

Oracle® Retail Invoice Matching

Installation Guide

Release 13.2.9

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Send Us Your Comments

Oracle Retail Invoice Matching Installation Guide, Release 13.2.9

Oracle welcomes customers' comments and suggestions on the quality and usefulness of this document.

Your feedback is important, and helps us to best meet your needs as a user of our products. For example:

- Are the implementation steps correct and complete?
- Did you understand the context of the procedures?
- Did you find any errors in the information?
- Does the structure of the information help you with your tasks?
- Do you need different information or graphics? If so, where, and in what format?
- Are the examples correct? Do you need more examples?

If you find any errors or have any other suggestions for improvement, then please tell us your name, the name of the company who has licensed our products, the title and part number of the documentation and the chapter, section, and page number (if available).

Note: Before sending us your comments, you might like to check that you have the latest version of the document and if any concerns are already addressed. To do this, access the new Applications Release Online Documentation CD available on My Oracle Support and www.oracle.com. It contains the most current Documentation Library plus all documents revised or released recently.

Send your comments to us using the electronic mail address: retail-doc_us@oracle.com

Please give your name, address, electronic mail address, and telephone number (optional).

If you need assistance with Oracle software, then please contact your support representative or Oracle Support Services.

If you require training or instruction in using Oracle software, then please contact your Oracle local office and inquire about our Oracle University offerings. A list of Oracle offices is available on our Web site at www.oracle.com.

Preface

Oracle Retail Installation Guides contain the requirements and procedures that are necessary for the retailer to install Oracle Retail products.

Audience

This Installation Guide is written for the following audiences:

- Database administrators (DBA)
- System analysts and designers
- Integrators and implementation staff

Related Documents

For more information, see the following documents in the Oracle Retail Invoice Matching Release 13.2.9 documentation set:

- *Oracle Retail Invoice Matching Release Notes*
- *Oracle Retail Invoice Matching Operations Guide*
- *Oracle Retail Invoice Matching Data Model*
- *Oracle Retail Merchandising Batch Schedule*

Customer Support

To contact Oracle Customer Support, access My Oracle Support at the following URL:
<https://support.oracle.com>

When contacting Customer Support, please provide the following:

- Product version and program/module name
- Functional and technical description of the problem (include business impact)
- Detailed step-by-step instructions to re-create
- Exact error message received
- Screen shots of each step you take

Review Patch Documentation

When you install the application for the first time, you install either a base release (for example, 13.2) or a later patch release (for example, 13.2.9). If you are installing the base release or additional patch releases, read the documentation for all releases that have occurred since the base release before you begin installation. Documentation for patch releases can contain critical information related to the base release, as well as information about code changes since the base release.

Improved Process for Oracle Retail Documentation Corrections

To more quickly address critical corrections to Oracle Retail documentation content, Oracle Retail documentation may be republished whenever a critical correction is needed. For critical corrections, the republication of an Oracle Retail document may at times **not** be attached to a numbered software release; instead, the Oracle Retail document will simply be replaced on the Oracle Technology Network Web site, or, in the case of Data Models, to the applicable My Oracle Support Documentation container where they reside.

This process will prevent delays in making critical corrections available to customers. For the customer, it means that before you begin installation, you must verify that you have the most recent version of the Oracle Retail documentation set. Oracle Retail documentation is available on the Oracle Technology Network at the following URL:

<http://www.oracle.com/technetwork/documentation/oracle-retail-100266.html>

An updated version of the applicable Oracle Retail document is indicated by Oracle part number, as well as print date (month and year). An updated version uses the same part number, with a higher-numbered suffix. For example, part number E123456-02 is an updated version of a document with part number E123456-01.

If a more recent version of a document is available, that version supersedes all previous versions.

Oracle Retail Documentation on the Oracle Technology Network

Documentation is packaged with each Oracle Retail product release. Oracle Retail product documentation is also available on the following Web site:

<http://www.oracle.com/technetwork/documentation/oracle-retail-100266.html>

(Data Model documents are not available through Oracle Technology Network. These documents are packaged with released code, or you can obtain them through My Oracle Support.)

Conventions

Navigate: This is a navigate statement. It tells you how to get to the start of the procedure and ends with a screen shot of the starting point and the statement “the Window Name window opens.”

This is a code sample

It is used to display examples of code

Preinstallation Tasks

This chapter explains the tasks required prior to installation.

Note: Oracle Retail product installations are tightly integrated with their technical configuration. After installation the application server hostname, database name and hostname, and other technical configuration is embedded within the installation of the Oracle Retail product. It is not recommended to attempt to copy an installation to a server with a different hostname for the purposes of environment cloning. The easiest and safest way to reconfigure applications on another server is to reinstall the applications using the Oracle Retail installers.

Requesting Infrastructure Software

If you are unable to find the necessary version of the required Oracle infrastructure software (database server, application server, WebLogic, etc.) on the Oracle Software Delivery Cloud, you should file a non-technical 'Contact Us' Service Request (SR) and request access to the media. For instructions on filing a non-technical SR, see My Oracle Support Note 1071023.1 – *Requesting Physical Shipment or Download URL for Software Media*.

Check Supported Database Server Requirements

General requirements for a database server running Oracle Retail Invoice Matching include:

Supported on:	Versions Supported:
Database Server OS	<p>OS certified with Oracle Database 11gR2 (11gR2) and 12cR1 (12.1.0.2) Enterprise Edition. Options are:</p> <ul style="list-style-type: none"> Oracle Enterprise Linux 5 update x for x86-64 (Actual hardware or Oracle virtual machine). Red Hat Enterprise Linux 5 update x for x86-64 (Actual hardware or Oracle virtual machine). Oracle Enterprise Linux 6 for x86-64 (Actual hardware or Oracle virtual machine). Red Hat Enterprise Linux 6 for x86-64 (Actual hardware or Oracle virtual machine). AIX 6.1 (Actual hardware or LPARs) AIX 7.1 (Actual hardware or LPARs) Solaris 10, 11 Sparc (Actual hardware or Oracle VM Server for SPARC). HP-UX 11.31 Integrity (Actual hardware or HPVM)

Supported on:	Versions Supported:
Database Server 11gR2	<p>Oracle Database Enterprise Edition 11gR2 (11.2.0.4) with the following specifications:</p> <p>Components:</p> <ul style="list-style-type: none"> ▪ Oracle Partitioning ▪ Examples CD (Formerly the companion CD) <p>Oneoff Patches:</p> <ul style="list-style-type: none"> ▪ 18465025: MERGE REQUEST ON TOP OF 11.2.0.4.0 FOR BUGS 18016963 18302329. <p>Other components:</p> <ul style="list-style-type: none"> ▪ Perl compiler 5.0 or later ▪ X-Windows interface
Database Server 12cR1	<p>Oracle Database Enterprise Edition 12cR1 (12.1.0.2) with the following specifications:</p> <p>Components:</p> <ul style="list-style-type: none"> ▪ Oracle Partitioning ▪ Examples CD <p>Oneoffs:</p> <ul style="list-style-type: none"> ▪ Patch 19623450: MISSING JAVA CLASSES AFTER UPGRADE TO JDK 7 ▪ 20406840: PROC 12.1.0.2 THROWS ORA-600 [17998] WHEN PRECOMPILING BY 'OTHER' USER ▪ 20925154: ORA-39126: WORKER UNEXPECTED FATAL ERROR IN KUPW\$WORKER GATHER_PARSE_ITEMS JAVA ▪ 18760297: DUMP IN QERTRCROWP WHEN TRACING WITH OPERAND LENGTH CHECK ▪ 21614112: ORA-01732 ON DML ON A PARTITIONED TABLE <p>RAC only:</p> <ul style="list-style-type: none"> ▪ 21260431: APPSST 12C : GETTING ORA-4031 AFTER 12C UPGRADE ▪ 21373473: INSTANCE TERMINATED AS LMD0 AND LMD2 HUNG FOR MORE THAN 70 SECS <p>Other components:</p> <ul style="list-style-type: none"> ▪ Perl interpreter 5.0 or later ▪ X-Windows interface ▪ JDK 1.7JDK

Note: By default, JDK is at 1.6. After installing the rdbms binary, apply patch 19623450. Then follow the instructions on Oracle Database Java Developer's Guide 12c Release 1 to change JDK to 1.7. The document is available at:

<http://docs.oracle.com/database/121/JJDEV/chone.htm#JJDEV01000>

Check Supported Application Server Requirements

General requirements for an application server capable of running the Oracle Retail Invoice Matching application include the following:

Note: Files required for Oracle Configuration Manager (OCM) are removed after OPatch is used to patch the WebLogic server. This will cause the product installers and OCM installation to fail. To work around this issue, back up the content of the \$ORACLE_HOME/utls/ccr/lib directory prior to applying a patch using OPatch, and recopy the content back after you apply any patches. ORACLE_HOME is the location where WebLogic Server has been installed.

Note: If using an OPatch on Linux 64-bit platforms, see [“Installer Fails because of missing .jar in \\$ORACLE_HOME/utls/ccr/lib”](#) in Appendix: Common Installation Errors.

Supported on	Versions Supported
Application Server OS	<p>OS certified with Oracle Fusion Middleware 11g Release 1 (11.1.1.9). Options are:</p> <ul style="list-style-type: none"> ▪ Oracle Enterprise Linux 5 update x for x86-64 (Actual hardware or Oracle virtual machine). ▪ Red Hat Enterprise Linux 5 update x for x86-64 (Actual hardware or Oracle virtual machine). ▪ Oracle Enterprise Linux 6 for x86-64 (Actual hardware or Oracle virtual machine). ▪ Red Hat Enterprise Linux 6 for x86-64 (Actual hardware or Oracle virtual machine). ▪ AIX 7.1 (Actual hardware or LPARs) ▪ Solaris 11 SPARC (Actual hardware or logical domains) ▪ HP-UX 11.31 Integrity (Actual hardware, HPVM, or vPars)

Supported on	Versions Supported
Application Server	<p>Oracle Fusion Middleware 11g Release 1 (11.1.1.9)</p> <p>Components:</p> <ul style="list-style-type: none"> Oracle WebLogic Server 11g Release 1 (10.3.6) Java: JDK 1.7.0+ 64 bit <p>IMPORTANT: If there is an existing WebLogic installation on the server, you must upgrade it to WebLogic 10.3.6. All middleware components associated with WebLogic server should be upgraded to 11.1.1.9.</p> <p>Back up the weblogic.policy file (\$WLS_HOME/wlserver_10.3/server/lib) before upgrading your WebLogic server, because this file could be overwritten. Copy over the weblogic.policy backup file after the WebLogic upgrade is finished and the post patching installation steps are completed.</p> <p>Optional (SSO required)</p> <ul style="list-style-type: none"> Oracle WebTier 11g (11.1.1.9) Oracle Internet Directory 10gR3 (10.1.4) optionally with Oracle Single Sign-On 10gR3 (10.1.4) <p>or</p> <ul style="list-style-type: none"> Oracle Identity Management 11gR1 (11.1.1.9) optionally with Oracle Single Sign-On 10gR3 (10.1.4) <p>or</p> <ul style="list-style-type: none"> Oracle Identity Management 11gR1 (11.1.1.9) optionally with Oracle Access Manager 11gR1 (11.1.2.3) using osso Agent. Must have separate WebLogic 10.3.6 for Oracle Access Manager 11g. <p>or</p> <ul style="list-style-type: none"> Oracle Identity Management 11gR1 (11.1.1.9) optionally with Oracle Access Manager 11gR2 (11.1.2.3) using webgate 11gR2 (11.1.2.3) agent. Must have separate WebLogic 10.3.6 for Oracle Access Manager 11g.

