgrade script in normal mode and designate the parameters:

   ```
   perl upgrade.pl [-l log-file] [-t tmp-directory] [-ssoid sso-id]
   ```

Table 10–1 Upgrade Script Parameters

Parameters	Description
-precheck	If precheck is specified, then only the prechecks are done and the upgrade exits afterwards. In this mode, the upgrade is not immediately aborted if a precheck fails.Instead, the errors for all prechecks are consolidated in the upgrade log. Look at the log to see a list of checks that failed. Refer to troubleshooting for solutions to errors. Run this mode until none of the prechecks fail. In this mode, the schema is not altered, so restoring from your backup is not necessary between runs.
-l *log-file*	Any log file name you specify. Default=upgrade.log.
-t *tmp-directory*	Any temporary directory name you specify. It must be empty and you must have write permissions on it. In this document, it is also be referred to as *upgrade_tmp_dir*. Default=tmp
-ssoid *sso-id*	This parameter is the identifier of the Oracle9*i*AS Single Sign-On Server with which the Oracle9*i*AS Portal is associated before the Oracle9*i*AS Portal schema is upgraded. This is a 15 character value that must match the identifier used when patching the Oracle9*i*AS Single Sign-On Server. This value is only required if either the Oracle9*i*AS Single Sign-On Server identifier can not be generated automatically, or if the server was patched earlier but the identifier that was used needs to be changed. Typically, you do not have to pass this value as the system generates one automatically. Refer to Section 10.1.1 for patch details.

The following examples assume that you have the appropriate middle tier Oracle home `perl` executable accessible from your path:

```
perl upgrade.pl -precheck -l precheck.log -t prechecktmp
perl upgrade.pl -l myupgrade.log -t upgtmp
perl upgrade.pl -l myupgrade.log
perl upgrade.pl -t upgtmp
perl upgrade.pl
perl upgrade.pl -l myupgrade.log -t upgtmp -ssoid B63875271239654
```

The script asks questions about the system's setup. Your answers are echoed back for verification at the end of the script. If you discover that you have input incorrect information before the end of the script, you can exit before any changes are made by answering no (`n`) to the last question.

The following list displays the questions asked by the script. Default answers to the questions are given in brackets.

1. Have you backed up your database `(y|n)? [y]:`

   If you have not backed up the database, answer no (n). Back up the database and restart the script.

2. Enter the name of the schema you would like to upgrade `[PORTAL]:`

   In a standard Oracle9*i*AS 9.0.2 infrastructure installation, the name of the schema is portal.

3. Enter the password for the schema that you would like to upgrade `[portal_schema_name]`:

   If your Oracle9*i*AS Portal repository is in the infrastructure database, use the Oracle Directory Manager for obtaining the randomized Oracle9*i*AS Portal schema password. Navigate to:

   a. `Entry Management`
   b. `cn=OracleContext`
   c. `cn=Products`
   d. `cn=IAS`
   e. `cn=Infrastructure Databases`
   f. `OrclReferenceName=Infrastructure Database` (for example: `iasdb.server.domain.com`)
   g. `OrclResourceName=PORTAL`
   h. Click the OrclResourceName=PORTAL entry.
   i. Look for the `orclpasswordattribute` value on the right panel. This value is the password for the schema.

   Refer to the *Oracle9i Application Server Administrator's Guide* for further instructions.

4. Enter the password for the `SYS` user of your database `[CHANGE_ON_INSTALL]`:
5. Enter the TNS connect string to connect to the database `[ORCL]`:

   The TNS connect string is in the tnsnames.ora file. Test your access to the database by using the Oracle9iAS Portal schema, schema password, and connect string.

6. `At this point, no changes have been made to your database. Please review all the details displayed above. If you choose to stop the upgrade at this point, you will be able to start it again without restoring from a backup. If you continue and a problem occurs, you will have to retrieve your backup and start over. Is it OK to continue with the upgrade? (y|n) [y]:`

   - Enter `y` to proceed with the upgrade.
   - Enter `n` to abort the upgrade. You can then run the upgrade script again, correcting your inputs.

   Note: Refrain from using your system during the upgrade. It will take several hours to upgrade your Oracle9*i*AS Portal repository. Actual timing depends on size of the repository, the system load and so forth.

10.2.6 Check the Log

Once the upgrade has completed, it is imperative to check the log for any errors.

1. Locate the log file. The default name for the log is upgrade.log. It is located in the same directory as the main upgrade script: *upgrade_directory*.

   Unless the upgrade terminates abruptly before finishing, the errors in the log are sent to standard output and are also included in a separate section at the end of the log file. Use the line numbers in the section at the end of the log file to search

for the errors when they occurred earlier in the file. Any errors are also summarized in a file named *upgrade_tmp_dir*/upgrade.err. Any warnings are also summarized in a file named *upgrade_tmp_dir*/upgrade.wrn.

2. Open the log file with a text editor.
3. Research all errors and warnings using Chapter 4, "Troubleshooting" from the *Oracle9iAS Portal Upgrade Guide Release 9.0.2 to 9.0.2.6 for UNIX and Windows*.
4. Resolve any errors and warnings that have documented actions. Most errors require the repository to be restored from backup, the problem resolved, and another upgrade run.

> **Note:** Any Oracle9*i*AS Portal running after an upgrade that was not clean is not supported by Oracle. A clean upgrade has either zero errors or only benign errors. Benign errors are documented as such in Chapter 4, "Troubleshooting" of Oracle9iAS Portal Upgrade Guide.

5. Contact Oracle Support for any errors that are not documented.
6. Continue this process until all errors are resolved.

The following example displays messages from the end of the log file in the case of a successful upgrade. Notice the Upgrade completed successfully message and the lack of error messages:

```
### PHASE III STEP 18: Show Errors and Warnings
Upgrade step started at Thu Jun 26 09:05:36 PDT 200
### Upgrade completed with the following warnings
     ...
### Upgrade completed successfully
Upgrade Ended at Thu Jun 26 09:05:36 PDT 2003
```

The following examples display messages from log files where the upgrades were unsuccessful:

Example 1: Premature termination and no error or warning sections:

```
### ERROR: Patch Failed with status code: 1.
###
### Upgrade aborted at Tue Jul 15 15:09:33 EDT 2003.
```

Example 2: Normal termination, but at least one error found (notice the line numbers preceding each error line):

```
###
### PHASE III STEP 18: Show errors and warnings
###
Upgrade step started at Fri June 6 20:32:02 2003
###
### WARNING: ### Upgrade completed with the following warnings
###
###
### ERROR: ### Upgrade completed with the following errors
### 2803:ERROR at line 1:
### 2804:ORA-01418: specified index does not exist
```

Table 10–2 summarizes the locations and contents of the different log files.

Table 10–2 Generated Log Files

File Name	File Location	Contents and Purpose
upgrade_log	*upgrade_directory/upgrade_log*	Contains all the logged information including errors, warnings, and details. Errors are summarized at the end of the log file.
upgrade.err	*upgrade_tmp_dir*/upgrade.err	Contains the summary of the error messages from the end of the *upgrade_log* file.
upgrade.wrn	*upgrade_tmp_dir*/upgrade.wrn	Contains the summary of the warning messages from the end of the *upgrade_log* file.

Table 10–3 Generated Log Files

File Name	File Location	Contents and Purpose
upgrade_log	*upgrade_directory**upgrade_log*	Contains all the logged information including errors, warnings, and details. Errors are summarized at the end of the log file.
upgrade.err	*upgrade_tmp_dir*\upgrade.err	Contains the summary of the error messages from the end of the *upgrade_log* file.
upgrade.wrn	*upgrade_tmp_dir*\upgrade.wrn	Contains the summary of the warning messages from the end of the *upgrade_log* file.

10.2.7 Access Your Upgraded Oracle9iAS Portal

If there were no errors, you are ready to access your upgraded Oracle9*i*AS Portal.

1. Start the Oracle Collaboration Suite middle tier.
2. Point your browser to:

   ```
   http://<host>:<port>/pls/<dad>
   ```

   where

   - `host` is the system where the Oracle9*i*AS Release 2 HTTP Server is running.
   - `port` is the port where the Oracle9*i*AS Release 2 HTTP Server is listening
   - `dad` is the Oracle9*i*AS DAD name of your upgraded OracleAS Portal. This is the same DAD name you used before the upgrade.

11

Upgrading Standalone Installations of Oracle Calendar

This chapter explains how to upgrade standalone installations of Oracle Calendar server and application system. The upgrade process involves installing a new version of the component and running an upgrade script to perform the upgrade.

11.1 Upgrading Oracle Calendar Server or CorporateTime Server 5.4

Oracle Collaboration Suite supports upgrading the following releases of the standalone Oracle Calendar server.

- CorporateTime 5.4
- Oracle Calendar Release 2 (9.0.4.1) server
- Oracle Calendar Release 2 (9.0.4.2) server

To upgrade a standalone installation of Oracle Calendar or Oracle CorporateTime 5.4, first install Oracle Calendar 10*g* Release 1 (10.1.1) server in a new Oracle home and then proceed with the steps in the following sections:

- Upgrading From CorporateTime 5.4
- Upgrading From All Supported Oracle Calendar Server Releases

---

See Also: Appendix C, "Installing Oracle Calendar Server Standalone," in the installation guide for your operating system for instructions on installing Oracle Calendar 10*g* Release 1 (10.1.1) server:

- *Oracle Collaboration Suite Installation Guide for Solaris Operating System*
- *Oracle Collaboration Suite Installation Guide for Linux*
- *Oracle Collaboration Suite Installation Guide for hp-ux*

11.1.1 Upgrading From CorporateTime 5.4

To upgrade from CorporateTime 5.4, run the preupgrade script as root from the 10.1.1 Oracle home:

```
DESTINATION_ORACLE_HOME/ocal/upgrade/ocalPreUpg.sh
```

where *DESTINATION_ORACLE_HOME* is the 10.1.1 Oracle home.

When the preupgrade script completes, run the upgrade assistant as described in Section 11.1.2.

11.1.2 Upgrading From All Supported Oracle Calendar Server Releases

To upgrade from all releases:

1. Shut down the Oracle Calendar server in both the Release 2 (9.0.4.2) Oracle home and the 10*g* Release 1 (10.1.1) Oracle home, if it is running.
2. Start the Oracle Calendar Upgrade Assistant by running the following script from the 10.1.1 Oracle home:

   ```
   DESTINATION_ORACLE_HOME/ocal/upgrade/ocalUpg.sh -srcpath SOURCE_ORACLE_HOME
   -dstpath DESTINATION_ORACLE_HOME
   ```

   where:

   - *DESTINATION_ORACLE_HOME* is the 10.1.1 Oracle home.
   - *SOURCE_ORACLE_HOME* is the 9.0.4 or 5.4 Oracle home.

     If you are upgrading from CorporateTime 5.4, use `/users/unison` for the value of *SOURCE_ORACLE_HOME*.

   The upgrade script migrates all your existing settings and data to the new installation.
3. Check the log file located in *DESTINATION_ORACLE_HOME*/ocal/upgrade/log for any errors that occured during the upgrade.

11.1.3 Verifying the Oracle Calendar Server Upgrade

To verify the upgrade of the Oracle Calendar server:

1. Start the Oracle Calendar server by entering the following command:

   ```
   $DESTINATION_ORACLE_HOME\ocal\bin\unistart
   ```

   Make sure the server starts without any errors.
2. Verify that you are able to see all existing users, resources and event calendars using the following commands:

   ```
   $DESTINATION_ORACLE_HOME/ocal/bin/uniuser -ls
   $DESTINATION_ORACLE_HOME/ocal/bin/ uniuser -resource -ls
   $DESTINATION_ORACLE_HOME/ocal/bin/uniuser -eventcal -ls
   ```

3. Make sure that you can log in as an existing user using any Oracle Calendar client.

11.1.4 Completing the Oracle Calendar Server Upgrade

The Oracle Calendar administrator is now located in the destination Oracle home. Modify your Web server configuration so that it points to the new location. For example, if *DESTINATION_ORACLE_HOME* is the directory containing Oracle Calendar 10*g* Release 1 (10.1.1), then the Web server configuration should include *DESTINATION_ORACLE_HOME*/ocad/config/ocad.conf.

11.2 Upgrading The Oracle Calendar Application System

To upgrade a standalone installation of the Oracle Calendar application system, first install Oracle Calendar 10*g* Release 1 (10.1.1) application system in a new Oracle home and then follow the instructions in this section to run the upgrade script.

See Also: Appendix C, "Installing Oracle Calendar Standalone," in the installation guide for your operating system for instructions on installing Oracle Calendar 10*g* Release 1 (10.1.1) application system:

- *Oracle Collaboration Suite Installation Guide for Solaris Operating System*
- *Oracle Collaboration Suite Installation Guide for Linux*
- *Oracle Collaboration Suite Installation Guide for hp-ux*

11.2.1 Upgrading from Oracle Calendar Release 1 (9.0.3.1) Application System

To run the upgrade script, enter the following command:

```
DESTINATION_ORACLE_HOME/ocas/upgrade/ocasua.sh -srcver source_version -destver
destination_version -appdir OWC_standalone_application_dir -resdir OWC_standalone_
resource_dir -destdir DESTINATION_ORACLE_HOME -confdir apache_configuration_dir
```

where

- *DESTINATION_ORACLE_HOME* is the Oracle home for Oracle Calendar 10*g* Release 1 (10.1.1).
- *source_version* is either `CTW3.0` if upgrading from CorporateTime for the Web 3.0 or `CTW3.1` if upgrading from CorporateTime for the Web 3.1.
- *destination_version* (optional) is `10.1.1`. If not provided, the default value is `10.1.1`.
- *OWC_standalone_application_dir* is is the absolute path of the 9.0.3 lexacal.fcgi
- *OWC_standalone_resource_dir* is the absolute path of the 9.0.3. lexacal-private directory
- *apache_configuration_dir* is the location of the Apache server configuration file `httpd.conf`.

In the following example, the *DESTINATION _ORACLE_HOME* is /u01/ocs10, the 9.0.3 lexacal.fcgi is located in /usr/local/apache/fcgi-bin/lexacal and the 9.0.3 lexacal resources are located in /usr/local/apache/lexacal-private. The HTTP server is the Apache Web server and the server configuration file is located in /usr/local/apache/conf. The command is:

```
/u01/ocs10/ocas/upgrade/ocasua.sh -srcver CTW3.1 -destver 10.1.1
-appdir /usr/local/apache/fcgi-bin/lexacal -resdir
/usr/local/apache/lexacal-private -destdir /u01/ocs10 -confdir
/usr/local/apache/conf
```

11.2.2 Upgrading from Oracle Calendar Release 2 (9.0.4.2) Application System

To run the upgrade script, enter the following command:

```
DESTINATION_ORACLE_HOME/ocas/upgrade/ocasua.sh -srcver source_version -destver
destination_version -srcdir source_oracle_home -destdir DESTINATION_ORACLE_HOME
-confdir apache_configuration_dir
```

where

- *DESTINATION_ORACLE_HOME* is the Oracle home for Oracle Calendar 10*g* Release 1 (10.1.1).
- *source_version* is `9.0.4`
- *destination_version* (optional) is `10.1.1`. If not provided, the default value is `10.1.1`.
- source_oracle_home is the location of the Oracle home for Oracle Calendar Release 2 (9.0.4.2)
- *apache_configuration_dir* is the location of the Apache server configuration file `httpd.conf`.

In this example, the *DESTINATION _ORACLE_HOME* is /u01/ocs10 and the 9.0.4 Oracle home is /u01/ocs904. The HTTP server is the Apache Web server and the server configuration file is located in /usr/local/apache/conf. The command is:

```
/u01/ocs10/ocas/upgrade/ocasua.sh -srcver 9.0.4 -destver 10.1.1 -srcdir
/u01/ocs904 -destdir /u01/ocs10 -confdir /usr/local/apache/conf
```

11.2.3 Verifying the Oracle Calendar Applications Upgrade

To verify that the upgrade to Oracle Calendar 10*g* Release 1 (10.1.1) was successful, from a browser access the Oracle Calendar Web client at the following URL:

```
http://web_server_host:web_server_port/ocas-bin/ocas.fcgi?sub=web
```

Enter your OracleAS Single Sign-On user name and password when prompted.

12

Oracle Content Services Upgrade

For the Oracle Collaboration Suite 10*g* (10.1.1) release, upgrading from Oracle Files 9.0.x to Oracle Content Services 10*g* (10.1.1) is not supported.

This limitation only applies to Applications tier upgrades for Oracle Collaboration Suite installations that have Oracle Files configured on *any* Applications tier. Upgrading your Oracle Internet Directory and Oracle Database instances is a supported production feature, as long as you do not upgrade any Applications tiers. However, if you are upgrading components that do not support staged upgrades, such as upgrading Oracle Application Server Portal from Oracle Collaboration Suite Release 1 (9.0.3.1) or Oracle Ultra Search in certain configurations, you should consider how upgrading Oracle Internet Directory and the Oracle Database will impact the functioning of your Oracle Collaboration Suite environment if you are not able to complete the upgrade of Application tiers. Review Section 1.5, "Upgrade Paths by Type of Configuration" for more information.

In addition, the Oracle Content Services Web user interface and the Oracle Drive Windows client are pre-production features in Oracle Content Services 10*g* (10.1.1)

Because upgrading from Oracle Files is not supported, you have the following options:

1. If you are a new Oracle Collaboration Suite customer, you can install and configure all Oracle Collaboration Suite 10*g* (10.1.1) components, including Oracle Content Services.

