Oracle® Universal Online Archive

Installation and Administrator's Guide

10g Release 3 (10.2.2.1.0)

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Oracle Universal Online Archive Installation and Administrator's Guide, 10g Release 3 (10.2.2.1.0)

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Preface

This document contains information necessary for the installation and configuration of Oracle Universal Online Archive (Oracle UOA). It also includes steps that prepare Oracle UOA to be used with Oracle Email Archive Service (Oracle EAS).

> **Note:** Oracle may update this documentation periodically after the software release. You can access the latest information and additions to this document on the Oracle Technology Network (OTN) at
>
> `http://www.oracle.com/technology/documentation`

This preface includes the following topics:

Audience

This document is intended for users who want to install Oracle UOA. It is also for users who want to prepare Oracle UOA for integration with Oracle EAS. Experience installing Oracle products and experience as a system administrator are necessary.

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Related Documents

For more information, see the following Oracle resources.

- Oracle Application Server documents:
  - *Oracle Application Server Installation Guide* for your operating system
  - *Oracle Application Server Quick Installation Guide* for your operating system
  - *Oracle Application Server Administrator's Guide*
  - *Oracle Application Server Enterprise Deployment Guide*
  - *Oracle Application Server High Availability Guide*
  - *Oracle Application Server Metadata Repository Creation Assistant User's Guide* for your operating system
  - *Oracle Internet Directory Administrator's Guide*
  - *Oracle Identity Management Guide to Delegated Administration*
  - *Oracle Identity Management Infrastructure Administrator's Guide*
- Oracle Database 11*g* documents:
  - *Oracle Database Installation Guide* for your operating system
  - *Oracle Database Administrator's Guide*
  - *Oracle Database Quick Installation Guide* for your operating system
  - *Oracle Clusterware Installation Guide* for your operating system
- Oracle Content Database documents:
  - *Oracle Content Database Installation Guide* for your operating system
  - *Oracle Content Database Administrator's Guide*
  - *Oracle Content Database Release Notes*
- Oracle Universal Online Archive documentation:
  - *Oracle Universal Online Archive Release Notes 10g Release 3 (10.2.2.1.0)*
- The Oracle Email Archive Service documentation set

Conventions

The following text conventions are used in this document.

Convention	Meaning
boldface	Boldface type indicates a graphical user interface element associated with an action, or a term defined in text or the glossary.
italic	Italic type indicates a book title, emphasis, or a placeholder variable for which you supply a value.
`monospace`	Monospace type indicates a command within a paragraph, URL, code in text or an example, text that appears on the screen, or text that you enter.
`#`	A crosshatch begins a line that contains an operating system command. Do not enter the leading # character.
`SQL>`	An SQL prompt begins a line that contains an SQL*Plus command. Do not enter the leading `SQL>` characters.

1

Introduction to Installing Oracle Universal Online Archive

This chapter provides an introduction to the installation of Oracle Universal Online Archive (Oracle UOA) and the components that support it. This chapter includes the following topics:

1.1 New Clustering Feature in Oracle UOA 10g (10.2.2.1.0)

Oracle UOA uses a set of server processes to perform critical operations on a time basis, event basis, or both. In previous releases, most of these server processes acted as **singletons**, meaning that they are to run on only one Oracle UOA middle-tier node. The burden was on the administrator to configure the middle-tier nodes correctly. If the configuration was such that a server process was not running, the UOA system might not function correctly. Similarly, if the configuration was such that a singleton server process was run on more than one node, the UOA system might also not function properly.

In Oracle UOA 10*g* (10.2.2.1.0), a new clustering feature is available. This feature automatically configures each server process for high availability, providing graceful failover so that if one node stops performing work, another node will start performing the work instead. In addition, Oracle UOA can automatically balance server processes across declared nodes.

To fine-tune the configuration, you can customize the clustering properties. For more information, see Section 6.1, "Changing the Clustering Configuration for Server Processes."

1.2 Overview of Installing Oracle UOA

Oracle UOA runs in Oracle Application Server and uses Oracle Content Database (Oracle Content DB) for its infrastructure and Oracle Database 11*g* for its content repository. Oracle UOA also uses Oracle Identity Management, part of Oracle Application Server Infrastructure (OracleAS Infrastructure), for user management and authentication. Typically, Oracle Email Archive Service (Oracle EAS) is installed to integrate with Oracle UOA. Because of these dependencies, installing Oracle UOA involves the following tasks:

- Installing OracleAS Infrastructure (if you do not have one installed and deployed already)
- Installing a new Oracle Database 11*g* or adjusting the parameters of an existing Oracle Database 11*g*
- Registering the Oracle Database 11*g* you are using with Oracle Internet Directory (part of OracleAS Infrastructure)
- Installing a patch for Oracle SecureFiles (optional)
- Installing one or more Oracle Content DB middle tiers
- Installing the most recent version of OPatch (mandatory)
- Installing Oracle UOA on top of each Oracle Content DB middle tier
- Installing Oracle EAS (optional)

This guide provides information about how to install Oracle UOA middle tiers. It includes some but not all of the information you need to install the other components. Links to specific guides in component documentation sets are provided in key places in this guide to help you through the installation process for all of these components.

For a list of the operating systems (or platforms) that Oracle UOA supports, see Knowledge Base Note 578167.1, "Oracle Universal Online Archive Certification Matrix," on the My Oracle Support Web site (formerly *MetaLink*) at

`http://metalink.oracle.com`

1.3 Deployment Configurations

In a production environment, Oracle UOA is typically deployed on multiple computers. This configuration enables you to achieve higher archiving throughput, separate the components, and configure failover, load-balancing, and high-availability options. With a multiple-computer deployment, you can also use computers with lower hardware requirements than required for a single-computer deployment.

Oracle UOA can be installed on a single computer if the computer meets the recommended hardware and software requirements. If your computer does not meet the recommended requirements, the performance of this configuration might be less than satisfactory. A single-computer deployment does not allow you to use load-balancing or failover options. For more information, see Section 3.7, "Installing Oracle UOA on a Single Computer."

For more information about planning for deployment, see also the "Planning for Oracle Content DB Deployment" chapter in *Oracle Content Database Administrator's Guide*.

2

Using Installation Checklists

This section provides checklists for installing Oracle Application Server Infrastructure (OracleAS Infrastructure), Oracle Database 11*g*, the Oracle Content Database (Oracle Content DB) middle tier, and Oracle Universal Online Archive (Oracle UOA). Each checklist identifies the information you are prompted to enter for each installation.

Table 2–1 lists required information for installing OracleAS Infrastructure.

Table 2–2 lists required information for installing Oracle Database 11*g*.

Table 2–3 lists required information for installing the Oracle Content DB middle tier.

Table 2–4 lists required information for installing Oracle UOA.

All the checklists provide blank table cells for writing in your information.

> **Note:** Oracle recommends that you ensure the safety and confidentiality of the following checklists because they contain sensitive information.

Table 2–1 Checklist for Installing OracleAS Infrastructure (Identity Management)

Information	Description	Example Values	Your Information
Inventory directory path	The full path to the inventory directory. This directory must be different from the Oracle home directory for the product files. This information is required only if this is the first installation of any Oracle product on the computer.	`/u01/app/oracle/oraInventory`	
Operating system group name	The operating system group that will have write permission for the inventory directory. This information is required only if this is the first installation of any Oracle product on the computer.	`oinstall`	
Oracle home name	The name of the Oracle home for OracleAS Infrastructure.	`AS_Infra_home1`	
Oracle home path (destination path)	The directory path for the Oracle home.	`/u01/app/oracle/product/10.1.4/as_1`	

Table 2–1 (Cont.) Checklist for Installing OracleAS Infrastructure (Identity Management)

Information	Description	Example Values	Your Information
Namespace in Oracle Internet Directory	The namespace in Oracle Internet Directory under which users will be contained. This namespace will be the default identity management realm.	`dc=mycompany,dc=com`	
Global database name	The name for the Oracle Application Server Metadata Repository (OracleAS Metadata Repository) database in the form *`database_name.domain_name`*.	`infra.mycompany.com`	
System identifier (SID)	The Oracle SID for the OracleAS Metadata Repository database.	`infra`	
Database character set	The character set to use for the OracleAS Metadata Repository. If you want to use the OracleAS Metadata Repository as your Oracle Content DB database, you must choose AL32UTF8 (this is *not* the default).	`Unicode standard UTF-8 AL32UTF8`	
Database file location	The full path to the parent directory of the data files for the OracleAS Metadata Repository database. This parent directory must already exist, and you must have write permissions in this directory.	`/u02/oradata`	
Database schema passwords	Passwords for the `SYS`, `SYSTEM`, `SYSMAN`, and `DBSNMP` schema users to use. You can create the same password for all four schemas, or you can create separate passwords.	*`your_sys_password`* *`your_system_password`* *`your_sysman_password`* *`your_dbsnmp_password`*	
Application Server instance name	The name of the infrastructure instance. Do not use the host name of the computer when naming an Oracle Application Server instance.	`infra`	
`ias_admin` password	The password for the administrator user for Oracle Application Server instances, used to log in to Oracle Enterprise Manager 10*g* Application Server Control. The minimum length of the password is five alphanumeric characters, and at least one of the characters must be a number.	*`your_iasadmin_password`* Note: The initial password for the `cn=orcladmin` Oracle Internet Directory user is the same as the password provided for the `ias_admin` user.	
`Root` password	The root user password for the operating system where you are installing the database.	*`your_root_password`*	

Table 2–2 Checklist for Installing Oracle Database 11g

Information	Description	Example Values	Your Information
Oracle home name	The name of the Oracle home for the database.	`OraDb11g_home1`	
Oracle home path	The directory path for the Oracle home.	`/u01/app/oracle/product/11.1.0/db_1`	
Global database service name	The name for the database.	`orcl.mycompany.com`	
Oracle system identifier (SID)	The Oracle system identifier for the database.	`orcl`	
Database passwords	Passwords for the `SYS`, `SYSTEM`, `SYSMAN`, and `DBSNMP` schema users to use. You can create the same password for all four schemas, or you can create separate passwords.	*`your_sys_password`* *`your_system_password`* *`your_sysman_password`* *`your_dbsnmp_password`*	
Database character set	The character set to use for the database. Make sure to set the character set to AL32UTF8 (this is *not* the default).	`Unicode (AL32UTF8)`	
Database file location	The directory path for the database files. Oracle recommends installing database files and Oracle software on separate disks.	`/u02/oradata`	
`Root` password	The root user password for the operating system where you are installing the database.	*`your_root_password`*	

Table 2–3 Checklist for Installing the Oracle Content DB Middle Tier

Information	Description	Example Values	Your Information
Oracle home name	The name of the Oracle home for the Oracle Content DB middle tier.	`UOA_home1`	
Oracle home location	The directory path for the Oracle home.	`/u01/app/oracle/product/10.2/uoa_1`	
Oracle Internet Directory host name	The fully qualified host name for the Oracle Internet Directory instance you want to use with Oracle Content DB.	`infra_host.mycompany.com`	
Oracle Internet Directory port	The port number for the Oracle Internet Directory instance you want to use with Oracle Content DB.	`389` (non-SSL) `636` (SSL)	
Oracle Internet Directory administrator user name	The user name for an Oracle Internet Directory account that has administrator privileges, such as `cn=orcladmin`. You can also use any Oracle Internet Directory user with the following privileges: ■ `IAS & User Management Application Admin` ■ `iAS Admin`	`cn=orcladmin`	
Oracle Internet Directory administrator password	The password for the Oracle Internet Directory account that has administrator privileges, such as `cn=orcladmin`.	*`your_cn_orcladmin_password`*	
Oracle Internet Directory realm name	The realm to which the Oracle Internet Directory administrator belongs. Only required if the Oracle Internet Directory instance contains multiple realms.	`us`	
Oracle Database	If your Oracle Database is installed on a computer running Microsoft Windows, you must disable the fire wall prior to installing Oracle Content DB, as follows: 1. From the **Start** menu, select **Control Panel**, then **Security Center**, and then **Windows Firewall**. 2. Select **Off**. 3. Click **OK**, and then exit the Security Center and Control Panel. Upon successful installation of Oracle Content DB, ensure that you reenable your fire wall.	NA	
Database connection string	The connection string for the Oracle Database that you want to use for the Oracle Content DB middle tier.	`orcl.mycompany.com`	

Table 2–3 (Cont.) Checklist for Installing the Oracle Content DB Middle Tier

Information	Description	Example Values	Your Information
SYS password	The password for the database user SYS.	*your_sys_password*	
CONTENT schema password	The password for the CONTENT schema user.	*your_content_password*	
Simple Mail Transfer Protocol (SMTP) host (optional)	The full host name of the SMTP server you want to use with Oracle Content DB. You can also enter the IP address of the SMTP host.	email.mycompany.com	
SMTP port (optional)	The port on which the SMTP server listens.	25	
Instance name	The name of the Oracle Application Server instance for the Oracle Content DB middle tier. Do not use the host name of the computer when naming the Oracle Application Server instance.	uoa1	
ias_admin password	The password of the administrator for the Oracle Application Server instance for the Oracle Content DB middle tier.	*your_iasadmin_password*	
Root password	The root user password for the operating system where you are installing Oracle Content DB.	*your_root_password*	

Table 2–4 Checklist for Installing Oracle UOA

Information	Description	Example Values	Your Information
Oracle home for Oracle Content DB	The directory path for the Oracle home in which Oracle Content DB is installed.	`/u01/app/oracle/product/10.2/uoa_1`	
Oracle Internet Directory administrator password	The password for the Oracle Internet Directory account that has administrator privileges.	*your_cn_orcladmin_password*	
Database host name	Information needed to construct the database connection descriptor (which follows).	`db_host.mycompany.com`	
Database listener port		`1521`	
Global database service name		`orcl.mycompany.com`	
Database connection descriptor	To invoke SQL scripts to create objects in Oracle UOA, a connection from the Oracle UOA middle tier to the database is required. Add this entry to *ORACLE_HOME*`/network/admin/tnsnames.ora`. For example: `SQL> connect CONTENT/`*your_content_password*`@ORCL`	`ORCL = (DESCRIPTION = (ADDRESS = (PROTOCOL = TCP) (HOST = db_host.mycompany.com)(PORT = 1521)) (CONNECT_DATA = (SERVER = DEDICATED) (SERVICE_NAME = orcl.mycompany.com)))`	
`SYS` password	The password for the database user `SYS`.	*your_sys_password*	
`CONTENT` schema password	The password for the `CONTENT` schema user.	*your_content_password*	
`CONTENT$EAS` schema password	The password for the Oracle Email Archive Service (Oracle EAS) schema user `CONTENT$EAS`. This user will be used to install database objects needed by Oracle EAS.	*your_contenteas_schema_password*	
`easadmin` user password	The password for the Oracle UOA administrative user `easadmin`. This user has administrator access to all e-mail messages archived through Oracle EAS.	*your_contenteas_uoa_user_password*	

3

Installing Supporting Components for Oracle UOA

This chapter provides streamlined instructions for installing Oracle Universal Online Archive (Oracle UOA) and supporting components, including Oracle Application Server Infrastructure (OracleAS Infrastructure), which contains Oracle Identity Management), Oracle Database 11*g*, and Oracle Content Database (Oracle Content DB) middle tier. It also provides information about installing Oracle UOA and supporting components on a single computer.