Verify Single Sign-On

If ReIM will not be deployed in a Single Sign-On environment, skip this section.

If Single Sign-On is to be used, verify the Oracle Internet Directory 10gR3 version 10.1.4 or Oracle Identity Management 11gR1 version 11.1.1.9 has been installed along with the components listed in the above Application Server requirements section. Verify the Oracle WebTier Server is registered with the Oracle Access Manager 11gR1 as a partner application.

Note: Oracle Application Server (OAS) 10.1.4 Single Sign-On is only supported for existing installations, this support may be dropped in a future 13.2.X patch release.

Check Supported Client PC and Web Browser Requirements

Requirement	Version
Operating system	Windows 7
Display resolution	1024x768 or higher
Processor	2.6GHz or higher
Memory	1GByte or higher
Networking	intranet with at least 10Mbps data rate
Oracle (Sun) Java Runtime Environment	1.7.0+
Browser	Microsoft Internet Explorer version 9 or 11 Mozilla Firefox ESR 31+

Configure Mozilla Firefox ESR 31+

If you are using Firefox ESR 31+, you need to configure the browser to display the list of values pop ups correctly.

1. Open your Firefox browser and type in your address bar as follows:
`about:config`
2. A warning dialog is displayed. Accept the warning.
A list of configuration values is displayed.
3. Locate the `browser.link.open_newwindow` property, right-click on it, and select Modify.
4. Change the value to 2.
5. Close and re-start the browser.

Supported Oracle Retail Products

Requirement	Version
Oracle Retail Merchandising System (RMS)/Oracle Retail Trade Management (RTM)/Oracle Retail Sales Audit (ReSA)	13.2.9
Oracle Retail Store Inventory Management (SIM) (by way of RMS)	13.2.9
Oracle Retail Analytics	13.2.9

UNIX User Account Privileges to Install the Software

A UNIX user account is needed to install the software. The UNIX user that is used to install the software should have write access to the WebLogic server installation files.

For example, `oretail`.

Note: Installation steps will fail when trying to modify files under the WebLogic installation, unless the user has write access.

Supported Oracle Applications

Requirement	Version
Oracle E-Business Suite Financials	Oracle E-Business Suite 12.1.3 integration is supported using the Oracle Retail Financial Integration for Oracle Retail Merchandising Suite and Oracle E-Business Suite Financials. See the <i>Oracle® Retail Financial E-Business Suite Integration Solution Implementation/Operations Guide</i> for specific version information.
PeopleSoft Enterprise Financials	Oracle Retail Financial Integration (ORFI) Media Pack Oracle E-Business Suite 12.1.3 integration is supported using the Oracle Retail Financial Integration Pack for Oracle Retail Merchandising Suite and Oracle E-Business Suite Financials.

RAC and Clustering

Oracle Retail Invoice Matching has been validated to run in two configurations on Linux:

- Standalone WebLogic and Database installations
- Real Application Cluster Database and WebLogic Server Clustering

The Oracle Retail products have been validated against an 11.2.0.4/12.1.0.2 RAC database. When using a RAC database, all JDBC connections should be configured to use THIN connections rather than OCI connections. It is suggested that if you do use OCI connections, the Oracle Retail products database be configured in the tnsnames.ora file used by the WebLogic Server installations.

Clustering for WebLogic Server 10.3.6 is managed as an Active-Active cluster accessed through a Load Balancer. Validation has been completed utilizing a RAC 11.2.0.4 Oracle Internet Directory database with the WebLogic 10.3.6 cluster. It is suggested that a Web Tier 11.1.1.5 installation be configured to reflect all application server installations if SSO will be utilized.

References for Configuration:

- Oracle® Fusion Middleware High Availability Guide 11g Release 1 (11.1.1) Part Number E10106-09
- Oracle® Real Application Clusters Administration and Deployment Guide 11g Release 2 (11.2) Part Number E16795-11 and/or

Oracle Real Application Clusters Administration and Deployment Guide
12c Release 1 (12.1) E48838-10

Database Installation Tasks

The ReIM database objects are bundled with the RMS database schema installer. To install the ReIM database objects follow the *Oracle Retail Merchandising System Installation Guide* to run the database schema installer, and select the ReIM option on the product selection page.

Application Installation Tasks

Before proceeding, you must install Oracle WebLogic Server 11g Release 1 (10.3.6) and patches listed in the Chapter 1 of this document. The Oracle Retail Invoice Matching application is deployed to a WebLogic Managed server within the Web Logic installation. It is assumed that Oracle Database has already been configured and loaded with the appropriate RMS and Oracle Retail Invoice Matching schemas for your installation.

IMPORTANT: If there is an existing WebLogic installation on the server, you must upgrade WebLogic to WebLogic 10.3.6. All middleware components associated with WebLogic server should be upgraded to 11.1.1.9.

Back up the weblogic.policy file (\$WLS_HOME/wlserver_10.3/server/lib) before upgrading your WebLogic server, because this file could be overwritten. Copy over the weblogic.policy backup file after the WebLogic upgrade is finished and the post patching installation steps are completed.

Create Providers

Perform the following procedure to create providers in APPDomain and ClassicDomain.

Note: The following steps are being performed in APPDomain but the steps must be done for both APPDomain and ClassicDomain.

1. Log in to the Administration Console.
`http://<host>:<port>/console/`
2. In the Domain Structure frame, click Security Realms.

The screenshot displays the Oracle WebLogic Server Administration Console. The left-hand 'Domain Structure' tree shows the hierarchy: APPDomain > Environment > Security Realms. The main content area is titled 'Summary of Security Realms' and includes a table of configured realms. Below the table, there are 'New' and 'Delete' buttons. The bottom left pane shows 'System Status' with 'Health of Running Servers'.

Name	Default Realm
myrealm	true

3. In the Realms table, click myrealm. The Settings for myrealm page is displayed.

ORACLE WebLogic Server® Administration Console

Welcome, weblogic Connected to: APPDomain

Home » Summary of Security Realms » myrealm » Summary of Security Realms » myrealm

Settings for myrealm

Configuration Users and Groups Roles and Policies Credential Mappings Providers Migration

General RDBMS Security Store User Logout Performance

Click the **Lock & Edit** button in the Change Center to modify the settings on this page.

Save

Use this page to configure the general behavior of this security realm.

Note: If you are implementing security using JACC (Java Authorization Contract for Containers as defined in JSR 115), you must use the DD Only security model. Other WebLogic Server models are not available and the security functions for Web applications and EJBs in the Administration Console are disabled.

Name: myrealm The name of this security realm. [More Info...](#)

Security Model Default: DD Only Specifies the default security model for Web applications or EJBs that are secured by this security realm. You can override this default during deployment. [More Info...](#)

☒ Combined Role Mapping Enabled Determines how the role mappings in the Enterprise Application, Web application, and EJB containers interact. This setting is valid only for Web applications and EJBs that use the Advanced security model and that initialize roles from deployment descriptors. [More Info...](#)

☐ Use Authorization Providers to Protect JMX Access Configures the WebLogic Server MBean servers to use the security realm's Authorization providers to determine whether a JMX client has permission to access an MBean attribute or invoke an MBean operation. [More Info...](#)

Advanced

Save

Click the **Lock & Edit** button in the Change Center to modify the settings on this page.

4. Click the Providers tab.

ORACLE WebLogic Server® Administration Console

Welcome, weblogic Connected to: APPDomain

Home » Summary of Security Realms » myrealm » Summary of Security Realms » myrealm » Providers

Settings for myrealm

Configuration Users and Groups Roles and Policies Credential Mappings Providers Migration

Authentication Password Validation Authorization Adjudication Role Mapping Auditing Credential Mapping Certification Path Keystores

An Authentication provider allows WebLogic Server to establish trust by validating a user. You must have one Authentication provider in a security realm, and you can configure multiple Authentication providers in a security realm. Different types of Authentication providers are designed to access different data stores, such as LDAP servers or DBMS. You can also configure a Realm Adapter Authentication provider that allows you to work with users and groups from previous releases of WebLogic Server.

Customize this table

Authentication Providers

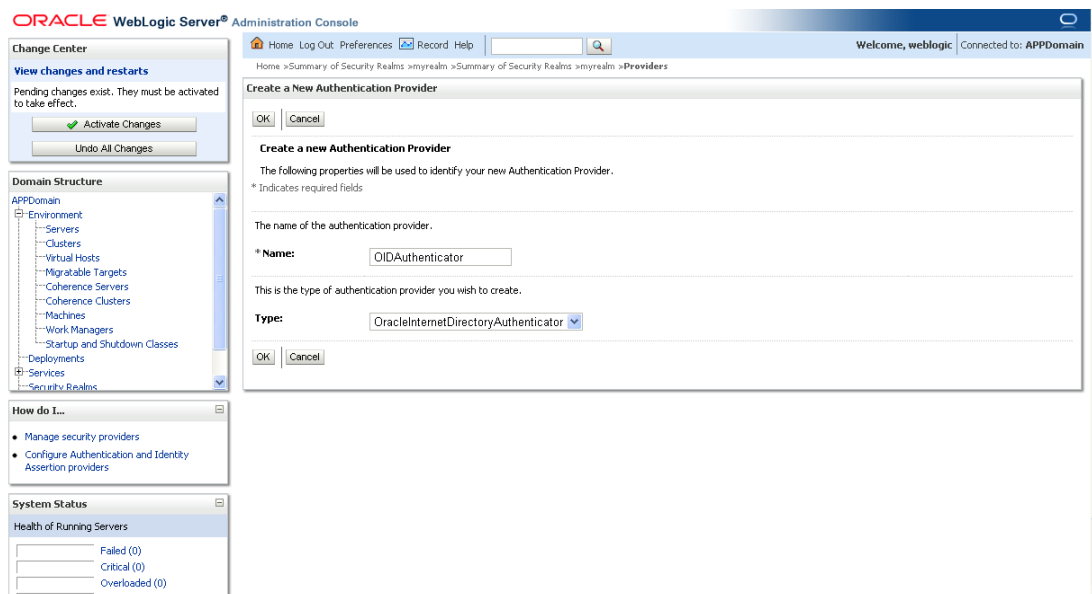
Click the **Lock & Edit** button in the Change Center to activate all the buttons on this page.

