Oracle E-Business Suite Release 12 Installation and Tips for IBM AIX

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Table of contents

Change history

Version	Date	Editor	Editing description
1.0	12/05/2007	Patrick Moore	Original Version
2.0	07/02/2008	Erik Salander	AIX 6.1 is certified on Oracle E-Business Suite
2.1	03/16/2009	Erik Salander	Minor wording change in Cloning Steps

Abstract

This document provides a sample multi-node installation of Oracle E-Business Suite Release 12 on AIX® 5.3. In addition to the installation procedure, the ongoing administration activities of configuration, patching, monitoring and cloning are described.

This document is written to a level of detail that assumes the reader has an in-depth knowledge of AIX, Oracle Database 10g and Oracle E-Business Suite.

Introduction

Oracle E-Business Suite Release 12 (R12) is a fully integrated, comprehensive suite of business applications for the enterprise. As such, there are many details to consider in the installation of Oracle E-Business Suite Release 12. These details range from ensuring installation prerequisites are in place to performing ongoing maintenance by applying patches. This document takes the reader through an installation procedure of Oracle E-Business Suite Release 12 on AIX 5.3. Once the Oracle E-Business Suite Release 12 installation is complete and verified, the regular life cycle activities of configuration, patching, monitoring and cloning are discussed.

This is a companion paper to *Oracle E-Business Suite Release 12 on the IBM BladeCenter running Linux*, http://www-03.ibm.com/support/techdocs/atsmastr.nsf/WebIndex/WP101102.

Feedback is important; please send any comments about this paper to the IBM Oracle International Competency Center at ibmoracl@us.ibm.com.

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Terminology

Oracle E-Business Suite was previously referred to as “Oracle Applications”. The old naming convention has not yet been phased out of Oracle’s documentation. In this document, we’ll only use “Oracle Applications” when referring to existing, unchanged documentation.

Oracle E-Business Suite Release 12 Documentation

MetaLink note 394692.1, “Oracle Applications Documentation Resources, R12” is a meta-document that lists all published information available for Oracle E-Business Suite Release 12. This is the starting point when looking for Oracle E-Business Suite Release 12 documentation.

The complete Oracle Release 12 Documentation Library (not including MetaLink notes) is located here, http://download.oracle.com/docs/cd/B40089_06/current/html/homeset.html.

MetaLink notes are found at https://metalink.oracle.com.

Technology Overview

This section provides an overview of the technologies deployed in this document.

Oracle E-Business Suite Release 12

The Oracle E-Business Suite Release 12 is defined by the Oracle Applications Architecture. The Oracle Applications Architecture is a framework for multi-tiered, distributed computing that supports Oracle E-Business Suite products. For a detailed description of this architecture, refer to the Oracle Applications Concepts Release 12 document, http://download.oracle.com/docs/cd/B40089_06/current/acrobat/120oacg.pdf. This section contains a description of the key design points of the architecture.

Basic Terminology

Oracle E-Business Suite was previously referred to as "Oracle Applications". Much of the Oracle E-Business Suite documentation still refers to Oracle Applications. We'll try to use Oracle E-Business Suite as much as possible and use Oracle Applications in the same way it is used by Oracle.

In the Oracle Applications Architecture, various servers or *services* are distributed among the levels, or *tiers*.

A *service* is a process or group of processes running on a single machine, providing a specific function. For example, *web services* process HTTP requests.

A *tier* is a logical grouping of services, possibly spread across more than one physical machine.

A machine may be referred to as a *node*, especially in the context of a group of computers that work closely together as a *cluster*. Each tier may consist of one or more nodes, and each node can potentially contain more than one tier.

Architectural Components

The Oracle Application Architecture deploys a three tier architecture consisting of a *database tier*, *application tier* and *desktop tier*.

Desktop Tier

The client interface is provided through HTML for HTML-based applications, and via a Java™ applet in a Web browser for the traditional Forms-based applications.

In Oracle E-Business Suite Release 12, each user logs in to Oracle Applications through the E-Business Suite Home Page on a desktop client web browser. Oracle E-Business Suite Release 12 provides a single sign-on feature, which requires a user to sign on only once, to access HTML-based applications, Forms-based applications, and Business Intelligence applications.

The desktop tier contains the forms client applet and the desktop Java client. The forms client applet is a collection of Java Archive (JAR) files which consist of all Java classes needed to run

the presentation layer of Oracle Application forms. The desktop Java client must have a Java Virtual Machine (JVM) which is called J2SE plug-in installed. One of the main differences between Oracle E-Business Suite 11*i* and Oracle E-Business Suite Release 12 is the change from Oracle JInitiator to J2SE Plug-in during the applications launch.

Application Tier

The application tier is sometimes referred as middle tier because it manages the communication between the desktop tier and database tier. It is comprised of three service groups which include:

- Web Services
- Forms Services
- Concurrent Processing Server

Oracle E-Business Suite Release 12 differs from Oracle E-Business Suite 11*i* in that Oracle Application Server (OracleAS) 10*g* is packaged with Oracle E-Business Suite Release 12 and provides Web and Forms services whereas Oracle E-Business Suite 11*i* had Web server and Forms server as separate processes. Also, there is no Administration Server in Oracle E-Business Suite Release 12. Patching can be carried out by any Application Tier node.

Oracle recommends only one type of platform for the application tier for easier maintenance.

Oracle E-Business Suite Release 12 uses two different Oracle Application Server 10*g* releases which are installed in separate ORACLE_HOME directories.

1. Oracle Application Server 10.1.2 ORACLE_HOME comprises mainly *frmweb* executable and formsapp.ear.
2. Oracle Application Server 10.1.3 ORACLE_HOME consists of the latest version of Java Servlet Engine (OC4J), Oracle Process Manager (*opmn*), Apache and application modules.

In summary, the following table shows the different versions of Oracle Database and Oracle Application Server ORACLE_HOME in Oracle E-Business Suite 11*i* and Oracle E-Business Suite Release 12.

Oracle E-Business Suite ORACLE_HOME	***Oracle E-Business Suite 11i***	***Oracle E-Business Suite Release 12***
Database Server ORACLE_HOME	Oracle9*i*	Oracle10*g* Release 2 (10.2)
OracleAS Tools, Developer ORACLE_HOME	Oracle9*i*AS 1.0.2.2.2	OracleAS 10*g* (10.1.2)
OracleAS Java or Web ORACLE_HOME	Oracle9*i*AS 1.0.2.2.2	OracleAS 10*g* (10.1.3)

Table 1: Different versions of ORACLE_HOME under Oracle E-Business Suite 11i and Oracle E-Business Suite Release 12

Another name change for Oracle E-Business Suite Release 12 is that the Self-Service applications are now referred as HTML-based applications. It uses the Oracle Applications Framework as the development platform.

In Oracle E-Business Suite Release 12, the Reports Server is obsolete; all reports are run by *rwrun* executable in Concurrent Processing server.

Daily Business Intelligence (DBI) has replaced Business Intelligence System (BIS); and through DBI overview pages, managers can read summarized information across multiple organizations with the ability to drill down into details on a daily basis.

Database Tier

The database tier contains the Oracle database server which is comprised of all database files, Oracle applications database executables, and Oracle applications online help information.

Since the Oracle database server is sometimes available on some platforms that have been certified whereas Oracle applications have not been certified on those platforms, a mixed platform architecture (formally referred to as “split configuration”) can be utilized. For instance, the database tier can be deployed on the IBM System z™ running Linux® while the application tier can be deployed on an Intel® processor-based x86 machine running Linux and the desktop tier on a platform running Microsoft® Windows®.

Single and Multi-node Installations

There is a lot of flexibility available when choosing to install Oracle E-Business Suite Release 12 on a single node or on multiple nodes.

For small workloads, all the services of Oracle E-Business Suite Release 12 can be installed on a single node. This is also beneficial for testing or development environments.

At the other extreme, a single service can be installed per node. In this configuration, there would be many nodes in the configuration. In our installation example, we’ll install the database server on a single node and all the other services on another node. That’s a common two node Oracle E-Business Suite Release 12 configuration.

The installation procedure for a multi-node install is slightly more complex than the installation procedure for a single-node installation. In a multi-node installation, always start with the database node. When the application tier consists of more than one node, it’s recommended that a two node (database and application) installation be performed. Then the (initial) application node can be cloned to create the other application node(s). This makes patching easier and allows the administrator flexibility in choosing which nodes run which services.

IBM Power Systems

IBM Power™ Systems servers, featuring IBM Power Architecture® technology, enable companies to easily adapt and manage to both the known and unknown challenges in their day-to-day processing environments.

- IBM Power Architecture technology and the AIX operating system helps drive business innovation with powerful, affordable, open and adaptable UNIX® and Linux offerings.
- IBM Virtualization Engine™ and Capacity on Demand technologies help increase flexibility and resource utilization while helping lower systems and administration costs.
- Leading-edge mainframe-inspired reliability, availability and serviceability features contribute to ease of management and improved availability.

Certification

See the latest certification information (mirrored from MetaLink) on the Oracle Technology Network (OTN) website at: http://www.oracle.com/technology/support/metalink/index.html.

Benchmarking

IBM benchmarks for Oracle E-Business Suite are published here: http://www.oracle.com/apps_benchmark/html/results.html.

Installation of Oracle E-Business Suite Release 12

This section describes the installation procedure of Oracle E-Business Suite Release 12 on a Power Systems server running AIX 5.3.

Documentation Resources

MetaLink note 405565.1, "Oracle Applications R12 Installation Guidelines" provides a mini-roadmap for installing Oracle E-Business Suite Release 12. These are the important installation documents:

- The main installation document is "Oracle Applications Installation Guide: Using Rapid Install", B31295, http://download.oracle.com/docs/cd/B40089_06/current/acrobat/120oaig.pdf
  - MetaLink note 405293.1 "Oracle Applications Release Notes R12" supplements the Installation Guide. So be sure to review the Release Notes for the latest information.
- The platform-specific installation notes for AIX are in MetaLink note 402306.1, "Oracle Applications Installation and Upgrade Notes R12 (12.0.4) for AIX-Based Systems".
- The Release Update Packs are listed in MetaLink note 423541.1, "Oracle E-Business Suite R12 Release Update Pack (RUP) Schedule".
  - Release Update Pack 5 is documented in MetaLink note 577406.1 "Now Available: Oracle Financials and Oracle HRMS Release Update Packs 12.0.5 (RUP5)" and MetaLink note 577440.1, "R12: FAQ for RUP5: Oracle Financials Release Update Pack 12.0.5 (RUP5)".

MetaLink notes are found at https://metalink.oracle.com.

Environment

For the Application (Apps) tier and Database (DB) tier, we'll use two separate logical partitions (LPARs) created on a Power p5-570 running the AIX 5.3 TL5 operating system, each with 4GB of memory. Storage is provided by an IBM System Storage™ DS4800, http://www-03.ibm.com/systems/storage/disk/ds4000/ds4800/.

The hostnames of each tier are:

- Apps tier hostname is i7805004
- DB tier hostname is i7805005

Requirements

This section describes these groups of requirements: hardware, operating system, software and "other" requirements. The hardware requirements are described in the Oracle Applications Installation Guide. The remaining requirements are documented in MetaLink note 402306.1, "Oracle Applications Installation and Upgrade Notes Release 12 (12.0.4) for AIX-Based Systems".

Hardware Requirements

Verify the sizing requirements for CPU, memory and disk space as described in the Oracle Applications Installation Guide.

In general, the CPU requirements depend on factor such as:

- Number of concurrent users and their usage model
- Number of concurrent manager processes and the types of jobs they run
- Load for activities other than Oracle E-Business Suite
- Size of the database
- Desired response time

When calculating memory requirements, consider:

- Oracle database overhead
- Size of System Global Area (SGA)
- Number of concurrent users

The approximate disk space requirements are:

- 28 GB for the Apps node
- 45 GB for the DB node with a fresh database
- 133 GB for the DB node with a Vision Demo database

For detailed sizings, use the Oracle E-Business Suite questionnaires available at http://www.ibm.com/erp/sizing.

Next, review the platform-specific installation notes for AIX as documented in MetaLink note 402306.1, "Oracle Applications Installation and Upgrade Notes Release 12 (12.0.4) for AIX-Based Systems". In the following examples, we'll verify the requirements on the DB tier. The Apps tier needs to be verified as well.

Note, these were the requirements at the time this document was initially developed. Check MetaLink note 402306.1 for the latest requirements.

OS Requirements

Ensure the versions of software components you plan to install are certified by Oracle by checking http://www.oracle.com/technology/support/metalink/index.html.

Verify that the OS is at least AIX 5.2 TL7 or 5.3 TL3.

```
oracle@i7805004:/home/oracle $ oslevel -s
5300-05-00
```

Note: In June of 2008, Oracle E-Business Suite Release 12 was certified with AIX 6.1 TL0 SP0 or higher.

Verify that the appropriate OS patches are in place.

```
oracle@i7805004:/home/oracle $ instfix -ik "IY58143 IY59386 IY60930
IY66513 IY70159 IY68989 IY76140"
    All filesets for IY58143 were found.
    All filesets for IY59386 were found.
    All filesets for IY60930 were found.
    All filesets for IY66513 were found.
    All filesets for IY70159 were found.
    All filesets for IY68989 were found.
    All filesets for IY76140 were found.
```

Lastly, for the OS, verify the following Filesets are installed: bos.adt.base, bos.adt.lib, bos.adt.libm, bos.perf.libperfstat, bos.perf.perfstat, bos.perf.proctools and X11.motif.lib.

For example,

```
oracle@i7805004:/home/oracle $ lslpp -l X11.motif.lib
  Fileset                      Level  State      Description
  ----------------------------------------------------------------------------
Path: /usr/lib/objrepos
  X11.motif.lib             5.3.0.50  COMMITTED  AIXwindows Motif Libraries
```

Software Requirements

For software requirements, verify these commands are installed and in the PATH: ar, cc, ld, linkxlC, make and the X display server. Specifically, they need to be in the PATH of the user account that owns the DB and Apps tier file systems.

Note, to obtain cc and linkxlC you'll need to install IBM XL C/C++ Runtime Utilities (unless the IBM XL C/C++ Enterprise Edition product is installed). These utilities can be downloaded from http://www-1.ibm.com/support/docview.wss?uid=swg24010670.

To get cc and linkxlC into the PATH, you can either:

- add these directories to the PATH
  - for cc, add /usr/vac/bin. Note, cc is a link to /usr/vac/bin/xlc
  - for linkxlC, add /usr/vacpp/bin
- add links in /usr/bin
  - link /usr/bin/cc to /usr/vac/bin/xlc
  - link /usr/bin/linkxlC to /usr/vacpp/bin/linkxlC

In our case, we added links in /usr/bin.

```
oracle@i7805004:/home/oracle $ which ar cc ld linkxlC make X
/usr/bin/ar
/usr/bin/cc
/usr/bin/ld
/usr/bin/linkxlC
/usr/bin/make
/usr/bin/X11/X
```

Other Requirements

This group of requirements consists of User Limits and Kernel Settings.

User limits

Ensure the user resource limits for the user account that owns the DB and Apps tier file systems are as follows:

- time (seconds) = unlimited
- file (blocks) = unlimited
- data (kbytes) = unlimited
- stack (kbytes) = unlimited
- memory (kbytes) = unlimited
- coredump (blocks) = unlimited
- nofiles (descriptors) = 65536

Verify the user limits (set in /etc/security/limits) with the ulimit command.

```
oracle@i7805004:/home/oracle $ ulimit -a
time(seconds)        unlimited
file(blocks)         unlimited
data(kbytes)         unlimited
stack(kbytes)        4194304
memory(kbytes)       unlimited
coredump(blocks)     unlimited
nofiles(descriptors) unlimited
```

Note, even though the stack limit does not indicate “unlimited”, it does indicate the total amount of usable physical memory.

Kernel Settings

These operating system characteristics need to be set:

- maximum number of processes allowed per user = 2048
- maximum size of argument list = 524288 (128 x 4K byte blocks)

These maximums can be set by using SMIT and going into System Environments, then Change/Show Characteristics of Operating System.

Pre-Installation

Prior to starting the installation we need to create user accounts, enable asynchronous I/O, set up the staging area and verify the Rapid Install Wizard version. These steps need to be performed on the DB tier and the Apps tier.

It is possible the pre-installation steps may change over time as fixes are incorporated into Release Update Packs (RUPs) or as new patches are documented in the Release Notes or Installation and Upgrade Notes for AIX. Make sure you review the documents listed at the beginning of this chapter for any changes.

User Accounts

We will be creating a multi-user installation. Create a group called *dba*. Then create users *oracle* and *applmgr* that are members of the dba group. These can be different names (eg. ora<SID> or appl<SID>).

Enable Asynchronous I/O

Asynchronous I/O (AIO) must be enabled for the database to start. To enable AIO, enter these commands as the root user.

```
root@i7805004:/ # mkdev -l aio0
aio0 Available
root@i7805004:/ # chdev -l aio0 -P
aio0 changed
root@i7805004:/ # chdev -l aio0 -P -a autoconfig=available
aio0 changed
```

Alternatively, MetaLink note 402306.1 describes how to enable AIO using AIX's SMIT tool.

Note, AIO is enabled by default on AIX 6.1.

Networking

Ensure the entries in /etc/hosts are of the format:

- <ip address> <node name>.<domain name> <node name>

Note the dot in the second field. For example:

```
root@i7805004:/etc # tail -n 2 hosts
139.185.10.67   i7805004.us.oracle.com i7805004
139.185.10.68   i7805005.us.oracle.com i7805005
```

Staging Area Setup

The Oracle E-Business Suite Release 12 staging area can be created in two ways, depending on the whether you have the product DVDs or if you use Oracle Electronic Delivery.

If you have the product DVDs, follow the instructions in the "Set Up the Stage Area" section of the Oracle Applications Installation Guide.