   You can implement the production features of Oracle Content Services 10*g*(10.1.1).

   If you want to use the pre-production features of Oracle Content Services for pre-production proofs of concept or pilot implementations, you can join the Beta program. Contact your Oracle sales representative for details.

   All other Oracle Collaboration Suite 10*g* (10.1.1) components, such as Oracle Calendar and Oracle Mail, can be used in production.

   When the pre-production capabilities of Oracle Content Services 10*g* (10.1.1) are released for production, you will be able to upgrade your 10g (10.1.1) installations of Oracle Content Services. You will also be able to upgrade your Oracle Files 9.0.x installations at that time.

2. If you are an existing customer who has installed and configured Oracle Collaboration Suite 9.0.x components, but have not configured Oracle Files 9.0.x, you can install and configure all Oracle Collaboration Suite 10*g* (10.1.1) components, including Oracle Content Services. You can also upgrade any of your previously configured Oracle Collaboration Suite components

3. If you are an existing customer who has installed and configured Oracle Collaboration Suite 9.0.x components and have configured Oracle Files 9.0.x, the

upgrade process will automatically terminate when the Oracle Files 9.0.x component is detected. The following warning message will be displayed:

ATTENTION: You cannot proceed with this upgrade because an Oracle Files 9.0.3 or 9.0.4 instance was configured as part of this Oracle Collaboration Suite installation. If you still want to upgrade, please refer to Metalink note 315692.1

If you are not actually using Oracle Files 9.0.x and have no need to save the content managed by Oracle Files, refer to Metalink note 315692.1 at `http://metalink.oracle.com`.

If you have configured and are using Oracle Files 9.0.x and want to save the content managed by Oracle Files, you will **NOT** be able to upgrade your existing sytem to Oracle Collaboration Suite 10*g* (10.1.1). You must wait for the next release of Oracle Collaboration Suite 10*g* to upgrade the entire suite. This does not preclude you from installing and configuring a new Oracle Content Services 10*g* (10.1.1) instance, as long as you do not upgrade your existing Oracle Collaboration Suite installation.

A

Troubleshooting the Upgrade

This appendix describes common problems that you might encounter when upgrading to Oracle Collaboration Suite 10*g* Release 1 (10.1.1) and explains how to solve them. It contains the following topics:

- Troubleshooting the Oracle9iAS Infrastructure Upgrade
- Troubleshooting the Information Storage Database Upgrade
- Troubleshooting the Oracle Collaboration Suite Middle Tier Upgrade
- Troubleshooting the Oracle9iAS Metadata Repository Upgrade
- For Additional Help

A.1 Troubleshooting the Oracle9*i*AS Infrastructure Upgrade

This section contains the following topics:

- Section A.1.1, "Upgrading the Database Version of the OracleAS Metadata Repository Database"
- Section A.1.2, "Problems Using Middle Tier with Upgraded Infrastructure"
- Section A.1.3, "Insufficient Privileges Error When Upgrading Oracle9iAS Infrastructure on UNIX Systems"
- Section A.1.4, "Problems Encountered While Upgrading Oracle Internet Directory"
- Section A.1.5, "Problem Stopping Processes in Source Oracle Home During Oracle9iAS Infrastructure Upgrade"
- Section A.1.6, "Configuration Assistant Failure During Oracle9iAS Infrastructure Upgrade"
- Section A.1.7, "Verifying the Progress of the Database Upgrade Assistant During OracleAS Identity Management Upgrade"
- Section A.1.8, "Database Upgrade Assistant Failure During Oracle9iAS Infrastructure Upgrade"

A.1.1 Upgrading the Database Version of the OracleAS Metadata Repository Database

The Oracle Application Server Metadata Repository requires an Oracle database. Before you upgrade to Oracle Collaboration Suite 10*g* Release 1 (10.1.1), your OracleAS Metadata Repository database must be the database versions described in Section 7.1.

Problem

When a newer version of Oracle Database is announced, should I upgrade the OracleAS Metadata Repository database to the new database version?

Solution

In general, use caution when upgrading your OracleAS Metadata Repository database to a new database version. Check Oracle *Metalink* (http://metalink.oracle.com) for posted articles or announcements that confirm that the database version and upgrade has been tested and is supported for an existing OracleAS Metadata Repository database.

A.1.2 Problems Using Middle Tier with Upgraded Infrastructure

Make sure you have followed the documented guidelines for upgrading your installations in the proper order.

Problem

After upgrading an Oracle9*i*AS Infrastructure, all the middle tiers generate errors when attempting to connect to the upgraded Infrastructure.

Solution

This problem occurs when you upgrade the Oracle9*i*AS Metadata Repository before you upgrade the middle tiers that depend on the repository. To fix the problem, you must do one of the following:

- Upgrade the middle tiers so they are the same version as the OracleAS Metadata Repository.
- Revert the OracleAS Metadata Repository to its original version by restoring a backup of the Oracle9*i*AS Metadata Repository; then, upgrade the middle tiers before upgrading the Oracle9*i*AS Metadata Repository.

> **See Also:** Section 1.3 for information on the supported order of upgrade.

A.1.3 Insufficient Privileges Error When Upgrading Oracle9*i*AS Infrastructure on UNIX Systems

You upgrade Oracle9*i*AS Infrastructure using the Oracle Collaboration Suite 10*g* Release 1 (10.1.1) installation procedure, which is performed using the Oracle Universal Installer.

Problem

When you attempt to upgrade Oracle9*i*AS Infrastructure on a UNIX system, the upgrade fails. An "insufficient privileges" error appears in the following log file:

```
SOURCE_ORACLE_HOME/assistants/dbma/logs/trace.log
```

Specifically, the error appears as follows:

```
oracle.sysman.assistants.util.sqlEngine.SQLFatalErrorException: ORA-01031:
insufficient privileges
```

Solution

Before you start Oracle Universal Installer to begin the installation procedure, be sure to log in as a user that is a member of the DBA group for the database.

A.1.4 Problems Encountered While Upgrading Oracle Internet Directory

The Oracle Internet Directory upgrade assistant is one of the assistants that run near the end of the 10*g* Release 1 (10.1.1) installation procedure when you are upgrading an Oracle9*i*AS Infrastructure installation.

You can get information about the cause of Oracle Internet Directory upgrade assistant errors by looking at the following log file:

ORACLE_HOME/ldap/log/oidca.log

Problem 1

The upgrade assistant log file (`oidca.log`) reports the following:

```
OID processes are currently running
```

Solution

This is a result of some Oracle Internet Directory or Oracle Directory Integration and Provisioning processes not being shut down properly in the source Oracle Home.

Shut down the processes in the source Oracle Home before retrying the Oracle Internet Directory configuration assistant from the Oracle Universal Installer configuration assistants page.

> **See Also:** Section 8.1.2 for instructions on stopping an Oracle9*i*AS Infrastructure or the Oracle Internet Directory documentation to stop the Oracle Internet Directory and Oracle Directory Integration and Provisioning processes in the source Oracle Home.

Problem 2

The Oracle Internet Directory configuration assistant fails during the Configuration Assistants phase of the Oracle9*i*AS Infrastructure upgrade with Oracle Universal Installer.

Solution

Check the contents of the following configuration file in the destination Oracle home and verify that the file contains the correct `SERVICE_NAME` entry for your Oracle9*i*AS Metadata Repository. If the value assigned to this entry is incorrect, enter the correct name, save the file, and retry the assistant.

DESTINATION_ORACLE_HOME/network/admin/tnsnames.ora

A.1.5 Problem Stopping Processes in Source Oracle Home During Oracle9*i*AS Infrastructure Upgrade

Problem

When you run the Oracle Universal Installer to upgrade Oracle9*i*AS Infrastructure, a popup dialog notifies you that the installer will shut down some processes in the source Oracle home.

After the installer performs the shutdown, it checks that Oracle Internet Directory is stopped. If Oracle Internet Directory is not stopped for some reason, the installer displays another dialog notifying you of the problem.

Solution

Examine the following log file to determine the cause of the problem:

DESTINATION_ORACLE_HOME/cfgtoollogs/shutdownprocesses.log

Resolve the problem and then manually stop Oracle Internet Directory in the source Oracle home. Once Oracle Internet Directory is stopped, continue with the Oracle9*i*AS Infrastructure upgrade by clicking **Continue** in Oracle Universal Installer.

See Section 8.1.2 for instructions on stopping Oracle Internet Directory.

A.1.6 Configuration Assistant Failure During Oracle9*i*AS Infrastructure Upgrade

Problem

Oracle Universal Installer invokes configuration assistants at the end of the Oracle9*i*AS Infrastructure upgrade. Some of the configuration assistants require an Oracle Database 10*g* database listener to connect to the database. If an Oracle Database 10*g* database listener is not available, those configuration assistants fail.

Solution

The installer normally starts an Oracle Database 10*g* database listener in the destination Oracle home. However, if an Oracle9*i* (9.0.1.3) database listener is already running, then the installer fails to start the Oracle Database 10*g* (10.1.0.2) database listener.

The most common cause of this problem is that you missed the instruction in a pop-up dialog during the installation. This message indicates during the interview phase of the installation that there is a running database listener running and that you should stop the listener manually before proceeding.

To correct the problem, stop the existing Oracle9*i* (9.0.1.3) listener, and then start the database listener in the destination Oracle home, as follows:

1. Set the `ORACLE_HOME` environment variable to point to the destination Oracle home of upgrade.
2. Change directory to `bin` directory of the destination Oracle home.
3. Run the `lsnrctl start` command to start the listener.

After the Oracle Database 10*g* database listener is running, continue with the OracleAS Identity Management upgrade by clicking **Retry** on the Configuration Assistants page in Oracle Universal Installer.

A.1.7 Verifying the Progress of the Database Upgrade Assistant During OracleAS Identity Management Upgrade

Problem

Oracle Universal Installer starts Database Upgrade Assistant at the end of Oracle9*i*AS Infrastructure upgrade. Database Upgrade Assistant may take a long time depending on the size and contents of the database. The installer shows progress of the Database Upgrade Assistant by displaying percentage numbers, but no details about the progress are shown on the Configuration Assistants screen in Oracle Universal Installer.

Solution

If you would like to obtain more detailed information about the progress of the Database Upgrade Assistant, examine the log files generated by the Database Upgrade Assistant. The log files reside in:

```
DESTINATION_ORACLE_HOME/admin/SID/upgrade/
```

In this example, replace *SID* with the system identifier of the database in the source Oracle home.

To obtain the timestamps of the different stages of the database upgrade, search for the string "COMP_TIME" in the log files. For example,

```
grep ^COMP_TIME *.log
```

The output of the command identifies each stage of the database upgrade, as well as a timestamp for each stage. For example:

```
Oracle_Server.log:COMP_TIMESTAMP DBUPG__BGN 2004-12-16 10:11:00 2453356 36660
Oracle_Server.log:COMP_TIMESTAMP UTLIP__END 2004-12-16 10:12:58 2453356 36778
Oracle_Server.log:COMP_TIMESTAMP CATALG_BGN 2004-12-16 10:27:44 2453356 37664
Oracle_Server.log:COMP_TIMESTAMP CATPROC    2004-12-16 11:18:45
Oracle_Server.log:COMP_TIMESTAMP RDBMS      2004-12-16 11:21:50
Oracle_Server.log:COMP_TIMESTAMP JAVAVM     2004-12-16 12:27:24
Oracle_Server.log:COMP_TIMESTAMP XML        2004-12-16 12:41:17
Oracle_Server.log:COMP_TIMESTAMP CATJAVA    2004-12-16 12:45:03
Oracle_Server.log:COMP_TIMESTAMP CONTEXT    2004-12-16 12:49:17
Oracle_Server.log:COMP_TIMESTAMP XDB        2004-12-16 12:56:32
Oracle_Server.log:COMP_TIMESTAMP OWM        2004-12-16 13:01:14
Oracle_Server.log:COMP_TIMESTAMP AMD        2004-12-16 13:11:04
Oracle_Server.log:COMP_TIMESTAMP ORDIM      2004-12-16 13:43:34
Oracle_Server.log:COMP_TIMESTAMP SDO        2004-12-16 13:52:30
Oracle_Server.log:COMP_TIMESTAMP WK         2004-12-16 13:56:24
Oracle_Server.log:COMP_TIMESTAMP DBUPG_END  2004-12-16 14:10:39
PostUpgrade.log:COMP_TIMESTAMP UTLRP_BGN  2004-12-16 14:12:32
PostUpgrade.log:COMP_TIMESTAMP UTLRP_END  2004-12-16 15:29:47
```

A.1.8 Database Upgrade Assistant Failure During Oracle9*i*AS Infrastructure Upgrade

Oracle Universal Installer invokes Database Upgrade Assistant at the end of the Oracle9*i*AS Infrastructure upgrade. If the Database Upgrade Assistant fails, you can examine the log files generated by the Database Upgrade Assistant. The log files reside in:

```
DESTINATION_ORACLE_HOME/admin/SID/upgrade/
```

In this example, replace *SID* with the system identifier of the database in the source Oracle home.

Examine the log files and determine the cause of the failure. In most cases, it is not possible to retry the Database Upgrade Assistant. Instead, you will need to restore the source Oracle home and the database files to their state before the Oracle9*i*AS Infrastructure upgrade. After the restoration, make sure that the problems which caused the Database Upgrade Assistant to fail are resolved. Then start the Oracle9*i*AS Infrastructure upgrade again.

A.2 Troubleshooting the Information Storage Database Upgrade

This section contains the following topics:

- ES_MAIL Schema Name Conflict

A.2.1 Spatial Component Error in Database Upgrade Assistant

In the Configuration Assistants screen of the Database Upgrade Assistant, the Spatial Component has a red X next to it.

Problem

This is a known issue.

Solution

You can ignore this error.

A.2.2 CommunicationException Thrown during Information Storage Database Upgrade

While the Oracle Collaboration Suite Schema Creation Assistant is running, between the messages "Modifying Schema for UM" and "Loading the mailstore object," the following error message appears:

```
javax.naming.CommunicationException: Request: 150 cancelled
```

Problem

This error occurs if the Oracle Internet Directory server shuts down while the Oracle Voicemail & FaxLDAP schema is being loaded from the Oracle Collaboration Suite information storage database.

Solution

Perform the following steps:

1. Copy the oidSchemaUpgradeFrom90400UM.sbs file from the upgraded Oracle Collaboration Suite 10*g* Database $ORACLE_HOME\um\install directory to the upgraded Oracle Collaboration Suite 10*g* Infrastructure $ORACLE_HOME\bin directory using the `ftp` utility.
2. Use the `ldapmodify` tool to upload the schema file using the "ignore errors" option. Enter the following command:

   ORACLE_HOME`/bin/ldapmodify -h` *host* `-p` *port* `-D` *userdn* `-w` *password* `-f oidSchemaUpgradeFrom90400UM.sbs -c`

   where

   - *ORACLE_HOME* is the Infrastructure destination Oracle home.
   - *host* is the name of the host where Oracle Internet Directory is running.
   - *port* is the port where Oracle Internet Directory is running.
   - *userdn* is the DN of the Oracle Internet Directory administrator user.
   - *password* is the password of the Oracle Internet Directory administrator user.
3. Start the Oracle Internet Directory Manager (oidadmin). Locate the Entry Management tree item and edit the attribute `orclproductversion` at `cn=UM,cn=oracleschemaversion`. Change the attribute's value to `10.1.1.0.2`.
4. Retry the upgrade configuration assistant.

A.2.3 Collaboration Suite Schema Creation Configuration Assistant Fails

During the Oracle Collaboration Suite information storage database upgrade, the status of the Collaboration Suite Schema Creation is Failed on the Configuration Assistant screen.

Problem

This is a known issue.

Solution

Perform the steps in Section 5.2.2.1 and click **Retry** in the Configuration Assistant screen.

A.2.4 ES_MAIL Schema Name Conflict

The Oracle Universal Installer displays the following error message during the process of enabling a customer Oracle Database 10*g* as an Oracle Collaboration Suite Database:

```
The Database has the following schema name conflicts. Ensure that this is
fixed or select another database to be enabled as Oracle Colloboration Suite
Database before continuing.
 -ESMAIL
```

Problem

The enabling process is attempting to create a schema named `es_mail`, but an empty schema with the same name exists in the Oracle Collaboration Suite Database.

Solution

Verify that the existing `es_mail` schema is empty and then drop it from the database.

A.2.5 Configuring Oracle Collaboration Suite Search with an Enabled Database

After upgrading Oracle Collaboration Suite with an enabled customer database enabled as an Oracle Collaboration Suite Database, Oracle Collaboration Suite 10*g* Search does not return any results. To correct this problem perform the following steps:

1. Log in to the Oracle Collaboration Suite Database as `wk_test`.
2. Run the following commands:

   ```
   exec wk_adm.use_instance('wk_inst');
   exec wk_util.register_dft_federated_sources;
   ```

3. Restart the OC4J_OCSClient process using OPMN by entering the following command on the Applications tier:

   ```
   $ORACLE_HOME/opmn/bin/opmnctl restartproc process-type=OC4J_OCSClient
   ```

A.3 Troubleshooting the Oracle Collaboration Suite Middle Tier Upgrade

This sections describes common problems and solutions. It contains the following topics:

- Section A.3.1, "No Instances Displayed in "Migrating Ultra Search Configuration Data" Screen"
- Section A.3.3, "Error Logging into the OracleAS Portal Page After the Upgrade"

A.3.1 No Instances Displayed in "Migrating Ultra Search Configuration Data" Screen

While running the Oracle Collaboration Suite Upgrade Assistants, the Instances table in the Migrating Ultra Search Configuration Data screen does not display any of the existing instances.