New Delete Reorder Showing 1 to 2 of 2 Previous Next

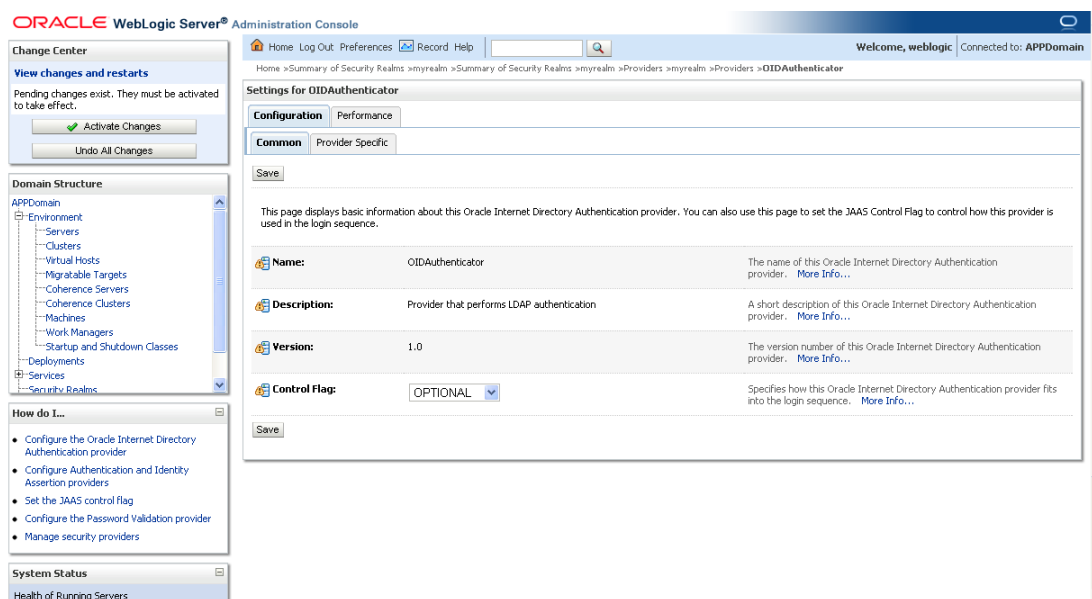
Name	Description	Version
<input type="checkbox"/> DefaultAuthenticator	WebLogic Authentication Provider	1.0
<input type="checkbox"/> DefaultIdentityAsserter	WebLogic Identity Assertion provider	1.0

New Delete Reorder Showing 1 to 2 of 2 Previous Next

- Click **Lock & Edit** and then click **New**. The Create a New Authentication Provider page is displayed.



- Enter **OIDAuthenticator** in the Name field and select **OracleInternetDirectoryAuthenticator** as the type.
- Click **OK**. The list of providers is displayed. Select the newly created provider, **OIDAuthenticator**. The Settings for **OIDAuthenticator** page is displayed



- Set the Control Flag field to **Optional** and click **Save**. The Control Flag should be set as **Optional** so users do not get locked out of the Admin console if there is a typo.

9. Once your changes are saved, click **Activate Changes**.

ORACLE WebLogic Server® Administration Console

Home Log Out Preferences Record Help

Welcome, weblogic Connected to: APPDomain

Home » Summary of Security Realms » myrealm » Users and Groups » Summary of Security Realms » myrealm » Providers » OIDAuthenticator

Settings for OIDAuthenticator

Configuration Performance

Common Provider Specific

Save

This page displays basic information about this Oracle Internet Directory Authentication provider. You can also use this page to set the JAAS Control Flag to control how this provider is used in the login sequence.

Name:	OIDAuthenticator	The name of this Oracle Internet Directory Authentication provider. More Info...
Description:	Provider that performs LDAP authentication	A short description of this Oracle Internet Directory Authentication provider. More Info...
Version:	1.0	The version number of this Oracle Internet Directory Authentication provider. More Info...
Control Flag:	OPTIONAL	Specifies how this Oracle Internet Directory Authentication provider fits into the login sequence. More Info...

Save

10. Click the **Provider Specific** tab and click **Lock & Edit**.

ORACLE WebLogic Server® Administration Console

Home Log Out Preferences Record Help

Welcome, weblogic Connected to: APPDomain

Home » Summary of Security Realms » myrealm » Summary of Security Realms » myrealm » Providers » myrealm » Providers » OIDAuthenticator

Settings for OIDAuthenticator

Configuration Performance

Common Provider Specific

Save

Use this page to define the provider specific configuration for this Oracle Internet Directory Authentication provider.

Connection

Host:	msp12095.us.oracle.com	The host name or IP address of the LDAP server. More Info...
Port:	3060	The port number on which the LDAP server is listening. More Info...
Principal:	cn=orcladmin	The Distinguished Name (DN) of the LDAP user that WebLogic Server should use to connect to the LDAP server. More Info...
Credential:	*****	The credential (usually a password) used to connect to the LDAP server. More Info...
Confirm Credential:	*****	
<input type="checkbox"/> SSL Enabled		Specifies whether the SSL protocol should be used when connecting to the LDAP server. More Info...

Users

User Base DN:	cn=users,dc=us,dc=oracle,dc=com	The base distinguished name (DN) of the tree in the LDAP directory that contains users. More Info...
All Users Filter:	(&(cn=*)(objectclass=pers)	An LDAP search filter for finding all users beneath the base user distinguished name (DN). Note: If you change the user name attribute to a type other than cn, you must duplicate that change in the User From More Info...

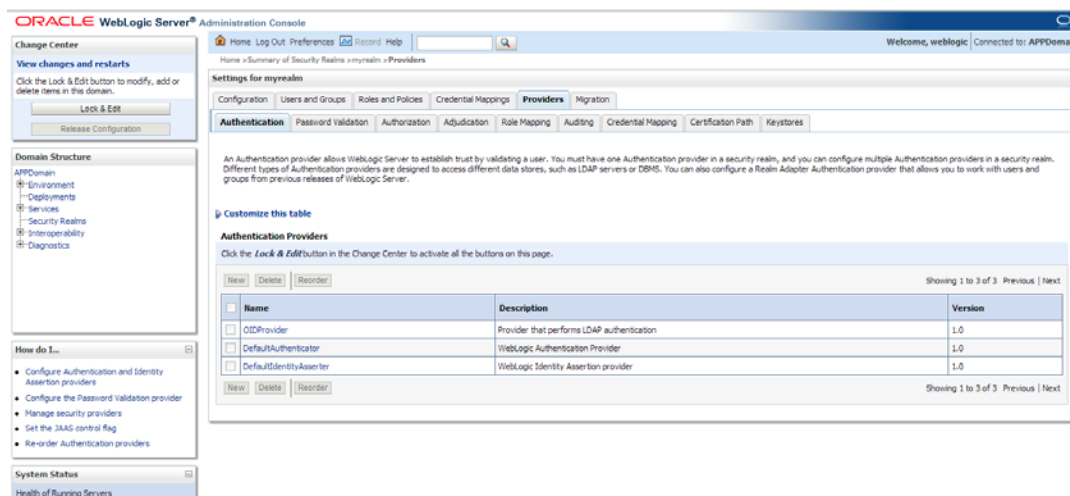
Save

11. Supply your LDAP connection and credentials.

The entries below are examples only. You should match the entries to your OID

- Host: msp12095.us.oracle.com
- Port: 3060
- Principal: cn=orcladmin
- Credential: <password>
- Confirm Credential: <password>
- User Base DN: cn=users,dc=us,dc=oracle,dc=com
- Group Base DN: cn=Groups,dc=us,dc=oracle,dc=com
- Check **Propagate Cause For Login Exception**

12. Click **Save** and **Activate Changes**.
13. Click the **Providers** tab and click **Lock & Edit**.



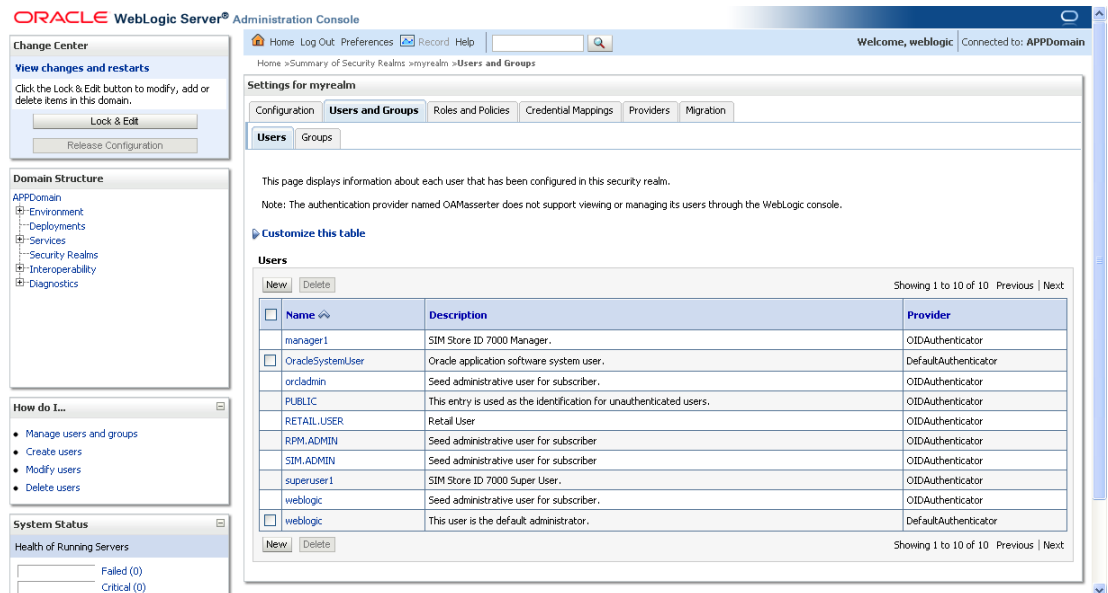
14. Click **Reorder**.
15. Order **OIDAuthenticator** first and **DefaultAuthenticator** second.
16. Click **Save**.
17. Once your changes are saved, click **Activate Changes**.
18. Shut down all servers and restart the admin server.

Verify and Set OID Authenticator

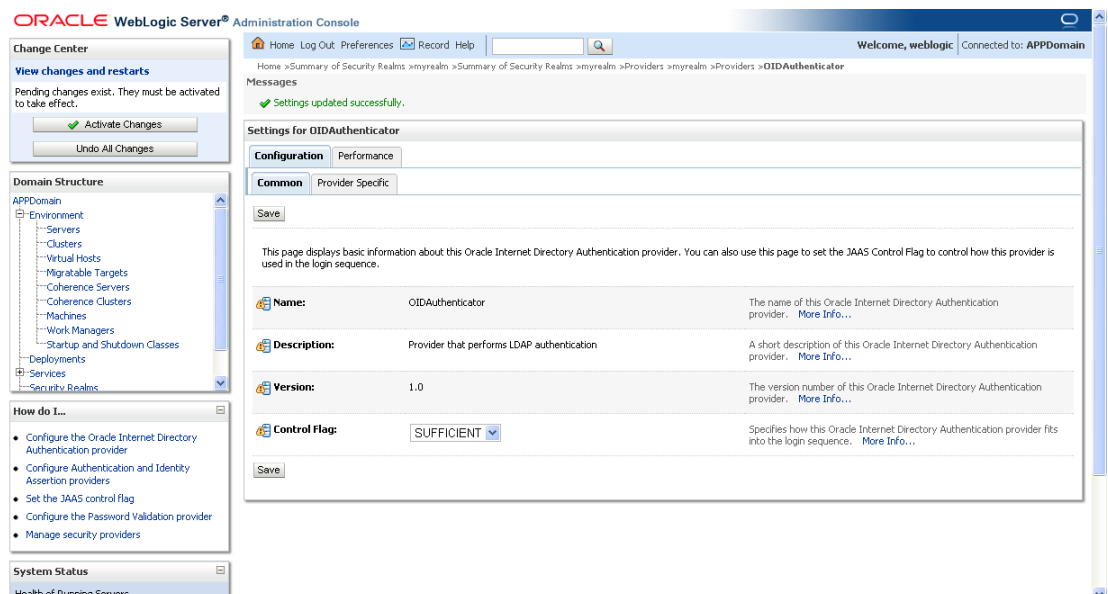
1. Log in to the Administration Console.
http://<host>:<port>/console/
2. In the Domain Structure frame, click **Security Realms**.
3. In the Realms table, click **Default Realm Name**. The Settings page is displayed.

- Click the Users and Groups tab to see a list of users and groups contained in the configured authentication providers.

You should see usernames from the Oracle Internet Directory configuration, which implicitly verifies that the configuration is working.



- Click the Providers tab and click OIDAuthenticator.