To use this chapter effectively, first see the checklists in Chapter 2, "Using Installation Checklists," to collect the information you will need during the installation. Then follow the procedures in this chapter for step-by-step instructions.

This chapter includes the following topics:

3.1 Introduction to Installing Supporting Components for Oracle UOA

Installing Oracle UOA involves the following tasks, which include installing supporting components:

- Installing OracleAS Infrastructure (if you do not have one installed and deployed already)
- Installing a new Oracle Database 11*g* or adjusting the parameters of an existing Oracle Database 11*g*
- Registering the Oracle Database 11*g* you are using with Oracle Internet Directory, part of OracleAS Infrastructure)
- Installing a patch for Oracle SecureFiles (optional)
- Installing one or more Oracle Content Database (Oracle Content DB) middle tiers

- Installing the most recent version of OPatch
- Installing Oracle UOA on top of each Oracle Content DB middle tier
- Installing Oracle Email Archive Service (Oracle EAS) (optional)

3.2 Installing OracleAS Infrastructure (Identity Management)

If you already have an OracleAS Infrastructure instance installed and deployed, skip this step. If you do not, follow the instructions under "Quick Installation of OracleAS Infrastructure" in *Oracle Content Database Installation Guide* for your operating system.

Note: Oracle recommends that you install OracleAS Infrastructure 10.1.4.0.1 for a new OracleAS Infrastructure installation.

For more detailed information, see also the "Installing OracleAS Infrastructure" chapter in *Oracle Content Database Installation Guide*.

For general installation information, see also *Oracle Application Server Installation Guide*.

For information about which versions of OracleAS Infrastructure are certified with Oracle UOA, see also Knowledge Base Note 578167.1, "Oracle Universal Online Archive Certification Matrix," on the My Oracle Support Web site (formerly *MetaLink*) at

`http://metalink.oracle.com`

3.3 Installing Oracle Database 11g

If you already have Oracle Database 11*g* installed, skip this step. Adjusting the parameters of the database is covered in Section 3.6, "Installing the Oracle Content DB Middle Tier."

This section provides streamlined instructions for installing an Oracle Database 11*g* for Oracle UOA. For complete information, see "Installing Oracle Database" in *Oracle Content Database Installation Guide* for your operating system, and also see *Oracle Database Installation Guide* and *Oracle Database Quick Installation Guide* for your operating system.

The following procedure might be slightly different from your actual installation, depending on which option you select and which database version you are installing.

Note: Oracle UOA requires Oracle Database version 11.1.0.6 or later with the SecureFiles feature. Oracle Database version 10.2 and earlier versions are *not* supported. For the most up-to-date certification information, see Knowledge Base Note 578167.1, "Oracle Universal Online Archive Certification Matrix," on the My Oracle Support Web site (formerly *MetaLink*) at

`http://metalink.oracle.com`

For more details, see also Chapter 4, "Meeting Preinstallation Requirements for Oracle UOA."

> **Tip:** When you refer to books in the Oracle Database 11*g* documentation library, make sure that the version and platform of the book you are looking at match the version and platform of the Oracle Database you are installing.

To install Oracle Database 11*g*:

1. Ensure that all hardware, software, and other requirements are met before you start the installation.

   For more information, see also the "Oracle Database Preinstallation Requirements" chapter in *Oracle Database Installation Guide*.

   > **Tip:** Use the checklist in Table 2–2 to record the information you need to provide during Oracle Database 11*g* installation.

2. Start Oracle Universal Installer. The Welcome screen appears.

   For more information, see also "Understanding Oracle Universal Installer" and "Starting Oracle Universal Installer" in *Oracle Content Database Installation Guide* for your operating system.

3. On the Select a Product to Install screen, select **Oracle Database 11g**, and then click **Next**.

4. On the Select Installation Method screen, select **Advanced Installation**, and then click **Next**.

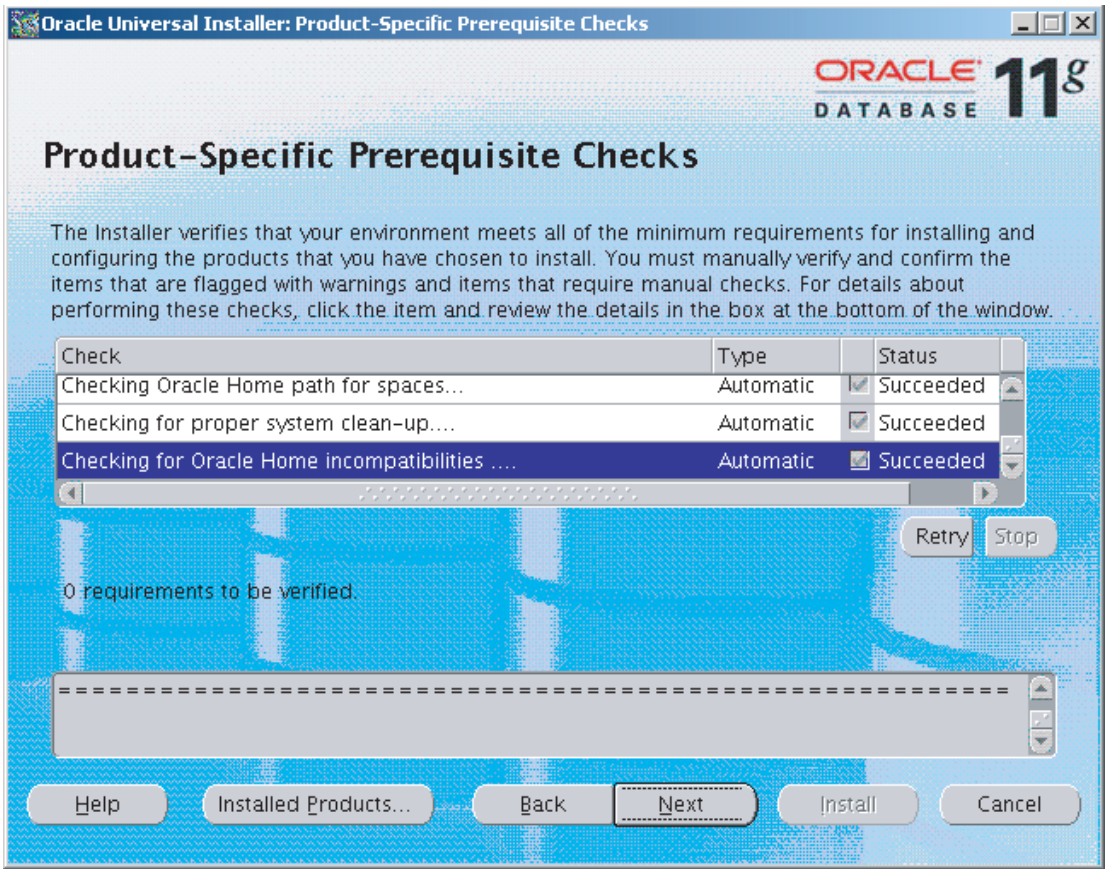
5. On the Select Installation Type screen, select **Enterprise Edition**, and then click **Next**.

6. On the Install Location screen, provide a path for the Oracle base location. In the Software Location Section provide a name for the Oracle home, provide the path where you want the database to be installed, and then click **Next**.

7. On the Product-Specific Prerequisite Checks screen, review any prerequisites that have been marked with warnings or that need to be checked manually. Be sure to fix any outstanding issues before proceeding. When you have finished reviewing the prerequisites, click **Next**.

   Figure 3–1 shows a successful Product-Specific Prerequisite Checks screen, with no failed prerequisite checks.

Figure 3–1 Oracle Database Installation: Product-Specific Prerequisite Checks Screen



8. On the Select Configuration Option screen, select a database configuration type, and then click **Next**.

   The remainder of this procedure follows from the selection of **Create a Database** on this screen. For information about selecting **Configure Automatic Storage Management (ASM)** or **Install Software Only**, see *Oracle Database Installation Guide*.

9. On the Select Database Configuration screen, select **General Purpose**, and then click **Next**.

10. On the Database Configuration Options screen, provide a value for **Global Database Name** in the form `database_name.domain_name`, enter the Oracle system identifier in the **SID** box, and then click **Next**.

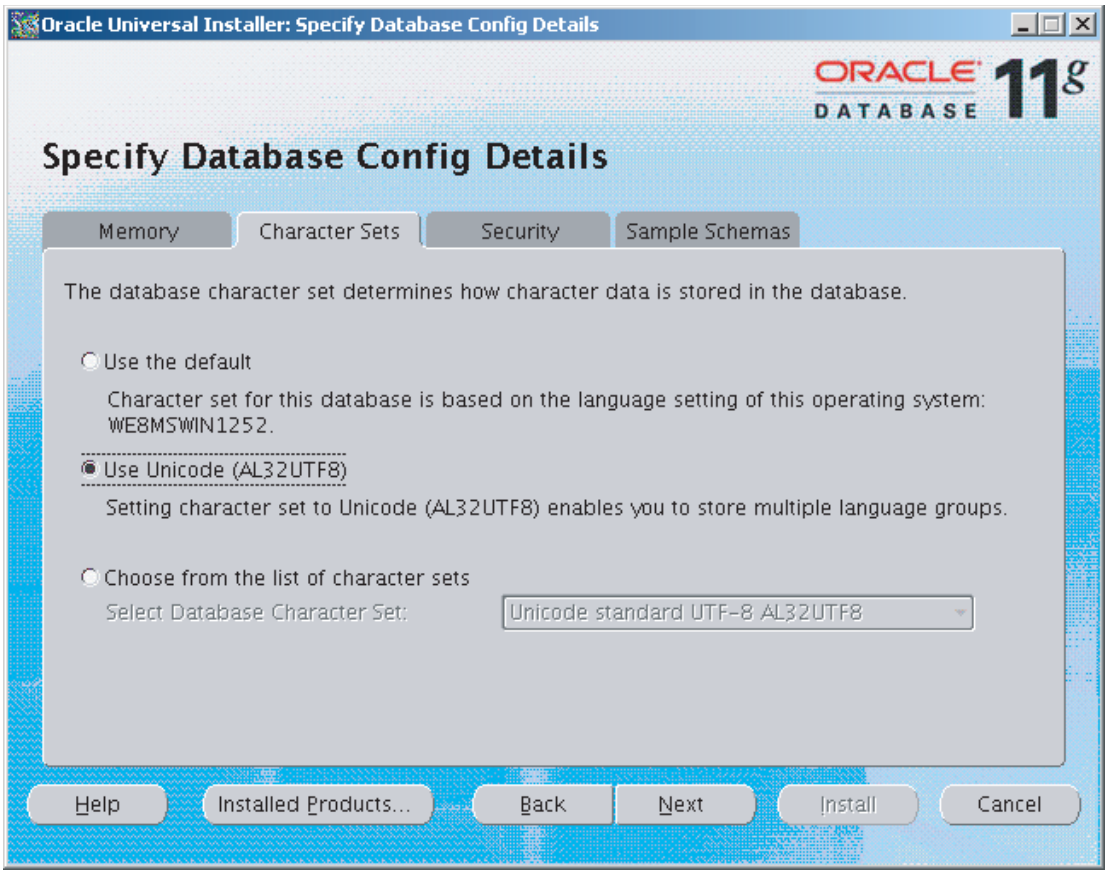
    The SID defaults to the database name and uniquely identifies the instance that runs the database.

11. On the Specify Database Config Details screen, click the **Character Sets** tab, select **Use Unicode (AL32UTF8)**, and then click **Next**.

    Choosing AL32UTF8 is required for using the database with Oracle UOA.

    Figure 3–2 shows the **Character Sets** tab.

Figure 3–2 Character Sets Tab of the Specify Database Config Details Screen



12. On the Select Database Management Option screen, click **Next**.
13. On the Database Storage Option screen, choose either **File System** or **Automatic Storage Management**, and then click **Next**.

    For more information about Automatic Storage Management, see *Oracle Database Installation Guide*.

    If you choose the **Raw** storage option, contact Oracle Support Services before proceeding with the installation of the Oracle UOA middle tier.
14. On the Backup and Recovery Options screen, select either **Do not enable Automated Backups** or **Enable Automated Backups**, and then click **Next**.

    For more information about the settings on this screen, see *Oracle Database Installation Guide*.
15. On the Database Schema Passwords screen, provide passwords for the `SYS`, `SYSTEM`, `DBSNMP`, and `SYSMAN` schema users, and then click **Next**.

    You can use the same password for all these schemas, or you can use different passwords.
16. On the Privileged Operating System Group screen, click **Next**.
17. On the Oracle Configuration Manager Registration screen, click **Next**.
18. On the Summary screen, review your settings, and then click **Install**.

    The Install Progress screen displays the progress of the installation.

19. Run any required configuration scripts, such as `root.sh`, as prompted.

> **Note:** You must run `root.sh` as the operating system user `root`.