Problem

The WKSYS password in the Oracle9*i*AS Metadata Repository was changed during the Oracle9*i*AS Infrastructure upgrade and no longer matches the password stored in Oracle Internet Directory.

Solution

Reset the WKSYS password in the Oracle9*i*AS Metadata Repository database to match the password in Oracle Internet Directory by performing the following steps:

1. Exit the Oracle Universal Installer.
2. Look up the WKSYS password in Oracle Internet Directory. From the system running Oracle Internet Directory enter the following command from the Oracle home bin directory:

```
ldapsearch -h oidhost -p oidport -D "cn=orcladmin" -w oiduser_password
-b "cn=IAS Infrastructure Databases,cn=IAS,cn=Products,cn=OracleContext"
 -s sub "orclResourceName=wksys" orclpasswordattribute
```

where

- *oidhost* is the name of the system running Oracle Internet Directory
- *oidport* is the port where Oracle Internet Directory is running
- *oiduser_password* is the password for the Oracle Internet Directory administrative user

The utility returns the password as the value of `orclpasswordattribute`. For example:

```
OrclResourceName=WKSYS,orclReferenceName=asdb.oracle.com,cn=IAS Infrastructure
Databases,cn=IAS,cn=Products,cn=OracleContext
```

```
orclpasswordattribute=T817Q155
```

3. On the system running the Oracle9*i*AS Metadata Repository, start SQL*Plus and log into the database as `SYSDBA`:

   ```
   $ORACLE_HOME/bin/sqlplus sysdba/sysdba_password
   ```

4. Change the `WKSYS` password to the password obtained from Oracle Internet Directory by entering the following command at the SQL*Plus prompt:

   ```
   ALTER USER WKSYS IDENTIFIED BY orclpasswordattribute;
   ```

   where *orclpasswordattribute* is the password returned by the ldapsearch utility. For example:

   ```
   ALTER USER WKSYS IDENTIFIED BY T817Q155;
   ```

5. Restart the Oracle Universal Installer. The existing Oracle Ultra Search instances should now display in the Instances table.

A.3.2 Oracle Ultra Search Upgrade Configuration Assistant Failure

In the Configuration Assistants screen, the status of the Oracle Ultra Search Configuration Assistant is "Failed" and the log file contains the following errors:

```
CST ERROR:1 Framework ORA-01017: invalid username/password; logon denied
java.sql.SQLException: ORA-01017: invalid username/password; logon denied
```

Problem

The `WKSYS` password in the Oracle9*i*AS Metadata Repository database was changed during the Oracle9*i*AS Infrastructure upgrade and no longer matches the password stored in Oracle Internet Directory. This problem is caused by a known issue.

Solution

Perform the following steps:

1. Leave the Oracle Universal Installer running.
2. Look up the `WKSYS` password in Oracle Internet Directory and reset it in the Oracle9*i*AS Metadata Repository database as explained in Section A.3.1.
3. Select the Oracle Ultra Search configuration assistant in the table in the Configuration Assistants screen.
4. Click **Retry**.

A.3.3 Error Logging into the OracleAS Portal Page After the Upgrade

After the middle tier upgrade, you are not able to log into OracleAS Portal.

Problem

The following error message appears when you log into the OracleAS Portal Page:

```
The address from which this authentication request was made,
does not match your IP address. Notify your administrator if you
believe this message to be in error. (WWC-41452)
```

Solution

Reconfigure OracleAS Portal by entering the following command from the Applications tier Oracle home configured with OracleAS Portal :

```
$ORACLE_HOME/portal/conf/ptlconfig -dad DAD -sso
```

A.3.4 Web Conference Meeting IDs Show PENDING Status After Oracle Real-Time Collaboration Upgrade

Oracle Calendar is integrated with Oracle Real-Time Collaboration. After the upgrade of Oracle Real-Time Collaboration, the status of meeting IDs is set to PENDING in Oracle Calendar clients.

Problem

As explained in Section 6.6.7, if Oracle Calendar is integrated with Oracle Real-Time Collaboration, then following the upgrade of Oracle Real-Time Collaboration, you need to reconfigure Oracle Calendar to get the new value of the key used to authenticate with Oracle Real-Time Collaboration. Until you perform the steps in this section, Oracle Calendar cannot communicate with Oracle Real-Time Collaboration. The status of meeting IDs is set to PENDING in Oracle Calendar clients.

Solution

Setting Oracle Calendar's initialiation parameter siteauthkey with the new value allows Web conferences created in Oracle Calendar to propagate to Oracle Real-Time Collaboration.

- Perform the steps in Section 6.6.7.
- If you do not perform these steps, then 72 hours after a meeting ID is set to PENDING, the status will remain PENDING. The only way to update the meeting ID is to change the meeting time or title.

A.3.5 Unable to Log in to the Applications Tier through OracleAS Single Sign-On

After upgrading to Oracle Collaboration Suite 10*g* Applications, users cannot log in using OracleAS Single Sign-On.

Problem

When trying to log in to the upgraded Applications tier, users get an error message "Oracle SSO Failure - Unable to process request."

Solution

Change the port where the users are accessing OracleAS Single Sign-On from the HTTP listening port to the Web cache port using the OracleAS Single Sign-On administration page. For example, if the HTTP listening port is 7778 and the Web cache port is 7777, change the port for accessing OracleAS Single Sign-On to 7777.

A.3.6 Cannot Access Oracle Calendar Server through Oracle Enterprise Manager 10*g* or Oracle Calendar Application System

When you click on a link to Oracle Calendar server from the Oracle Enterprise Manager or from Oracle Calendar application system, you cannot access it through the URL specified.

Problem

The upgrade process registers the Oracle Calendar service using the https port. Oracle Enterprise Manager and Oracle Calendar application system are trying to access Oracle Calendar server using this port. However, the URL will not work because the https port has not been registered as an OracleAS Single Sign-On Partner Application.

This problem will occur if you are upgrading from Release 1 (9.0.3.1) and did not configure the middle tier https port as a Partner Application or if you are upgrading from Release 2 (9.0.4.2) and you removed the https port as a Partner Application but left the https port in the webcache.xml file.

Solution

Check the OracleAS Single Sign-On administration page to make sure that the URL specified by Oracle Enterprise Manager 10*g* or another application is registered as a OracleAS Single Sign-On Partner Application.

A.3.7 "No Oracle Collaboration Suite Databases Registered With Oracle Internet Directory" Error

During the middle tier upgrade, after the Specify Username and Password for Oracle Internet Directory screen, the following error appears and the upgrade fails:

```
There are no Oracle Collaboraion Suite databases registered with the
specified OID. You must specify a different OID install and register
an existing database Oracle Collaboration Suite database before you can
continue Database information is unavailable for the following components
Oracle collaboration suite search
- oracle calendar server"
```

Problem

This error occurs when the middle tier being upgraded does not use an Oracle Collaboration Suite information storage database. This configuration was possible if you installed a middle tier and configured only Oracle Calendar. This component used its own database in previous releases.

Solution

Load the Oracle Collaboration Suite schema information into the Infrastructure database by perform the following steps:

1. Exit the Oracle Universal Installer.
2. In the upgraded Oracle Collaboration Suite 10*g* Infrastructure, copy the install/OCSdbSchemaReg.ini.sample file to OCSdbSchemaReg.ini. Open OCSdbSchemaReg.ini and fill in values for all the variables listed in the file.
3. Run the following script from *ORACLE_HOME*/install where *ORACLE_HOME* is the Oracle home of the upgraded Infrastructure:

   ```
   ORACLE_HOME/install/OCSdbSchemaReg.sh -f ORACLE_HOME/install/OCSdbSchemaReg.ini
   ```

   This configures the Oracle Collaboration Suite 10*g* Infrastructure database to work with components from Oracle Collaboration Suite 10*g* Applications and performs the necessary registration with with Oracle Internet Directory.
4. Run the Oracle Universal Installer again.

A.3.8 Upgraded Oracle Collaboration Suite 10*g* Search Does Not Return Search Results

After the upgrade, queries performed using Oracle Collaboration Suite 10*g* Search does not return any results.

Problem

This problem occurs when there are strings consisting of multi-byte characters in the file *DESTINATION_ORACLE_HOME*/j2ee/OC4J_OCSClient/connectors/UltraSearch/UltraSearch/META-INF/oc4j-ra.xml.

For example, you create an instance with a name that uses multi-byte characters and you configure this instance as the source of Oracle Collaboration Suite 10*g* Search. When you copy and paste this string into oc4j-ra.xml, the Oracle Collaboration Suite 10*g* Search application does not recognize the instance name and does not perform the search.

Solution

Convert the oc4j-ra.xml file to UTF-8 encoding by performing the following steps:

1. Edit the *DESTINATION_ORACLE_HOME*/j2ee/OC4J_OCSClient/connectors/UltraSearch/UltraSearch/META-INF/oc4j-ra.xml file by assigning the username, password and instancename properties. For example:

   ```
   <config-property name="userName" value="ultra_tw"/>
   <config-property name="password" value="welcome"/>
   <config-property name="instanceName" value="multibytename"/>
   ```

   where *multibytename* is a multi-byte character string, for example a traditional Chinese string copied and pasted from a Big-5 encoded document.

2. Download the oc4j-ra.xml file to your local system.
3. Convert oc4j-ra.xml to UTF-8 using a character encoding conversion tool.
4. Upload the new oc4j-ra.xml in UTF-8 to *DESTINATION_ORACLE_HOME*/j2ee/OC4J_OCSClient/connectors/UltraSearch/UltraSearch/META-INF/
5. Removed the cached version of oc4j-ra.xml from *DESTINATION_ORACLE_HOME*/j2ee/OC4J_OCSClient/application-deployments/defaults/UltraSearch/oc4j-ra.xml
6. Restart the OC4J_OCSClient instance.

A.3.9 Applying the Oracle Ultra Search Patch

If you are upgrading an Applications tier configured with Oracle Ultra Search, then download patch 4493920 from Oracle MetaLink and apply it to the upgraded Oracle Collaboration Suite Database 10g (10.1.1), according to the instructions contained in the patch ZIP file.

The patch fixes the following issues:

- The `configtool.log` file contains the following Oracle Collaboration Suite Upgrade Assistant error message:

  ```
  oracle.ocs.upgrade.exception.UpgradeException: Can not migrate data from
  metadata repository database to Collaboration Suite database.
  ```

- The `wk0create_user.sql` script does not grant all necessary privileges.

- The Oracle Ultra Search Configuration Assistant fails when Oracle Internet Directory is in SSL-Only mode.
- After the Applications tier upgrade, the Web search does not return results.

If you encounter any of these issues during or after the Applications tier upgrade, then apply the patch to the upgraded Oracle Collaboration Suite Database 10g (10.1.1).

A.3.10 Modifying Upgraded Calendar Accounts Using Delegated Administration Services

After an upgrade, if you try to modify certain user accounts using Delegated Administration services, an error similar to the following can occur:

```
Error

Post Plugin Errors.
Calendar - oracle.idm.provisioning.plugin.PluginException: Calendar storage cannot
be modified. Use the calendar administration tool to move the calendar account
from one storage location to another
```

This generally happens with user accounts that did not exist in Oracle Calendar before the upgrade.

There are two workarounds for this problem; both involve changing the status of the account from `UPGRADE_IN_PROGRESS` to `PROVISIONING_NOT_REQUIRED`.

Workaround 1: Using the Oracle Directory Manager

1. Start Oracle Directory Manager:

   ```
   $ORACLE_HOME/bin/oidadmin
   ```

2. Log in to Oracle Directory Manager.
3. In the System Objects frame:
   a. Expand **Entry Management**.
   b. Navigate to the appropriate subscriber dn, such as `dc=com | dc=acme`.
   c. Expand **cn=users**.
4. Select the affected user.
5. In the right pane, find the following attribute:

   ```
   orclUserApplnProvStatus;CALENDAR_CALENDAR
   ```

6. Set its value to `PROVISIONING_NOT_REQUIRED`.

Workaround 2: Using the command line

Run the following command:

```
% printf "dn: `$ORACLE_HOME/bin/ldapsearch -host host -port port -D managerdn -w
password -b basedn (mail=mail_of_the_user) dontremoveme`\nchangetype:
modify\nreplace: orclUserApplnProvStatus;CALENDAR_
CALENDAR\norclUserApplnProvStatus;CALENDAR_CALENDAR: PROVISIONING_NOT_REQUIRED\n"
| $ORACLE_HOME/bin/ldapmodify -host host -port port -D managerdn -w password
```

For example:

```
% printf "dn: `$ORACLE_HOME/bin/ldapsearch -host host1.acme.com -p 389 -D
```

```
cn=orcladmin -w test1 -b dc=acme,dc=com (mail=john.doe@acme.com)
dontremoveme`\nchangetype: modify\nreplace: orclUserApplnProvStatus;CALENDAR_
CALENDAR\norclUserApplnProvStatus;CALENDAR_CALENDAR: PROVISIONING_NOT_REQUIRED\n"
| $ORACLE_HOME/bin/ldapmodify -host host1.acme.com -p 389 -D cn=orcladmin -w test1
```

A.3.11 Null Pointer Exception after Logging on to Oracle WebMail Page

After upgrading an Applications tier configured with Oracle Mail to 10.1.1, there is a NullPointerException after logging into the Oracle WebMail page at `http://apptier_host:apptier_port/um`

Problem

You need to perform manual steps to configure Oracle WebMail.

Solution

On the system running the upgraded Applications tier, perform the following steps where $ORACLE_HOME is the upgraded Applications tier Oracle home:

1. Append the contents of the `$ORACLE_HOME/um/client/config/toolkit.properties` to the contents of `$ORACLE_HOME/j2ee/OC4J_OCSClient/config/oc4j.properties`. For example:

   ```
   cat $ORACLE_HOME/um/client/config/toolkit.properties >>$ORACLE_HOME/j2ee/OC4J_
   OCSClient/config/oc4j.properties
   ```

2. Set the PERL5LIB environment parameter to:

   ```
   $ORACLE_ HOME/perl/lib:$ORACLE_HOME/perl/lib/5.6.1:$ORACLE_HOME/perl/lib/site_
   perl/5.6.1
   ```

3. Execute the `clientupgv2_1.pl` script:

   ```
   $ORACLE_HOME/perl/bin/perl $ORACLE_HOME/oes/bin/clientupgv2_1.pl -o path_to_
   old_oracle_home -n path_to_new_oracle_home
   ```

4. Restart the OC4J_OCSClient container:

   ```
   $ORACLE_HOME/opmn/bin/opmnctl restartproc process-type=OC4J_OCSClient
   ```

A.3.12 Users Cannot Log in to Oracle Collaboration Suite Portal Page

After the upgrade from Oracle Collaboration Suite 10*g* Release 1 (10.1.1) Release 1 (9.0.3.1), when some users log into the Oracle Collaboration Suite 10*g* Release 1 (10.1.1) portal page at:

`http://`*`hostname`*`:`*`port`*`/pls/portal`

all the portlets display errors.

Problem

This error occurs for the `orclguest` user or for any user whose default portal page was changed. When logging in to the portal, the user is redirected to the old portal page rather than the new Oracle Collaboration Suite 10*g* Release 1 (10.1.1) Collaborative Portlets page.

Solution

To set the user's default home page to the new portal, perform the following steps:

1. Go to the Oracle Collaboration Suite 10*g* Release 1 (10.1.1) portal page and log in as `orcladmin`.
2. Select the **Builder** link.
3. Click the **Administer** tab.
4. In the **Portal User Profile** portlet, enter `orclguest`, then click **Edit**.
5. On the **Default Home Page** field, click **Reset.**
6. Click **OK**.

When logging into the portal page, the user is directed to the new page.

A.4 Troubleshooting the Oracle9*i*AS Metadata Repository Upgrade

This section contains the following topics:

- OracleAS Metadata Repository Upgrade Assistant Reports the Wrong Version of the Oracle9iAS Portal Schema

A.4.1 OracleAS Metadata Repository Upgrade Assistant Reports the Wrong Version of the Oracle9*i*AS Portal Schema

After applying the patch to upgrade the Oracle9*i*AS Portal schema to Oracle Application Server 10*g* (9.0.4), the OracleAS Metadata Repository Upgrade Assistant reports that the version is still at 9.0.2.3.

Problem

This error occurs because one of the Applications tiers is still running.

Solution

Check each Applications tier that uses the Oracle9*i*AS Metadata Repository being upgraded and make sure that there are no processes executing in the Applications Oracle home.

A.4.2 Error Message When Logging into Oracle Ultra Search Administration Page

The message "No Suitable Driver" displays when logging into the Oracle Ultra Search administrative page.

Problem

This error is caused by a missing Oracle Internet Directory entry.

Solution

Add the entry to Oracle Internet Directory by performing the following steps:

1. Log into Oracle Internet Directory Manager (`oidadmin`).
2. Navigate to Entry Management -> cn=OracleContext -> cn=Portal -> cn=Ultrasearch -> cn=Database Instances -> orclApplicationCommonName=*db_name* -> cn=Associated Mid-tiers
3. In the `uniquemember` attribute field, add the following line:

```
orclapplicationcommonname=mid_instance_name,cn=midtier
instances,cn=ultrasearch,cn=portal,cn=products,cn=oraclecontext
```

where *mid_instance_name* is the Oracle Application Server instance name of the Oracle Ultra Search Applications tier, for example, `mid_upgrade.mysystem.oracle.com`.