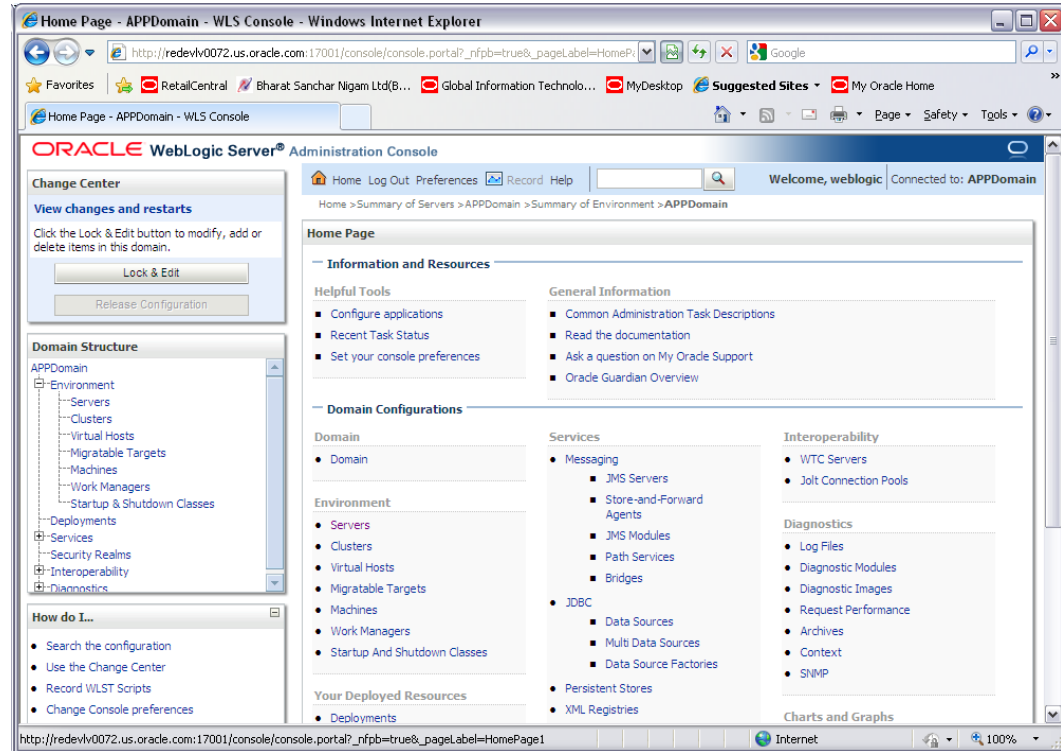
- Set Control Flag to SUFFICIENT and click Save.
- Click **Activate Changes** and restart the admin server.

Install Managed Server in WebLogic

Important Note: Skip this section if a managed server already exists for Oracle Retail Invoice Matching.

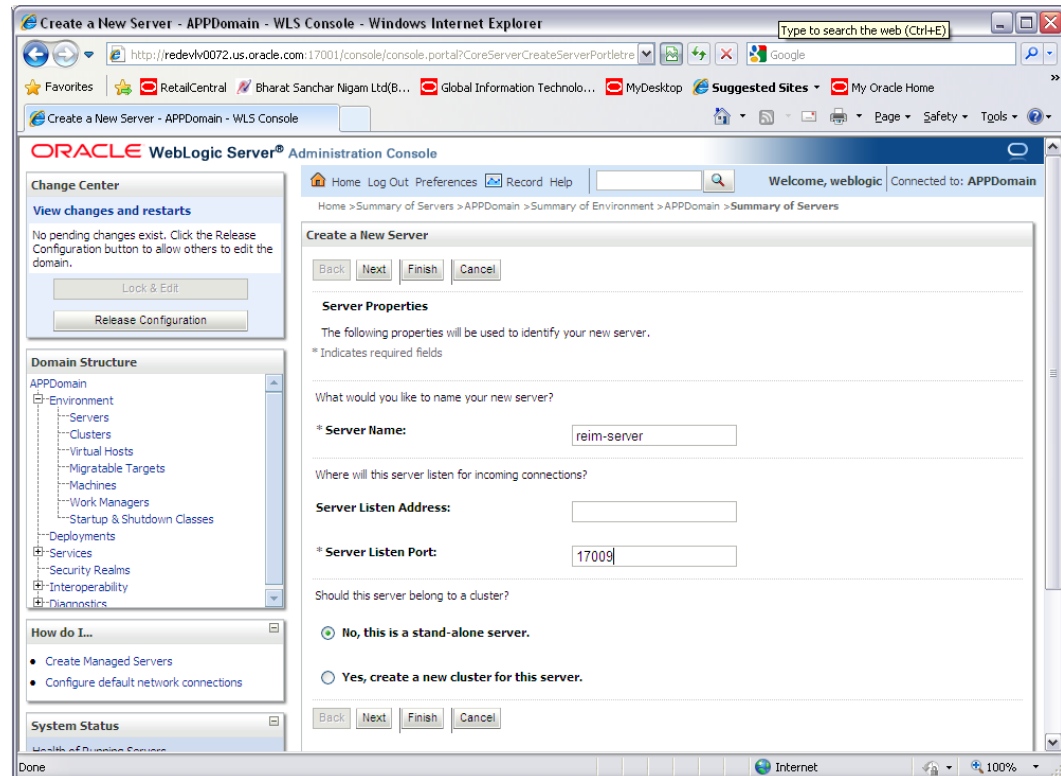
Before running the application installer, you must install the managed server in WebLogic if it was not created during the domain install.

1. Log in to the Administration Console.



2. Click Lock & Edit.

3. Navigate to Environment > Servers and select new tab of the servers on the right side.



4. Set the following variables:

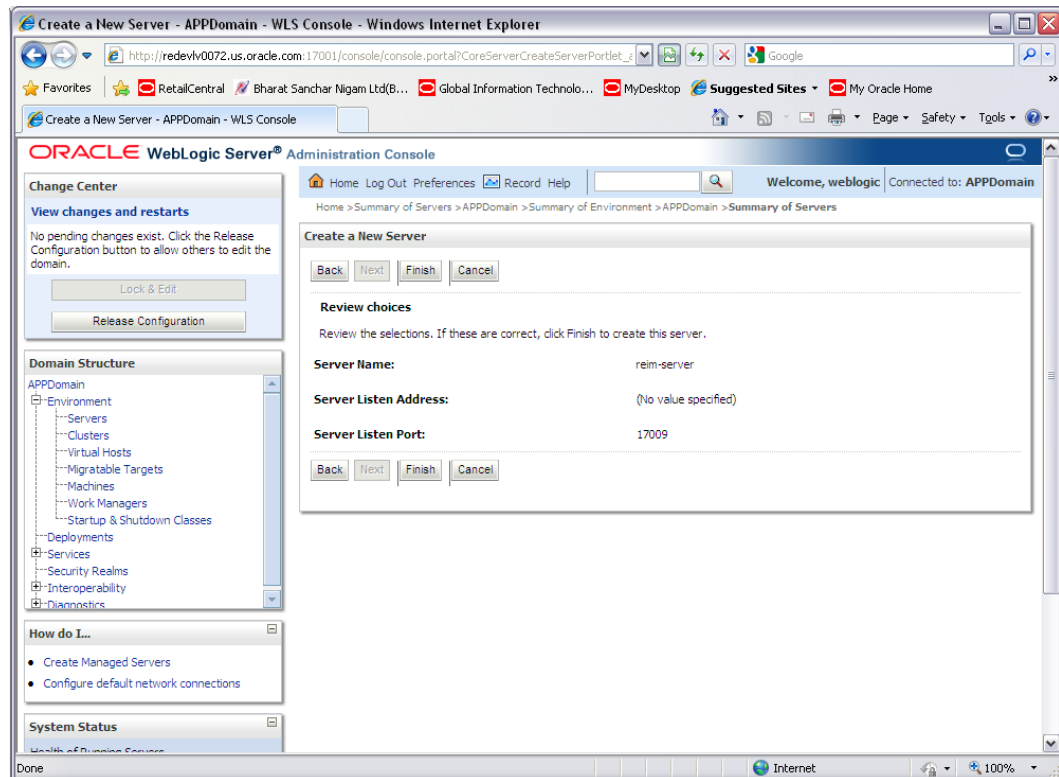
- **Server Name:** These should be some name specific to your application targeted (for example, reim-server).

Server Listen Address: <weblogic server> (for example, redevlv0072.us.oracle.com)

- **Server Listen Port:** A free port. Check for availability.

A suggestion is to increment the AdminServer port by two and keep incrementing by two for each managed server (for example, 17003, 17005, 17007, 17009, and so on.)

5. Click Next.



6. Click Finish.

Summary of Servers - APPDomain - WLS Console - Windows Internet Explorer

http://redevlv0072.us.oracle.com:17001/console/console.portal?_nfpb=true&_pageLabel=CoreSe

Summary of Servers - APPDomain - WLS Console

ORACLE WebLogic Server® Administration Console

Home Log Out Preferences Record Help Welcome, weblogic Connected to: APPDomain

Change Center

View changes and restarts

Pending changes exist. They must be activated to take effect.

Activate Changes

Undo All Changes

Domain Structure

APPDomain

- Environment
 - Servers
 - Clusters
 - Virtual Hosts
 - Migratable Targets
 - Machines
 - Work Managers
 - Startup & Shutdown Classes
 - Deployments
 - Services
 - Security Realms
 - Interoperability
 - Diagnostics

How do I...

- Create Managed Servers
- Clone Servers
- Delete Managed Servers
- Delete the Administration Server
- Start and stop servers

Summary of Servers

Configuration Control

A server is an instance of WebLogic Server that runs in its own Java Virtual Machine (JVM) and has its own configuration. This page summarizes each server that has been configured in the current WebLogic Server domain.

Customize this table

Servers (Filtered - More Columns Exist)

New Clone Delete Showing 1 to 2 of 2 Previous Next

<input type="checkbox"/>	Name	Cluster	Machine	State	Health	Listen Port
<input type="checkbox"/>	AdminServer(admin)		redevlv0072	RUNNING	OK	17001
<input type="checkbox"/>	reim-server			Unknown		17009

New Clone Delete Showing 1 to 2 of 2 Previous Next

7. Click Activate Changes on the left side.

Summary of Servers - APPDomain - WLS Console - Windows Internet Explorer

http://redevlv0072.us.oracle.com:17001/console/console.portal?_nfpb=true&_pageLabel=CoreSe

Summary of Servers - APPDomain - WLS Console

ORACLE WebLogic Server® Administration Console

Home Log Out Preferences Record Help Welcome, weblogic Connected to: APPDomain

Change Center

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 - Diagnostics

How do I...

- Create Managed Servers
- Clone Servers
- Delete Managed Servers
- Delete the Administration Server
- Start and stop servers

System Status

Health of Running Servers

Failed (0)

Critical (0)

Overloaded (0)

Warning (0)

OK (5)

Summary of Servers

Configuration Control

A server is an instance of WebLogic Server that runs in its own Java Virtual Machine (JVM) and has its own configuration. This page summarizes each server that has been configured in the current WebLogic Server domain.