20. On the End of Installation screen, click **Exit**, and then click **Yes** to quit the installer.

    After Oracle Database 11*g* has been successfully installed, you can perform postinstallation tasks to complete the installation. For recommended postinstallation tasks, see also *Oracle Database Installation Guide*.

3.4 Registering an Oracle Database 11*g* with Oracle Internet Directory

You must register an Oracle Database 11*g* with Oracle Internet Directory before you can use the database with Oracle UOA. For more information, see "Registering Oracle Database with Oracle Internet Directory" in *Oracle Content Database Installation Guide* for your operating system.

> **Note:** It is very important that you register the Oracle Database 11*g* with Oracle Internet Directory. Without registering the Oracle Database 11g, you cannot use it with Oracle Content DB or Oracle UOA.

3.5 Installing an Oracle Database 11g SecureFiles Patch

Oracle UOA requires Oracle Database 11*g* with the SecureFiles feature. You should apply SecureFiles critical patches to avoid any problems. For more information, see Knowledge Base Note 468163.1, "List of Critical Patches Required For Oracle 11g SecureFiles," on the My Oracle Support Web site (formerly *MetaLink*) at

`http://metalink.oracle.com`

For Linux x86 and Sun Solaris SPARC (64-bit), this note currently directs customers to Patch 6367945 for Oracle Database 11*g* (11.1.0.6). Patch 6367945 is expected to be superseded by a future patch set release of Oracle Database 11*g*. When that occurs, Knowledge Base Note 468163.1 will be updated.

To install an Oracle Database 11g SecureFiles Patch:

1. Locate Patch 6367945 on the My Oracle Support Web site (formerly *MetaLink*) at

   `http://metalink.oracle.com`

2. Select the right platform for your Oracle Database 11*g* installation, and then click **Download**.

3. Unzip the file `p6367945_111060_LINUX.zip` or `p6367945_111060_SOLARIS64.zip` to any temporary directory, referred to hereafter as `$TEMP_DIR`; for example:

   ```
   # unzip p6367945_111060_LINUX.zip -d $TEMP_DIR
   ```

> **Note:** For information about unzipping files in different operating system environments, see the Oracle UnZip Utilities Download page at
>
> http://updates.oracle.com/unzips/unzips.html
>
> Unzipping the file in a Windows environment and transferring the files to another operating system environment will corrupt the contents of the patch files. Oracle recommends that you unzip the file on the computer where you will be applying the patch.

4. A directory named `6367945` is created inside the temporary directory.
5. Navigate to the `$TEMP_DIR/6367945` directory:

   ```
   # cd $TEMP_DIR/6367945
   ```

6. Open the `README.txt` file, and then follow the instructions exactly as described.
7. Before you install this patch, make sure that all instances running in the Oracle home being patched are cleanly shut down and that the tool you used to terminate the instance or instances has exited cleanly.
8. If Oracle Inventory is not set up correctly, this utility will fail. To check accessibility to the inventory, you can use this command:

   ```
   # opatch lsinventory
   ```

   > **Note:** If you have any problem installing this patch or you are not sure about inventory setup, contact Oracle Support Services.

9. Set the `ORACLE_HOME` environment variable to the Oracle home directory for your Oracle Database 11*g* installation, using operating system commands.
10. Enter the following command:

    ```
    # $ORACLE_HOME/OPatch/opatch apply
    ```

    For more information about the OPatch utility, see also Note 224346.1 on the My Oracle Support Web site (formerly *MetaLink*) at

    http://metalink.oracle.com

When you complete the installation procedure, Oracle Database 11*g* Patch 6367945 has been successfully applied.

3.6 Installing the Oracle Content DB Middle Tier

This section provides streamlined instructions for installing the Oracle Content DB middle tier. For more detailed instructions, see the "Installing the Oracle Content DB Middle Tier" chapter in *Oracle Content Database Installation Guide* for your operating system.

Notes:

- If your database uses raw storage, contact Oracle Support Services before proceeding with installation of the Oracle Content DB middle tier.
- If a database, infrastructure, or middle tier is installed or is to be installed on a computer running Microsoft Windows, disable the fire wall (if already enabled) on that computer prior to installing the Oracle Content DB middle tier. The installation will fail if the fire wall is enabled.

  Ensure that you reenable the fire wall (if previously enabled) upon successful installation of the Oracle Content DB middle tier.

To install the Oracle Content DB middle tier:

1. Get Oracle Content Database 10.2.0.0.0 software from either of these media:
   - The *Oracle Content Database Infrastructure 10gR3 (10.2.0.0.0) Revision B for Universal Online Archive* or *Oracle Content Database Infrastructure 10gR3 (10.2.0.0.0) for Universal Online Archive* media, for your operating system
   - The *Oracle Database 11g* media pack
2. Before installing the Oracle Content DB middle tier, ensure that you have Oracle Database 11*g* and OracleAS Infrastructure already installed and your database registered with Oracle Internet Directory.

   For more information, see "Registering Oracle Database with Oracle Internet Directory" in *Oracle Content Database Installation Guide* for your operating system.
3. Ensure that all other prerequisites listed in the "Preinstallation Requirements for Oracle Content DB Middle Tier" chapter in *Oracle Content Database Installation Guide* for your operating system are met prior to running Oracle Universal Installer.

   Tip: Use the checklist in Table 2–3 to record the information you need to provide during installation of the Oracle Content DB middle tier.
4. Ensure that the Oracle Database 11*g* you want to use with Oracle UOA has the required minimum values for the initialization parameters.

   Table 3–1 lists the minimum values for using Oracle Database 11*g* Automatic Memory Management (recommended).

Table 3–1 Database Initialization Parameters for Oracle Content DB Using Automatic Memory Management

Parameter Name	Minimum Value
`aq_tm_processes`	1
`compatible`	11.1.0.0.0
`db_block_size`	8192
`db_file_multiblock_read_count`	32

Table 3–1 (Cont.) Database Initialization Parameters for Oracle Content DB Using Automatic Memory Management

Parameter Name	Minimum Value
dispatchers	(PROTOCOL=TCP)(SERVICE=*SID*XDB) Replace *SID* with the system ID of the database. For example: (PROTOCOL=TCP)(SERVICE=orclXDB)
dml_locks	200
job_queue_processes	10
memory_max_target	2000M
memory_target	2000M
open_cursors	400
processes	250
remote_login_passwordfile	EXCLUSIVE
session_max_open_files	50
sessions	400
star_transformation_enabled	TRUE
undo_management	AUTO

5. For a complete list of quick installation steps, see "Quick Installation of the Oracle Content DB Middle Tier" in *Oracle Content Database Installation Guide* for your operating system.

   For more details, see also the "Installing the Oracle Content DB Middle Tier" chapter in *Oracle Content Database Installation Guide* for your operating system.

3.7 Installing Oracle UOA on a Single Computer

A single-computer installation is one that has Oracle Database 11*g*, OracleAS Infrastructure (with Oracle Identity Management), the Oracle Content DB middle tier, and Oracle UOA on the same computer. This section provides information and recommendations for a single-computer configuration for Oracle UOA.

A single-computer installation is primarily useful for demonstration and proof-of-concept applications.

3.7.1 System Requirements for a Single-Computer Installation of Oracle UOA

If you plan a single-computer installation of Oracle UOA running a single database instance, ensure that the computer on which you plan to install the software meets the requirements listed in Table 3–2. These requirements are necessary to contain not only Oracle UOA but also Oracle Content DB, Oracle Identity Management components, and the Oracle Database.

If you plan to run both an Oracle UOA database and the OracleAS Infrastructure database on the same computer, see the system requirements for both Oracle Database 11*g* and OracleAS Infrastructure in *Oracle Database Installation Guide* and *Oracle Application Server Installation Guide* to determine which requirements you need to meet.

For more information about using Oracle Database 11*g* with OracleAS Infrastructure, see the Oracle Identity Management Certification Information page on the Oracle Technology Network at

http://www.oracle.com/technology

Table 3–2 System Requirements for a Single-Computer Installation of Oracle UOA

Item	Minimum Requirements
Processor Speed	2 GHz or faster
Number of CPUs	2
Memory	4 GB RAM
Disk Space	20 GB
Swap Space	4 GB

3.7.2 Single-Computer Installation Options

In general, there are three different ways to install OracleAS Infrastructure, Oracle Database, the Oracle Content DB middle tier, and Oracle UOA on the same computer. The following sections provide information about each configuration option:

- Using an Existing Database for Your OracleAS Metadata Repository
- Using the OracleAS Infrastructure Database as the Oracle UOA Database
- Installing OracleAS Infrastructure, Oracle Database, Oracle Content DB, and Oracle UOA in Three Oracle Homes

3.7.2.1 Using an Existing Database for Your OracleAS Metadata Repository

You can install Oracle Application Server Metadata Repository (OracleAS Metadata Repository) into an existing Oracle Database 10g (version 10.1.0.5 or 10.2 recommended) and then upgrade the database to Oracle Database 11*g*. In this configuration, only one database is running on the computer.

For information about using an existing database as your OracleAS Metadata Repository, see *Oracle Application Server Metadata Repository Creation Assistant User's Guide*. For additional details on known issues and limitations, see Knowledge Base Note 740417.1, "Oracle Database 11g Certification For Oracle Application Server 10g," on the My Oracle Support Web site (formerly *MetaLink*) at

http://metalink.oracle.com

To be used with Oracle UOA, this database must meet all the requirements listed under "Installing Oracle Database" in *Oracle Content Database Installation Guide* for your operating system.

After you have configured your database to be the OracleAS Metadata Repository database and installed Oracle Identity Management components, you can install the Oracle Content DB middle tier. Be sure that you have already installed the following Oracle Identity Management components:

- Oracle Internet Directory
- Oracle Application Server Single Sign-On (OracleAS Single Sign-On)
- Oracle Delegated Administration Services
- Oracle Directory Integration and Provisioning

For more information, see also "Installing Oracle Identity Management Components Only (Including Oracle Internet Directory)" in *Oracle Application Server Installation Guide* for your operating system or the "Installing the Oracle Content DB Middle Tier" chapter in *Oracle Content Database Installation Guide* for your operating system.

3.7.2.2 Using the OracleAS Infrastructure Database as the Oracle UOA Database

You can install OracleAS Infrastructure first, use the OracleAS Infrastructure database as the Oracle Content DB database, and then upgrade Oracle Content DB to Oracle UOA, resulting in your Oracle UOA schemas being in the same database as the infrastructure database. In this configuration, only one database is running on the computer.

To use the OracleAS Infrastructure database as your Oracle Content DB database, you must ensure that the following requirements are met:

- Oracle Database version 11.1.0.6 or later

  You might need to upgrade the version of an existing OracleAS Infrastructure database. For the most up-to-date certification information, see the Oracle UOA certification matrix on the My Oracle Support Web site (formerly *MetaLink*) at

  `http://metalink.oracle.com`

  For more information, see "Upgrading an Existing Oracle Database" in *Oracle Content Database Installation Guide* for your operating system.

- AL32UTF8 as the database character set

  Note: When you install the OracleAS Infrastructure database, be sure to choose AL32UTF8, which is *not* the default character set. For more information, see "Setting the Required Database Character Set" in *Oracle Content Database Installation Guide* for your operating system.

- Database initialization parameters, listed in Table 3–1

  Make sure to set the required parameters before installing the Oracle Content DB middle tier.

After you have installed OracleAS Infrastructure and configured the OracleAS Metadata Repository database to be your Oracle UOA database, you can install the Oracle Content DB middle tier. For more information, see the "Installing the Oracle Content DB Middle Tier" chapter in *Oracle Content Database Installation Guide* for your operating system.

3.7.2.3 Installing OracleAS Infrastructure, Oracle Database, Oracle Content DB, and Oracle UOA in Three Oracle Homes

You can choose to install OracleAS Infrastructure, Oracle Database, the Oracle Content DB middle tier, and Oracle UOA in three separate Oracle homes. In this configuration, two databases are running on the same computer: the database for Oracle UOA and the OracleAS Metadata Repository database (part of OracleAS Infrastructure).

Because of this configuration, you might have port conflicts when you install the second database. For more information, see Section 3.7.3, "Database Port Conflicts."

Also, you should increase your hardware configuration proportionally to account for both database instances. For more information, see Section 3.7.1, "System Requirements for a Single-Computer Installation of Oracle UOA."

For this configuration, install the components in the following order:

- OracleAS Infrastructure
- Oracle Database 11*g*
- Oracle Content DB
- Oracle UOA

For more information, see also the "Installing OracleAS Infrastructure and Oracle Database" chapter or the "Installing the Oracle Content DB Middle Tier" chapter in *Oracle Content Database Installation Guide* for your operating system.

3.7.3 Database Port Conflicts

You can resolve database port conflicts caused by an existing Oracle Database or another application using Port 1521.

3.7.3.1 Port 1521 Being Used by an Existing Oracle Database

If you are installing both Oracle Database and OracleAS Metadata Repository on the same computer, you might have a port conflict when you install the second database (typically the OracleAS Metadata Repository) because port 1521 will already be in use by the first database you installed.

As long as the first Oracle Database is version 10.1.0.2 or later, the existing listener will support both the existing database and the new Oracle Database 11*g*. Oracle Universal Installer will perform this configuration automatically. You must stop the existing listener during installation using the following command:

```
# $ORACLE_HOME/bin/lsnrctl stop
```

3.7.3.2 Port 1521 Being Used by Another Application

If another application is listening on port 1521, you must reconfigure it to listen on a different port. If that is not possible, stop the application while you install the Oracle Database. After the installation, you can reconfigure the Oracle Database to use a port other than 1521.

For more information about reconfiguring the database to use another port, see also *Oracle Database Administrator's Guide*.

3.8 Installing Oracle Email Archive Service

For information about installing Oracle EAS, see Section 5.2.4, "Deploying Oracle Email Archive Service (Optional)," and the Oracle Email Archive Service documentation set.

4

Meeting Preinstallation Requirements for Oracle UOA

This chapter discusses requirements that must be met prior to installing Oracle Universal Online Archive (Oracle UOA).