If you download the (zip) files from http://edelivery.oracle.com, use MetaLink note 406138.1 "Downloading Rapid Install Software with Oracle Electronic Deliver Oracle Applications Release 12.0" as a guide. We used Electronic Delivery to obtain the zip files. Once the zip files are expanded, this is the resulting set of directories:

- StartCD
- OraApps
- OraDB
- OraAS
- OraAppDB

Latest Version of Rapid Install Wizard

Always make sure you have the latest version of the Rapid Install Wizard. MetaLink note 405293.1 "Oracle Applications Release Notes Release 12" indicates the latest version of the wizard and the patch required to download and install, to bring the wizard to the latest level. Initially, the wizard version downloaded from the Electronic Delivery site was:

```
oracle@i7805004:/data1/Stage12/startCD/Disk1/rapidwiz # ./RapidWizVersion
Oracle Applications Rapid Install Wizard
Version 12.0.0.20
```

After installing patch 5972626, as prescribed in MetaLink note 405293.1, the new wizard version is:

```
oracle@i7805004:/data1/Stage12/startCD/Disk1/rapidwiz # ./RapidWizVersion
Oracle Applications Rapid Install Wizard
Version 12.0.0.23
```

DB Tier Installation

We'll perform a Standard Installation of Oracle E-Business Suite Release 12. In a Standard Installation, the user must supply the configuration parameters. In an Express Installation, the Rapid Install Wizard supplies defaults for many configuration parameters, requiring less input from the user.

When installing in a multi-node environment, always start the install on the DB tier first. Start the Rapid Install Wizard from the command prompt.

```
oracle@i7805004@/data1/Stage12/startCD/Disk1/rapidwiz $ ./rapidwiz
Rapid Install Wizard is validating your file system......
       4 dvd labels found
Rapid Install Wizard will now launch the Java Interface.....
```

The Welcome screen lists the database and technology stack components that are to be installed. Expand the components to see more details. Click on *Next* to continue.

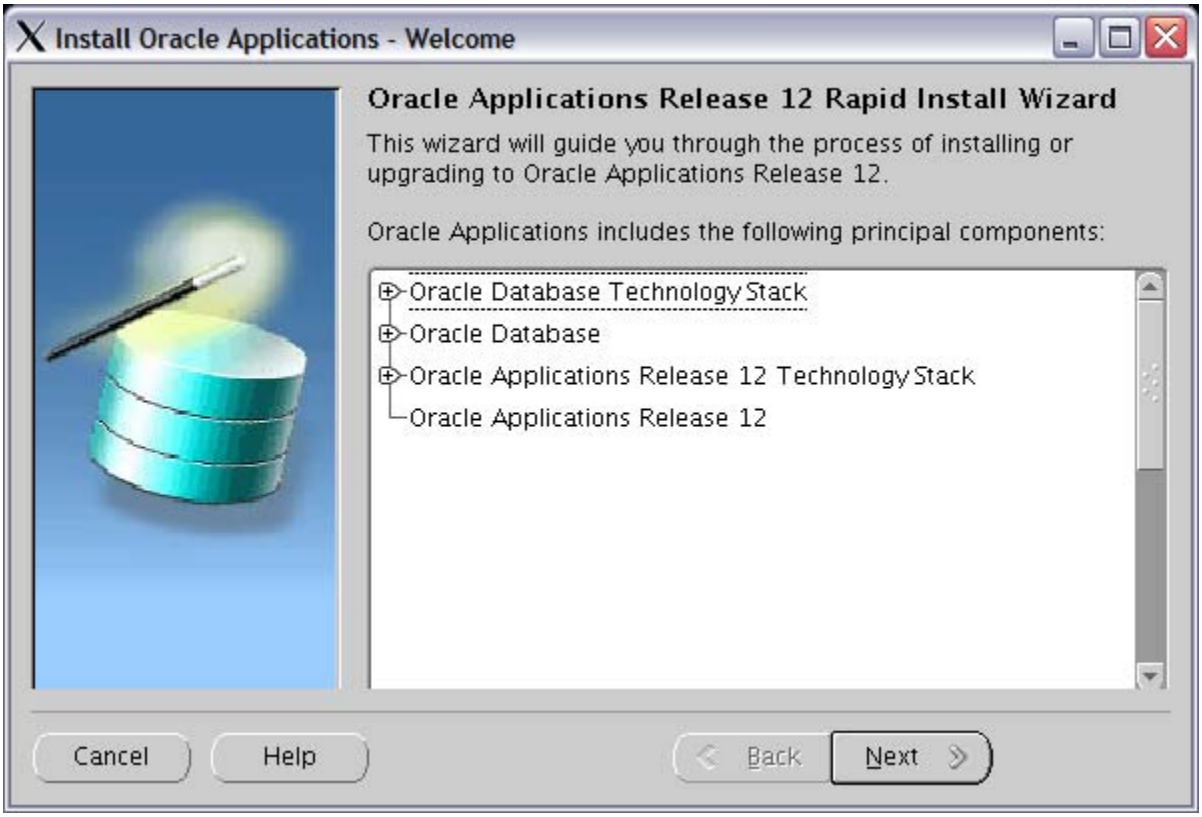

Figure 1: Installation Welcome screen

On the Wizard Operation screen, choose the general type of installation you want performed. We will perform a Standard Installation (ie. not an Express Install or Upgrade) of the Vision Demo database. Click *Next* to continue.

Figure 2: Wizard Operation screen

On the Oracle Configuration Manager (OCM) screen, you can select whether you want to deploy OCM or not. OCM provides ongoing tracking of Oracle statistics for the system on which it is running. This data can be sent to Oracle Support for problem determination. OCM is optional, the Rapid Install process will continue in either case. After making the OCM selection, click on *Next* to continue.

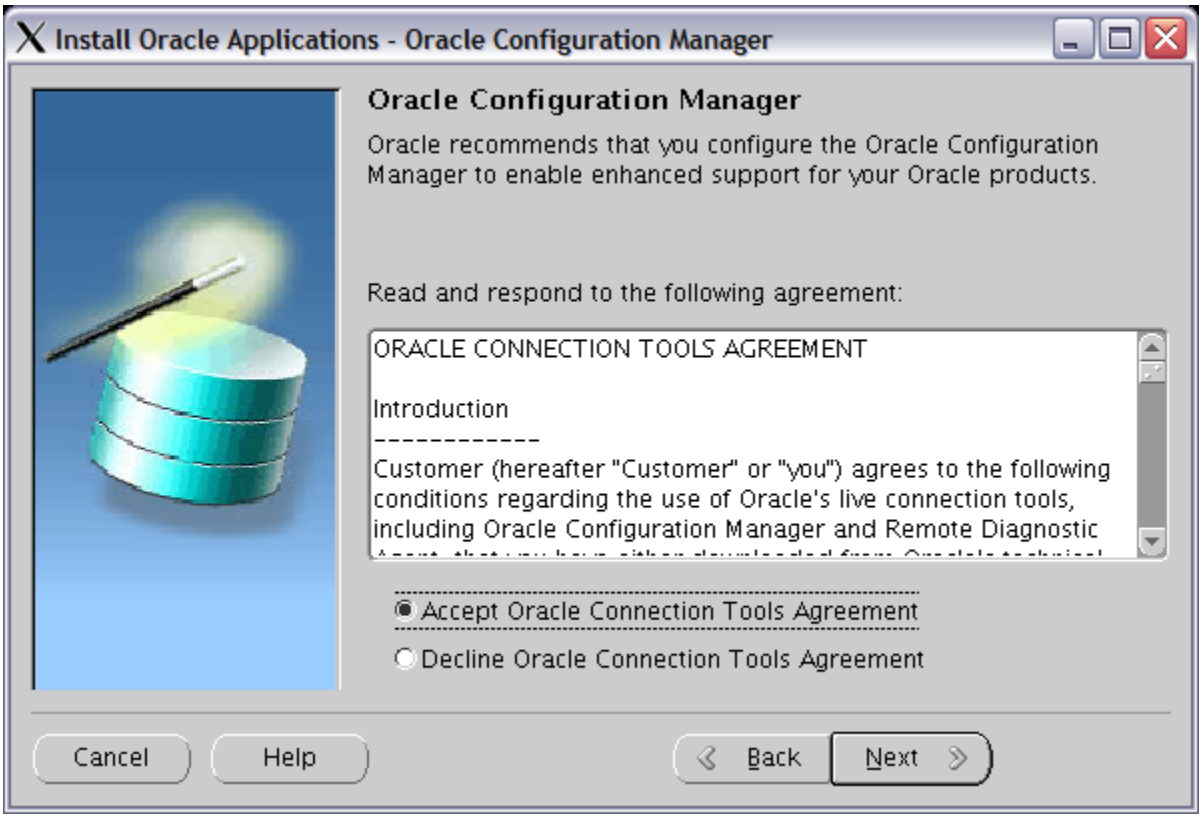

Figure 3: Oracle Configuration Manager screen

The OCM Details screen is presented if the OCM license is accepted. Specify your Customer Support Identifier (CSI), a MetaLink account user name and Country. The proxy information is optional. Click on *Next* to continue.

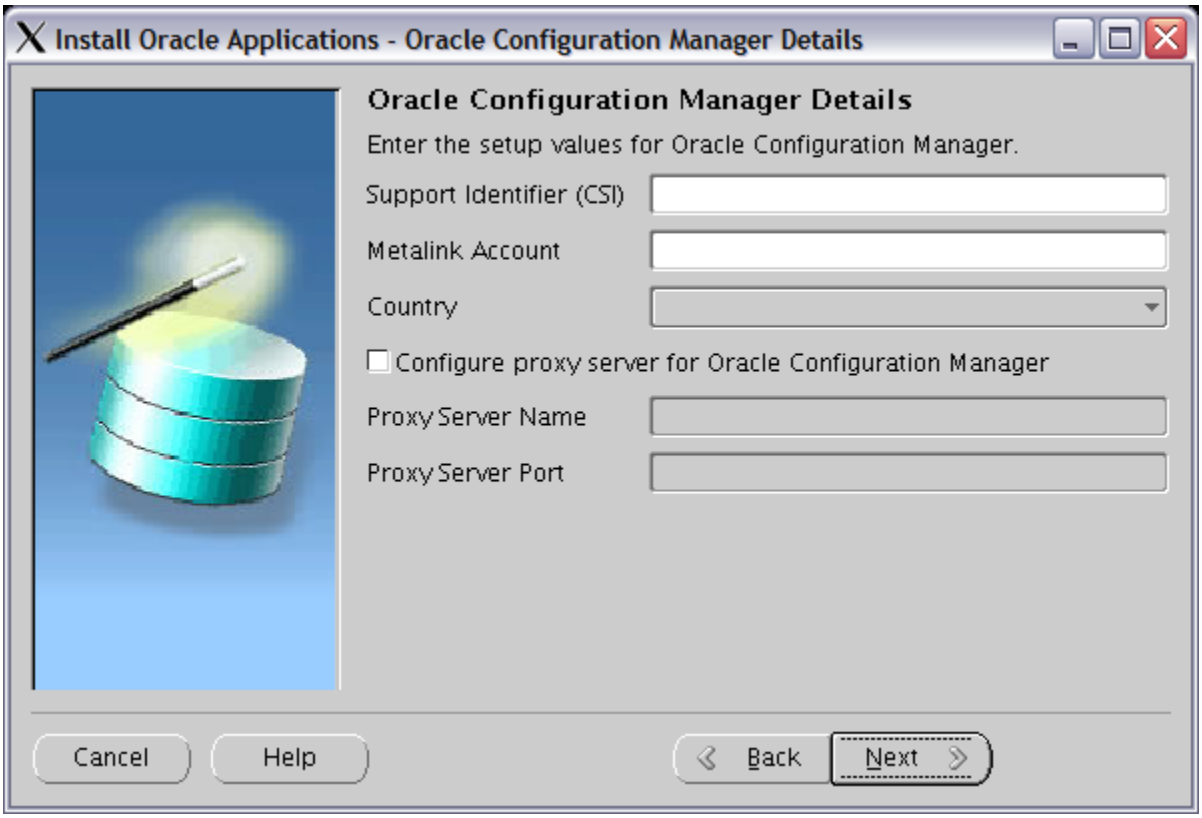

Figure 4: Oracle Configuration Manager Details screen

On the initial visit to the Configuration Choice screen, we'll create a new configuration. That means the configuration choices on this pass through the Rapid Install Wizard will be saved to the new configuration file. Later in the installation process, the name and location of the configuration file will be provided. The name of the configuration file is of the format conf_<SID>.txt.

If we abort the installation process and need to restart it, we can retrieve the saved configuration and avoid having to re-enter the configuration parameters.

Later, when installing the Apps tier, we'll make use of a saved configuration. Click *Next* to continue.

Figure 5: Configuration Choice screen

On the Global System Settings screen, choose the port pool or specific port settings. This configuration option provides the flexibility for multiple applications environments to avoid port conflicts, thereby coexisting on the same system. Click *Next* to continue.

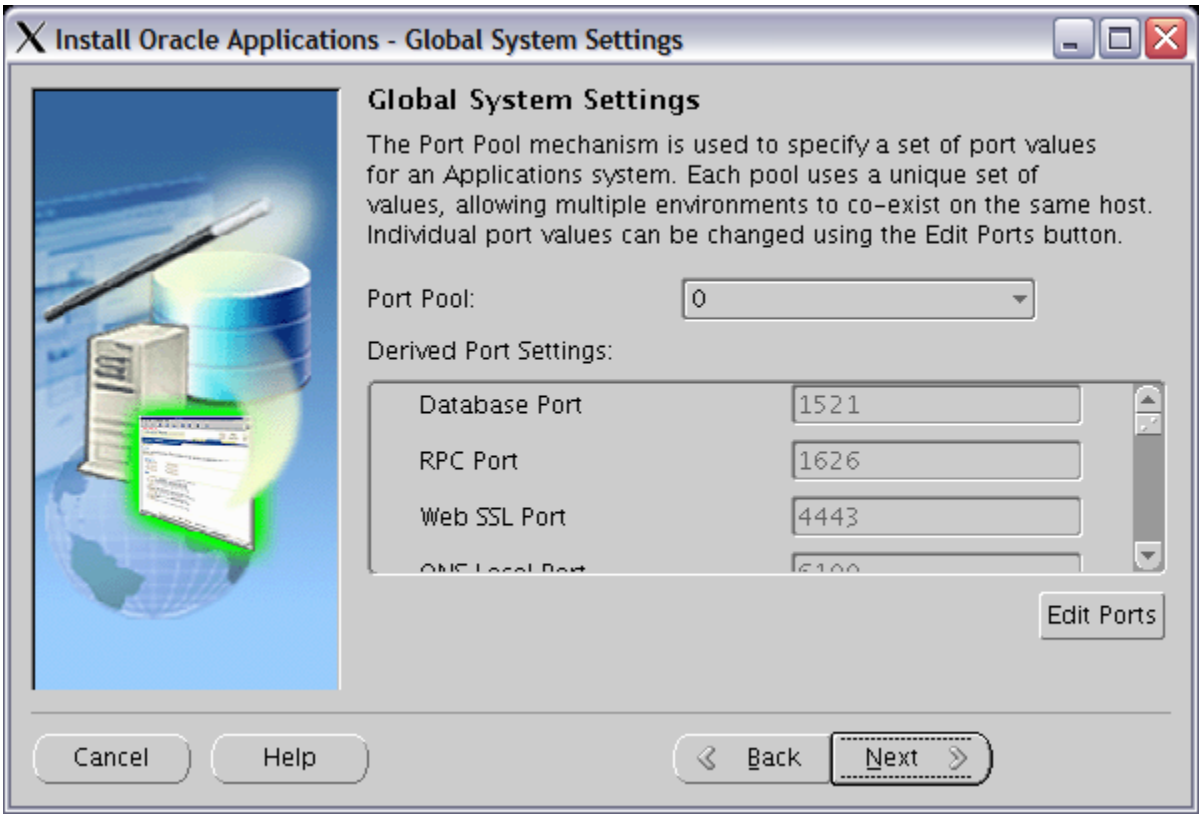

Figure 6: Global System Settings screen

On the Database Node Configuration screen, we'll make the major configuration choices for the DB tier. For our installation, we are installing the Vision Demo Database, not a fresh database. The Database OS User is the account that will own the database file system. The Database OS User and Database OS Group must be defined prior to installation. The User must be a member of the Group. The User can also be a member of other groups. The Base Directory specified is the top-level directory of the mount point of the database. Click on *Next* to continue.

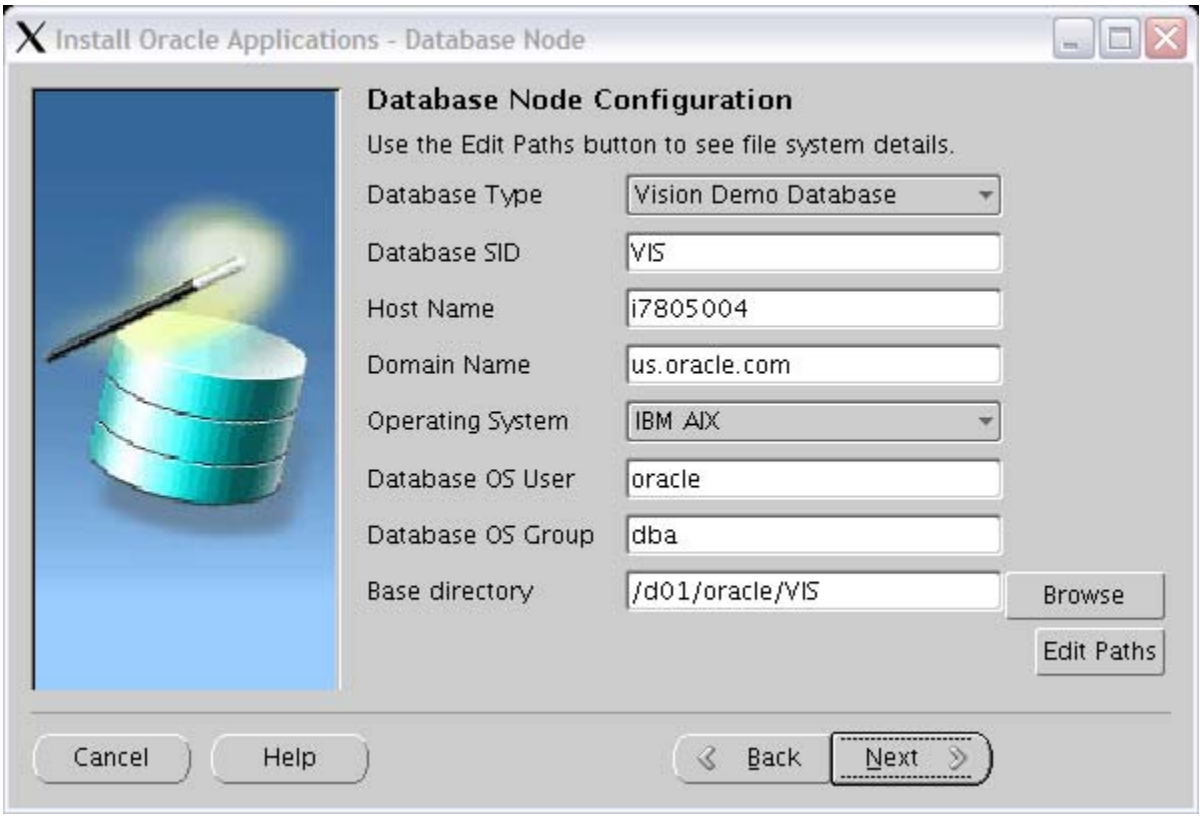

Figure 7: Database Node Configuration screen

On the Primary Applications Node Configuration screen, we'll make the major configuration choices for the Apps tier. In our environment, we have only one Apps node. We'll use a different user name for the Apps OS User than we did for the Database OS User. The Apps OS User must belong to the Apps OS Group. The Base Directory specified is the top-level directory for the Apps node.