Customize this table

Servers (Filtered - More Columns Exist)

New Clone Delete Showing 1 to 6 of 6 Previous Next

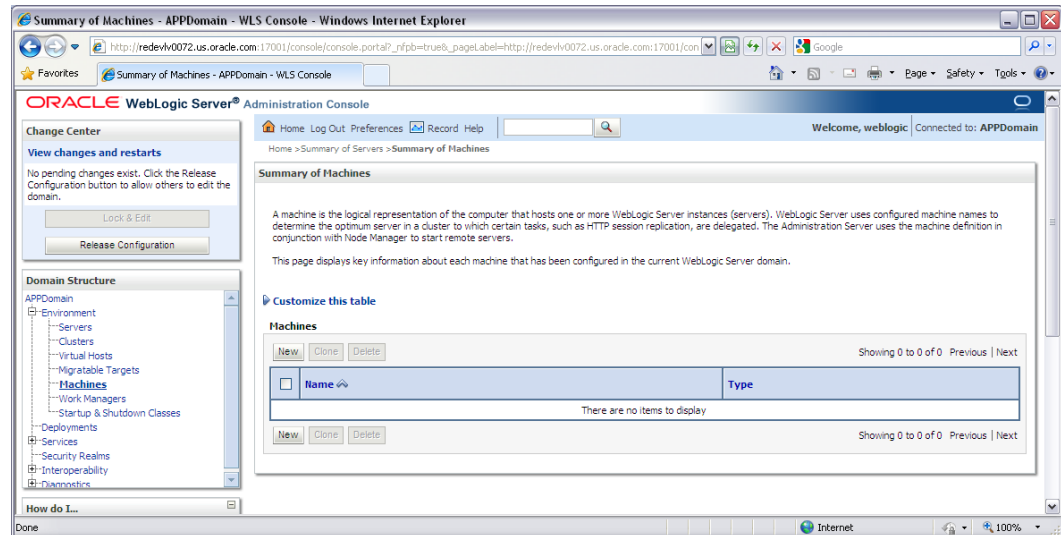
<input type="checkbox"/>	Name	Cluster	Machine	State	Health	Listen Port
<input type="checkbox"/>	AdminServer(admin)		redevlv0072	RUNNING	OK	17001
<input type="checkbox"/>	alloc-server		redevlv0072	Unknown		17005
<input type="checkbox"/>	reim-server		redevlv0072	RUNNING	OK	17009
<input type="checkbox"/>	rpm-server		redevlv0072	RUNNING	OK	17011
<input type="checkbox"/>	rsl-server		redevlv0072	RUNNING	OK	17013
<input type="checkbox"/>	srs-server		redevlv0072	RUNNING	OK	17015

New Clone Delete Showing 1 to 6 of 6 Previous Next

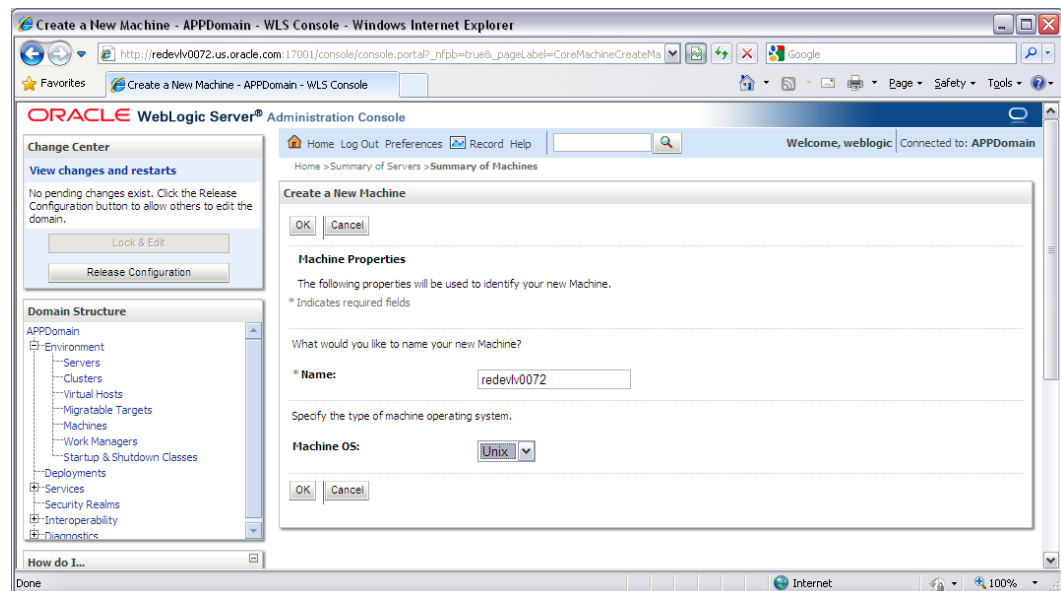
Install Node Manager

Install Node Manager if it was not created during domain install. The node manager is required so that the managed servers can be started and stopped through the Administration Console. Only one node manager is needed per WebLogic install.

1. Log in to the Administration Console.
2. Click **Lock & Edit** and navigate to **Environments > Machines**.

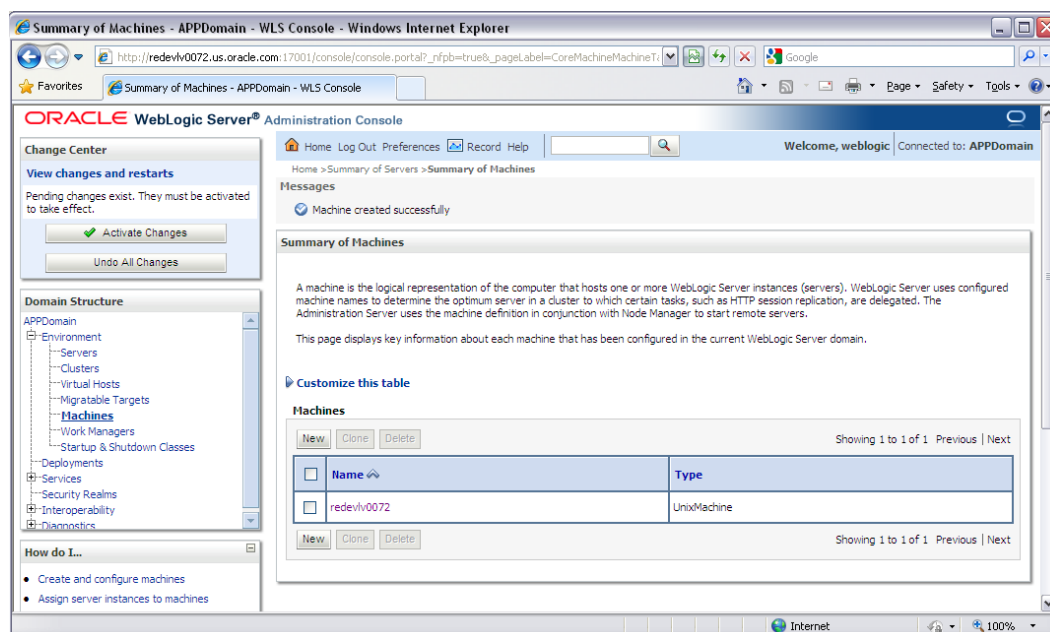


3. Click **New**.



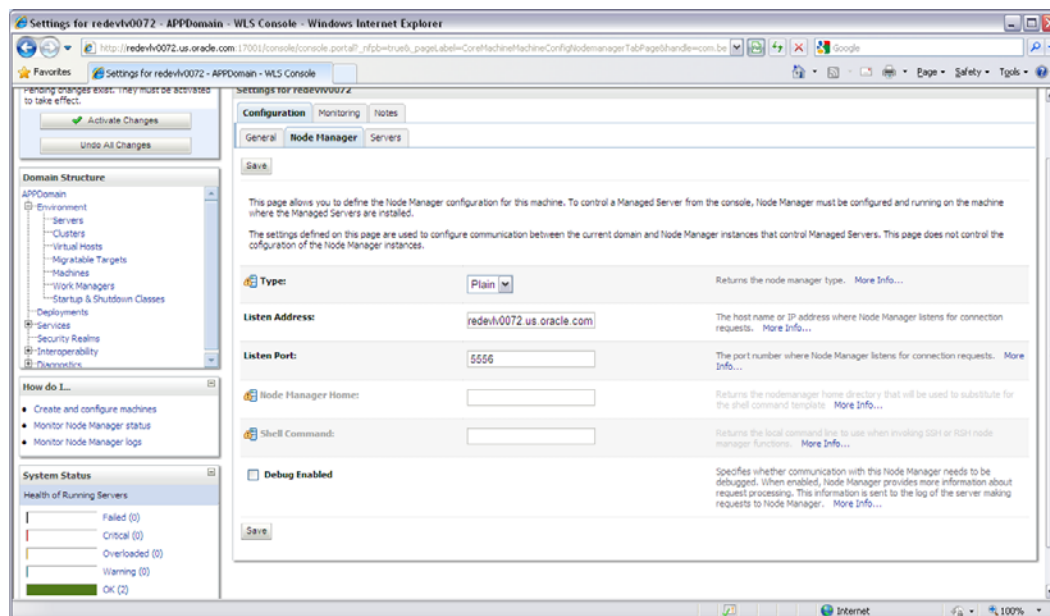
4. Set the following variables.
 - **Name:** Logical machine name
 - **Machine OS:** UNIX
5. Click **OK**.

6. Click on the machine created.

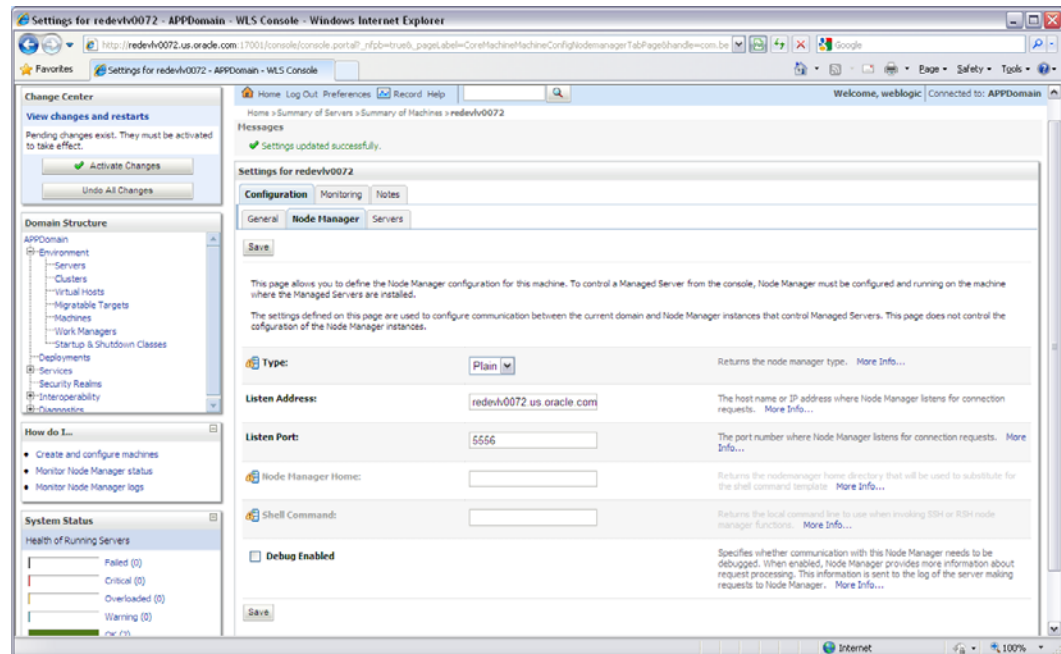


7. Click the Node manager tab and update the details below.

- **Type:** Plain
- **Listen Address:** redevlv0072.us.oracle.com
- **Listen Port:** Default port (for example, 5556) or any available port.



