Oracle® Application Management Pack for Oracle E-Business Suite

User's Guide

Release 2.0.2

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Oracle Application Management Pack for Oracle E-Business Suite User's Guide, Release 2.0.2

Part No. E12178-03

Primary Author: Biju Mohan, Mildred Wang

Contributor: John Aedo, Max Arderius, Srikrishna Bandi, Nipun Goel, Ritanshu Jaiswal, Mike Smith

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Preface

Intended Audience

Welcome to Release 2.0.2 of the *Oracle Application Management Pack for Oracle E-Business Suite User's Guide.*

This book is intended for database administrators and system administrators who are responsible for performing the tasks associated with maintaining an Oracle E-Business Suite system using the Oracle Application Management Pack for Oracle E-Business Suite.

See Related Information Sources on page viii for more Oracle Applications product information.

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Structure

Related Information Sources

Oracle Application Management Pack for Oracle E-Business Suite Installation Guide

This manual describes the system requirements and installation procedures for this product.

Oracle Applications System Administrator's Guide Documentation Set

This documentation set provides planning and reference information for the Oracle Applications System Administrator. *Oracle Applications System Administrator's Guide - Configuration* contains information on system configuration steps, including defining concurrent programs and managers, enabling Oracle Applications Manager features, and setting up printers and online help. *Oracle Applications System Administrator's Guide - Maintenance* provides information for frequent tasks such as monitoring your system with Oracle Applications Manager, managing concurrent managers and reports, using diagnostic utilities, managing profile options, and using alerts. *Oracle Applications System Administrator's Guide - Security* describes User Management, data security, function security, auditing, and security configurations.

Do Not Use Database Tools to Modify Oracle Applications Data

Oracle STRONGLY RECOMMENDS that you never use SQL*Plus, Oracle Data Browser, database triggers, or any other tool to modify Oracle Applications data unless otherwise instructed.

Oracle provides powerful tools you can use to create, store, change, retrieve, and maintain information in an Oracle database. But if you use Oracle tools such as SQL*Plus to modify Oracle Applications data, you risk destroying the integrity of your data and you lose the ability to audit changes to your data.

Because Oracle Applications tables are interrelated, any change you make using an Oracle Applications form can update many tables at once. But when you modify Oracle Applications data using anything other than Oracle Applications, you may change a row in one table without making corresponding changes in related tables. If your tables get out of synchronization with each other, you risk retrieving erroneous information and you risk unpredictable results throughout Oracle Applications.

When you use Oracle Applications to modify your data, Oracle Applications automatically checks that your changes are valid. Oracle Applications also keeps track of who changes information. If you enter information into database tables using database tools, you may store invalid information. You also lose the ability to track who has changed your information because SQL*Plus and other database tools do not keep a record of changes.

1

Introduction to the Oracle Application Management Pack for Oracle E-Business Suite, Version 2.0.2

Overview

The Oracle Application Management Pack for Oracle E-Business Suite extends Oracle Enterprise Manager 10*g* Grid Control to help monitor and manage an Oracle E-Business Suite system more effectively. The pack integrates Oracle Applications Manager with Grid Control to provide a consolidated, end-to-end Oracle E-Business Suite management solution. This pack supersedes the Oracle Grid Control Plug-in version 1.2. The pack can be used to manage both Oracle E-Business Suite Release 11*i* systems and Release 12 systems.

This document describes the features and usage of this new pack for Grid Control.

The Oracle Application Management Pack for Oracle E-Business Suite provides extensions for the Enterprise Manager 10*g* Grid Control management service, repository, and agent. This pack introduces target types for Release 11*i* as well as Release 12.

This pack introduces target types that can be monitored within Grid Control.

The following table lists the target types in Release 12:

Target Type	Description
Oracle E-Business Suite	Oracle E-Business Suite composite target.

Target Type	Description
Oracle Applications Service	Aggregate service for monitoring Oracle Applications. This service contains the Oracle Applications Infrastructure Service. It can optionally also contain an Order Management service if out-of-box example services are enabled. Refer to Application Service Level Monitoring, page 5-1 for details of how to enable the example services.
Oracle Applications Infrastructure Service	Aggregate service for monitoring the Oracle Applications infrastructure. This service contains the following sub-services: Concurrent Processing Service, Forms Applications Service, Self-Service Applications Service, and Workflow Service.
Concurrent Processing Service	Service for monitoring concurrent processing. The key components for this service are: Database Instance, Applications Listener, and Oracle Concurrent Manager.
Forms Applications Service	Service for monitoring Oracle Forms-based applications. The key components for this service are: Database Instance, Forms, OC4J, and Oracle HTTP Server.
Self-Service Applications Service	Service for monitoring Self-Service applications. The key components for this service are: Database Instance, OC4J, and Oracle HTTP Server.
Workflow Service	Service for monitoring Oracle Workflow. The key components for this service are: Database Instance, Applications Listener, Oracle Concurrent Manager, Oracle Workflow Agent Listener, Oracle Workflow Background Engine, and Oracle Workflow Notification Mailer.

Target Type	Description
Order Management Service	Optional. An example aggregate service for monitoring the Order Management application. It contains the following sub-services: Order Information Portal Service, Order Entry Service, Ship Confirm Service. Refer to Application Service Level Monitoring, page 5-1 for details of how to enable the example services.
Order Management − Order Information Portal Service	Optional. An example service for monitoring the Order Management − Order Information Portal using an example service test. Refer to Application Service Level Monitoring, page 5-1 for details of how to enable the example services.
Order Management − Order Entry Service	Optional. An example service for monitoring Order Entry. Refer to Application Service Level Monitoring, page 5-1 on details of how to enable the example services.
Order Management − Ship Confirm Service	Optional. An example service for monitoring Order Entry. Refer to Application Service Level Monitoring, page 5-1 on details of how to enable the example services.
Oracle E-Business Suite System	A system target that contains all the components for the Oracle Applications system.
Oracle E-Business Suite Node System	A system target that contains all the Oracle E-Business Suite Infrastructure targets for a given Oracle Applications system.
Oracle E-Business Suite Infrastructure	Composite target for monitoring an Oracle Applications node. It contains targets for components that always run from that particular node.
Oracle Concurrent Manager	Target for monitoring concurrent managers.
Internal Concurrent Manager	Target for monitoring the Internal Concurrent Manager.

Target Type	Description
Oracle E-Business Suite Workflow	Composite target for monitoring Oracle Workflow. It contains the Oracle Workflow Agent Listener, Oracle Workflow Background Engine, and Oracle Workflow Notification Mailer targets.
Oracle Workflow Agent Listener	Target for monitoring the Oracle Workflow Agent listeners.
Oracle Workflow Background Engine	Target for monitoring the Oracle Workflow Background Engine.
Oracle Workflow Notification Mailer	Target for monitoring the Oracle Workflow Notification Mailer.
Oracle Applications JVM Usage	Target for monitoring Oracle Applications JVMs.
Oracle E-Business Suite Custom Objects	Target for monitoring the custom objects configuration.
Oracle E-Business Suite Patch Information	Target for monitoring the patch information configuration.

For Release 11*i* systems (with the interoperability patch applied), refer to the following table for target types:

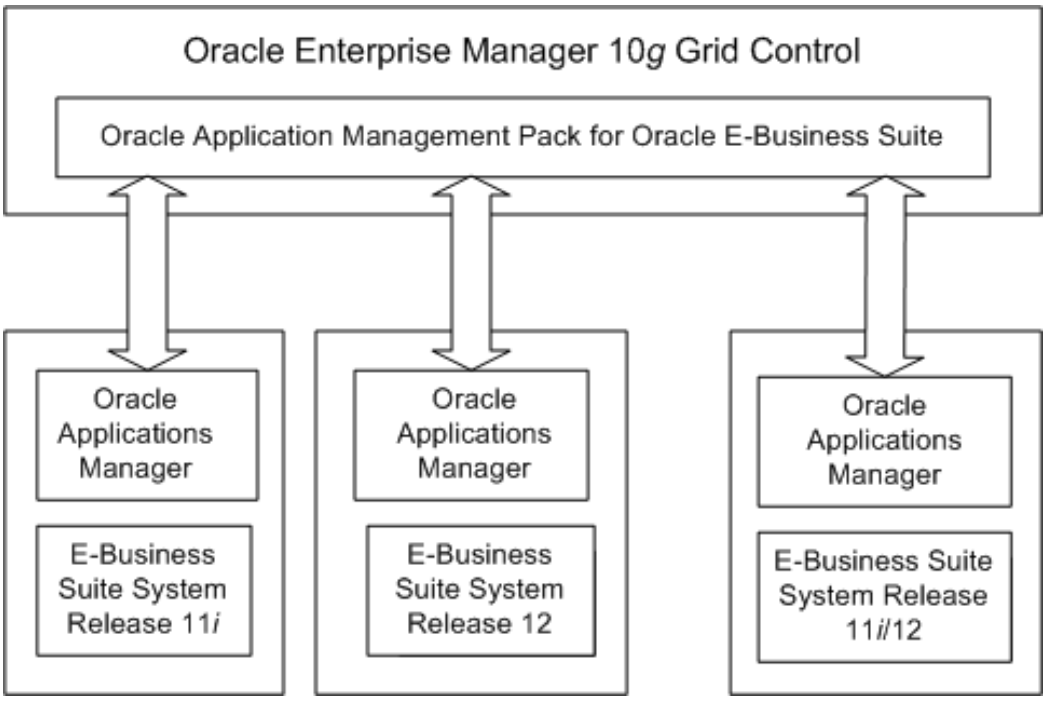
Target Type	Description
Oracle E-Business Suite	Oracle E-Business Suite composite target.
Oracle Applications Service	Aggregate service for monitoring Oracle Applications. It contains the Oracle Applications Infrastructure Service.
Oracle Applications Infrastructure Service	Aggregate service for monitoring the Oracle Applications infrastructure. This service contains the following sub-services: Concurrent Processing Service, Forms Applications Service, Self-Service Applications Service, and Workflow Service.

Concurrent Processing Service	Service for monitoring concurrent processing. The key components for this service are: Database Instance, Applications Listener, and Oracle Concurrent Manager.
Forms Applications Service	Service for monitoring Oracle Forms-based applications. The key components for this service are: Database Instance, Forms Listener for Oracle Applications 11*i*, and HTTP Server for Oracle Applications 11*i*.
Self Service Applications Service	Service for monitoring Self Service applications. The key components for this service are: Database Instance, HTTP Server for Oracle Applications 11*i*, and JServ for Oracle Applications 11*i*.
Workflow Service	Service for monitoring Oracle Workflow. The key components for this service are: Database Instance, Applications Listener, Oracle Concurrent Manager, Oracle Workflow Agent Listener, Oracle Workflow Background Engine, and Oracle Workflow Notification Mailer.
Oracle E-Business Suite System	A system target that contains all the components for the Oracle Applications system.
Oracle E-Business Suite Node System	A system target that contains all the Oracle E-Business Suite infrastructure targets for a given Oracle Applications system.
Oracle E-Business Suite Infrastructure	Composite target for monitoring an Oracle Applications node. It contains targets for components that run from that particular node.
Oracle Concurrent Manager	Target for monitoring concurrent managers.
Internal Concurrent Manager	Target for monitoring the Internal Concurrent Manager.

Oracle E-Business Suite Workflow	Composite target for monitoring Oracle Workflow. This target contains: Oracle Workflow Agent Listener, Oracle Workflow Background Engine, and Oracle Workflow Notification Mailer targets.
Oracle Workflow Agent Listener	Target for monitoring Oracle Workflow Agent listeners.
Oracle Workflow Background Engine	Target for monitoring Oracle Workflow Background Engine.
Oracle Workflow Notification Mailer	Target for monitoring Oracle Workflow Notification Mailer.
HTTP Server for Oracle Applications 11*i*	Target for monitoring HTTP Server for Oracle Applications 11*i*.
JServ for Oracle Applications 11*i*	Target for monitoring JServ for Oracle Applications 11*i*.
Forms Listener for Oracle Applications 11*i*	Target for monitoring the Forms Listener for Oracle Applications 11*i*. Applicable if Forms is configured in socket mode.
Forms Servlet for Oracle Applications 11*i*	Target for monitoring Forms Servlet for 11*i*. Applicable if forms is configured in servlet mode.
Reports Server for Oracle Applications 11*i*	Target for monitoring Reports Server for Oracle Applications 11*i*.
Discoverer for Oracle Applications 11*i*	Target for monitoring Discoverer for Oracle Applications 11*i*.
Oracle E-Business Suite Custom Objects	Target for monitoring custom objects configuration.
Oracle E-Business Suite Patch Information	Target for monitoring patch information configuration.

Grid Control provides a complete view of your enterprise so that you can manage all of your Oracle E-Business Suite systems from a single console. This pack provides new pages within Grid Control that help you to monitor the performance, availability and configuration changes of your Oracle E-Business Suite system and also help you to

provision your Oracle E-Business Suite applications. You can take advantage of advanced Grid Control features such as the provisioning framework and Application Service Level Management.



Grid Control itself allows you to monitor multiple Oracle E-Business systems (both Release 11*i* and Release 12) from the outside.

The Oracle Application Management Pack for Oracle E-Business Suite provides advanced features to monitor and manage Oracle E-Business Suite Release 12 systems as well as Release 11*i* systems that meet a standard interoperability patch level. These advanced features include Oracle E-Business Suite provisioning, Application Service Level Management, extended performance metrics, and links from Grid Control to Oracle Applications Manager.

2

Discovering Oracle E-Business Suite Systems with Grid Control

Discovering Oracle E-Business Suite Systems with Grid Control

Before you can manage an Oracle E-Business Suite system in Grid Control, you must discover (register) that system and its components with the agent. The process of discovering an Oracle E-Business Suite system with Grid Control has been automated.

Before beginning the registration process, you must make sure the following steps have been performed:

- An agent has been installed on the Oracle Applications system, on both the database tier and the application system tier.
- The Oracle Applications database host system has been discovered by Grid Control.
- The Oracle Applications system database has been discovered by Grid Control.

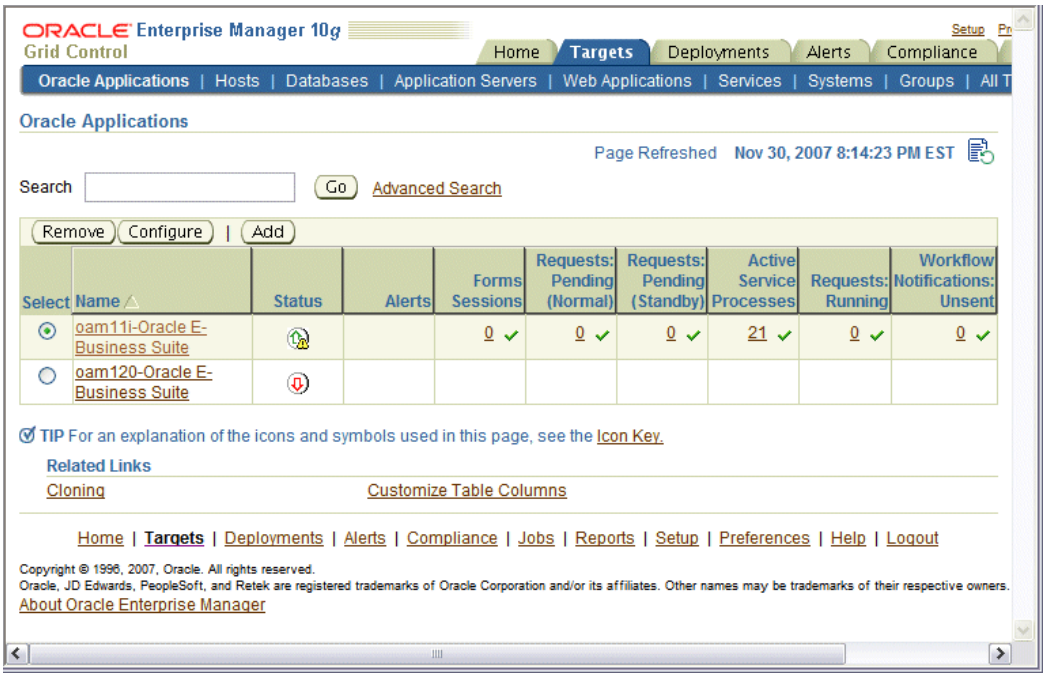
To discover the Oracle Applications system database, navigate to the Targets tab > Databases subtab and click the **Add** button. Select the machine on which the database resides and click **Continue**.

For Release 11*i* systems, if the database is discovered, click on the **Configure** button to verify and update the monitoring configuration properties for the database. If the database was not discovered automatically, click on the **Manually Add** button to register the database target.

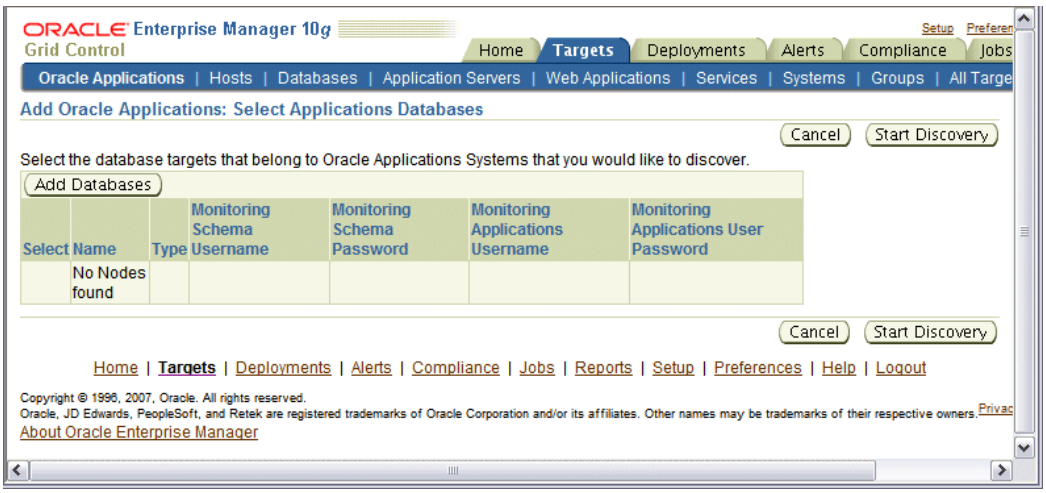
For Release 12 systems, click the **Manually Add** button to register the database target.

You can start the registration process from the **Oracle Applications** subtab.

Start by clicking the **Add** button found in the **Oracle Applications** subtab.



After you click the **Add** button in the **Oracle Applications** subtab, you are prompted to add the database of the Oracle E-Business Suite system that needs to be monitored. Click the **Add Database** button to choose the Oracle E-Business Suite system database.



After you choose the relevant database, you can enter on the next page the schema details and the application access details of the monitoring system.

For Monitoring Schema Username and Monitoring Schema Password, enter the schema username and password for the Oracle Applications database that can be used by the management pack for monitoring.

If you have applied the interoperability patch 6874932 for Release 11*i* or interoperability patch 6874927 for Release 12, you can use the out-of-box "em_monitor" user with access

to limited database objects required by the management pack. You can enable the "em_monitor" user as follows:

- Apply the required patches to your Oracle Applications system (patch 6874932 for Release 11*i* and patch 6874927 for Release 12)
- Connect to the database through 'sqlplus' as the SYSTEM user and issue command:

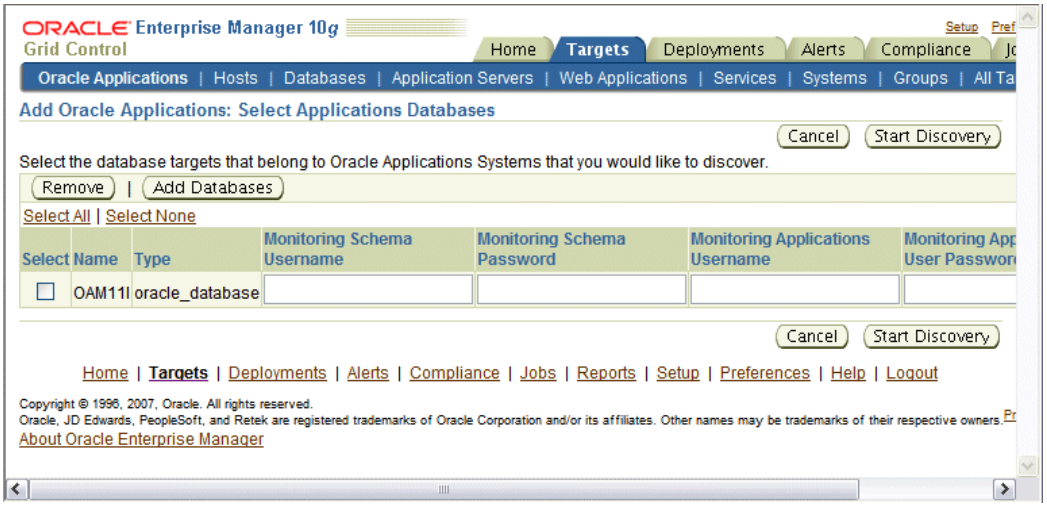
  ```
  alter user em_monitor account unlock;
  ```

- Connect to the database through 'sqlplus' as the em_monitor user and change the password:

  ```
  sqlplus em_monitor/lizard;
  ```

You can also use the APPS schema username and password as your monitoring schema credentials.

Additionally, if you want to enable out-of-box example services, you need to provide a Monitoring Applications Username and Password. Please refer to the chapter Application Service-Level Monitoring, page 5-1 for the steps required for creating a Monitoring Applications user. After following these steps, enter the credentials of the Applications user into these fields.



Click the **Start Discovery** button to start the registration process. After receiving input from the user (to register Oracle Application instance with Grid Control), the Grid Control connects to Oracle E-Business Suite database and retrieves the configuration information. Grid Control then registers the various target types for the Oracle E-Business Suite system and starts capturing the metrics.

> **Note:** If you had plug-in version 1.x installed and you already had Oracle Application instances registered with Oracle Enterprise Manager, you will need to rediscover these systems after you install Application Management Pack 2.0. The Oracle E-Business Suite targets

registered using the V1 plug-in are not supported.

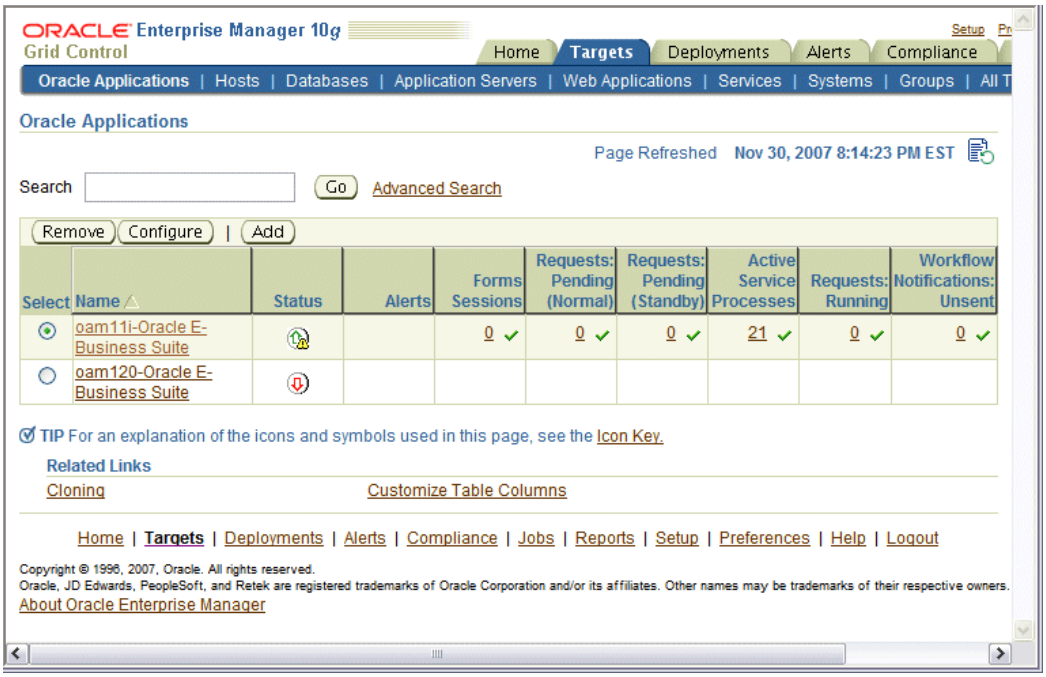
- Run the start discovery process by following the steps above for these Oracle Applications systems.

- Once the new target instances have been registered, you can remove the old targets that were manually registered prior to version 2 of the management pack.

You also need to discover the database listener manually on the Oracle Enterprise Manager Grid Control console by clicking on **Add Listener** from the Enterprise Manager Grid Control Agent home page. For more information, see the Oracle Enterprise Manager online help.

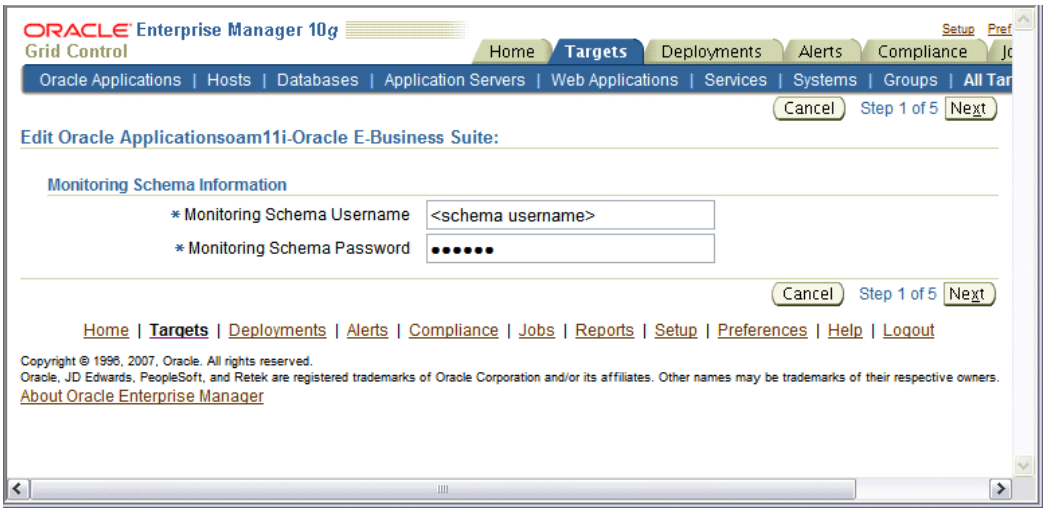
Configure Monitoring of Oracle Applications

To edit the monitoring configuration of an Oracle Application system, first select the desired system in the table, and then click **Configure**.



For more information on the **Oracle Applications** subtab, please see the section Using the Grid Control Pages to Manage the Oracle E-Business Suite, page 3-1. To access this subtab, you may need to set your Preferences in Grid Control (described in that section).

You can review and edit the monitoring schema information on this page.

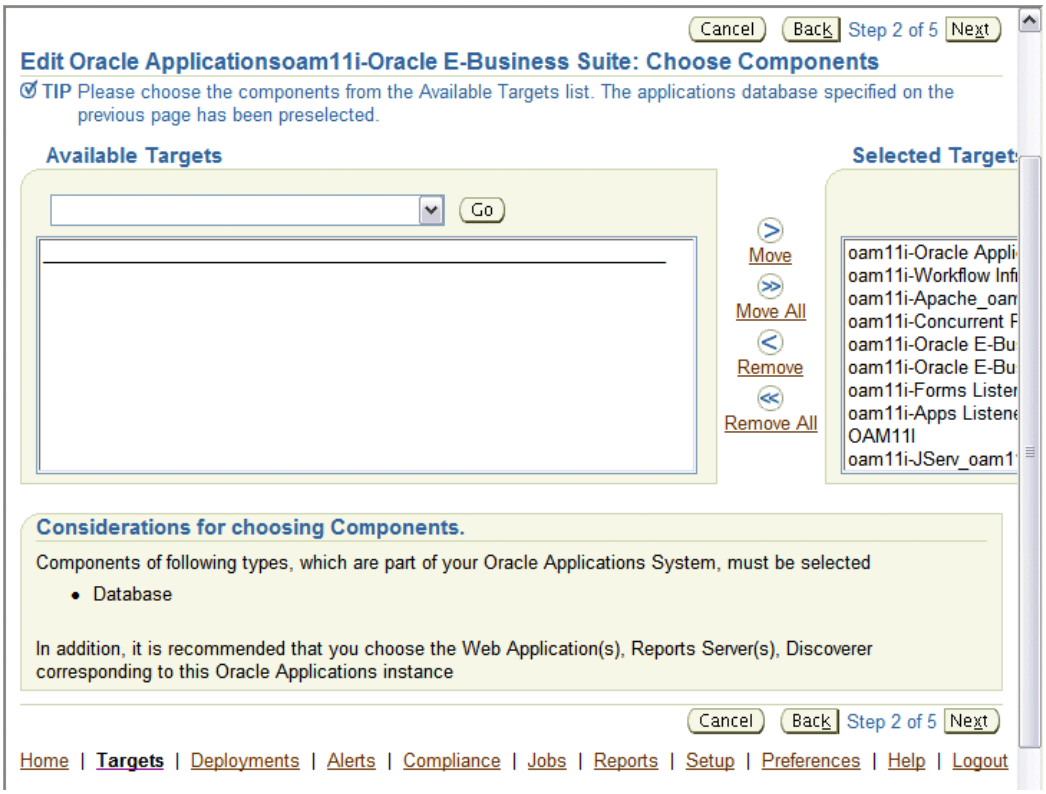


You will be prompted to review the following details:

- Monitoring Schema Username - This is the name of the Monitoring schema in your Oracle Applications database. Enterprise Manager will connect to this schema to collect certain system metrics.

- Monitoring Schema Password - This is the password of the Monitoring schema in your Oracle Applications database.

After you have reviewed the required information, click **Next** to continue.

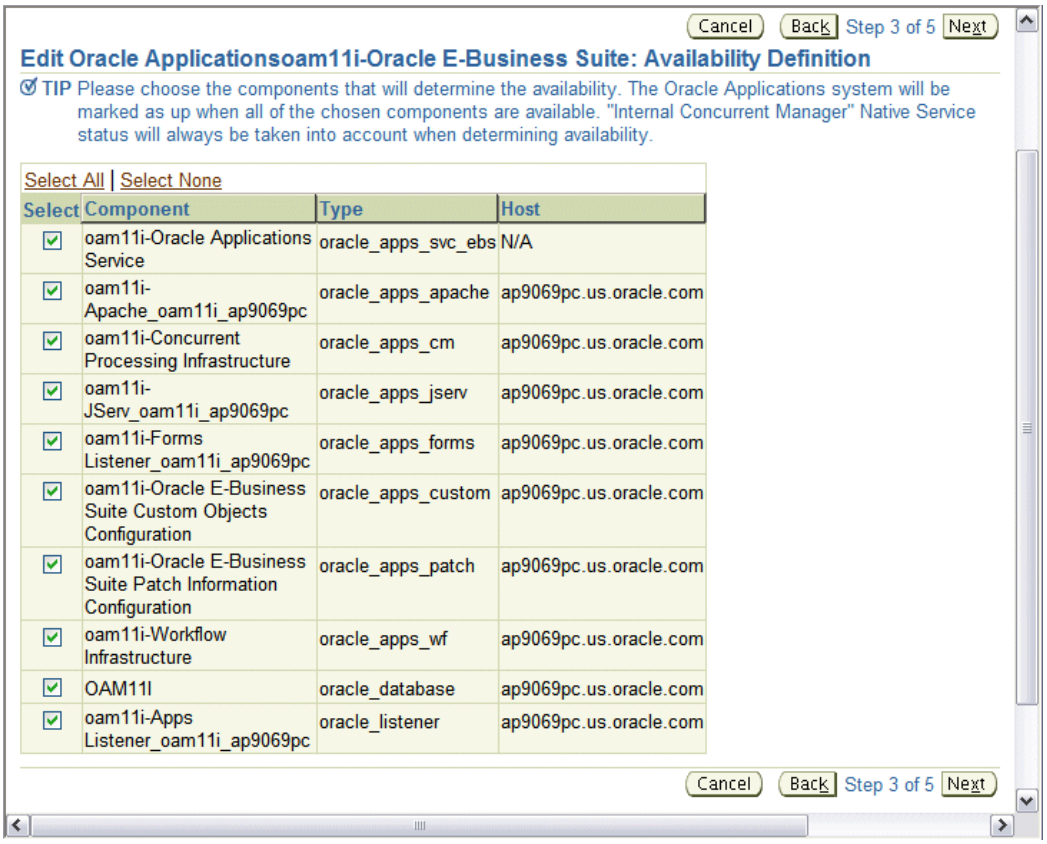


In this page, the registered Grid Control targets can be associated with the Oracle Applications system. These can include HTTP Servers, Oracle Forms listeners, databases, or any other targets registered in Grid Control. You will be able to monitor the status of these targets in the Oracle Applications pages, and you will later be given the option of defining the availability of the Oracle Applications system as a function of these targets.

> **Note:** This page will attempt to automatically identify your Oracle Applications database and add it to the **Selected Targets** list. If the page cannot automatically match the database connection information that you provided to a registered target in Grid Control, then you will receive a warning, and you will need to add the correct database to the **Selected Targets** list manually.

To add a registered target to the **Selected Targets** list, choose the target type (e.g. Database, Forms Listener for Oracle Applications Release 11*i*) and click **Go**. Select the appropriate target(s) from the **Available Targets** list, and click **Move**.

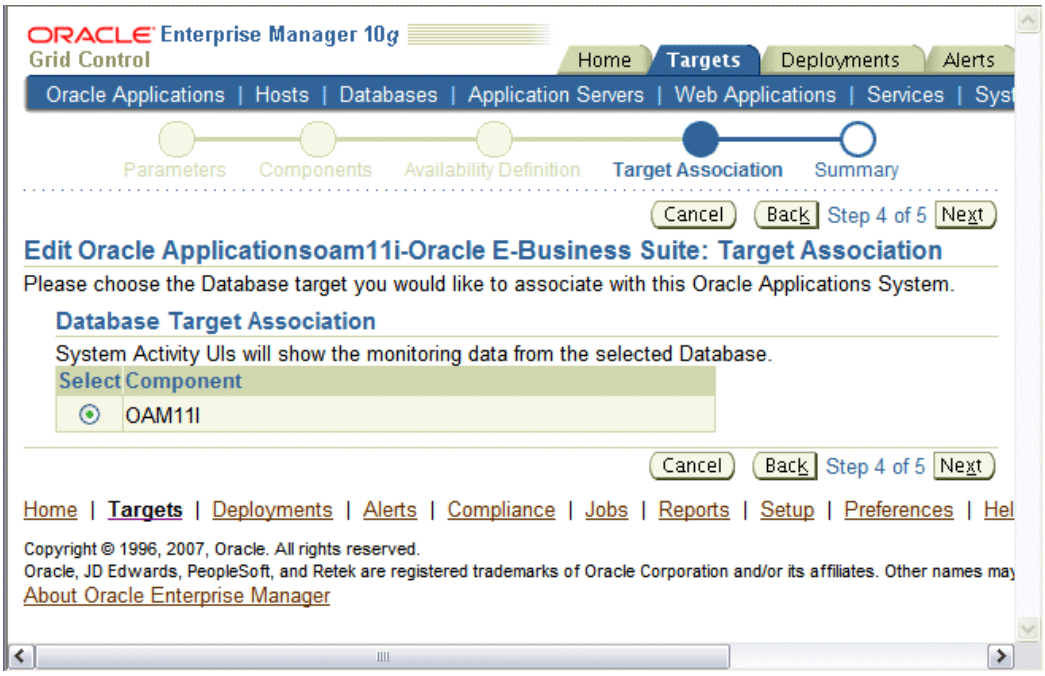
Once the **Selected Targets List** is complete, click **Next** to continue.



This page allows you to define the availability of your Oracle Applications system as a function of the availability of its member targets. Each selected target is included in the availability calculation for the Oracle Applications system. Any targets that are not selected are excluded from the availability calculation for the Oracle Applications system. The availability of the Oracle Applications system is calculated as described in the following table:

Selected Targets' Status	Oracle Applications System Status
All Up	Up
One or more Up	Partially Up
All Down	Down

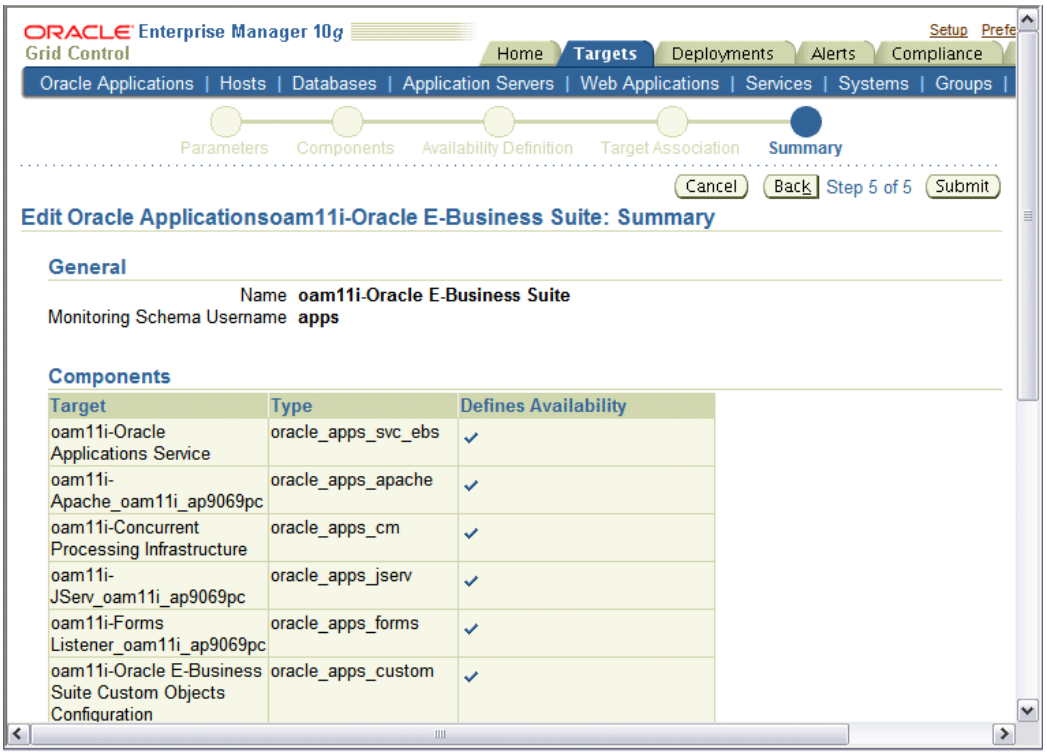
Once you have selected the appropriate targets, click **Next** to continue.