Click on *Edit Services* to ensure you have the correct services enabled for your environment.

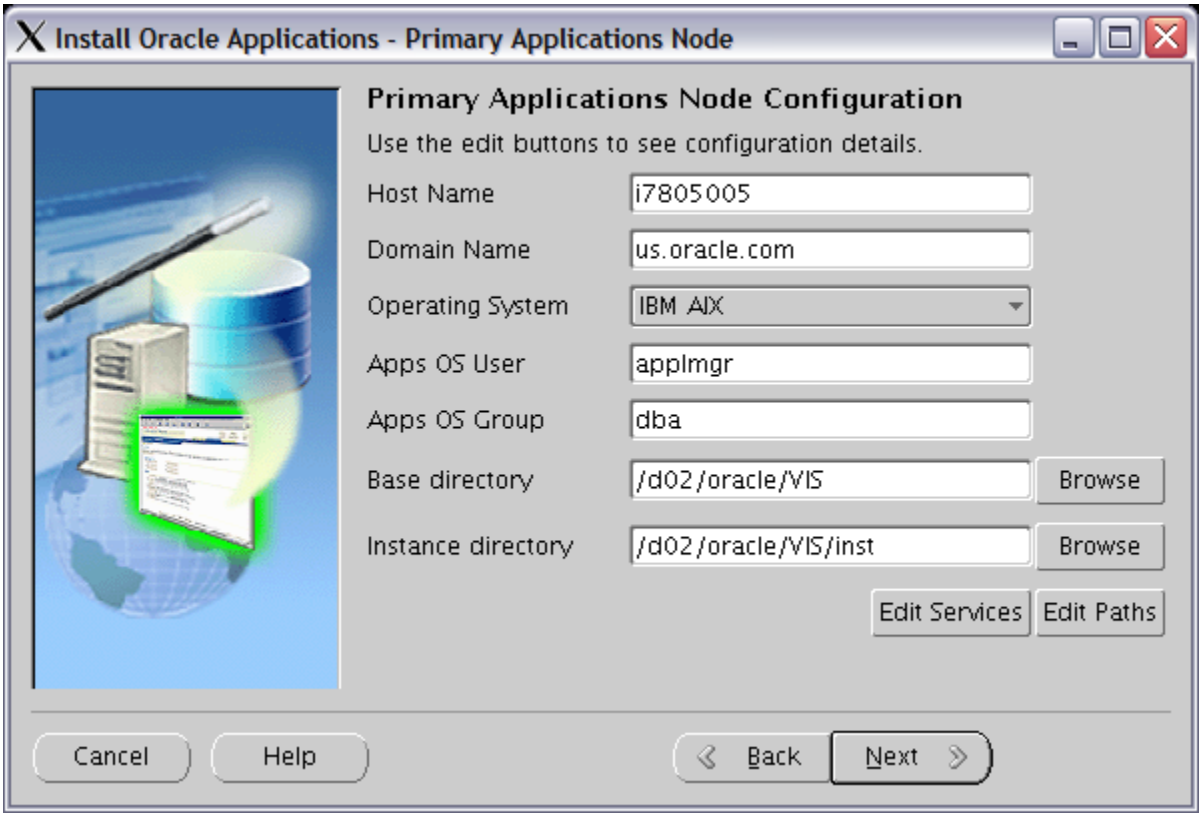

Figure 8: Primary Applications Node Configuration screen

The Application Services screen defines the set of processes that will be started on each Applications node and can be enabled or disabled based on the function the node will perform. Click *OK* when finished.

After clicking OK, the Rapid Install will return to the Primary Applications Node screen, click *Next* to continue.

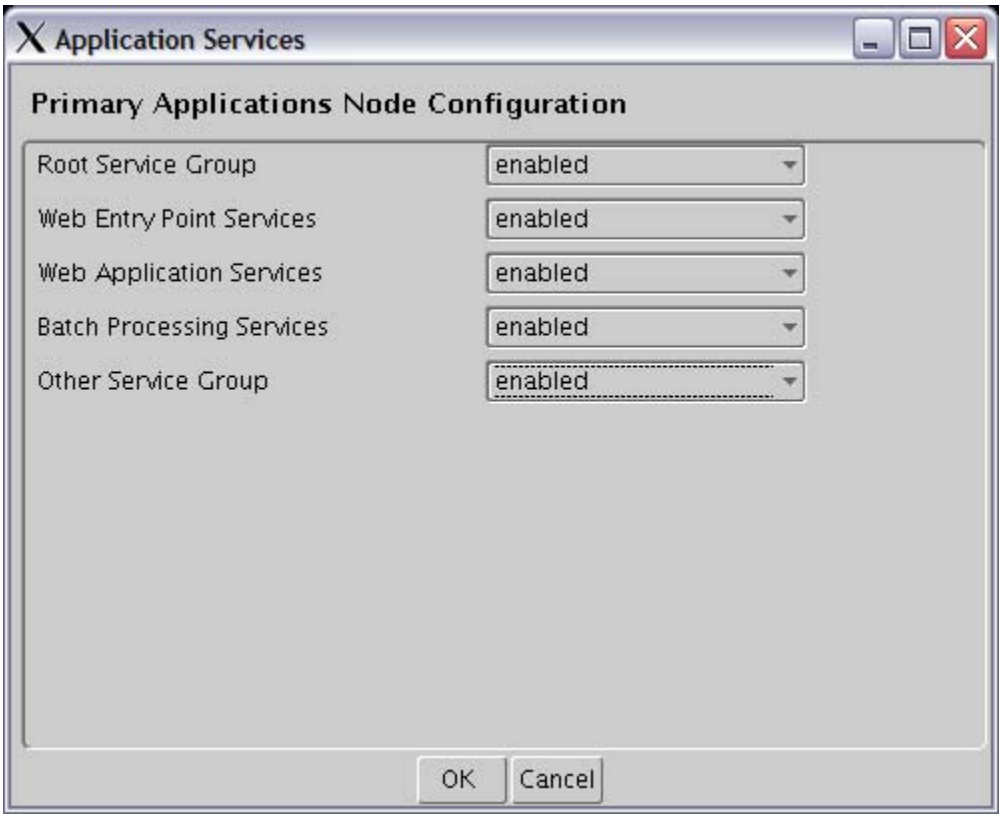

Figure 9: Application Services screen.

The Node Information screen is a summary of the nodes configured at this point. If additional Apps nodes are desired, click on Add Server and provide additional configuration parameters for each additional Apps node. In our environment, we only have one Apps node. When all the Apps nodes are configured, click *Next* to continue. Rapid Install will now perform a sequence of system tests to validate the configuration.

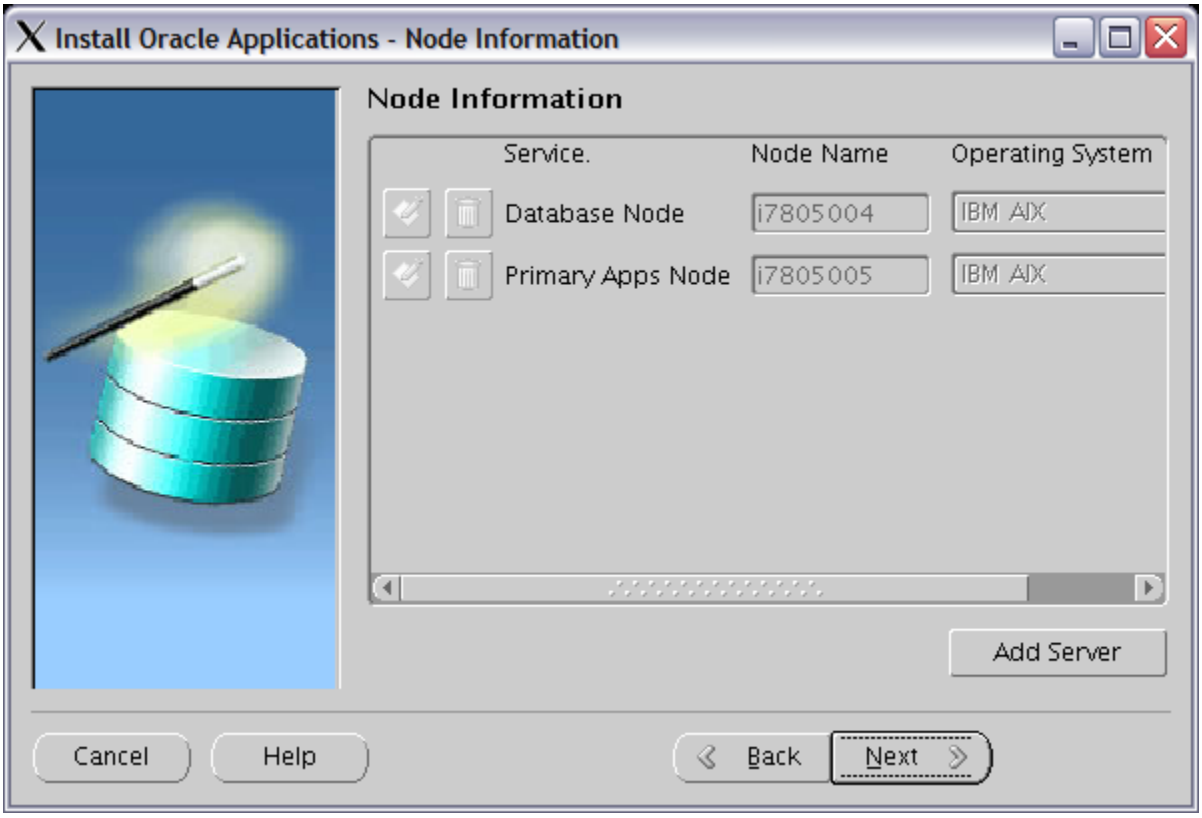

Figure 10: Node Information summary screen

The System Check Status screen will be shown while Rapid Install is validating the configuration.

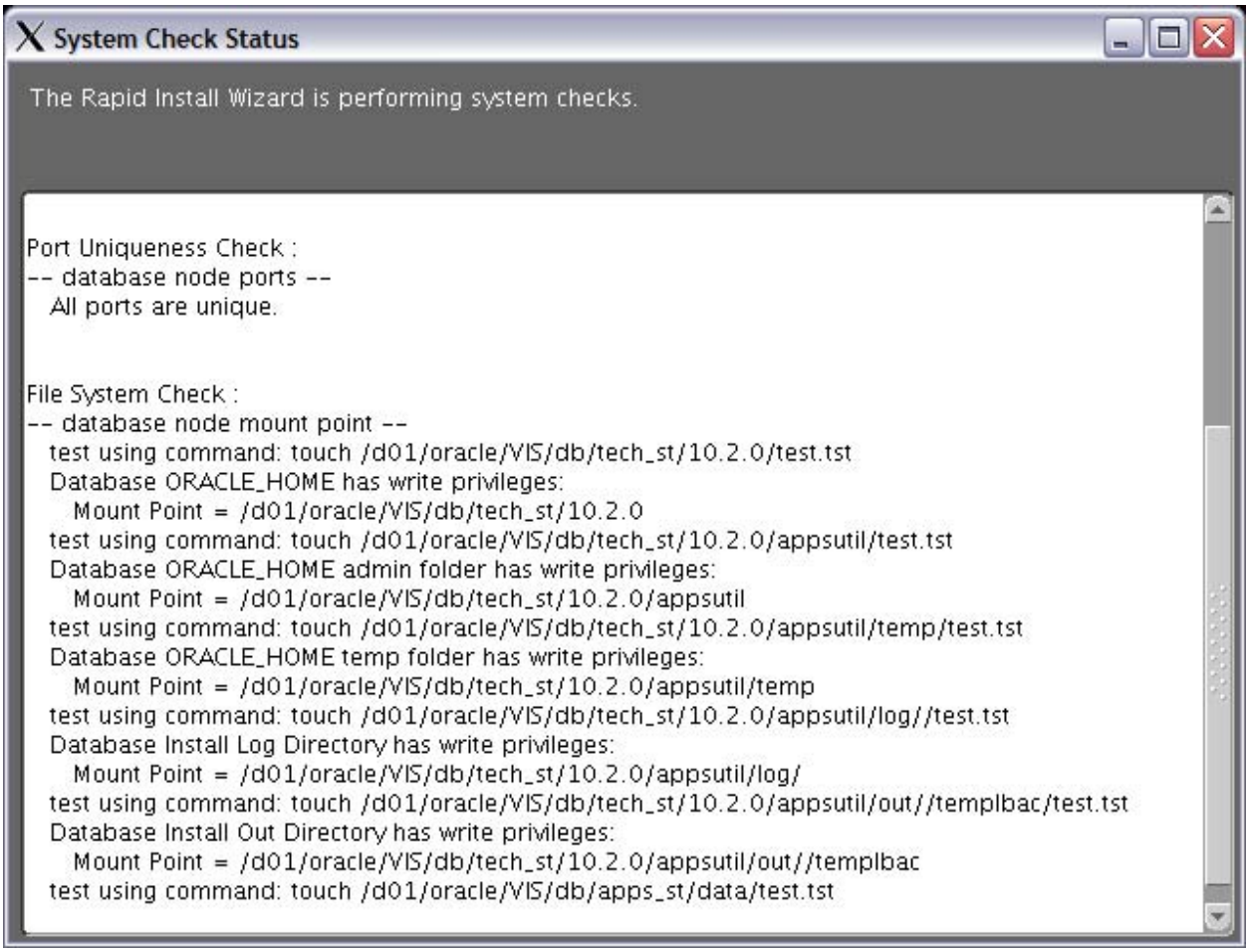

Figure 12: System Check Status screen

When the configuration validation is complete, the Pre-Install Checks screen will be shown. Each of the boxes below will contain one of three values:

- a check mark, indicates the test succeeded
- an exclamation mark (!), indicates the test needs to be reviewed
- an x, indicates the issue must be resolved before continuing with the installation

Click on the box to see the details of the issue. After resolving the issue, click on Retry to rerun the configuration validation. When all the boxes have a check mark, click on *Next* to continue.

Note, if you have items to be reviewed (the exclamation mark), yet you choose to continue with the installation, you'll receive a warning pop-up before you can continue.

After clicking on Next, the configuration file location is displayed on the operator console.

```
Configuration file written to:
/d01/oracle/VIS/db/tech_st/10.2.0/appsutil/conf_VIS.txt
```

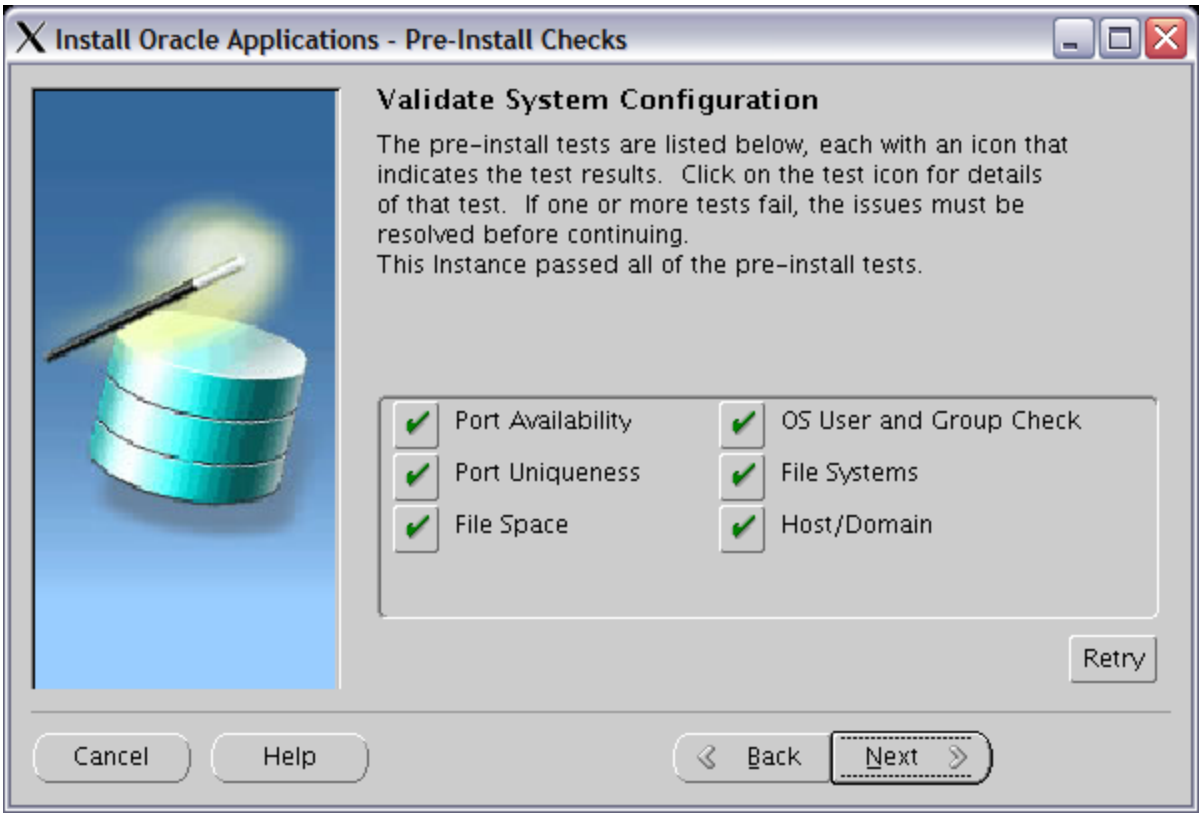

Figure 13: Pre-Install Checks screen

On the Component Installation Review screen, Rapid Install shows the components it is about to install. Click on *Next* to continue with the installation.