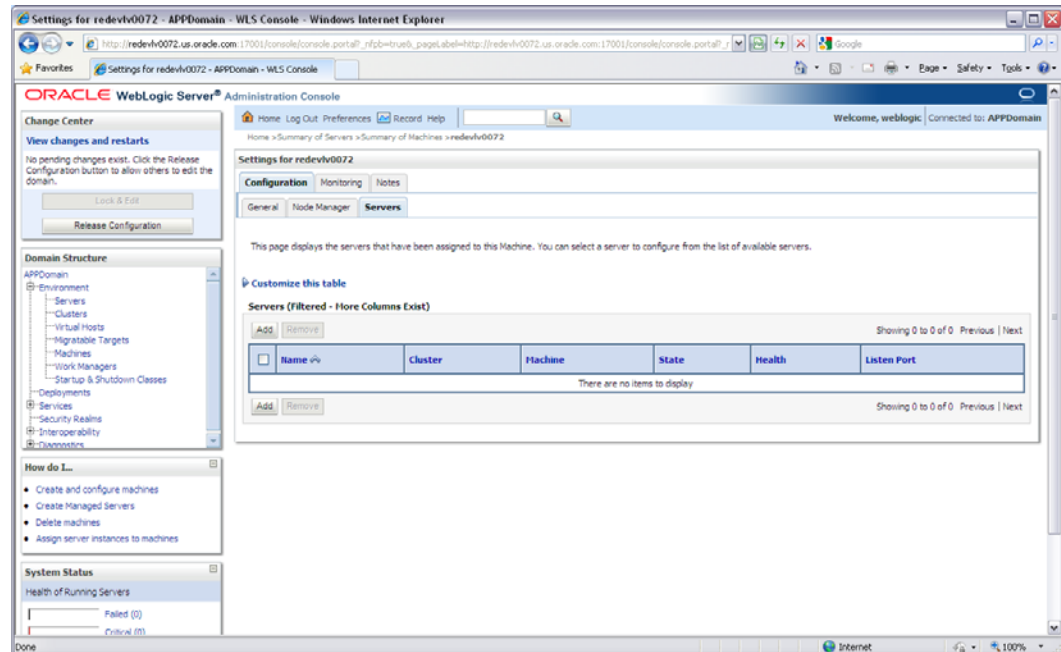
8. Click Save.



9. Click Activate Changes.

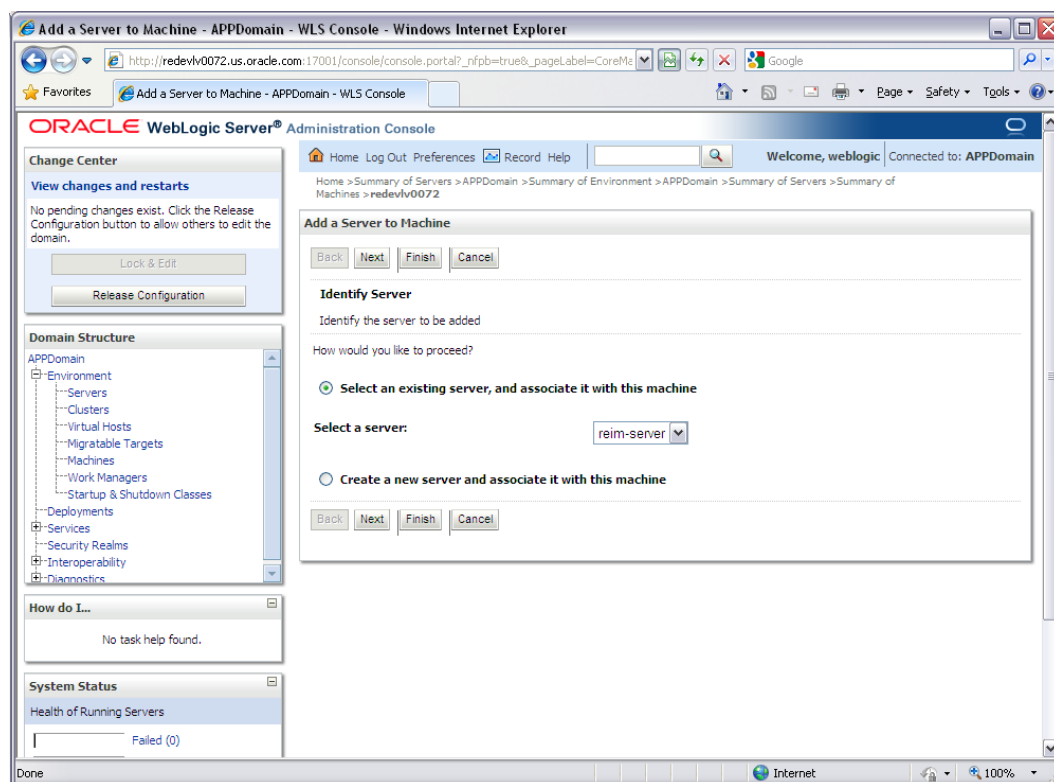
10. Click Lock & Edit.

11. Navigate to Environments->machines->click on the machine name and select the Servers tab.



12. Add the managed servers that need to be configured with the Node Manager. Save the changes.

13. Click **Add**.



14. Set the following variables:

- Server: reim-server

15. Click **Next/Finish**.

16. Click Activate Changes.

Note: To activate changes the server needs to be stopped as follows.

```
$WLS_HOME/user_projects/domains/<APP_Domain>/bin/stopManagedWebLogic.sh reim-server  
${server_name}:${server_port}
```

Go to the managed server that is being added to the machine and click the Server Start tab. In the Class Path box, add the following:

```
<full-path-to-domain>/servers/<managed-server>  
For example: /u00/webadmin/product/10.3.x  
/WLS/user_projects/domains/<Domain_name>/servers/reim-server
```

- 17.** Start NodeManager from the server using the startNodeManager.sh at \$WLS_HOME/wlserver_10.3/server/bin:
- 18.** Edit the nodemanager.properties file at the following location with the below values:
\$WLS_HOME/wlserver_10.3/common/nodemanager/nodemanager.properties
- SecureListener=false
 - StartScriptEnabled=true
 - StartScriptName=startWebLogic.sh.
- nodemanager.properties has Listener port=5556 by default. If you have given a different port in the previous steps, update the same in nodemanager.properties.
- 19.** NodeManager must be restarted after making changes to the nodemanager.properties file.

Note: The nodemanager.properties file is created after NodeManager is started for the first time. It will not be available before that point.

Start the Managed Servers

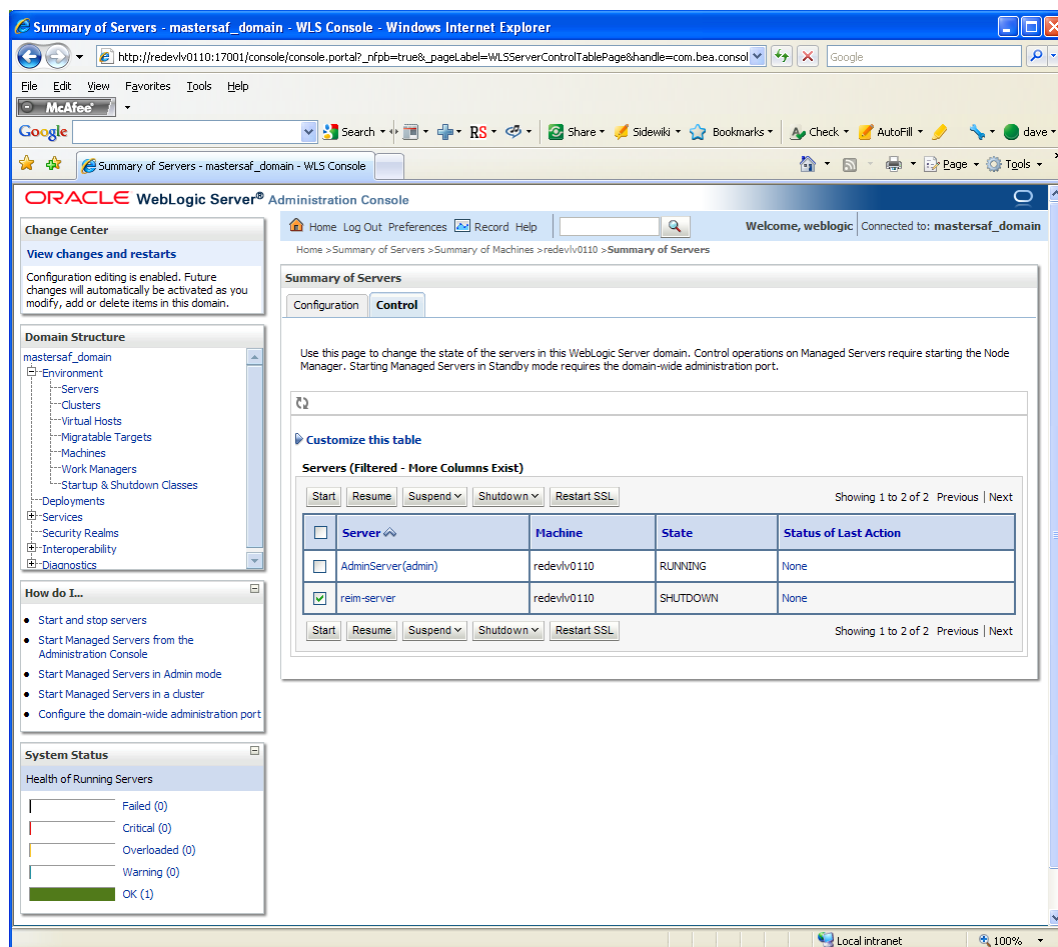
To start the managed servers, do the following.

1. Start the Node Manager from the command line if not already done from starting the node manager in the section above this.

```
$WEBLOGIC_HOME/wlserver_10.3/server/bin/startNodeManager.sh
```

After the Node Manager is started, the managed servers can be started through the Administration Console.

2. Navigate to Environments->Servers->select reim-server server and click the Control tab.
3. Click the managed server (reim-server) you want to start and press the **Start** button to start the managed server you clicked to start.

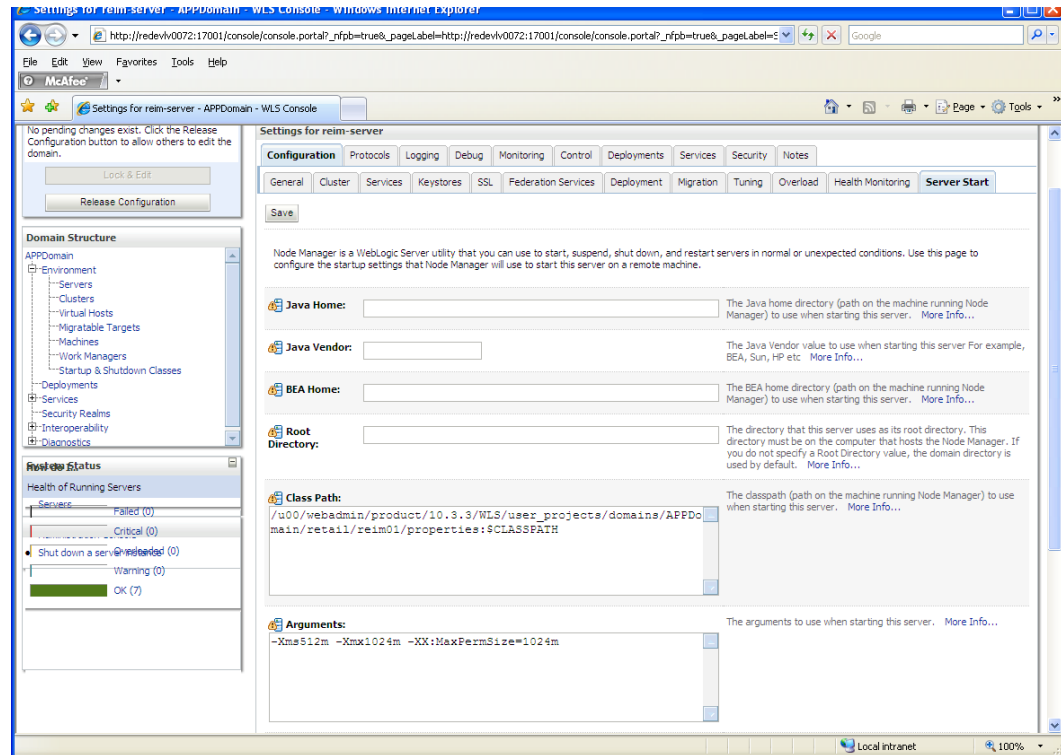


4. Update in weblogic console->servers->reim-server->server start tab->Classpath and Arguments, with the following:

```
CLASSPATH: full_path_to_domain>/retail/<context_root>/properties:$CLASSPATH
```

Arguments for 1.7.0+ JDK

```
-Xms512m -Xmx1024m -XX:MaxPermSize=1024m
```



5. Export `WEBLOGIC_DOMAIN_HOME=<full_path_to_domain>`
6. Update `<WLS_HOME>/server/lib/weblogic.policy` file with the below.