If you have associated multiple databases with the Oracle Applications system, then this page prompts you to specify the primary database and the primary Web application for your system.

The primary database is the database that contains the APPS schema for this Oracle Applications system. The database performance graphs shown in the Oracle Applications System Performance page are derived from this primary database.

Once you have selected the appropriate database and Web application, click **Next** to continue.



This page summarizes the configuration information for your Oracle Applications system. Click **Next** to complete configuring the Oracle Application System.

Configuring Monitoring of HTTPS/SSL Targets

To configure Grid Control to monitor Oracle Applications middle tiers that are running in SSL, each Management Agent must be able to authenticate the mid-tier's SSL certificate against its Certificate Authority (CA).

Assumed Prerequisites

The HTTP Server that ships with Oracle Applications is already configured and verified to be running in SSL mode.

Basic knowledge of SSL certificates and their configuration.

Obtaining the CA certificate(s)

1. In Microsoft Internet Explorer, connect to the HTTPS URL of the Web site you are attempting to monitor.

2. Double-click the lock icon at the bottom of the browser screen, which indicates that you have connected to a secure Web site. The browser displays the Certificate dialog box, which describes the Certificate used for this Web site. Other browsers offer a similar mechanism to view the Certificate detail of a Web site.

3. Click the Certificate Path tab and select the first entry in the list of certificates.

4. Click **View Certificate** to display a second Certificate dialog box.

5. Click the Details tab on the Certificate window.

6. Click **Copy to File** to display the Certificate Manager Export wizard.

7. In the Certificate Manager Export wizard, select Base64 encoded X.509 (.CER) as the format you want to export and save the certificate to a text file with an easily identifiable name, such as beacon_certificate.cer.

8. Open the certificate file using a text editor.

Add the Certificate to the Management Agent(s)

Each Management Agent that monitors an Oracle Applications middle-tier must have the CA certificate added to it as follows:

1. Locate the b64InternetCertificate.txt file in the following directory of Agent Home of the Beacon host: $AGENT_ORACLE_HOME/sysman/config (This file contains a list of Base64 Certificates).

2. Edit the b64InternetCertificate.txt file and add the contents of the Certificate file you just exported to the end of the file, taking care to include all the Base64 text of the Certificate including the BEGIN and END lines.

3. Repeat for each Management Agent.

Restart Each Management Agent

Each Management Agent should be restarted:

```
> $AGENT_ORACLE_HOME/bin/emctl stop agent
> $AGENT_ORACLE_HOME/bin/emctl start agent
```

Grid Control may not immediately pick up the change. You may want to give it a few minutes for the agent to run a metrics collection and upload them to the OMS. You can click on the **Refresh** icon in the upper right of the Oracle Applications home page (by the Page Refreshed time stamp) in the Grid Control Console to get updated information.

A Note on Oracle Forms 6*i*

Even though your Forms configuration may be running in SSL, Grid Control does not require any additional configuration to monitor Forms. The reason for this is that it uses a different method for determining the Forms Server status that does not require SSL communications with the server.

Re-Configuring SSL for Oracle Applications

If you have implemented SSL or deactivated SSL after the initial discovery of that Oracle Applications instance in Grid Control, you will have to re-configure Grid Control to monitor the new URL with the new protocol. There are two ways to do this:

- The Easy Way: If you don't care about the metrics data that has been collected for the instance, you can simply remove the instance from Grid Control and rediscover it.

- The Hard Way: If metrics history is important, then each HTTP Server Target has to be re-configured to point to the new URL, port, and protocol.

Re-configuring Release 11*i* Apache Targets

1. Select the Release 11*i* instance in the Oracle Applications targets tab.

2. Under Applications Nodes Status, expand the Context link that corresponds with your SSL middle tier.

3. Select the Apache target (description: "HTTP Server for Oracle Applications 11*i*").

4. Under "Related Links", select "Monitoring Configuration".

5. Edit the Protocol and Port as appropriate.

6. Click **OK**.

Re-configuring Release 12 Application Servers

1. Select the Release 12 instance in the Oracle Applications targets tab.

2. Under Applications Nodes Status, expand the Context link that corresponds with your SSL middle tier.

3. Select the target described as "Oracle Application Server".

4. Under "Related Links", select "Monitoring Configuration".

5. Edit the "URL to measure application response" as appropriate.

6. Click **OK**.

References

- Oracle*MetaLink* Note 123718.1 - A Guide to Understanding and Implementing SSL with Oracle Applications Release 11*i*

- Oracle*MetaLink* Note 376700.1 - Enabling SSL in Oracle Applications Release 12

- Oracle*MetaLink* Note 391652.1 - Problem: Accessing Web application gives sun.security.validator.ValidatorException: No trusted certificate

- *Oracle Enterprise Manager Advanced Configuration10g Release 3 (10.2.0.3.0)*, Section 12.1.6, "Adding Trust Points to the Management Agent Configuration"

3

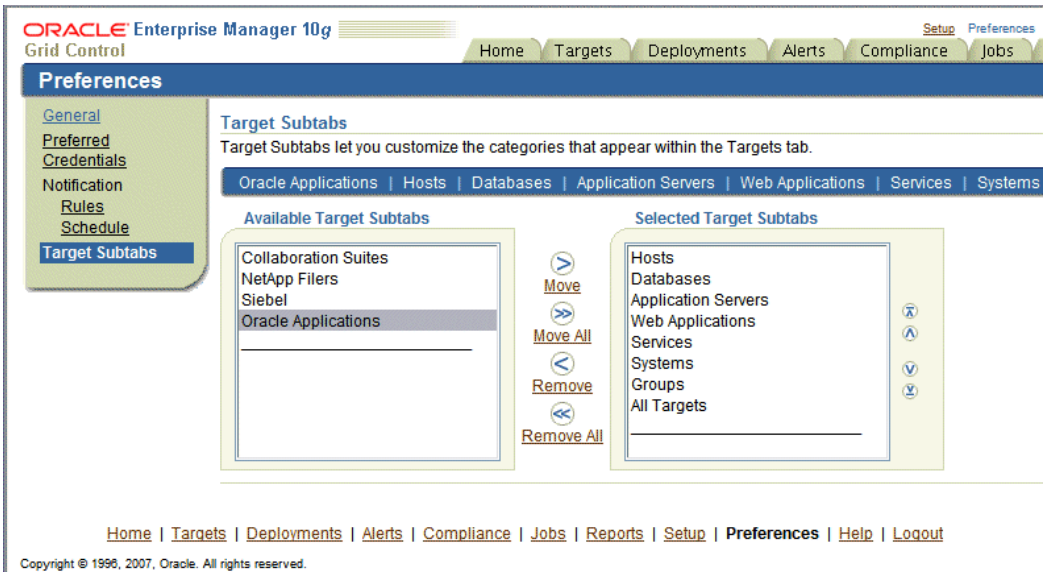
Using the Grid Control Pages to Manage Oracle Applications

Using the Grid Control Pages to Manage Oracle E-Business Suite

Grid Control allows you to monitor multiple Oracle Applications systems from a single console and to drill down into Oracle Applications Manager where you can control, configure, troubleshoot, and maintain individual systems. Once you have registered your Oracle Applications systems, you are ready to start using the features of Grid Control for managing those systems.

Enabling the Oracle Applications Subtab

The Grid Control Plug-in for Oracle Applications provides a new **Oracle Applications** subtab under the **Targets** tab of Grid Control. You can enable or disable this subtab, depending on your preferences. By default, this new subtab is enabled only for the SYSMAN user.

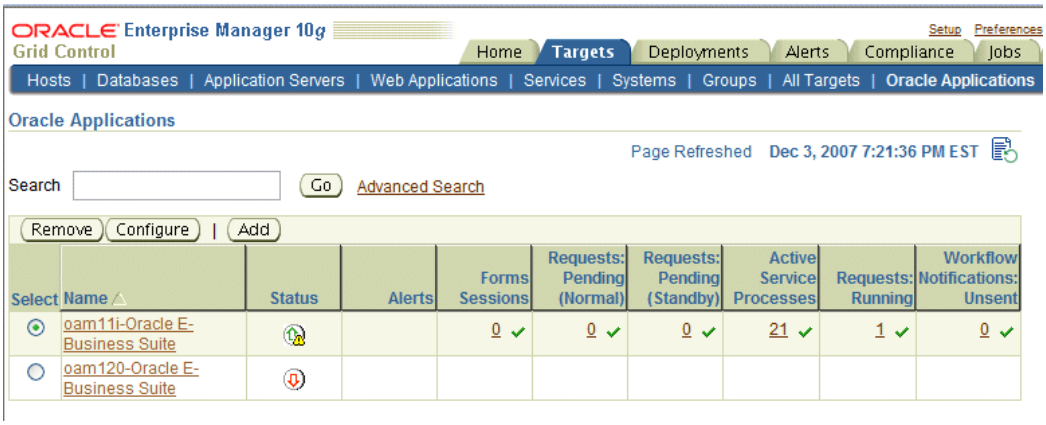


To enable the subtab:

1. Click on the global **Preferences** link in Grid Control.
2. Select **Target Subtabs** from the menu on the left of the page.
3. Choose **Oracle Applications** from the **Available TargetSubtabs** list.
4. Click **Move** to move your selection to the **Selected Target Subtabs** list.

The Oracle Applications Page

Access the Oracle Applications page by clicking on the **Oracle Applications** subtab under the **Targets** tab in Grid Control.

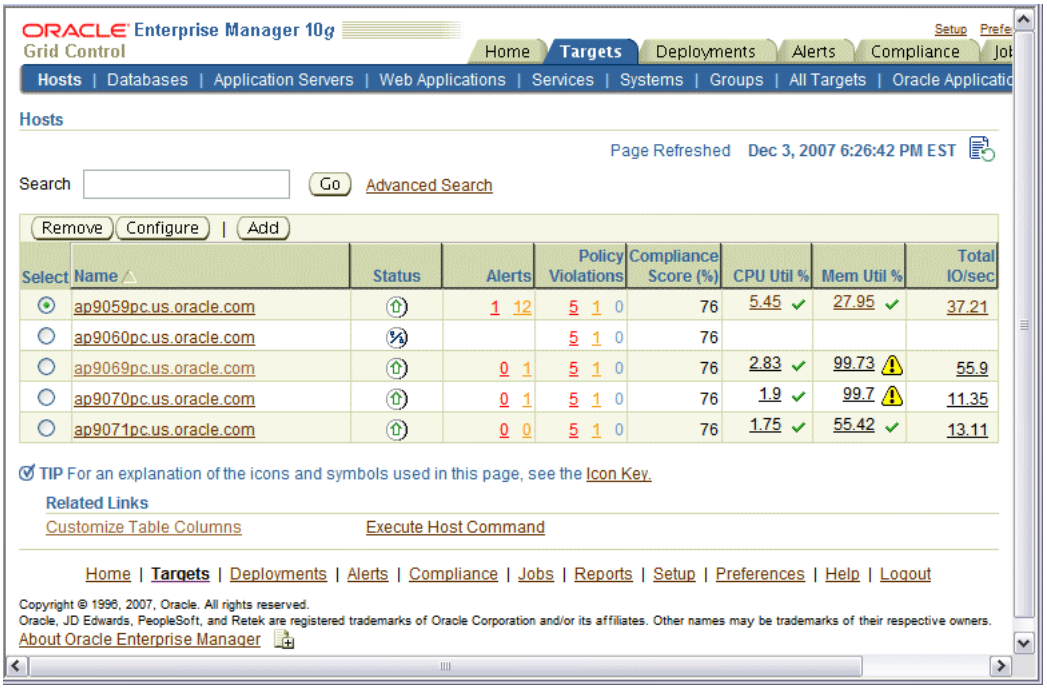


This page provides an overview of the Oracle Applications systems that have been registered with Grid Control. You can register a new system by clicking **Add**, and

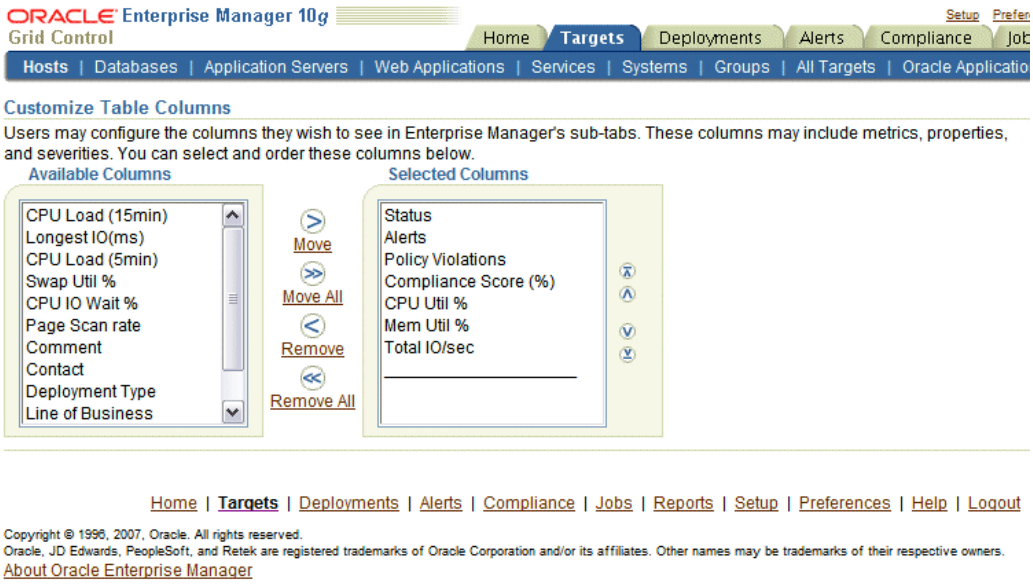
following the directions in the section Discovering Oracle E-Business Suite Systems with Grid Control, page 2-1. You can remove an Oracle Applications system from Grid Control by selecting the desired system in the table, and then clicking **Remove**. You can also edit the monitoring configuration of a system by selecting the desired system in the table, and then clicking **Configure** .

The Oracle Applications page summarizes the status of each Oracle Applications system that has been registered with Grid Control. For each system, the page also provides a set of metrics that summarize aspects of system usage and performance. You can drill down on the Oracle Application system **Name** to access the home page for that system. You can also drill down on any summary metric to view the historical values of that metric.

You can configure the summary metrics that are displayed in the Oracle Applications page by clicking on the Customize Table Columns link under "Related Links".



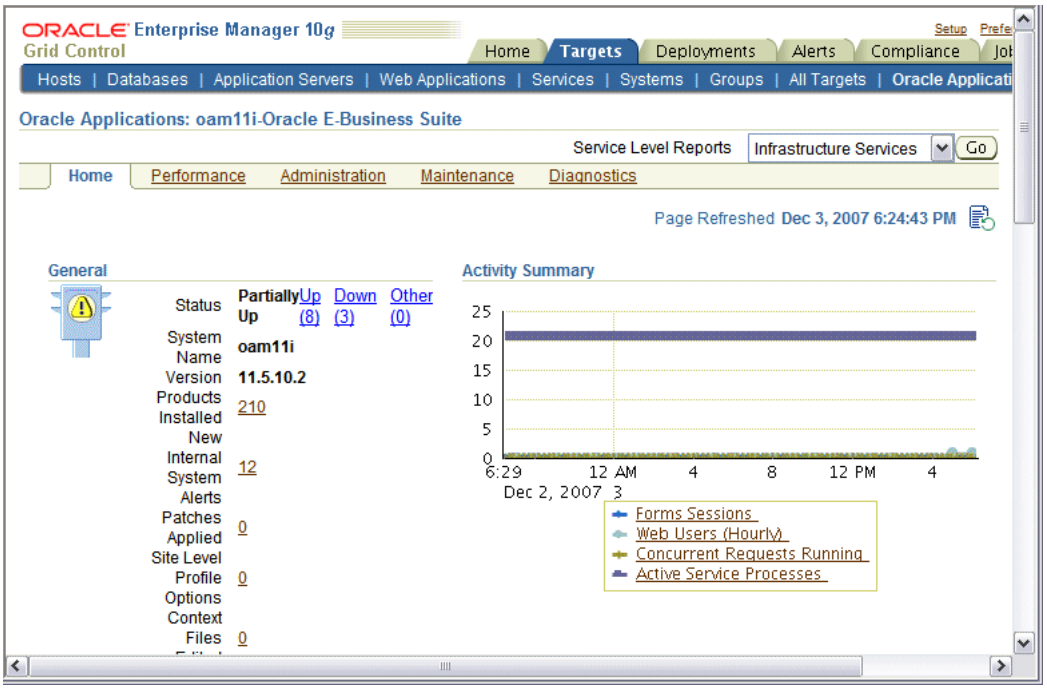
Use the shuttle control to select the summary metric columns that you would like to appear in the Oracle Applications page.



Descriptions of the available "summary" metric columns can be found in the section The Oracle Applications System Home Page, page 3-4.

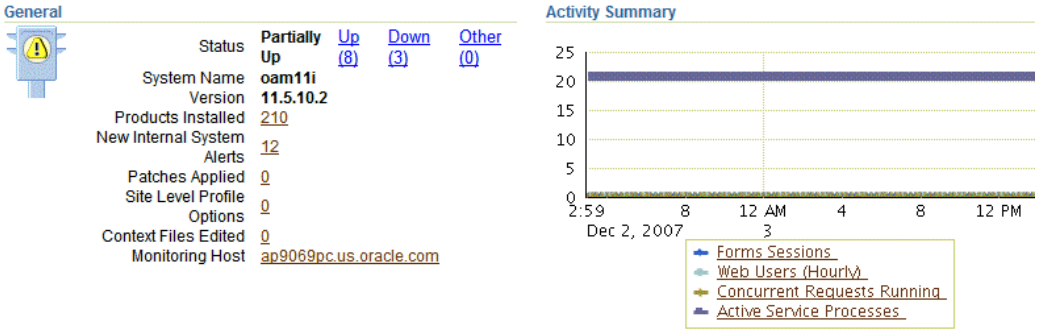
The Oracle Applications System Home Page

The home page for an individual Oracle Applications system can be reached by drilling down from the Oracle Applications page as described in the section above. You can also reach the home page by drilling down on the desired Oracle Applications system target in the All Targets page and in other pages of Grid Control.



The Oracle Applications System home page provides an overview of the status of a single Oracle Applications system. This page is divided into the following sections:

General



The General section provides general status and configuration information, including:

- Status - The status of the Oracle Applications system, calculated based on the availability of its member targets that contribute to its availability definition. In addition to the current status of the system, you can see the counts of member targets that fall into the status categories of **Up**, **Down**, or **Other**. You can drill down on a status category to view the targets that currently fall into that category.

- System Name - The system name that was entered when the system was registered as described in the section above.

- Version - The current release level of the Oracle Applications system. The level is set at installation time, and is updated when Maintenance Packs are applied. Please note that Family Packs, Mini Packs, and individual patches do not update this version number. The actual patch levels of individual products may be more recent than the system version.

- Products Installed - This indicates the number of products that are installed in the Oracle Applications system. If the Oracle Applications Enterprise Manager Interoperability Patch has been applied to the managed system, then you can drill down on this value into Oracle Applications Manager, where you can view the list of products installed, and the patch levels of those individual products.

- New Internal System Alerts -This metric is only available when the Oracle Applications Enterprise Manager Interoperability Patch has been applied to the managed system. This metric shows the number of System Alerts within Oracle Applications Manager that have a status of new. You can drill down on this number to view the details in Oracle Applications Manager. Note that these System Alerts originate from within the Oracle Applications System itself, and are complementary to the Enterprise Manager alerted discussed below. For more information on System Alerts, please see the Oracle Applications Manager online help.

- Patches Applied - This metric is only available when the Oracle Applications Enterprise Manager Interoperability Patch has been applied to the managed system. This metric indicates the number of patches that have been applied to the system in the last 24 hours. You can drill down on this metric to view the patches in Oracle Applications Manager.

- Site Level Profile Options Changed - This metric indicates the number of site level profile options that have changed on the system in the last 24 hours. You can drill down on this metric to view the site level profile options in Oracle Applications Manager. (Note: For Release 11*i*, this metric is available only when the Oracle Applications Enterprise Manager interoperability patch has been applied to the managed system. The Release 11*i* interoperability patch for version 2.0.2 of the pack is patch 6874932.).

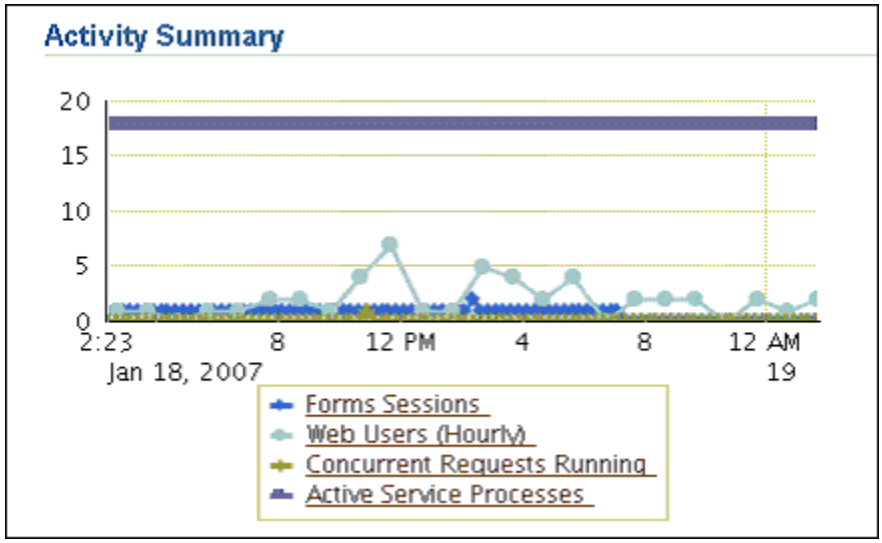
- Context Files Edited - This metric is only available when the Oracle Applications Enterprise Manager Interoperability Patch has been applied to the managed system. This metric indicates the number of AutoConfig context files that have changed on the system in the last 24 hours. You can drill down on this metric to view the context files in Oracle Applications Manager.

- Monitoring Host - The host of the agent that is monitoring the Oracle Applications system. This host was selected when the Oracle Applications system was registered as described in the section above. You can drill down on the host name to reach the Grid Control home page for the host.

The **New Internal System Alerts**, **Patches Applied**, **Site Level Profile Options**

Changed, and **Context Files Edited** metrics are based on information periodically summarized in the Oracle Applications database by the Oracle Applications Manager Dashboard Collection concurrent program. This program is controlled through the **Preferences** global link in Oracle Applications Manager. If this program has been disabled in the Oracle Applications system for some reason, then these metrics will not be updated.

Activity Summary



The activity summary provides an overview of system activity for the last 24 hours including:

- Form Sessions - This metric indicates the number of open Form sessions on the system at a given point in time.

  Note: To enable Oracle Applications Manager and Grid Control to collect this metric, set the profile option Sign-on: Audit Level to "Form" in the target Oracle Applications system.

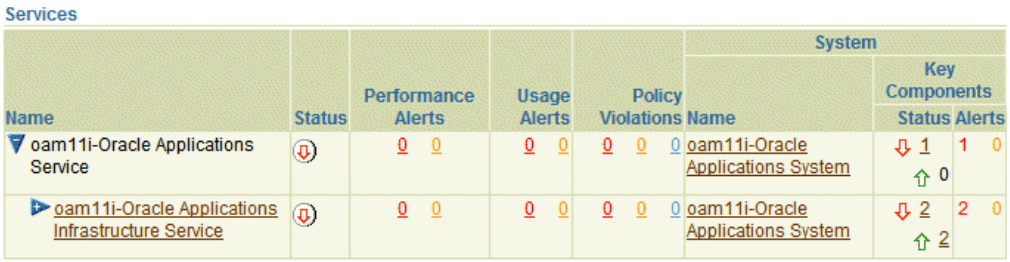
- Web Users (Last Hour) - This metric measures the number of distinct users to access Oracle Applications HTML pages during the previous hour.

- Concurrent Requests Running - This metric indicates the number of concurrent requests running on the system at a given point in time.

- Active Service Processes - The meaning of this metric differs depending on whether or not the Oracle Applications Enterprise Manager Interoperability Patch has been installed on the target system. If the interoperability patch has been applied, then this metric indicates the number of active application tier processes that are running

under the Generic Service Management feature of Oracle Applications Release 11*i*. This metric includes concurrent processing infrastructure processes, Workflow mailer processes, and more. If the interoperability patch has not been applied to the target system, then this metric indicates only the number of active concurrent processing infrastructure processes on the application tier. The concurrent processing infrastructure includes concurrent managers, transaction managers, service managers, the Internal Concurrent Manager, the Conflict Resolution Manager, and the Scheduler.

Services


Services

Name	Status	Performance Alerts	Usage Alerts	Policy Violations	System: Name	System: Key Components Status	System: Key Components Alerts
oam11i-Oracle Applications Service		0 0	0 0	0 0 0	oam11i-Oracle Applications System	1 / 0	1 0
oam11i-Oracle Applications Infrastructure Service		0 0	0 0	0 0 0	oam11i-Oracle Applications System	2 / 2	2 0

Using Service Level Management feature with Enterprise Manager Grid Control, Oracle Applications mid-tier components can be monitored for their availability and performance. The middle tier components, being the infrastructure for Oracle Applications, are being monitored not only for their key processes but also for all the other components they are dependent on.

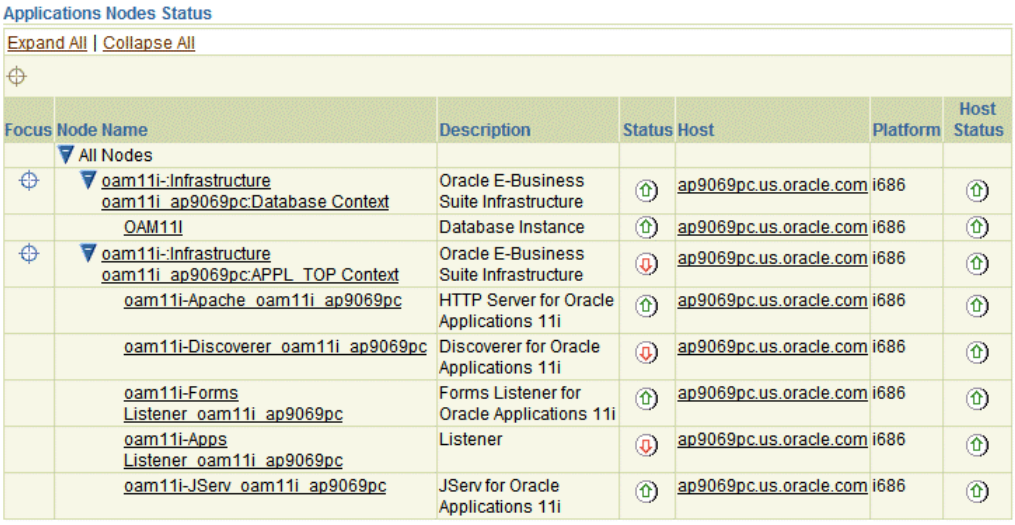
The Oracle Applications Infrastructure service is defined by the following:

- Concurrent Processing Service - This service provides a summary of the availability and performance of concurrent processing within Oracle Application.
- Forms Applications Service - This service provides a summary of the availability and performance of Forms within Oracle Application.
- Self Service Applications Service - This service provides a summary of the availability and performance of Oracle Application Framework pages within Oracle Application.
- Workflow Service - This service provides a summary of the availability and performance of workflow within Oracle Application.

The following table provides details of the core service/component that's being monitored as part of the infrastructure service and also the key components the core service is dependent on.

Infrastructure Service	Core Service / Component Monitored	Key Components
Concurrent Processing Service	Internal Concurrent Manager	• Database Instance • Apps Listener
Forms Application Service	OC4J Forms Server	• Oracle HTTP Server • Database Instance
Self Service Application Service	OC4J (Oracle Application Framework)	• Oracle HTTP Server • Database Instance
Workflow Service	• Workflow Agent Listener • Workflow Background Engine • Workflow Notification Mailer	• Oracle Concurrent Manager • Database Instance • Apps Listener

Application Node Status



Applications Nodes Status

Expand All | Collapse All

Focus	Node Name	Description	Status	Host	Platform	Host Status
	All Nodes					
	oam11i-:Infrastructure oam11i_ap9069pc:Database Context	Oracle E-Business Suite Infrastructure		ap9069pc.us.oracle.com	i686	
	OAM11I	Database Instance		ap9069pc.us.oracle.com	i686	
	oam11i-:Infrastructure oam11i_ap9069pc:APPL_TOP Context	Oracle E-Business Suite Infrastructure		ap9069pc.us.oracle.com	i686	
	oam11i-Apache_oam11i_ap9069pc	HTTP Server for Oracle Applications 11i		ap9069pc.us.oracle.com	i686	
	oam11i-Discoverer_oam11i_ap9069pc	Discoverer for Oracle Applications 11i		ap9069pc.us.oracle.com	i686	
	oam11i-Forms Listener_oam11i_ap9069pc	Forms Listener for Oracle Applications 11i		ap9069pc.us.oracle.com	i686	
	oam11i-Apps Listener_oam11i_ap9069pc	Listener		ap9069pc.us.oracle.com	i686	
	oam11i-JServ_oam11i_ap9069pc	JServ for Oracle Applications 11i		ap9069pc.us.oracle.com	i686	

The Application Node Status provides a summary of the availability statuses of various components such as Forms, Applications Listener, Application Server and Database Instance. The availability status information is summarized at the node level. The host details such as host name, platform and the host status are available for each component.

Alerts and Related Alerts

Alerts

Metric Collection Errors 6

Previous 1-5 of 46 Next 5

Metric	Target Name	Target Type	Severity	Alert Triggered	Last Value	Last Checked
Service Status for FND/FNDSM_SDFDS	Ebusiness Suite - OAMDEV - AP6102RT	Oracle Applications System		Nov 4, 2004 2:34:52 PM	DOWN	Nov 23, 2004 10:13:22 AM
Service Status for FND/FNDSM_SKTESTLOV	Ebusiness Suite - OAMDEV - AP6102RT	Oracle Applications System		Nov 2, 2004 2:48:51 AM	DOWN	Nov 23, 2004 10:13:22 AM
Service Status for FND/FNDSM_TEST7	Ebusiness Suite - OAMDEV - AP6102RT	Oracle Applications System		Nov 2, 2004 2:48:51 AM	DOWN	Nov 23, 2004 10:13:22 AM
Service Status for FND/FNDSM_TEST16	Ebusiness Suite - OAMDEV - AP6102RT	Oracle Applications System		Nov 2, 2004 2:48:51 AM	DOWN	Nov 23, 2004 10:13:22 AM
Service Status for FND/FNDSM_TEST4	Ebusiness Suite - OAMDEV - AP6102RT	Oracle Applications System		Nov 2, 2004 2:48:51 AM	DOWN	Nov 23, 2004 10:13:22 AM

View All

Related Alerts

Previous 1-5 of 12 Next 5

Metric	Target Name	Target Type	Severity	Alert Triggered	Last Value	Last Checked
Tablespace Space Used (%) for SYSTEM	oamdev	Database		Sep 17, 2004 2:41:42 PM	97.52	Nov 23, 2004 9:45:58 AM
Tablespace Space Used (%) for USER_DATA	oamdev	Database		Sep 17, 2004 2:41:42 PM	99.98	Nov 23, 2004 9:45:58 AM
db file sequential read (%)	oamdev	Database		Nov 23, 2004 8:44:15 AM	99.81	Nov 23, 2004 10:13:15 AM
Dump Area Used (%) for background	oamdev	Database		Nov 5, 2004 3:59:43 AM	94	Nov 23, 2004 9:19:17 AM
Dump Area Used (%) for core	oamdev	Database		Nov 5, 2004 3:59:43 AM	94	Nov 23, 2004 9:19:17 AM

View All

The Alerts section provides an overview of the Alerts posted by Oracle Enterprise Manager for targets that have become unavailable, or for metrics that have exceeded specified thresholds. The Alerts table shows alerts specifically for the Oracle Applications system target.

The Related Alerts table shows alerts for all targets that were registered as members of the Oracle Applications system but being monitored separately outside the pack.

You can drill down to view the details of an alert by clicking on the corresponding name in the **Metric** column. You can drill down to the related target's home page by drilling down on the **Target Name**. To define an alert metric threshold for alerting, click the **Edit Metric Thresholds** link under Related Links at the bottom of the page. For more information on metrics and alerts, please see the Enterprise Manager 10*g* Grid Control documentation.

The Oracle Applications System Performance Page

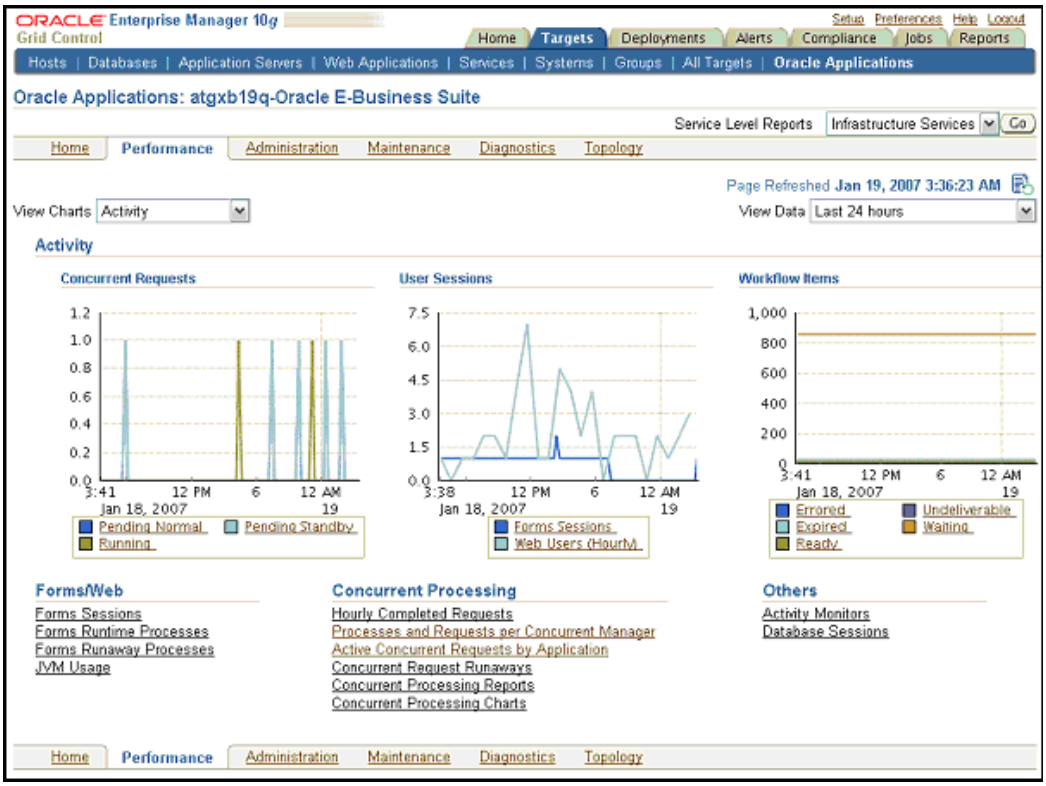
The Oracle Applications System Performance page pulls together key usage and

performance indicators for the system in general, and for each tier of the system. You can change views using the **View** list. Four views are provided:

- Activity
- Applications Server
- Database
- All

Each view provides a set of charts. You can control the period of time depicted by the charts using the **View Data** list.

The Oracle Applications System Activity View



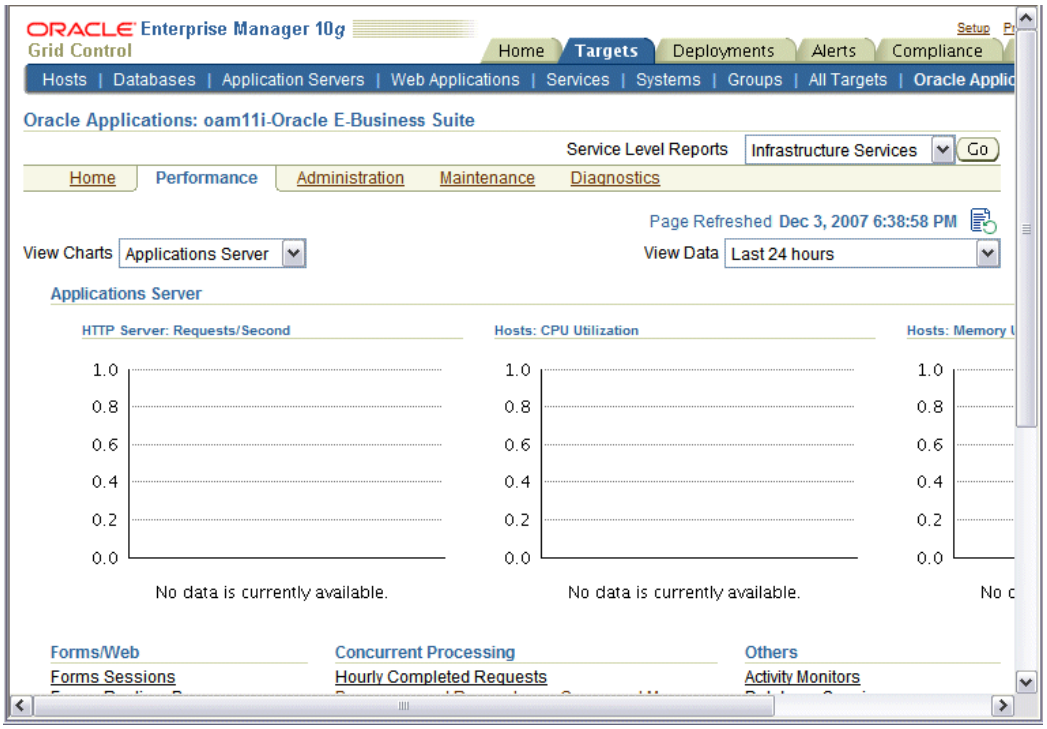
The Oracle Applications System view provides an overview of key system-wide metrics. This view contains the following three charts:

- Concurrent Requests - This chart depicts the concurrent request load on the system. The chart shows the numbers of Pending Normal, Pending Standby, and Running concurrent requests at each point in time.
- User Sessions - This chart depicts the end user activity on the system. The chart

shows the number of Forms sessions active at each point in time. Also, the chart shows the count of users who have accessed the HTML-based applications over hourly intervals.