For more information, see also the "Preinstallation Requirements for Oracle Content DB" chapter in *Oracle Content Database Installation Guide* for your operating system.

This chapter includes the following topics:

4.1 Meeting Oracle UOA Hardware Requirements

The hardware requirements for Oracle UOA are the same as the hardware requirements for Oracle Content Database (Oracle Content DB). For detailed information, see "Oracle Content DB Hardware Requirements" in *Oracle Content Database Installation Guide* for your operating system.

Oracle UOA will be installed as a patch, with the OPatch utility, on top of an Oracle Content DB middle tier. The Oracle Universal Installer will check the hardware requirements at the start of the Oracle Content DB installation process. Therefore, it is not necessary to check the requirements again if the system has not been changed after the Oracle Content DB installation.

If the system has been changed after the Oracle Content DB installation, you can run the system checks performed by Oracle Universal Installer without doing an installation of Oracle Content DB. To do so, run the following command, where the `runInstaller` executable is on the Oracle Content DB DVD:

```
# mount_point/runInstaller -executeSysPrereqs
```

The results are displayed on the screen as well as written to a log file.

For more information about the checks performed, see also "Prerequisite Checks Performed by Oracle Universal Installer" in *Oracle Content Database Installation Guide* for your operating system.

4.2 Meeting Oracle UOA Software Requirements

Oracle UOA depends upon Oracle Identity Management, which is part of Oracle Application Server Infrastructure (OracleAS Infrastructure), and Oracle Database 11*g*. The Oracle Database must be registered with Oracle Internet Directory.

For more information, see also the "Installing OracleAS Infrastructure and Oracle Database" chapter in *Oracle Content Database Installation Guide* for your operating system.

Oracle Universal Installer for the Oracle Content DB software checks that your computer includes any required operating system patches. If Oracle Universal Installer determines that some required patches are missing, it displays an error.

4.2.1 Oracle Application Server 10g Release 2

The Oracle UOA middle tier runs in Oracle Application Server 10g Release 2 (10.1.2.0.2).

For information about software requirements for your operating system, see the "Software Requirements" appendix or "Operating System Patches and Packages" appendix in *Oracle Content Database Installation Guide*.

4.2.2 Oracle Database 11g

Oracle UOA requires Oracle Database 11*g* (11.1.0.6 or higher). For more information about software requirements for an Oracle Database 11*g*, see *Oracle Database Installation Guide*.

4.2.3 Oracle Content DB

Installation of Oracle UOA is supported only on top of a fresh Oracle Content DB 10.2.0.0.0 Revision B installation. Existing Oracle Content DB installations, which already contain data, such as Documents, Folders, or Categories, as well as fresh Oracle Content DB installations with versions later than 10.2.0.0.0 are not supported to use as the infrastructure for Oracle UOA.

4.2.4 OPatch Version

Oracle UOA comes as an OPatch on top of an Oracle Content DB middle tier. OPatch version 1.0.0.0.57 or later must be used to install Oracle UOA successfully. This requires you to patch the OPatch version 1.0.0.0.52 of an Oracle Content DB installation with the latest version of OPatch.

For detailed information about how to apply this patch, see Section 5.2.1, "Applying the Latest OPatch Version."

4.3 Verifying the Oracle Content DB Configuration

To ensure that the Oracle Content DB node and HTTP node are successfully installed and up and running, you can use the following `opmnctl` command:

```
# $ORACLE_HOME/opmn/bin/opmnctl status
```

The output should look similar to this output:

```
------------------+-------------------+---------+------
ias-component     | process-type      |     pid |status
------------------+-------------------+---------+------
Content           | Node              |    2450 | Alive
Content           | OC4J_Content      |   16403 | Alive
DSA               | DSA               |     N/A | Down
HTTP_Server       | HTTP_Server       |   31951 | Alive
LogLoader         | logloaderd        |     N/A | Down
dcm-daemon        | dcm-daemon        |    2381 | Alive
OC4J              | home              |   25767 | Alive
WebCache          | WebCache          |   32002 | Alive
WebCache          | WebCacheAdmin     |   31995 | Alive
```

In the output of the `opmnctl` command, the Oracle Content DB regular node typically has the value `Content` in the `ias-component` column and the value `Node` in the `process-type` column The Oracle Content DB HTTP node typically has the value `Content` in the `ias-component` column and the value `OC4J_Content` in the `process-type` column. Verify that the `status` column has the value `Alive` for these two processes.

Table 7-1 lists access URLs used with Oracle Content DB basic functionality.

Table 4–1 Oracle Content DB Basic Functionality

Access Method	Access URL

Oracle Enterprise Manager 10*g* Application Server Control	`http://`*`middle_tier_host`*`:`*`em_port`*`/emd`
	For example:
	`http://myserver.mycompany.com:1156/emd`

WebDAV	`http://`*`middle_tier_host`*`:`*`port`*`/content/dav`
	For example:
	`http://myserver.mycompany.com:7778/content/dav`

> **Note:** The FTP and FTPS protocols are not enabled by default after you install and configure Oracle Content DB.

For information about how to enable FTP and FTPS, see the "Oracle Content DB Protocol Support" chapter in *Oracle Content Database Administrator's Guide*.

To verify that you can access Application Server Control:

1. Open a Web browser.
2. Enter the Application Server Control URL.

   For example:

   `http://myserver.mycompany.com:1156/emd`

To verify that you can open a Microsoft Web folder to access the Oracle Content DB WebDAV server:

1. Go to a Microsoft Windows 2000 or Windows XP computer.
2. Open Microsoft Internet Explorer.
3. From the File menu, select **Open**.

4. Type the WebDAV URL.

   For example:

   `http://myserver.mycompany.com:7778/content/dav`

5. Select the **Open as Web Folder** check box.
6. Click **OK**.
7. Enter a name for this item for My Network Places, such as `Content DB`.
8. Enter `orcladmin` as the user name.

   This is an administrator user in Oracle Content DB.

9. Enter a password for the `orcladmin` user, *`your_orcladmin_password`*.

   This can be the same password as *`your_cn_admin_password`*.

> **Note:** This user is the `orcladmin` user within the default realm, or in other words, the user with the following DN:
>
> `cn=orcladmin,cn=users,dc=xxxxx,dc=yyyyy`
>
> This is *not* the super user `cn=orcladmin`. They are two separate users.

If you have performed both of these verification procedures successfully, Oracle Content DB was installed properly.

4.4 Preparing to Install Oracle UOA on a Computer with Multiple Network Cards

Typically, a computer on which Oracle UOA is installed has a network connection through a single network card. OPatch uses the first name it finds in the `/etc/hosts` file to determine the local host name to use for an IP address lookup.

If you are installing Oracle UOA on a computer with multiple network cards, check the `/etc/hosts` file to verify that the first name in the file is the name you want to use for the computer. If not, you need to edit `/etc/hosts` and move the name you want to use to the top prior to the Oracle UOA installation.

4.5 Preparing to Install Oracle UOA from a Local Hard Drive

If you are installing Oracle UOA on a computer that does not have sufficient local storage to contain the Oracle UOA installation, you can copy the contents of the Oracle UOA CD to the local hard drive and install the product from there. Installation from a hard drive also provides a solution if you plan to install many nodes of Oracle UOA on your network or if the computer where you want to install Oracle UOA does not have a CD-ROM drive.

4.5.1 Checking the Space Requirement

Ensure that the hard drive contains enough space to hold the contents of the Oracle UOA CD.

4.5.2 Copying the Oracle UOA CD to a Hard Drive from a Remote CD-ROM Drive

Before you can copy the contents of the Oracle UOA CD to your local hard drive, you need to share the remote CD-ROM drive through Network File System. Then you can copy the CD to prepare for installation of Oracle UOA from the hard drive.

To copy the Oracle UOA CD to a hard drive from a remote CD-ROM drive:

1. Insert the Oracle UOA CD in to the CD-ROM drive on a remote computer.
2. Share the CD-ROM drive, as follows:

   CD-ROM:

   ```
   # su
   Password: your_root_password
   # exportfs -o ro '*:/media/cdrom0'
   ```

   The path `/media/cdrom0` specifies the path to a CD-ROM drive. Instead of this path, specify the path to the CD-ROM drive you are using.
3. On the local computer, point your `ORACLE_HOME` environment variable to the Oracle home directory of the Oracle Content DB middle tier on the local computer.
4. Access the CD-ROM, and then unzip the file `p7565786_1022_Generic.zip` to any temporary directory, referred to hereafter as `$TEMP_DIR`, using the following command (one line):

   ```
   # unzip /net/remote_computer_host_name/cdrom/
   p7565786_1022_Generic.zip -d $TEMP_DIR
   ```

   In the command, replace *`remote_computer_host_name`* with the name of the remote computer.

After you copy the files to the hard drive, follow the installation instructions in Chapter 5, "Installing Oracle Universal Online Archive."

5

Installing Oracle Universal Online Archive

This chapter describes the procedure for installing Oracle Universal Online Archive (Oracle UOA). Prior to installing Oracle UOA, ensure that your system meets all of the preinstallation requirements listed in Chapter 4, "Meeting Preinstallation Requirements for Oracle UOA"

This chapter includes the following topics:

- Copying Files from the Oracle UOA Media Pack to a Hard Drive
- Installing Oracle UOA
- Verifying That Server Processes Are Running on Each Node

> **Note:** There is *no* deinstallation option available for Oracle UOA with this release. Ensure you have a proper backup of your Oracle Content Database (Oracle Content DB) environment before installing Oracle UOA on top of your Oracle Content DB middle tiers.

For information about how to perform a complete backup of the Oracle Content DB environment, see also the "Oracle Content DB Maintenance and Tuning" chapter of *Oracle Content Database Administrator's Guide*.

5.1 Copying Files from the Oracle UOA Media Pack to a Hard Drive

The Oracle UOA Media Pack contains the files required for installing Oracle UOA. Because they are ZIP files that need to be unpacked first, you cannot install Oracle UOA directly from the CD. You can copy the contents of the CD and then install Oracle UOA from your system hard drive. You must complete the procedures required for the installation method you choose before starting Oracle Universal Installer.

For operating systems that do not support automatic mounting of CDs, the Oracle UOA CD must be mounted manually. You must have `root` privileges to mount or unmount a CD. Be sure to unmount a CD before removing it from the drive.

To copy files from the Oracle UOA Media Pack to a hard drive:

1. Verify whether your operating system supports automatic mounting of CDs. For information about how to determine which mounting method is supported by your operating system, see its instructions on mounting CDs.
2. Share the Oracle UOA CD using the method supported by your operating system:
   - **Automatically:** For more information, see the instructions on mounting CD-ROMs with auto-mounting software.
   - **Manually:** For more information, see the instructions on mounting CDs manually.
3. Copy the contents of the Oracle UOA CD to any temporary directory in the Oracle Content DB middle tier, referred to hereafter as `$TEMP_DIR`.

5.2 Installing Oracle UOA

The Oracle UOA installation procedure includes installation of the latest OPatch version, the Oracle UOA software, and one or more Oracle UOA middle tiers.

The following procedure is for the initial Oracle UOA installation. Subsequent Oracle UOA installations follow this same procedure with a few exceptions, as noted in Section 5.2.3, "Installing Multiple Oracle UOA Middle Tiers (Optional)."

> **Tip:** Use the checklist in Table 2–4 to record pertinent information for use during the Oracle UOA installation.

5.2.1 Applying the Latest OPatch Version

Oracle UOA comes as a patch on top of an Oracle Content DB middle tier. OPatch version 1.0.0.0.57 or later must be used to successfully install Oracle UOA. This requires you to patch the existing OPatch version (1.0.0.0.52) on each Oracle Content DB middle tier installation before starting the Oracle UOA installation process.

To apply the latest OPatch version:

1. Ensure that you have completed the Oracle Content DB installation.
2. Get the latest version of OPatch in either of two ways:
   - Copy the file `p2617419_10102_generic.zip` from your installation media to any temporary directory in the Oracle Content DB middle tier, referred to hereafter as `$TEMP_DIR`.
   - Download OPatch patch 2617419 (`p2617419_10102_generic.zip`) from the My Oracle Support Web site (formerly *MetaLink*) at `http://metalink.oracle.com` to any temporary directory in the Oracle Content DB middle tier, referred to hereafter as `$TEMP_DIR`.
3. Set your `ORACLE_HOME` environment variable to the Oracle home directory for your Oracle Content DB installation.
4. Back up your existing OPatch folder, as the following example shows:

```
# cd $ORACLE_HOME
# mv OPatch OPatch.pre100057
```

5. Unzip the file `p2617419_10102_generic.zip` directly into your Oracle home directory.

```
# cd $TEMP_DIR
# unzip p2617419_10102_generic.zip -d $ORACLE_HOME
```

6. Run the following command to verify the version of OPatch in your Oracle home directory:

```
# $ORACLE_HOME/OPatch/opatch version
```

The output should look like this:

```
Oracle Interim Patch Installer version 1.0.0.0.57
Copyright (c) 2007 Oracle Corporation. All Rights Reserved.
...

OPatch Version: 1.0.0.0.57
```

If the output looks like this, OPatch version 1.0.0.0.57 has been successfully installed.

For help debugging any problems with installing OPatch, see Note 283367.1 on the My Oracle Support Web site (formerly *MetaLink*) at

http://metalink.oracle.com

5.2.2 Installing Oracle UOA with the OPatch Utility

You can install Oracle UOA with the OPatch utility.

To install Oracle UOA with the OPatch Utility:

1. You must have Oracle Database 11*g*, Oracle Application Server Infrastructure (OracleAS Infrastructure), and the Oracle Content DB middle tier already installed before installing Oracle UOA.
2. Ensure that all other prerequisites listed in Chapter 4, "Meeting Preinstallation Requirements for Oracle UOA" are met prior to starting your Oracle UOA installation.
3. Set your `ORACLE_HOME` environment variable to your Oracle Content DB Oracle home directory.
4. Shut down all running Oracle Content DB middle tier processes on all Oracle Content DB middle tiers.