Note: If copying the following text from this guide to UNIX, ensure that it is properly formatted in UNIX. Each line entry beginning with "permission" must terminate on the same line with a semicolon.

Note: `<WEBLOGIC_DOMAIN_HOME>` in the below example is the full path of the Weblogic Domain, `<managed_server>` is the managed server created for the App and `<context_root>` correlates to the value entered for the application deployment name/context root of the application during installation. See the example. There should not be a space after **file:** in the following. `file:<WEBLOGIC_DOMAIN_HOME>`.

```
grant codeBase "file:
<WEBLOGIC_DOMAIN_HOME>/servers/<managed_server>/tmp/_WL_user/<context_root>/-"
{permission java.security.AllPermission;permission
oracle.security.jps.service.credstore.CredentialAccessPermission
"credstoressp.credstore", "read,write,update,delete";permission
oracle.security.jps.service.credstore.CredentialAccessPermission
"credstoressp.credstore.*", "read,write,update,delete";
};
```

An example of the full entry that might be entered is:

```
grant codeBase
"file:/u00/webadmin/product/10.3.x/WLS/user_projects/domains/APPDomain/servers
/reim-server/tmp/_WL_user/reim01/-" {permission
java.security.AllPermission;permission
oracle.security.jps.service.credstore.CredentialAccessPermission
"credstoressp.credstore", "read,write,update,delete";permission
oracle.security.jps.service.credstore.CredentialAccessPermission
"credstoressp.credstore.*", "read,write,update,delete";}
```

7. Restart weblogic admin server after making changes to the weblogic.policy file in the previous step.

Expand the ReIM Application Distribution

To expand the ReIM application distribution, do the following.

1. Log in to the UNIX server as the user who owns the WebLogic installation. Create a new staging directory for the ReIM application distribution (reim13application.zip). There should be a minimum of 120 MB disk space available for the application installation files.

Example: /u00/webadmin/media/reim

This location is referred to as `INSTALL_DIR` for the remainder of this chapter.

2. Copy reim13application.zip to `INSTALL_DIR` and extract its contents.

Clustered Installations– Preinstallation Steps

Note: Skip this section if you are not clustering the application server.

Complete the following preinstallation steps.

1. Make sure that you are able to start and stop the managed servers that are part of the ReIM Cluster from the Administration Console.
2. Insert into `$WEBLOGIC_HOME/wlserver_10.3/server/lib/weblogic.policy` file, the same ReIM entries for java security permissions you entered on the main server. See the Start the Managed Servers section for additional information.

There are no additional steps to take before running the installer for ReIM.

Run the ReIM Application Installer

When the managed server is configured and started, you can run the ReIM application installer. This installer configures and deploys the ReIM application.

Note: See [Appendix: ReIM Application Installer Screens](#) for details on every screen and field in the application installer.

Note: It is recommended that the installer be run as the same UNIX account which owns the application server ORACLE_HOME files.

Note: If you are using AIX 7.1, the "retail-OCM-withAnt.zip" file present in the INSTALL_DIR/reim must be renamed or removed, before running the installer. See [Appendix: Common Installation Errors](#) for more information

1. Change directories to INSTALL_DIR/reim/application.
2. Set the ORACLE_HOME and JAVA_HOME environment variables. ORACLE_HOME should point to your WebLogic 11g installation. JAVA_HOME should point to the Java 7.0 (1.7.0) or higher.
3. Set the WEBLOGIC_DOMAIN_HOME environment variable to point to the domain that ReIM will be installed to (for example, /u00/webadmin/product/10.3.x/WLS/user_projects/domains/132_mck_soa_domain).
4. If you are using an X server such as Exceed, set the DISPLAY environment variable so that you can run the installer in GUI mode (recommended). If you are not using an X server, or the GUI is too slow over your network, unset DISPLAY for text mode.
5. Run the install.sh script. This launches the installer. After installation is completed, a detailed installation log file is created (reim13install.<timestamp>.log).
6. Prior to running the ReIM batch programs, run the following command.

```
cp
$WEBLOGIC_DOMAIN_HOME/retail/reim13/properties/com/retex/reim/reim.properties
$WEBLOGIC_DOMAIN_HOME/retail/reim13/batch/WEB-INF/classes/com/retex/reim/
```

Resolving Errors Encountered During Application Installation

If the application installer encounters any errors, it halts execution immediately. You can run the installer in silent mode so that you do not have to retype the settings for your environment. See [Appendix: Installer Silent Mode](#) in this document for instructions on silent mode.

See [Appendix: Common Installation Errors](#) in this document for a list of common installation errors.

Because the application installation is a full reinstall every time, any previous partial installs are overwritten by the successful installation.

Oracle Configuration Manager

The Oracle Retail OCM Installer packaged with this release installs the latest version of OCM.

The following document is available through My Oracle Support Access My Oracle Support at the following URL:

<https://support.oracle.com>

Oracle Configuration Manager Installer Guide (ID 1071030.1)

This guide describes the procedures and interface of the Oracle Retail Oracle Configuration Manager Installer that a retailer runs at the beginning of the installation process.

OCM Documentation Link

<http://www.oracle.com/technology/documentation/ocm.html>

Note: OCM is not supported on AIX 7.1

Clustered Installations– Post-Installation Steps

If you are installing the ReIM application to a clustered WebLogic Server environment, there are some extra steps you need to take to complete the installation. In these instructions, the application server node with the ORACLE_HOME you used for the ReIM installer is referred to as the *master server*. All other nodes are referred to as the *remote server*.

1. The ReIM batch files should be copied from the master server to each of the remote servers under the same path as on the master server. You should take the \$WEBLOGIC_DOMAIN_HOME/retail/context root/batch directory and copy it onto the remote servers under the same path.
2. The Oracle Retail Installation creates some security files on \$WEBLOGIC_DOMAIN_HOME/retail/context root/config directory. Copy this directory to each remote node of the Cluster, matching the full path of the location of this directory on main node.

Backups Created by Installer

The ReIM application installer backs up a previous batch script installation by renaming it from reim-batch to reim-batch.<timestamp>. This is done to prevent the removal of any custom changes you might have. These backup directories can be safely removed without affecting the current installation.

Example: reim-batch.200803011726

Test the ReIM Application

After the application installer completes you should have a working ReIM application installation. To launch the application, open a web browser and go to `http:// (managed_server_port)/<context_root>/index.jsp`.

If you have configured a WebTier to a front end ReIM application, use `httpport` instead of managed server port.

Example: `http:// redev1v0072: 17009/reim01/index.jsp`

Oracle Retail provides test cases that allow you to smoke test your installation. See the My Oracle support document, “Oracle Retail Merchandising Installation Test Cases” (ID 1277131.1).

reim.properties

The `reim.properties` file contains most of the settings for the ReIM application. Many properties in this file are set by the installer to get a working application up and running, but you may want to modify other settings in this file.

To modify settings in the properties file, you must redeploy the ReIM application. The properties values are stored in the `templates/reim.properties` file, which is in the directory where you expanded the ReIM installer files (for example, `<INSTALL_DIR>/reim/application/templates/reim/properties`, where `<INSTALL_DIR>` is the directory the application installer was unzipped).

Edit the `reim.properties` file to set the properties to the desired values. Then rerun the installer to deploy ReIM.

ReIM Batch Scripts

The ReIM application installer configures and installs the batch scripts under `$ORACLE_HOME/user_projects/domains/<domain>/reim-batch`.

The batch scripts are copies of the same generic file. Their file names determine which functionality is run. To run batch scripts, use the alias name provided in the installer when ReIM is installed, the one that is written out to the Java wallet (for example, `reim_batchpgmname ADMIN`).

For the scripts to run correctly, values for the following variables must be provided:

- `ORACLE_HOME`: WebLogic Home directory where the ReIM application has been deployed.
- `JAVA_HOME`: Java 7.0 (1.7.0) installation that typically is being used by the WebLogic Application Server.

Example:

```
export
ORACLE_HOME=/u00/webadmin/product/10.3.x/WLS
export
JAVA_HOME=/u00/webadmin/product/10.3.x/jdk17
export PATH=$JAVA_HOME/bin:$PATH
```

Online Help

The application installer automatically installs Online Help to the proper location. It is accessible from the help links within the application.

Single Sign-On

Skip this section if ReIM is not used within an Oracle Single Sign-On environment.

Note: This section assumes the Oracle WebLogic Server has already been registered with the Oracle Single Sign-On server through the regssso.sh script. See Oracle Single Sign-On documentation for details.

To set up single sign-on, complete the following steps.