- Workflow Items - This chart depicts the messaging activity in Workflow's Business Event System. The chart shows the count of messages by status for each period of time.

The Applications Server View



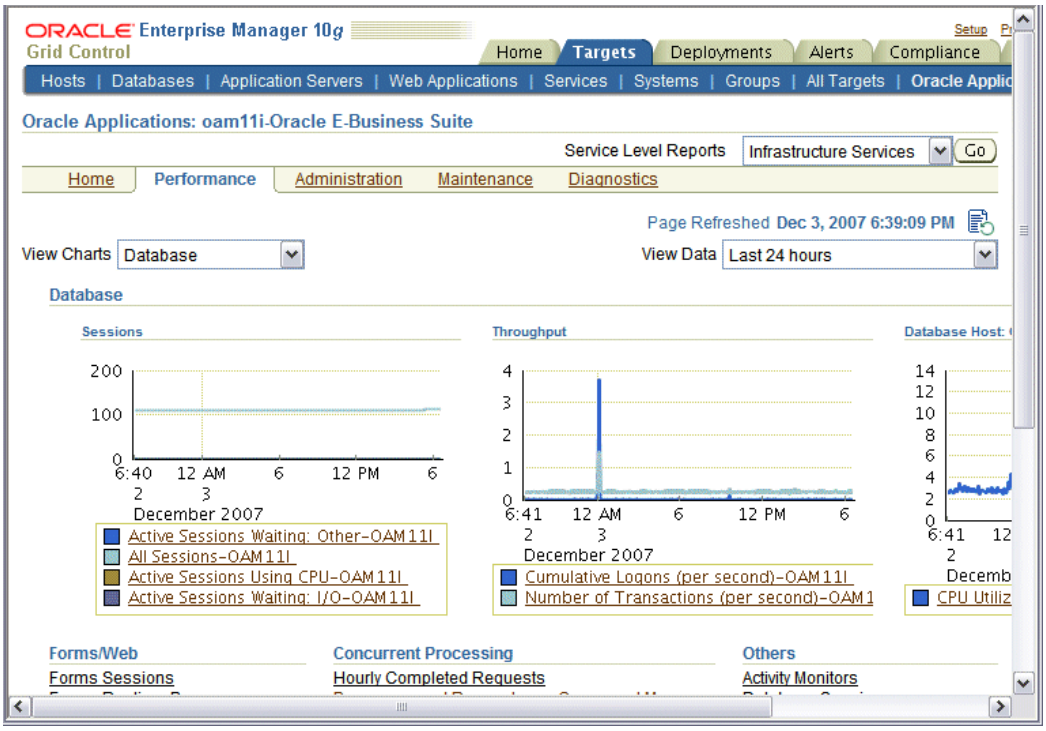
The Applications Server view shows key middle tier usage and performance metrics for the Oracle Applications System. This view provides the following three charts:

- HTTP Server: Requests/Second - This chart depicts the throughput of the HTTP Server at each point in time. Multiple HTTP servers are represented by different lines in this graph.

- Hosts: CPU Utilization - This chart depicts the CPU utilization on each Applications Tier host. Multiple hosts are shown as different lines in this graph.

- Hosts: Memory Utilization - This chart depicts the memory utilization on each Applications Tier host. Multiple hosts are shown as different lines in this graph.

The Database View



The Database Tier view shows usage and performance metrics for the Oracle Applications system database and its hosts. This view provides the following three charts:

- Sessions - This chart breaks down the database session usage. The data points include the total count of database sessions, the count of active sessions using CPU, the count of active sessions waiting on I/O, and the count of active sessions waiting on other resources.

- Throughput - This chart provides two indicators of database throughout: the number of transactions per second, and the number of logins per second.

- Database Hosts: CPU Utilization - This chart depicts the CPU utilization on each Database Tier host. Multiple hosts are shown as different lines in this graph.

JVM Usage

The Oracle Application System JVM usage summary can be viewed from the Performance page. Click the JVM Usage link available under the heading Forms/Web.

The JVM usage information is available across all the multiple nodes. The following metrics are collected as part of the JVM Usage:

- Application Module pool - Provides information about all the active and leaked Application Modules.
- Locked AOLJ Connections - Provides information about all the locked and leaked AOLJ connections utilized by applications
- Cache Components - Provides information about the cache component utilization by Oracle Application Framework.

For Release 12 systems, in order to enable collection of the data for Application Modules, AOLJ Connection, and Cache Components columns, please ensure that you have set up the monitoring configuration for each "oacore" OC4J target as follows:

1. For each "oacore" OC4J target click on the name link. The oacore OC4J targets are named in <context_name>.<hostname>_oacore format and are parent targets of each JVM target.
2. On the home page of the oacore OC4J target, click on "Monitoring Configuration" link under the Related Links section.
3. Enter the OC4J administrator username and password for the "oacore" OC4J in the

"Username for Basic authorization" the "Password for Basic authorization" fields respectively. Please refer to the note below to determine the values for these fields.

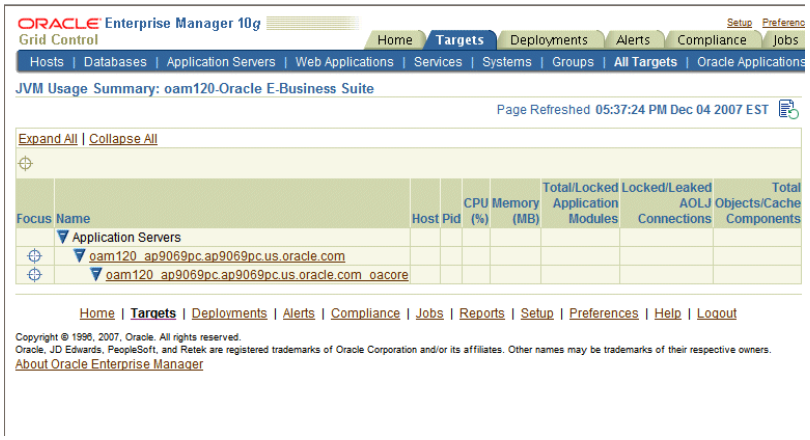
4. Click on **OK** to save the information.

Note: The OC4J administrator username by default is "oc4jadmin" and is specified in the system-jazn-data.xml file under the $INST_TOP/ora/10.1.3/j2ee/oacore/config directory. The oc4jadmin password by default is set to a randomized value during install and will need to be reset as follows:

- In the $INST_TOP/ora/10.1.3/j2ee/oacore/config/system-jazn-data.xml file, set the value of the "credentials" element for oc4jadmin user to your chosen password preceded by a ! character. For example:

```
<user>
<name>oc4jadmin</name>
<display-name>OC4J Administrator</display-name>
<description>OC4J Administrator</description>
<credentials>!welcome</credentials>
</user>
```

- After saving system-jazn-data.xml restart the oacore OC4J. This will encrypt the updated password in system-jazn-data.xml.



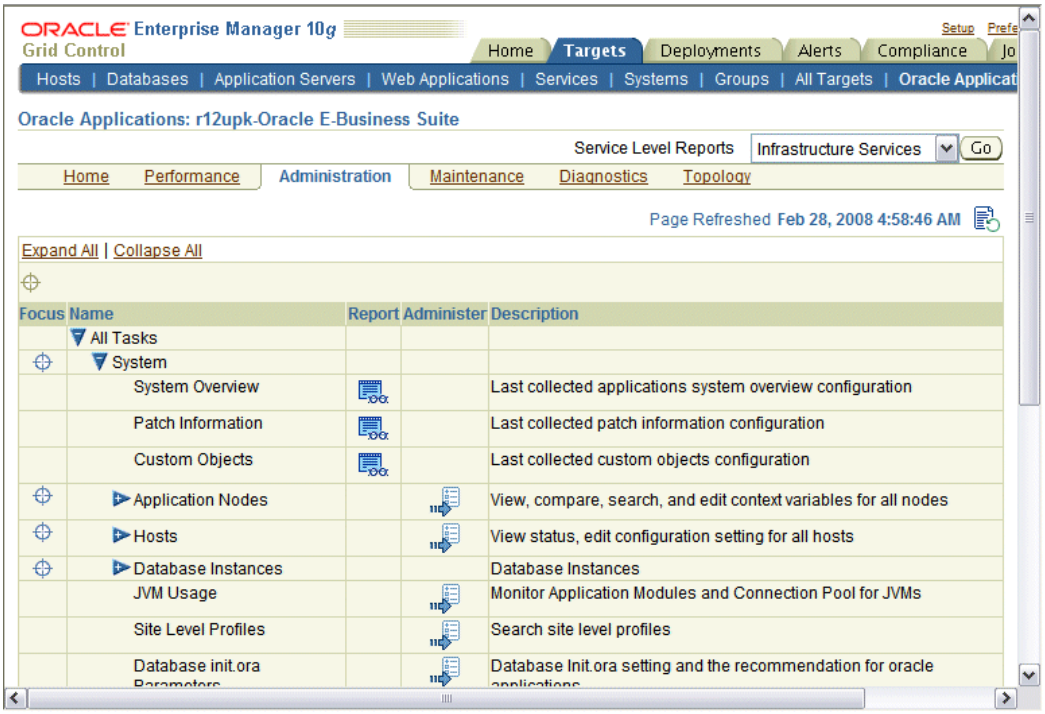
Drill down to Oracle Applications Manager

The Oracle Applications System Performance page provides seamless integration to performance pages within Oracle Applications Manager (OAM). You can use the links provided to access the performance metrics within OAM.

The Oracle Applications System Administration Page

The Oracle Applications System Administration page provides seamless integration with all the administrative activities within Oracle Applications Manager (OAM). Click on the icon in the "Administer" column to navigate to a feature's OAM administrative page.

Configuration reports of the middle-tier components can be accessed from this page using the icons in the "Reports" column.



This section describes the various configuration reports accessible from the Administration page.

Note: On the entire configuration reports page, you can perform the following actions:

- Save - You can save the current configuration snapshot for either comparing with other reports or for viewing the historical changes.
- Compare - You can compare the configuration information with that of the same system, saved at an earlier time, or with information of another system.
- Compare with Multiple - You can compare the configuration information of a system with multiple other systems (being

monitored using Grid Control).

- History - You can view the change history of the configuration.
- Refresh - You can refresh the configuration report to reflect the latest data.

View Oracle Application System Configuration

The Oracle Application system configuration can be accessed from the Administrative view.

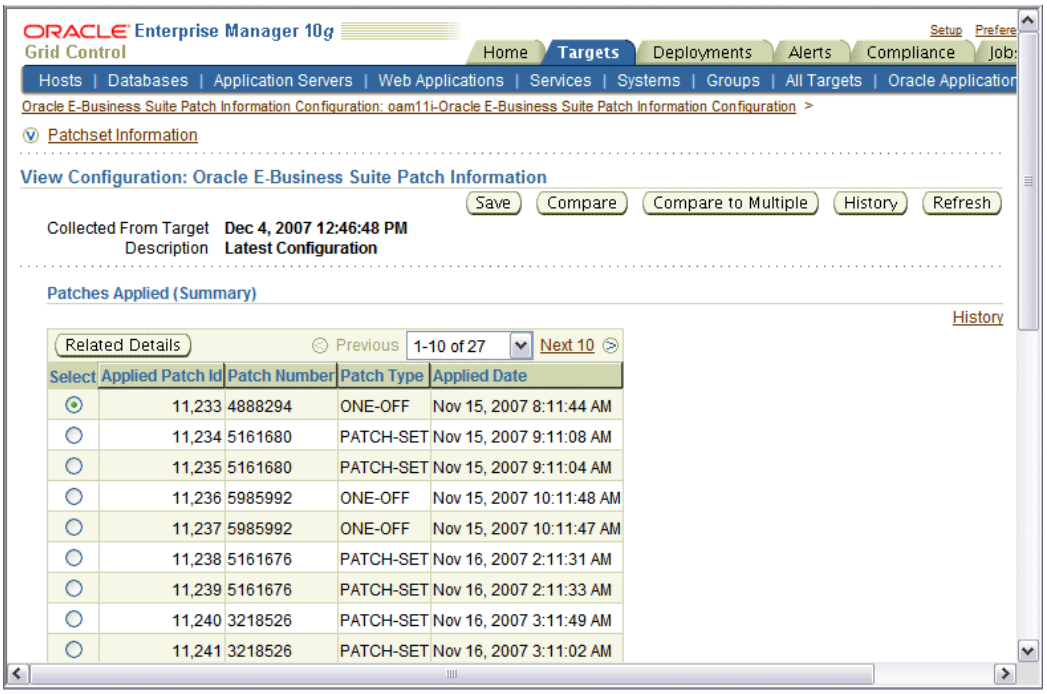
The Oracle Application configuration information is available through the following reports:

System Overview

The System Overview view is broken into three sections:

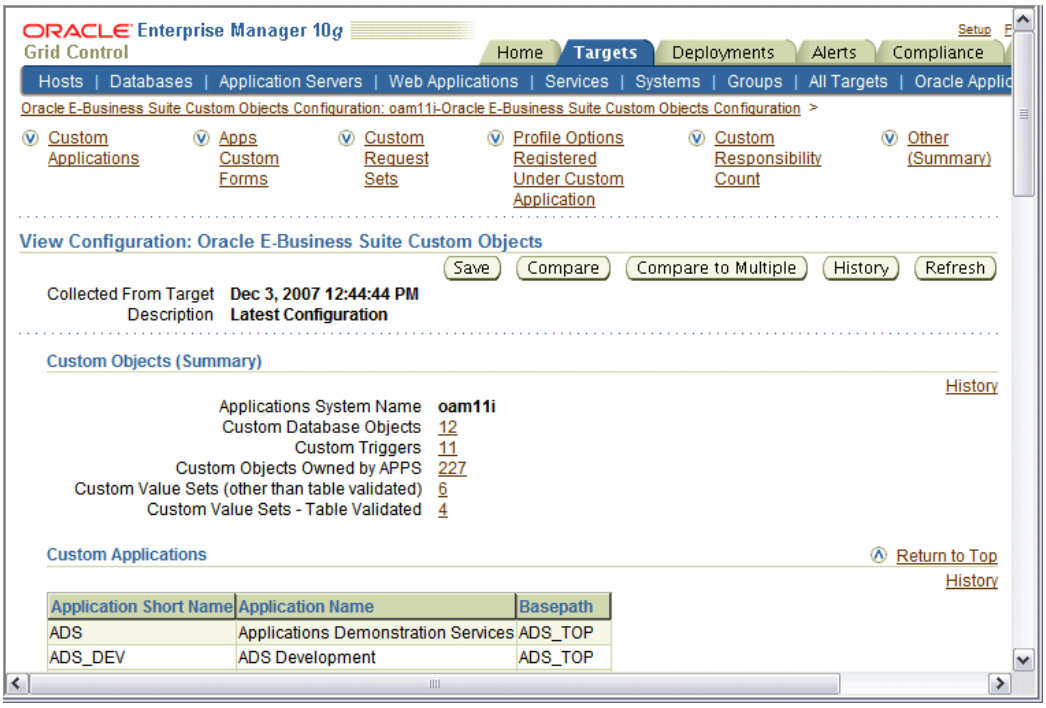
- Application System Overview Summary
- User Summary
- Other Summary

Patch Information



The Patch Information view provides information about all the patches that have been applied to the Oracle Applications system.

Custom Objects

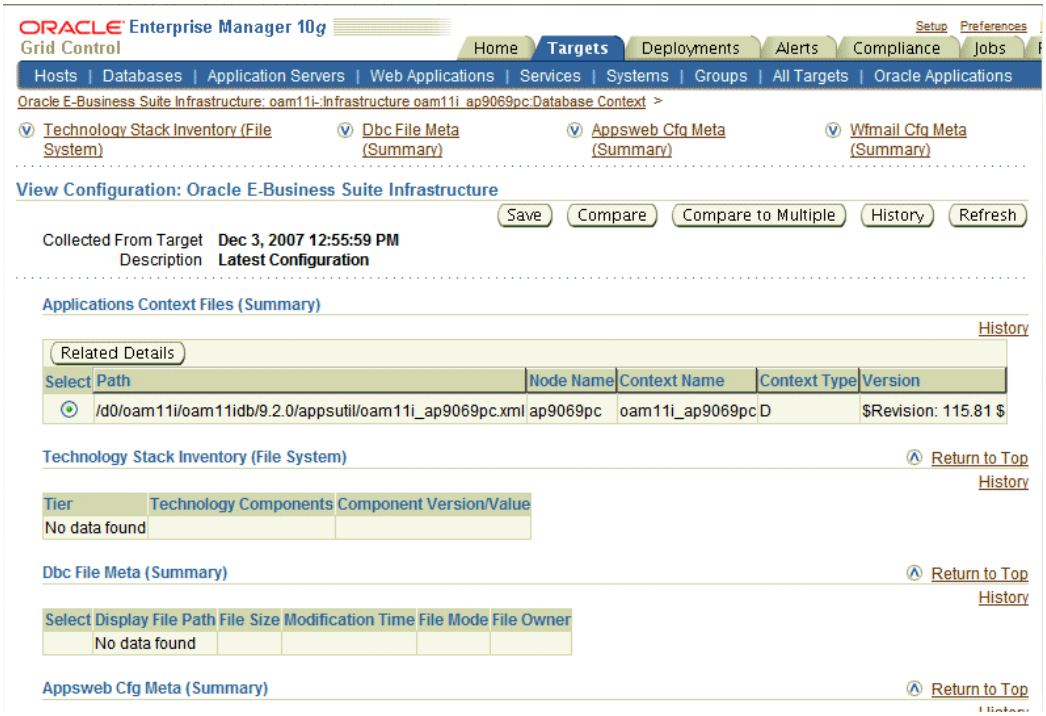


In the custom objects view you can see all the Oracle E-Business Suite customizations.

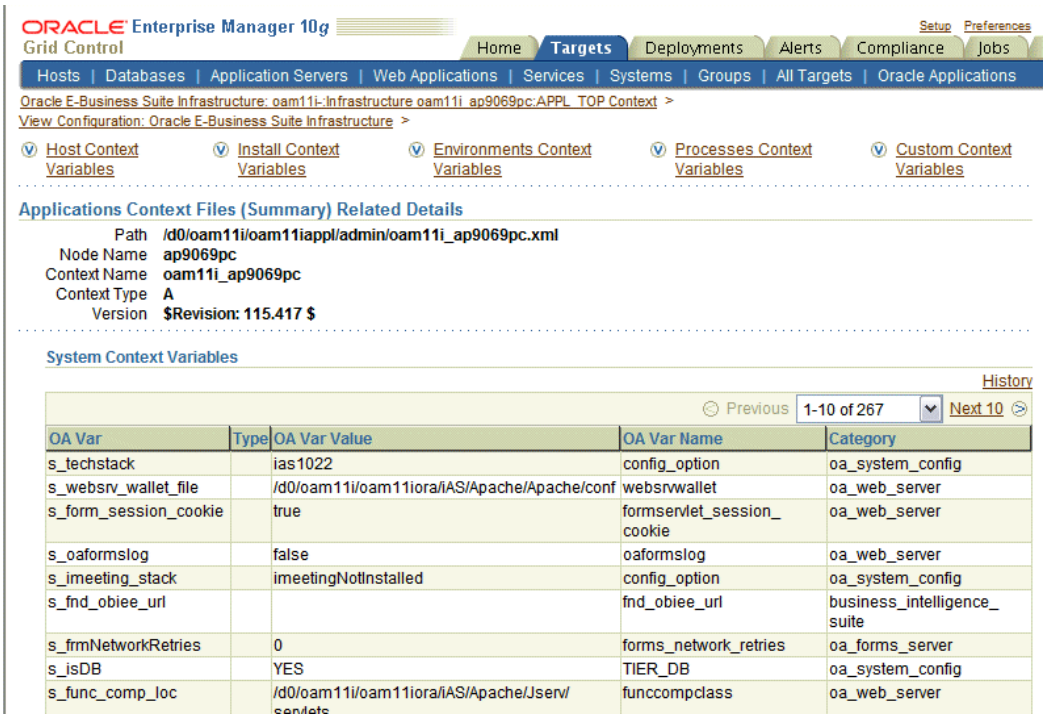
View Oracle Applications Context Files

The Oracle Applications context files can be accessed from the Administrative view.

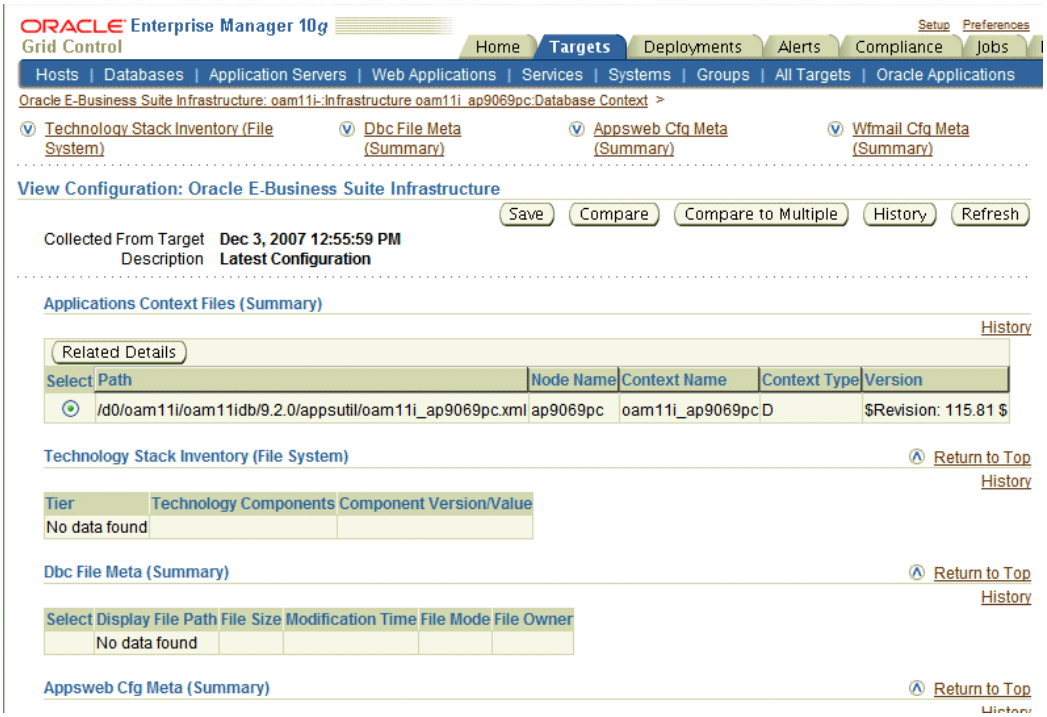
To view the context file for the application tier, click the icon next to "APPL-TOP Context" (under the Reports column).



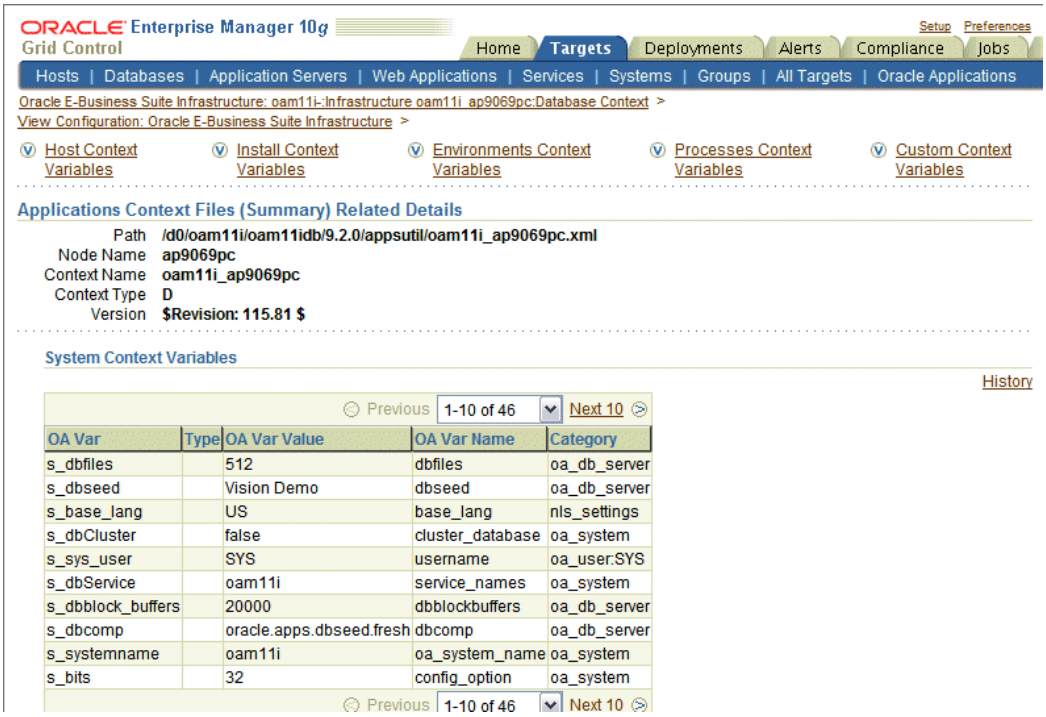
Next select the appropriate context file and click **Related Details** button to view the context file.



To view the context file for the database tier, within the administration view, click the icon next to "Database Context" (under the Reports column).



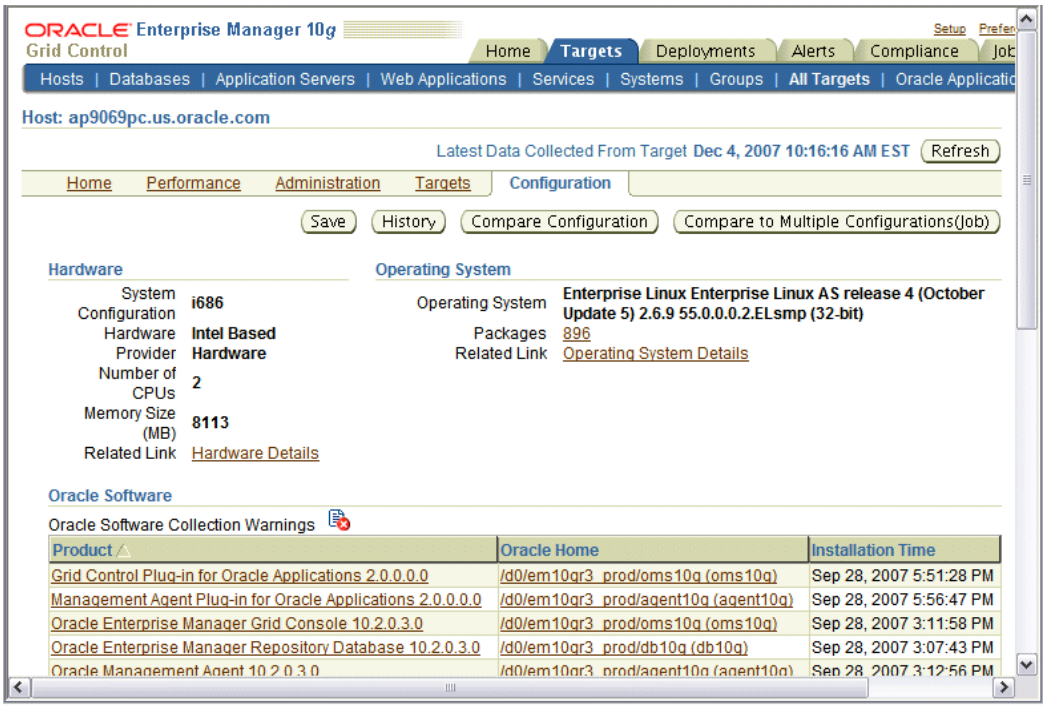
Next select the appropriate context file and click the **Related Details** button to view the context file.



View Oracle Application Host Configuration

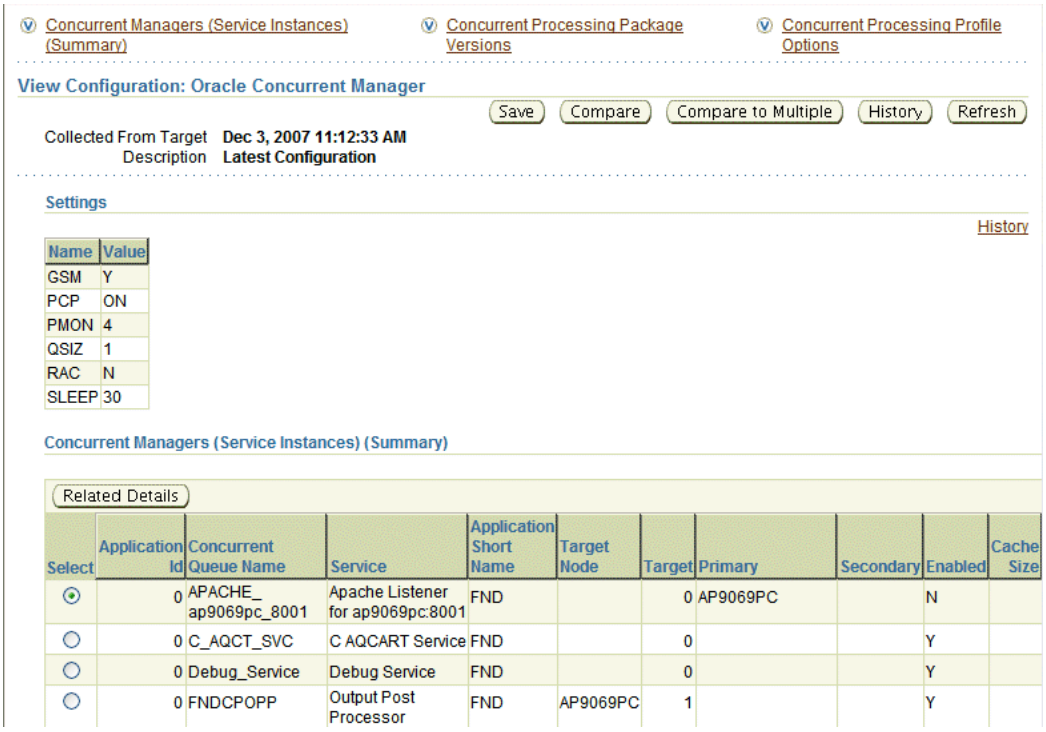
The Oracle Application host configuration details can be accessed from the Administrative view. Expand the "Hosts" heading to view a listing of individual hosts; then for each host, click on the icon under the Reports column to view its details.

You can view the configuration information of the hardware, operating system, Oracle software (such as Java Runtime Environment or the Oracle database product) and OS-registered software.



View Oracle Applications Concurrent Processing Configuration

The Oracle Application Concurrent processing configuration details can be accessed from the Administrative view.



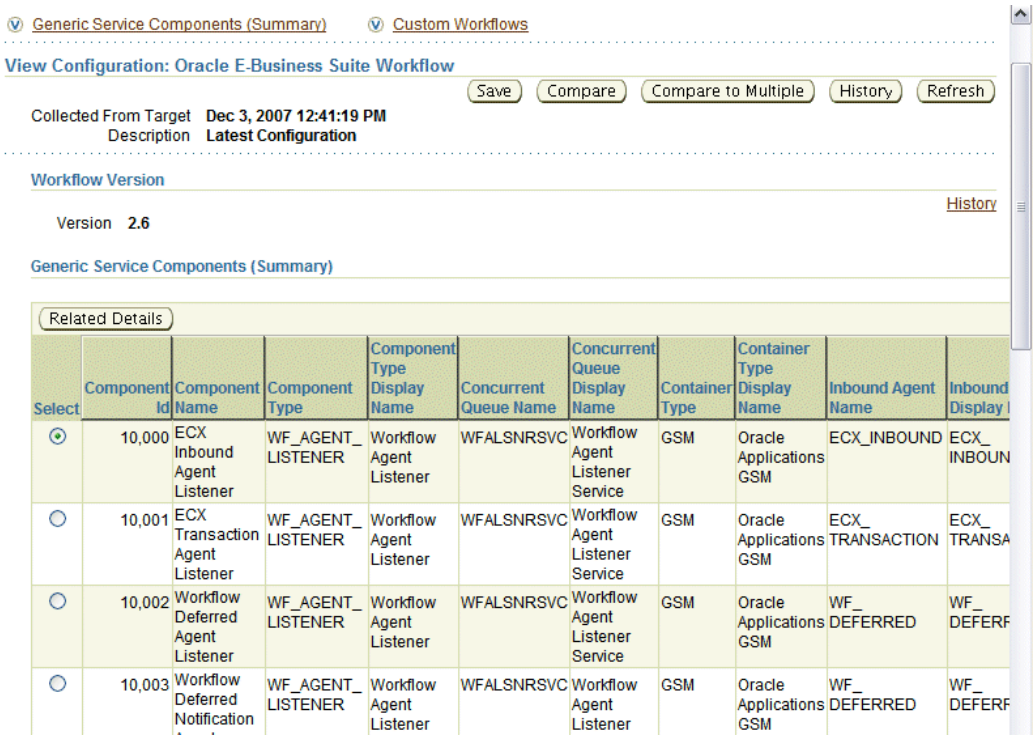
You can view the configuration information for the concurrent processing unit of the Oracle Application system. The configuration information that can be viewed is:

- Profile option settings for concurrent processing
- Concurrent managers and their configuration attributes

View Oracle Application Workflow Configuration

The configuration information for the workflow component of the Oracle E-Business Suite system can be viewed from the Grid Control.

The Oracle Application workflow configuration details can be accessed from the Administrative view.



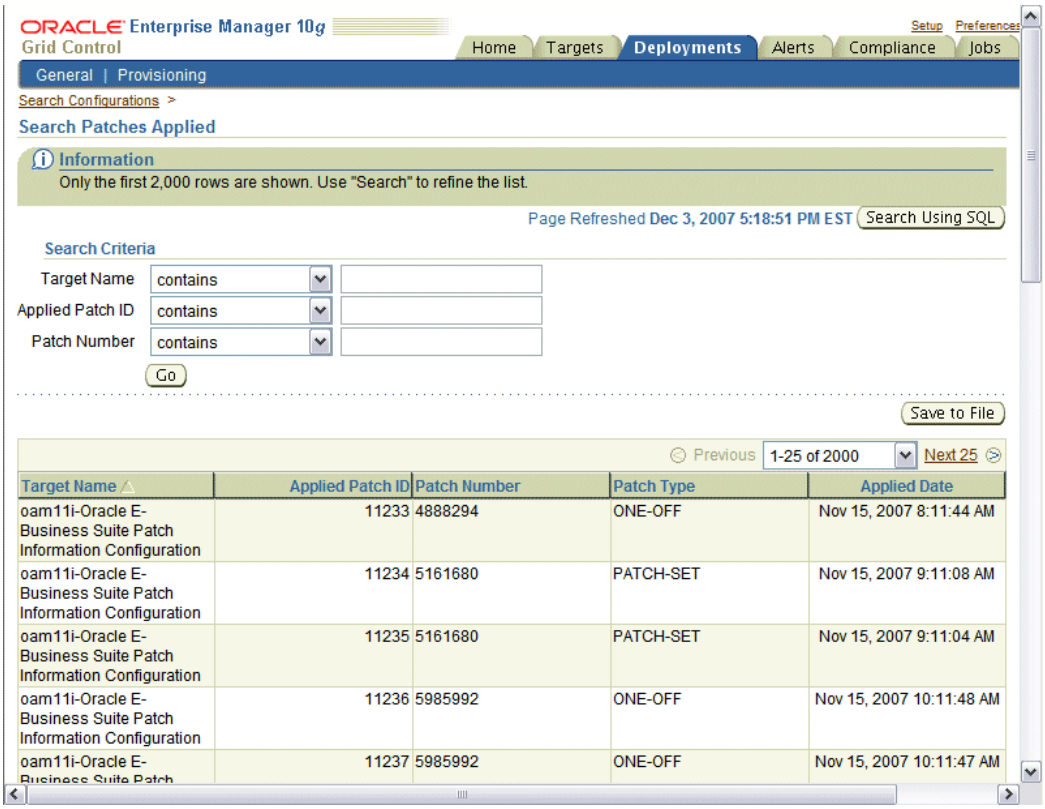
Configuration information is shown for the following components:

- XML Gateway (ECX) Inbound Agent Listener
- XML Gateway (ECX) Transaction Agent Listener
- Workflow Deferred Agent Listener
- Workflow Deferred Notification Agent Listener
- Workflow Inbound Notifications Agent Listener
- Workflow Notification Mailer

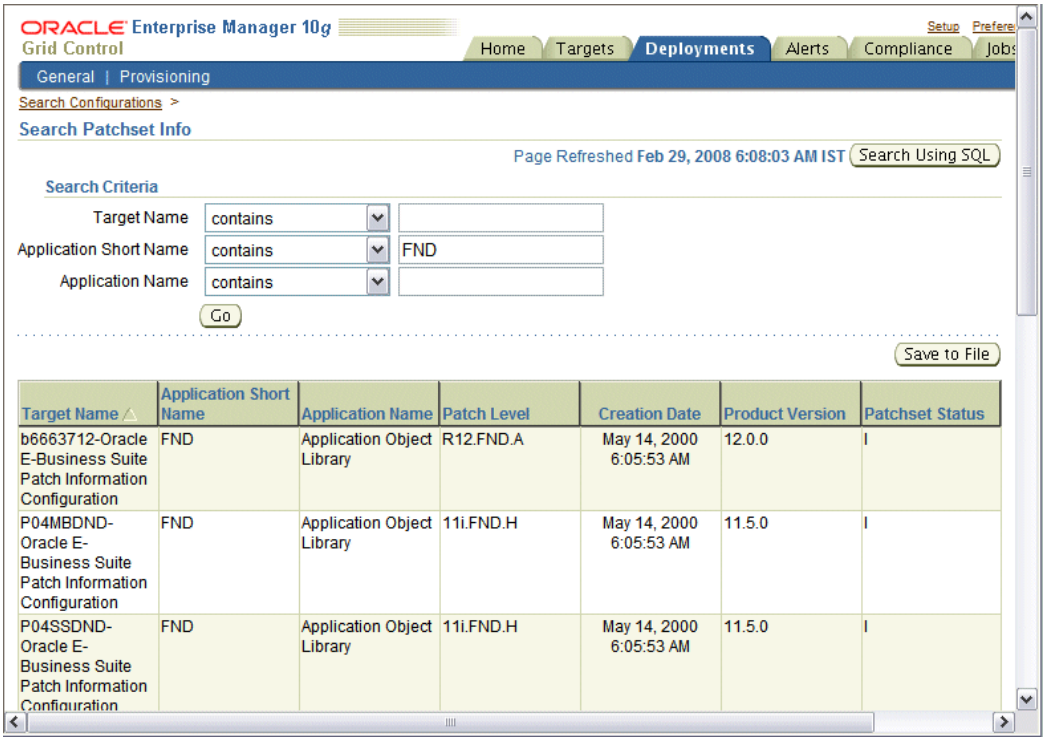
Search Patch / Patchset Information

You can search for Oracle Application patch/patchset information from the Administrative view.