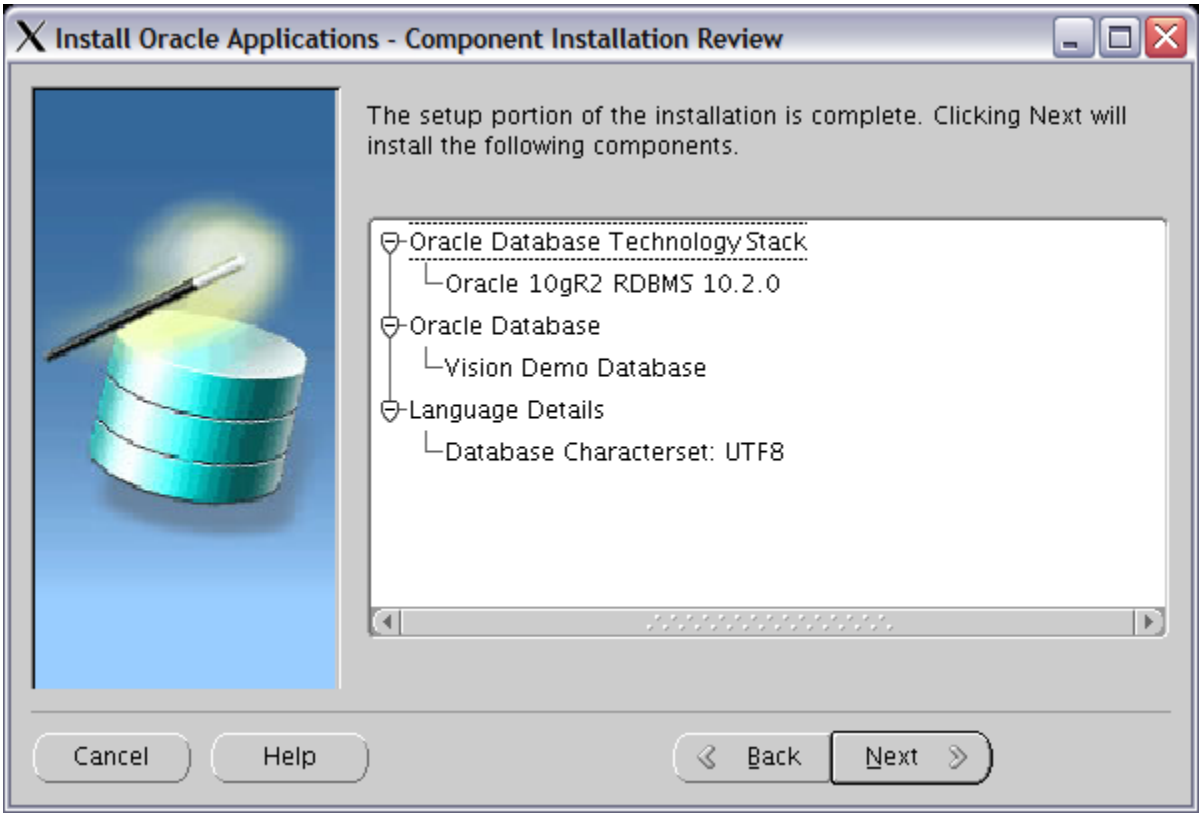

Figure 14: Component Installation Review screen

A final Alert screen is shown to let you know the installation of the files is about to begin. Click on *Yes* to begin the installation.

After clicking on Yes, the log file location is displayed on the operator console.

```
Database logfile -
/d01/oracle/VIS/db/tech_st/10.2.0/appsutil/log/VIS_i7805004/10161016.log
```

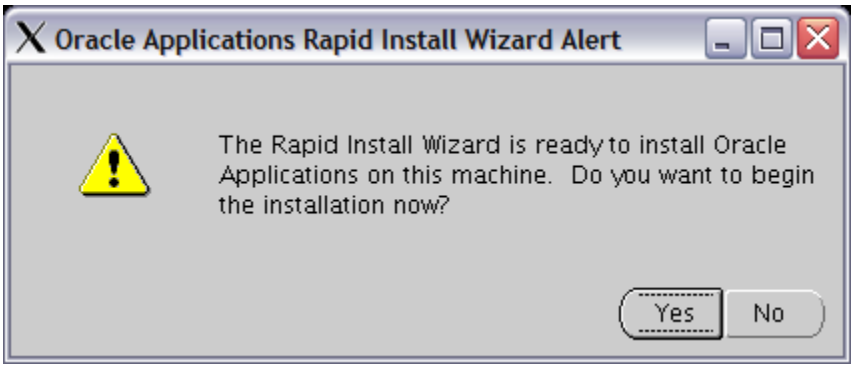

Figure 15: Rapid Install Wizard Alert – start installation screen

During the installation Rapid Install displays a main progress bar (above) and an individual progress bar (below).

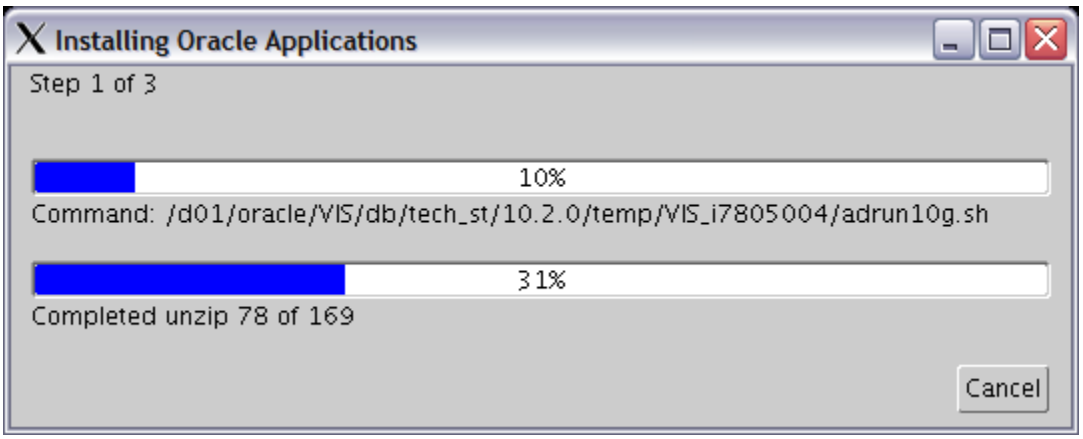

Figure 16: Installing – Step 1 screen

If for some reason, the installation process were to terminate abnormally before completion, you can restart the installation process. To restart, run the rapidwiz command with the –restart option. When prompted for a configuration file at the Configuration Choice screen, specify the configuration file Rapid Install identified the during the first installation attempt.

When the installation is complete, the Post-Install Checks screen is shown. Rapid Install automatically validates the installed DB tier by testing for database availability, functioning listeners and it uploads the configuration file to the database. We'll use this uploaded configuration file during the installation of the Apps node.

If there are any exclamation marks or x's indicated in the boxes, resolve each issue then select Retry to re-run the Post-Install validation. When there are no errors, click on *Next* to continue.

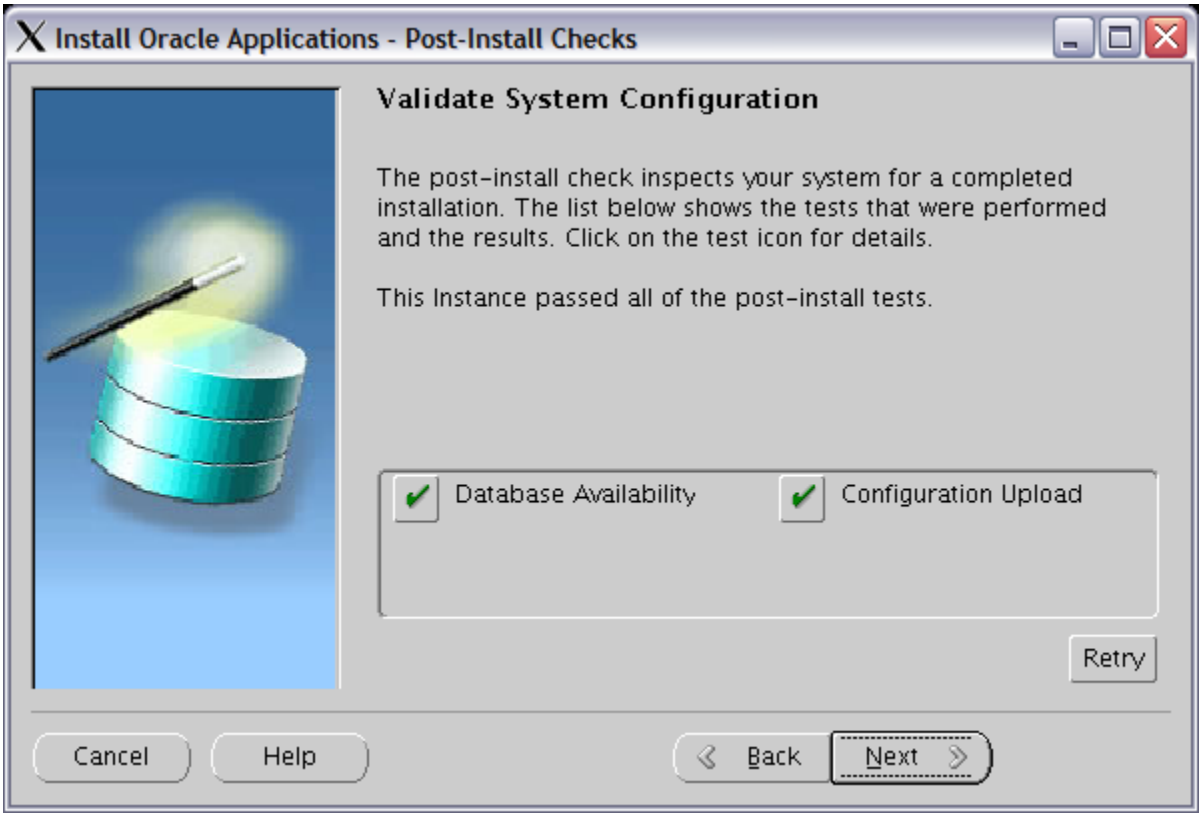

Figure 17: Post-Install Checks screen

Lastly, Rapid Install indicates which components were installed on the Finish screen. Click on *Finish* to exit the completed install procedure for the DB tier.

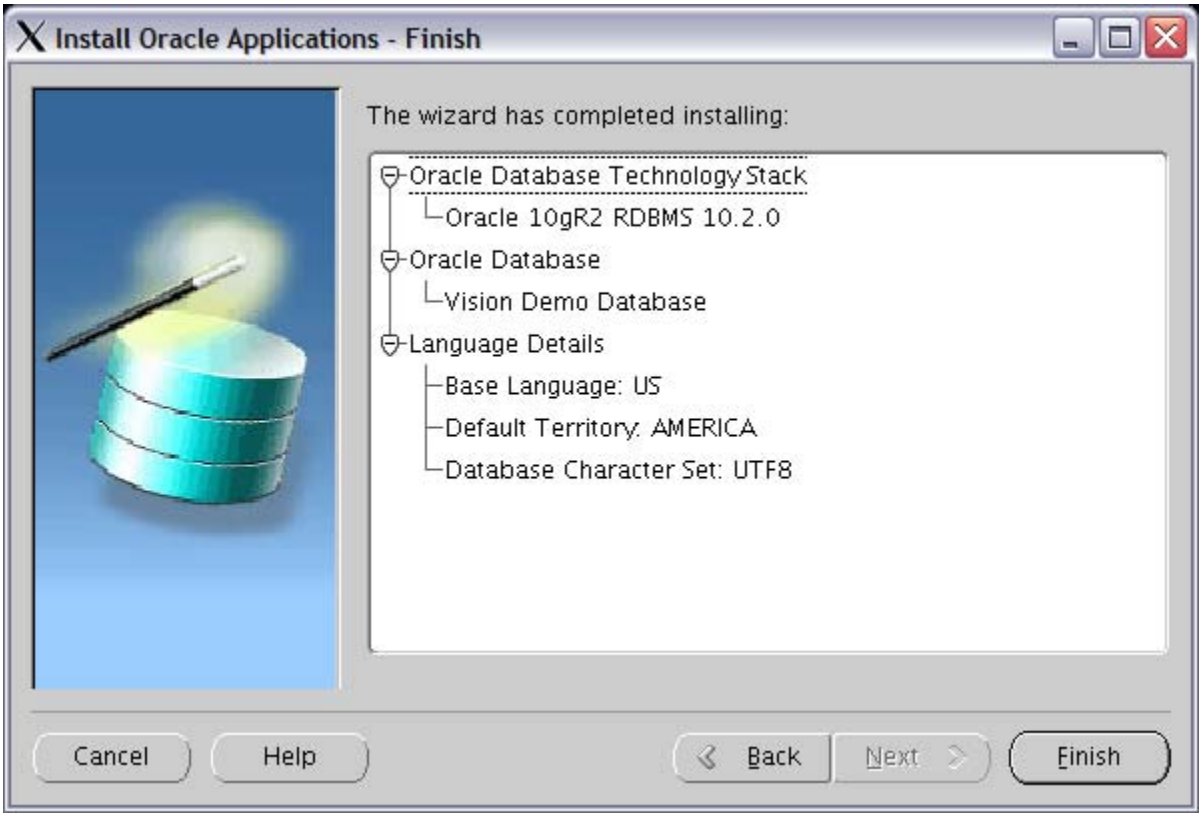

Figure 18: Finish screen

Apps Tier Installation

After successful installation of the DB tier, we'll kick off the installation on the Apps tier. We have the staging area created on the Apps tier as well. Start the Rapid Install Wizard on the Apps tier.

```
applmgr@i7805005:/d02/Stage12/startCD/Disk1/rapidwiz # ./rapidwiz
Rapid Install Wizard is validating your file system......
       4 dvd labels found
Rapid Install Wizard will now launch the Java Interface.....
Oct 18, 2007 1:40:10 PM java.util.prefs.FileSystemPreferences$2 run
INFO: Created user preferences directory.
Oct 18, 2007 1:40:11 PM java.util.prefs.FileSystemPreferences$3 run
INFO: Created system preferences directory in java.home.
```

Proceed through the following screens in the same manner as was done when installing the DB node:

- Welcome screen
- Wizard Operation screen, select Standard Installation
- Oracle Configuration Manager screen
- Oracle Configuration Manager Details, if OCM license was accepted

After the OCM or OCM Details screen, the Configuration Choice screen will be displayed. When the "Load the following saved configuration" button is selected, the database connect string becomes active. Enter the appropriate database connect string of the form:

- <hostname>:<SID>:<database port>

This will point Rapid Install to a stored set of configuration parameters. Click *Next* to retrieve the saved configuration and continue.

Figure 19: Configuration Choice screen

As was done on the DB node install, system checks are performed. Once the system checks are completed, the Pre-Install Checks screen is shown. Handle any warnings or errors in the same manner as described in DB node installation section. When all the boxes have a check mark, click on *Next* to continue.

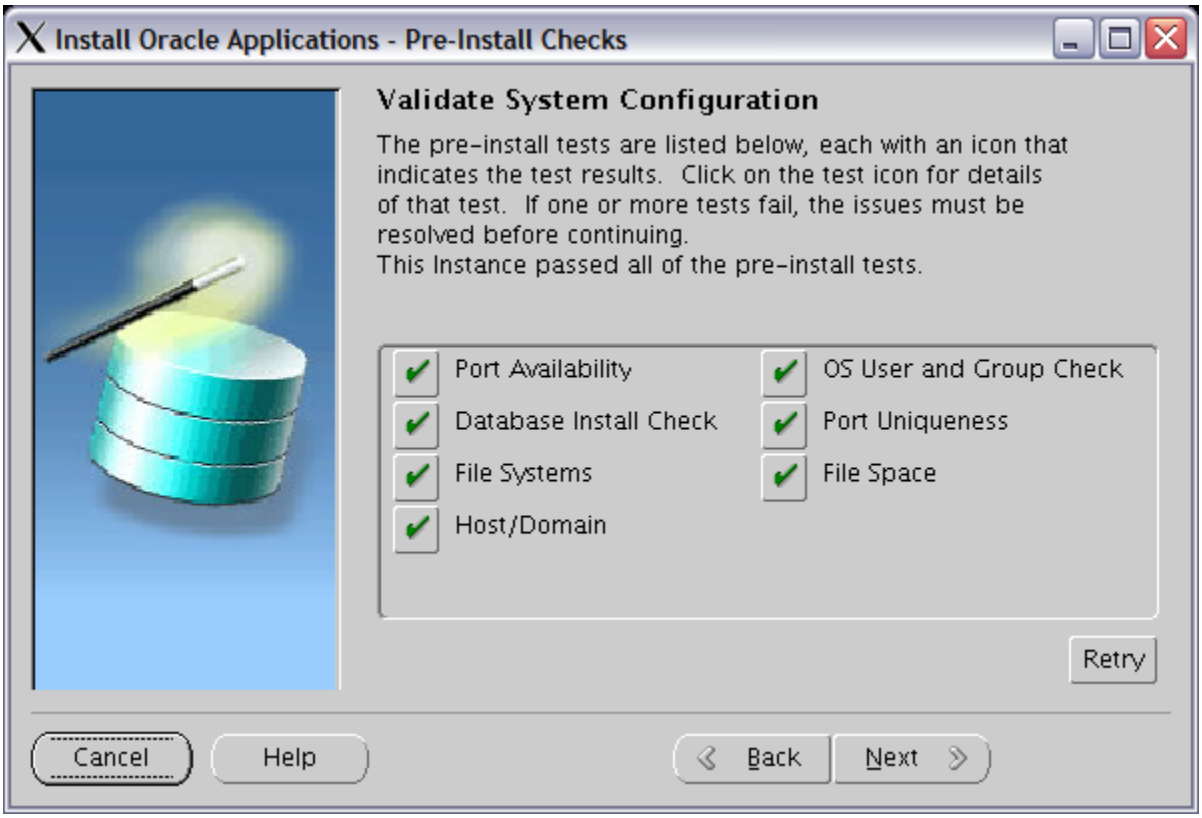

Figure 20: Pre-Install Checks screen

On the Component Installation Review screen, Rapid Install shows the components it is about to install. Click on *Next* to continue with the installation.