4. Click **Apply.**

A.5 For Additional Help

You can find more solutions on Oracle *MetaLink*, `http://metalink.oracle.com`. If you do not find a solution for your problem, log a service request.

> **See Also:** *Oracle Collaboration Suite Release Notes for Solaris*, available on the Oracle Technology Network:
>
> `http://www.oracle.com/technology/documentation/`

B

Upgrade Backup Matrix

B.1 Determining a Backup Strategy During the Oracle Collaboration Suite Upgrade

Table A-1 summarizes the backup recommendations for backing up Oracle Collaboration Suite components during the upgrade. The columns represent the Oracle Collaboration Suite components to be backed up. The rows represent the stages of the upgrade process.

Table B–1 Recommended Backup Strategy

Upgrade Stage	Oracle9*i*AS Infrastructure	Oracle9*i*AS Metadata Repository Database	Information Storage Database	Oracle Collaboration Suite Middle Tier
Before Portal 9023 Patch		X		X
Before Portal 9026 Patch				X
Before Oracle9*i*AS Infrastructure Upgrade	X	X[1]		
Before Portal 9026 10g Database Patch		X		
Before Information Storage Database Upgrade			X	
Before Oracle Collaboration Suite Middle Tier Upgrade		X[2]	X[3]	
Before Oracle9*i*AS Metadata Repository Upgrade		X[4]		
After Upgrade Complete and Verified	X	X	X	X

[1] The database that is used by the Oracle Identity Management components such as Oracle Internet Directory.

[2] This applies if the middle tier is configured with Oracle9*i*AS Wireless.

[3] The upgraded Oracle Collaboration Suite 10*g* Database installed in the destination Oracle home

[4] The upgraded Oracle 10*g* (10.1.0.5) Database hosting the Oracle9*i*AS Metadata Repository used by the middle tiers.

C

File References

This appendix lists and describes the files that contain settings and configuration data that is transferred from the source to the target Oracle home in an upgrade.

C.1 Upgraded Application Tier Files

This section contains tables for each component, listing the files that are modified by the upgrade process.

C.1.1 Upgraded Files in Oracle Calendar Application System

Table 13–1 summarizes the files that are modified when your upgrade your Oracle Collaboration Suite middle tier configured with Oracle Calendar application system to 10*g* Release 1 (10.1.1).

In addition to the files listed in the table, the middle tier upgrade process also modifies Oracle Calendar Applications service entries in Oracle Internet Directory.

Table C–1 Files Containing Oracle Calendar Applications Upgrade Data

File Name	Path from Oracle Home
ocal.conf	ocas/conf
ocas.conf	ocas/conf
ocst.conf	ocas/conf
ocwc.conf	ocas/conf
ocws.conf	ocas/conf
.	ocas/linkdb

C.1.2 Upgraded Files in Oracle Calendar Server

Table summarizes the files that are modified when you upgrade your Oracle Collaboration suite middle tier configured with Oracle Calendar Server to 10*g* Release 1 (10.1.1).

Table C–2

File Name	Path from Oracle Home
unison.ini	ocal/misc
category.ini	ocal/misc
eventcal.ini	ocal/misc

Table C–2 (Cont.)

File Name	Path from Oracle Home
resource.ini	ocal/misc
user.ini	ocal/misc
nodes.ini	ocal/misc
Calendar databases	db/nodes/Nx

C.1.3 Upgraded Files in Oracle Mail

Table C–3 summarizes the files that are modified when your upgrade your Oracle Collaboration Suite middle tier configured with Oracle Web Conferencing to Oracle Real-Time Collaboration 10*g* Release 1 (10.1.1).

Table C–3 Files Containing Oracle Mail Upgrade Data

File Name	Path from Oracle Home
oc4j.properties	j2ee/OC4J_OCSClient/config
jazn.xml	oes/jazn
jazn-data.xml	oes/jazn
emiasconsoleintg.xml	sysman/config
iasadmin.properties	sysman/config
opmn.xml	opmn/conf
classpath.lst	sysman/conf
targets.xml	sysman/emd

C.1.4 Upgraded Files in Oracle Ultra Search

table summarizes the files that are modified when your upgrade your Oracle Ultra Search configured with Oracle Ultra Search to Oracle Collaboration Suite 10*g* Ultra Search.

Table C–4 Files Containing Oracle Collaboration Suite 10g Ultra Search Upgrade Data

Files Name	Path from Oracle Home
oc4j-ra.xml	j2ee/OC4J_ OCSClient/connectors/UltraSearch/UltraSearch/META-INF
data-sources.xml	j2ee/OC4J_OCSADMIN/config

C.1.5 Upgraded Files in Oracle Real-Time Collaboration

Table 13–3 summarizes the files that are modified when your upgrade your Oracle Collaboration Suite middle tier configured with Oracle Web Conferencing to Oracle Real-Time Collaboration 10*g* Release 1 (10.1.1).

Table C–5 Files Containing Oracle Real-Time Collaboration Upgrade Data

File Name	Path from Oracle Home
imtinit.conf	imeeting/conf

C.2 Other Upgraded Application Tier Files

Table C–6 contains a list of the other files which are modified during the upgrade.

Table C–6 Files Containing Oracle Collaboration Suite 10g Applications Data

File Name	Path from Oracle Home
.	webcache/wallets
.reg_key.dc	discoverer902/bin/.reg_key.dc (which upgrades to discoverer/.reg_key.dc)
cache.conf	Apache/modplsql/conf/cache.conf
dads.conf	Apache/modplsql/conf/dads.conf
data-sources.xml	j2ee/OC4J_Portal/config/data-sources.xml and j2ee/<name of OC4J instance>/config/data-sources.xml
EAR files for applications defined in the server.xml file in the source instance	j2ee/<name of OC4J instance>/applications/*.ear
httpd.conf	Apache/Apache/conf/httpd.conf
iasproviders.xml	portal/pdkjava/providerGroups/iasProviders.xml
iaschema.xml	config/iaschema.xml
jazn-data.xml	j2ee/home/config/jazn-data.xml and j2ee/home/application-deployments/<name of application>/jazn-data.xml
jazn.xml	j2ee/home/config/jazn.xml
mod_oc4j.conf	Apache/Apache/conf/mod_oc4j.conf
mod_osso.conf	Apache/Apache/conf/mod_osso.conf
moddav.conf	Apache/Apache/oradav/conf/moddav.conf
oc4j.properties	j2ee/oc4j.properties
opmn.xml	opmn/conf/opmn.xml
oradav.conf	Apache/oradav/conf/oradav.conf
orion-web.xml	j2ee/home/application-deployments/<name of application>/orion-web.xml
osso.conf	Apache/Apache/conf/osso/osso.conf
plsql.conf	discoverer902/util/Pref.txt (which upgrades to discoverer/util/Pref.txt)
Pref.txt	discoverer902/util/Pref.txt (which upgrades to discoverer/util/Pref.txt)
principals.xml	j2ee/<name of OC4J instance>/config/principals.xml
progrp.xml	j2ee/OC4J_Portal/applications/jpdk/jpdk/WEB-INF/deployment_providerui/progrp.xml AND j2ee/OC4J_Portal/applications/portalTools/providerBuilder/WEB-INF/deployment_providerui/prngrp.xml

Table C–6 (Cont.) Files Containing Oracle Collaboration Suite 10g Applications Data

File Name	Path from Oracle Home

provider.xml	`j2ee/OC4J_Portal/applications/portalTools/omniPortlet/WEB-INF/providers/omniPortlet/provider.xml`
	
	`j2ee/OC4J_Portal/applications/portalTools/webClipping/WEB-INF/providers/webClipping/provider.xml`
	
	`j2ee/OC4J_Portal/applications/jpdk/jpdk/WEB-INF/providers/PORTLETBLDGTOOLS/provider.xml`
	
	`j2ee/OC4J_Portal/applications/jpdk/jpdk/WEB-INF/providers/<seeded_provider>/providers.xml`
	
	`j2ee/OC4J_Portal/applications/portalTools/providerBuilder/WEB-INF/providers.xml`

provideruiacls.xml	`j2ee/OC4J_Portal/applications/jpdk/jpdk/WEB-INF/deployment_providerui/provideruiacls.xml`
	
	AND
	
	`j2ee/OC4J_Portal/applications/portalTools/providerBuilder/WEB-INF/deployment_providerui/provideruiacls.xml`

targets.xml	`sysman/emd/targets.xml`
tnsnames.ora	`network/admin/tnsnames.ora`
uddiserver.config	`ds/uddi/config/uddiserver.config` (which upgrades to `uddi/config/uddiserver.config`)
vaultIdMappings.properties	j2ee/OC4J_Portal/applications/portalTools/omniPortlet/WEB-INF/providers/omniPortlet/vaultIdMappings.properties
web.xml	`j2ee/OC4J_Portal/applications/portal/portal/WEB-INF/web.xml`
webcache.xml	`webcache/webcache.xml`

D

Upgrade and Compatability Error Messages

This appendix provides information about the error messages you may encounter when upgrading your Oracle Collaboration Suite installations or when running multiple versions Oracle Collaboration Suite.

The following sections provide information about error messages that may appear in the OracleAS Upgrade Assistant, Oracle Application Server Metadata Repository Upgrade Assistant, or Oracle Universal Installer log files when you are upgrading your Oracle Collaboration Suite instances to 10*g* Release 1 (10.1.1):

D.1 Error Messages Common to All Components

This section contains upgrade error messages that are common to all Oracle Application Server components.

Unable to upgrade file *filename*

Cause: The file was not found in the source Oracle home, or you do not have sufficient permissions to copy the file.

Action: Determine the permissions for the file in the source Oracle home and the destination Oracle home, and adjust them as necessary.

D.2 Error Messages When Upgrading Instance Configuration Components

This section contains error messages that are specific to the upgrade of your Oracle Application Server instance configuration.

INVALID_XML_CONFIG_FILE

Cause: The `iasschema.xml` file is corrupted.

Action: Provide an uncorrupted version of the file.

IOEXCEPTION

Cause: The `iasschema.xml` file could not be accessed in the source or destination Oracle home.

Action: Ensure that the file is accessible in both locations.

D.3 Error Messages When Upgrading Oracle HTTP Server

This section contains error messages that are specific to Oracle HTTP Server.

java.io.FileNotFoundException

Cause: This error indicates that a particular file that is required for the Oracle HTTP Server upgrade is not available in the expected location. For example, additional information provided with the error will usually indicate which files are missing.

Action: You can fix this problem by manually copying the file from the source Oracle home (or from some other known location) to the destination Oracle home.

D.4 Error Messages When Upgrading Oracle Application Server Web Services UDDI Registry

This followins sections contains error messages that are specific to the Oracle Application Server UDDI Registry:

- UDDI Registry Middle Tier Upgrade Error Messages
- UDDI Registry OracleAS Metadata Repository Upgrade Error Messages

D.4.1 UDDI Registry Middle Tier Upgrade Error Messages

UDDI plug-in does not support upgrade from version {0}. No upgrade will be done.

Cause: The version of the application server in the source mid-tier cannot be upgraded directly to 10*g* (10.1.2).

Action: Check the version of your source AS mid-tier.

See Also:

UDDI plug-in does not support upgrade to version {0}. No upgrade will be done.

Cause: The version of the application server in the destination Oracle home is not supported for this upgrade.

Action: Make sure you are starting the Upgrade Assistant from the correct destination Oracle home.

Source configuration file not found at {0}. No upgrade will be done for version 9.0.2.

Cause: In Release 2 (9.0.2), there was no configuration file for UDDI registry. Therefore upgrade is not applicable.

Action: No action required.

Destination configuration file not found at {0}. Looking for backup at {1}.

Cause: The UDDI registry configuration file is not found in the destination application server middle tier Oracle home.

Action: No action required. A backup configuration file will be used instead.

Destination configuration file not found at {0}, and its backup not found at {1}. Upgrade cannot proceed.

Cause: Neither the UDDI registry configuration file nor its backup can be found in the destination middle tier Oracle home.

Action: Check the installation log file for the destination middle tier.

ErrorMsg: Destination configuration file restored from its backup at {0}.

Cause: The UDDI registry configuration file is not found in the destination Oracle home. However the configuration file was restored from a backup.

Action: No action required.

ErrorMsg: Backup of destination configuration file is made at {0}.

Cause: A backup copy was made of the original UDDI registry configuration file in the destination Oracle home.

Action: Action: No action required.

ErrorMsg: UDDI plug-in did not expect item {0}.

Cause: The item to be upgraded is a directory.

Action: Check the source Oracle home. For UDDI middle-tier upgrades, this item should represent a configuration file.

ErrorMsg: Unknown URL prefix for UDDI: {0}.

Cause: The JDBC URL prefix is incorrect.

Action: The UDDI plug-in will use a JDBC thin driver prefix as a defensive measure. However, you need to double check the setting in the source configuration file.

ErrorMsg: Missing URL prefix definition for UDDI.

Cause: The JDBC URL prefix is absent from the UDDI registry configuration file.

Action: Check the source Oracle home or configuration file.

ErrorMsg: Unknown property for UDDI: {0}.

Cause: Unknown property exists in the UDDI registry configuration file.

Action: Check each item in the UDDI registry configuration file.

D.4.2 UDDI Registry OracleAS Metadata Repository Upgrade Error Messages

Error: Current UDDI Component has wrong version {0}.

Cause: UDDI database schema version is incorrect.

Action: Manually inspect the VERSION table in UDDISYS schema. You may need help from a system administrator or a database administrator.

Error: UDDI Upgrade is having problem with DB.

Cause: Some generic database exceptions have been thrown and caught.

Action: Contact the system administrator, the database administrator, or contact Oracle Support Services with the full error message.

Error: UDDI Upgrade is having problem closing DB Connection.

Cause: Exception generated while closing a database connection.

Action: Contact the system administrator, the database administrator, or contact Oracle Support Services with the full error message.

Error: UDDI Upgrade sql script execution failed.

Cause: Exception during UDDI upgrade-related SQL execution.

Action: Contact the system administrator, the database administrator, or contact Oracle Support Services with the full error message.

Error: UDDI Upgrade sqlldr execution failed.

Cause: Exception during Oracle SQL*Loader excecution.

Action: Contact the system administrator, the database administrator, or contact Oracle Support Services with the full error message.

D.5 Error Messages When Upgrading mod_plsql

This section describes the error messages, their causes, and suggested actions that are specific to the mod_plsql upgrade in the 10.1.2 Middle-tier upgrade.

Exception in the mod_plsql plug-in.

Cause: An error occurred while upgrading mod_plsql during the middle-tier upgrade.

Action: Try to fix the error based on the additional details in this message and restart the upgrade.

Exception while backing up: <file>

Cause: An error occurred while backing up the file *<file>* during the middle-tier upgrade.

Action: Verify that *<file>* exists in the source Oracle home, that the disk is not full, and that you have write permission in the directory where *<file>* is to be backed up.

D.6 Error Messages When Upgrading Oracle Application Server Portal

This section describes the error and warning messages, their causes, and suggested actions that you may encounter when upgrading OracleAS Portal. The messages have been listed in numeric or alphabetical order in each subsection for easy location. For more information, refer to the Upgrade documentation, available on OracleAS Portal Center at `http://portalcenter.oracle.com/upgrades`. This section contains the following subsections:

- Middle-tier Upgrade Error Messages for OracleAS Portal
- Portal Repository Upgrade Messages

D.6.1 Middle-tier Upgrade Error Messages for OracleAS Portal

The following public error messages are specific to the OracleAS Portal upgrade in the 10.1.2 Middle-tier upgrade.

A failure occurred during the portal target upgrade process.

Cause: Failed to migrate portal target entries from the source to the destination.

Action: Try to fix the error based on the additional details in this message and restart the upgrade.

Cannot determine which Oracle home is running the 9.0.2 Oracle Enterprise Manager Website.

Cause: The upgrade process could not determine which Oracle home is running the active Oracle Enterprise Manager process. This information is retrieved from the `emtab` file on Solaris and Linux platforms, or from the registry on Windows platforms.

Action: Depending on your platform, verify that a valid entry for the Oracle Enterprise Manager home exists:

- For Solaris, `/var/opt/oracle/emtab` file.
- For Linux, `/etc/emtab` file.
- For Windows, check the `em_loc` subkey under the `HKEY_LOCAL_MACHINE\SOFTWARE\ORACLE` key in the registry.

Cannot re-deploy application <app_name>.

Cause: Failed to migrate user application <*app_name*> to the destination OC4J_Portal instance.

Action: Try to fix the error based on the additional details in this message and re-deploy the user application manually to the destination OC4J_Portal instance after fixing the problem.

Cannot retrieve portal targets from the Oracle Enterprise Manager home.

Cause: Target entries for one or more portals were missing or invalid in the source `targets.xml` file.

Action: Verify that `targets.xml` exists in the Oracle home running the Oracle Enterprise Manager Services. In release 9.0.4, the Oracle Enterprise Manager Oracle home will be the same as the source Oracle home. In release 9.0.2, the active Oracle Enterprise Manager home location is specified in the `emtab` file on UNIX and in the `em_loc` subkey in the registry on Windows under the `HKEY_LOCAL_MACHINE\SOFTWARE\ORACLE` key.

Cannot retrieve the emtab file used to determine which Oracle home running the Oracle Enterprise Manager 9.0.2 Website.

Cause: This error is specific to 9.0.2 to 10.1.2 upgrades on the UNIX platform. It occurs when the `emtab` file, which is used to determine which Oracle home is running the Oracle Enterprise Manager services, is not found.