You can search for **Patch information** by Target Name, Patch ID, or Patch number.



You can search for **Patchset information** by Target Name, Application Short Name, or Application Name.



Compare Information (One to One)

For all the configuration reports you have viewed in the earlier sections, you can perform a one-to-one comparison of the report with that of another instance or the same report that was saved previously.

1. Click the **Compare** button within the configuration report.

2. Choose the configuration report from another instance or from a "Saved Configurations" of the current system and click the **Compare** button.

3. The comparison results are shown.

Compare Information (One to Many)

You can also compare a configuration report to other reports for multiple instances in a single request.

1. To compare configuration with multiple other configurations, click the **Compare to Multiple** button within the configuration report.

   By default the latest configuration information for the system is used for comparison. However, you can choose information from another saved configuration (with an earlier timestamp).

2. Select all the Oracle E-Business Suite systems whose configuration information needs to be compared with the first (selected in the earlier step). Any number of Oracle E-Business Suite systems can be added for comparison. By default, their latest configuration information is utilized; however, a saved one also can be used.

3. You can schedule the comparison to begin immediately or on a future date (also an option to choose a convenient time zone is available). This comparison job can also be repeated and options for the same are available in this page.

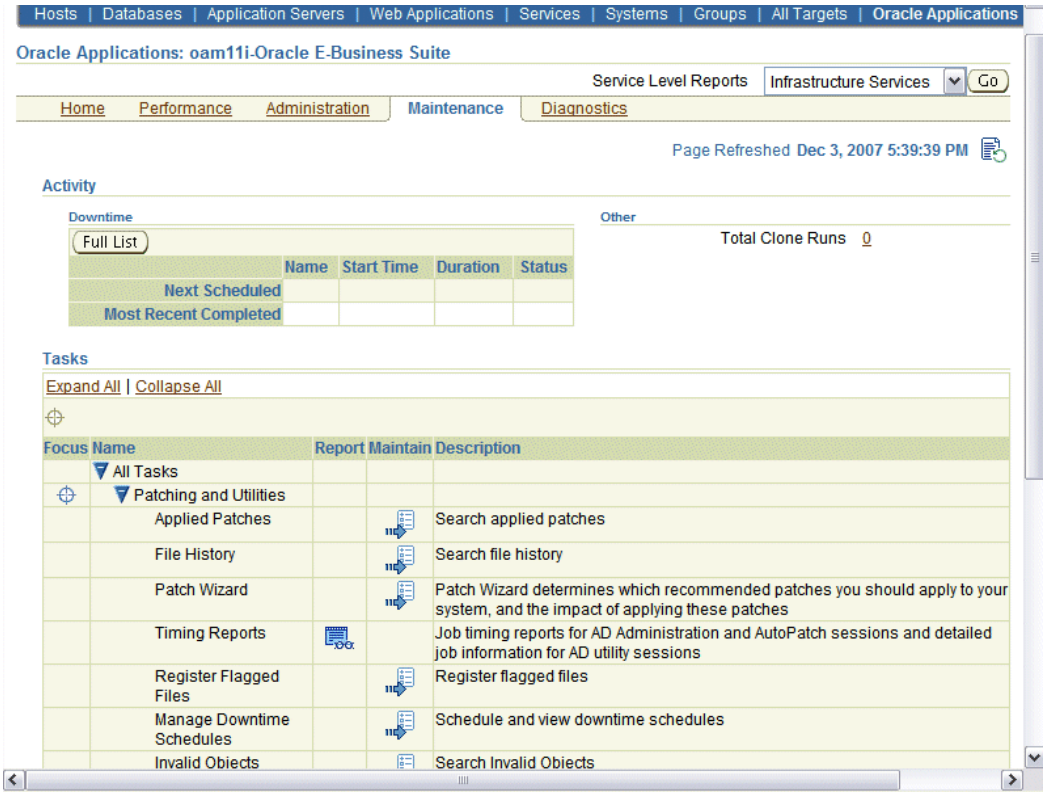
4. Complete the comparison job by reviewing the details that you had provided.

5. View the result summary of the comparison job done across multiple instances.

6. Click the **Different** link to view the actual differences between configurations.

The Oracle Applications System Maintenance Page

The Oracle Applications Maintenance page provides access to the Oracle Application maintenance activities particularly in the areas of patching and cloning.

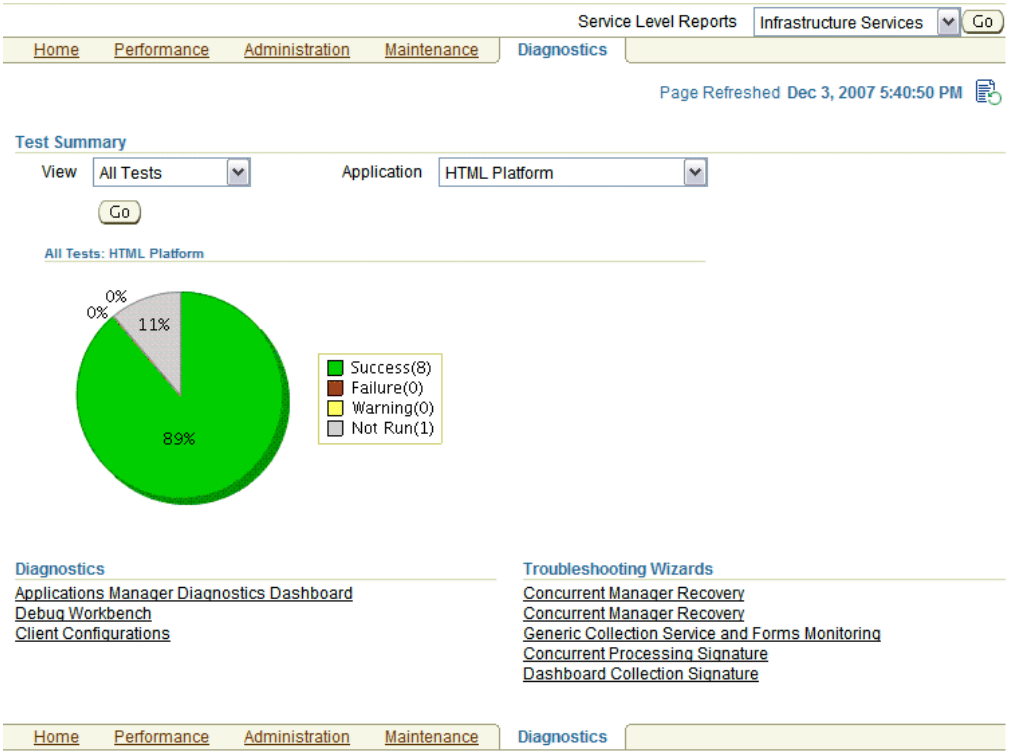


The Maintenance page is divided into the three sections:

- Activity - This section provides a summary of system down time that has been scheduled and that have recently been completed.
- Tasks - The Tasks table provides links to various patching and cloning tasks.
  - Patching tasks - these links direct you to the corresponding tasks page within Oracle Applications Manager.
  - Cloning tasks - Cloning can be done automatically from the Oracle Application Management Pack for Oracle E-Business Suite and is discussed later in this document.
- Links for other maintenance activities are also provided.

The Oracle Applications System Diagnostics Page

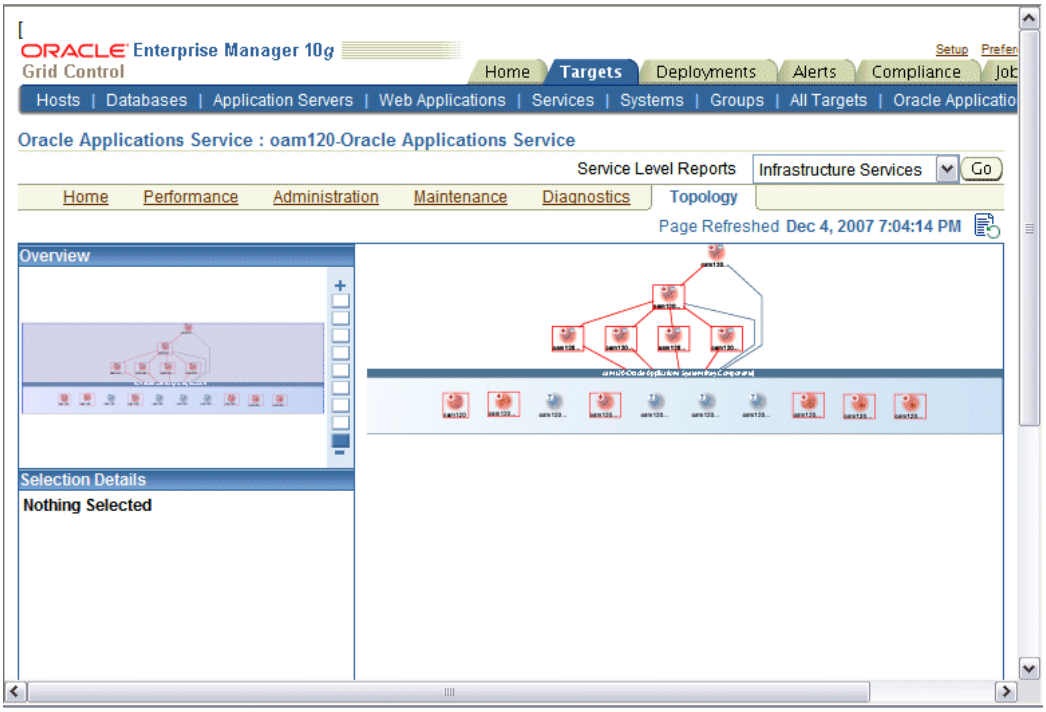
The Oracle Applications System Diagnostics Page provides summary results of the Diagnostic Test execution within the system.



Use the links provided to access Diagnostics tasks and Troubleshooting Wizards within Oracle Applications Manager.

The Oracle Applications System Topology Page

The Oracle Application System Topology page lists the dependencies between the infrastructure services, the key system components, and other services that define their availability. Upon service failure, the potential causes of failure, as identified by Root Cause Analysis, are highlighted in the topology view. In the Topology page, you can view dependent relationships between services and systems.



The Topology page shows the infrastructure service Topology view of the Oracle Application system. The icons represent each service and the lines connecting them show their dependencies. This view allows administrators to identify the root cause of a problem much more quickly compared to a tabular representation of the same information.

Links to related features are also on this page, including:

- All Metrics
- Metric Thresholds
- Target Properties
- Monitoring Configuration
- Alerts History
- Configured Components
- Configure Order Management

4

Cloning an Oracle E-Business Suite System

Cloning an Oracle E-Business Suite System

One of the key features of the Oracle Application Management Pack for Oracle E-Business Suite is the ability to clone an Oracle E-Business Suite system automatically.

The key highlights of the cloning process include:

- The Oracle Application Management Pack for Oracle E-Business Suite allows Oracle E-Business Suite systems to be cloned via the Grid Control provisioning framework.
- A step-by-step interview is available to guide you through the cloning process.
- Grid Control automates the creation of clone systems and executes any required application-specific actions.
- Additionally, you can modify the standard cloning process to include custom actions.

Here are some cloning terms that are used in this document.

Term	Meaning
Source	Applications system being cloned.
Target	Applications system being created as a copy of the source system.
Image	Packaged copy of the source system ready for deployment to a target.

Term	Meaning
Stage	Location to store the image created from the source system.
Scramble	Process to obfuscate or remove sensitive data.

Configuring the Software Library

Prior to starting your first clone operation, configure the Software Library by performing the following steps:

1. Login to Enterprise Manager Grid Control as SYSMAN.
2. Navigate to Deployments, then Provisioning and then to Administration.
3. Navigate to the Software Library Configuration section and click **Add.**
4. Provide a valid directory path where you want to store the raw data for the component(s).
5. Log in to the machine that hosts the OMS and do the following:
    1. Set the ORACLE HOME environment variable to the Oracle home directory of the OMS.
    2. Run the following command:

```
<ORACLE_HOME>/bin/PARDeploy -action deploy -parDir
<ORACLE_HOME>/sysman/prov/paf -force
```

Group Membership for Cloning

Successful cloning using a shared stage location requires that group membership be established such that the target system user(s) has group membership in the same group(s) used to create the stage or cloning image on the shared disk resource.

For example, say the source system has a user "applmgr1" with a primary group of "appldba1". There also exists a user "oracle1" with a primary group of "oradba1". In this case "applmgr1:appldba1" owns the $APPL_TOP and you have user "oracle1:oradba1" who owns the database file system on the source system.

On the source system, the EM Agent user is "agent1" with a primary group of "agentgrp1".

On the target system, you wish to have a user "applmgr2" with primary group of "applmgr2" owning the $APPL_TOP. You wish to have user "oracle2" with primary

group "oradba2" owns the target database file system.

On the target system EM agent is "agent2" with a primary group of "agentgrp2".

For cloning to be successful using a shared stage area in this above scenario, the user groups will require the following memberships:

Source:

- applmgr1:appldba1--> no additional groups required in this scenario.
- oracle1:oradba1--> no additional groups required in this scenario.
- agent1:agentgrp1--> must add secondary memberships in groups "appldba1" and "oradba1" (if not already present). See: OS User/Group Requirement, *Oracle Application Management Pack for Oracle E-Business Suite Installation Guide*.

Target:

- applmgr2:appldba2--> must add secondary membership in group appldba1 (if not already present).
- oracle2:oradba2-->must add secondary membership in group oradba1 (if not already present).
- agent2:agentgrp2--> must add secondary memberships in groups "appldba2" and "oradba2" (if not already present). See: OS User/Group Requirement, *Oracle Application Management Pack for Oracle E-Business Suite Installation Guide*.

In the above example, only the target requires group membership for inclusion of those groups that created the source area on the shared stage. Without these permissions, reading of files from the shared stage will fail.

Additional cloning limitations are detailed in Known Product Limitations, page B-1.

The Cloning Pages

Cloning can be accessed from the following pages:

- Oracle Application System Page - from the **Cloning** link under "Related Links"
- Oracle Applications System Administration Maintenance Page - from the icons corresponding to Cloning tasks in the "Maintain" column.

Cloning Types

Different types of clone jobs can be performed. Click on "Clone Status" in the Oracle Application Maintenance page and then on the "Cloning Procedures subtab to see these types.

- Clone Source to Target: In Source to Target clone job, the source system data is extracted and applied on to a target system. On completion of the clone process, the source and target systems will have the same data and patch set level. The benefit of this procedure is that it creates identical copy of production system.

- Clone Source to Image: The second category is Source to Image where the source system data is extracted and stored. The image extracted can be applied to any number of target systems. The benefit of this procedure is that it facilitates periodic backing up of the source system.

- Deploy Image to Target: The third category is Image to Target where an image is deployed on to a target system. The benefit of this procedure is that it allows for rapid deployment of standard pre-configured target systems.

  Note: Customizations of the seeded cloning procedures are not supported. However, existing cloning procedures may be copied and those copies then edited. See "Custom Clone Procedure" below.

Clone Status Page

The Clone Status page can be accessed from the Oracle Applications System page or from the Oracle Applications Maintenance page.

The Clone Status page provides an enterprise-wide view of the statuses of clone jobs. This page is divided into the following sections:

- In Progress: In this section you can view all the clone jobs that are currently in progress. Even though this section provides a summarized status, you can drill down to find the exact stage of progress of the clone job.

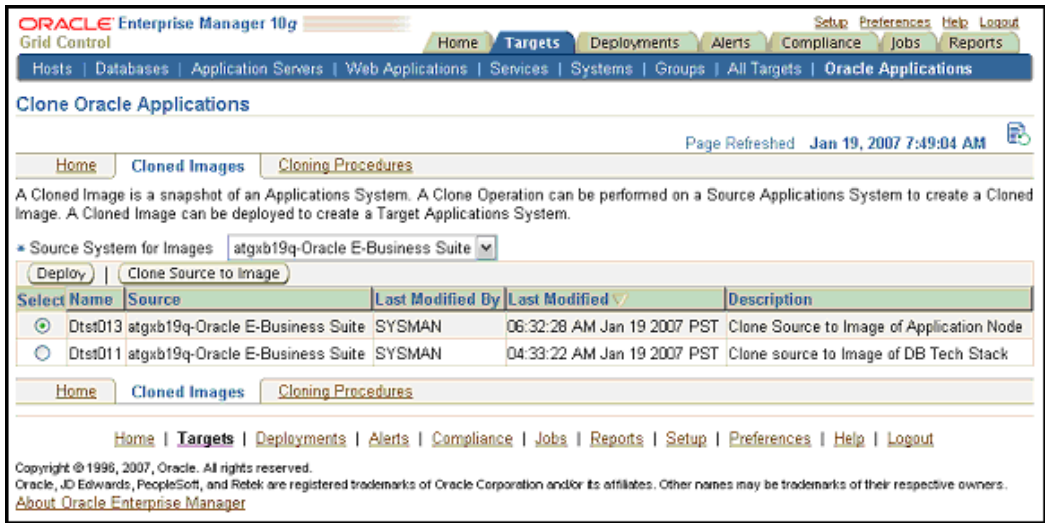
- Scheduled: Clone jobs scheduled for a later point in time can be viewed here. You can create a copy of a scheduled clone job here as well.

- Saved: Clone job interviews saved midway are listed in this section. You can come back later and complete the interview process in order to start the clone job. You can also create a copy of the clone job.

- Completed: Clone jobs that have been completed successfully or with errors are listed in this section. You can create a copy of a completed clone job to kick start a new clone.

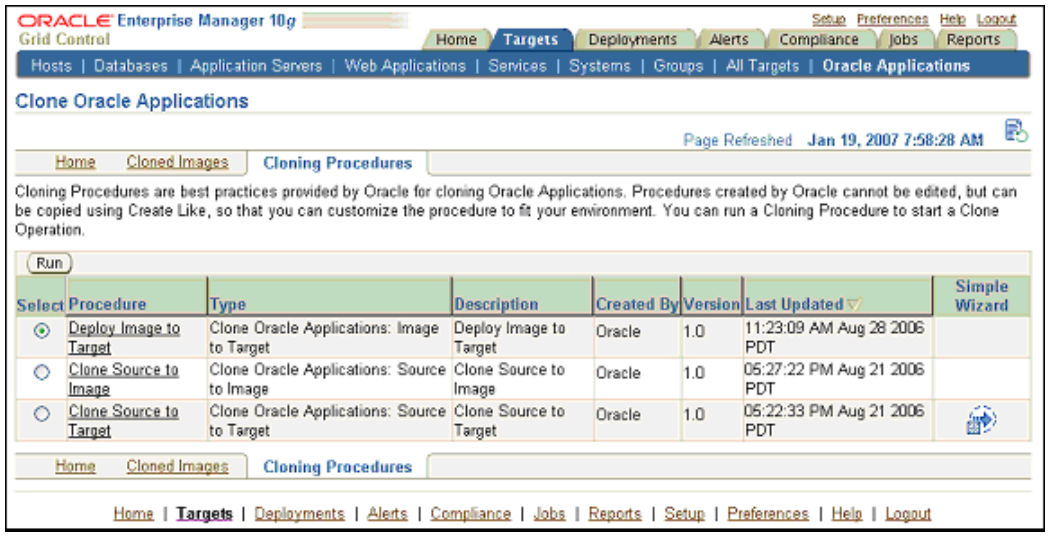
In all the above sections, you can click **Add** in the "Notes" column to add comments to a specific clone job.

Clone Image View



The Image View lists all the images that were created from a source system. From this page you can either deploy the images or create a new image for a source system.

Clone Procedure View



Clone Procedures are best practices provided by Oracle for cloning Oracle Applications. Clone Procedures provide a step-by-step interview process for initiating a clone job. For more information on concepts mentioned here, including configuring a Software Library and Target Systems, see the Enterprise Manager online help.

The Oracle Application Management Pack for Oracle E-Business Suite ships with the

following clone procedures:

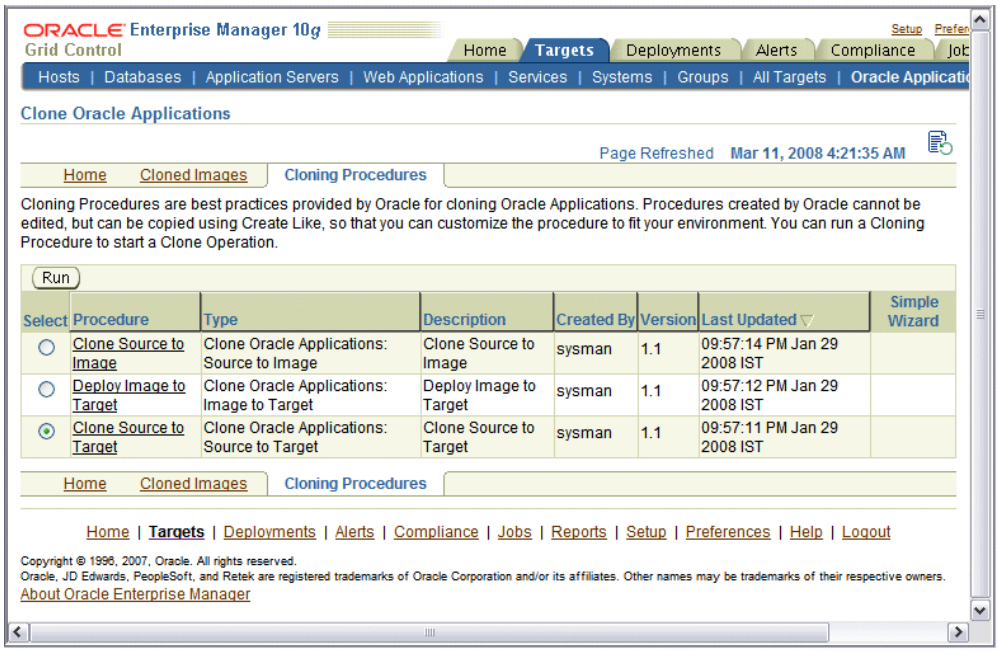
- Clone Source to Target
  - Advanced Clone: Advanced Clone is a detailed step-by-step interview process that allows users to configure each and every parameter in the clone process. Advanced Clone procedures are covered in a later section.
  - Simple Clone: Simple clone process skips the long steps provided in Advanced Clone by setting some defaults for some values. This allows you to create a clone job quickly. The Simple Clone option is available only for Source to Target procedure. Simple Clone procedures are covered in a later section.
- Clone Source to Image
- Deploy Image to Target

Important: You cannot delete or modify the default procedures. However, you can create a custom copy of the default procedure.

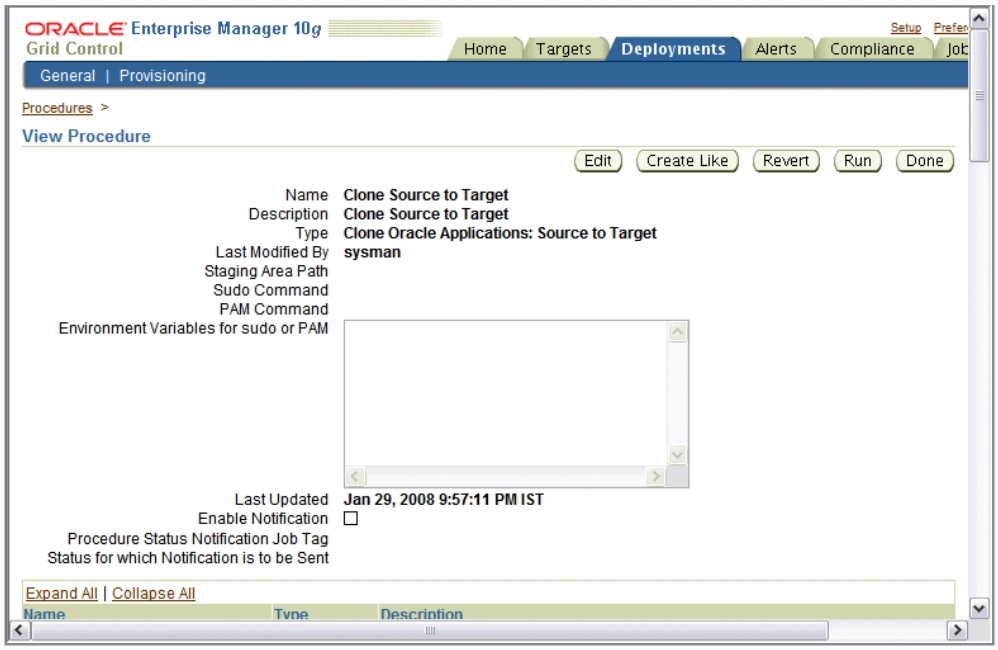
Custom Clone Procedure

To create a custom clone procedure, follow these steps:

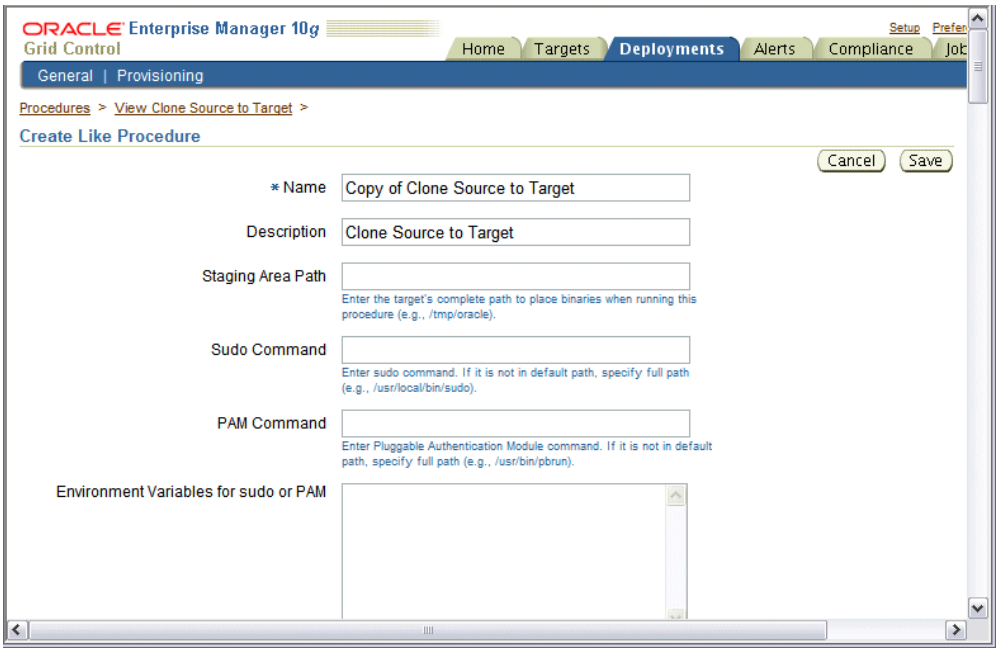
1. Select a default procedure from the Clone Procedure view by clicking on the procedure name.



2. Click on the **Create Like** button.



3. Enter a unique name and fill in the relevant details. Click **Save** to create a new custom clone job.



The details that need to be entered are:

- Name - Enter a unique name to identify this custom clone job. (Required)
- Description - Enter a short description about the clone job.
- Staging Area Path - Enter the path where the binaries would be placed for running the procedure.
- Sudo Command - Enter the sudo command. (For UNIX platforms only. See the Enterprise Manager online help or the UNIX sudo man page for more information.)
- PAM Command - Enter the PAM command. (For UNIX platforms only. See the Enterprise Manager online help for more information.)
- Environment Variables for sudo or PAM
- Enable Notification - Check this box if you want to be notified about the status of the clone job.
- Procedure Status Notification Job Tag - Enter a job tag that will be pre-pended to the notification job name that would be created for this clone job.
- Status for which Notification is to be sent - Choose the status for which you need to be notified.

The table at the bottom of the page lists the possible tasks to be performed by clone job

in chronological order. You can:

- Enable a step
- Disable a step
- Insert a custom step
- Delete a step
- Edit a step

For each step you can specify the Run Privilege and the Error Handling Mode. Click **Save** and the custom clone procedure is created. You can then access this new custom clone job from the Clone Procedure view.

Clone Source to Target

In a Source to Target clone job, the source system data is extracted and applied on to a target system. Upon completion of the clone process, the source and target systems will have the same data and patchset level. The benefit of this procedure is that it creates an identical copy of production system.

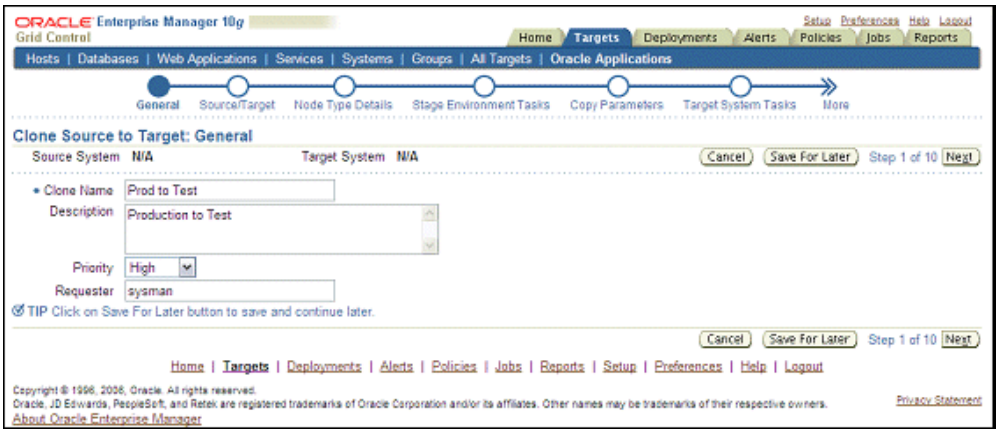
Advanced Clone

The advanced clone can be initiated from the following pages:

- Clone Status Page, by selecting "Clone Source to Target" from the "Start a Clone" list.
- Clone Procedure View, by selecting "Clone Source to Target" line in the Procedure view.

To perform an advanced clone procedure, follow these steps:

1. Enter general clone information.



Enter the name of the clone run and a brief description, along with the job priority. Only the Clone Name is required.

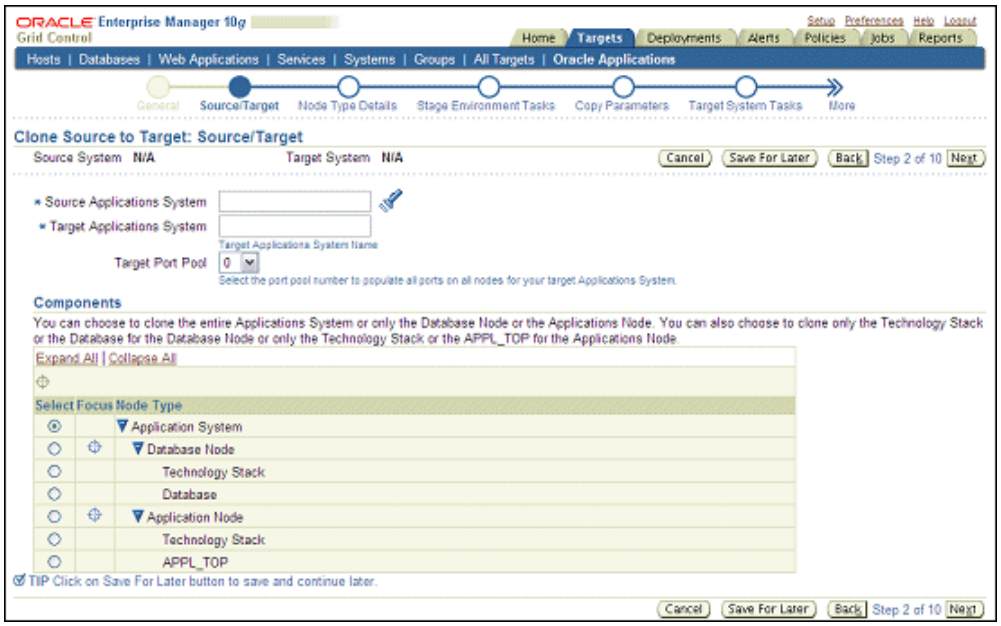
2. Select source and target systems.

   Select a source system, enter the target system details, and choose the target port pool. Note that the source database must be running at this point. You have a choice to clone either the entire system, the database tier, or the application tier.

   - Database Node - User can choose this option to clone the complete Database Node, that is, Database and Database Technology Stack.
     - Technology Stack: User can choose this option to clone Database Technology Stack only.
     - Database: User can choose this option to clone the Database (data tops) only. The Database component, in particular, has a dependency on the Database Technology Stack, so it should not be applied without an existing Database Technology Stack on the target.
   - Application Node - User can choose this option to clone the complete Application Node, that is, APPL_TOP and Application Technology Stack.
     - Technology Stack: User can choose this option to clone the Application Technology Stack only.
     - APPL_TOP: User can choose this option to clone the APPL_TOP (appl tops) only. Like the Database clone above, cloning only the APPL_TOP requires that an Applications Technology Stack already be in place on the target.

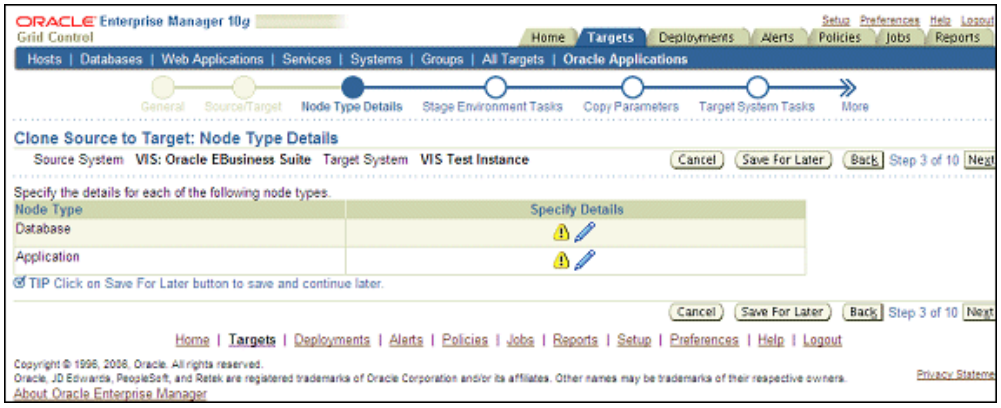
   For cloning the Application Node only (or Application Technology Stack or $APPL_TOP), the User has to make sure that whatever Database Node is to be referenced as the database to be used for the new $APPL_TOP/Application Node, it must be specified during the Clone Automation UI interview process for the

Application Node (or Application Technology Stack or APPL_TOP), and must be up and running at the time of the clone flow submission.



3. Specify node type details.

   During this step you will specify the details for the target database and application nodes.



1. Specify database node details.

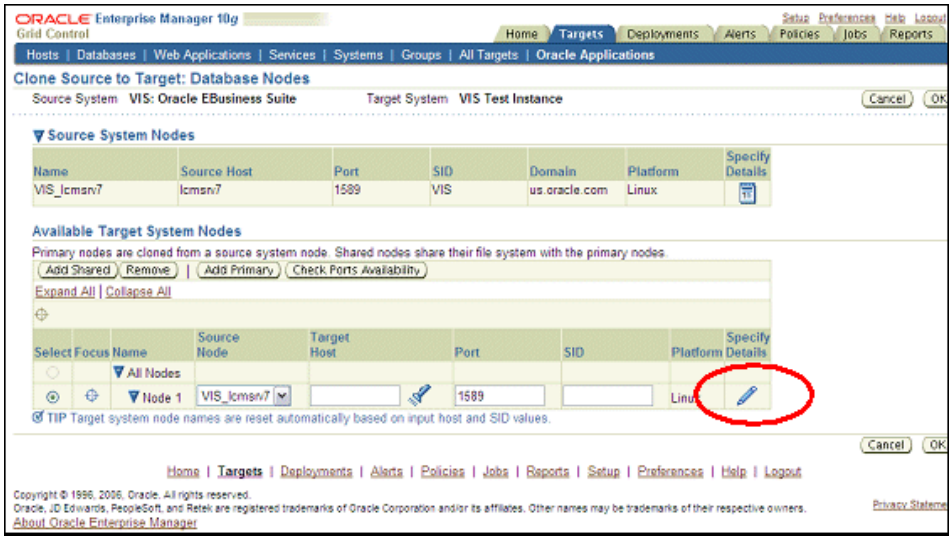
   Specify the following information for the target database.

   - Target host name
   - Port

- SID

You have the option to specify further details as well.

Also in this page you have the option to add nodes in addition to the primary one.



Specify target database node details such as the mount points for the data files.

Note that in the case where the source application system's database files reside in multiple mount points/directories, it is important that they be mapped to the clone target as well. You can refer to the Database Context file variables " s_dbhome" (1-4) in order to synchronize the target database file mount point configuration with the source.