   You can use the following command on each middle tier:

```
# $ORACLE_HOME/opmn/bin/opmnctl stopall
```

5. Shut down all running Oracle Enterprise Manager 10*g* Application Server Control processes on all Oracle Content DB middle tiers.

   You can use the following command on each middle tier:

```
# $ORACLE_HOME/bin/emctl stop iasconsole
```

6. Navigate to the `$TEMP_DIR` directory:

```
# cd $TEMP_DIR
```

This is the directory to which you copied the software from the Oracle UOA CD.

7. Unzip the file `p7565786_1022_Generic.zip` to `$TEMP_DIR` with the following command:

   ```
   # unzip p7565786_1022_Generic.zip
   ```

   From this main ZIP file, two inner ZIP files and a text file are extracted:

   - `p7565786_1022_generic.zip`
   - `p2617419_10102_generic.zip`
   - `README.txt`

8. Unzip the file `p7565786_1022_generic.zip` to `$TEMP_DIR` with the following command:

   ```
   # unzip p7565786_1022_generic.zip
   ```

   A directory named `7565786` is created inside the temporary directory.

9. Navigate to the `$TEMP_DIR/7565786` directory:

   ```
   # cd $TEMP_DIR/7565786
   ```

10. Apply the Oracle UOA patch with the following command:

    ```
    # $ORACLE_HOME/OPatch/opatch apply
    ```

    Follow the instructions provided by the OPatch utility.

11. After OPatch has finished, make sure no errors occurred during application of the patch by reviewing the OPatch log file under *`ORACLE_HOME`*`/content/log/Patch.log`.

    You should fix any errors before proceeding with the optional installation tasks.

12. After you have successfully installed Oracle UOA, you can proceed with the task described in Section 5.2.3, "Installing Multiple Oracle UOA Middle Tiers (Optional)," or Section 5.2.4, "Deploying Oracle Email Archive Service (Optional)," or both.

    For information about changing the configuration of Oracle UOA, see Chapter 6, "Administering Oracle UOA."

5.2.3 Installing Multiple Oracle UOA Middle Tiers (Optional)

After installation of the first Oracle UOA middle tier, the Oracle Content DB schema version has been upgraded to version 10.2.2.1.0. For any subsequent installation of Oracle UOA, you need to reset the Oracle Content DB schema version back to 10.2.0.0.0. If the schema version is not reset to 10.2.0.0.0, the Oracle UOA installation will fail.

There are two different installation scenarios:

- **First install all Oracle Content DB middle tiers, then Oracle UOA on top of each Oracle Content DB installation.**

  In this scenario, you do not need to reset the schema version at any time.

- **Install one Oracle Content DB middle tier, then Oracle UOA on top of this middle tier. Repeat this for all subsequent middle tiers.**

  In this scenario, you have to reset the schema version before each *Oracle Content DB* installation.

To reset the Oracle Content DB schema version:

1. Shut down all running Oracle Content DB middle tier processes on all Oracle Content DB middle tiers.

   You can use the following command on each middle tier:

   ```
   # $ORACLE_HOME/opmn/bin/opmnctl stopall
   ```

2. Shut down all running Application Server Control processes on all Oracle Content DB middle tiers.

   You can use the following command on each middle tier:

   ```
   # $ORACLE_HOME/bin/emctl stop iasconsole
   ```

3. On the Oracle UOA 10*g* (10.2.2.1.0) middle tier that is already installed, run the *ORACLE_HOME*`/content/bin/uoa/resetschemaversion.sh` script, and follow the instructions provided by the script.

   This script resets the schema version back to 10.2.0.0.0. You need to invoke the script from the first patched middle tier before you patch any additional middle tiers. Once each new middle tier is patched, this script is then available from the Oracle home of that middle tier as well.

4. After resetting the schema version, continue to install your next Oracle UOA middle tier.

Note: If you want to install Oracle EAS, you need to deploy it on only one Oracle UOA node. For more information, see Section 5.2.4, "Deploying Oracle Email Archive Service (Optional)."

5.2.4 Deploying Oracle Email Archive Service (Optional)

If you want to deploy Oracle Email Archive Service (Oracle EAS) to your Oracle UOA site, you need to create an Oracle EAS user and then invoke the `deployeas.sh` script on only one of your Oracle UOA patched middle tiers.

To deploy Oracle EAS:

1. Create a new user, such as `easadmin`, in Oracle Internet Directory.

   Oracle EAS will use this user account to retrieve email messages from Oracle UOA through the WebDAV protocol.

   For information about how to create a new user in Oracle Internet Directory, see also the "Managing Users and Groups with the Oracle Internet Directory Self-Service Console" chapter in *Oracle Identity Management Guide to Delegated Administration*.

   To create the Oracle EAS user account, perform the following steps:

   a. Launch the Oracle Identity Management Self-Service Console with a URL in this format:

      `http://`*infrastructure_host*`:`*infra_port*`/oiddas`

      For example:

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

   b. Log in with user `orcladmin` and the password for this user, *your_orcladmin_password*.

Tip: Use the checklist in Table 2–1 to review the password you specified for the `orcladmin` user during the OracleAS Infrastructure installation.

c. On the Welcome page, click the **Directory** tab.

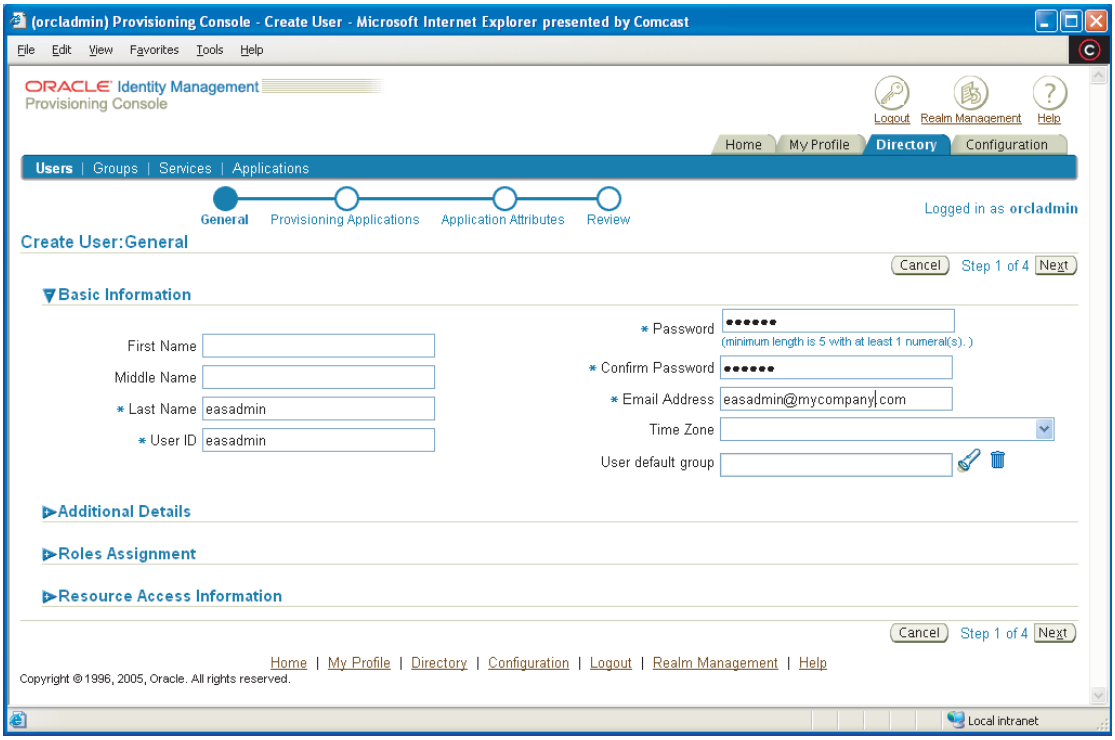
d. On the Directory Users page (the default page), click the **Create** button, above the Users table.

e. On the Create User screen, enter the following information:

Last Name: *your_Oracle_EAS_user*
User ID: *your_Oracle_EAS_user*
Password: *your_Oracle_EAS_user_password*
Confirm Password: *your_Oracle_EAS_user_password*
Email Address: *your_Oracle_EAS_user_email_account*

Figure 5–1 shows sample input for the Create User screen.

Figure 5–1 Create User Screen for Oracle EAS User



f. On the next page (Application Provisioning), make sure the **Yes** check box is selected for the Content application, and then click **Next**.

g. Click **Next**.

h. Click **Next**.

i. On the review screen, click **Finish**.

2. Before running the `deployeas.sh` script, verify that `opmn` is up and running, which you can do by using the following command:

```
$ORACLE_HOME/opmn/bin/opmnctl status
```

3. Invoke the *ORACLE_HOME*/content/bin/uoa/deployeas.sh script, and follow the instructions provided by the script.

   This script creates the migration import schema and audit specifications and registers the import schema. Among other things, this script will prompt you for the user name to add to the ECM.UOA.EAS.Administrators and ECM.UOA.EAS.Readers groups. You can specify the user that you created in step 1 (*your_Oracle_EAS_user*).

5.3 Verifying That Server Processes Are Running on Each Node

After Oracle UOA installation on one or more nodes, you can verify that the server processes are running on each node and are load balanced, if applicable. You have two options for verifying that server processes are running on each node: checking the clustering status of each server process with Application Server Control and checking the cluster information for server processes in the Oracle UOA log.

5.3.1 Verifying That Each Server Process Is Running with Application Server Control

You can verify that each server process is running by looking at the value of its IFS.SERVER.ClusteringStatus runtime property on each middle-tier node. Application Server Control displays the runtime properties on the Server page for each server.

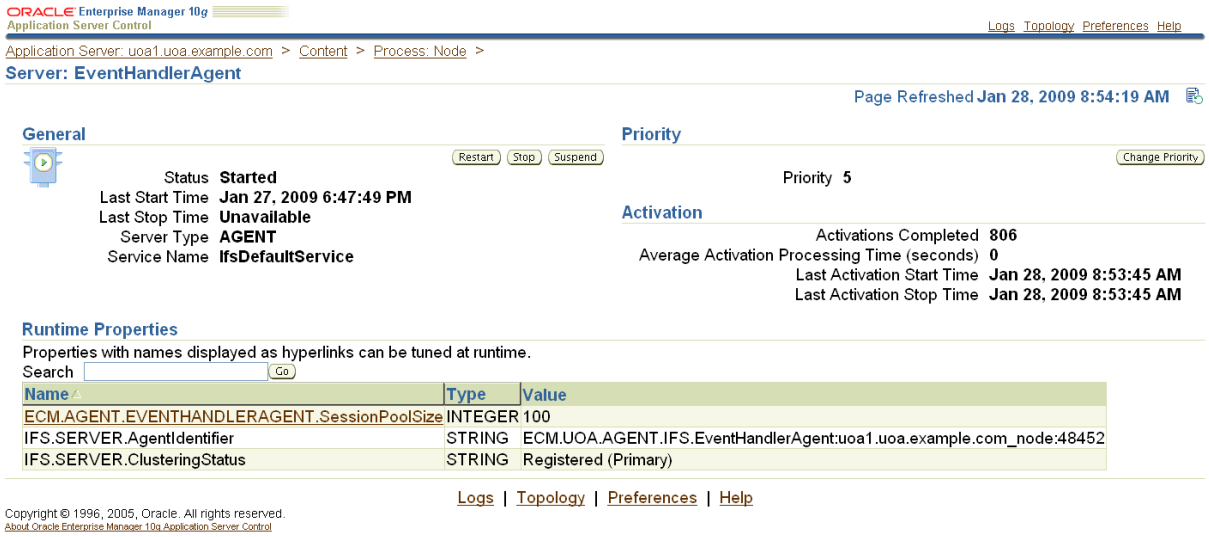
The String value of IFS.SERVER.ClusteringStatus shows the server's assignment along with its role; for example, Registered (Primary). If the server has neither of the two possible role assignments, Registered or Standby, the value will show either Ready (meaning the server is able to obtain an assignment) or Idle (the server is not able to obtain an assignment because it is stopped, suspended, or otherwise disabled). The role will always be Primary, Secondary, Backup, or None.

To verify that each server process is running with Application Server Control:

1. On the Application Server Control Home page, click **Content** in the System Components table.
2. Click the first occurrence of **Node** in the Processes table.
3. For each server, scroll down and click its name in the Servers table.

   Application Server Control displays the Server page, with runtime properties for the server process. Figure 5–2 shows this page.

Figure 5–2 Server Page for a Server Process



4. In the Runtime Properties table for each server, look at the value of the `IFS.SERVER.ClusteringStatus` property.

   Each server has this read-only, runtime property, with one of the following values:

   - `Registered (Primary|Secondary|Backup)`
   - `Standby (Primary|Secondary|Backup):`
   - `Ready (Primary|Secondary|Backup):`
   - `Idle (Primary|Secondary|Backup):`

   The value is dependent on the number and order of the nodes started.

5. Repeat steps1 through 4 on other Oracle UOA middle tiers to verify the node on which each server process runs.

5.3.2 Verifying That Server Processes Are Running with the Oracle UOA Log

You can verify that all the server processes are running by looking at the cluster information in the Oracle UOA log. This information also shows the load-balancing configuration for the server processes.

To verify that server processes are running with the Oracle UOA log:

1. On any running Oracle UOA node, navigate to *ORACLE_HOME*`/content/log/`*instance_name*`/`.
2. Open the log file for the node, typically *instance_name*`.middle_tier_host_Node.log`.

   The Statistics Agent logs the cluster information every 15 minutes (default interval) to `instance_name.middle_tier_host_Node.log`.

3. For a single-node configuration, check the log to verify that each server process is running.

   The cluster information for a single-node configuration without Oracle EAS installed should look similar to the output in Figure 5–3. The output shows all server processes running with the `Primary` role on this node. A single-node configuration has no secondary node.