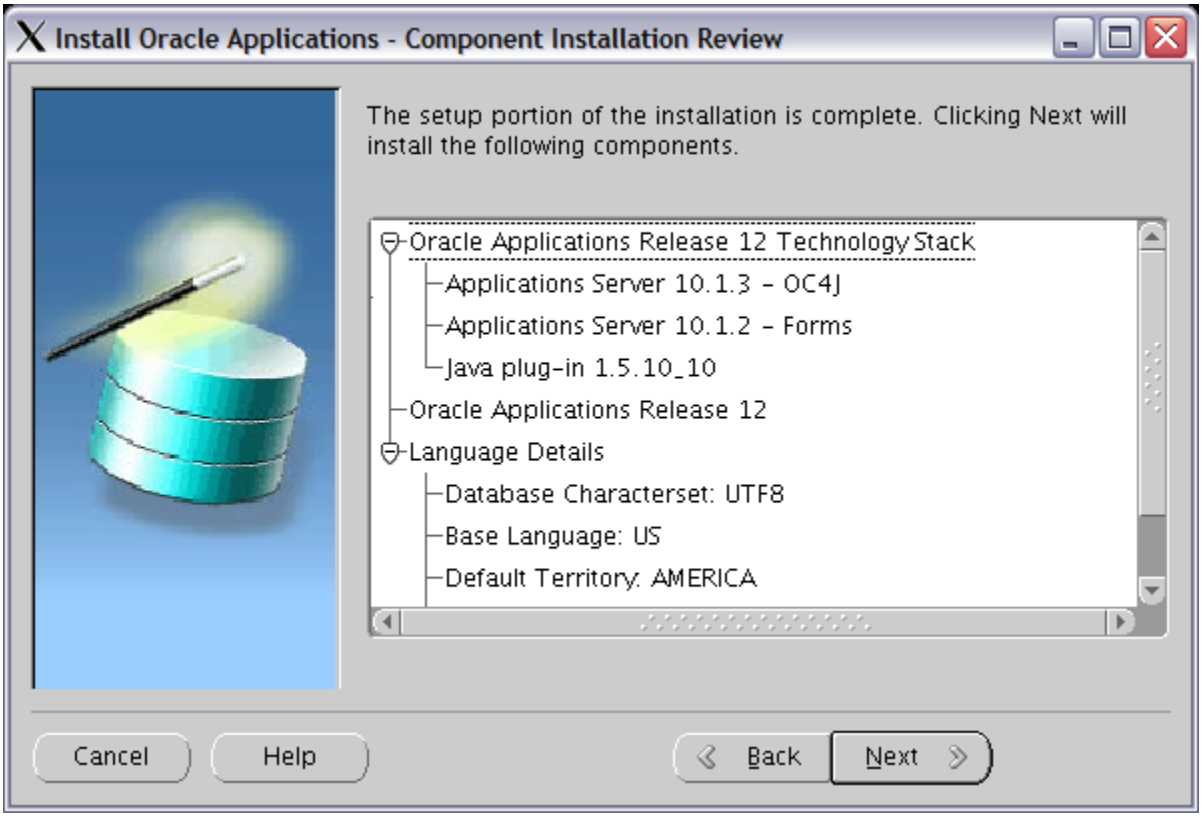

Figure 21: Component Installation Review screen

A final Alert screen is shown to let you know the installation of the files is about to begin. Click on *Yes* to begin the installation.

After clicking on Yes, the log file location is displayed on the operator console.

```
Appltop logfile - /d02/oracle/VIS/inst/apps/VIS_i7805005/logs/10181521.log
```

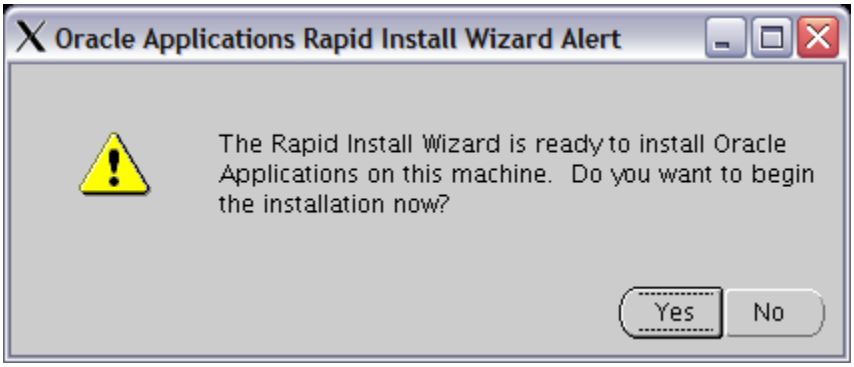

Figure 22: Rapid Install Wizard Alert – start installation screen

During the installation Rapid Install displays a main progress bar (above) and an individual progress bar (below).

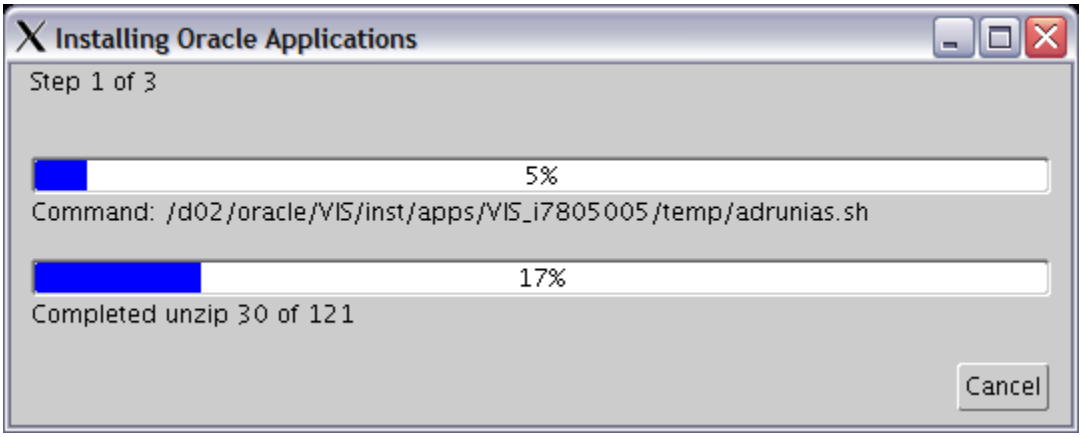

Figure 23: Installing – Step 1 screen

When the installation is complete, the Post-Install Checks screen will be shown. If there are any exclamation marks or x's indicated in the boxes, resolve each issue then select Retry to re-run the Post-Install validation. When there are no errors, click on *Next* to continue.

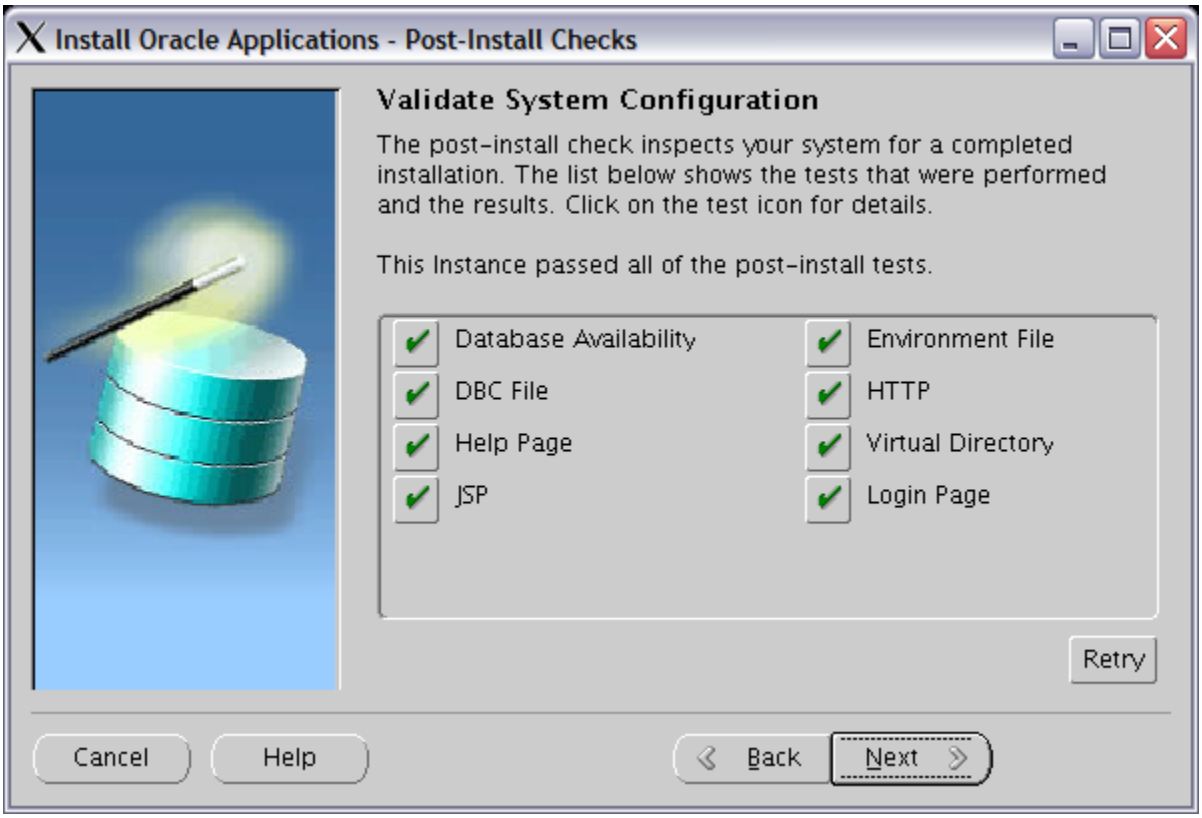

Figure 24: Post-Install Checks screen

Lastly, Rapid Install indicates which components were installed on the Finish screen. If you want to log on to Oracle E-Business Suite Release 12, click on *Connect to Oracle Applications Release 12*. Note, you'll need a browser installed on the Apps node. Otherwise, click on *Finish* to exit the completed install procedure for the Apps tier.

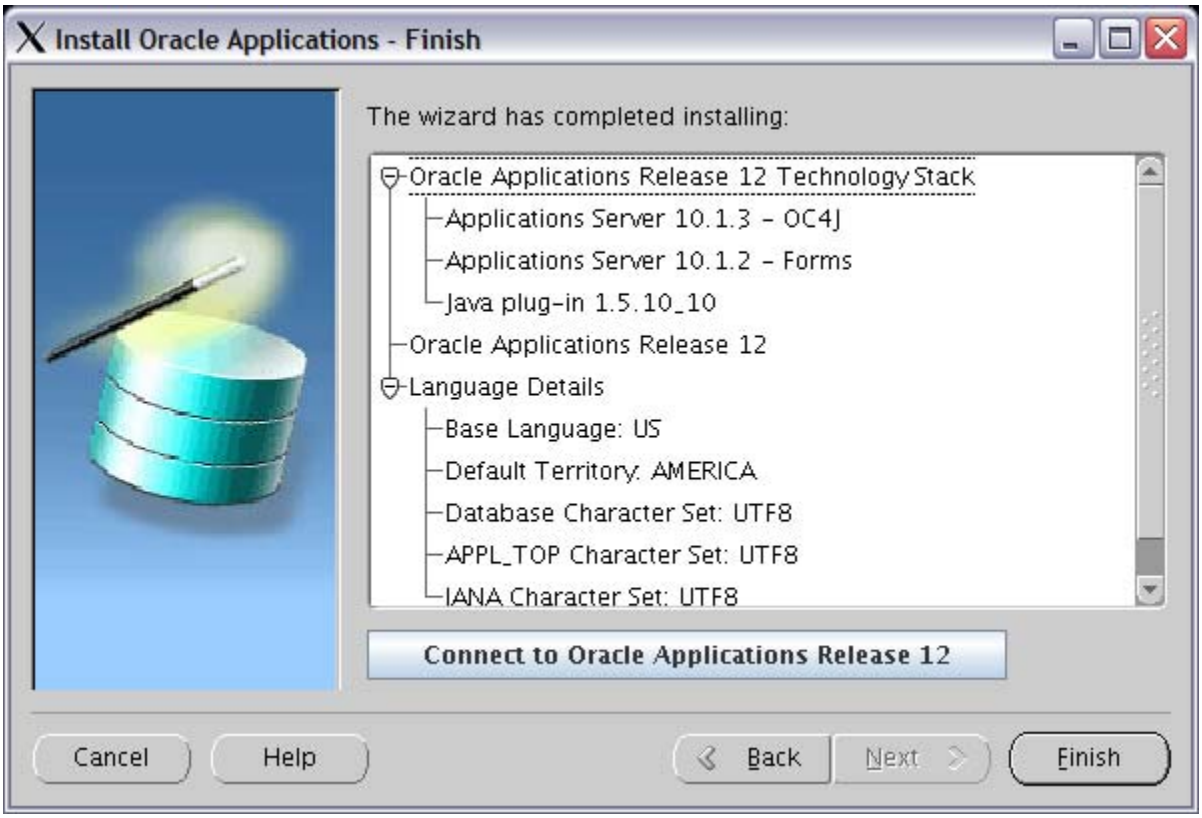

Figure 25: Finish screen

Post-Installation

The post-installation actions may change over time as fixes are incorporated into Release Update Packs (RUPs) or as new patches are documented in the Release Notes or Installation and Upgrade Notes for AIX. Review the documents listed in this section for the most recent post-installation content. The post-installation steps listed in this section are those documented at the time of initial publication of this paper.

Installation and Upgrade Notes (IUN) for AIX

Perform the steps in the "After Installing or Upgrading" section of MetaLink note 402306.1, "Oracle Applications Installation and Upgrade Notes R12 for AIX-Based Systems". At the time of initial publication, these steps consisted of:

- Information for setting the LIBPATH environment variable on the DB tier and Apps tier.
- Set the permissions on /tmp/.oracle for Net Service Listeners on DB tier.
- Enable Asynchronous I/O (AIO) – Note: This is an error. AIO needed to be enabled **before** the installation. See instructions in Pre-Installation section.
- Set the environment variable for Customer Care Forms.

- Create DQM indexes if the Vision Demo database was installed. Note, this requires E-Business Suite Release 12 login.
- Update Java files in the 10.1.3 ORACLE_HOME directory. Note, one of these patches required running opatch. For opatch to run successfully, we had to copy /d02/oracle/VIS/inst/apps/VIS_i7805005/admin/oraInst.loc to the /etc directory.
- Update Oracle Payroll Forms, if required.

Release Notes

Review MetaLink note 405293.1 “Oracle Applications Release Notes Release 12” for any post-installation actions that must be performed. The Release Notes do not have a specific post-installation section, so read through the whole MetaLink note. At the time of initial publication, these steps consisted of:

- Reset FND_SQLNET_ACCESS to ALLOW_RESTRICTED

Installation Guide

Step through the “Finishing Tasks” section of the “Oracle Applications Installation Guide: Using Rapid Install” (B31295) document.

Release Update Pack

Check for the latest Release Update Pack in MetaLink note 423541.1 “Oracle E-Business Suite R12 Release Update Pack (RUP) Schedule”. At the time of initial publication, MetaLink note 445192.1 “Oracle E-Business Suite 12.0.3 Release Upate Pack Readme” describes the latest Release Update Pack (Oct 16, 2007). The main steps to applying RUP3 are:

- Apply patch 6272715, R12.AD.A.DELTA.3, with AutoPatch (adpatch).
- Apply patch 6141000, the RUP3 unified driver (u6141000.drv), with AutoPatch.
- Apply patch 5717700, the consolidated online help patch, with AutoPatch.

A successful application of a patch should complete with AutoPatch displaying these messages.

```
AutoPatch is complete.

AutoPatch may have written informational messages to the file
/d02/oracle/VIS/apps/apps_st/appl/admin/VIS/log/adpatch.lgi

Errors and warnings are listed in the log file
/d02/oracle/VIS/apps/apps_st/appl/admin/VIS/log/adpatch.log

and in other log files in the same directory.
```

In January of 2008, RUP 12.0.4 (RUP4) was released. RUP4 contains many problem fixes and it’s recommended that users consider upgrading to RUP4 when possible. For information about RUP4,

see MetaLink note 473119.1, “Now Available: Oracle E-Business Suite 12.0.4 Release Update Pack (RUP4)”.

In May of 2008, RUP 12.0.5 (RUP5) was released. RUP5 is a product family RUP, not a suite-wide RUP. It is for Oracle Financials and Oracle HRMS. For information about RUP5, see MetaLink note 423541.1, “Now Available: Oracle Financials and Oracle HRMS Release Update Packs 12.0.5 (RUP5)”.

See the “Patching Oracle E-Business Suite Release 12” section of this document for a general description of the patching process.

Other Post-installation Tips

Throughout the rest of the document there will be references to environment variables such as $ORACLE_HOME, $APPL_TOP or $INST_TOP. These are set by the environment files for the DB and Apps tier, respectively. For convenience, source these files in the user’s profile. For example, on the DB tier, user oracle’s .profile contains this line:

```
. /d01/oracle/VIS/db/tech_st/10.2.0/VIS_i7805004.env
```

On the Apps tier, user applmgr’s .profile contains this line:

```
. /d02/oracle/VIS/apps/apps_st/appl/APPSVIS_i7805005.env
```

For the remainder of the document, we’ll assume these environment files have been sourced.

Login to Oracle E-Business Suite Release 12

After an Installation, all the Apps tier server processes are usually started. However, some post-installation steps may have required the server processes be stopped. To start the server processes, run $INST_TOP/admin/scripts/adstrtal.sh.

```
applmgr@i7805005:/d02/oracle/VIS/inst/apps/VIS_i7805005/admin/scripts #
./adstrtal.sh apps/apps


You are running adstrtal.sh version 120.13

. . . (all the configured server processes are started) . . .

All enabled services for this node are started.

adstrtal.sh: Exiting with status 0

adstrtal.sh: check the logfile
/d02/oracle/VIS/inst/apps/VIS_i7805005/logs/appl/admin/log/adstrtal.log for
more information ...
```

For information about adstrtal.sh and related scripts (ie. adstpall.sh) see the “Oracle Applications Maintenance Procedures Release 12 (12.0.3)” document, B31569, http://download.oracle.com/docs/cd/B40089_06/current/acrobat/r12adproc.pdf.

At this time, bring up the Oracle Applications Login page from the Desktop tier by browsing this URL: http://i7805005.us.oracle.com:8000/OA_HTML/AppsLogin. Login as “operations”, the default password is “welcome”. Click on *Login* to proceed.