Action: Verify that this file exists in the correct location (`/var/opt/oracle` on Solaris and `/etc` on Linux) and that the "DEFAULT" property refers to the correct Oracle home.

Cannot retrieve the registry key value for the Oracle home running the Oracle Enterprise Manager 9.0.2 Website.

Cause: An error occurred when the upgrade process tried to retrieve Oracle Enterprise Manager location from the registry during a 9.0.2 to 10.1.2 upgrade on the Windows platform.

Action: Verify that the value of the `em_loc` subkey exists under the `HKEY_LOCAL_MACHINE\SOFTWARE\ORACLE` key in the registry.

Exception in the OracleAS Portal plug-in

Cause: An error occurred while upgrading OracleAS Portal during the middle-tier upgrade.

Action: Try to fix the error based on the additional details in this message and restart the upgrade.

OmniPortlet: Unable to migrate customizations.

Cause: Could not access the source or target OmniPortlet customization directories.

Action: You can manually copy all subdirectories under the following directory from the source installation to the target installation:

SOURCE_ORACLE_HOME/j2ee/OC4J_Portal/applications/portalTools/omniPortlet/WEB-INF/providers/omniPortlet/

OmniPortlet: Unable to migrate encodeHtmlField Setting.

Cause: Could not access the source or target OmniPortlet configuration file, `provider.xml`, or the file contained an invalid encodeHtmlField Setting.

Action: You can manually copy the `<encodeHtmlField>` tag in the following configuration file from the source installation to the target installation:

SOURCE_ORACLE_HOME/j2ee/OC4J_Portal/applications/portalTools/omniPortlet/WEB-INF/providers/omniPortlet/provider.xml

OmniPortlet: Unable to migrate exportConnectionInfo Setting.

Cause: Could not access the source or target OmniPortlet configuration file, `provider.xml`, or the file contained an invalid exportConnectionInfo Setting.

Action: You can manually copy the `<exportConnectionInfo>` tag in following configuration file from the source installation to the target installation:

SOURCE_ORACLE_HOME/j2ee/OC4J_Portal/applications/portalTools/omniPortlet/WEB-INF/providers/omniPortlet/provider.xml

OmniPortlet: Unable to migrate Locale Personalization Level.

Cause: Could not access the source or target OmniPortlet configuration file, `provider.xml`, or the file contained an invalid Local Personalization Level.

Action: You can manually copy the `<localePersonalizationLevel>` tag in the following configuration file from the source installation to the target installation:

SOURCE_ORACLE_HOME/j2ee/OC4J_Portal/applications/portalTools/omniPortlet/WEB-INF/providers/omniPortlet/provider.xml

OmniPortlet: Unable to migrate Preference Store Settings.

Cause: Could not access the source or target OmniPortlet configuration file, `provider.xml`, or the file contained invalid Preference Store Settings.

Action: You can manually copy the `<preferenceStore>` tag in the following configuration file from the source installation to the target installation:

SOURCE_ORACLE_HOME/j2ee/OC4J_Portal/applications/portalTools/omniPortlet/WEB-INF/providers/omniPortlet/provider.xml

OmniPortlet: Unable to migrate Proxy Settings.

Cause: Could not access the source or target OmniPortlet configuration file, `provider.xml`, or the file contained invalid Proxy Settings.

Action: You can manually copy the `<proxyInfo>` tag in following source file from the source installation to the target installation:

SOURCE_ORACLE_HOME/j2ee/OC4J_
Portal/applications/portalTools/omniPortlet/WEB-INF/providers/omniPortlet/provi
der.xml

OmniPortlet: Unable to migrate Security Repository Settings.

Cause: Could not access the source or target OmniPortlet configuration file, `provider.xml`, or the file contained invalid Security Repository Settings.

Action: You can manually copy the `<vaultId>` tag in following configuration file from the source installation to the target installation:

SOURCE_ORACLE_HOME/j2ee/OC4J_
Portal/applications/portalTools/omniPortlet/WEB-INF/providers/omniPortlet/provi
der.xml

OmniPortlet: Unable to migrate Trusted Certificate Location Setting.

Cause: Could not access the source or target OmniPortlet configuration file, `provider.xml`, or the file contained an invalid Trusted Certificate Location.

Action: You can manually copy the `<trustedCertificateLocation>` tag in the following configuration file from the source installation to the target installation:

SOURCE_ORACLE_HOME/j2ee/OC4J_
Portal/applications/portalTools/omniPortlet/WEB-INF/providers/omniPortlet/provi
der.xml

There are incomplete target entries in the destination targets.xml.

Cause: Target entries were missing or incomplete in the destination `targets.xml` file.

Action: Verify that target entries for OracleAS (target type `oracle_ias`) and Oracle HTTP server (target type `oracle_apache`) exist in the following configuration file, and verify that valid entries exist for the various properties of these targets:

DESTINATION_ORACLE_HOME/sysman/emd/targets.xml

There are incomplete target entries in the source targets.xml file.

Cause: Target entries were missing or incomplete in the source `targets.xml` file.

Action: Verify that target entries for OracleAS (target type `oracle_ias`) and Oracle HTTP server (target type `oracle_apache`) exist in the following configuration file, and verify that valid entries exist for the various properties of these targets:

SOURCE_ORACLE_HOME/sysman/emd/targets.xml

Unable to copy file: <file name>

Cause: An error occurred while copying the file, from the source to the destination middle tier during jpdk upgrade.

Action: Verify that the file exists in the source Oracle home, that the disk is not full, and that you have write permission in the directory. After fixing the problem, manually copy the file from the source to the destination middle tier.

Unable to create the directory: <directory name>

Cause: An error occurred while creating the directory during jpdk upgrade.

Action: Verify that the directory exists in the source Oracle home, that the disk is not full, and that you have write permission. After fixing the problem, copy the directory manually from the source to the destination middle tier.

For example, if the source directory is:

SOURCE_ORACLE_HOME/j2ee/OC4J_
Portal/applications/jpdk/jpdk/WEB-INF/PORTLETBLDGTOOLS/provider/myprovider.

Then the corresponding target directory is:

DESTINATION_ORACLE_HOME/j2ee/OC4J_
Portal/applications/jpdk/jpdk/WEB-INF/PORTLETBLDGTOOLS/provider/myprovider.

Note: Special care should be taken if the directory to be copied contains the file `provider.xml`. The source file can contain multiple `<preferenceStore>` entries. If this is the case, perform one of the following two steps, depending on whether a `<prefStoreName>` tag is defined in the source `provider.xml` file:

- If it is defined, select, the tag whose name attribute value matches the `<prefStoreName>` tag out of all the `<preferenceStore>` tags in that file and migrate that `<preferenceStore>` tag to the destination `provider.xml` file.
- If it is not defined, copy the first `<preferenceStore>` tag of all the `<preferenceStore>` tags from the source `provider.xml` file, to the destination `provider.xml` file.

If there is only one occurrence of the `<preferenceStore>` tag in the source `provider.xml` file, copy this tag to the destination `provider.xml` file.

Unable to migrate JNDI entries from source to destination orion-web.xml file: <file name>

Cause: During jpdk upgrade, an error occurred while copying the `<env-entry-mapping>` tags from the orion-web.xml file in the source Oracle home to the orion-web.xml file in the destination Oracle home.

The orion-web.xml file is located in the following directory of the source Oracle home and the destination Oracle home:

- *SOURCE_ORACLE_HOME*\j2ee\OC4J_
  Portal\application-deployments\jpdk\source\orion-web.xml
- *DESTINATION_ORACLE_HOME*\j2ee\OC4J_
  Portal\application-deployments\jpdk\source\orion-web.xml
  file

Action: Manually copy the `<env-entry-mapping>` tags from the source to the destination `orion-web.xml` file.

Unable to migrate Provider Group changes from source to destination iasProviders.xml file: <file name>

Cause: Migration of the `<providerGroup>` tags to the target `iasProviders.xml` file failed during jpdk upgrade.

Action: Copy the `<providerGroup>` tags under the `<providerGroups>` tag from the source `iasProviders.xml` file to the destination. Copy only the `<providerGroup>` tag if it does not start with 'oracle', Paste it under the root

<providerGroups> tag. The source and the target file will be at the following locations:

- *SOURCE_ORACLE_HOME*/portal/pdkjava/providerGroups/iasProviders.xml
- *DESTINATION_ORACLE_HOME*/portal/pdkjava/providerGroups/iasProviders.xml

Unable to migrate the <preferenceStrore> tag from the providers.xml file: <file name>

Cause: An error occurred while migrating the <preferenceStore> tag from the source to the destination provider.xml file during jpdk upgrade. The exact location of the provider.xml file is provided in the error message.

Action: The source file can contain multiple <preferenceStore> entries. If this is the case, perform one of the following two steps, depending on whether a <prefStoreName> tag is defined in the source provider.xml file:

- If it is defined, select, the tag whose name attribute value matches the <prefStoreName> tag out of all the <preferenceStore> tags in that file and migrate that <preferenceStore> tag to the destination provider.xml file.
- If it is not defined, copy the first <preferenceStore> tag of all the <preferenceStore> tags from the source provider.xml file, to the destination provider.xml file.

If there is only one occurrence of the <preferenceStore> tag in the source provider.xml file, copy this tag to the destination provider.xml file.

Unable to migrate the Provider UI Security Settings Registry file: <file name>

Cause: Failed to migrate the <providerGroup> tag from the source to the destination *<provider_registry>* file during jpdk upgrade. The *<provider_registry>* file could be progrp.xml or provideruiacls.xml.

Action: The propgrp.xmlfile can be located in the following places:

- *SOURCE_ORACLE_HOME*/j2ee/OC4J_Portal/applications/jpdk/jpdk/WEB-INF/deployment_providerui/progrp.xml.
- *SOURCE_ORACLE_HOME*/j2ee/OC4J_Portal/applications/portalTools/providerBuilder/WEB-INF/deployment_providerui/progrp.xml.

The provideruiacls.xml file can be located in one of the following places:

- *SOURCE_ORACLE_HOME*/j2ee/OC4J_Portal/applications/jpdk/jpdk/WEB-INF/deployment_providerui/provideruiacls.xml or
- *SOURCE_ORACLE_HOME*/j2ee/OC4J_Portal/applications/portalTools/providerBuilder/WEB-INF/deployment_providerui/provideruiacls.xml.

Manually copy the <providerGroup> tag, located under the <providerGroups> tag to the destination propgrp.xml file.

> **Note:** If you are upgrading from version 9.0.2, you will see that all the <providerGroups> tags are located under the <webNode> tag, instead of under the <providerGroups> tags (version 9.0.4 and up) In this case, select all the <providerGroup> tags located under the <webNode> tag from the source and migrate them to the <providerGroups> node tag in the destination propgrp.xml file.

For provideruiacls.xml file, manually copy the file from the source to the destination location and add the following entry to the corresponding target file:

```
<user name="portal" privilege="500"/>
```

under the <object name="ANY_PROVIDER" owner="providerui"> tag, if this tag is present.

and under the <object name="ANY_PORTLET" owner="providerui"> tag, if this tag is present.

Web Clipping: Unable to migrate Proxy Settings.

Cause: Could not access the source or target Web Clipping configuration file, provider.xml, or the file contained invalid Proxy Settings.

Action: You can manually copy the <proxyInfo> tag in the following configuration file from the source installation to the target installation:

SOURCE_ORACLE_HOME/j2ee/OC4J_Portal/applications/portalTools/webClipping/WEB-INF/providers/webClipping/provider.xml

Web Clipping: Unable to migrate Security Repository Settings.

Cause: Could not access the source or target Web Clipping configuration file, provider.xml, or the file contained invalid Security Repository Settings.

Action: You can manually copy the <repositoryInfo> tag in the following configuration file from the source installation to the target installation:

SOURCE_ORACLE_HOME/j2ee/OC4J_Portal/applications/portalTools/webClipping/WEB-INF/providers/webClipping/provider.xml

Web Clipping: Unable to migrate Trusted Certificate Location Setting.

Cause: Could not access the source or target Web Clipping configuration file, provider.xml, or the file contained an invalid Trusted Certificate Location Setting.

Action: You can manually copy the <trustedCertificateLocation> tag in the following configuration file from the source installation to the target installation.

SOURCE_ORACLE_HOME/j2ee/OC4J_Portal/applications/portalTools/webClipping/WEB-INF/providers/webClipping/provider.xml

Web Clipping: Unable to update Repository Schema.

Cause: A database access failure occurred while upgrading the Web Clipping Repository Schema from 9.0.2.4.0 to latest version.

Action: You can manually invoke the Schema Upgrade Script from the Web Clipping Welcome page. The database connection you provide has to have the privileges to create/modify tables.

D.6.2 Portal Repository Upgrade Messages

This section contains error messages that are specific to the OracleAS Portal Repository upgrade. Error messages that are generated after the upgrade has progressed past the precheck stage indicate that the OracleAS Portal schema has had modifications. If you receive any error messages after the precheck step, you must fix the problem, restore your database from its backup, and then run the upgrade again. This section contains the following subsections:

- Numbered Error Messages (WWU-00001 to WWU-24999)
- Numbered Warning Messages (WWU-25000 to WWU-49999)
- Unnumbered Error Messages
- Unnumbered Warning Messages

D.6.2.1 Numbered Error Messages (WWU-00001 to WWU-24999)

WWU-00001: An unexpected exception was raised during the upgrade prechecks:

Cause: An unexpected error caused the upgrade to abort.

Action: Based on the details in the message, correct the problem and run the upgrade again.

WWU-00002: The value of the shared_pool_size database parameter was not high enough for the upgrade.

Cause: The value of the shared_pool_size database parameter is too low.

Action: Increase the value of the shared_pool_size database parameter to 20 MB or greater. Run the upgrade again.

WWU-00003: The value of the java_pool_size database parameter was not high enough for the upgrade.

Cause: The value of the java_pool_size database parameter is too low.

Action: Increase the value of the java_pool_size database parameter to 20 MB or greater. Run the upgrade again.

WWU-00004: The optimizer_mode database parameter was incorrectly set to RULE.

Cause: The optimizer_mode database parameter is incorrectly set to RULE.

Action: Change the optimizer_mode database parameter to CHOOSE. Run the upgrade again.

WWU-00005: There was insufficient free space in the default tablespace.

Cause: There is less than 20 MB of free default tablespace.

Action: Create at least 20 MB of free default tablespace. Run the upgrade again.

WWU-00006: There was insufficient free space in the temporary tablespace.

Cause: There is less than 10 MB of free temporary tablespace.

Action: Create at least 10 MB of free temporary tablespace. Run the upgrade again.

WWU-00007: The _system_trig_enabled database parameter was incorrectly set to FALSE.

Cause: The _system_trig_enabled database parameter is incorrectly set to FALSE.

Action: Set the value for the _system_trig_enabled database parameter to TRUE, or do not set it. Run the upgrade again.

WWU-00008: There were jobs running in the DBMS jobs queue during the upgrade.

Cause: The upgrade cannot progress because there are DBMS jobs running.

Action: Either kill the DBMS jobs, or wait for them to finish before restarting the upgrade. Check the "Analyze Product Schema" step in the upgrade log for more information on the running jobs.

WWU-00009: The DBMS job queue was disabled. There were jobs that would have run immediately if it were enabled.

Cause: Jobs submitted for the current repository may not run properly under the upgraded version.

Action: You have two options: 1. Remove the jobs from the queue. 2. Re-enable the job queue by raising the job_queue_processes database parameter to a value greater than 0, and allow the jobs to complete. For a list of all jobs, look under the "Analyze Product Schema" step in the upgrade log.

WWU-00010: Some jobs in the DBMS job queue were incorrectly configured.

Cause: There are OracleAS Portal jobs in the DBMS job queue that were either incorrectly submitted as another user, or submitted as the OracleAS Portal user with another default schema or default privilege.

Action: Remove these jobs from the job queue. The upgrade correctly resubmits any jobs that are missing. For a list of all jobs, look under the "Analyze Product Schema" step in the upgrade log.

WWU-00011: Concurrent sessions were running for the schema you are upgrading.

Cause: Other sessions are running on the OracleAS Portal schema.

Action: Make sure the OracleAS 10g middle-tier is shut down and there are no other connections to the schema being upgraded. Look under "Open Sessions" in the upgrade log for a list of open sessions for the schema.

WWU-00012: Not all components of the JVM installation were present in the database or valid.

Cause: SYS Java objects are not present in the database or are invalid.

Action: Recompile the invalid Java objects in SYS. If this fails, reinstall the JVM in the database following the instructions found in the Oracle database documentation.

WWU-00013: Tables with UPG_ prefix were found in the OracleAS Portal schema.

Cause: The upgrade is aborted when UPG_ prefix tables are present in the OracleAS Portal schema.

Action: Back up all tables with the UPG_prefix, then delete them from the OracleAS Portal schema.

WWU-00014: Obtaining Oracle Text information failed.

Cause: An error occurred during the attempt to retrieve information about the Oracle Text installation.

Action: Ensure that the Oracle Text component is correctly installed. If necessary, reinstall the Oracle Text component. For installation instructions, refer to the *Oracle Application Server Portal Configuration Guide*.

WWU-00015: Oracle Text schema (CTXSYS) does not exist.

Cause: The database does not contain the CTXSYS schema. This indicates that Oracle Text is not installed.

Action: Install the Oracle Text component in the database. For installation instructions, refer to the *Oracle Application Server Portal Configuration Guide*.

WWU-00016: Oracle Text indextype is invalid or does not exist.