Figure 5–3 Cluster Information Logged for a Single Middle-Tier Node

```
Registered Clustering tokens, grouped by node
 ECM.UOA.NODE.uoa.myserver.mycompany.com_node:47910   Status: Active
   ECM.UOA.AGENT.IFS.ArchiveLinkAgent                                  Role: Primary    Standby: None
   ECM.UOA.AGENT.IFS.AuditEventDispatchAgent                           Role: Primary    Standby: None
   ECM.UOA.AGENT.IFS.BackgroundRequestAgent                            Role: Primary    Standby: None
   ECM.UOA.AGENT.IFS.CleanupAgent                                      Role: Primary    Standby: None
   ECM.UOA.AGENT.IFS.ContentGarbageCollectionAgent                     Role: Primary    Standby: None
   ECM.UOA.AGENT.IFS.DanglingObjectAVCleanupAgent                      Role: Primary    Standby: None
   ECM.UOA.AGENT.IFS.EventExchangerAgent                               Role: Primary    Standby: None
   ECM.UOA.AGENT.IFS.EventHandlerAgent:uoa.myserver.mycompany.com_node:47910   Role: Primary    Standby: None
   ECM.UOA.AGENT.IFS.ExpirationAgent                                   Role: Primary    Standby: None
   ECM.UOA.AGENT.IFS.FolderIndexAgent                                  Role: Primary    Standby: None
   ECM.UOA.AGENT.IFS.GarbageCollectionAgent                            Role: Primary    Standby: None
   ECM.UOA.AGENT.IFS.InboundQueueListenerAgent                         Role: Primary    Standby: None
   ECM.UOA.AGENT.IFS.LifecycleAgent                                    Role: Primary    Standby: None
   ECM.UOA.AGENT.IFS.LockExpirationAgent                               Role: Primary    Standby: None
   ECM.UOA.AGENT.IFS.OidCredentialManagerAgent                         Role: Primary    Standby: None
   ECM.UOA.AGENT.IFS.QuotaAgent                                        Role: Primary    Standby: None
   ECM.UOA.AGENT.IFS.ReadDocumentAgent                                 Role: Primary    Standby: None
   ECM.UOA.AGENT.IFS.ReassignQuotaAgent                                Role: Primary    Standby: None
   ECM.UOA.AGENT.IFS.RefreshSecurityAgent                              Role: Primary    Standby: None
   ECM.UOA.AGENT.IFS.ServiceWatchdogAgent                              Role: Primary    Standby: None
   ECM.UOA.AGENT.IFS.VersionPurgeAgent                                 Role: Primary    Standby: None
   ECM.UOA.HANDLER.IFS.PersonalLibraryHandler                          Role: Primary    Standby: None
```

4. For a multiple-node configuration, check the log to verify that all of the server processes are running with primary and secondary nodes.

   The cluster information for a two-node configuration with Oracle EAS installed should look similar to the output in Figure 5–4. The output shows that some server processes are running on node `uoa1.myserver.mycompany_node`, which has the `Primary` role for these processes, and that `Standby` node `uoa2.myserver.mycompany_node` has the `Secondary` role. Other server processes are running on node `uoa2.myserver.mycompany_node` and have `uoa1.myserver.mycompany_node` as their `Standby (Secondary)` node.

   This output demonstrates the out-of-the-box load balancing and clustering feature of Oracle UOA.

Figure 5–4 Cluster Information Logged for Two Middle-Tier Nodes

```
Registered Clustering tokens, grouped by node
 ECM.UOA.NODE.uoa1.myserver.mycompany_node:48457   Status: Active
   ECM.UOA.AGENT.IFS.ArchiveLinkAgent                                  Role: Primary    Standby: uoa2.myserver.mycompany_node:48703 (Secondary)
   ECM.UOA.AGENT.IFS.AuditEventDispatchAgent                           Role: Primary    Standby: uoa2.myserver.mycompany_node:48703 (Secondary)
   ECM.UOA.AGENT.IFS.BackgroundRequestAgent                            Role: Primary    Standby: uoa2.myserver.mycompany_node:48703 (Secondary)
   ECM.UOA.AGENT.IFS.ContentGarbageCollectionAgent                     Role: Primary    Standby: uoa2.myserver.mycompany_node:48703 (Secondary)
   ECM.UOA.AGENT.IFS.EventExchangerAgent                               Role: Primary    Standby: uoa2.myserver.mycompany_node:48703 (Secondary)
   ECM.UOA.AGENT.IFS.EventHandlerAgent:uoa1.myserver.mycompany_node:48457   Role: Primary    Standby: None
   ECM.UOA.AGENT.IFS.LockExpirationAgent                               Role: Primary    Standby: uoa2.myserver.mycompany_node:48703 (Secondary)
   ECM.UOA.AGENT.IFS.OidCredentialManagerAgent                         Role: Primary    Standby: uoa2.myserver.mycompany_node:48703 (Secondary)
   ECM.UOA.AGENT.IFS.QuotaAgent                                        Role: Primary    Standby: uoa2.myserver.mycompany_node:48703 (Secondary)
   ECM.UOA.AGENT.IFS.ReadDocumentAgent                                 Role: Primary    Standby: uoa2.myserver.mycompany_node:48703 (Secondary)
   ECM.UOA.AGENT.IFS.ReassignQuotaAgent                                Role: Primary    Standby: uoa2.myserver.mycompany_node:48703 (Secondary)
   ECM.UOA.HANDLER.IFS.EAS.HVI.CONTENT$EAS.DocumentHandler.00          Role: Primary    Standby: uoa2.myserver.mycompany_node:48703 (Secondary)
   ECM.UOA.HANDLER.IFS.EAS.HVI.CONTENT$EAS.DocumentHandler.01          Role: Primary    Standby: uoa2.myserver.mycompany_node:48703 (Secondary)
   ECM.UOA.HANDLER.IFS.EAS.HVI.CONTENT$EAS.DocumentHandler.03          Role: Primary    Standby: uoa2.myserver.mycompany_node:48703 (Secondary)
   ECM.UOA.HANDLER.IFS.EAS.HVI.CONTENT$EAS.DocumentHandler.05          Role: Primary    Standby: uoa2.myserver.mycompany_node:48703 (Secondary)
   ECM.UOA.HANDLER.IFS.EAS.HVI.CONTENT$EAS.DocumentHandler.07          Role: Primary    Standby: uoa2.myserver.mycompany_node:48703 (Secondary)
   ECM.UOA.HANDLER.IFS.EAS.HVI.CONTENT$EAS.DocumentHandler.09          Role: Primary    Standby: uoa2.myserver.mycompany_node:48703 (Secondary)
   ECM.UOA.HANDLER.IFS.EAS.HVI.CONTENT$EAS.DocumentHandler.10          Role: Primary    Standby: uoa2.myserver.mycompany_node:48703 (Secondary)
   ECM.UOA.HANDLER.IFS.EAS.HVI.CONTENT$EAS.MainHandler                 Role: Primary    Standby: uoa2.myserver.mycompany_node:48703 (Secondary)

 ECM.UOA.NODE.uoa2.myserver.mycompany_node:48703   Status: Active
   ECM.UOA.AGENT.IFS.CleanupAgent                                      Role: Primary    Standby: uoa1.myserver.mycompany_node:48457 (Secondary)
   ECM.UOA.AGENT.IFS.DanglingObjectAVCleanupAgent                      Role: Primary    Standby: uoa1.myserver.mycompany_node:48457 (Secondary)
   ECM.UOA.AGENT.IFS.EventHandlerAgent:uoa2.myserver.mycompany_node:48703   Role: Primary    Standby: None
   ECM.UOA.AGENT.IFS.ExpirationAgent                                   Role: Primary    Standby: uoa1.myserver.mycompany_node:48457 (Secondary)
   ECM.UOA.AGENT.IFS.FolderIndexAgent                                  Role: Primary    Standby: uoa1.myserver.mycompany_node:48457 (Secondary)
   ECM.UOA.AGENT.IFS.GarbageCollectionAgent                            Role: Primary    Standby: uoa1.myserver.mycompany_node:48457 (Secondary)
   ECM.UOA.AGENT.IFS.InboundQueueListenerAgent                         Role: Primary    Standby: uoa1.myserver.mycompany_node:48457 (Secondary)
   ECM.UOA.AGENT.IFS.LifecycleAgent                                    Role: Primary    Standby: uoa1.myserver.mycompany_node:48457 (Secondary)
   ECM.UOA.AGENT.IFS.RefreshSecurityAgent                              Role: Primary    Standby: uoa1.myserver.mycompany_node:48457 (Secondary)
   ECM.UOA.AGENT.IFS.ServiceWatchdogAgent                              Role: Primary    Standby: uoa1.myserver.mycompany_node:48457 (Secondary)
   ECM.UOA.AGENT.IFS.VersionPurgeAgent                                 Role: Primary    Standby: uoa1.myserver.mycompany_node:48457 (Secondary)
   ECM.UOA.HANDLER.IFS.EAS.HVI.CONTENT$EAS.DocumentHandler.02          Role: Primary    Standby: uoa1.myserver.mycompany_node:48457 (Secondary)
   ECM.UOA.HANDLER.IFS.EAS.HVI.CONTENT$EAS.DocumentHandler.04          Role: Primary    Standby: uoa1.myserver.mycompany_node:48457 (Secondary)
   ECM.UOA.HANDLER.IFS.EAS.HVI.CONTENT$EAS.DocumentHandler.06          Role: Primary    Standby: uoa1.myserver.mycompany_node:48457 (Secondary)
   ECM.UOA.HANDLER.IFS.EAS.HVI.CONTENT$EAS.DocumentHandler.08          Role: Primary    Standby: uoa1.myserver.mycompany_node:48457 (Secondary)
   ECM.UOA.HANDLER.IFS.EAS.HVI.CONTENT$EAS.DocumentHandler.11          Role: Primary    Standby: uoa1.myserver.mycompany_node:48457 (Secondary)
   ECM.UOA.HANDLER.IFS.PersonalLibraryHandler                          Role: Primary    Standby: uoa1.myserver.mycompany_node:48457 (Secondary)
```

6

Administering Oracle UOA

This section covers topics that are new to Oracle Universal Online Archive (Oracle UOA) and, therefore, are not in *Oracle Content Database Administrator's Guide*. This administrator's guide includes some general administration topics that apply to Oracle UOA.

For information about which sections of *Oracle Content Database Administrator's Guide* do *not* apply to Oracle UOA, see *Oracle Universal Online Archive Release Notes*.

After you install and configure Oracle UOA, you can customize your setup for a particular archive service, such as Oracle Email Archive Service (Oracle EAS). For example, you might want to balance the load for data ingestion over multiple Oracle UOA nodes.

This chapter describes key administrative tasks for Oracle UOA, in the following topics:

6.1 Changing the Clustering Configuration for Server Processes

Oracle UOA automatically balances clustered servers across all middle-tier nodes specified in the `DECLARED_AGENT_NODES` list. You can explicitly specify an optimum balancing configuration for a particular agent by also listing it in the `DECLARED_AGENT_IDENTIFIERS` list.

After you declare a server in the `DECLARED_AGENT_IDENTIFIERS` list, then the middle-tier node listed as primary should ultimately become the node registered to run the server process, and the node listed as secondary should become the standby node for that process, provided these primary and secondary nodes are running and available. If either of these nodes shuts down, however, Oracle UOA will adjust the `Registered` and `Standby` configuration.

If the registered node were to shut down, for example, then the standby node would get promoted to become the registered node for the server process. Alternatively, if the standby were to shut down, then any other backup node would take over the standby position.

Oracle UOA has several clustering properties for configuring which Oracle UOA middle tiers will run server processes. Agents, scripts, and other tools can access the clustering information through these properties in the Oracle UOA schema. You can use Oracle Enterprise Manager 10*g* Application Server Control to change the clustering configuration for server processes in these properties.

Each agent accesses the clustering properties at run time. Figure 6–1 shows Oracle UOA clustering properties on the Edit 'IFS.DOMAIN.LOOKUP.ClusteringProperties' page in Application Server Control.

Figure 6–1 Edit Clustering Properties Page

Table 6–1 describes these clustering properties.

Table 6–1 Clustering Properties for Oracle UOA Middle Tiers

Property Key	Data Type	Sample Values	Description
DECLARED_AGENT_IDENTIFIERS	String[]	ECM.UOA.AGENT.IFS.CleanupAgent : $$NODE1, $$NODE3 ECM.UOA.HANDLER.IFS.ReadDocumentAgent : $$NODE2, $$NODE4	Contains a set of identifiers for agents and event handlers, with a list of the primary and secondary nodes on which to run the server process for each identifier. In this example, the first node in the list, $$NODE1 (which maps to uoa1.uoa.example.com_Node in the DECLARED_AGENT_NODES list), is the primary node, and the second node in the list, $$NODE3 (which maps to uoa3.uoa.example.com_Node in the DECLARED_AGENT_NODES list), is the secondary node. All other declared nodes are backup nodes. The DECLARED_AGENT_IDENTIFIERS property does not list backup nodes. To specify a node that is not part of the cluster and, therefore, is not in the DECLARED_AGENT_NODES list, you can use the full node name. You can also use a full node name for a declared node.
DECLARED_AGENT_NODES	String[]	uoa1.uoa.example.com_Node, uoa2.uoa.example.com_Node, uoa3.uoa.example.com_Node	Contains a list of node names for Oracle UOA middle-tier nodes that are already configured. By default, the list includes all such nodes in the domain. The string values are the node names chosen during node configuration.

Table 6–1 (Cont.) Clustering Properties for Oracle UOA Middle Tiers

Property Key	Data Type	Sample Values	Description
DISABLED_AGENT_IDENTIFIERS	String[]	ECM.UOA.HANDLER.ECM.EAS.MainHandler	Contains a list of disabled identifiers for agents and event handlers. By default, the list includes identifiers with old naming patterns, which were used by event handlers. You can disable an identifier by adding it to the list or enable an identifier by removing it from the list. Oracle recommends that you do not remove any identifier from the default list unless you need to use the identifier in your Oracle UOA domain.
REGISTRATION_PERIOD	String	1M	The minimum time interval for each server to recheck its registration status. If this property is not defined, a default value of 1 minute is used. A normal server process will automatically reestablish the registration at this time period. Failure to reestablish the registration within 3 times the REGISTRATION_PERIOD value (default 3 minutes) will result in the server being marked as disabled.
EVENT_NOTIFICATION_ENABLED	Boolean	true	Indicates whether Oracle UOA immediately performs clustering actions when a server process is stopped or suspended.