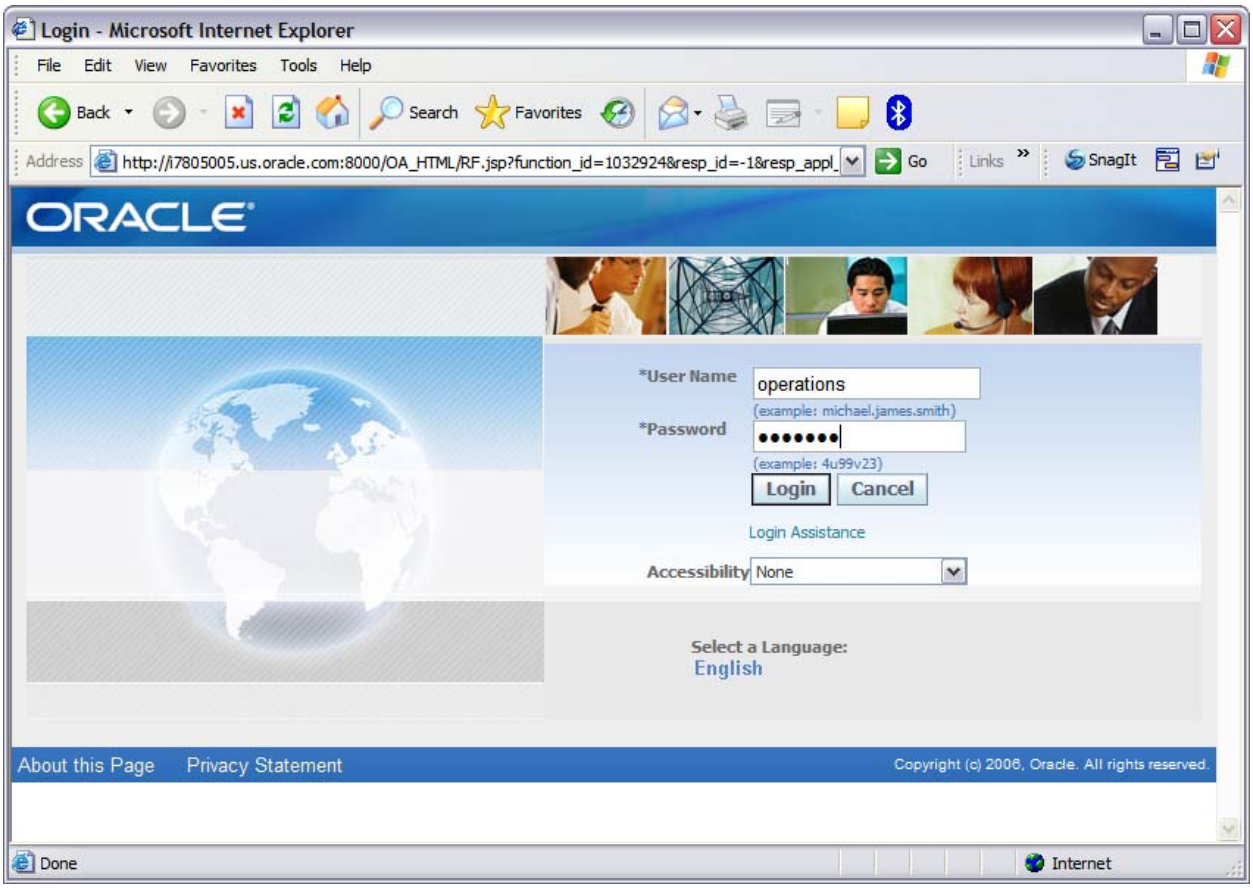

Figure 26: Oracle Applications Login screen

Once logged in, select your responsibility and continue with your desired activity.

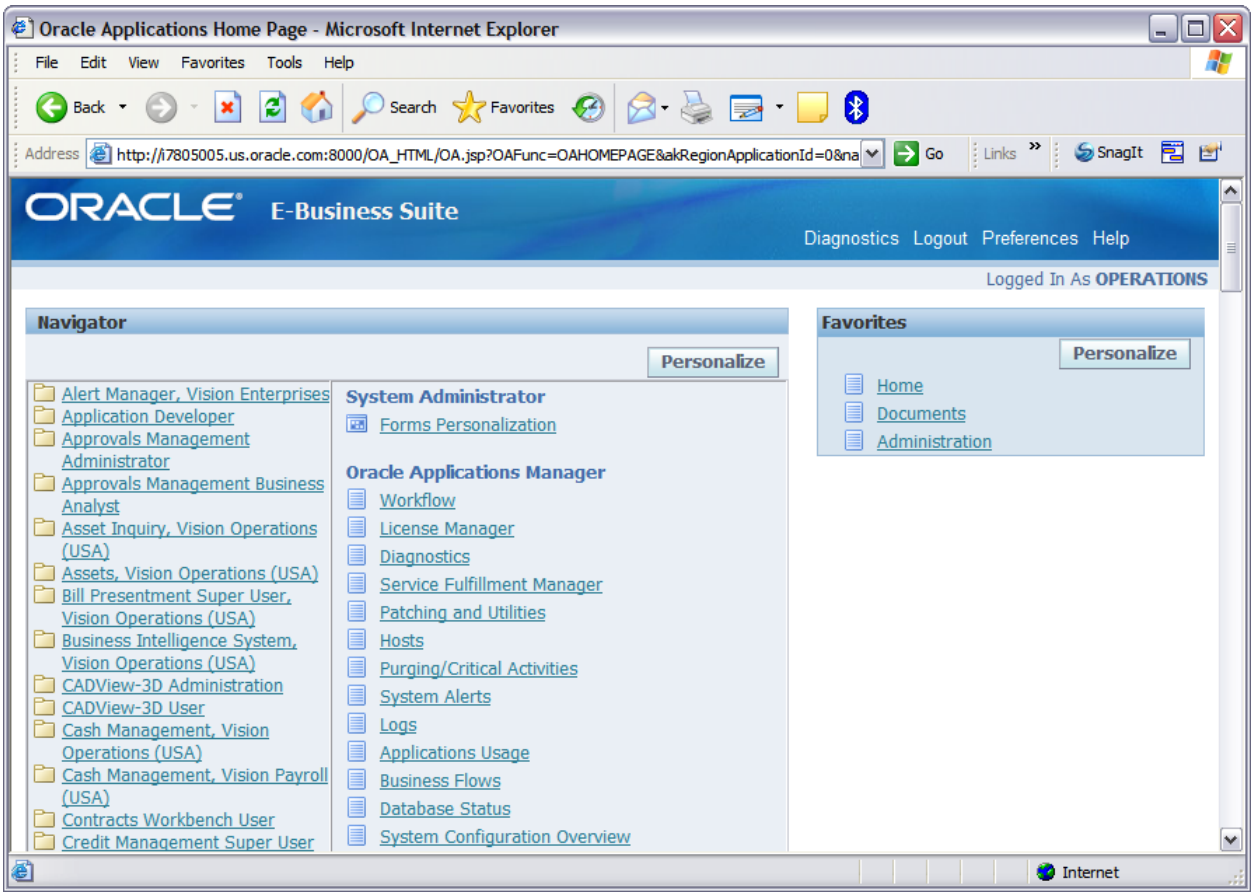

Figure 27: Responsibility selection screen

In Oracle E-Business Suite Release 12, the browser's JVM is no longer used. Instead, it uses the J2SE Plug-in when necessary, as when running a form. If the J2SE Plug-in is not installed, the browser prompts the user to download the executable. For more details, see 393931.1 "Upgrading Sun J2SE (Native Plug-in) with Oracle Applications 12 for Windows Clients".

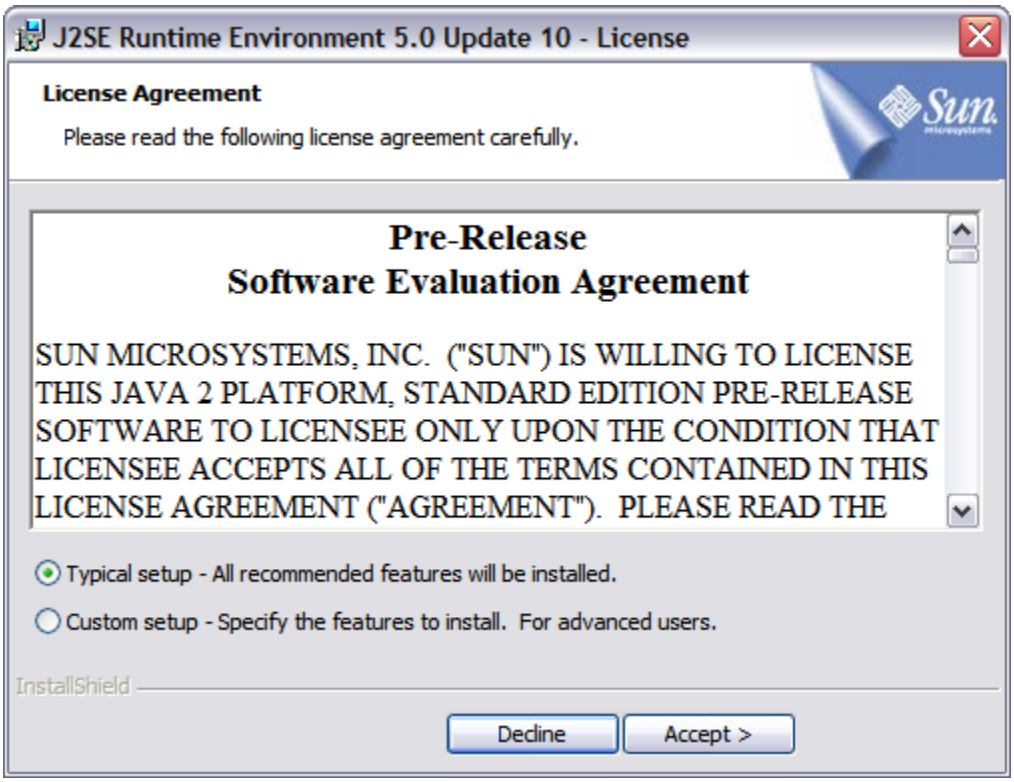

Figure 28: Plug-in license agreement screen

Upon completion of the download, this screen is shown.

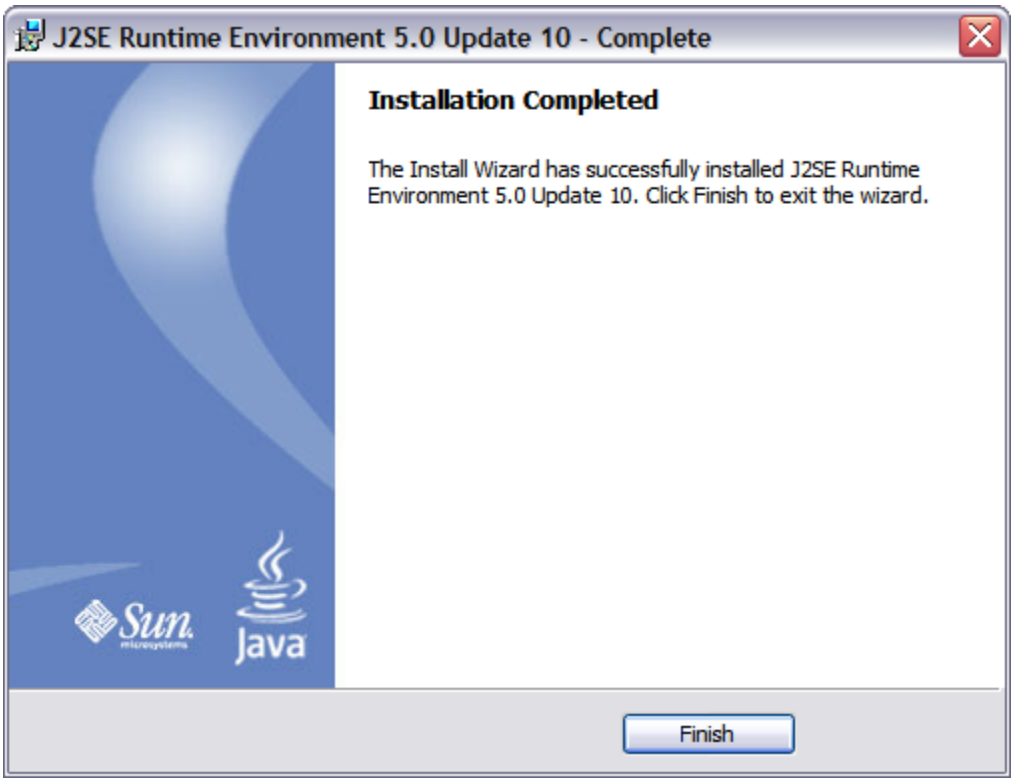

Figure 29: JS2E installation complete screen

To stop all the Apps tier server processes, run $INST_TOP/admin/scripts/adstpall.sh.

```
applmgr@i7805005:/d02/oracle/VIS/inst/apps/VIS_i7805005/admin/scripts #
./adstpall.sh apps/apps
You are running adstpall.sh version 120.9
. . . (all the started server processes are stopped) . . .
ServiceControl is exiting with status 0
```

Configuration of Oracle E-Business Suite Release 12

The AutoConfig tool is the principal configuration mechanism for Oracle E-Business Suite Release 12. AutoConfig can be invoked as a command (adautocfg.sh) or through the Oracle Applications Manager (OAM) GUI. In addition to configuration OAM provides: problem diagnosis, patch management, monitoring and tuning configuration.

Documentation Resources

These are the main documents that discuss configuration.

- MetaLink note 387859.1, “Using AutoConfig to Manage System Configurations in Oracle E-Business Suite Release 12”
- “Oracle Applications Concepts”, B31450, http://download.oracle.com/docs/cd/B40089_06/current/acrobat/120oacg.pdf
- “Oracle Applications System Administrator’s Guide – Configuration”, B31453, http://download.oracle.com/docs/cd/B40089_06/current/acrobat/120sacg.pdf
- “Oracle Applications Maintenance Utilities”, B31568, http://download.oracle.com/docs/cd/B40089_06/current/acrobat/r12adutil.pdf

MetaLink notes are found at https://metalink.oracle.com.

Oracle Applications Manager

Oracle Applications Manager (OAM) is a powerful, HTML-based utility that allows you to diagnose problems, manage patches and configure, monitor and tune the system. OAM utilities are basically available from two main screens: the Applications Dashboard and the Site Map. The configuration tasks presented by OAM are listed under the System Configuration section of the Site Map. These configuration tasks consist of:

- Hosts – For each host, you can see its status and configuration. It can also be brought online or offline, or disabled.
- License Manager – License additional products, country-specific features and languages. You can also generate license reports.
- AutoConfig – View and update the AutoConfig settings.

To bring up OAM, login to Oracle E-Business Suite Release 12 as was done in the previous section. Once logged in, select the *System Administrator* responsibility. Then under the Oracle Applications Manager list, select *Dashboard*. This will take you to the Applications Dashboard screen.

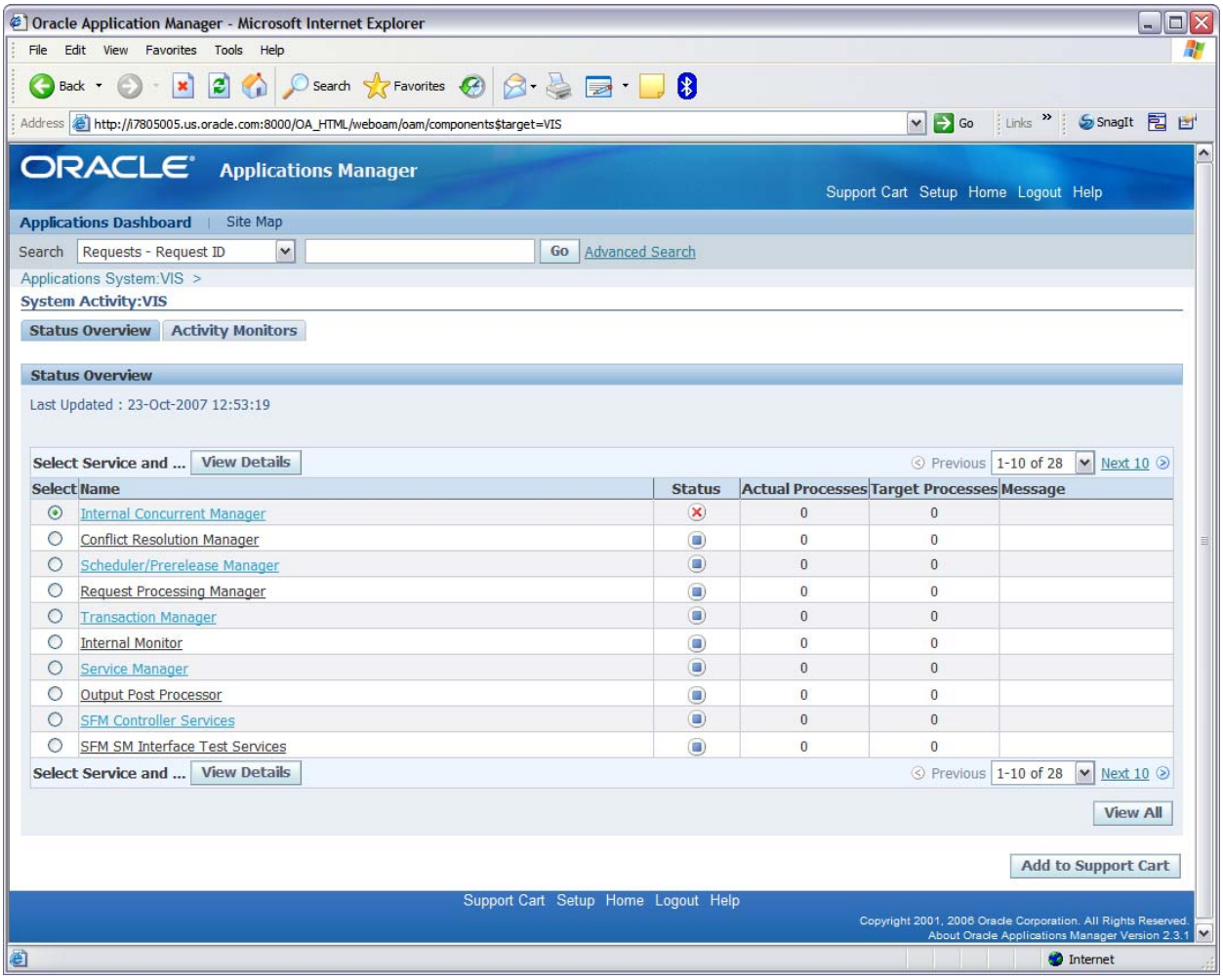

Figure 30: Oracle Applications Manager – Applications Dashboard screen

Click on the *Site Map* tab to see the Site Map screen.