For example, consider this structure in the Database context file:

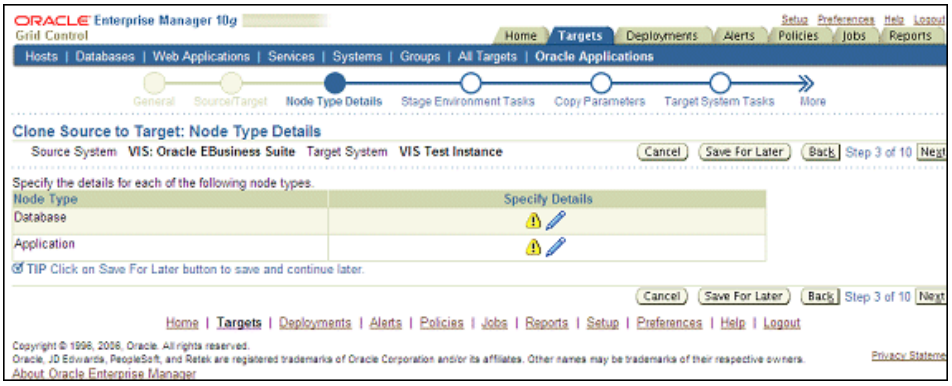
```
<db_sysfiles
oa_var="s_dbhome1">/d10/oracle/VIS/db/apps_st/data_sys</db_sysfil
es>
         <db_logfiles
oa_var="s_dbhome2">/d10/oracle/VIS/db/apps_st/data_log</db_logfil
es>
         <db_datfiles
oa_var="s_dbhome3">/d10/oracle/VIS/db/apps_st/data_dat</db_datfil
es>
         <db_ndxfiles
oa_var="s_dbhome4">/d10/oracle/VIS/db/apps_st/data_ndx</db_ndxfil
es>
```

The Database Files Mount Point(s) inputs would be as follows:

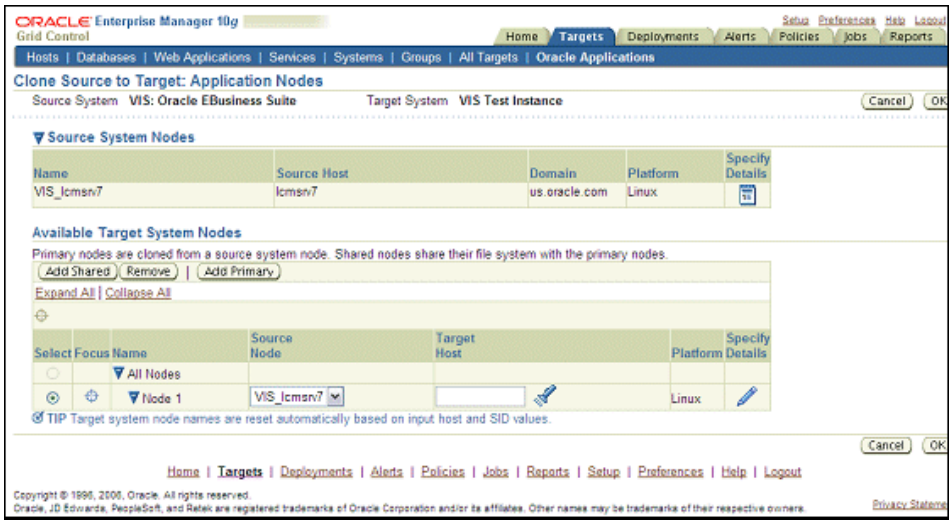
APPL_TOP Mount Point(s)

Mount Point	Value
APPL_TOP mount point	/d10/oracle/VIS/apps/apps_st/data_sys
Auxiliary mount point 2	/d10/oracle/VIS/apps/apps_st/data_log
Auxiliary mount point 3	/d10/oracle/VIS/apps/apps_st/data_dat
Auxiliary mount point 4	/d10/oracle/VIS/apps/apps_st/data_ndx

2. Specify application node details.

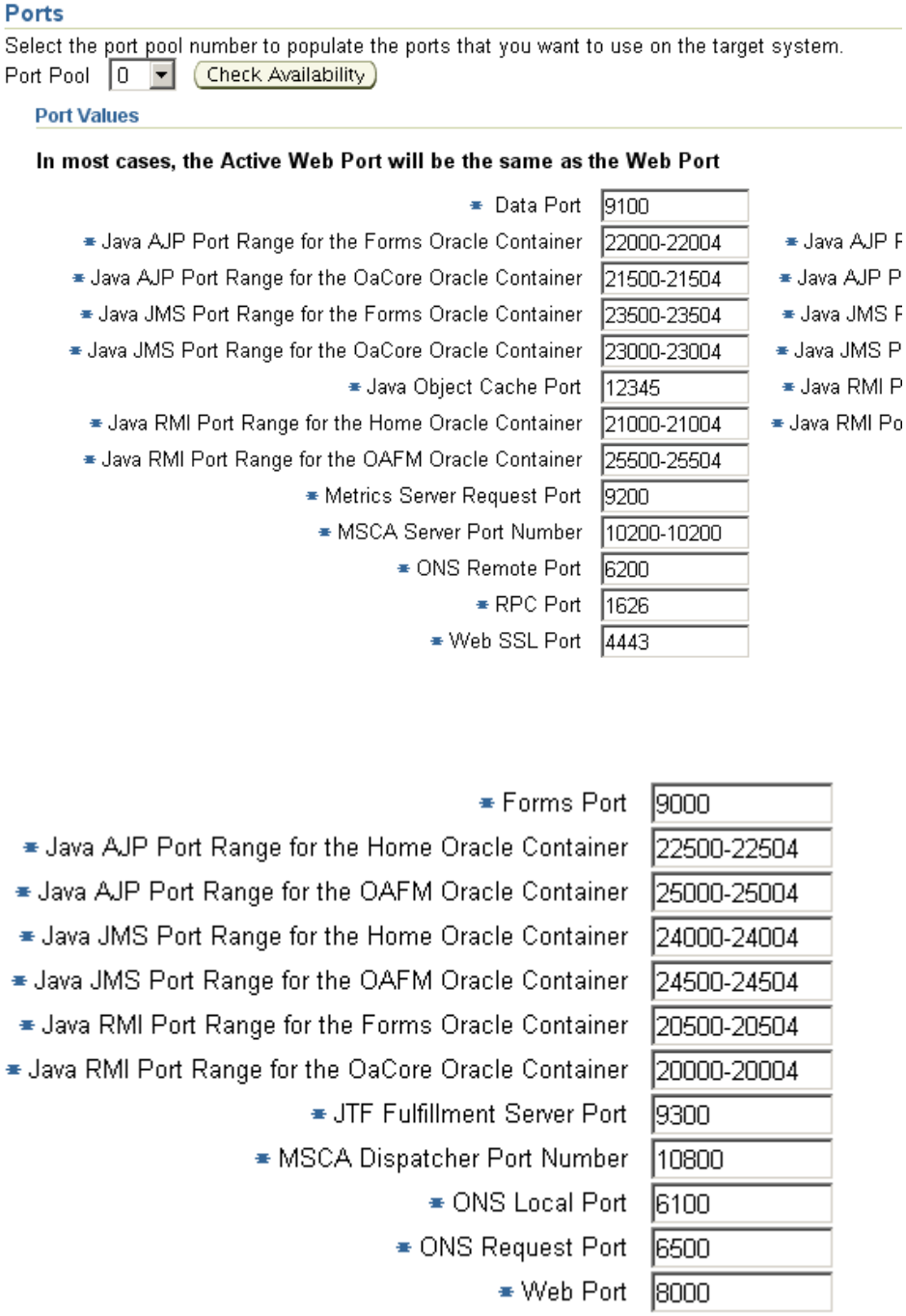


Specify the target system node details for the application node. In this page you have options to add nodes in addition to the primary one.



Click the icon corresponding to each application tier node to enter the details. You can specify target application node details such as the COMMON_TOP locations and other details.

Scroll down the page to enter information in the Ports section.



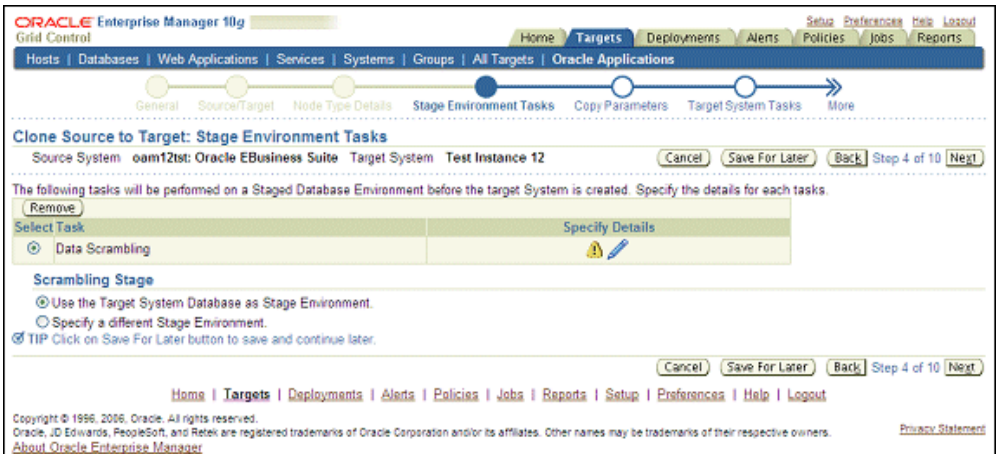
Note: Clarification: The Data Port listed in the Port Values section is not the same as the database listener port which was

specified earlier in the Database Node Details. Instead, this "Data Port" refers to the Forms Metrics Server Data Port. This ambiguity is resolved in Oracle E-Business Suite Release 12.0.4.

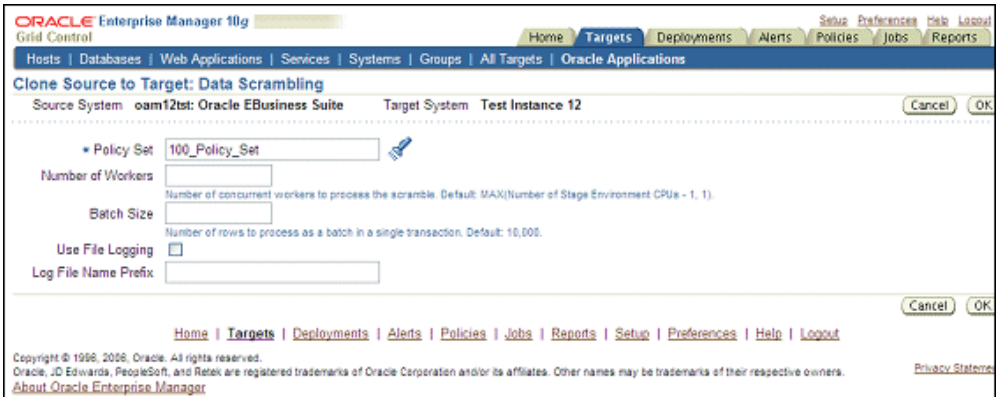
4. Configure data scrambling (Optional).

   Configuring data scrambling is an optional step. In this step you can specify the Data Scrambling options required to remove sensitive data from the source system. Also, you can specify where the interim stage environment should be for scrambling. If Data Scrambling is not enabled, this step will be skipped.

   See Data Scrambling, page 6-2 for more information.

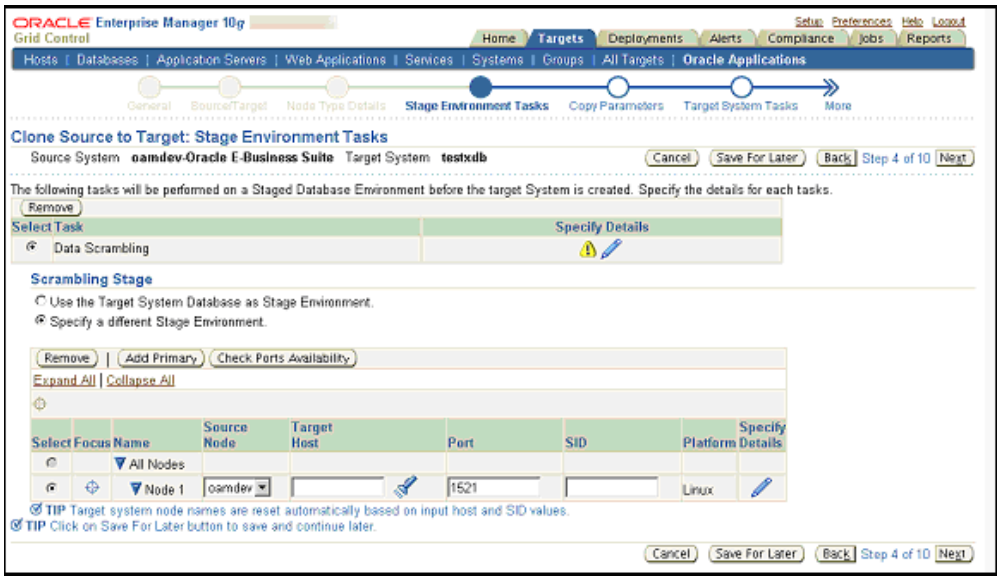


   Click the "Specify Details" icon corresponding to Data Scrambling to select the Policy Set and other details. Click **OK** to save the details and go to the previous page.



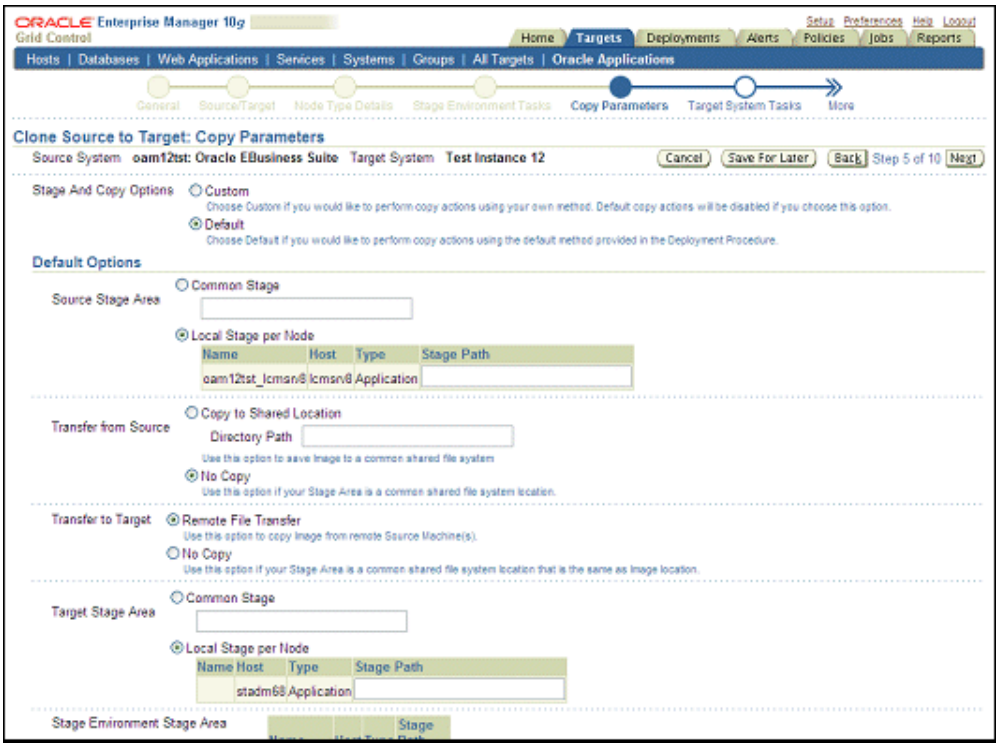
   Under "Scrambling Stage", select the "Use the Target System Database as Stage Environment" option if you want the target system database to be used as the interim database where scrambling should be performed. Additionally, if you

would like to specify a separate stage environment you can choose the "Specify a Different Stage Environment" option. This option will create a separate interim database where scrambling is performed. The interim database is then cloned to create the target system database.



5. Specify clone staging options.

   Cloning using the Oracle Application Management Pack for Oracle E-Business Suite requires that the source environment be prepared for the cloning process into a stage area. This step allows you to specify the details for the stage, such as its location and method of transfer to the target system.



The following are some definitions for terms used.

- Source Stage Area or Target Stage Area
  - Common Stage: Both Database and Application Nodes are staged in the specified location.
  - Local Stage per Node: Database and Application Nodes each have separate staging areas.
- Transfer from Source
  - Copy to Shared Location: Allows you to copy the stage area at the location specified in "Source Stage Area" to a shared directory location, specified in " Directory Path" (e.g. an NFS mounted location visible across both source and target nodes). Using this option allows the process of creating the stage itself, which is file I/O intensive due to heavy use of zip compression, to occur on a local file system for better performance. Once the I/O intensive operations are complete, the stage area is then copied to the shared file system.
  - No Copy: Must be selected if the stage location is not shared.
- Transfer to Target

- Remote File Transfer: Must be specified when the stage area is not shared between source and destination systems.

- No Copy: This option is used when the staging area is either shared or when the source and target Oracle E-Business Suite systems are on the same machine.

Some example scenarios are given below. For each scenario specified, the options selected are in this order: Source Stage Area > Transfer from Source > Transfer to Target > Target Stage Area.

1. User chooses to create a local stage and then copy it to a shared location which is an NFS mounted location visible across both source and target nodes.

   Common Stage → Copy to Shared Location → No Copy → Common Stage

   OR

   Local Stage per Node → Copy to Shared Location → No Copy → Local Stage per Node

   For best use of this option, User can set target stage location, specified in " Common stage"or "Local Stage per Node", to the location same as that of "Copy to Shared Location", which is an NFS-mounted location visible across both source and target nodes.

2. User chooses to create the stage at an NFS mounted location, which is visible across both source and target nodes.

   Common Stage → No Copy → No Copy → Common Stage

   OR

   Local Stage per Node → No Copy → No Copy → Local Stage per Node

   Stage location must be an NFS mounted location, which is visible across both source and target nodes, for both "Common Stage" and "Local Stage per Node" options.

3. User chooses to have the stage created in a location, which is not visible to target nodes. This stage is then transferred over the network via secure agent communications to the target node.

   Common Stage → No Copy → Remote File Transfer → Common Stage

   OR

   Local Stage per Node → No Copy → Remote File Transfer → Local Stage per Node

4. User chooses to save an image Copy to a shared location when having selected the "Clone Source to Target" cloning flow. (Just to store an image backup on the

shared location.)

Common Stage → Copy to Shared Location → Remote File Transfer → Common Stage

OR

Local Stage per Node → Copy to Shared Location → Remote File Transfer → Local Stage per Node

> **Note:** This flow will not yield best performance because of the extra copy operation.

6. Specify final system tasks.

   Choose the finishing tasks that need to be performed on the target system after the image has been deployed. The selected Product Setup programs are run automatically as part of the clone operation. The Data Purge programs can be scheduled at the end of the clone operation. Similarly, the diagnostic tests for the selected products under Check List can be executed at the end of the clone operation. (Refer to Monitoring a Clone Operation/Manual Finishing Tasks, page 4-40 for the detailed steps).

7. Specify source and target authentication information.

   Specify the credentials for the clone process to access the source system and to set the credentials for the target system.

   > **Note:** The APPS Schema Password on the Target System must be set the same as the Source System. There is currently no way of changing the APPS schema password on the target during the clone procedure.

8. Enter Custom Properties (Optional).

   If you have any custom jobs, then you can enter the custom parameters for these jobs.

9. Schedule the clone job.

   The clone job can either be run immediately after the final review and submission or it may be deferred to some later time.

10. Review the clone job details.

    Review the clone job details and ensure the information is correct. Submit the clone job by clicking **Finish**.

Simple Cloning

Simple cloning (also referred to as simple clone) is a three-step process (unlike the ten-step process of advanced cloning) to create an exact clone of the source system. Simple clone is very beneficial while creating mirror copies of the source system for high availability.

The simple clone can be initiated from:

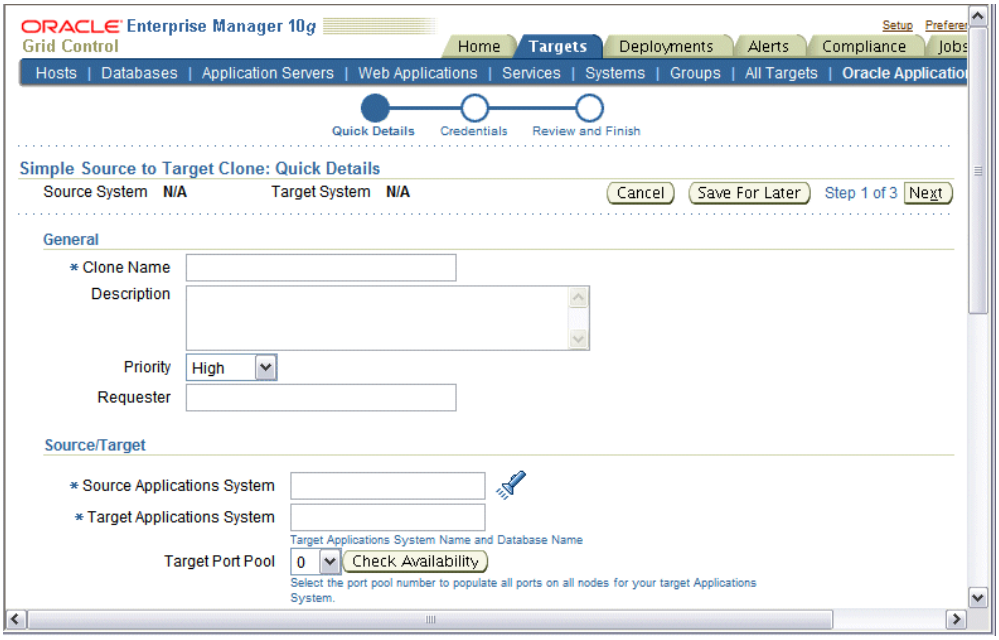
- Clone Status Page - By selecting "Simple Clone Source to Target" from the "Start a Clone" list.
- Clone Procedure View - By clicking the icon under the Simple Wizard column corresponding to "Clone Source to Target" row in the Procedure view.

The following are required in order to perform a Simple Source to Target clone operation.

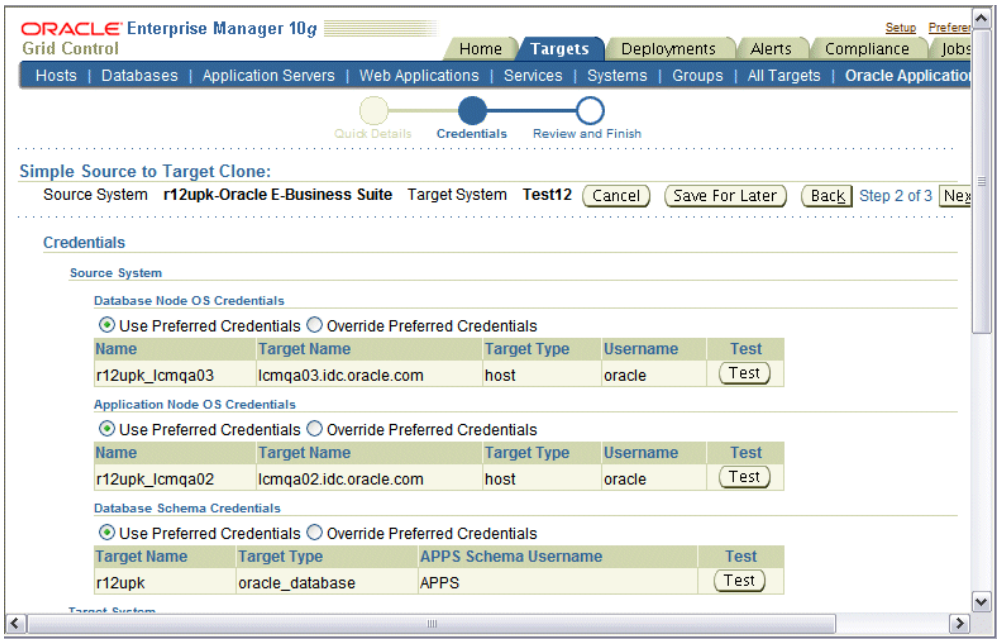
- A shared common stage directory that is accessible from the source and target system machines.
- For Release 11*i*, the source system should have at least one Applications node that supports all of Admin, Concurrent Processing, Forms and Web.
- OS username and group for the Database and Applications node must be the same on target system as on the source system.

Follow these steps to perform the Simple Source to Target clone operation

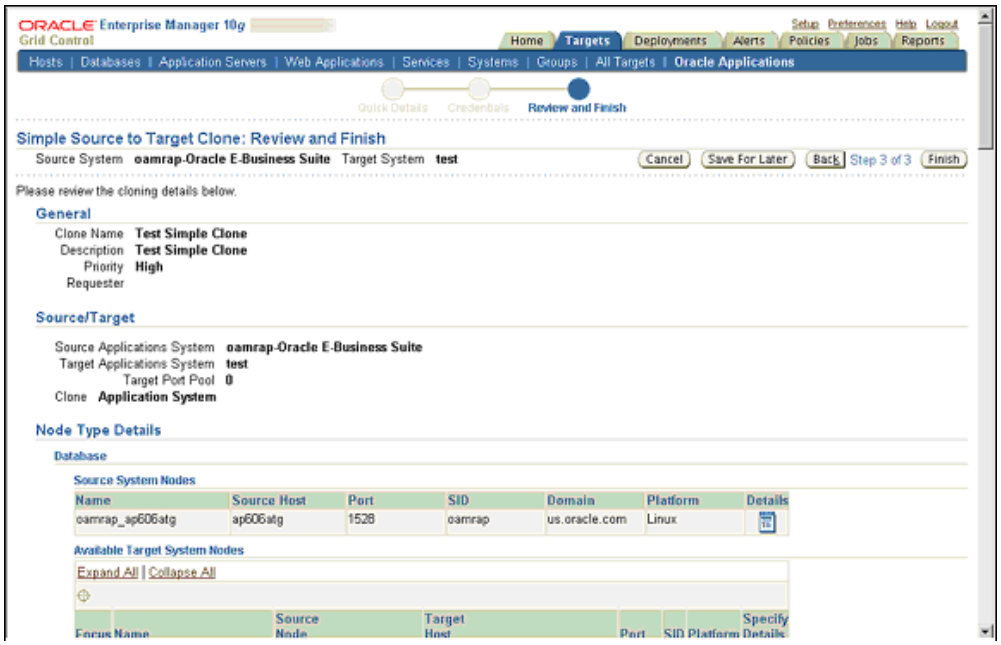
1. Specify these details:
    - Clone name and details.
    - Source and target details.
    - Node (database and application) information.
    - Stage directory (this must be a shared directory accessible from the source and target system machines).
    - Schedule.



2. Specify the credentials needed for clone job to access the source system. Also to be specified are the target system credentials. A test button is available for testing these credentials.



3. Review the details entered before submitting the clone job.



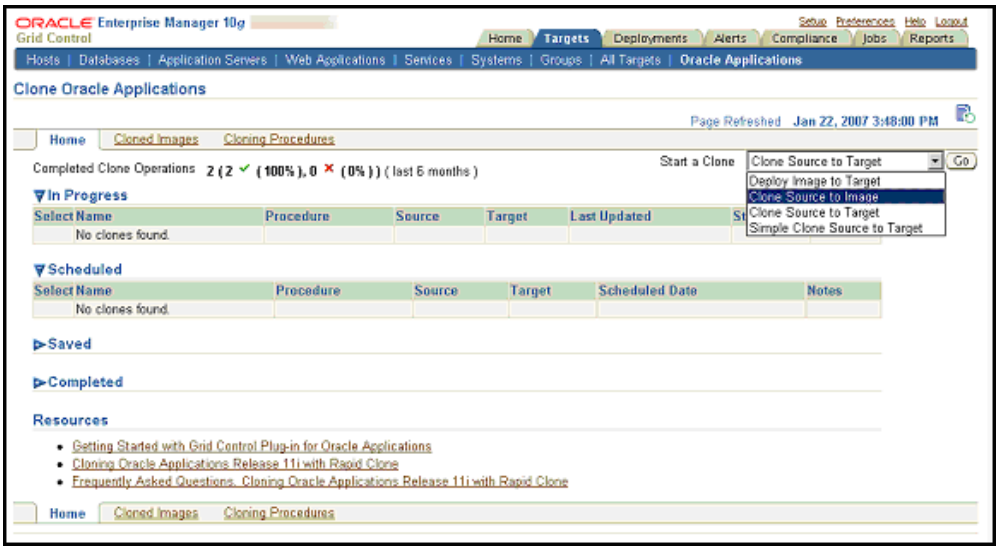
Clone Source to Image

Clone Source to Image can be used to create an image or backup of a source Oracle Applications system. The image is registered with Enterprise Manager and can be later used to create a target system using the Deploy Image to Target flow (See: Deploy

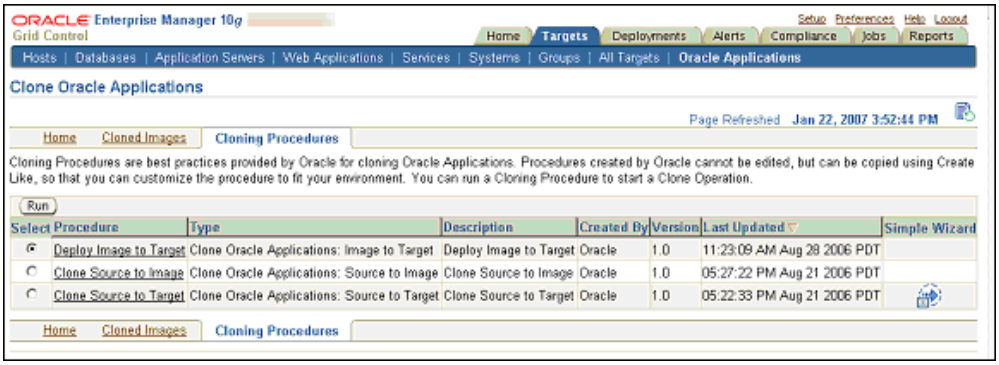
Image to Target, page 4-33).

A Clone Source to Image operation can be invoked from the following places:

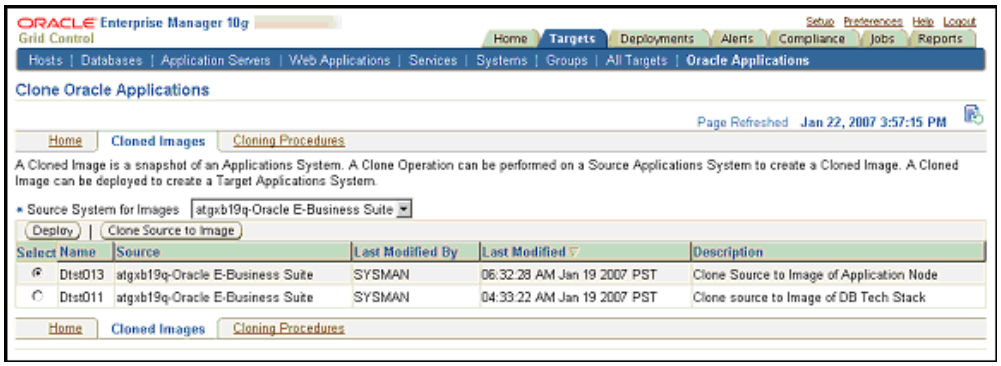
- From the "Clone Oracle Applications" Home page, select "Clone Source to Image" from the "Start a Clone" list.



- From the "Cloning Procedures" view, select "Clone Source to Image" and click on the **Run** button.

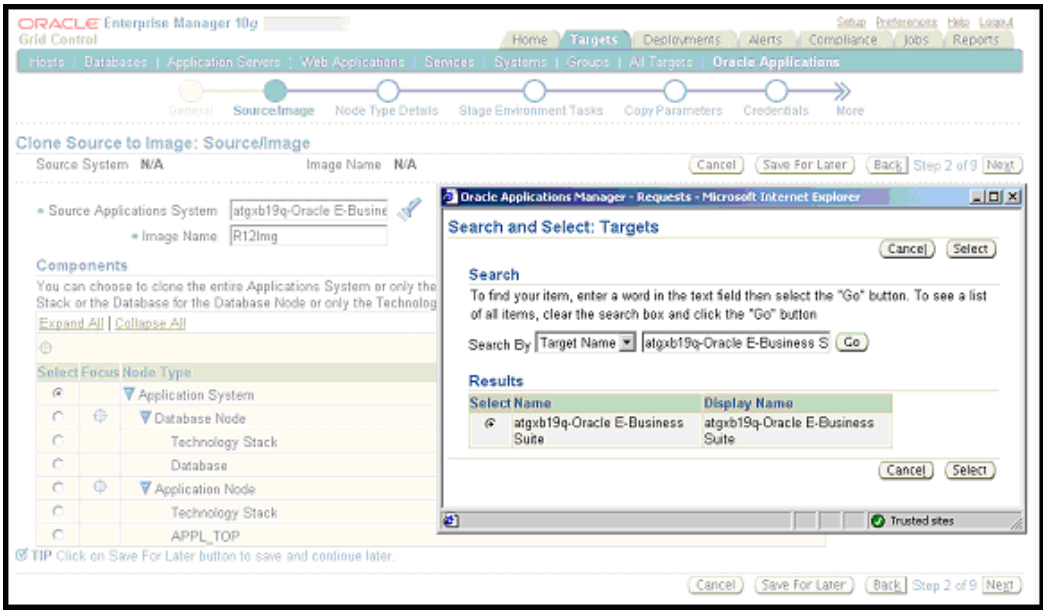


- From the "Cloned Image" view by clicking on the **Clone Source to Image** button.

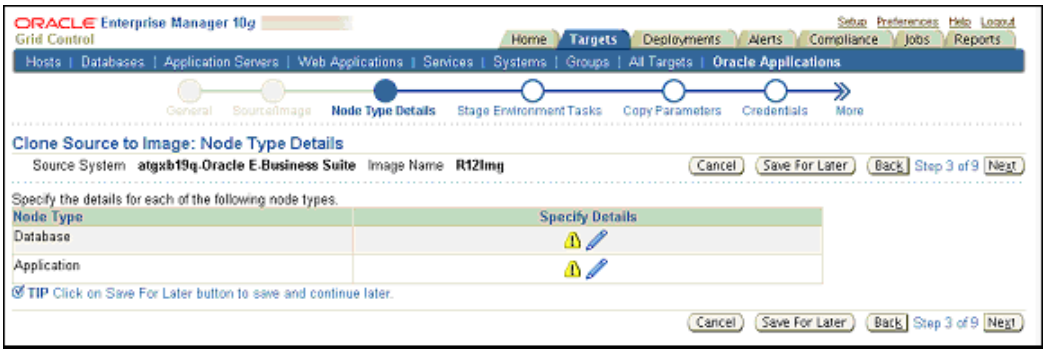


After launching the wizard, specify the clone operation details on the "General" step.

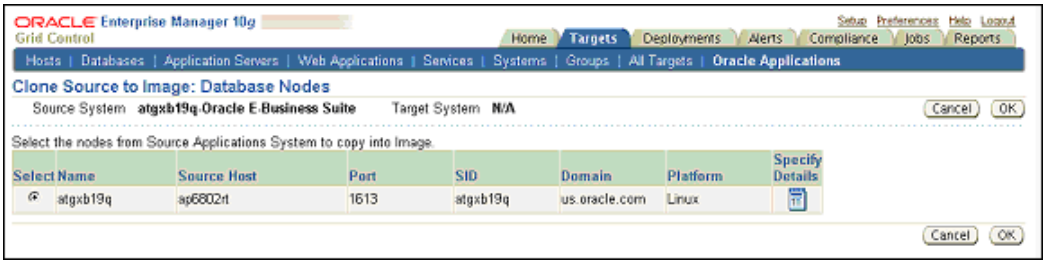
On the "Source/Image" step, select the source Oracle Applications system. Also specify a name for the image and select the component that you would like to be included in the image.



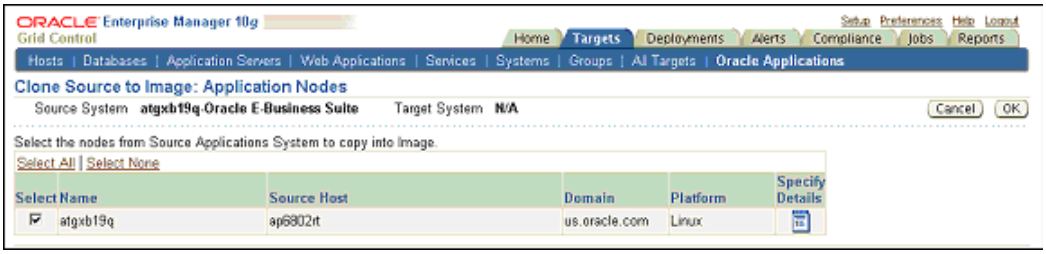
From the "Node Type Details" step, select the nodes to be included in the image for Database and Application node types.



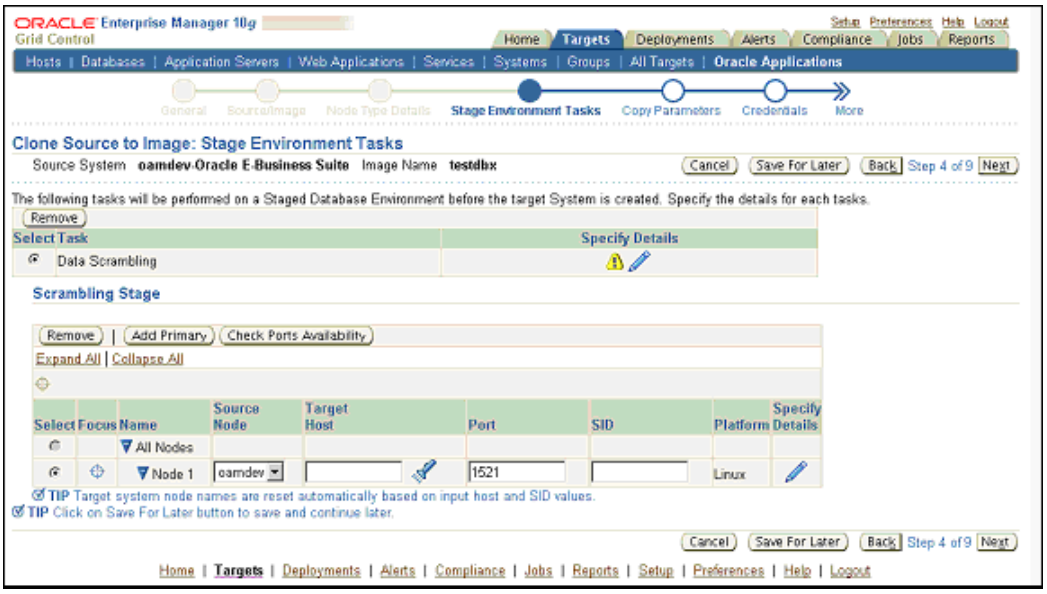
For the Database node type, select the database node to be included in the image.