Cause: The Oracle Text context indextype is not valid or does not exist. This may indicate a problem with the Oracle Text installation.

Action: Ensure the Oracle Text context indextype is present and valid. If necessary, reinstall the Oracle Text component. For installation instructions, refer to the *Oracle Application Server Portal Configuration Guide*.

WWU-00017: Some Oracle Text packages are invalid.

Cause: Packages in the Oracle Text schema (CTXSYS) that begin with DRI or CTX_ are invalid.

Action: Revalidate the Oracle Text invalid packages. If necessary, reinstall the Oracle Text component. For installation instructions, refer to the *Oracle Application Server Portal Configuration Guide*.

WWU-00018: Oracle Text version does not match the database version.

Cause: The version of the database is more recent than the Oracle Text component. This may indicate that the Oracle Text component upgrade was not successful. Oracle Text manual upgrade steps may have failed or been omitted. On some platforms, this may also indicate that patch 2658339 was not applied.

Action: Depending on the situation, either rerun the Oracle Text upgrade or download and apply the patch.

WWU-00019: Could not find the schema(s) on which Portlet Builder (Web View) applications are based.

Cause: The schema on which the Portlet Builder application is based is missing.

Action: There are two ways to fix this issue: 1. Drop the applications that are using the schema. 2. Recreate the missing schema and all objects in it.

WWU-00020: One or more one-off patches with schema changes have been applied.

Cause: One or more one-off patches that include schema changes have been applied to the OracleAS Portal schema. The upgrade cannot proceed because these changes have not been tested with this release of the upgrade scripts.

Action: See if a version of the upgrade based on the next patchset has been released on Metalink. If so, download and run the new version. If not, wait until it is released.

WWU-00021: The following mandatory object(s) are missing or invalid:

Cause: Mandatory objects that OracleAS Portal relies on are invalid or are not present in the database. If they are missing due to a faulty upgrade of the database, this could also cause failures in the OracleAS Portal upgrade.

Action: Review the database installation and upgrade procedures. If the object is present but invalid, run the rdbms/admin/utlrp.sql script under the database Oracle home to recompile all invalid objects.

WWU-00022: Version %0 of Oracle Portal/WebDB is not supported for upgrade.

Cause: The OracleAS Portal version being upgraded is not supported by this upgrade installation.

Action: If your OracleAS Portal instance is version 9.0.2, 9.0.2.3, or 9.0.2.6, be sure you have followed the instructions for applying Patch 2778342 mentioned in the Oracle Application Server 10g Upgrading to 10g Release 2 (10.1.2) upgrade guide. If you are starting with version 3.0.9, follow the instructions on http://portalcenter.oracle.com/upgrades to upgrade to version 9.0.4. If you are running a different version, it is not supported by this upgrade installation. Contact Oracle support.

WWU-00023: Version %0 of Oracle Database is not supported for upgrade.

Cause: The version of the database against which the upgrade was run is not supported for this upgrade.

Action: Upgrade to the minimum database version of Oracle9i Database 9.0.1.5 Enterprise or Standard edition.

WWU-00024: The compatible database parameter is less that 9.0.0.

Cause: The compatible database parameter is set to less than 9.0.0.

Action: Set the value of the compatible database parameter to at least 9.0.0.

WWU-00025: VPD was not installed properly.

Cause: One of the VPD checks has failed.

Action: This error is followed by a detailed message. Resolve the issue by examining the information provided in the message.

WWU-00026: VPD context value is not set.

Cause: The OracleAS Portal login trigger that sets the VPD context is disabled or is not installed.

Action: Verify that the OracleAS Portal login trigger was installed and enabled on the database. If you must install the trigger, run the wwhost/logintrg.sql script from SQL*Plus while logged in as SYS user. You'll find this script under the upgrade directory.

WWU-00027: VPD context value is incorrect.

Cause: The login trigger(s) is not setting the correct context.

Action: Verify that the login trigger is correctly installed. To install the trigger, run the wwhost/logintrg.sql script from SQL*Plus while logged in as SYS user. You'll find this script under the upgrade directory.

WWU-00028: Portal schema user is not set up to use VPD.

Cause: The OracleAS Portal schema user has the EXEMPT ACCESS POLICY system privilege.

Action: Revoke the EXEMPT ACCESS POLICY privilege from the OracleAS Portal schema user by running the following SQL command in SQL*Plus: 'REVOKE EXEMPT ACCESS POLICY FROM PORTAL_SCHEMA_NAME;'. In this command, replace PORTAL_SCHEMA_NAME with the actual OracleAS Portal schema name. Also verify that the OracleAS Portal schema user does not inherit the EXEMPT ACCESS POLICY privilege from any of its assigned roles.

WWU-00029: VPD is not being enforced in the database.

Cause: A problem occurred in the database that caused the VPD check to fail.

Action: Consult the database documentation to find possible actions.

WWU-00031: %0 Unable to bind as the application.

Cause: An error was encountered while connecting to the Oracle Internet Directory server.

Action: The error message above may provide more information about the cause. Make sure that the Oracle Internet Directory server is up and running on host %1 and port %2 and OracleAS Portal has been wired correctly against it.

WWU-01000: Back up the database before running the upgrade.

Cause: You have answered n (no) when asked if the schema has been backed up.

Action: Back up the database, and restart the upgrade.

WWU-01001: Connection to the Portal repository failed.

Cause: Incorrect OracleAS Portal schema, password, or connect string.

Action: Supply the correct OracleAS Portal schema, password, and connect string.

WWU-01002: Connection as SYS to the Portal repository failed.

Cause: An invalid SYS password was supplied, or the orapw file is missing.

Action: Supply the correct SYS password. If the password is correct, verify that you can connect remotely to SYS as SYSDBA using an orapwSID file. Refer to the Oracle database documentation for instructions on creating an orapw file.

WWU-01003: An unexpected exception was raised:

Cause: An unexpected error caused the upgrade to abort.

Action: Based on the details in the message, correct the problem, restore the database from backup, and run the upgrade again.

WWU-01004: Missing strings reported in %0 file:

Cause: The sqlldr utility encountered issues when trying to load message translation data.

Action: Look for specific issues in the .bad file and the corresponding .log file in the upgrade tmp directory. Give these to Oracle Customer Support along with the upgrade logs.

WWU-01005: Version not updated, fatal errors found in upgrade log.

Cause: This message indicates that the earlier version of OracleAS Portal will not be updated to the new version. Errors have occurred in the upgrade that will prevent OracleAS Portal from functioning properly. A summary of the errors is listed at the end of the upgrade log.

Action: Search through the errors in the log and apply any fixes mentioned. Then restore the database from backup and run another upgrade. If this fails, or if unexpected errors are encountered, contact Oracle Customer Support.

WWU-01007: Unable to create directory %0.

Cause: You do not have the required permissions to create the directory.

Action: Change the permissions on the parent directory.

WWU-01008: Write permission not available for directory %0.

Cause: You do not have the required permissions to write to the directory.

Action: Change the permissions on the directory, or specify a different temporary directory, then rerun the upgrade.

WWU-01009: Unable to create %0. Check permissions on the directory.

Cause: The permissions on the temporary directory do not allow the creation of a login.sql script for the user profile.

Action: Change the permissions on the temporary directory, and run the upgrade again.

WWU-01010: SQL*Plus version %0 not supported for upgrade.

Cause: The version of SQL*Plus you are trying to execute is not supported for this upgrade.

Action: Verify that the version of bin/sqlplus under the Oracle Home is at least 9.0.1.

WWU-01011: Restart the upgrade.

Cause: You have answered n (no) when asked if input details are correct.

Action: Correct the input details, and restart the upgrade.

D.6.2.2 Numbered Warning Messages (WWU-25000 to WWU-49999)

WWU-25000: Removed session cleanup job: %0 from the SYS schema.

Cause: The session cleanup job usually exists in the OracleAS Portal schema. However, an earlier operation, such as the database upgrade, has resulted in removing this job as a part of the upgrade.

Action: If the database instance where the upgrade is being performed does not contain any other OracleAS Portal schema, then no action is required. This is because the session clean-up job gets created in the OracleAS Portal schema during upgrade. However, if there are other OracleAS Portal schemas in the database instance, then verify that they all have their respective session clean-up jobs. Run the script wwc/ctxjget.sql under the upgrade directory from SQL*Plus in an OracleAS Portal schema to check whether the session clean-up job exists. If this job is missing in any OracleAS Portal schema, then you can create it by running the script wwc/ctxjsub.sql in that schema from SQL*Plus.

WWU-25001: VPD check found some issues.

Cause: One of the VPD checks has failed.

Action: This warning is followed by a detailed message. Resolve the issue by examining the information provided in the message.

WWU-25003: Portlet Builder (WebView) components have unknown issues.

Cause: The Portlet Builder components (packages) are invalid.

Action: Try resolving the cause of the errors when compiling the packages that are listed in the log. For example, a report may be based on a table that has been dropped. In this case, the report is no longer valid, so you can drop the report.

WWU-25004: Only %0% of the components in the wwv_modules$ table are production components.

Cause: This informational message indicates that there is a relatively large number of archive versions of Portlet Builder components (formerly WebView). This may be because in Oracle9iAS Portal 3.0.9, a new version of a component was created each time the component was edited and saved.

Action: Delete as many of the archive versions of components as possible. This reduces the size of the tables where attributes for all the archive versions are stored.

WWU-25005: Table without VPD policy: %0

Cause: The VPD policy on the table indicated in the message was not installed properly in the OracleAS Portal schema.

Action: If the table indicated in the message is not part of the OracleAS Portal product, it is safe to ignore the warning.

WWU-26000: Component %0 has errors. Check that all the objects it is based on are present.

Cause: The component is based on one or more missing objects. For example, a Query By Example report was based on table MY_TABLE. Then MY_TABLE is dropped.

Action: Supply the missing object. If the component is no longer being used, delete it using the OracleAS Portal Navigator.

WWU-26001: Non-Portal objects have errors. See %0 for details.

Cause: Non-OracleAS Portal objects in the OracleAS Portal schema cannot be compiled and have errors.

Action: Find out what is causing the object not to compile, and rectify it.

D.6.2.3 Unnumbered Error Messages

An unexpected exception was raised: <exception and where it occurred>

Cause: An unexpected error caused the script to abort.

Action: Based on the details in the message, correct the problem, restore your database from its backup and run the upgrade script again.

An unexpected exception was raised during the upgrade prechecks: <exception where it occurred>

Cause: An unexpected error caused the script to abort.

Action: Based on the details in the message, correct the problem and run the upgrade script again. For example:

If the following lines are found in the log, then the error may be because Oracle Text is not installed correctly.

```
### PHASE I STEP 8: Perform pre upgrade checks
Upgrade step started at Fri Apr 4 02:28:18 2003
Running upg/common/utlchvpd.sql
Connected
Calling DoPreChecks()
Starting precheck at Fri Apr 4 02:28:21 2003
Calling upg/common/sysuppre.sql
Connected.
```

ERROR: An unexpected exception was raised during the upgrade prechecks:

```
ORA-00942: table or view does not exist
----- PL/SQL Call Stack -----
object handle line number object name
80bc68c4 76 anonymous block
80bc68c4 380 anonymous block
```

Verify if the Oracle Text component is installed and reinstall it if it does not exist. Refer to the Oracle Application Server Portal Configuration Guide.

Back up your database before running the upgrade.

Cause: You have answered n (no) when asked if the schema has been backed up.

Action: Back up the database and restart the script.

Connection as SYS to the Portal repository failed.

Cause: An invalid SYS password was supplied or the orapw file is missing.

Action: Supply the correct SYS password.If the password is correct, make sure you can connect to SYS as `sysdba` by creating a `orapw<SID>` file in the database Oracle Home's `dbs` directory by running orapwd with the same password used by the SYS database account.

Connection to the Portal repository failed.

Cause: Incorrect Oracle9*i*AS Portal schema, password or connect string.

Action: Supply the correct Oracle9*i*AS Portal schema, password or connect string.

Dropping Oracle Text Indexes has failed, upgrade cannot continue.

Cause: Dropping the Oracle Text indexes, or removing the synchronization or optimization jobs has failed. Find the output of the `uptxtdrp` script in the upgrade log to see what should be done. The entire `uptxtdrp.log` is appended to the error message output in the upgrade log.

Action: If the error was encountered while dropping the Oracle Text indexes, make sure that all the Oracle Text indexes are dropped before restarting the upgrade. For information about dropping Oracle Text indexes, refer to the *Index Maintenance* chapter of the *Oracle Text Application Developer's Guide*.

If the error was encountered while removing the synchronization or optimization jobs, make sure that these jobs are removed from the job queue before restarting the upgrade. For information about breaking or removing jobs, refer to the *Managing Job Queues* chapter of the *Oracle9i Database Administrator's Guide*.

After upgrading, manually recreate the Oracle Text indexes and the synchronization and optimization jobs if you wish to use Oracle Text searching in your OracleAS Portal. Refer to the Oracle Application Server Portal Configuration Guide for complete instructions.

Environment variable ORACLE_HOME is not set.

Cause: The ORACLE HOME environment variable is not set.

Action: Review your environment and set the Oracle Home environment variable.

Error: Could not determine the version of OracleAS Portal

Cause: An error occurred while determining the version of OracleAS Portal.

Action: This message is followed by the actual exception, which occurred. Resolve the error by examining the information provided and run MRUA again.

Error: OracleAS Portal version {0} is not supported for upgrade on Oracle Database 10g

Cause: The OracleAS Portal version must be at least 9.0.2.3.

Action: Download the Oracle9*i*AS 9.0.2.3 patchset from Metalink and apply it on your application server infrastructure and middle-tier. Then run the upgrade again.

Failed to rename <*file/directory*>

Cause: You do not have the required permissions on the parent directory.

Action: Change the permissions on the parent directory.

Getting password of <*schema-name*> schema

Cause: Failed to retrieve the password of the schema <*schema-name*>.

Action: The error is followed by the actual exception which occurred. Try to fix the error and restart the upgrade.

granting execute on <schema>.<procedure> to <application_schema> as <schema>--ORA-01001:invalid cursor

Cause: The schema or procedure is missing. For example:

```
ERROR: granting execute on SCHEMA1.CHECK_SAL to SCHEMA1B as
SCHEMA1--ORA-01001:invalid cursor
```

In this case, there is a form in a database provider based on `SCHEMA1B`, on the procedure `SCHEMA1.CHECK_SAL` and either the procedure `CHECK_SAL` is missing or one of the schemas `SCHEMA1` or `SCHEMA1B` is missing. Therefore, the form will not run. However, it would not have run before the upgrade either.

Action: Determine if the form or database provider is obsolete. If it is obsolete, delete it. If not, supply the missing schema or procedure.

GUID and/or DN are not available for %string% subscriber.

Cause: Could not get the globally unique identifier and/or the distinguished name for the named identity management realm from the Portal repository.

Action: Make sure that the identity management realm has been configured properly.

Invalid profile status value: %string%

Cause: The value specified for profile status is invalid.

Action: Please use only ENABLED or DISABLED for the profile status.

Missing strings reported in <filename> file: <strings>

Cause: `SQLLDR` encountered issues when trying to load the languages.

Action: Look at the corresponding log and the `.log` and `.bad` files from `<upgrade_tmp_dir>` for specific issues. Give these to Oracle Support along with the upgrade logs.

Obtaining Oracle Text information failed. Please check Oracle Text has been correctly installed. Reinstall Oracle Text schema (CTXSYS) if necessary.

Cause: An error has occurred whilst attempting to retrieve information about the Oracle Text installation.

Action: Ensure the Oracle Text component is correctly installed. If necessary, reinstall the Oracle Text component. Refer to the *Oracle Application Server Portal Configuration Guide* for complete instructions.

ORA-04031: unable to allocate <n> bytes of shared memory ("shared pool","unknown object","session heap","frame segment") (WWC-44847)

Cause: The shared pool size database parameter is too small.

Action: The value for this parameter depends on the size of your Oracle9*i*AS Portal. It may need to be several hundred megabytes for large Oracle9*i*AS Portals to avoid encountering this problem. Increase the shared pool size in your database and restart your upgrades after restoring from a backup.

ORA-1031: insufficient privileges

Cause: The sysdba connection to the database has failed due to insufficient privileges.

Action: To connect to SYS as sysdba, create the `orapw<SID>` file in the database Oracle Home's dbs directory by running `orapwd` with the same password used by the SYS database account.

ORA-29521: referenced name javax/ejb/<class> could not be found

Cause: The instructions contained in Metalink Note 222437 to facilitate Oracle9*i*AS Portal working on an Oracle 9.2 database have not yet been applied. Here is an example of the error:

```
Loading Java Classes - soap.jar
errors : class oracle/soap/providers/ejbprov/<class>
ORA-29521: referenced name javax/ejb/<name> could not be found
The following operations failed
class oracle/soap/providers/ejbprov/<provider>: resolution
exiting : Failures occurred during processing
```

Action: Restore your repository back to its Oracle9*i*AS Portal 9.0.2 state and follow the instructions contained in the Metalink Note 222437.1 available from the Oracle Metalink web site at `http://metalink.oracle.com`. Run the upgrade again after the steps have been completed.

Oracle Text indextype is invalid or does not exist. Revalidate the invalid indextype. If necessary, reinstall the Oracle Text schema (CTXSYS).

Cause: The Oracle Text context indextype is not valid or does not exist. This may indicate a problem with the Oracle Text installation.

Action: Ensure the Oracle Text context indextype is present and valid. If necessary, reinstall the Oracle Text component. Refer to the Oracle Application Server Portal Configuration Guide.