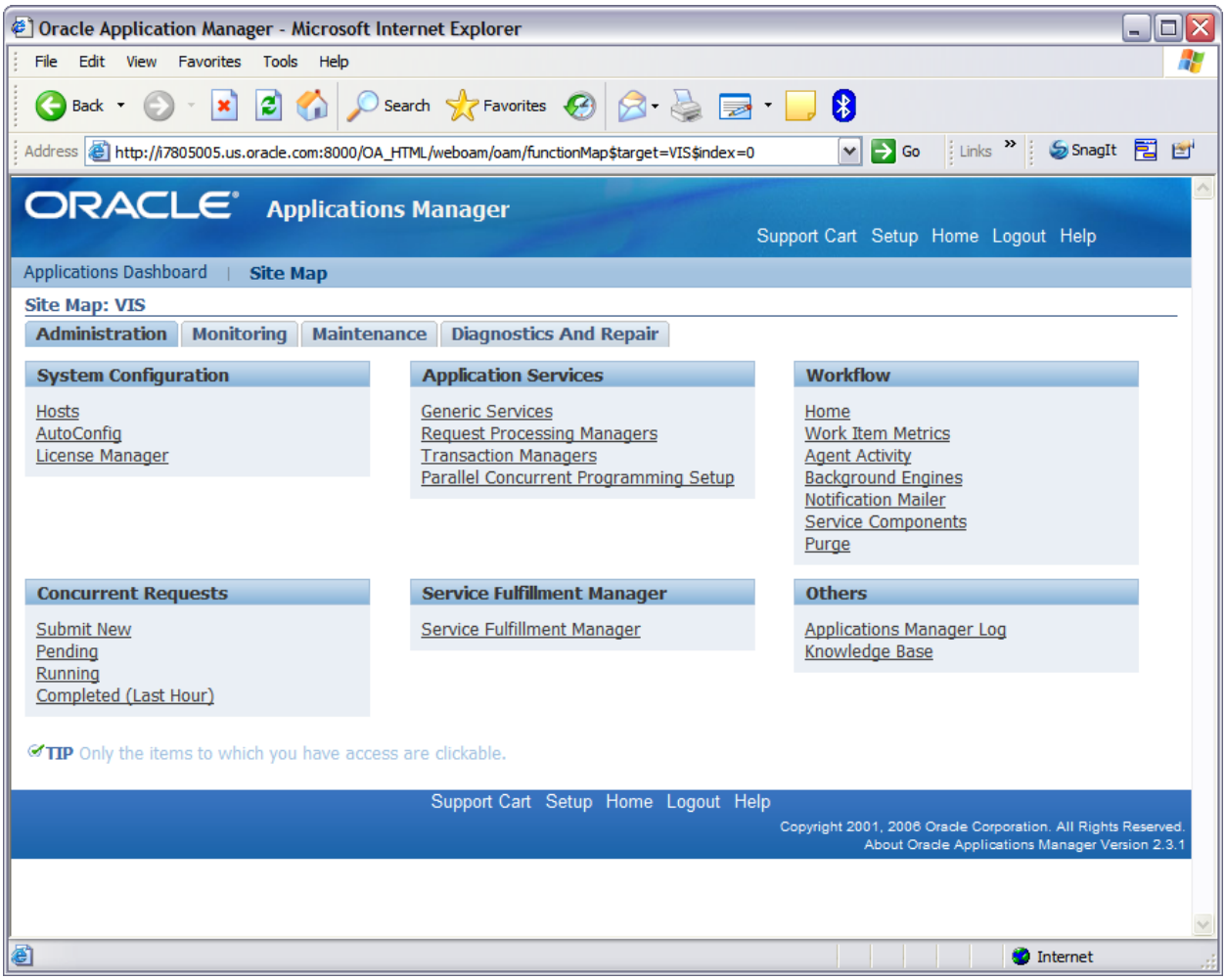

Figure 31: Oracle Applications Manager – Site Map screen

The Site Map screen contains the System Configuration options: Hosts, AutoConfig and License Manager.

AutoConfig

AutoConfig handles the configuration management tasks of:

- Coalescing information to create the desired configuration
- Storing the configuration on the relevant nodes
- Creating technology stack and applications configuration files
- Coordinating the starting of the server processes

AutoConfig uses an Applications context to identify a file as belonging to an AutoConfig-managed Applications environment. The *context name* consists of <SID>_<hostname>. Therefore our DB tier context name is VIS_i7805004 and the Apps tier context name is VIS_i7805005.

AutoConfig uses an XML file as a repository for environment-specific configuration information. The format of the context file is <context_name>.xml. Therefore our DB tier context file is <RDBMS_HOME>/appsutil/VIS_i7805004.xml and the Apps tier context file is <INST_TOP>/appl/admin/i7805005.xml. While there may be other configuration files in the AutoConfig-managed environment, they are secondary to the context files.

AutoConfig is started from the command line by running the adautocfg.sh shell script.

Oracle Configuration Manager

Oracle Configuration Manager (OCM) is a utility that collects configuration information and uploads it to a central repository. Starting in Oracle E-Business Suite Release 12, OCM is incorporated into Rapid Install, Rapid Clone and AutoConfig. For details about OCM see: MetaLink note 406369.1 “Oracle Configuration Manager and E-Business Suite Release 12 Release Notes”.

Patching Oracle E-Business Suite Release 12

Patches are inherent in the ongoing maintenance of an Oracle E-Business Suite Release 12 system. Patches may need to be applied for such reasons as: problem fixes, new features, product enhancements or maintenance level updates. Depending on the type of patch, the database and/or application binaries may be updated.

Documentation Resources

These are the main documents that discuss patching and general maintenance.

- “Oracle Applications Patching Procedures”, B31567, http://download.oracle.com/docs/cd/B40089_06/current/acrobat/oa_patching_r12.pdf
- “Oracle Applications Maintenance Utilities”, B31568, http://download.oracle.com/docs/cd/B40089_06/current/acrobat/r12adutil.pdf
- “Oracle Applications Maintenance Procedures”, B31569, http://download.oracle.com/docs/cd/B40089_06/current/acrobat/r12adproc.pdf
- “Oracle Applications System Administrator’s Guide – Maintenance”, B31454, http://download.oracle.com/docs/cd/B40089_06/current/acrobat/120samg.pdf
- MetaLink note 405293.1, “Oracle Applications Release Notes Release 12”.
- MetaLink note 423541.1, “Oracle E-Business Suite R12 Release Update Pack (RUP) Schedule” for RUP1 through RUP4.
- MetaLink note 577406.1, “Now Available: Oracle Financials and Oracle HRMS Release Update Packs 12.0.5 (RUP5)” for RUP5.
- MetaLink note 433461.1, “E-Business Suite Release 12 Maintenance Strategy”.
- MetaLink note 432882.1, “Oracle E-Business Suite Critical Patch Update Note, Releases 11i and 12”.

Patching Overview

The manuals above provide the definitive description of the patching process. This section will provide an overview of the patching process and the utilities used in the patching process.

1. Always backup your DB and Apps nodes prior to applying any patch.
2. Set the environment by sourcing the appropriate .env file. See earlier directions for including .env file in the login profile, in “Post-Installation” section.
3. Download the patch into a patch top directory and unzip the patch.
4. Review the README.txt or README.html in the patch directory.
5. Run the Oracle Patch Application Assistant (admsi.pl) to generate customized instructions for your system.
6. Run AD Administration (adadmin) to enable Maintenance mode.
7. Stop the server processes ($INST_TOP/admin/scripts/adstpall.sh)
8. Run AutoPatch (adpatch), select the “Number of Parallel Workers”. Oracle recommends specifying 2-4 times the number of workers as processors. For AIX on a Power Systems server, this can be the 2-4 times the number of logical processors. That is, if SMT is enabled on two physical processors, there exist 4 logical processors.
9. Review the log files in $APPL_TOP/admin/<SID>/log, such as adpatch.log.
10. Restart the server processes.
11. Run AD Administration (adadmin) to disable Maintenance mode.

These are the common utilities used in the patching process.

- Oracle Patch Application Assistant (PAA) – admsi.pl: Generates customized instructions, specific to each installation, which displays the manual steps for all the patches you want to apply.
- AD Administration – adadmin: Performs maintenance tasks for Oracle Applications. Run adadmin to enable and disable Maintenance mode. This is the adadmin main menu.

```
         AD Administration Main Menu
-------------------------------------------------
1.    Generate Applications Files menu
2.    Maintain Applications Files menu
3.    Compile/Reload Applications Database Entities menu
4.    Maintain Applications Database Entities menu
5.    Change Maintenance Mode
6.    Exit AD Administration
```

- AutoPatch – adpatch: Applies patches and other system updates.
- AD Merge Patch – admrgpch: Merges multiple patches into a single merged patch.
- AD Controller – adctrl: Manages parallel workers in AD Administration and AutoPatch. This is the main menu for adctrl. Use adctrl if AutoPatch encounters errors and worker processes need to be stopped or restarted. This is often the case before AutoPatch can be resumed.

```
                AD Controller Menu
-------------------------------------------------
1.    Show worker status
2.    Tell worker to restart a failed job
3.    Tell worker to quit
4.    Tell manager that a worker failed its job
5.    Tell manager that a worker acknowledges quit
6.    Restart a worker on the current machine
7.    Exit
```

Each utility has an associated log file in $APPL_TOP/admin/<SID>/log, for example: adadmin.log and adpatch.log.

Cloning Oracle E-Business Suite Release 12

Cloning is the process of creating a copy of an Oracle E-Business Suite system. Common scenarios for cloning are:

- Make a copy of an existing system, copy a production system for testing purposes.
- Adding new nodes to a system to handle increased workloads.
- For multi-node Apps tiers, installation is performed to one node then the node is cloned.
- Altering system data or file systems, as well as platform migration.
- Delivering new versions of components and allowing rolling environments to minimize downtime.

This section describes the process of cloning the Apps tier and DB tier of a dual-node Oracle E-Business Suite Release 12 installation to another physical machine. For the latest information on using Rapid Clone, see MetaLink note 406982.1, “Cloning Oracle Applications Release 12 with Rapid Clone”.

In the example described below, we’ll clone the multi-node Oracle E-Business Suite Release 12 installation described earlier in this document, to a single-node system. The details of each Oracle E-Business Suite system are:

- Source nodes
  - Apps node: hostname is i7805005, 4 GB of memory, 2-way POWER5™
  - DB node: hostname is i7805004, 4 GB of memory, 2-way POWER5
- Target node
  - Apps/DB node: hostname is ap914app, 8 GB of memory, 4-way PowerPC®

Requirements for Cloning

All Oracle E-Business Suite Release 12 software requirements for installation must be present on target node. See the section “Installing Oracle E-Business Suite Release 12” for a list of those requirements. In addition to those requirements, the following are required:

Software	Minimum Version	Location	Details
Zip	2.3	Source	Must be in $PATH
OS Utilities	N/A	Target	See Release 12 Install Guide
Perl	5.x	Target	Must be in $PATH and $PERL5LIB must be correctly set

The latest AutoConfig Template rollup patch must be applied to the source node. See MetaLink note 387859.1, “Using AutoConfig to Manage System Configurations in Oracle E-Business Suite Release 12” for details.

The latest Rapid Clone patch should be applied. The minimum level should be: Patch 5484000 Oracle EBS 12.0.2 Release Update Pack 2 (RUP2). Note: In our example we applied 6141000 Release Update Pack 3 (RUP3) which includes all RUP2 patches.

Cloning Steps

These are the steps we followed to clone our multi-node Oracle E-Business Suite Release 12 system to a single-node system.

1. Run AutoConfig on the Apps tier (See MetaLink note 387859.1)

   Run the following script: $INST_TOP/admin/scripts/adautocfg.sh

2. Synchronize appsutil on the DB tier (See MetaLink note 387859.1)

   a. On the Apps tier:
      i. Login to APPL_TOP environment
      ii. Create appsutil zip file

      ```
      perl $AD_TOP/bin/admkappsutil.pl
      ```

      iii. This will create $INST_TOP/admin/out/appsutil.zip

   b. On the DB tier:
      i. Copy or FTP appsutil.zip from above steps to $ORACLE_HOME
      ii. cd $ORACLE_HOME
      iii. unzip –o appsutil.zip

3. Run AutoConfig on the DB tier (See MetaLink note 387859.1)

Run the following script: $ORACLE_HOME/appsutil/scripts/<CONTEXT NAME>/adautocfg.sh

4. Maintain snapshot information (See Oracle Applications Maintenance Utilities)

   Run the following command: $AD_TOP/bin/adadmin

5. Prepare the DB tier

   On the source DB tier, login and run the following commands:

```
cd $ORACLE_HOME/admin/scripts
perl adpreclone.pl dbTier
```

6. Prepare the Apps tier

   On the source Apps tier, login and run the following commands:

```
cd $INST_TOP/admin/scripts
perl adpreclone.pl appsTier
```

7. Shutdown the source Apps tier processes

   Run the following commands:

```
cd $ADMIN_SCRIPTS_HOME
./adstpall.sh apps/apps
```

8. Copy the Apps tier file system

   Note: In the commands below the following is assumed:

   - Source APPL_TOP = /mnt/d02/oracle/VIS/apps/apps_st/appl
   - Source COMMON_TOP = /mnt/d02/oracle/VIS/apps/apps_st/comn
   - Source ORACLE_HOME = /mnt/d02/oracle/VIS/apps/tech_st/10.1.2
   - Source IAS_ORACLE_HOME = /mnt/d02/oracle/VIS/apps/tech_st/10.1.3

```
mkdir –p  /d02/oracle/VIS/apps/apps_st/appl
cd /d02/oracle/VIS/apps/apps_st/appl
cp –Rh /mnt/d02/oracle/VIS/apps/apps_st/appl/* .
mkdir –p /d02/oracle/VIS/apps/apps_st/comn
cd /d02/oracle/VIS/apps/apps_st/comn
cp –Rh /mnt//d02/oracle/VIS/apps/apps_st/comn/* .
mkdir –p /d02/oracle/VIS/apps/tech_st/10.1.2
```

```
cd /d02/oracle/VIS/apps/tech_st/10.1.2
cp –Rh /mnt/d02/oracle/VIS/apps/tech_st/10.1.2/* .
mkdir –p /d02/oracle/VIS/apps/tech_st/10.1.3
cd /d02/oracle/VIS/apps/tech_st/10.1.3
cp –Rh /mnt/d02/oracle/VIS/apps/tech_st/10.1.3/* .
```

9. Shutdown the source database

   Run the following commands:

```
cd $ORACLE_HOME/appsutil/scripts/<context name>
./addlcntl.sh stop VIS
./addbctl.sh stop
```

10. Copy the DB tier file system

    Note: In the commands below the following is assumed:

    - Source database files = /mnt/d01/oracle/VIS/db/apps_st/data
    - Source ORACLE_HOME = /mnt/d01/oracle/VIS/db/tech_st/10.2.0

```
mkdir –p /d01/oracle/VIS/db/apps_st/data
cd /d01/oracle/VIS/db/apps_st/data
cp –Rh /mnt/d01/oracle/VIS/db/apps_st/data/* .
mkdir –p d01/oracle/VIS/db/tech_st/10.2.0
cd d01/oracle/VIS/db/tech_st/10.2.0
cp –Rh /mnt/d01/oracle/VIS/db/tech_st/10.2.0/* .
```