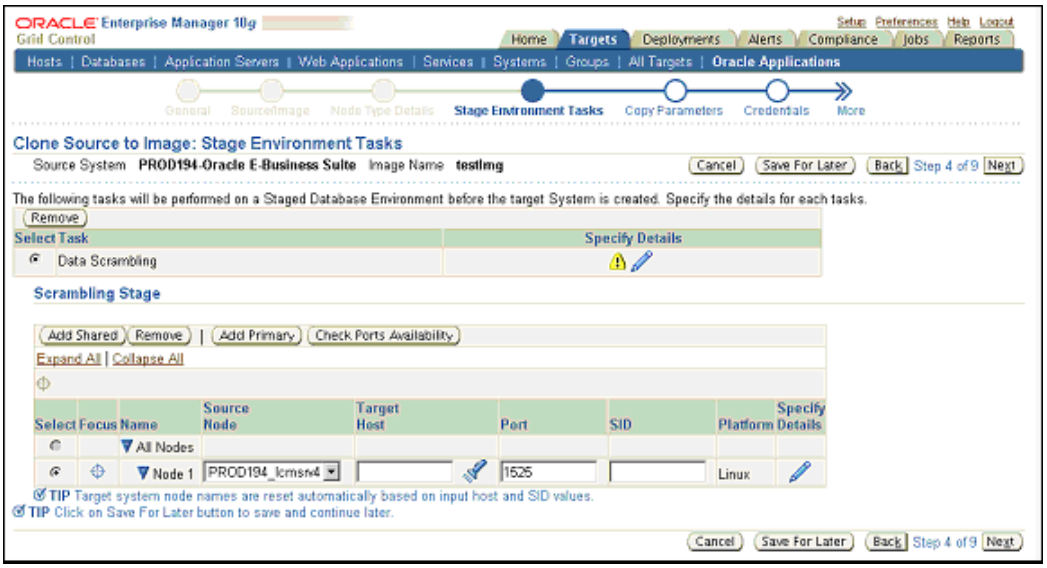
Similarly, for the application node type, select the application nodes to be included in the image.



On the "Stage Environment Tasks" step, specify Data Scrambling related information if required. If Data Scrambling is not enabled, this step will be skipped (Refer to Data Scrambling, page 6-2 on how to enable Data Scrambling). Click on the "Specify Details" icon for the "Data Scrambling" task in order to specify the related details such as the policy set to be used for scrambling.



If you choose to run Data Scrambling during a Source to Image operation, you must also specify details for a stage environment database where scrambling will be executed. An interim database will be cloned from the source to the specified stage environment and scrambling executed on this database. Upon completion of scrambling, the interim database is staged and included as part of the final image.

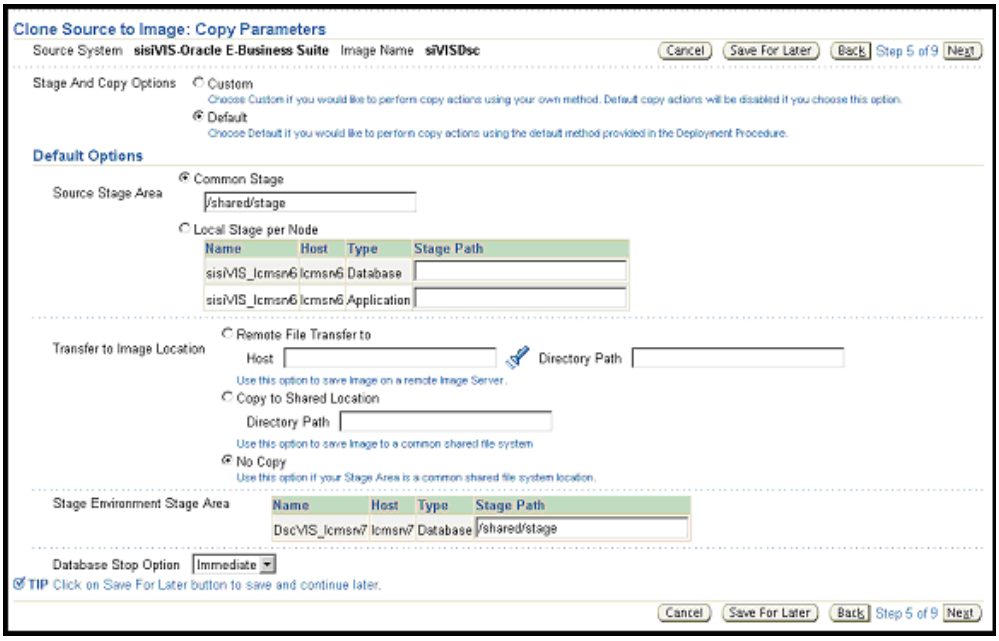


On the "Copy Parameters" step, specify the stage area location and file transfer options for creating the image.

- If you would like the image to be staged directly to a shared file system image directory (the image directory must be accessible from the Source system nodes and also from the Stage Environment if scrambling is enabled), you can specify the

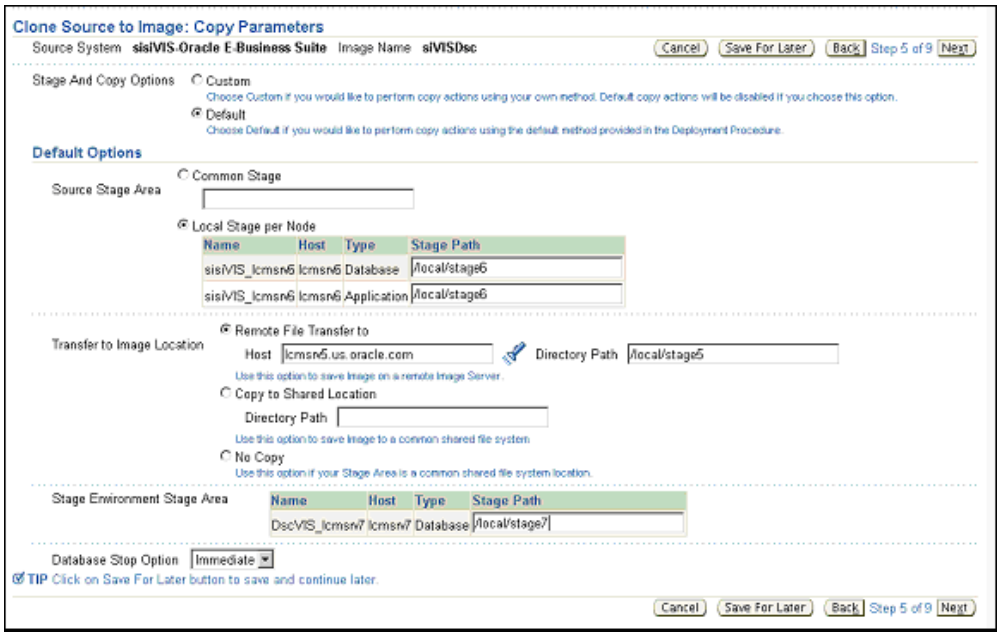
shared image directory location in the Common Stage location field, and select "No Copy" for "Transfer to Image Location".

Also, if you have enabled scrambling, specify the same shared image directory location in the "Stage Path" field for the Stage Environment Stage Area.

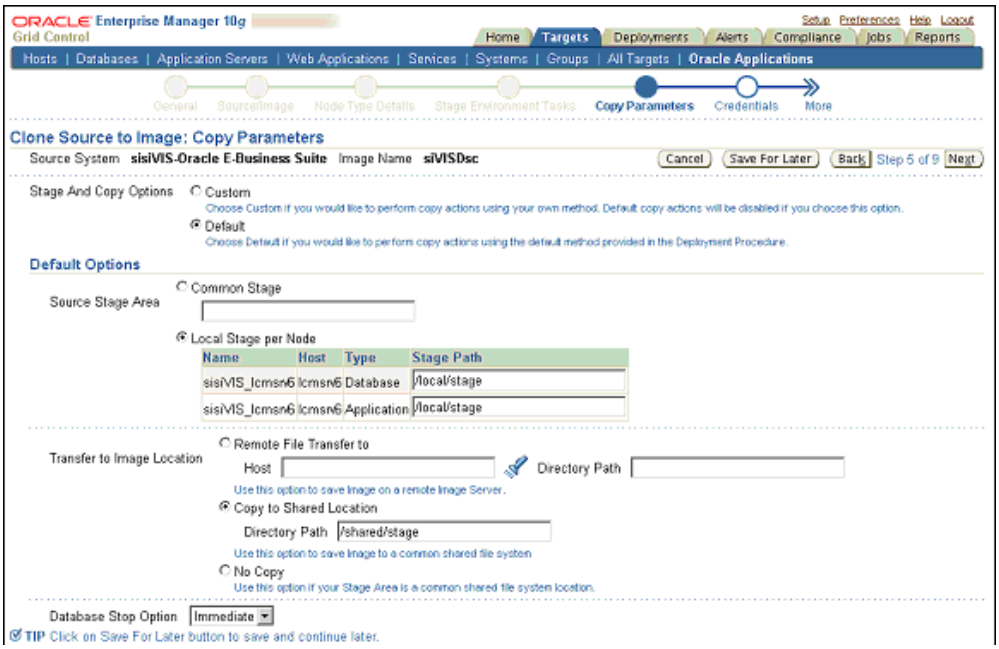


- If the image storage file system is not accessible from the source system nodes, you can specify local stage directories for each source system node and select "Remote file transfer to" option for "Transfer to Image Location". Specify a Host with access to the image storage file system and the directory path where the image should be stored.

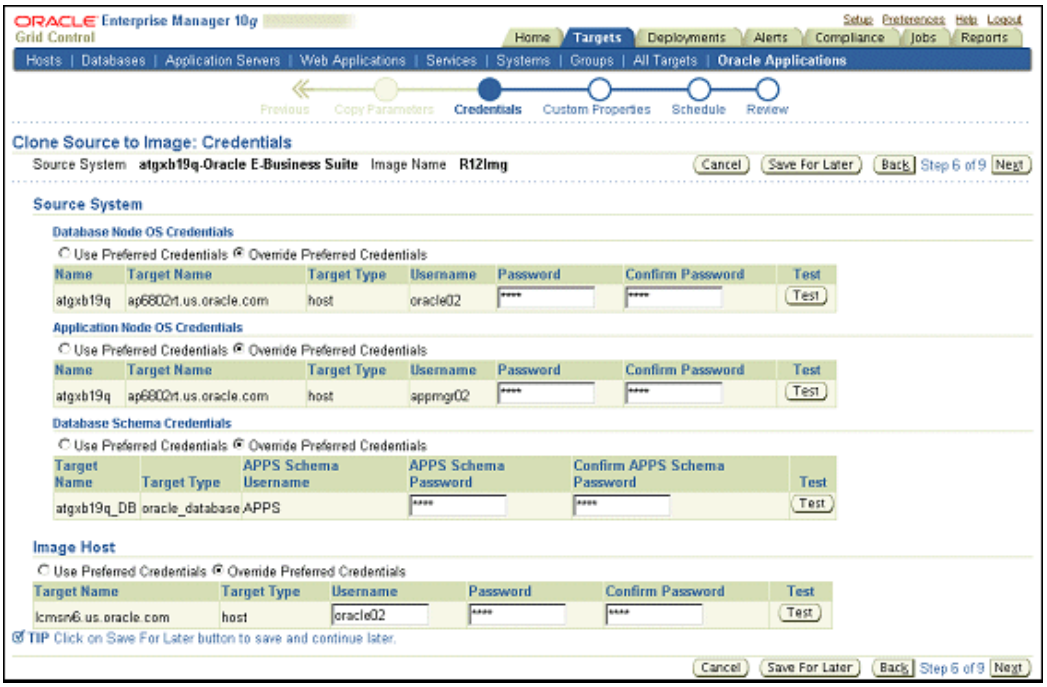
  If scrambling is enabled, also specify a Stage Path for the Stage Environment.



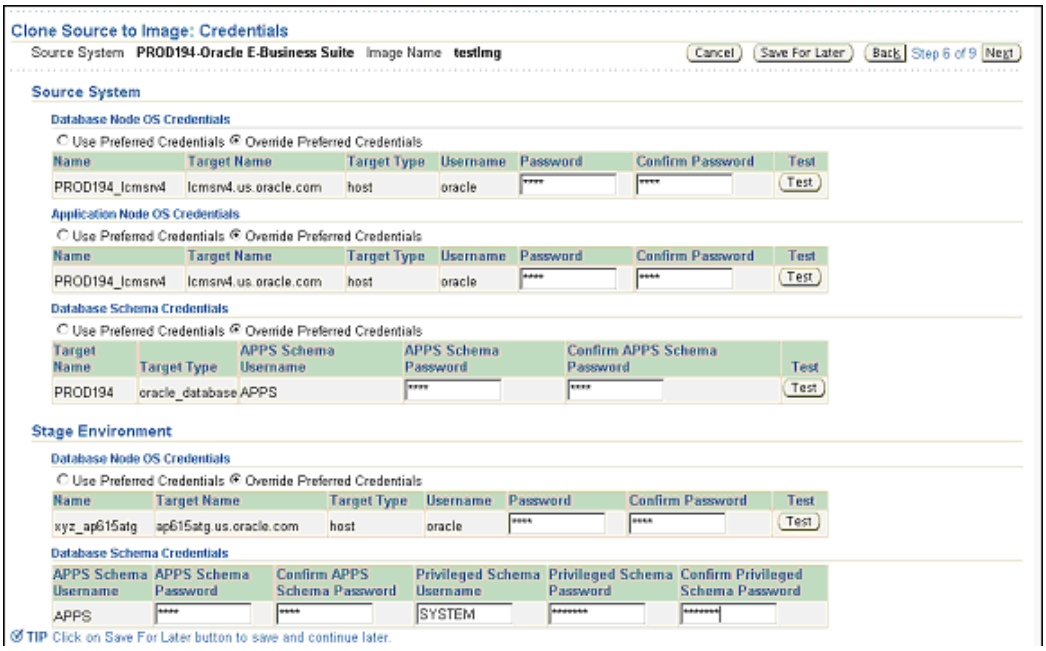
- If you are not using data scrambling, you can specify local stage directories per node and copy to a shared location to store the image (all source system nodes must have access to the shared location) by choosing the "Copy to Shared Location" option for "Transfer to Image Location".



In the "Credentials" step, specify the OS and APPS schema credentials for the source system. Additionally, you may also need to specify OS credentials for the Image Host. Click the **Test** button for each credential to ensure that it is valid.

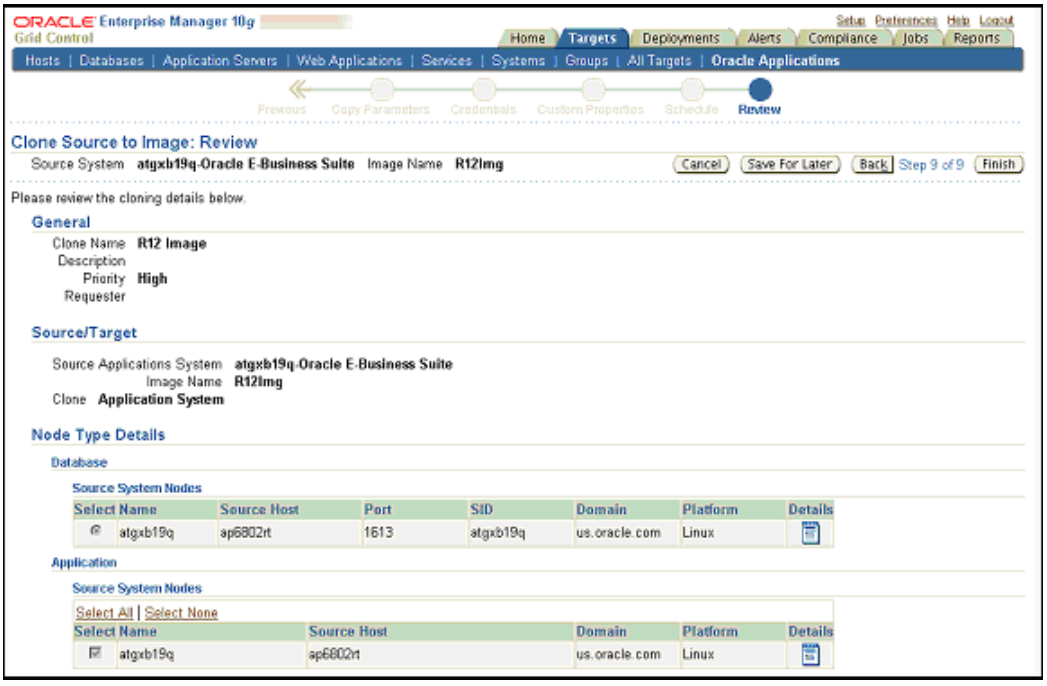


If you are using data scrambling, you need to specify the OS, APPS schema, and a privileged schema credentials for the stage environment database. The privileged schema should have a "RESTRICTED ACCESS" privilege. You can also use the SYSTEM schema as the privileged schema for scrambling.



In the "Schedule" step, specify if you would like the clone operation to execute immediately or at a later time.

Finally, review the cloning details information and click **Finish** to submit the clone operation. Alternatively, click the **Save For Later** button to save the information and submit the operation later.



Deploy Image to Target

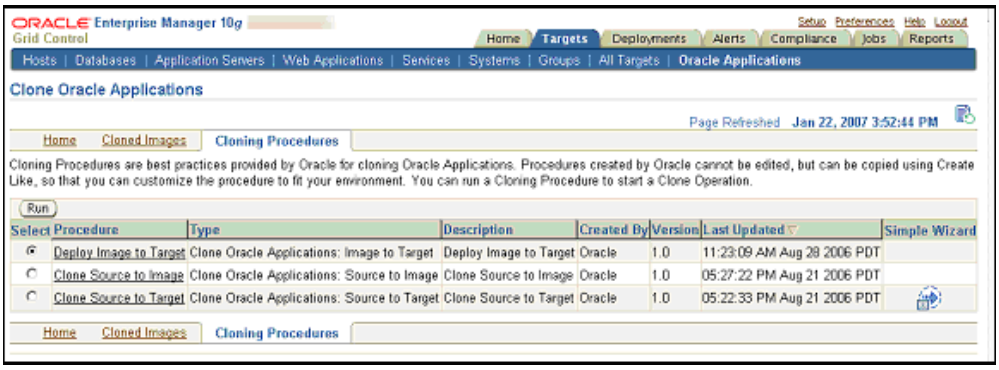
Deploy Image to Target can be used to create a cloned Oracle Applications system from an image created by a Clone Source to Image operation.

Please read Group Membership for Cloning, page 4-2 for important information on group membership.

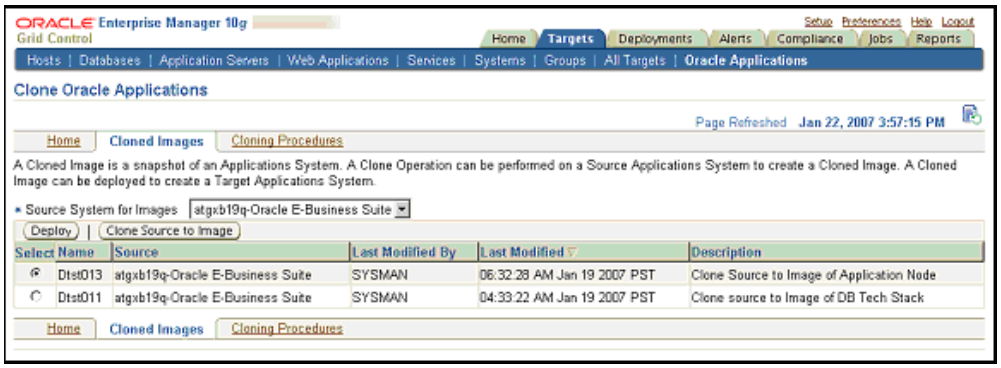
A Deploy Image to Target operation can be invoked from the following:

- From the "Clone Oracle Applications" home page, select "Deploy Image to Target" from the "Start a Clone" list.

- From the "Cloning Procedures" view, select "Deploy Image to Target" and click the **Run** button.

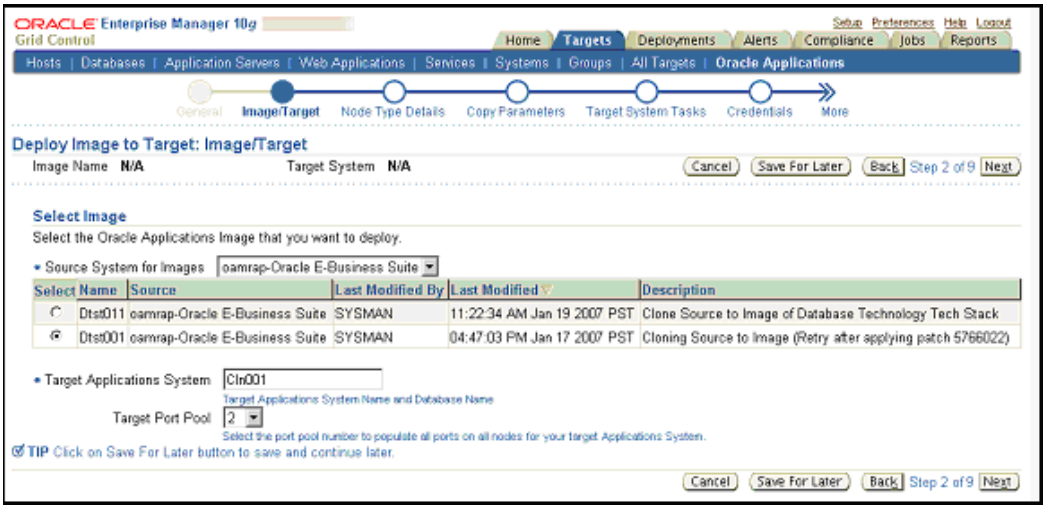


- From the "Cloned Image" view, select an image and click the **Deploy** button.



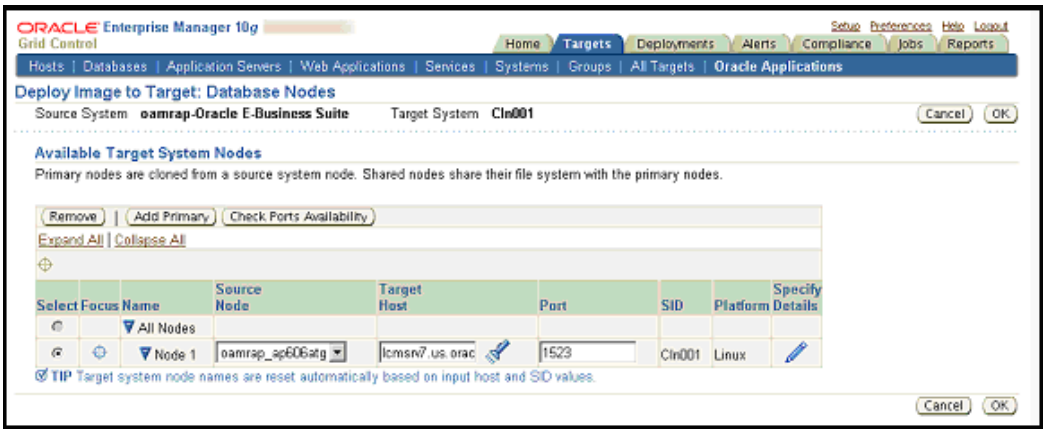
After launching the wizard, specify the clone operation details in the "General" step.

In the "Image/Target" step, select the Image from which you would like to clone. Also specify the target system name and port pool value.

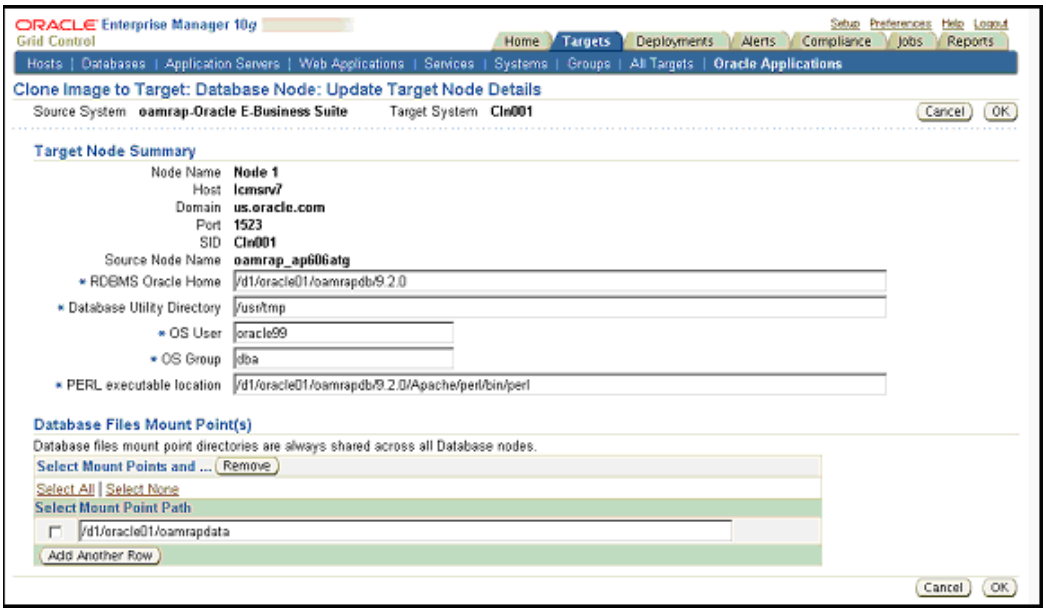


On the "Node Type Details" page, specify the target system details for Database and Application node types.

For the database node type, specify the target system database host.

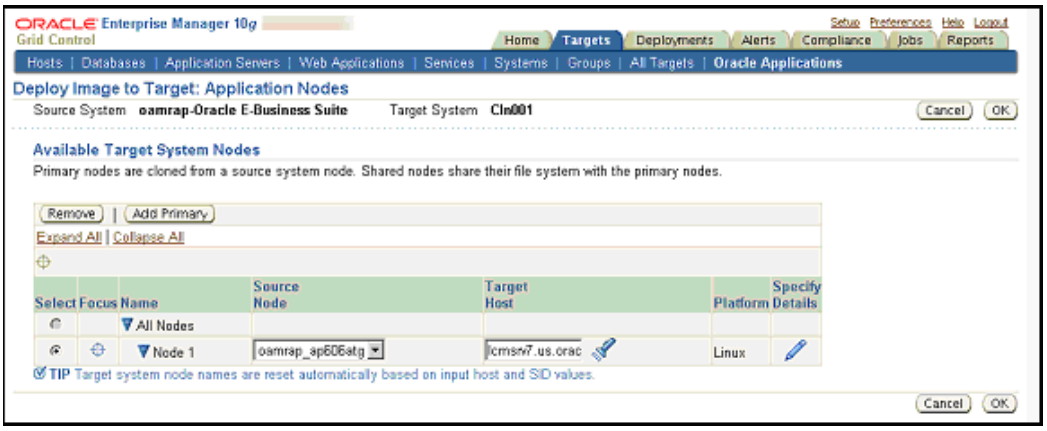


Click on the "Specify Details" icon to provide and review additional details about a particular target system database node.



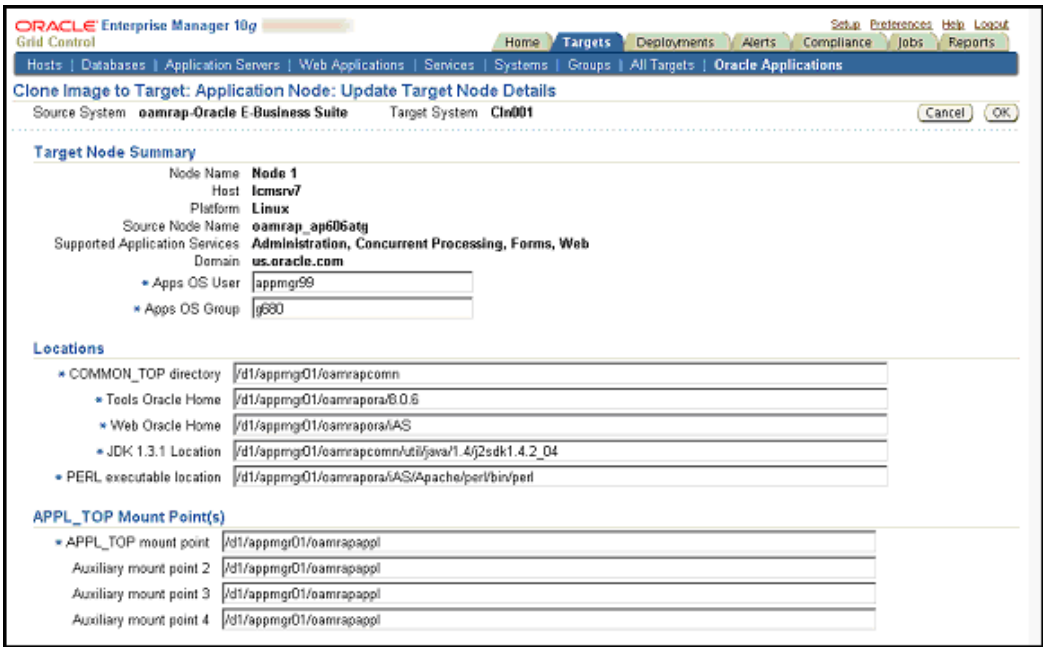
For the application node type, specify the target system applications node. You can use the "Add Primary" button to create additional Applications nodes during the clone operation.

For Release 12 system images, you can also select a primary node and click on the **Add Shared** button to add an Applications node that shares its file system with that of the selected primary node.



For each application node, click on the "Specify Details" icon to update the node details such as the OS user and group, directory locations, APPL_TOP mount points, services, and ports.

> **Note:** Ensure that you enter the correct OS User name for the Applications tier before submitting your clone request.

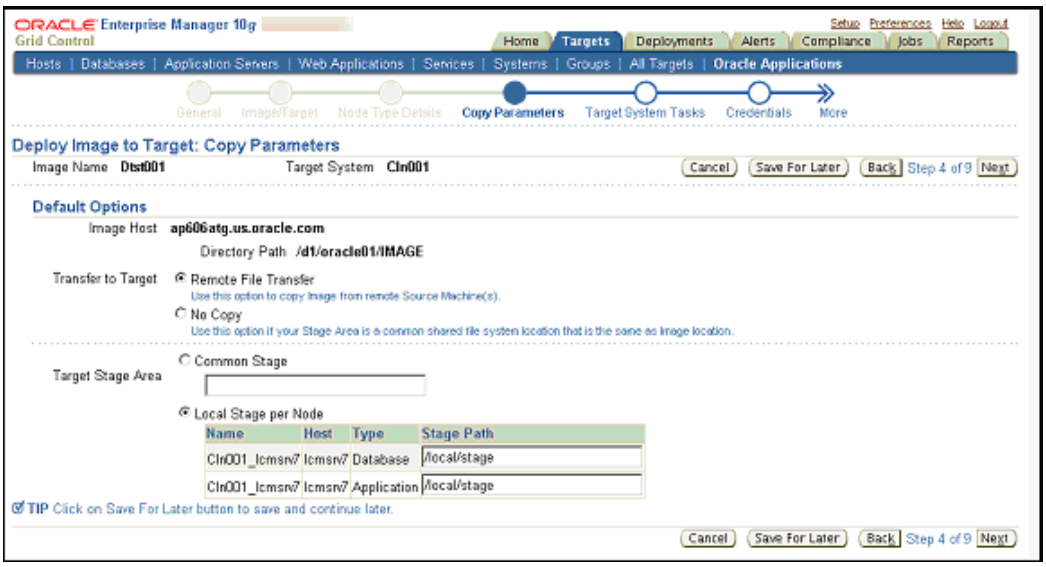


In the "Copy Parameters" step, specify the file transfer mechanism and stage directory for the target system.

- Choose "Remote File Transfer" if the image location is not accessible from the target system nodes.

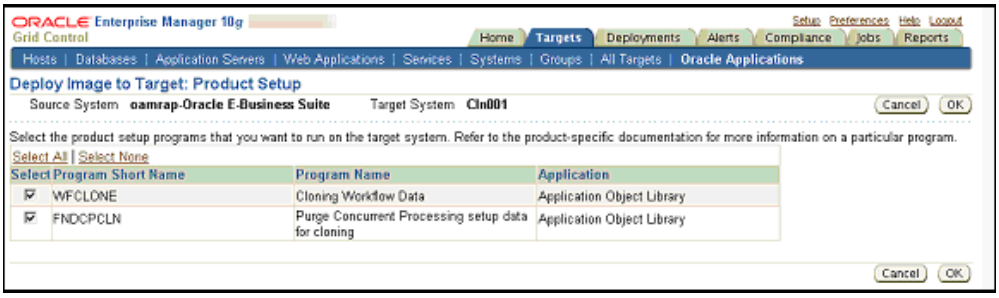
- If the image location is accessible from all the target system nodes, select "No Copy"

for "Transfer to Target" and specify "Common Stage" directory as the directory path of the image.

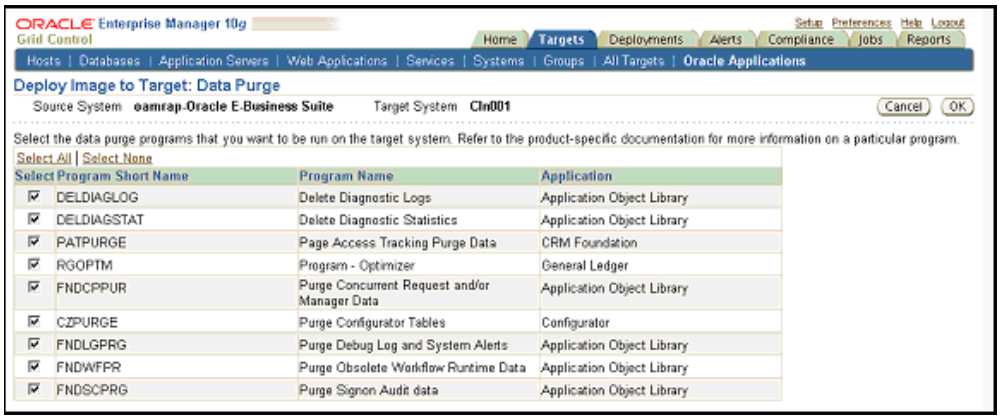


In the Target System Tasks step, select the tasks to be performed on the target system. For each task, specify the details.

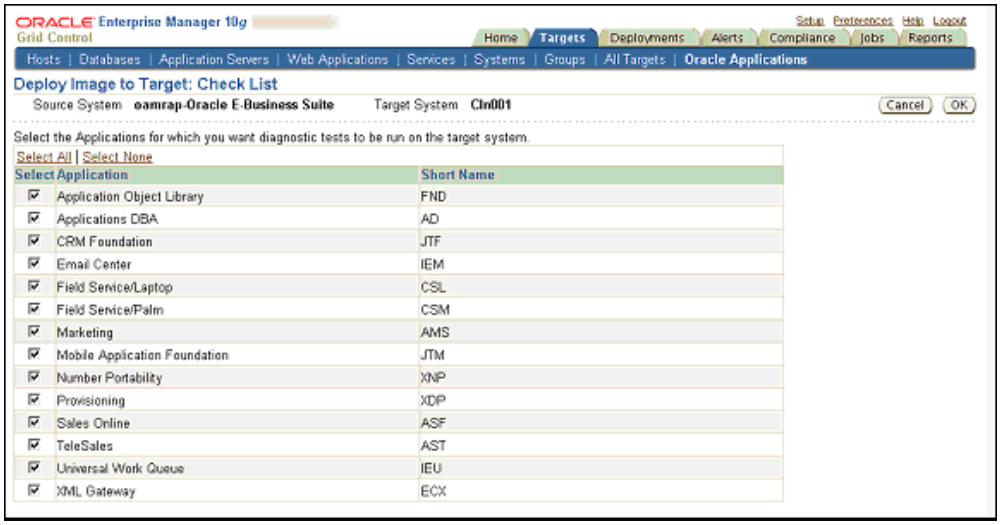
- For the Product Setup task, select the product setup programs to be run during the clone operation.



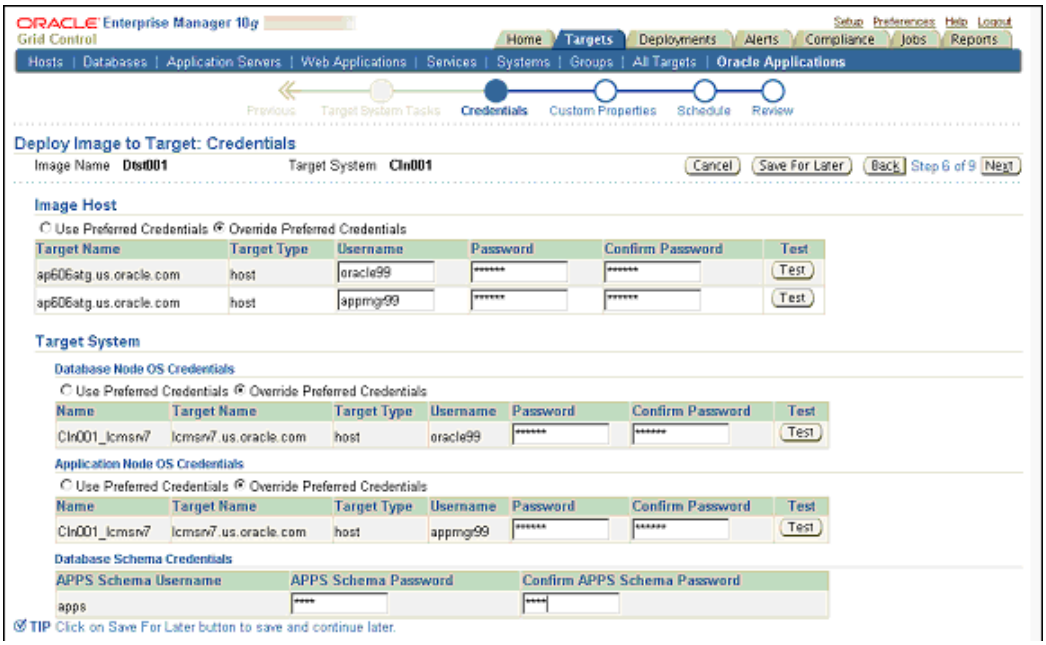
- For the Data Purge task, select the purge programs to be scheduled upon completion of the clone operation.