Note: The clustering properties and functionality are only for non-HTTP nodes. You should never add HTTP nodes to the DECLARED_AGENT_NODES list.

For more information about the clustering feature, which is introduced in Oracle UOA 10*g* (10.2.2.1.0), see Section 1.1, "New Clustering Feature in Oracle UOA 10g (10.2.2.1.0)."

For information about verifying the clustering configuration, see Section 5.3, "Verifying That Server Processes Are Running on Each Node."

6.1.1 Configuring Primary and Secondary Nodes

Oracle UOA automatically load balances its server processes across all nodes listed in the DECLARED_AGENT_NODES property. If you want to set up the initial load balancing, you can use Application Server Control to specify the primary and secondary nodes to run each server process in the DECLARED_AGENT_IDENTIFIERS property.

When you specify nodes in the DECLARED_AGENT_IDENTIFIERS property for a specific agent identifier, Oracle UOA assigns one of the following clustering roles for that agent identifier to each node:

- Primary (meaning the node will typically be assigned as Registered and have responsibility for that agent identifier)
- Secondary (meaning the node will typically be assigned as Standby and have responsibility if the node assigned as Registered were to fail or be stopped

The first node you specify in the DECLARED_AGENT_IDENTIFIERS property entry is the node that has the Primary role for running server processes, and the second node is the node that has the Secondary role. All other Oracle UOA nodes configured to service agents or event handlers assume a Backup role, and they are used only if the nodes with Primary or Secondary roles are unavailable.

If the primary node becomes unavailable, the secondary node takes over the processing. If the secondary node also becomes unavailable, one of the backup nodes takes over.

Oracle UOA provides the following agent identifiers, which are associated with agents:

```
ECM.UOA.AGENT.IFS.ArchiveLinkAgent
ECM.UOA.AGENT.IFS.AuditEventDispatchAgent
ECM.UOA.AGENT.IFS.BackgroundRequestAgent
ECM.UOA.AGENT.IFS.CleanupAgent
ECM.UOA.AGENT.IFS.ContentGarbageCollectionAgent
ECM.UOA.AGENT.IFS.DanglingObjectAVCleanupAgent
ECM.UOA.AGENT.IFS.EventExchangerAgent
ECM.UOA.AGENT.IFS.EventHandlerAgent:running node identifier
ECM.UOA.AGENT.IFS.ExpirationAgent
ECM.UOA.AGENT.IFS.FolderIndexAgent
ECM.UOA.AGENT.IFS.GarbageCollectionAgent
ECM.UOA.AGENT.IFS.InboundQueueListenerAgent
ECM.UOA.AGENT.IFS.LifecycleAgent
ECM.UOA.AGENT.IFS.LockExpirationAgent
ECM.UOA.AGENT.IFS.OidCredentialManagerAgent
ECM.UOA.AGENT.IFS.QuotaAgent
ECM.UOA.AGENT.IFS.ReadDocumentAgent
ECM.UOA.AGENT.IFS.ReassignQuotaAgent
ECM.UOA.AGENT.IFS.RefreshSecurityAgent
ECM.UOA.AGENT.IFS.ServiceWatchdogAgent
ECM.UOA.AGENT.IFS.VersionPurgeAgent
```

Oracle UOA provides the following agent identifiers for its event handlers to use:

```
ECM.UOA.HANDLER.IFS.EAS.HVI.CONTENT$EAS.DocumentHandler.00
ECM.UOA.HANDLER.IFS.EAS.HVI.CONTENT$EAS.DocumentHandler.01
ECM.UOA.HANDLER.IFS.EAS.HVI.CONTENT$EAS.DocumentHandler.02
ECM.UOA.HANDLER.IFS.EAS.HVI.CONTENT$EAS.DocumentHandler.03
ECM.UOA.HANDLER.IFS.EAS.HVI.CONTENT$EAS.DocumentHandler.04
ECM.UOA.HANDLER.IFS.EAS.HVI.CONTENT$EAS.DocumentHandler.05
ECM.UOA.HANDLER.IFS.EAS.HVI.CONTENT$EAS.DocumentHandler.06
ECM.UOA.HANDLER.IFS.EAS.HVI.CONTENT$EAS.DocumentHandler.07
ECM.UOA.HANDLER.IFS.EAS.HVI.CONTENT$EAS.DocumentHandler.08
ECM.UOA.HANDLER.IFS.EAS.HVI.CONTENT$EAS.DocumentHandler.09
ECM.UOA.HANDLER.IFS.EAS.HVI.CONTENT$EAS.DocumentHandler.10
ECM.UOA.HANDLER.IFS.EAS.HVI.CONTENT$EAS.DocumentHandler.11
```

```
ECM.UOA.HANDLER.IFS.EAS.HVI.CONTENT$EAS.MainHandler
ECM.UOA.HANDLER.IFS.PersonalLibraryHandler
```

To configure primary and secondary nodes:

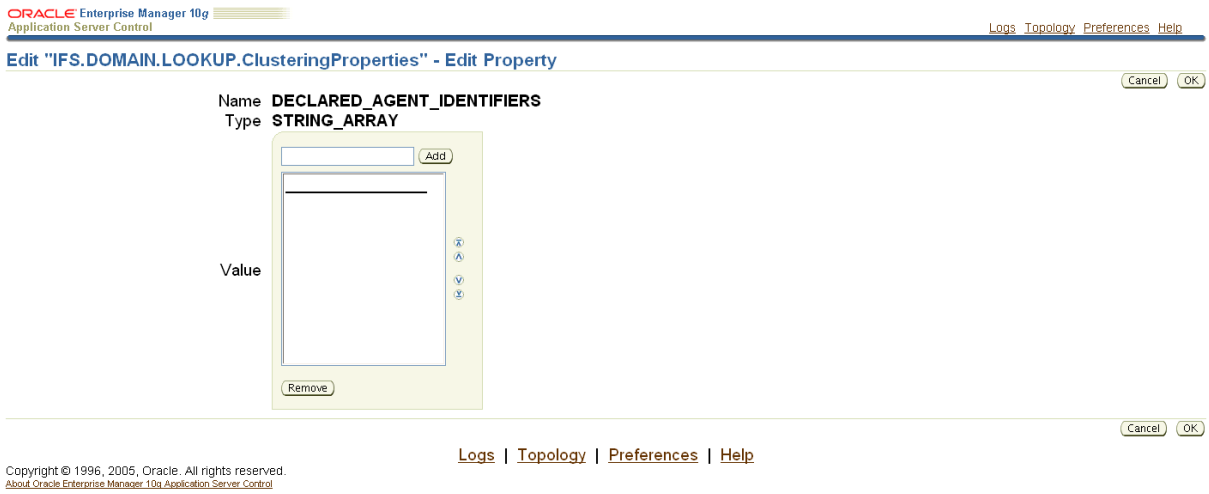
1. On the Application Server Control Home page, click **Content** in the System Components table.
2. On the Domain Properties page, click **IFS.DOMAIN.LOOKUP.ClusteringProperties**.
3. On the Edit 'IFS.DOMAIN.LOOKUP.ClusteringProperties' page, which Figure 6–1 shows, click **DECLARED_AGENT_IDENTIFIERS**.
4. On the Edit Property page for `DECLARED_AGENT_IDENTIFIER`, enter the agent identifier associated with each agent or event handler and the primary and secondary nodes to run its server process, as in this example:

   ```
   ECM.UOA.AGENT.IFS.CleanupAgent : $$NODE1, $$NODE3
   ```

   A colon (:) follows the name, and a comma (,) follows the primary node. Click **Add** after each entry.

   The identifier list is empty by default, as Figure 6–2 shows.

Figure 6–2 Edit Property Page for DECLARED_AGENT_IDENTIFIERS



You can indicate a node name with a macro derived from the list of node names in the `DECLARED_AGENT_NODES` property. In the example, `$$NODE1` maps to the first node in the list of agents in the `DECLARED_AGENT_NODES` property, and `$$NODE3` maps to the third node in the list.

Alternatively, you could enter the full Oracle UOA node name, whether or not it is in the `DECLARED_AGENT_NODES` list. To find the Oracle UOA node name, perform the following steps:

a. On the Application Server Control Home page, click **Content** in the System Components table.

b. On the Content page, click **Node Configurations** under Administration.

c. In the table on the Node Configurations page, locate the name of the Oracle UOA node, such as `uoa.myserver.mycompany.com_Node`, in the Name column.

5. When you finish entering identifiers and nodes, click **OK**.

6.1.2 Configuring Middle-Tier Nodes to Run Server Processes

The `DECLARED_AGENT_NODES` property contains the names of all configured Oracle UOA middle-tier nodes in the domain by default. All nodes listed in this property can run server processes for agents and event handlers.

Even if a node is not listed in the `DECLARED_AGENT_NODES` list, the node's clustered server processes will act as backups. A server processes in a cluster on an undeclared node can even act as the primary or secondary process if an entry in the `DECLARED_AGENT_IDENTIFIERS` property leverages the node.

You can change the list of node names in this property with Application Server Control. If you remove an entry from the list of node names or reorder the list, however, your custom values would get overwritten if an Oracle UOA middle tier were added to the domain. Adding a new middle tier to an existing environment deletes the values in the `DECLARED_AGENT_NODES` property and repopulates the property with the names of all Oracle UOA nodes currently in the domain.

Removing any middle-tier node from the list could have a negative impact on load balancing and performance. If you do remove a node, however, you can still configure a server process to run on the node by entering an identifier for the process in the `DECLARED_AGENT_IDENTIFIERS` property. For more information, see Section 6.1.1, "Configuring Primary and Secondary Nodes."

Oracle recommends that you do not delete all nodes from the `DECLARED_AGENT_NODES` list. By default, all Oracle UOA middle-tier nodes are in the list. If all of the nodes were cleared from the list, leaving the property value undefined, all nodes would assume the `Primary` role and compete equally for control of the available agents and handlers. The first node that starts could perform most or all of the processing, without any load balancing.

To configure middle-tier nodes to run server processes:

1. On the Application Server Control Home page, click **Content** in the System Components table.
2. On the Domain Properties page, click **IFS.DOMAIN.LOOKUP.ClusteringProperties**.
3. On the Edit 'IFS.DOMAIN.LOOKUP.ClusteringProperties' page, which Figure 6–1 shows, click **DECLARED_AGENT_NODES**.
4. On the Edit Property Page for `DECLARED_AGENT_NODES`, which Figure 6–3 shows, enter the Oracle UOA middle-tier name and click **Add** for each node.

Figure 6–3 Edit Property Page for DECLARED_AGENT_NODES

You can use the `DECLARED_AGENT_IDENTIFIERS` property to specify the primary and secondary nodes. For more information, see Figure 6–2.

5. When you finish entering node names, click **OK**.

6.1.3 Restoring Disabled Identifiers for Server Processes

The `DISABLED_AGENT_IDENTIFIERS` property contains a list of identifiers that have been disabled in the Oracle UOA domain. If you need to use a disabled identifier for a server process, you can restore the identifier by editing this property with Application Server Control.

The default list includes disabled identifiers with old naming patterns that event handlers were using. Oracle recommends that you do not restore an identifier that is in the default list unless you need to use the identifier for a server process.

To restore a disabled identifier for a server process:

1. On the Application Server Control Home page, click **Content** in the System Components table.
2. On the Domain Properties page, click **IFS.DOMAIN.LOOKUP.ClusteringProperties**.
3. On the Edit 'IFS.DOMAIN.LOOKUP.ClusteringProperties' page, which Figure 6–1 shows, click **DISABLED_AGENT_IDENTIFIERS**.
4. On the Edit Property page for `DISBLED_AGENT_IDENTIFIERS`, which Figure 6–4 shows, select one or more identifiers that you want to enable, and then click `Remove`.

Figure 6–4 Edit Property Page for DISABLED_AGENT_IDENTIFIERS

5. When you finish removing identifiers from the disabled list, click **OK**.

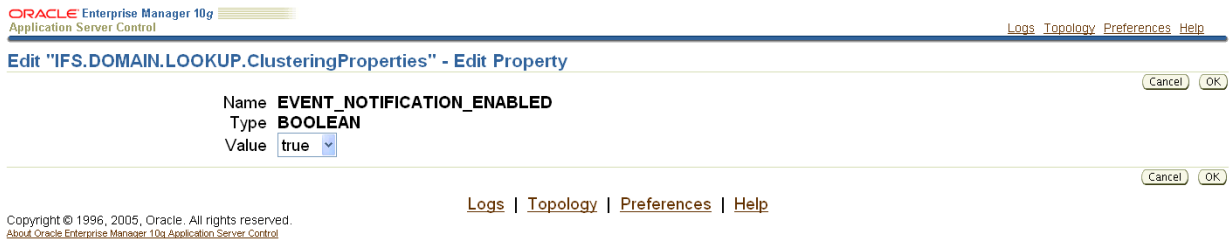
6.1.4 Changing the Notification for Inactive Server Processes

The `EVENT_NOTIFICATION_ENABLED` property controls whether Oracle UOA receives immediate notification when a server process is stopped or suspended on a node. The default value, `true`, specifies immediate notification. If this property value is `false` and a server process is stopped or suspended, Oracle UOA waits for the duration specified by the `REGISTRATION_PERIOD` value before switching processing to another node.

To change the notification for inactive server processes:

1. On the Application Server Control Home page, click **Content** in the System Components table.
2. On the Content page, select a node in the Processes table, and then click **Domain Properties** under Administration.
3. On the Domain Properties page, click **IFS.DOMAIN.LOOKUP.ClusteringProperties**.
4. On the Edit 'IFS.DOMAIN.LOOKUP.ClusteringProperties' page, which Figure 6–1 shows, click **EVENT_NOTIFICATION_ENABLED**.
5. On the Edit Property page for `EVENT_NOTIFICATION_ENABLED`, which Figure 6–5 shows, select `true` or `false` from the list, and then click **OK**.