11. Configure the target DB tier

```
cd $ORACLE_HOME/appsutil/clone/bin
perl adcfgclone.pl dbTier
```

```
============================================================================

                    Copyright (c) 2002 Oracle Corporation
                       Redwood Shores, California, USA

                       Oracle Applications Rapid Clone

                                Version 12.0.0

                     adcfgclone Version 120.20.12000000.7

Enter the APPS password :
```

```
Running:
/d01/oracle/VIS/db/tech_st/10.2.0/appsutil/clone/bin/../jre/bin/java -Xmx600M
-cp
/d01/oracle/VIS/db/tech_st/10.2.0/appsutil/clone/jlib/java:/d01/oracle/VIS/db
/tech_st/10.2.0/appsutil/clone/jlib/xmlparserv2.jar:/d01/oracle/VIS/db/tech_s
t/10.2.0/appsutil/clone/jlib/ojdbc14.jar oracle.apps.ad.context.CloneContext
-e
/d01/oracle/VIS/db/tech_st/10.2.0/appsutil/clone/bin/../context/db/CTXORIG.xm
l -validate -pairsfile /tmp/adpairsfile_446690.lst -stage
/d01/oracle/VIS/db/tech_st/10.2.0/appsutil/clone   2>
/tmp/adcfgclone_446690.err; echo $? > /tmp/adcfgclone_446690.res
Enter the APPS password : apps

Log file located at
/d01/oracle/VIS/db/tech_st/10.2.0/appsutil/clone/bin/CloneContext_10300521.lo
g

Provide the values required for creation of the new Database Context file.

Target System Hostname (virtual or normal) [ap914app] :

Target Instance is RAC (y/n) [n] :

Target System Database Name : VIS

Target System Base Directory : /d01/oracle

Target System utl_file_dir Directory List :
Target System utl_file_dir Directory List : /d01/tmp

Number of DATA_TOP's on the target system [4] : 1

Target System DATA_TOP Directory 1 : /d01/oracle/VIS/db/apps_st/data

Target System RDBMS ORACLE_HOME Directory : /d01/oracle/VIS/db/tech_st/10.2.0

Do you want to preserve the Display [null] (y/n) ? : y

Do you want the the target system to have the same port values as the source
system (y/n) [y] ? :
Complete port information available at
/d01/oracle/VIS/db/tech_st/10.2.0/appsutil/clone/bin/out/VIS_ap914app/portpoo
l.lst

Creating the new Database Context file from :
  /d01/oracle/VIS/db/tech_st/10.2.0/appsutil/template/adxdbctx.tmp

The new database context file has been created :
  /d01/oracle/VIS/db/tech_st/10.2.0/appsutil/VIS_ap914app.xml

Log file located at
/d01/oracle/VIS/db/tech_st/10.2.0/appsutil/clone/bin/CloneContext_10300521.lo
g
```

```
Check Clone Context logfile
/d01/oracle/VIS/db/tech_st/10.2.0/appsutil/clone/bin/CloneContext_10300521.lo
g for details.

Running Rapid Clone with command:
perl /d01/oracle/VIS/db/tech_st/10.2.0/appsutil/clone/bin/adclone.pl
java=/d01/oracle/VIS/db/tech_st/10.2.0/appsutil/clone/bin/../jre mode=apply
stage=/d01/oracle/VIS/db/tech_st/10.2.0/appsutil/clone component=dbTier
method=CUSTOM
dbctxtg=/d01/oracle/VIS/db/tech_st/10.2.0/appsutil/VIS_ap914app.xml
showProgress contextValidated=true
Running:
perl /d01/oracle/VIS/db/tech_st/10.2.0/appsutil/clone/bin/adclone.pl
java=/d01/oracle/VIS/db/tech_st/10.2.0/appsutil/clone/bin/../jre mode=apply
stage=/d01/oracle/VIS/db/tech_st/10.2.0/appsutil/clone component=dbTier
method=CUSTOM
dbctxtg=/d01/oracle/VIS/db/tech_st/10.2.0/appsutil/VIS_ap914app.xml
showProgress contextValidated=true
APPS Password :
Setting LIBPATH to
/d01/oracle/VIS/db/tech_st/10.2.0/appsutil/clone/oui/lib/aix

Beginning database tier Apply - Tue Oct 30 06:26:56 2007

/d01/oracle/VIS/db/tech_st/10.2.0/appsutil/clone/bin/../jre/bin/java -Xmx600M
-DCONTEXT_VALIDATED=true  -
Doracle.installer.oui_loc=/d01/oracle/VIS/db/tech_st/10.2.0/oui -classpath
/d01/oracle/VIS/db/tech_st/10.2.0/appsutil/clone/jlib/xmlparserv2.jar:/d01/or
acle/VIS/db/tech_st/10.2.0/appsutil/clone/jlib/ojdbc14.jar:/d01/oracle/VIS/db
/tech_st/10.2.0/appsutil/clone/jlib/java:/d01/oracle/VIS/db/tech_st/10.2.0/ap
psutil/clone/jlib/oui/OraInstaller.jar:/d01/oracle/VIS/db/tech_st/10.2.0/apps
util/clone/jlib/oui/ewt3.jar:/d01/oracle/VIS/db/tech_st/10.2.0/appsutil/clone
/jlib/oui/share.jar:/d01/oracle/VIS/db/tech_st/10.2.0/appsutil/clone/jlib/oui
/srvm.jar:/d01/oracle/VIS/db/tech_st/10.2.0/appsutil/clone/jlib/ojmisc.jar
oracle.apps.ad.clone.ApplyDBTier -e
/d01/oracle/VIS/db/tech_st/10.2.0/appsutil/VIS_ap914app.xml -stage
/d01/oracle/VIS/db/tech_st/10.2.0/appsutil/clone   -showProgress
APPS Password : Log file located at
/d01/oracle/VIS/db/tech_st/10.2.0/appsutil/log/VIS_ap914app/ApplyDBTier_10300
526.log
  |      0% completed
Completed Apply...
Tue Oct 30 06:32:49 2007

Starting database listener for VIS:
Running:
/d01/oracle/VIS/db/tech_st/10.2.0/appsutil/scripts/VIS_ap914app/addlnctl.sh
start VIS

You are running addlnctl.sh version 120.1

Logfile:
/d01/oracle/VIS/db/tech_st/10.2.0/appsutil/log/VIS_ap914app/addlnctl.txt

Starting listener process VIS ...
```

```
Listener VIS has already been started.

addlnctl.sh: exiting with status 0

==========================================================================
```

12. Configure the target Apps tier

```
cd $COMMON_TOP/clone/bin
perl adcfgclone.pl appsTier
```

```
==========================================================================

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                       Redwood Shores, California, USA

                       Oracle Applications Rapid Clone

                                Version 12.0.0

                     adcfgclone Version 120.20.12000000.7

Enter the APPS password :

Running:
/d02/oracle/VIS/apps/apps_st/comn/clone/bin/../jre/bin/java -Xmx600M -cp
/d02/oracle/VIS/apps/apps_st/comn/clone/jlib/java:/d02/oracle/VIS/apps/apps_s
t/comn/clone/jlib/xmlparserv2.jar:/d02/oracle/VIS/apps/apps_st/comn/clone/jli
b/ojdbc14.jar oracle.apps.ad.context.CloneContext -e
/d02/oracle/VIS/apps/apps_st/comn/clone/bin/../context/apps/CTXORIG.xml -
validate -pairsfile /tmp/adpairsfile_667740.lst -stage
/d02/oracle/VIS/apps/apps_st/comn/clone   2> /tmp/adcfgclone_667740.err; echo
$? > /tmp/adcfgclone_667740.res
Enter the APPS password : apps

Log file located at
/d02/oracle/VIS/apps/apps_st/comn/clone/bin/CloneContext_10300652.log

Provide the values required for creation of the new APPL_TOP Context file.

Target System Hostname (virtual or normal) [ap914app] :

Target System Database SID : VIS

Target System Database Server Node [ap914app] :

Target System Base Directory : /d02/oracle/VIS

Target System Instance Home Directory [/d02/oracle/VIS/inst] :

Target System Root Service [enabled] :
```

```
Target System Web Entry Point Services [enabled] :

Target System Web Application Services [enabled] :

Target System Batch Processing Services [enabled] :

Target System Other Services [disabled] :

Do you want to preserve the Display [i7805005:0.0] (y/n) ? : y

Do you want the the target system to have the same port values as the source
system (y/n) [y] ? :
Complete port information available at
/d02/oracle/VIS/apps/apps_st/comn/clone/bin/out/VIS_ap914app/portpool.lst

UTL_FILE_DIR on database tier consists of the following directories.

1. /usr/tmp
2. /d01/tmp
3. /d01/oracle/VIS/db/tech_st/10.2.0/appsutil/outbound/VIS_ap914app
4. /usr/tmp
Choose a value which will be set as APPLPTMP value on the target node [1] : 2

Backing up /d02/oracle/VIS/inst/apps/VIS_ap914app/appl/admin/VIS_ap914app.xml
to /d02/oracle/VIS/inst/apps/VIS_ap914app/appl/admin/VIS_ap914app.xml.bak

Creating the new APPL_TOP Context file from :
  /d02/oracle/VIS/apps/apps_st/comn/clone/context/apps/adxmlctx.tmp

The new APPL_TOP context file has been created :
  /d02/oracle/VIS/inst/apps/VIS_ap914app/appl/admin/VIS_ap914app.xml

Log file located at
/d02/oracle/VIS/apps/apps_st/comn/clone/bin/CloneContext_10300652.log
Check Clone Context logfile
/d02/oracle/VIS/apps/apps_st/comn/clone/bin/CloneContext_10300652.log for
details.

Running Rapid Clone with command:
perl /d02/oracle/VIS/apps/apps_st/comn/clone/bin/adclone.pl
java=/d02/oracle/VIS/apps/apps_st/comn/clone/bin/../jre mode=apply
stage=/d02/oracle/VIS/apps/apps_st/comn/clone component=appsTier
method=CUSTOM
appctxtg=/d02/oracle/VIS/inst/apps/VIS_ap914app/appl/admin/VIS_ap914app.xml
showProgress contextValidated=true
Running:
perl /d02/oracle/VIS/apps/apps_st/comn/clone/bin/adclone.pl
java=/d02/oracle/VIS/apps/apps_st/comn/clone/bin/../jre mode=apply
stage=/d02/oracle/VIS/apps/apps_st/comn/clone component=appsTier
method=CUSTOM
appctxtg=/d02/oracle/VIS/inst/apps/VIS_ap914app/appl/admin/VIS_ap914app.xml
showProgress contextValidated=true
APPS Password :
```

```
Beginning application tier Apply - Tue Oct 30 06:59:01 2007

/d02/oracle/VIS/apps/apps_st/comn/clone/bin/../jre/bin/java -Xmx600M -
DCONTEXT_VALIDATED=true  -Doracle.installer.oui_loc=/oui -classpath
/d02/oracle/VIS/apps/apps_st/comn/clone/jlib/xmlparserv2.jar:/d02/oracle/VIS/
apps/apps_st/comn/clone/jlib/ojdbc14.jar:/d02/oracle/VIS/apps/apps_st/comn/cl
one/jlib/java:/d02/oracle/VIS/apps/apps_st/comn/clone/jlib/oui/OraInstaller.j
ar:/d02/oracle/VIS/apps/apps_st/comn/clone/jlib/oui/ewt3.jar:/d02/oracle/VIS/
apps/apps_st/comn/clone/jlib/oui/share.jar:/d02/oracle/VIS/apps/apps_st/comn/
clone/jlib/oui/srvm.jar:/d02/oracle/VIS/apps/apps_st/comn/clone/jlib/ojmisc.j
ar  oracle.apps.ad.clone.ApplyAppsTier -e
/d02/oracle/inst/apps/VIS_ap914app/appl/admin/VIS_ap914app.xml -stage
/d02/oracle/VIS/apps/apps_st/comn/clone    -showProgress
APPS Password : Log file located at
/d02/oracle/inst/apps/VIS_ap914app/admin/log/ApplyAppsTier_10300659.log
=========================================================================
```

13. Update Workflow configuration settings

    Note: In the commands below the following is assumed:

    - Source host name (apps tier) = i7805005
    - Target host name = ap914app

```
sqlplus apps/apps

sqlplus> update wf_notification_attributes set text_value = replace
(text_value, 'i7805005', 'ap914app') where text_value like
'http://i7805005%';

sqlplus> update wf_item_attribute_values set text_value = replace
(text_value, 'i7805005', 'ap914app') where text_value like
'http://i7805005%';

sqlplus> update fnd_concurrent_requests set logfile_name = replace
(logfile_name, 'i7805005', 'ap914app') where logfile_name like
'%i7805005%';

sqlplus> update fnd_concurrent_requests set outfile_name = replace
(outfile_name, 'i7805005', 'ap914app') where outfile_name like
'%i7805005%';
```

Upgrading Oracle E-Business Suite

This section covers a variety of upgrade and migration topics within the context of Oracle E-Business Suite.

Upgrading Oracle E-Business Suite from Release 11*i* to Release 12

The detailed procedure for upgrading Oracle E-Business Suite from Release 11*i* to Release 12 is outside the scope of this document. What follows is a brief overview of the upgrade procedure and some references.

The process of upgrading Oracle E-Business Suite from Release 11*i* to Release 12 has been simplified as compared to past upgrade procedures. This upgrade procedure no longer requires running AutoUpgrade and AutoPatch. The upgrade can be accomplished by running an enhanced version of AutoPatch. The main utilities used in the upgrade procedure are Rapid Install and AutoPatch.

In order to upgrade to Oracle E-Business Suite Release 12, the Release 11*i* system must be at 11.5.7 or later. Earlier versions of Release 11*i* must be first upgraded to at least 11.5.7 before upgrading to Release 12. Oracle recommends earlier versions of Release 11*i* be upgraded to 11.5.10.2 before upgrading to Release 12. In all cases, the Oracle Database must be upgraded to 10.2.02 either before or during the Release 12 upgrade process and before running AutoPatch to upgrade the data model.

These documents provide the information to migrate from Oracle E-Business Suite Release 11*i* to Release 12. Start by checking the "Notes for Upgrade Customers" in the Release Notes.

- MetaLink note 405293.1, "Oracle Applications Release Notes Release 12"
- "Oracle Applications Upgrade Guide: Release 11i to Release 12", B31566, http://download.oracle.com/docs/cd/B40089_06/current/acrobat/r12upg11i.zip
- MetaLink note 403339.1, "Oracle 10gR2 Database Preparation Guidelines for an Oracle E-Business Suite Release 12 Upgrade".
- MetaLink note 215527.1, "Maintenance Wizard Overview".

Upgrading to Oracle Database 10.2.0.3

When Oracle E-Business Suite Release 12 installs the database, it installs Oracle Database 10.2.0.2. If you need to utilize the features of Oracle Database 10.2.0.3, these MetaLink notes provide Database upgrade information in the context of Oracle E-Business Suite Release 12.

- MetaLink note 454750.1, "Interoperability Notes Oracle E-Business Suite Release 12 with Oracle Database 10g Release 2 (10.2.0)".
- MetaLink note 396009.1, "Database Initialization Parameter Settings for Oracle Applications Release 12".

Upgrading the Operating System

If your OS is currently AIX 5.2 (TL7 or later) and you want to upgrade to AIX 5.3 (TL3 or later), migration is the default installation method to move from AIX 5.2 to AIX 5.3.

During a migration, the installation process determines which optional software products are installed on the existing version of the operating system. Components from previous releases that have been replaced by new software in AIX 5.3 are installed at the AIX 5.3 level. For details about migrating to AIX 5.3 see:

http://publib.boulder.ibm.com/infocenter/pseries/v5r3/index.jsp?topic=/com.ibm.aix.install/doc/insgdrf/bos_migration_installation.htm

After upgrading to AIX 5.3, verify these kernel settings are still correct:

- maximum number of processes allowed per user = 2048
- maximum size of argument list = 524288 (128 x 4K byte blocks)

These maximums can be verified (and restored) by using SMIT and going into System Environments, then Change/Show Characteristics of Operating System.

Migrating to Real Applications Clusters

If you want to migrate your Oracle E-Business Suite Release 12 database from single instance to a Real Application Clusters (RAC) environment with Automatic Storage Management (ASM), use MetaLink note 388577.1, “Using Oracle 10g Release 2 Real Application Clusters and Automatic Storage Management with Oracle E-Business Suite Release 12” as a guideline.

Summary

This paper provided a detailed description of an Oracle E-Business Suite Release 12 installation scenario. The installation procedure documented the requirements, the pre-installation steps, the installation steps and their associated screen shots and the post-installation steps. After the installation was complete, the system was started to verify the correctness of the installation. Once verified, the key life cycle activities necessary to maintain an Oracle E-Business Suite Release 12 system were discussed. These life cycle activities consist of: configuration, patching and cloning.

About the Authors

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Appendix 1: Resources

These Web sites provide useful references to supplement the information contained in this document:

Oracle Documentation

- Oracle E-Business Suite Release 12 Documentation Library,
  http://download.oracle.com/docs/cd/B40089_06/current/html/docset.html

IBM Documentation

- IBM System p™ and AIX Information Center,
  http://publib.boulder.ibm.com/infocenter/pseries/index.jsp

- IBM developerWorks AIX,
  http://www-128.ibm.com/developerworks/aix

- IBM Redbooks
  www.redbooks.ibm.com/

- IBM AIX Wiki,
  http://www-941.ibm.com/collaboration/wiki/display/WikiPtype/Home

- Oracle E-Business Suite Release 12 on the IBM BladeCenter running Linux,
  http://www-03.ibm.com/support/techdocs/atsmastr.nsf/WebIndex/WP101102

Appendix 2: Oracle E-Business Suite Release 12 and AIX 6.1

In June of 2008, Oracle E-Business Suite Release 12 was certified with AIX 6.1 TL0 SP0 or higher. AIX 6.1 is the latest version of IBM's open, standards-based UNIX operating system for Power Systems hardware. Some of the new features of this version include:

- Workload Partitions
- Live Application Mobility
- Role Based access control
- Trusted AIX
- Encrypted filesystems
- AIX Security Expert LDAP integration
- Secure by Default installation option
- Graphical Installation
- NIM support for NFSv4
- Kernel support for POWER6 storage key
- Concurrent AIX kernel update
- Dynamic tracing
- Enhanced software first failure data capture
- POWER6 processor exploitation

AIX 6.1 is binary compatible with previous releases of AIX Version 5 as documented in the AIX binary compatibility statement: http://www-03.ibm.com/systems/p/os/aix/compatibility/

32-bit and 64-bit AIX V5.1, V5.2, and V5.3 applications can be executed on AIX 6.1 without recompilation as long as those programs are well behaved and do not utilize programming techniques that are explicitly identified as non-portable. 32-bit applications written for AIX V4.1, 4.2, or 4.3 can be executed on AIX 6.1 without recompilation as long as those programs meet the same standards for well behaved programs.

These documents and websites provide additional information about AIX 6.1.

- AIX 6.1 web page, http://www-03.ibm.com/systems/p/os/aix/v61/index.html
- AIX 6.1 Information Center, http://publib.boulder.ibm.com/infocenter/pseries/v6r1/index.jsp?topic=/com.ibm.aix.doc/doc/base/aixinformation.htm
- "IBM AIX 6.1 Differences Guide", SG24-7559, http://w3.itso.ibm.com/redpieces/abstracts/sg247559.html

Installing Oracle E-Business Suite Release 12

Installation of Oracle E-Business Release 12 on AIX 6.1 is very similar to installing on AIX 5.3. Differences in requirements as specified in MetaLink note 402306.1, "Oracle Applications Installation and Upgrade Notes Release 12 (12.0.4) for AIX-Based Systems" are noted below:

- OS Supported Versions:
  - IBM AIX (64-bit) 6.1 base level or higher

- OS Patches:
  - All AIX OS patches listed as requirements are included in AIX 6.1 base level

- Enabling Asynchronous I/O (AIO):
  - In AIX 6.1, AIO is enabled by default

- Other Patches:
  - See the Known Issues section of the MetaLink note for information about oraparam.ini and opatch patches.

Upgrading to AIX 6.1

If your OS is currently AIX 5.2 or 5.3 and you want to upgrade to AIX 6.1, migration is the default installation method to move to AIX 6.1.

During a migration, the installation process determines which optional software products are installed on the existing version of the operating system. Components from previous releases that have been replaced by new software in AIX 6.1 are installed at the AIX 6.1 level. For details about migrating to AIX 6.1 see:

http://publib.boulder.ibm.com/infocenter/pseries/v6r1/index.jsp?topic=/com.ibm.aix.install/doc/insgdrf/bos_migration_installation.htm

After upgrading to AIX 6.1, verify these kernel settings are still correct:

- maximum number of processes allowed per user = 2048
- maximum size of argument list = 524288 (128 x 4K byte blocks)

These maximums can be verified (and restored) by using SMIT and going into System Environments, then Change/Show Characteristics of Operating System.

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