- For the check list, select products for which to run diagnostic tests upon completion of the clone operation.

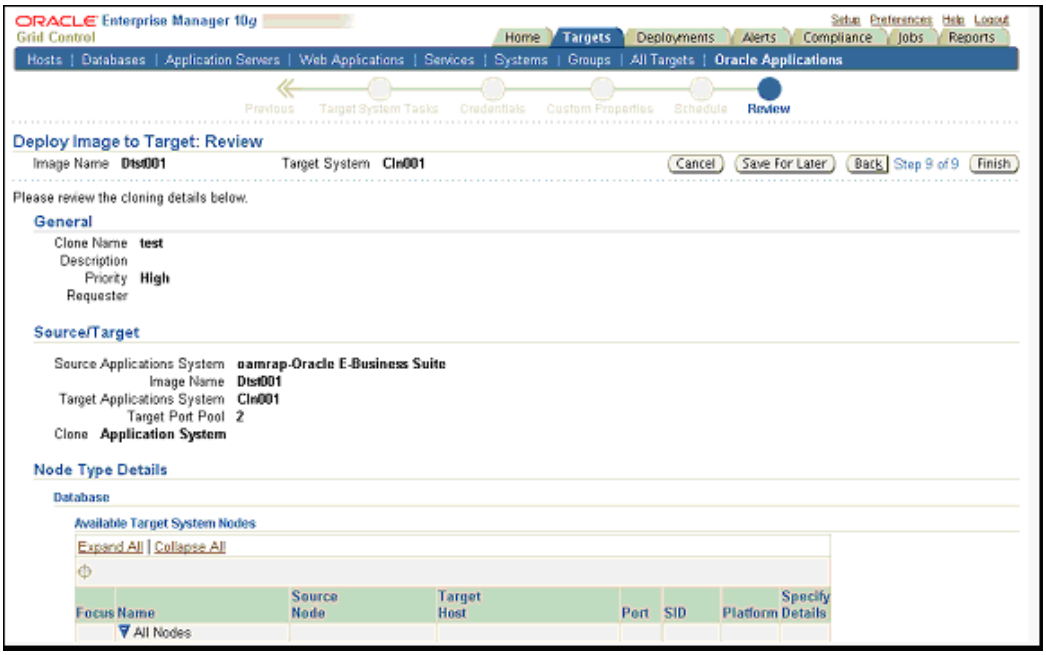


In the "Credentials" step, specify the OS and APPS schema credentials for the target system. You may also need to specify credentials for the machine from which image needs to be transferred. Use the **Test** button to test the credentials to make sure they are valid.



In the "Schedule" step, specify if you want to execute the clone operation immediately or at a later time.

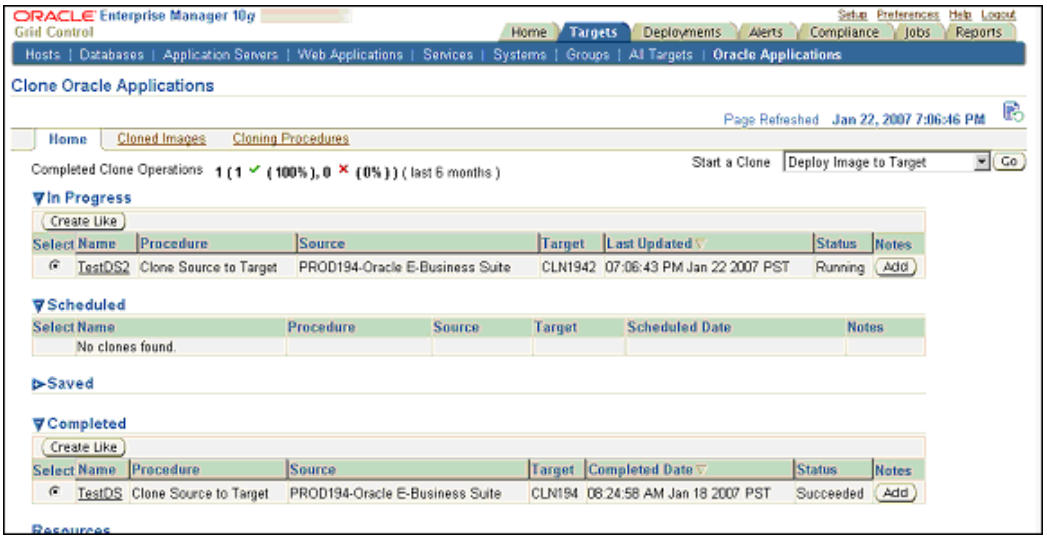
Finally, review and submit the clone operation.



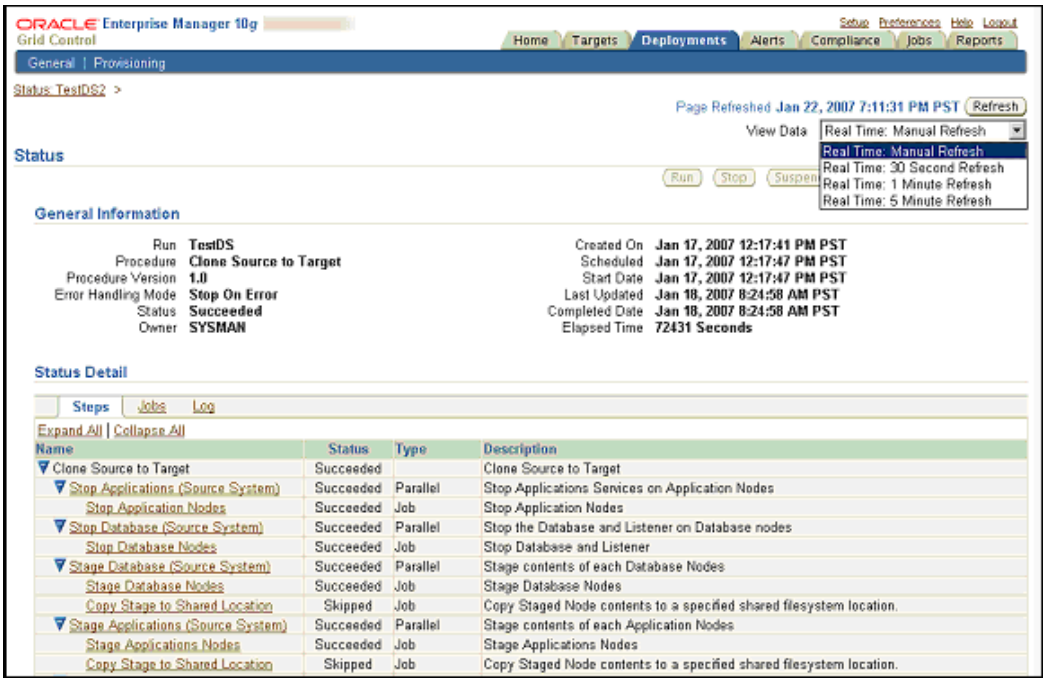
Monitoring a Clone Operation / Manual Finishing Tasks

After submitting a clone operation, you will see the operation on the Clone Oracle

Applications page. Click on the operation name to view the status details.

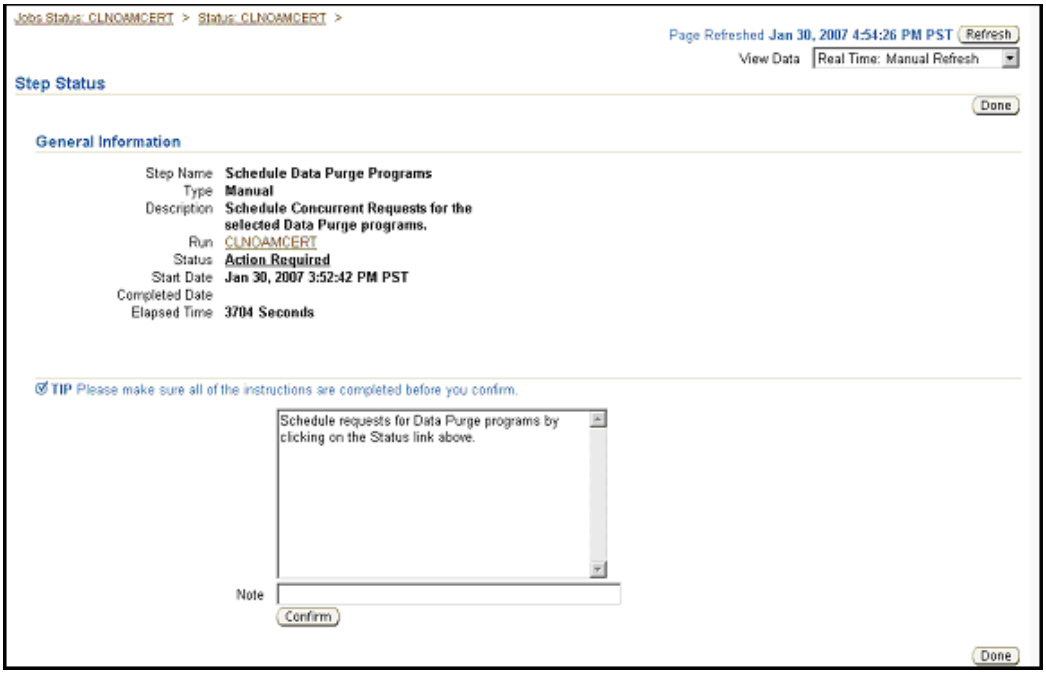


On the Status Details page select the view option to monitor the status of the clone operation. You can also switch to the Jobs view to drill into the status and output of each step of the operation.

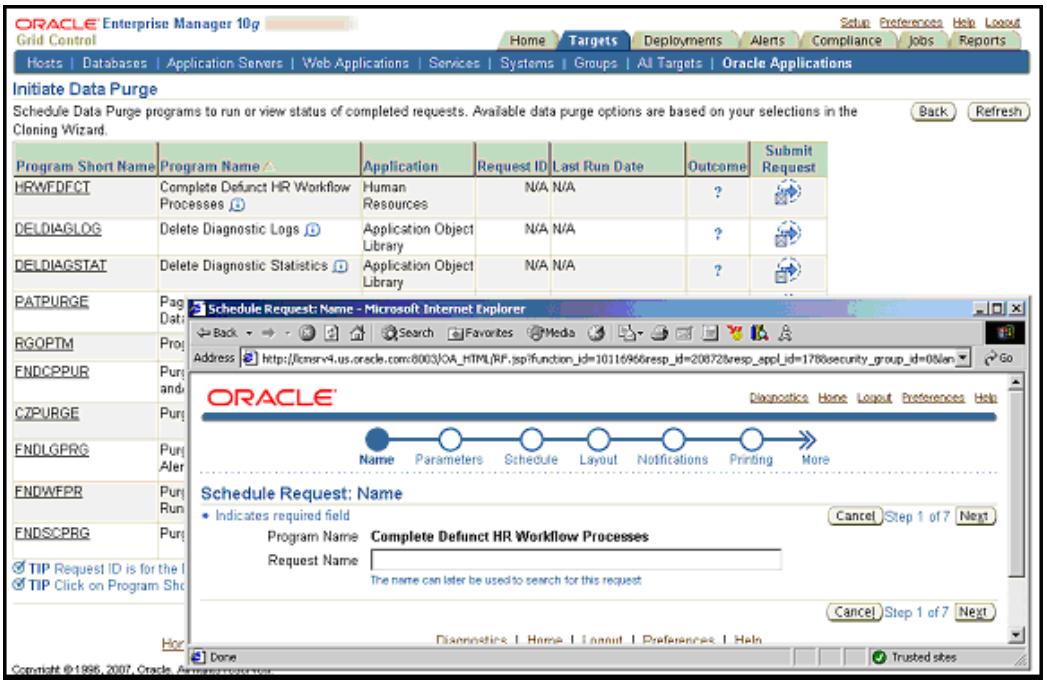


To perform the "Schedule Data Purge Programs" manual task at the end of the clone operation, click on the step name for the manual task.

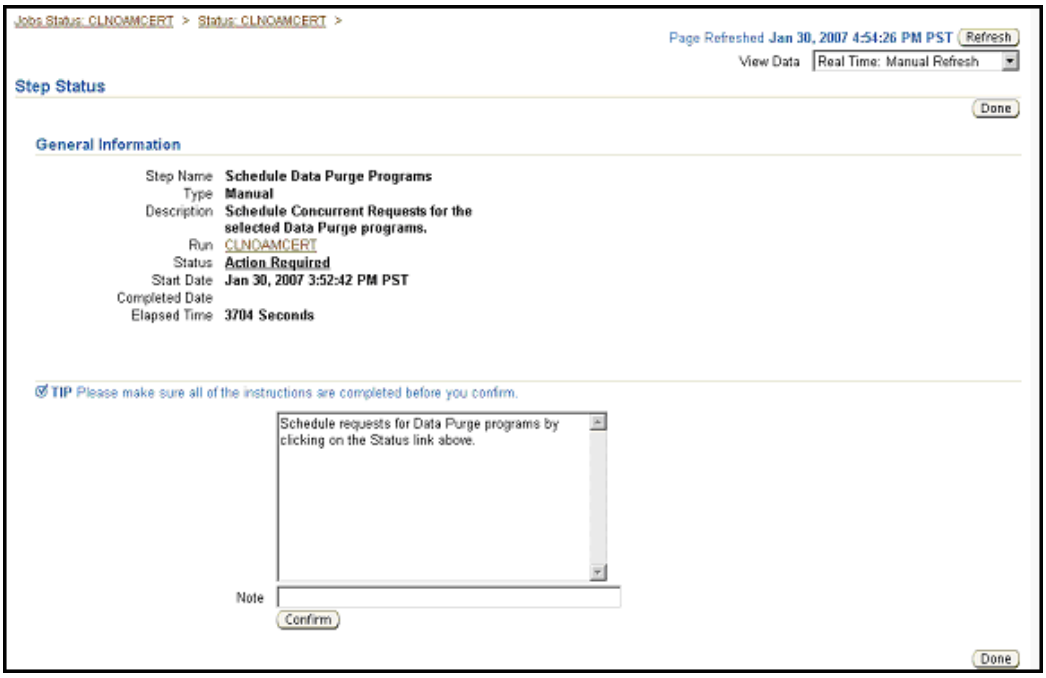
On the Step Status page, select the "Status" link to perform the manual task.



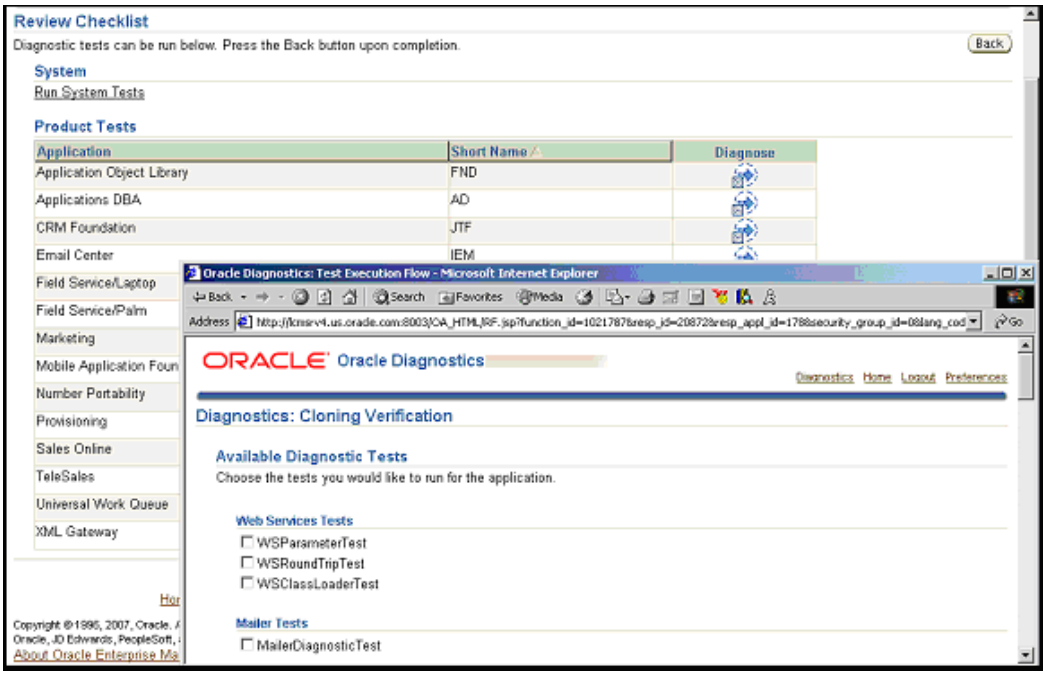
On the Initiate Data Purge page, click the "Submit Request" icon to schedule a request for each of the selected data purge concurrent programs.



After completion of this task, click the **Back** button to go back to the Step Status page. Click the **Confirm** button to indicate that the "Schedule Data Purge Programs" step has been completed and to move to the next step. Click **Done** to go back to the Status page.



Follow similar steps to those above to navigate to the Review Checklist page in order to perform the "Run Diagnostics Tests" task. Select the "Diagnose" icon to run diagnostic tests for the selected products.

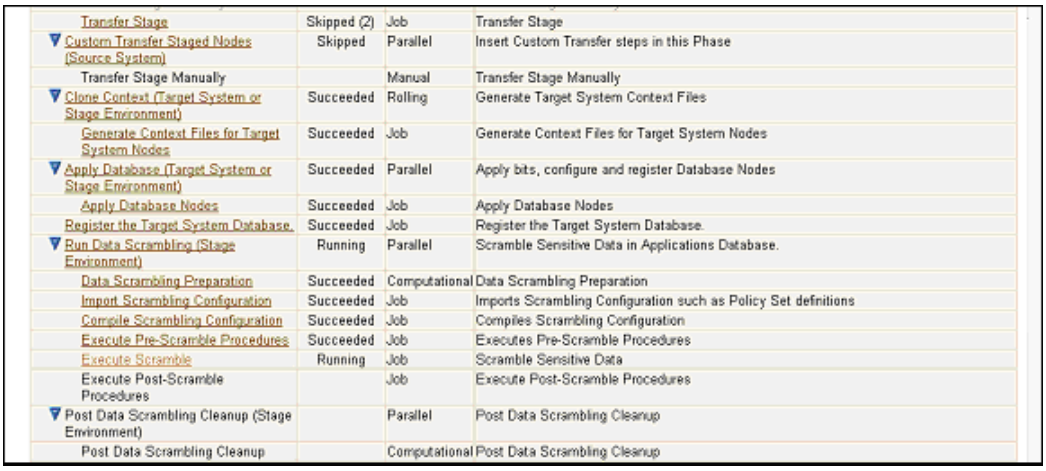


After completion of this task, click the **Back** button to go back to the Step Status page and click on the **Confirm** button to indicate that the "Run Diagnostics Tests" task is completed. At this point your clone operation should be complete.

Monitoring Data Scrambling

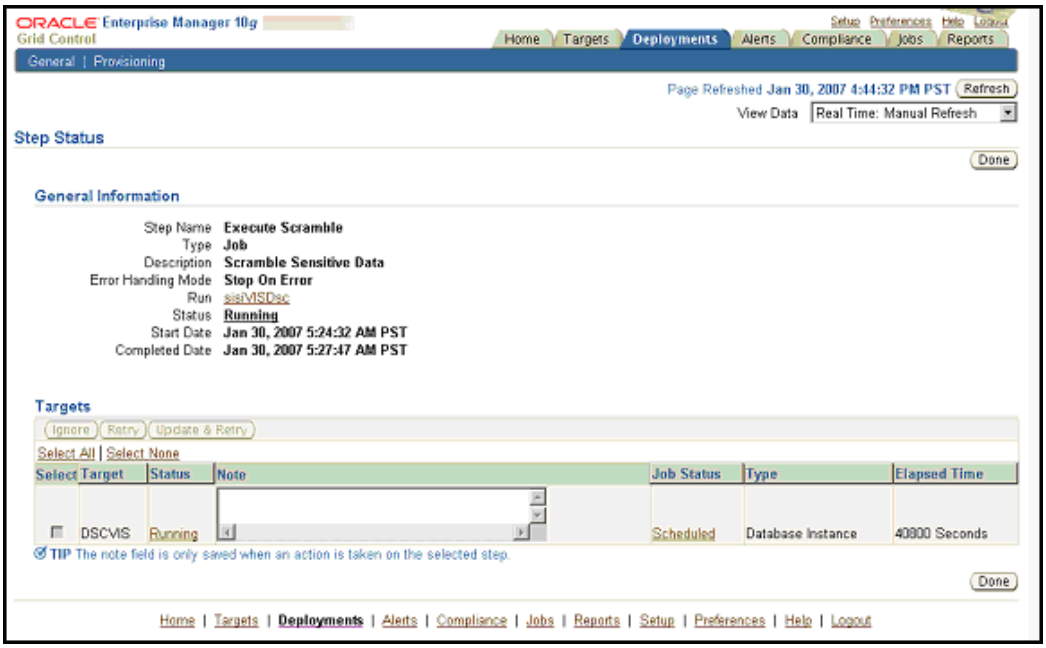
If you have enabled data scrambling for a Source to Target or Source to Image clone operation, you can also monitor its progress during the scrambling execution. On the Clone Oracle Applications page, click on the running clone operation.

On the Status page, click on the "Execute Scrambling" step once it has started running.

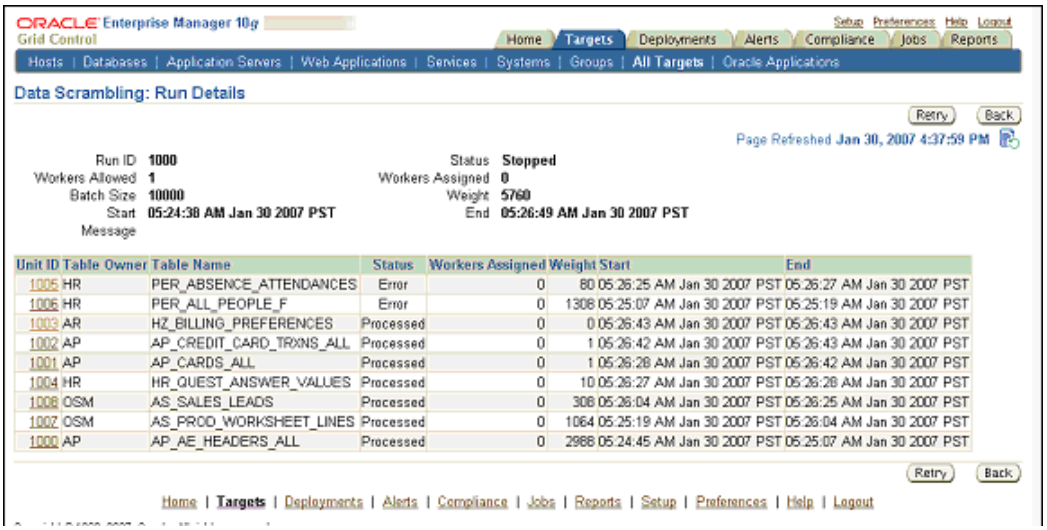


Transfer Stage	Skipped (2)	Job	Transfer Stage
Custom Transfer Staged Nodes (Source System)	Skipped	Parallel	Insert Custom Transfer steps in this Phase
Transfer Stage Manually		Manual	Transfer Stage Manually
Clone Context (Target System or Stage Environment)	Succeeded	Rolling	Generate Target System Context Files
Generate Context Files for Target System Nodes	Succeeded	Job	Generate Context Files for Target System Nodes
Apply Database (Target System or Stage Environment)	Succeeded	Parallel	Apply bits, configure and register Database Nodes
Apply Database Nodes	Succeeded	Job	Apply Database Nodes
Register the Target System Database.	Succeeded	Job	Register the Target System Database.
Run Data Scrambling (Stage Environment)	Running	Parallel	Scramble Sensitive Data in Applications Database.
Data Scrambling Preparation	Succeeded	Computational	Data Scrambling Preparation
Import Scrambling Configuration	Succeeded	Job	Imports Scrambling Configuration such as Policy Set definitions
Compile Scrambling Configuration	Succeeded	Job	Compiles Scrambling Configuration
Execute Pre-Scramble Procedures	Succeeded	Job	Executes Pre-Scramble Procedures
Execute Scramble	Running	Job	Scramble Sensitive Data
Execute Post-Scramble Procedures		Job	Execute Post-Scramble Procedures
Post Data Scrambling Cleanup (Stage Environment)		Parallel	Post Data Scrambling Cleanup
Post Data Scrambling Cleanup		Computational	Post Data Scrambling Cleanup

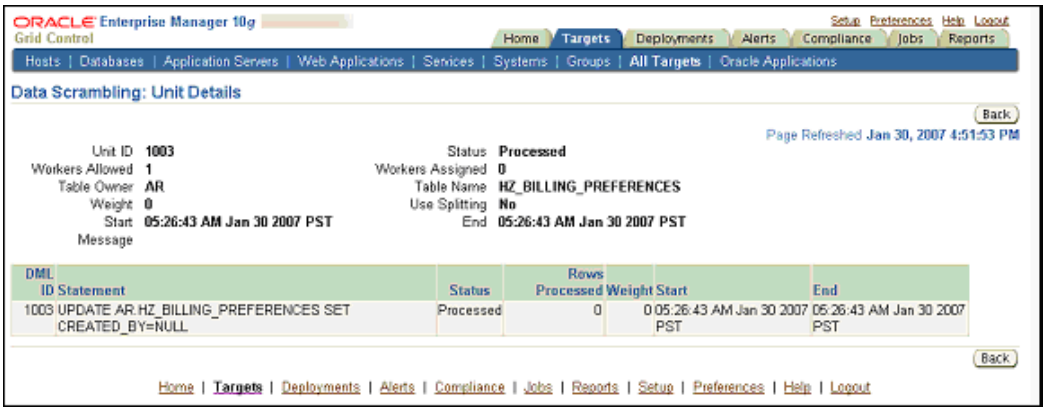
On the Step Status page, click on the Status link.



On the Data Scrambling: Run Details page, review the scrambling status details. Click on the Unit ID link to view the details of work completed for each unit. You can also click on "Retry" to retry a stopped scrambling execution process.



Review the unit details and click on the **Back** button to go to the previous page.



5

Application Service Level Monitoring

Application Service Level Monitoring

With Oracle Enterprise Manager 10*g* Grid Control you can define one or more service models that represent the business functions or applications in your enterprise. You can define these service models by creating one or more service tests that simulate common end-user functionality. Using these service tests, you can measure the performance and availability of critical business functions, receive alerts when there is a problem, identify common issues and diagnose causes of failures. Monitoring a service helps you ensure that your operational goals and service level agreements are met. Refer to the *Oracle Enterprise Manager Concepts* for more information on the concepts of service management.

Web Transactions Monitoring

You can define a Web application service to monitor Web transactions. A Web application target consolidates all the components of your Web application and determines the availability, performance and usage of the application.

The availability of the Web application can be defined in terms of availability of the Web transactions that are being monitored. For Web applications, Web transactions represent the service tests. A Web application is available as long as the critical functions such as generating a sales report or an online purchase can be performed. Beacons are used to monitor the Web transactions from different geographical locations. You can designate one or more beacons as the "key beacons" that will be used to run the Web transaction. The Web transaction is considered available if it can be executed successfully by any of the key beacons. A Web application can have multiple "key Web transactions" defined. One or more key Web transactions can be used to monitor the availability of the Web application.

Go through the following steps to define your own Web applications for monitoring your key Web transactions.

Setup Tasks Prior to recording Web Transactions

Create an Oracle Applications user for beacon monitoring and playback

In your Oracle Applications system, create an Applications user for beacon monitoring and playback from Enterprise Manager. Ensure that this user has all the responsibilities required to perform the Web transactions that you will be recording.

Update Fixed Key profile options

1. Set profile "FND: Fixed Key Enabled" to "Yes" for the Oracle Applications user created above.

2. Set profile "FND: Fixed Key" to a hexadecimal String of length 64 for the Oracle Applications user created above. Example "AAAA....A" (x64).

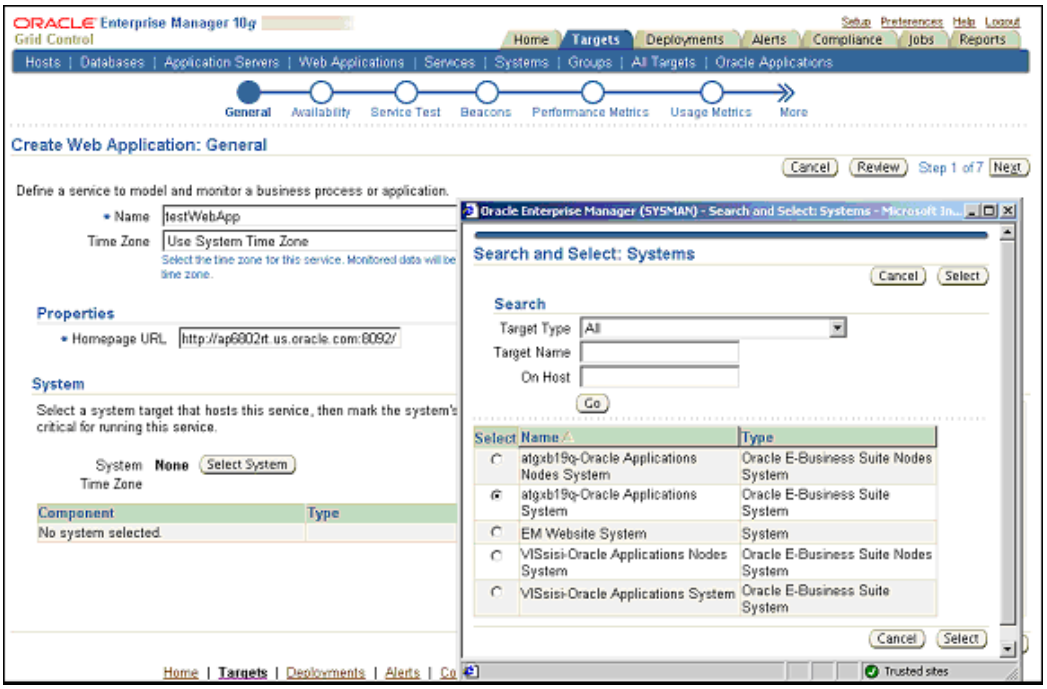
3. Set the profiles "FND: Fixed Key Enabled" to "Yes" and "FND: Fixed Key" to the same value as set in item (2) above for the Guest user. The Guest user is determined by the profile "GUEST_USER_PWD" and is typically the user "GUEST".

Recording Web Transactions

You can create a Web application service to record Web transactions for monitoring as follows.

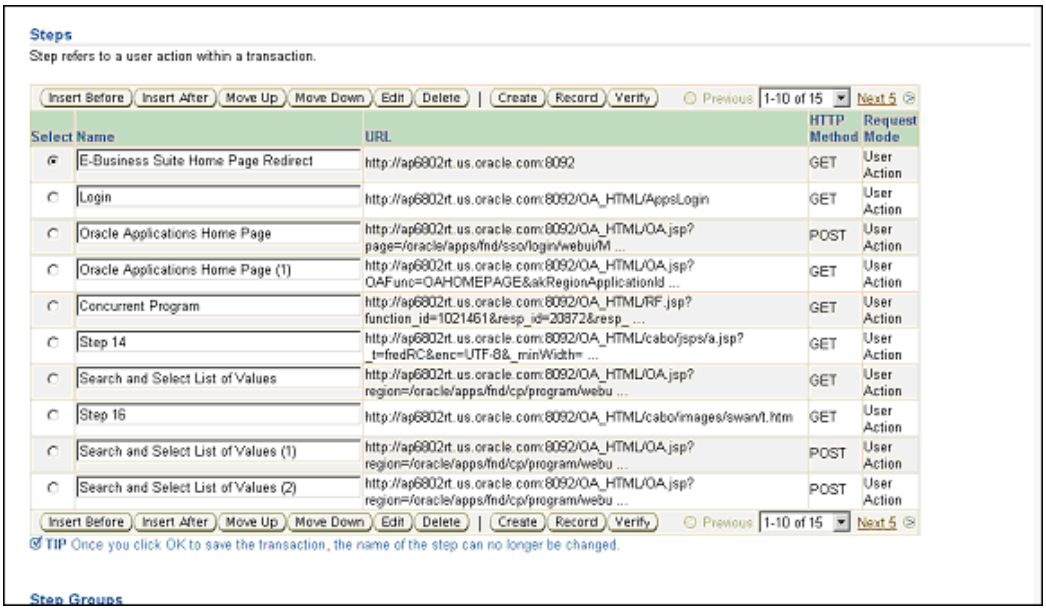
Follow the steps in the Create Web Application wizard to create a Web application service and record Web transactions that represent the service tests for the Web application. At any step in the wizard, you can click on the global "Help" link to get detailed information and instructions for that step.

In the "General" step of the wizard, if you decide to select a system that hosts the Web application service, you can select the system of type "Oracle E-Business Suite System" for your Oracle Applications system.

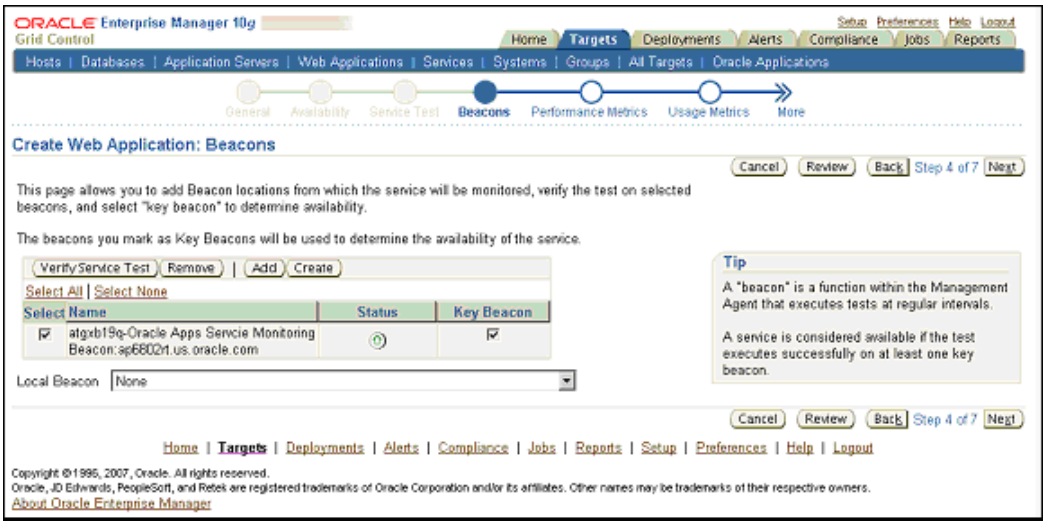


In the "Availability" step of the wizard, choose "Service Test" to determine the availability of the Web application service based on the key Web transactions.

In the "Service Test" step of the wizard, you can record a Web transaction by following the instructions on the page. When recording the transaction, log in to the Oracle Applications system as the Applications user and navigate to the related pages in order to perform the Web transaction. After recording, click on the **Verify** button to playback the recorded transaction in the browser.

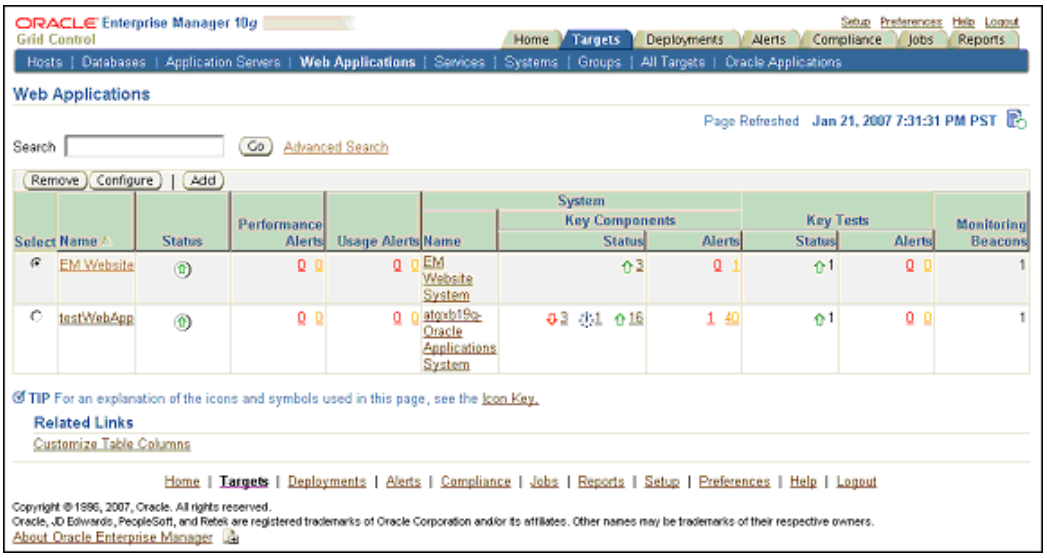


In the "Beacons" step of the wizard, add or create beacons that will monitor and playback the Web transaction. You can also select one or more beacons and verify the service test from those beacons.