Figure 6–5 Edit Property Page for EVENT_NOTIFICATION_ENABLED



6.1.5 Changing the Registration Period for a Domain

The registration period is the minimum interval at which servers should recheck their registrations. The period is used by servers to internally recheck their registration status no less frequently than the period indicated.

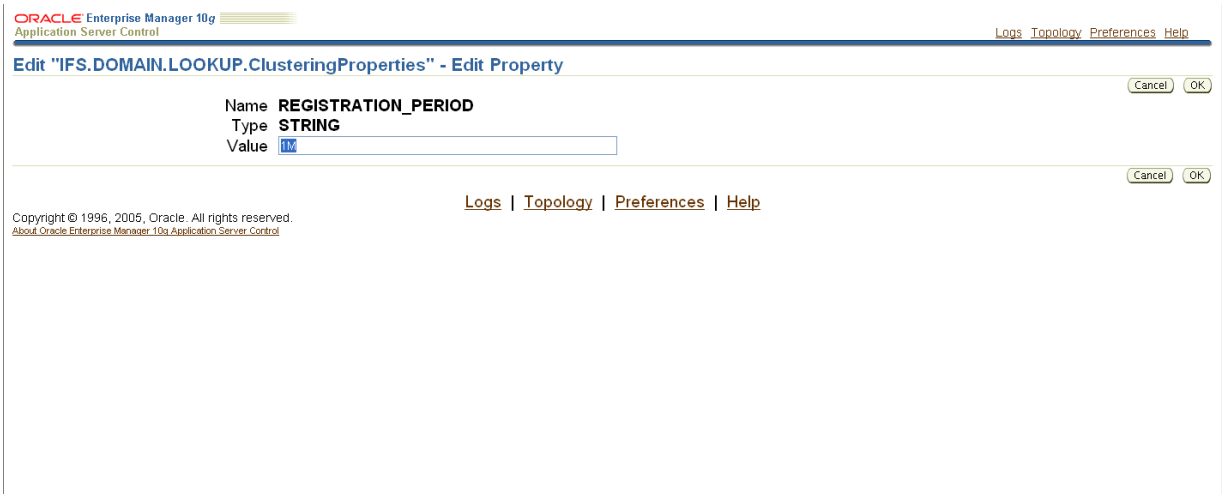
When a server checks it registration, it also checks the node associated with either the `Registered` or `Standby` role to determine whether the node is expired. A node is considered expired if its node token has not been updated or modified in 3 times the registration period. If an expired node is detected, the `Registered` or `Standby` position it was occupying becomes vacant, enabling another node running the appropriate server to take over.

You can change the registration period for an Oracle UOA domain by editing the `REGISTRATION_PERIOD` property with Application Server Control. If you change property value, you need to restart the Event Handler Agent for the change to take effect.

To change the registration period for a domain:

1. On the Application Server Control Home page, click **Content** in the System Components table.
2. On the Content page, select a node in the Processes table, and then click **Domain Properties** under Administration.
3. On the Domain Properties page, click **IFS.DOMAIN.LOOKUP.ClusteringProperties**.
4. On the Edit 'IFS.DOMAIN.LOOKUP.ClusteringProperties' page, which Figure 6–1 shows, click **REGISTRATION_PERIOD**.
5. On the Edit Property page for `REGISTRATION_PERIOD`, which Figure 6–6 shows, select the value, type a new value, and then click **OK**.

Figure 6–6 Edit Property Page for REGISTRATION_PERIOD



Oracle recommends a value of `1M` or more for the `REGISTRATION_PERIOD` property. If you specify less than 1 minute, the server might not have time to complete its processing and reregister.

6. Restart the Event Handler Agent, as follows, for your change to take effect:
   a. Return to the Content page, by clicking the **Back** arrow in your browser.
   b. Click the first occurrence of **Node** in the Processes table.
   c. Select **EventHandlerAgent** in the Servers table.
   d. Click the **Restart** button at the top of the table.

6.2 Setting Server Configuration Properties for the Life Cycle Agent

The properties listed in this section are all required for the Oracle UOA Lifecycle agent to run properly. When you install and configure an Oracle UOA instance, the properties are configured using the default values shown in this section.

For more information about configuring the standard protocol servers and agents, see "Server Configuration Properties" in *Oracle Content Database Administrator's Guide*.

The Lifecycle Agent performs life cycle operations for documents that have an assigned life cycle policy (`LifecyclePolicy` instance). The default name for this agent's server configuration follows:

`LifecycleAgentConfiguration`

Table 6–2 lists the properties of the Lifecycle Agent.

Table 6–2 Lifecycle Agent Properties

Property	Description and Usage Notes	Default Value
ECM.AGENT.LIFECYCLE AGENT.BatchSize	The number of documents that will be processed in a single batch by one of the agent threads.	5000
ECM.AGENT.LIFECYCLE AGENT.ExecutionBaseTime OfDay	The base time of day from which the ExecutionPeriod value is offset. For example, if the ExecutionBaseTimeOfDay value is 00:05:00 and the ExecutionPeriod value is 10m, then the agent will run at 00:15:00, 00:25:00, and so on.	00:00:00
ECM.AGENT.LIFECYCLE AGENT.ExecutionPeriod	The time interval for when the agent runs again, specified as a number followed by a time unit. Time units are as follows: h=hours m=minutes, s=seconds	24h (but 10m is recommended).
ECM.AGENT.LIFECYCLE AGENT.SessionPoolSize	The maximum number of sessions kept in the pool.	10
ECM.AGENT.LIFECYCLE AGENT.ThreadCount	The maximum number of parallel agent threads.	8
IFS.SERVER.Class	The class used to instantiate the server. Do not change	oracle.ifs.ecm.agents .LifecycleAgent (one line)
IFS.SERVER.SESSION.User	An internal user name for the server session. Do not change	System

6.3 Using Administrative Scripts

Oracle UOA ships with a set of administrative scripts, which are located in the *ORACLE_HOME*/content/admin/ecmscript directory. You can use these scripts to do the following tasks:

- Provision new users from Oracle Internet Directory into Oracle UOA
- Add an Oracle UOA user as a member to an Oracle UOA group
- Add an Oracle UOA group as a subgroup to an Oracle UOA group
- Set the FTP password for an Oracle UOA user

You can do each of these administrative tasks by running the scriptdriver.sh script out of the *ORACLE_HOME*/content/bin directory with the respective definition file as one of the script's parameters. The following sections describe how to execute the various scripts in more detail.

6.3.1 Provisioning New Users from Oracle Internet Directory into Oracle UOA

If you need to add a new user to Oracle UOA without waiting until the user gets provisioned automatically (after approximately 15 minutes), you can use the ProvisioningUser.def file to enforce the provisioning of this user. Before you can do this, the user needs to be created through the Oracle Identity Management Self-Service Console.

For information about how to create a new user in Oracle Internet Directory, see also the "Managing Users and Groups with the Oracle Internet Directory Self-Service Console" chapter in *Oracle Identity Management Guide to Delegated Administration*.

To enforce provisioning of a user into Oracle UOA:

1. Navigate to the *ORACLE_HOME*/content/admin/ecmscript directory:

   ```
   # cd $ORACLE_HOME/content/admin/ecmscript
   ```

2. Run the scriptdriver.sh script with the following command:

   ```
   # $ORACLE_HOME/content/bin/scriptdriver.sh ProvisionUser.def User=your_new_user_name
   ```

3. Follow the instructions provided by the script.
4. After the script has finished, check the ProvisionUser.out log file for any errors.

6.3.2 Adding a User to an Oracle UOA Group

If you need to add an existing user needs as a member to an existing group in Oracle UOA, you can to use the AddGroupMember.def file.

To add a user to an Oracle UOA group:

1. Navigate to the *ORACLE_HOME*/content/admin/ecmscript directory:

   ```
   # cd $ORACLE_HOME/content/admin/ecmscript
   ```

2. Run the scriptdriver.sh script with the following command:

   ```
   # $ORACLE_HOME/content/bin/scriptdriver.sh AddGroupMember.def Group=your_group_name User=your_user_name
   ```

3. Follow the instructions provided by the script.
4. After the script has finished, check the AddGroupMember.out log file for any errors.

6.3.3 Adding a Subgroup to an Oracle UOA Group

If you need to add an existing group as a subgroup of another existing group in Oracle UOA, you can use the AddGroupSubgroup.def file.

To add a subgroup to an Oracle UOA group:

1. Navigate to the *ORACLE_HOME*/content/admin/ecmscript directory:

   ```
   # cd $ORACLE_HOME/content/admin/ecmscript
   ```

2. Run the scriptdriver.sh script with the following command:

   ```
   # $ORACLE_HOME/content/bin/scriptdriver.sh AddGroupSubgroup.def Group=your_group_name GroupMember=your_subgroup_name
   ```

3. Follow the instructions provided by the script.
4. After the script has finished, check the AddGroupSubgroup.out log file for any errors.

6.3.4 Setting the FTP Password for an Oracle UOA User

If you have the FTP protocol enabled on Oracle UOA, each user who accesses Oracle UOA through FTP needs to have a separate FTP password. This password can be different from the single sign-on (SSO) password for WebDAV access.

To set the FTP password for an Oracle UOA user:

1. Navigate to the *ORACLE_HOME*/content/admin/ecmscript directory:

   ```
   # cd $ORACLE_HOME/content/admin/ecmscript
   ```

2. Run the scriptdriver.sh script with the following command:

   ```
   # $ORACLE_HOME/content/bin/scriptdriver.sh SetUserFtpPassword.def User=your_
   user_name FtpPassword=your_user_ftp_password
   ```

3. Follow the instructions provided by the script.

4. After the script has finished, check the SetUserFtpPassword.out log file for any errors.

   For more information about how to set the FTP password for Oracle UOA users, see *Oracle Universal Online Archive Release Notes 10g Release 3 (10.2.2.1.0)*.

Glossary

agents

Processes that perform operations periodically (time based) or in response to events generated by other Oracle Content DB servers or processes (event based).

Application Server Control

Oracle Enterprise Manager 10*g* Application Server Control

A Web-based management interface used to manage Oracle Application Server middle-tier hosts. Oracle UOA system administrators can use Application Server Control to operate and monitor system processes associated with the Oracle Content DB instance.

ingestion schema

The database schema where documents and folders are described, so that Oracle UOA can create the corresponding objects in the Oracle UOA repository. For Oracle EAS, the schema name is `CONTENT$EAS`.

instance

An entire set of interrelated software that perform as a unified whole. An instance can span multiple nodes and multiple computers. Some examples are Oracle Application Server instance, Oracle Database instance, Oracle Content DB instance.

LDAP

Lightweight Directory Access Protocol

An Internet protocol that applications use to look up contact information from a server, such as a central directory. LDAP servers index all the data in their entries, and you can use filters to select just the person or group you want and return just the information you want.

Lightweight Directory Access Protocol

See LDAP.

OPatch

OPatch is an Oracle utility that assists you with the process of applying interim patches to Oracle software.

Oracle Application Server Infrastructure

See OracleAS Infrastructure.

Oracle Application Server Metadata Repository

See OracleAS Metadata Repository.

Oracle EAS

Oracle Email Archive Service

Provides an optimized e-mail archiving interface, in conjunction with Oracle Universal Online Archive, for Microsoft Exchange, IBM Lotus Notes, and SMTP-based mail systems.

Oracle Email Archive Service

See Oracle EAS.

Oracle Enterprise Manager

Systems management software that enables you to administer, operate, and monitor Oracle Application Server instances, other Oracle products, and applications. See also Application Server Control.

Oracle Enterprise Manager 10*g* Application Server Control

See Application Server Control.

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. Oracle Identity Management includes the following components:

- Oracle Internet Directory
- Oracle Directory Integration and Provisioning
- Oracle Delegated Administration Services
- OracleAS Single Sign-On
- Oracle Application Server Certificate Authority

Oracle Internet Directory

An LDAP service that combines Oracle Database technology with the LDAP v3 directory standard. Oracle Internet Directory is a component of Oracle Identity Management. It is also closely integrated with Oracle Database. All Oracle UOA users are created and managed in Oracle Internet Directory.

Oracle Universal Online Archive

See Oracle UOA.

Oracle UOA

Oracle Universal Online Archive

An archiving system that uses Oracle Database and Oracle Application Server to provide a high-volume data ingestion engine to simplify archiving, management, and rapid retrieval of multiple content types.

OracleAS Infrastructure

Oracle Application Server Infrastructure

An application server installation type that provides centralized product metadata and security services, configuration information, and data repositories for Oracle Application Server middle tiers. Oracle UOA middle tiers use the OracleAS Infrastructure for three main services:

- Product Metadata Service
- Oracle Identity Management Services
- Management Service

OracleAS Metadata Repository

Oracle Application Server Metadata Repository

An Oracle Database that is preseeded with additional schemas to support Oracle Application Server. The schemas are divided into these categories:

- Identity Management Schemas

  These schemas are used by Identity Management components, such as OracleAS Single Sign-On and Oracle Internet Directory.

- Product Metadata Schemas

  These schemas are used by middle-tier application components, such as Oracle Application Server Portal and Oracle Application Server Wireless.

- Management Schemas

  These schemas are used for Oracle Application Server management.

- Internet Application Server Registry

  This schema contains release numbers for OracleAS Metadata Repository schemas.

Web-based Distributed Authoring and Versioning

See WebDAV.

Web Folders

The Microsoft operating system extension that supports the WebDAV protocol. Using Web Folders, you can drag and drop files into Oracle UOA and browse your files through Windows Explorer. On Microsoft Windows 2000 and Microsoft Windows XP, Web Folders appears in Network Places.

WebDAV

Web-Based Distributed Authoring and Versioning

A protocol that lets clients browse and edit files on Oracle UOA as if they were on the local computer. One of three protocols supported by Oracle UOA, WebDAV is designed for wide area networks such as the Internet. Currently, the most widespread WebDAV client is the Web Folders extension to Windows Explorer, also known as Network Places in Microsoft Windows 2000 and Microsoft Windows XP. Oracle UOA also provides WebDAV support for Macintosh users.

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