Oracle Text schema (CTXSYS) does not exist, please install it.

Cause: The database does not contain the CTXSYS schema. This indicates that Oracle Text is not installed.

Action: Install the Oracle Text component in the database. Refer to the Oracle Application Server Portal Configuration Guide.

Oracle Text version does not match the database version. Check that Oracle Text has been correctly upgraded. Reinstall the Oracle Text schema (CTXSYS) if necessary.

Cause: The database version is more recent that the Oracle Text component. This may indicate that the Oracle Text component was not upgraded correctly. The Oracle Text manual upgrade steps may have been omitted or failed. However, on certain platforms, this may also indicate that patch 2658339 has not been applied.

Action: Run the Oracle Text upgrade again or download and apply the patch depending on your situation.

OracleAS Portal 9.0.2 -> 9.0.4 upgrade failed. See <*upgrade-log-file*> for details.

Cause: Errors were encountered in the 9.0.2 to 9.0.4 portion of the upgrade.

Action: Search through the errors in the log file and make a note of any fixes mentioned. Then restore the database from backup, apply the fixes, and run the upgrade again.

OracleAS Portal 9.0.2 -> 9.0.4 upgrade precheck failed. See <*precheck-log-file*> for details.

Cause: Errors were encountered during the precheck run of the 9.0.2 to 9.0.4 portion of the upgrade.

Action: Search through the errors in the log file and apply any fixes mentioned. Then run the upgrade again.

OracleAS Portal 9.0.4 -> 10.1.2 upgrade completed with errors. See <*upgrade-log-file*> for details.

Cause: Errors were encountered in the 9.0.4 to 10.1.2 portion of the upgrade.

Action: Search through the errors in the log file and make a note of any fixes mentioned. Then restore the database from backup, apply the fixes, and run the upgrade again.

OracleAS Portal 9.0.4 -> 10.1.2 upgrade precheck failed. See <*precheck-log-file*> for details.

Cause: Errors were encountered during the precheck run of the 9.0.4 to 10.1.2 portion of the upgrade.

Action: Search through the errors in the log file and apply any fixes mentioned. Then run the upgrade again.

Patch Failed with status code: <status>

Cause: A patch installation has failed.

Action: Look at the upgrade log file for details.

Please delete all tables with UPG_ prefix from the Portal schema.

Cause: `UPG_ prefix` tables exist in the Oracle9*i*AS Portal schema. The upgrade is aborted.

Action: Delete all tables with the `UPG_ prefix` from the Oracle9*i*AS Portal schema. Backup the tables before removing them.

Portal schema user is not set up to use VPD.

Cause: The Oracle9*i*AS Portal schema user has the EXEMPT ACCESS POLICY system privilege.

Action: Revoke the EXEMPT ACCESS POLICY privilege from the Oracle9*i*AS Portal schema user by running the following SQL command in SQL*Plus:

```
revoke exempt access policy from <portal_schema_user>;
```

Also verify the Oracle9*i*AS Portal schema user does not inherit the EXEMPT ACCESS POLICY privilege from any of its assigned roles.

Portal version not supported by VPD check utility.

Cause: The VPD check does not support your current version of Oracle9*i*AS Portal.

Action: Verify your Oracle9*i*AS Portal version is supported by this upgrade.

Post-Upgrade tasks not done, fatal errors found in upgrade log.

Cause: This message indicates that the post upgrade scripts have not been executed. These tasks require a completed upgrade and your upgrade has errors. A summary of the errors are listed at the end of the upgrade log.

Action: Attempt to fix any errors listed. Search through this chapter and apply any fixes mentioned. Then restore from your backup and run another upgrade. If this fails, contact Oracle Support.

An example of a post-upgrade task is checking whether VPD is enabled correctly. Another example of a post-upgrade task is verifying if the SSO Partner Configuration has been run.

Problem running sqlplus.

Cause: The upgrade script was unable to execute the SQL*Plus command.

Action: Make sure that `bin/sqlplus` exists under your Oracle Home, and that you have permissions to execute it.

Restart the upgrade script.

Cause: You have answered n (no) when asked if input details are correct.

Action: Correct the perceived problem and restart the upgrade script.

Simultaneous upgrades cannot be run from the same location.

Cause: You are trying to run multiple simultaneous upgrades from the same location.

Action: Wait until the upgrade you started earlier finishes before starting another one. If a previous upgrade (run using `upgrade.csh`) terminated abnormally (for example, with `Ctrl+C`), the lock file created during upgrade (`upgcsh.lok`) is not deleted. Therefore, if you attempt to start another upgrade, you will see this message. In this case you will need to manually delete the lock file. You should delete this lock file only when an upgrade has abnormally terminated, not if an upgrade is actually running. You can find the lock file in the location from where you ran the upgrade script.

Some Oracle Text packages are invalid. Revalidate the invalid packages. If necessary, reinstall the Oracle Text schema (CTXSYS).

Cause: Packages in the Oracle Text schema (`CTXSYS`) beginning with `DRI` or `CTX_` are invalid.

Action: Revalidate the Oracle Text invalid packages. If necessary, reinstall the Oracle Text component. Refer to the Oracle Application Server Portal Configuration Guide.

SQL Error: *%string%* LDAP Error: *%string%*. Unexpected Error occured while connecting to the Oracle Internet Directory as Application entry.

Cause: An attempt was made to connect to the Oracle Internet Directory using the application credentials stored in the OracleAS Portal repository. However, this attempt failed. Some possible reasons for this failure are given below:

- OracleAS Portal has not been configured correctly for the Oracle Internet Directory.
- Oracle Internet Directory server is not running.
- An unexpected error was encountered.

Action: Make sure that the Oracle Internet Directory is up and running. Reconfigure OracleAS Portal for the Oracle Internet Directory. Also review the message logged before this error message and take appropriate action.

SQL*Plus version <version> not supported for upgrade.

Cause: The version of SQL*Plus you are trying to execute is not current enough.

Action: Verify that the version of `bin/sqlplus` under your Oracle Home is at least 9.0.1.

System triggers are disabled in the database.

Cause: System triggers are disabled in your database configuration file.

Action: Verify that the `_system_trig_enabled` parameter is set to TRUE in your database's `init.ora` file. If it is not, set it to TRUE and restart your database.

The allocated java_pool_size parameter for the database is not sufficient for the Installation/Upgrade. Increase the java_pool_size and run the upgrade again.

Cause: The java pool size parameter is too small.

Action: Increase the java pool size parameter to 20 MB or greater. Refer to the documentation, if necessary, then run the upgrade again.

The allocated shared_pool_size parameter for the database is not sufficient for the Installation/Upgrade. Increase the shared_pool_size and run the upgrade again.

Cause: The shared pool size parameter is too small.

Action: Increase the shared pool size to 20 MB or greater. Refer to the documentation, if necessary, then run the upgrade again.

The compatibility level of the database is not supported for upgrade.

Cause: If the compatible init parameter is not set to at least 9.0.0, then the upgrade aborts.

Action: Set the compatible init parameter to at least 9.0.0 in your `init.ora` file.

The database blocksize is less than the recommended value.

Cause: The database blocksize is less than 8K.

Action: Create a new Oracle9*i* database with a minimum blocksize of 8K. Use the database import/export utilities to move your Oracle9*i*AS Portal from your prior database to the new one.

The DBMS job queue is disabled, and there are jobs which would run immediately if it were enabled. Please re-enable the job queue and wait for these jobs to complete, or remove them, before restarting the upgrade.

Cause: Jobs submitted under a previous version of Oracle9*i*AS Portal may not run properly under OracleAS Portal 9.0.4 and higher.

Action: Re-enable the job queue and allow the jobs to complete, or remove them.

The following invalid Portal objects exist in the Portal schema:

Cause: There are invalid Oracle9*i*AS Portal objects in the Portal schema.

Action: Investigate the invalid Oracle9*i*AS Portal objects in the Oracle9*i*AS Portal schema and fix the source of the problem. Run the upgrade again.

The following mandatory object(s) are missing or invalid: <[obj_type]owner.obj_name>

Cause: Mandatory objects which Oracle9*i*AS Portal relies on are not present in the database or are invalid. If they are missing due to a faulty upgrade of the database, it could cause failures in the Oracle9*i*AS Portal upgrade as well.

Action: Review your database installation and upgrade procedures. If the object is present but invalid, run the utlrp.sql script located in rdbms/admin of your database Oracle Home in an installation to recompile all invalid objects in the database.

The Java Option is not enabled in the chosen database. This product installation requires the Java option of the database to be enabled. Enable the Java Option and run the upgrade again.

Cause: Java is not installed in the database or there was a problem during the Java portion of the database upgrade.

Action: Enable the Java Option and run the upgrade again.

The JVM installation is not proper. Please check if you have the JVM installed or if there are invalid java objects in SYS

Cause: SYS java objects are not present in the database or are invalid.

Action: Recompile the invalid java objects in SYS. If this fails, reinstall the JVM in the database.

The LDAP parameters stored in the preference store are either incorrect or missing.

Cause: The OracleAS Portal repository has not been configured correctly for the Oracle Internet Directory.

Action: Please reconfigure OracleAS Portal repository for the Oracle Internet Directory.

The Optimizer Mode should not be set to RULE.

Cause: The optimizer mode is incorrectly set as `RULE`.

Action: Change the optimizer mode to `CHOOSE` and run the upgrade again.

The system triggers are not enabled. Set the _system_trig_enabled flag in the Oracle parameters file to TRUE and run the upgrade again.

Cause: The system triggers are not enabled.

Action: Set the system triggers enabled flag in the Oracle parameters file to TRUE and run the upgrade again.

There are concurrent sessions running for the schema you are upgrading.Verify that there are no other sessions running during the upgrade.

Cause: There are other sessions running on the Oracle9iAS Portal schema.

Action: Make sure your OracleAS Middle Tier 10g (10.1.2) is shut down and no other connections are made to the schema being upgraded. Check the Analyze Product Schema step in the upgrade log for more information on the concurrent sessions.

There are currently jobs running in the DBMS jobs queue. Either kill them or wait for them to finish before restarting the upgrade.

Cause: There are DBMS jobs running.

Action: Either kill the DBMS jobs or wait for them to finish before restarting the upgrade. Check the Analyze Product Schema step in the upgrade log for more information on the running jobs.

There are currently jobs in the DBMS job queue which are incorrectly configured. Please remove these jobs before restarting the upgrade.

Cause: There are Oracle9*i*AS Portal jobs in the DBMS job queue which were either incorrectly submitted as another user, or submitted as the Oracle9*i*AS Portal user with another default schema or default privilege user.

Action: Remove these jobs from the job queue. The upgrade correctly resubmits any jobs that are missing.

There is not sufficient free space in the default tablespace.

Cause: There is less than 20MB of free default tablespace.

Action: Create at least 20MB of free default tablespace. Run the upgrade again.

There is not sufficient free space in the temporary tablespace.

Cause: There is less than 10M of free temporary tablespace.

Action: Create at least 10M of free temporary tablespace. Run the upgrade again.

Unable to bind as the application. LDAP Error: %string%

Cause: An error was encountered while connecting to the Oracle Internet Directory Server.

Action: The line following the error may provide more information about the cause. Make sure that the Oracle Internet Directory Server is up and running and the Portal has been wired correctly against it.

Unable to create directory <upgrade_tmp_dir>

Cause: You do not have permissions to create the temporary directory.

Action: Change your permissions on the parent directory.

Unable to create <log_file_name>. Check permissions on the directory.

Cause: The upgrade log file could not be created.

Action: Change your permissions on the directory where the upgrade log is written or specify a different log file location and run the upgrade again.

Unable to create <user_profile>. Check permissions on the directory.

Cause: The permissions on the temporary directory do not allow the creation of a login.sql script for the user profile.

Action: Change your permissions on the temporary directory and run the upgrade again.

Unable to get the application GUID. LDAP Error: %string%

Cause: Could not get the globally unique identifier for the application entry stored in the Oracle Internet Directory.

Action: The line following the error may provide more information about the cause. Make sure that the Oracle Internet Directory Server is up and running and the Portal has been wired correctly against it.

Unable to unbind. LDAP Error: %string%

Cause: An error was encountered while closing the connection with the Oracle Internet Directory.

Action: The line following the error may provide more information about the cause. Take corrective action as appropriate.

Updating External Application IDs: <string>

Cause: This is an internal error that may occur when converting the external application identifiers.

Action: Report this error to Oracle Support and provide them the output files for upgrade.

Updating provisioning profile: %string%

Cause: An error was encountered while updating the provisioning profile.

Action: The string may provide more information about the cause of error. Take appropriate action to resolve the error.

Unknown error happened in VPD check utility: <check_step>

Cause: An unexpected error happened during the specified step. A subsequent message following this one will contain details about the error.

Action: If the situation described in the details can be corrected, do so.

Version not updated, fatal errors found in upgrade log.

Cause: This message indicates that the version of Oracle9*i*AS Portal will not be updated to the new version. Errors have occurred in the upgrade which will prevent Oracle9*i*AS Portal from functioning properly. A summary of the errors is listed at the end of the upgrade log.

Action: Attempt to fix any errors listed. Search through this chapter and apply any fixes mentioned. Then restore from your backup and run another upgrade. If this fails, contact Oracle Support.

Note: Only certain fatal errors are detected in this check. It is possible for the version to be updated even if other fatal errors are encountered.

Version <version> not supported for upgrades in this release.

Cause: Unsupported Oracle9*i*AS Portal version.

Action: Make sure you are running the upgrade on a supported Oracle9*i*AS Portal version (9.0.2.0, 9.0.2.2, 9.0.2.3, or 9.0.2.6).

Version <version> of Oracle Database is not supported for upgrade.

Cause: Incorrect RDBMS version.

Action: Upgrade to the minimum database version of Oracle9*i* Database 9.0.1.4 Enterprise or Standard editions.

Version <version> of Oracle Portal/WebDB is not supported for upgrade.

Cause: Incorrect Oracle9*i*AS Portal version.

Action: Make sure you are running on a supported Oracle9*i*AS Portal version (9.0.2.0, 9.0.2.2, 9.0.2.3, or 9.0.2.6).

VPD has not been installed properly.

Cause: One of the VPD checks has failed.

Action: This error is followed by a detailed message. Resolve the issue by examining the information provided in the message.

VPD is not being enforced in database.

Cause: A problem occurred in the database that caused the VPD check to fail.

Action: Consult your database documentation to find possible actions.

Write permission not available for directory <upgrade_tmp_dir>.

Cause: You do not have permissions to write to the temporary directory.

Action: Change your permissions on the temporary directory or specify a different temporary directory location and run the upgrade again.

D.6.2.4 Unnumbered Warning Messages

<n> session cleanup job(s) detected in the SYS schema.

Cause: The session cleanup job is a job that usually exists in the Oracle9*i*AS Portal schema. However, an earlier operation such as the database upgrade resulted in creating this job in the SYS schema. For example:

```
WARNING: 1 session cleanup job(s) detected in the SYS schema.
```

Action: This message is informational only. No action is required.

Component <APPLICATION_SCHEMA>.<COMPONENT_NAME> has errors. Please check that all the objects it is based on are present.

Cause: The component is based on one or more missing objects. For example, a QBE is created based on table `MY_TABLE`. Then `MY_TABLE` is dropped. For example:

```
WARNING: Component SCOTT.MY_QBE has errors. Please check that all the objects
it is based on are present.
```

Action: Supply the missing object. If the component is no longer being used, delete it using the OracleAS Portal Navigator.

Could not parse <select_statement> as <schema_name>

Cause: An object on which a Portlet Builder calendar is based is missing. This happens when:

- The table on which the calendar is based is missing.
- The schema on which the database provider containing the calendar is based on is missing.

Examples:

```
WARNING: Could not Parse select a1.HIREDATE the_date, a1.ENAME the_name, null
the_name_link, null the_date_link, null the_target from test_1.EMP_1 a1 order
by a1.HIREDATE as TEST_1.

WARNING: Could not Parse select b2.HIREDATE the_date, b2.ENAME the_name, null
the_name_link, null the_date_link, null the_target from test_2.EMP_2 b2 order
by b2.HIREDATE as TEST_2.
```

This warning usually occurs while upgrading a Oracle9*i*AS Portal which was created using Oracle export/import. Not all of the schemas on which the Portlet Builder components are based were imported. Calendars which show this warning cannot be used unless the missing objects are supplied, and the calendar component is regenerated.

Action: Supply the missing objects and regenerate the component.

Could not refresh OMNIPORTLET provider.

Cause: The refresh of the OminPortlet provider failed because the provider is not accessible.

Action: Verify that the OmniPortlet Web provider is accessible on the portal's middle-tier. After verification, refresh this provider from the Portlet Repository.

Default JPDK instance URL is not present. So, provider is registered using url http://host:port/.

Cause: At the time of upgrade, when the seeded OmniPortlet, Web Clipping, and OracleAS Portal Building Tools providers are registered, it is assumed that these providers are deployed on the same middle-tier as identified in the Default JPDK Instance URL. You can view this value by completing the following steps:

1. Log on to your OracleAS Portal.

2. Click the **Administer** tab.
3. In the Services portlet, click the **Global Settings** link.
4. Click the **Configuration** tab.
5. Locate the **Default JPDK Instance URL** field. Usually this value is `<portal_middle_tier_protocol>://<portal_middle_tier_host>:<portal_middle_tier_port>/jpdk/servlet/soaprouter/`. If there is no value in this field, you will receive the warning mentioned above in your upgrade log.