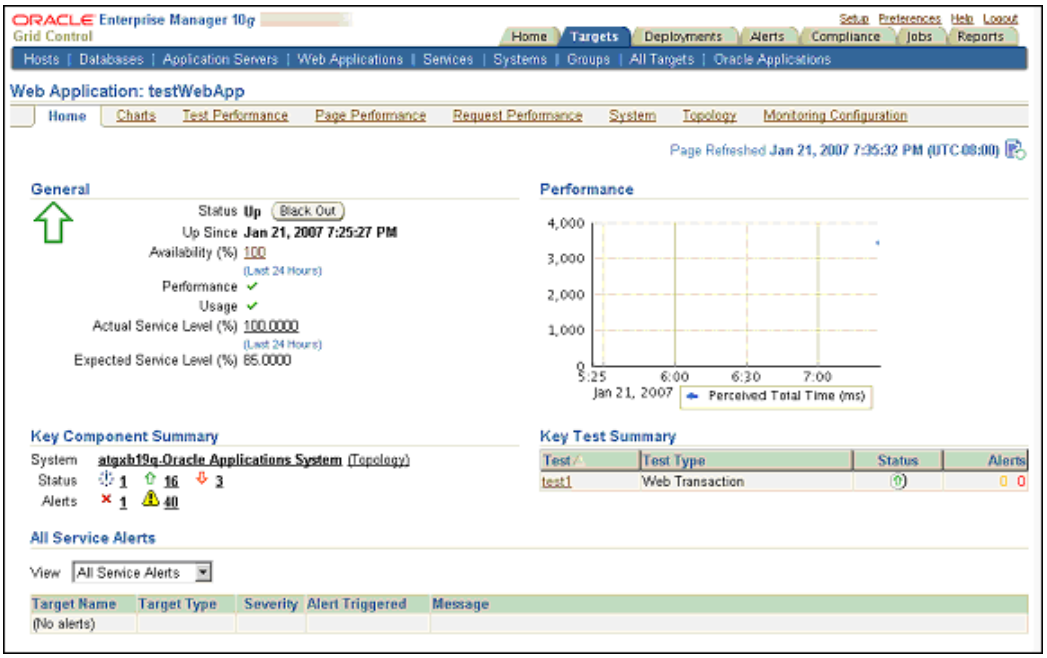


Monitoring Web Transactions

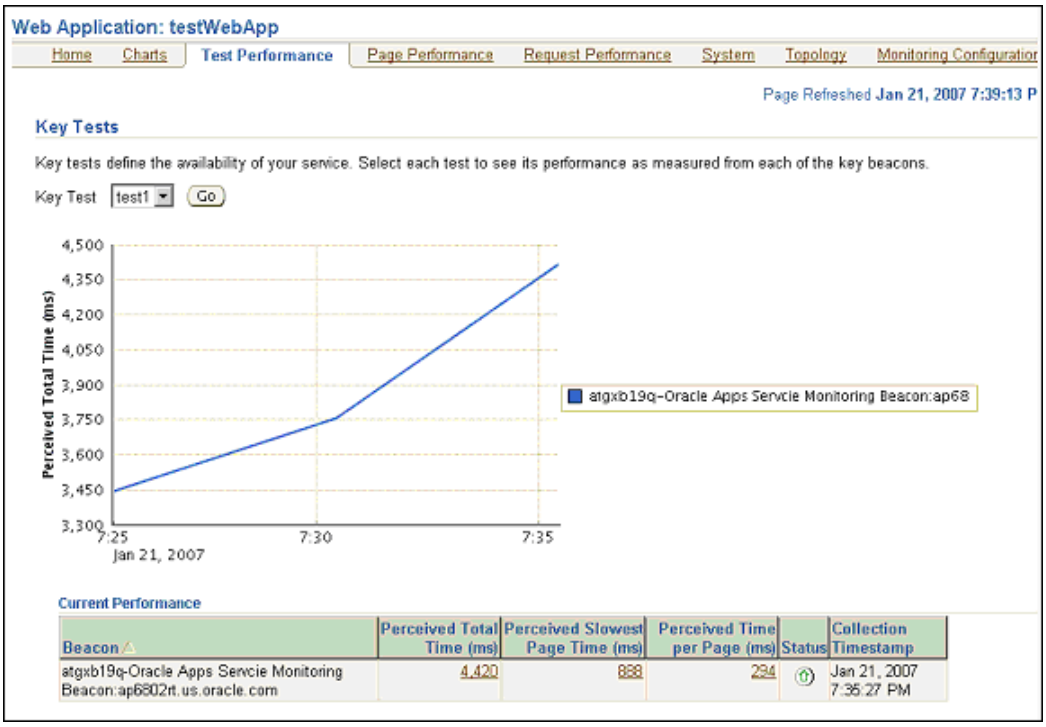
You can monitor your recorded Web transactions by clicking on the Web applications service.



If you selected "Service Test" for determining availability of the Web application, the status of the Web application service will be based on the status of the Web transactions that comprise the key tests for that service.



You can also navigate to the "Test Performance" subtab to view the performance of each key test as measured from each of the key beacons.



Example Web Transaction

The Application Management Pack provides an "Order Management - Order Information Portal" service with an example Web transaction. In order to enable this service, you can follow these steps.

1. Create an Oracle Applications user for beacon monitoring and playback.

   In your Oracle Applications system create an Oracle Applications user for beacon monitoring and playback from Enterprise Manager. Assign the "OAM EM Service Monitor" responsibility to this user.

2. Update Fixed Key profile options.

   Update the Fixed Key profile options described above for the user you just created. Set the profile "FND: Fixed Key" to a hexadecimal String "AAAA....A" (of length 64).

   > **Note:** You must set the "FND: Fixed Key" profile to this specific key value in order to enable the out-of-box example.

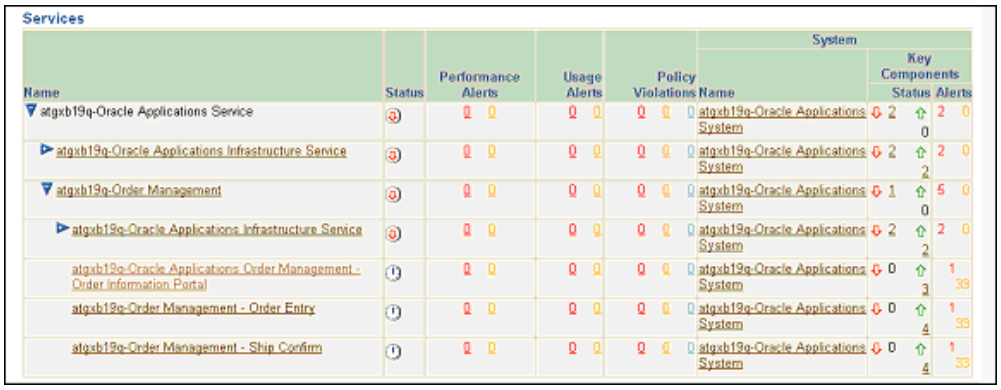
3. Discover the Oracle Applications system.

   Register your Oracle Applications System with Enterprise Manager as described in the chapter Discovering Oracle E-Business Suite Systems with Grid Control, page 2-1. After choosing the relevant database, in addition to the Monitoring Schema and

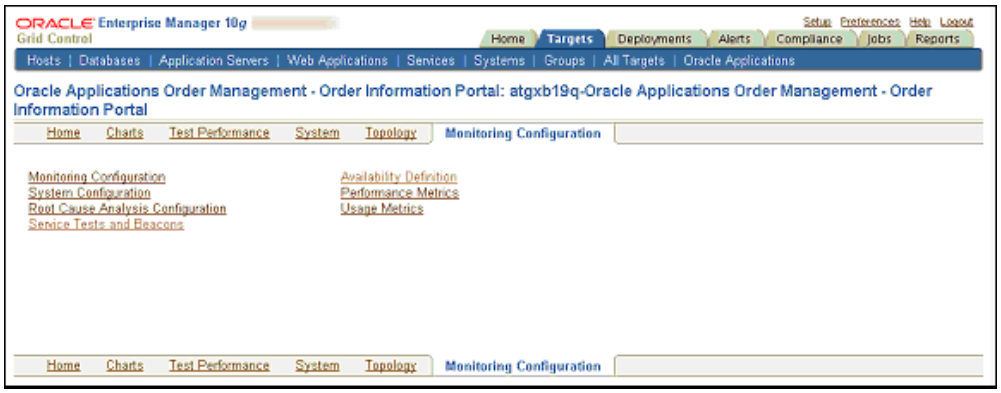
Monitoring Schema Password, specify values for the Monitoring Applications Username and Monitoring Applications User Password. The Monitoring Applications Username and Monitoring Applications User Password fields should contain the credentials for the Applications user created in the step above.

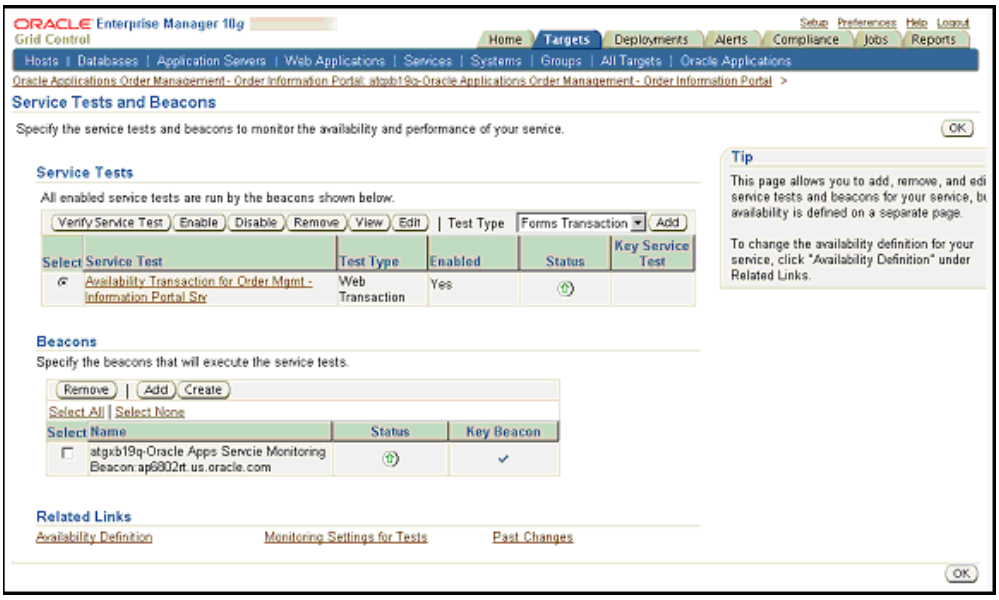
4. Enable the example Web transaction.

   After registering the Oracle Applications system, from the Oracle Applications target home page, select the Order Management – Order Information Portal target.

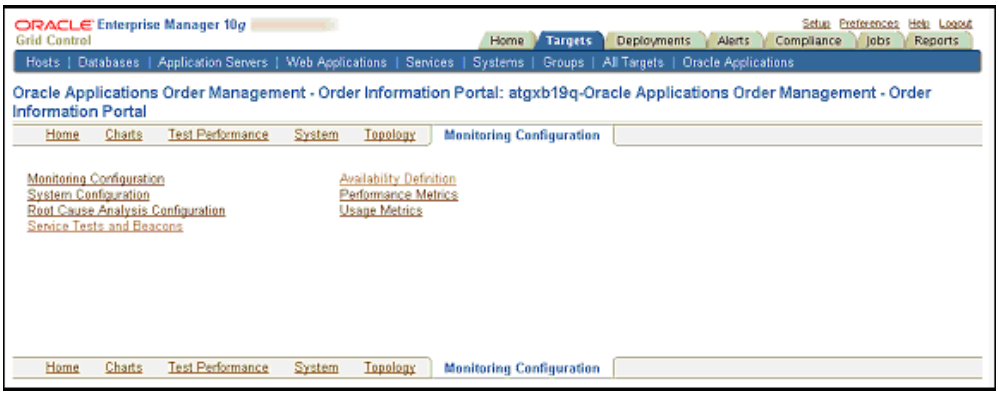


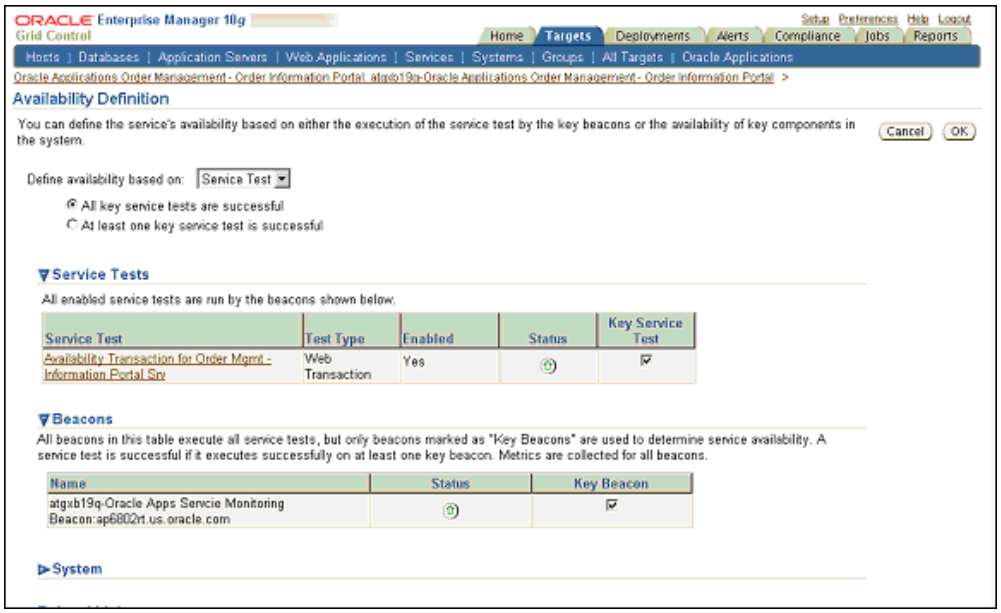
   Enable the service tests under Monitoring Configuration page of the service.





Define the availability of the Order Information Portal service by selecting the key test and key beacons. To do this, follow this navigation path: Oracle Applications Order Management - Order Information Portal page > Monitoring Configuration tab > Availability Definition link.





Forms Transactions Monitoring

The ability to record and monitor Oracle Forms-based transactions with Oracle E-Business Suite Release 12 is currently being certified and is being tracked by bug **5838926**. Once the certification is complete, this document will be updated with the relevant instructions for Forms-based transaction monitoring.

6

Data Scrambling

Introduction to Data Scrambling

Data scrambling is the process to obfuscate or remove sensitive data. This process is irreversible so that the original data cannot be derived from the scrambled data. Data scrambling can be utilized only during the cloning process.

The data scrambling feature is facilitated through the data scrambling framework that is available with Oracle E-Business Suite Release 11i and Release 12. The framework provides a user interface to enter database columns to obfuscate or truncate data. This user interface is available from within Oracle Applications Manager. After collecting this pre-configured information, you select a user-configured or pre-seeded configuration for use by the data scrambling engine during cloning.

The following table lists some data scrambling terms used in this document.

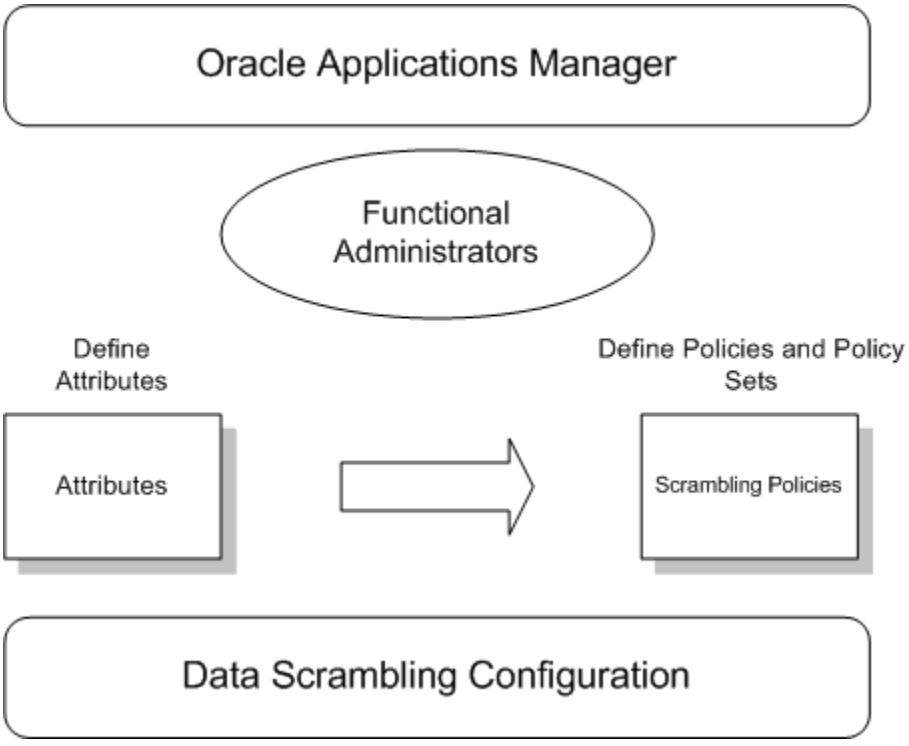
Term	Meaning
Attribute	Group of columns in one or more tables representing a single, logical Oracle E-Business Suite-wide value such as customer name.
Tables to Purge	Tables selected to be purged for rows matching user-defined criteria. This table selection allows the removal of sensitive data such as transaction histories before allowing applications to access to the system.

Term	Meaning
Policy	Functional groupings of Attributes and Tables to Purge related to one or more applications in the Oracle E-Business Suite. For example: an Oracle General Ledger policy or an Oracle Receivables policy.
Policy Set	Policy sets are groups of policies. Multiple policy sets contains overlapping policies. Example: Financial policy set

In order to use the data scrambling feature you must first enable it. To enable data scrambling, update the site-level profile option OAM: Data Scrambling Enabled to "Yes".

Configuring Data Scrambling

Data scrambling is configured through the Oracle Applications Manager.



The configuration process begins with the functional administrators defining the attributes and mapping them to database columns. Then they collect attributes together

to define policies and policy sets. All these steps are part of the data scrambling configuration and are performed within Oracle Applications Manager.

To configure data scrambling, use Oracle Applications Manager, and navigate to the following: Sitemap > Maintenance tab > Cloning Data Scrambling Configuration.

Clicking the Configuration link takes you to the Data Scrambling Configuration main page. Here you can define attributes, define tables to purge, define policies, and define policy sets.

Task 1: Define Attributes

The first task in configuring data scrambling is to define the attributes to be scrambled. Click the Task icon corresponding to "Task 1: Define Attributes".

Defining data scrambling attributes involves three steps.

1. Provide an attribute name and description. Select the default data scrambling algorithm.

2. Click **Next** to proceed to the second step. In this step, you can specify the table name, column name, the where clause and a specific data algorithm to be used for this column. (A specified data algorithm here overrides the default one from the previous step).

3. Click **Next** to proceed to the final step, in which you can review the details entered before defining the attribute.

Task 2: Define Tables to Purge

The second task is to define tables to purge. When cloning production systems, it is important that you purge transactional or workflow tables to avoid further processing of the same in the test or development system.

For example, to avoid having your test systems (after the data was cloned from your production) in sending out workflow notifications as part of the workflow process, it's advisable to purge the workflow tables.

Click the Task icon corresponding to "Task 2: Define Tables to Purge".

Then define which tables to purge and click **OK** to save your work.

Task 3: Define Policies

The third task is to define your data scrambling policies.

Click the Task icon corresponding to "Task 3: Define Policies".

Defining a new policy is done in three steps.

1. Define the policy name and select the attributes to be part of this policy.

2. Choose the tables to be purged as part of this policy. This is an optional step.

3. In the final step, review the details entered before defining the policy.

Task 4: Defining Policy Set

The next task in the configuration process is to define the policy set. Please note that during the cloning process, you can only choose from policy sets for scrambling the target system data.

1. Click the Task icon corresponding to "Task 4: Define Policy Sets".

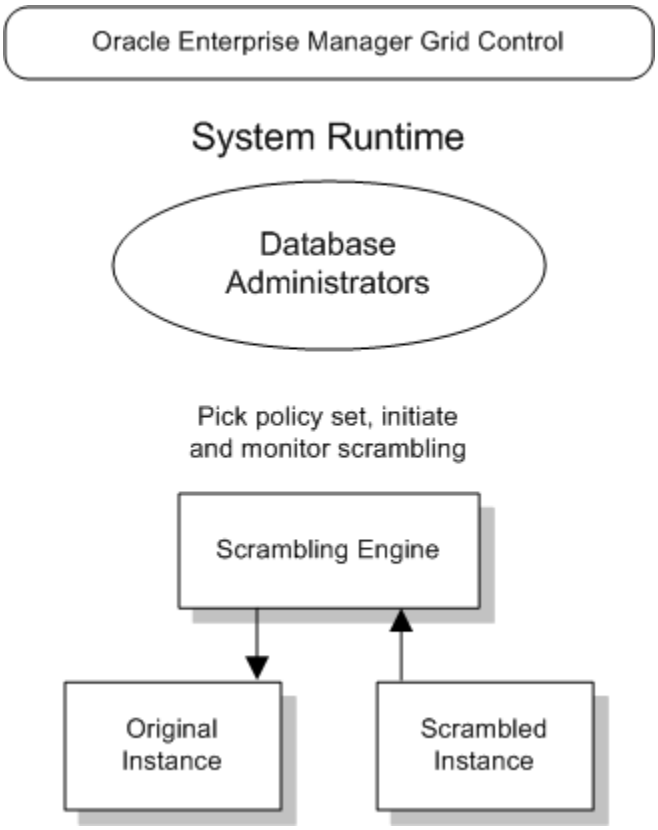
2. Create policy sets by grouping policies that have been created previously.

Data Scrambling Execution

The configuration set through Oracle Applications Manager for data scrambling can be utilized by the cloning process during system runtime of Oracle Enterprise Manager Grid Control.

The Database Administrator specifies the policy sets to scramble the source data, and initiates and monitors the data scrambling.

The source data from the original instance is sent through the data scrambling engine, which then provides the scrambled data as output.


Oracle Enterprise Manager Grid Control
System Runtime
Database Administrators
Pick policy set, initiate and monitor scrambling
Scrambling Engine
Original Instance
Scrambled Instance

A

Command Line Discovery for Oracle E-Business Suite Systems

Command Line Discovery for Oracle E-Business Suite Systems

Note: Command line discovery is currently not certified on MS Windows platforms.

The Oracle Application Management Pack for Oracle E-Business Suite provides a command line interface for the batch discovery of multiple Oracle E-Business Suite systems. Command line discovery is executed using the script ebsdiscovery.sh located under the Oracle Management Server (OMS) ORACLE_HOME under $ORACLE_HOME/sysman/admin/scripts.

Prerequisites

The operating system user who runs Command Line Discovery must have the full permissions on the OMS ORACLE_HOME. Before running Command Line Discovery, set the following environment variables:

- ORACLE_HOME: This environment variable must be set to OMS Home.
- JAVA_HOME: This variable must be set to a valid JDK 1.4.x directory. The OMS ORACLE_HOME ships with one under $ORACLE_HOME/jdk. Once the OMS ORACLE_HOME is set, JAVA_HOME may be set simply by reference to the ORACLE_HOME variable:

  ```
  export JAVA_HOME=$ORACLE_HOME/jdk
  ```

Before running discovery for multiple instances, it is highly recommended that you first try discovering a single Oracle E-Business Suite system.

Creating the Credentials File

The ebsdiscovery.sh needs to authenticate itself to the OMS throughout the discovery process. To automate this process, a credentials file must be created which contains encrypted credentials the script will use for the authentications.

The ebsdiscovery.sh script is used to create the OMS Credentials file by running the following command:

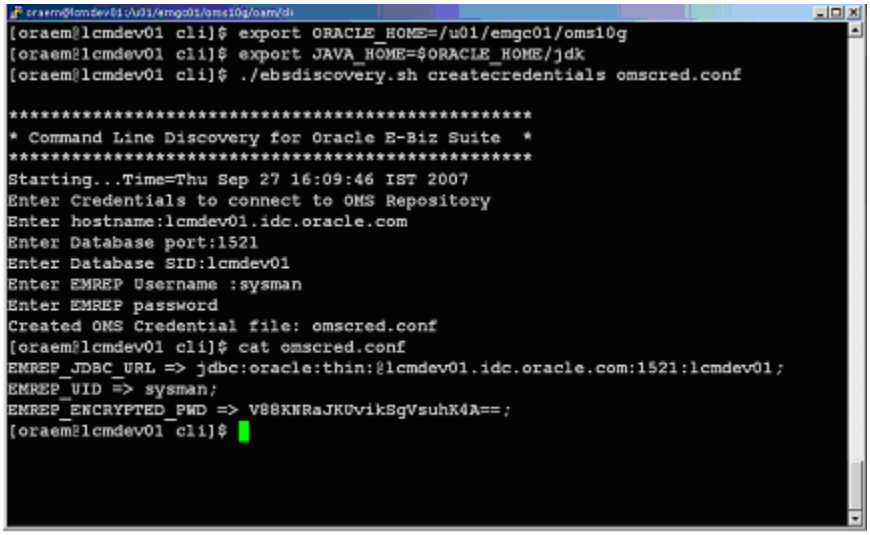
```
ebsdiscovery.sh createcredentials  <outfile>
```

This command takes input from the command line and creates the OMS Credentials file <outfile> containing the encrypted SYSMAN username and password.

Requested input includes:

- Hostname
- Database port
- Database SID
- EMREP username [SYSMAN user]
- EMREP password

Creating the OMS Credentials file (omscred.conf) and its resulting output



Discovery

The ebsdiscovery.sh script can be run with the following parameters:

- `inputfile=<ebslist>`

This option, when passed to the ebsdiscovery.sh script, will allow for the use of an input file which may contain details for the discovery of several Release 11*i* or Release 12 Oracle E-Business Suite systems (Oracle Applications environments). See: The ebsList.txt file, page A-4 for more information.

How this option works: Information will be taken from the file specified as <ebslist> and submitted as separate Enterprise Manager jobs for discovering each Oracle E-Business Suite system described in the file. If this "inputfile" option is not provided, then the default value is ebsList.txt. Please see ebsList.txt under $OMS_HOME/sysman/admin/scripts/samples for a sample input file.

- `omscred=<oms credentials file>`

  OMS Credentials will be taken from this file. This file is machine-generated and should not be edited. If this file does not exist, the ebsdiscovery.sh script will create it. If this "omscred" option is not provided, then the default value is omscred.conf.

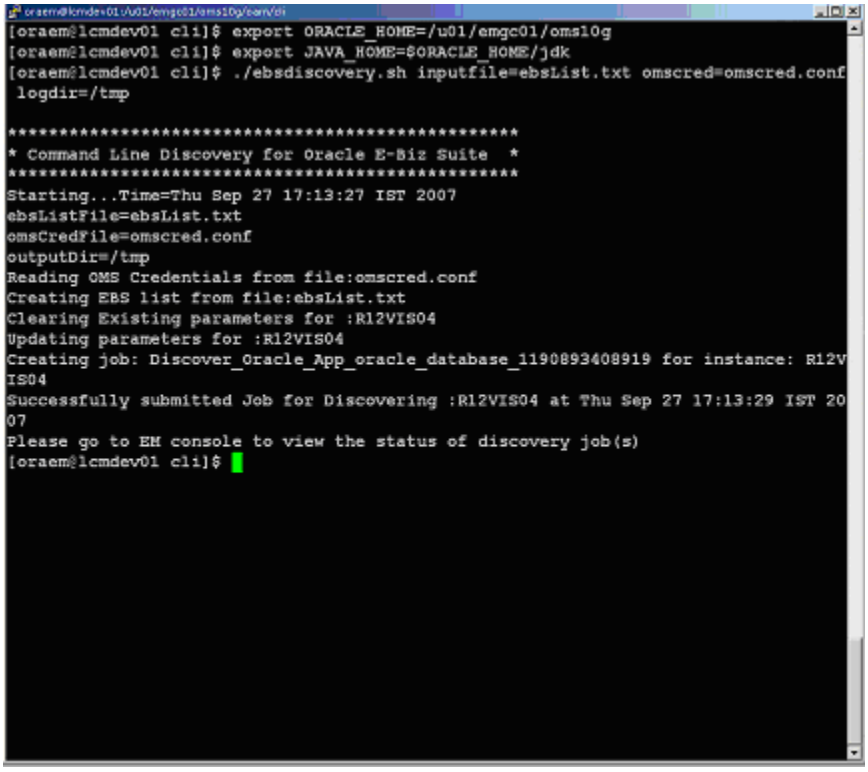
- `logdir=<log directory>`

  This option determines the location where the log files will be written.

An example of running the command is:

```
./ebsdiscovery.sh inputfile=ebsList.txt omscred=omscred.conf logdir=/tmp
```

Running Command Line Discovery

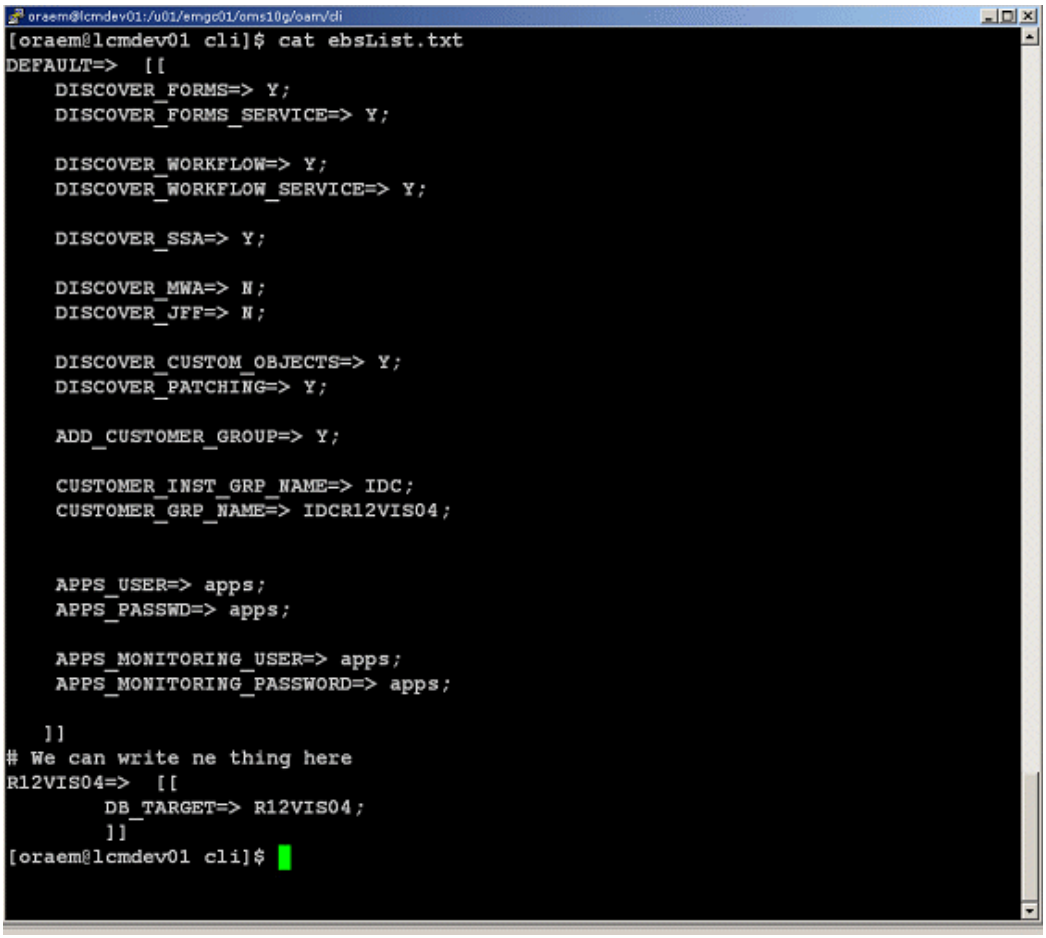


After the discovery job is started, you can view its status on the Oracle Management Server. From the Oracle Enterprise Manager console, navigate to Jobs (tab) > Job Activity. The status of the job is shown in the Status field. Click on the job name link to drill down to details on the discovered Oracle Applications instance.

The ebsList.txt file

The ebsList.txt file contains parameters and values for the discovery process.

The ebsList.txt file



The format for the ebsList.txt file is:

```
DBTARGET=>[[
           DBTARGET=><DBTARGET>;
           DBTYPE=><oracle_database | rac_database>;
           APPS_USER=><apps db user>;
           APPS_PASSWORD=><apps password>;
           ]]
```

Extra parameters can be provided as <key>=><value> pairs delimited by a semi-colon (;).

For ENCRYPTED_PASSWORD=><encrypted apps password>, the encrypted password will be used to decrypt the password on successive usage of the ebsList.txt file. To override the old password, change the input and add APPS_PASSWORD key value pair again with the new, changed password.

ebsList.txt Parameters

The following table describes the ebsList.txt parameters and their valid values.

KEY	SUPPORTED RELEASE	VALID VALUES	DESCRIPTION	DEFAULT
DB_TARGET	All	DB Target Name	Database Target name of the Apps you want to discover	N/A
DB_TYPE	All	oracle_database or rac_database	Database type	oracle_database
APPS_USER	All	Apps username		apps
APPS_PASSWD	All	Apps password	This will be replaced by ENCRYPTED_APPS_PASSWD	apps
APPS_MONITORING_USER	12.0 or higher	Apps Monitoring username	This is used for out-of-box service monitoring	
APPS_MONITORING_PASSWORD	12.0 or higher	Apps Monitoring password	This will be replaced by ENCRYPTED_APPS_MONITORING_PASSWORD	
DISCOVER_WORKFLOW	All	Y or N	Whether to Discover Workflow targets	Y

KEY	SUPPORTED RELEASE	VALID VALUES	DESCRIPTION	DEFAULT
DISCOVER_WORKFLOW_SERVICE	12.0 or higher	Y or N	Whether to Discover Workflow Service if DISCOVER_WORKFLOW is Y	Y
DISCOVER_FORMS	12.0 or higher	Y or N	Whether to Discover Forms or not	Y
DISCOVER_FORMS_SERVICE	12.0 or higher	Y or N	Whether to Discover Forms Service if DISCOVER_FORM is Y	Y
DISCOVER_SSA	12.0 or higher	Y or N	Whether to discover SSA Service or not	Y
DISCOVER_CUSTOM_OBJECTS	12.0 or higher	Y or N	Whether to Discover Custom Objects or not	Y
DISCOVER_PATCHING	12.0 or higher	Y or N	Whether to discover Patching Configuration target	Y
PROTOCOL	11*i*	http or https	Whether to have http or https	http

KEY	SUPPORTED RELEASE	VALID VALUES	DESCRIPTION	DEFAULT
SRVLT_URL_FROM_CTXFILE	11*i*	Y or N.	Whether to take Servlet URL from Context file or Not. If this value is N, Value for Servlet url will be "/servlet/oracle.forms.servlet.ListenerServlet"	Y
ADD_CUSTOMER_GROUP	12.0 or higher	Y or N	Shall Add Customer Group	N
CUSTOMER_INST_GRP_NAME	12.0 or higher	Text	Customer Instance Group Name	N/A
CUSTOMER_GRP_NAME	12.0 or higher	Text	Customer Group Name	N/A
DELETE_REMOVED_TARGETS	All	Y or N	Whether or not to delete removed targets. Default is N	N
DISCOVER_DISCOVERER	11*i*	Y or N	Whether or not discover discoverer	Y
FORMS_SRVLT_PROTOCOL	11*i*	http or https	Whether to have http or https for forms servlet mode	http
CREATE_SYSTEM_SERVICES	11*i*	Y or N	Whether or not to discover services	Y
DISCOVER_JVM_USAGE	12.0 or higher	Y or N	Whether or not to discover JVM usage target	Y

Customer Groups Created by Discovery

Groups are an optional feature in Enterprise Manager that allows the logical organization of targets in accordance to user preference. Command line discovery allows the definition of target groups and placement of Oracle E-Business Suite systems in these groups at time of discovery. This is not available to the normal discovery process available in the management console, although groups can always be created after discovery.

To view these groups, navigate within the Enterprise Manager to Targets (tab) > Groups.

B

Known Product Limitations

Known Product Limitations

1. Use of the native Oracle Enterprise Manager (EM) patch mechanism to apply core technology patches (Developer Forms, Application Server, Database or other standalone technologies) against Oracle E-Business Suite managed targets should NOT be done under any circumstances.

   While EM can be used to apply such patches to standalone installations of Developer Forms, Application Server and the RDBMS products, when these components are part of an Oracle E-Business Suite environment (installed at the same time via the Rapid Install Wizard), they must not be patched via Oracle Enterprise Manager.

   Failure to acknowledge this caveat could result in unrecoverable system status.

2. Start and Stop features present in some of the Enterprise Manager UI pages should NOT be used against individual Oracle E-Business Suite sub-targets. One example is starting and stopping the Oracle E-Business Suite database. While Oracle Enterprise Manager has no problems starting and stopping individual standalone product services, doing the same with Oracle E-Business Suite components will produce unexpected and inconsistent results.

   The Oracle E-Business Suite start and stop scripts are documented in the Oracle Applications System Administrator's Guide and only those scripts as provided within the Oracle E-Business Suite environment should be used. There are certain services that may be controlled from within the Oracle Application Manager UI (which is tightly bundled with the Oracle E-Business Suite).

3. The Oracle Enterprise Manager native Database Cloning feature should NOT be used against an Oracle E-Business Suite Database sub-target. The only mechanism for cloning an Oracle E-Business Suite system from within the Oracle Enterprise Manager UI is to do so from the provided cloning flows as discussed within the Cloning chapter of this guide, or alternatively as described in Oracle E-Business

Suite Cloning Oracle*MetaLink* Note 230672.1 for Release 11*i* and Oracle*MetaLink* Note 406982.1 for Release 12.

4. At this time, Shared Agent Configurations are limited to Discovery and Monitoring of Oracle E-Business Suite systems. Cloning using the Oracle Application Management Pack for Oracle E-Business Suite v. 2.0.2 in a Shared Agent environment is currently not certified. Shared Agent configurations are currently not supported with the Applications Management Pack on Windows platforms.

5. Cloning of Oracle E-Business Suite systems which use a shared APPL_TOP is not yet certified.

6. Customizations of the seeded cloning procedures are not supported. However, existing cloning procedures may be copied and those copies then edited.

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W