Action: Run the following script to update the URLs for these providers:

```
ORACLE_HOME/portal/upg/plsql/upg/9025-9026/wws/updmturl.sql
```

The script updates the middle-tier URL for the PORTLETBLDGTOOLS, OMNIPORTLET, and WEBCLIPPING providers in the providers table. This script is not run from the upgrade script. Run it in standalone mode to update the URLs. For example:

```
@updmturl.sql http my.domain.com 80
```

where:

- `http` is the middle-tier's protocol
- `my.domain.com` is the middle-tier's host
- `80` is the middle-tier's port

Document size for file <file_path> is null

Cause: The upgrade found an item on a page which appears to have a document attached but this document does not actually exist. This indicates a data inconsistency in the data for the item. The item will be upgraded but its document will not be accessible. It is unlikely that the document was accessible in Oracle9*i*AS Portal 9.0.2 either.

Action: Delete the item and recreate it.

External Application IDs have been updated. However, some customizations have been lost because of the large number of applications. Please reduce the number of external applications and ask the users to customize again.

Cause: You have a very large number of external applications. The customizations for these applications have exceeded the maximum physical limit for their storage. As a result, some customizations may have been lost.

Action: Reduce the number of external applications on the SSO server. Edit the defaults for the external applications portlet and advise the users to check their customizations.

Non Portal Objects have errors. See <upgrade_tmp_dir>/nonportal.log for details.

Cause: Non-Oracle9*i*ASPortal objects in the Oracle9*i*AS Portal schema cannot be compiled and have errors.

Action: Find out what is causing the object not to compile and rectify it. One reason these errors could occur is because deprecated or changed Oracle9*i*AS Portal APIs are being referenced and these APIs do not work in the latest release. Refer to the PDK information on `http://portalcenter.oracle.com`.

Only <n> % of components in wwv_modules$ table are production components.

Cause: This informational message indicates there are too many archive versions of Portlet Builder (formerly WebView) components. This may be because in Oracle9*i*AS Portal 3.0.9 a new version of a component was created each time the component was edited and saved. For example:

```
WARNING: Only 38 % of components in wwv_modules$ table are production
components.
```

Action: Delete as many of the archive versions of components as possible. This reduces the size of the tables where attributes for all the archive versions are stored.

Portlet Builder (WebView) components have unknown issues.

Cause: The Portlet Builder components (packages) are invalid.

Action: Try resolving the cause of the errors when compiling the packages listed in the log. For example, a report may be based on a table and the table has been dropped. In this case, the report is no longer valid, so you can drop the report.

Region ID = <region ID> on page ID = <page ID> and site ID = <site ID> was not converted to a sub-page links region

Cause: The region on the page was not successfully converted to a sub-page links region during the upgrade, since it contained items other than just the sub-page display items.

Action: The user must first move all the existing items in the region to a different region on the page. After making this change, the user can edit the region properties to convert it to a sub-page links region. Alternatively, a sub-page links region can also be created on the page.

Region ID = <region ID> on template ID = <template ID> and site ID = <site ID> was not converted to a sub-page links region

Cause: The region on the template was not successfully converted to a sub-page links region during the upgrade, either because there were items other than just the sub-page display items on the template itself, or on the pages based on the template. In this case, there were far too many items found in the region, so individual warnings for all pages based on the template could not be reported.

Action: The user must first move all the existing items in the region to a different region on the template/page. After making this change, the user can edit the region properties to convert it to a sub-page links region. Alternatively, a sub-page links region can also be created on the template.

Removed session cleanup job: <job_id> from the SYS schema.

Cause: The session cleanup job is a job that usually exists in the Oracle9*i*AS Portal schema. However, an earlier operation such as the database upgrade has resulted in removing this job as a part of the upgrade. For example:

```
WARNING: Removed session cleanup job: 63 from the SYS schema.
```

Action: If the database instance where the upgrade is being performed does not contain any other Oracle9*i*AS Portal schema, then no action is required. This is because the session cleanup job gets created in the Oracle9*i*AS Portal schema during upgrade. However, if there are other Oracle9*i*AS Portal schemas in the database instance, then it must be verified that they all have their respective session cleanup jobs. Run the following script from `sqlplus` in a Oracle9*i*AS Portal schema to check whether the session cleanup job exists:

ORACLE_HOME`/portal/upg/plsql/wwc/ctxjget.sql`

If this job is missing in any Oracle9*i*AS Portal schema then you can create it by running the script `ctxjsub.sql` from `sqlplus` in that schema, located in the same directory.

Subpage item (title: <item title>) on site id <site_id> and page <page_name> was not upgraded because other items exist in the same region.

Cause: The subpage item was obsoleted but could not be replaced by a subpage region type because there were other items in the same region.

Action: Create a new subpage type region on the page where the warning message appears.

Table without VPD policy: <table_name>

Cause: The VPD policy on the table indicated in the message was not installed properly in your Oracle9*i*AS Portal schema.

Action: If the table indicated in the message is not part of the Oracle9*i*AS Portal product, it is safe to ignore the warning. If the table is one of the following, it is also safe to ignore this warning:

- `WWPRO_OFFLINE_PRO_PORTLET$`
- `WWPRO_OFFLINE_PRO_PORTLET_NLS$`
- `WWPRO_PORTLET_METADATA_USER$`

In all other cases, there may have been a problem with a previous installation or upgrade procedure. Contact Oracle Support for more information.

Template region ID = <region ID> on page ID = <page ID> and site ID = <site ID> was not converted to a Sub-Page Links region

Cause: The region on the template was not successfully converted to a sub-page links region during the upgrade, either because there were items other than just the sub-page display items on the template itself, or on the pages based on the template.

Action: The user must first move out all the existing items in the region to a different region on the template/page. After making this change, the user can edit the region properties to convert it to a sub-page links region. Alternatively, a sub-page links region can also be created on the template.

The DBMS job queue is currently disabled. It must be re-enabled for proper Portal operation.

Cause: The DBMS job queue must be enabled for proper operation. It may have been disabled by setting the system parameter `job_queue_processes` to 0, or by restricting logins.

Action: Make sure `job_queue_processes` is set to one or greater, and that logins are not restricted by changing the system disable restricted session.

The following invalid non-Portal objects exist in the Portal Schema

Cause: Oracle9*i*AS Portal and non-Oracle9*i*AS Portal objects are compiled separately. For Oracle9*i*AS Portal objects, compilation problems are reported as errors. However, for non-Oracle9*i*AS Portal objects, compilation problems are reported as warnings, since they should not cause the upgrade to be considered a failure.

Action: Examine the generated file `<upgrade_tmp_dir>/nonportal.log` and fix the compilation problems associated with your objects. Compilation errors in your packages may cause your portlets to render incorrectly.

User/Role <schema> does not exist. Applications based on <schema> will have errors.

Cause: A database provider (formerly called application) schema is missing. For example:

```
WARNING User/Role SCOTTB does not exist. Application based on SCOTTB will have
errors.
```

In this case, the database provider would not have been accessible before the upgrade either.

Action: Determine if the database provider is obsolete. If it is, delete it. If not, supply the missing schema.

VPD precheck found some issues.

Cause: One of the VPD checks has failed.

Action: This warning is followed by a detailed message. Resolve the issue by examining the information provided in the message.

D.7 Error Messages When Upgrading Oracle Ultra Search

This section contains error messages that are specific to the Oracle Ultra Search.

WKG-100 Error: Current Ultra Search Component has wrong version {0}

Cause: The version of Ultra Search is incorrect for upgrade

Action: Make sure the Ultra Search version satisfies upgrade requirement

WKG-101 Error: Ultra Search Upgrade is having problem with database: {0}

Cause: An Oracle exception has been raised while performing the upgrade

Action: Check the specific Oracle exception for the nature of the problem

WKG-102 Error: Ultra Search Upgrade is having problem closing DB Connection

Cause: An Oracle exception has been raised while disconnecting from the database

Action: Check the specific Oracle exception for the nature of the problem

WKG-103 Error: Unable to connect to database as {0}: {1}

Cause: Ultra Search MRUA plugin is unable to connect to the MR database

Action: Check the specific Oracle exception for the nature of the problem

WKG-104 Error: upgrade not performed due to previous error"

Cause: An earlier error has been encountered

Action: Check and resolve the error that comes before this message

WKG-105 Error: Unknown upgrade scenario, DB version = {0}, Ultra Search version = {1}

Cause: Ultra Search plugin does not know to upgrade this Ultra Search configuration

Action: Make sure the database version and Ultra Search version satisfies upgrade requirement

WKG-106 Error: Upgrade error: {0}

Cause: An Ultra Search upgrade specific error has been encountered during upgrade

Action: Check the specific error message for more information

WKG-199 Error: Unexpected internal error: {0}

Cause: An unexpected upgrade error has been encountered

Action: Check the specific error message for more information.

D.8 Error Messages When Upgrading OracleAS Wireless

This section contains error messages that are specific to the OracleAS Wireless.

Could Not Copy File or Create Directory

Cause: This error indicatest that the disk is full, or you do not have sufficient permissions to copy the file.

Action: Determine the available disk space and permissions for the following directory and adjust as necessary:

```
DESTINATION_ORACLE_HOME/wireless/server/classes
```

Failed to send LocalCfgChangeEvnet due to the following DB Access Error

Cause: Whenever there is configuration data change, OracleAS Wireless tries to broadcast a configuration data change event to all the working Wireless Processes. During the middle-tier upgrade, the middle tier is down. As a result, OracleAS Wireless generates the following error:

```
[TIMESTAMP] NOTIFICATION:1 Wireless: LocalCfgSession: Failed to send
LocalCfgChangeEvnet due to the following DB Access Error:
[TIMESTAMP] NOTIFICATION:1 Wireless: LocalCfgSession: SQLCODE is -20001
[TIMESTAMP] NOTIFICATION:1 Wireless: LocalCfgSession: SQLERROR is NO INSTANCE
UNDER [MID-OH] ON [MACHINE] HAS BEEN STARTED
```

Action: None. This is an expected warning message and no action is required.

ERROR: Provisioning Profile Already Exists.

The Provisioning Profile for the Application could not be created.

Cause: Oracle Internet Directory is not responding or there is a problem with a process created or maintained by Oracle Internet Directory.

Action: Restart the processes in the OracleAS Infrastructure Oracle home.

Glossary

Applications tier

The tier of Oracle Collaboration Suite that runs the server applications that provide specific functionality to end users. The term "Applications tier" replaces the term "middle tier" that was used in previous releases. Each Applications tier corresponds to an instance of Oracle Application Server.

See also Oracle Collaboration Suite Applications.

Client tier

The tier of Oracle Collaboration Suite that consists of the end-user applications that reside on client devices, such as desktops, laptops, wireless phones, and PDAs.

See also Oracle Collaboration Suite Applications.

customer database

An Oracle Collaboration Suite information storage database (an Oracle9*i* Database) that was upgraded out-of-place to Oracle Database 10*g* and patched to release 10.1.0.4. This database is not recognized by the Oracle Universal Installer as an Oracle Collaboration Suite database. You do not need to upgrade this database but instead use the Oracle Universal Installer to enable it as an Oracle Collaboration Suite Database.

Database Upgrade Assistant

An interactive tool started by the Oracle Universal Installer when you upgrade an existing Oracle Collaboration Suite information storage database. It steps you through the upgrade process and configures the database for the new Oracle Database 10*g* release. The Database Upgrade Assistant automates the upgrade process by performing all of the tasks normally performed manually. The Database Upgrade Assistant makes appropriate recommendations for configuration options such as tablespaces and redo logs. You can then act on these recommendations.

destination Oracle home

An upgraded Oracle home where an Oracle Collaboration Suite 10*g* Release 1 (10.1.1) component is installed.

distributed Oracle9*i*AS Infrastructure

An Oracle9*i*AS Infrastructure where the Oracle Identity Management components are distributed across different Oracle homes. An Oracle9*i*AS Infrastructure configured with Oracle Internet Directory and Oracle9*i*AS Metadata Repository is installed in an Oracle home on one system. Another Oracle9*i*AS Infrastructure configured with

Oracle9*i*AS Single Sign-On and Oracle9*i*AS Metadata Repository is installed in an Oracle home on a different system.

See also non-distributed Oracle9*i*AS Infrastructure.

distributed Oracle9*i*AS Metadata Repository

An Oracle9*i*AS Infrastructure configuration where you assign one or more middle tier components to their own Oracle9*i*AS Metadata Repository. You create this configuration by installing a distributed or non-distributed Oracle9*i*AS Infrastructure and then, on a separate system, installing one or more additional Oracle9*i*AS Infrastructures with only the Oracle9*i*AS Metadata Repository configured. You then install an Oracle Collaboration Suite middle tier and connect to the second Oracle9*i*AS Metadata Repository.

Infrastructure tier

The tier of Oracle Collaboration Suite that consists of the components that provide services, such as identity management and metadata storage, for the Applications tier. Components of the Infrastructure tier include Oracle Collaboration Suite Database and Oracle Identity Management.

See also Oracle Collaboration Suite Infrastructure.

in-place upgrade

The process of upgrading an Oracle Collaboration Suite component by overwriting existing files, rather than creating copies or new versions of them. For example, datafiles are modified in-place as part of the upgrade process.

See also out-of-place upgrade.

non-distributed Oracle9*i*AS Infrastructure

An Oracle9*i*AS Infrastructure where Oracle Internet Directory, Oracle9*i*AS Single Sign-On and Oracle9*i*AS Metadata Repository are configured in a single Oracle home.

See also distributed Oracle9*i*AS Infrastructure.

Oracle Application Server Metadata Repository Upgrade Assistant

A tool that upgrades some of the Oracle9*i*AS component schemas in the Oracle9iAS Metadata Repository to Oracle Application Server Metadata Repository. The schemas related to Oracle Identity Management are upgraded as part of the Oracle9*i*AS Infrastructure upgrade while some schemas do not require any modification. The OracleAS Metadata Repository Upgrade Assistant performs an in-place upgrade.

Oracle Collaboration Suite

An integrated suite of software applications to enable communication, messaging, and content sharing in an enterprise environment. At an architectural level, it includes three tiers: an Applications tier, which consists of server applications that provide the basic functionality, a Client tier, which consists of applications on desktops, laptops, and wireless devices, and an Infrastructure tier, which provides centralized services, such as identity management and metadata storage, for the applications.

Oracle Collaboration Suite Applications

The applications that make up Oracle Collaboration Suite, namely:

Oracle Calendar

Oracle Collaboration Suite Search

Oracle Content Services

Oracle Discussions

Oracle Mail

Oracle Mobile Collaboration

Oracle Real-Time Collaboration

Oracle Voicemail & Fax

Oracle Workspaces

Each of the preceding applications is a component of Oracle Collaboration Suite Applications. These applications rely on the services provided by the Infrastructure tier.

See also Applications tier.

Oracle Collaboration Suite Database

The default database included with Oracle Collaboration Suite to hold application data and metadata. The Oracle Collaboration Suite Database is part of the Oracle Collaboration Suite Infrastructure.

Oracle Collaboration Suite Infrastructure

The underlying components that support Oracle Collaboration Suite and provide centralized product metadata and security services, configuration information, and data repositories for Oracle Collaboration Suite Applications. Oracle Collaboration Suite Infrastructure uses and builds on OracleAS Infrastructure. It includes the Oracle Collaboration Suite Database and Oracle Identity Management.

See also Infrastructure tier.

Oracle Collaboration Suite Upgrade Assistant

An interactive tool started by the Oracle Universal Installer when you upgrade an existing Oracle Collaboration Suite middle tier Oracle home. It steps you through the upgrade process and and automates the upgrade process by performing all of the tasks normally performed manually, such as copying configuration information from the source Oracle home to the destination Oracle home.

Oracle Identity Management

An integrated set of components that provide distributed security to Oracle products and make it possible to centrally and securely manage enterprise identities and their access to applications in the enterprise. It includes the following components: Oracle Internet Directory, Oracle Directory Integration and Provisioning, Oracle Delegated Administration Services, OracleAS Single Sign-On, and Oracle Application Server Certificate Authority.

Oracle Universal Installer

A Java-based graphical user interface application that enables you to install Oracle components from a CD, multiple CDs, or the Web. It is used to start the Oracle Collaboration Suite upgrade process. If you select a product and installation type that is already installed on the same system, then if offers you the option of upgrading that component. If you choose to upgrade, then it installs a Oracle Collaboration Suite 10*g* Release 1 (10.1.1) in a new Oracle home and starts the appropriate upgrade assistant to automate the process of configuring the new Oracle home.

out-of-place upgrade

The process of upgrading an Oracle Collaboration Suite component by installing a new version of the product in a different Oracle home than the existing component. In this type of upgrade, files in the source Oracle home are not modified. Files in the destination Oracle home may be modified with values from files in the source Oracle home.

See also in-place upgrade.

rolling upgrade

The process of upgrading a middle tier Oracle home without stopping the applications configured in other middle tier Oracle homes.

staged upgrade

The process of upgrading where after each phase of the upgrade is completed, the entire Oracle Collaboration Suite environment works as it did before the upgrade began, even though different components are at different versions. Oracle Collaboration Suite supports one order of upgrade that allows for a staged upgrade: Oracle9*i*AS Infrastructure, Oracle Collaboration Suite information storage database, Oracle Collaboration Suite middle tiers and Oracle9*i*AS Metadata Repository.

source Oracle home

An Oracle home where an Oracle Collaboration Suite Release 1 (9.0.3) or Release 2 (9.0.4) component. This is the Oracle home that is upgraded.

See also destination Oracle home.

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