1. If you are using Oracle Retail Invoice Matching in an Oracle Single Sign-On environment, then the Invoice Matching root context must be protected. Modify the following files

- `mod_wl_ohs.conf` located in
<WEBLOGIC_HOME>/Oracle_WT1/instances/instance1/config/OHS/ohs1

```
LoadModule weblogic_module
"<WEBLOGIC_HOME>/Oracle_WT1/ohs/modules/mod_wl_ohs.so"
<IfModule weblogic_module>
    WebLogicHost host name
    WebLogicPort admin port number
    MatchExpression *.jsp
</IfModule>
<Location /reim_sso >
    SetHandler weblogic-handler
</Location>
```
- `mod_osso.conf` located in
<WEBLOGIC_HOME>/Oracle_WT1/instances/instance1/config/OHS/ohs1/moduleconf

```
LoadModule osso_module
"<WEBLOGIC_HOME>/Oracle_WT1/ohs/modules/mod_osso.so"
<IfModule mod_osso.c>
    OssoIpCheck off
    OssoIdleTimeout off
    OssoSecureCookies off
    OssoConfigFile
<WEBLOGIC_HOME>/Oracle_WT1/instances/instance1/config/OHS/ohs1/osso/osso.conf
<Location /reim_sso >
    WebLogicHost host name
    WebLogicPort port number of managed server
    require valid-user
    AuthType Osso
</Location>
</IfModule>
```

2. If you are using Oracle Retail Invoice Matching in an Oracle Single Sign-On environment, then the Invoice Matching root context must be protected. Modify the following files

- `mod_wl_ohs.conf` located in
<WEBLOGIC_HOME>/Oracle_WT1/instances/instance1/config/OHS/ohs1

```
LoadModule weblogic_module
"<WEBLOGIC_HOME>/Oracle_WT1/ohs/modules/mod_wl_ohs.so"
<IfModule weblogic_module>
    WebLogicHost <WEBLOGIC_HOST>
    WebLogicPort <WEBLOGIC_PORT>
    Debug ON
```

```

        WLLogFile /tmp/weblogic.log
        MatchExpression *.jsp
    </IfModule>

    <Location /ReimViewController >
        SecureProxy ON
        WebLogicHost <WEBLOGIC_HOST>
        WebLogicPort <WEBLOGIC_PORT>
        SetHandler weblogic-handler
        WLCookieName REIMSESSIONID
        WLProxySSL ON
        WLProxySSLPassThrough ON
        WLSLWallet
        "${ORACLE_INSTANCE}/config/${COMPONENT_TYPE}/${COMPONENT_NAME}/keystores/h
ost_name"
    </Location>

    <Location /RetailAppsAdminConsole-REIM >
        WebLogicHost <WEBLOGIC_HOST>
        WebLogicPort <WEBLOGIC_PORT>
        SetHandler weblogic-handler
        WLCookieName REIMSESSIONID
        WLProxySSL ON
        WLProxySSLPassThrough ON
        SecureProxy ON
        WLSLWallet
        "${ORACLE_INSTANCE}/config/${COMPONENT_TYPE}/${COMPONENT_NAME}/keystores/h
ost_name"

```

3. The descriptor files, web.xml and weblogic.xml, must be adjusted to include entries related to security constraints.

- Your web.xml should look like this:

```

<security-constraint>
    <display-name>Security Constraint</display-name>
    <web-resource-collection>
        <web-resource-name>SecurePages</web-resource-name>
        <description>These pages are only accessible by authorized
users.</description>
        <url-pattern>/reim</url-pattern>
        <url-pattern>/reim/*</url-pattern>
        <http-method>GET</http-method>
    </web-resource-collection>
    <auth-constraint>
        <description>These are the roles who have access to
ReIM.</description>
        <role-name>Users</role-name>
    </auth-constraint>
    <user-data-constraint>
        <description>This is how the user data must be
transmitted.</description>
        <transport-guarantee>NONE</transport-guarantee>
    </user-data-constraint>
</security-constraint>
<login-config>
    <auth-method>CLIENT-CERT</auth-method>
    <realm-name>myrealm</realm-name>
</login-config>
<security-role>
    <description>These are the roles who have access to
ReIM.</description>

```

```
<role-name>Users</role-name>
</security-role>
```

- Your weblogic.xml file should look like this:

```
<security-role-assignment>
  <role-name>Users</role-name>
  <principal-name>users</principal-name>
</security-role-assignment>
<security-permission>
  <description>ReIM Security Permissions</description>
  <security-permission-spec>
    grant { permission java.net.SocketPermission "*", "resolve"; };
  </security-permission-spec>
</security-permission>
```

Add “-Xms512m -Xmx1024m -XX:MaxPermSize=1024m -Dweblogic.http.enableRemoteUserHeader=true”) to server start of reim-server.

ReIM Reports Installation—Patch

ReIM 13.2.9 reports support ONLY BI Publisher 11g.

Upgrading from BI Publisher 10g to 11g is not trivial. Among other things, the BI Publisher report program in 10g is the <report_name>.xdo file. In 11g, this <report_name>.xdo report file gets split into two new folders, a <report_name>.xdo folder along with a <report_name>.xdm folder. Both of these two new folders have report files within them. Your BI Publisher 10g reports programs will not work without a change in BI Publisher 11g.

Note: If BI Publisher application 11g is already deployed to a BI Publisher managed server in WebLogic, you can directly go to the “Manually Copy Reports to Install Directory” section. If not, continue with the “BI Server Component Installation Tasks”.

BI Server Component Installation Tasks

Oracle BI Publisher is used as the main RMS, RWMS, REIM, and SIM reporting engine and can be used in conjunction with external printing solutions like label printing. This section describes the installation of Oracle BI Publisher as a server application within WebLogic 10.3.6. One deployment of BI Publisher can be used for any of the RMS, RWMS, REIM, and SIM reports.

If you are installing BI Publisher as a part the Oracle BI EE suite(which you will if installing BI Publisher 11g), refer to the appropriate Fusion Middleware guides for the installation of the product in a WebLogic server environment.

BI Publisher 11g Installation Process Overview

Installing the BI Publisher server as a standalone web application in a WebLogic server involves the following tasks:

1. Run RCU to create BI Publisher related database schemas and other db objects.
2. Install Oracle BI EE under an existing WebLogic Server (WLS) 10.3.6 and choose “software only install”.
3. Configure Oracle BI EE, create default bifoundation_domain and configure component “Business Intelligence Publisher” only.
4. Select the BIPlatform schema for update of the ORACLE 11.2.0.4/12.1.0.2 DB
5. Configure ports and document and test the URL’s that are created.

The following post-installation tasks are involved once BI Publisher has been installed:

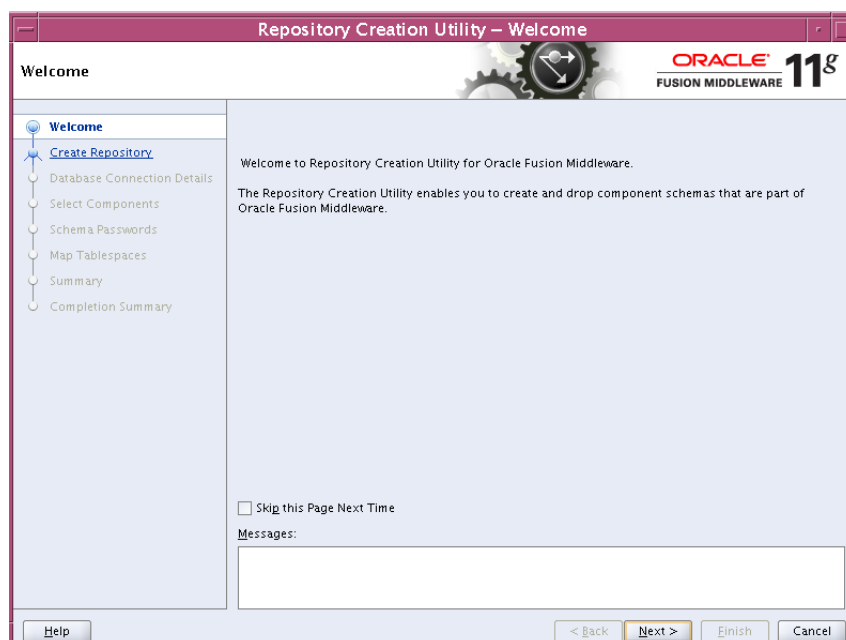
6. Configure the BI Publisher repository. Set security model, add users, assign roles, add reports, add printers, set repository path, set data source, etc.
7. Set up and copy the ReIM BI Publisher Report Templates produced for ReIM.

BI Publisher 11g– Install Oracle BI EE 11g

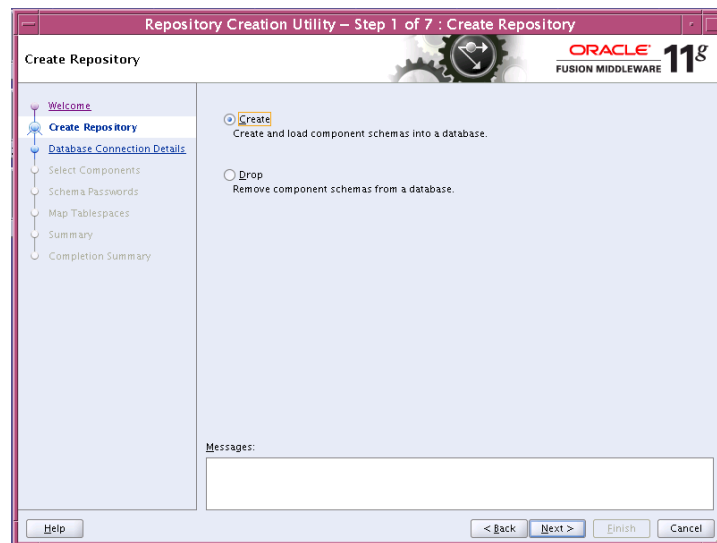
1. Run the Repository Creation Utility to create the BI Publisher-related database schemas and other database objects. Create the BIPlatform schema into an existing ORACLE 11.2.0.4/12.1.0.2 DB

Note: Download Repository Creation Utility software from <http://www.oracle.com/technetwork/middleware/bi-enterprise-edition/downloads/bi-downloads-1525270.html>. Install it on your desktop

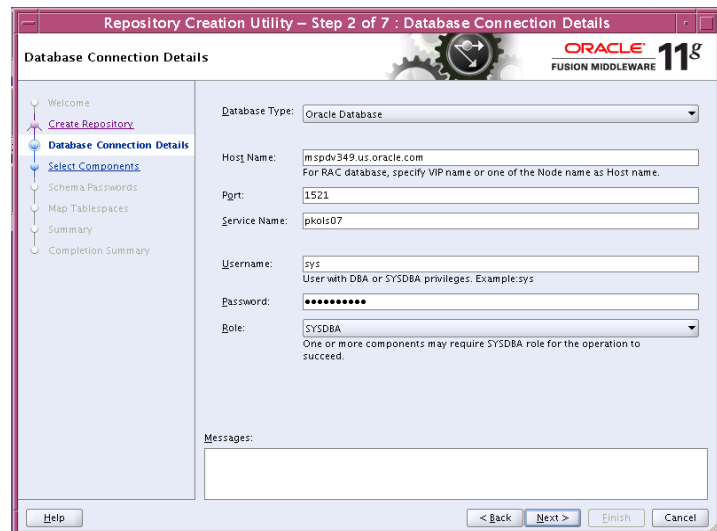
2. Export your DISPLAY.
Example: export DISPLAY=10.141.10.110:0.0
3. Go to \$RCU_HOME/bin.
Example: /linux/x86_64/ofm_11g/RCU_11.1.1.7/rcuHome/bin>
Start RCU: ./rcu



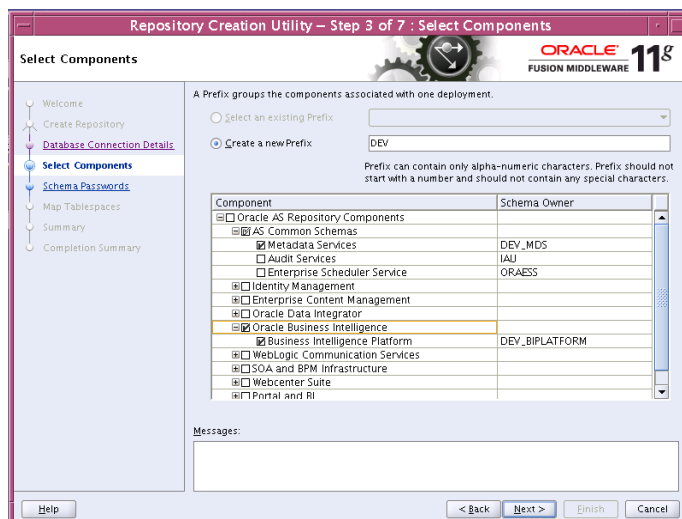
4. Click **Next**.



5. Launch Oracle BI EE RCU Repository Creation Utility to create the Oracle BI EE schemas need for the Oracle BI EE BI Publisher installation. On this screen select **Create Repository** and click **Next**.



6. On the Database Connection Details screen, enter your Oracle Database information and click **Next**.

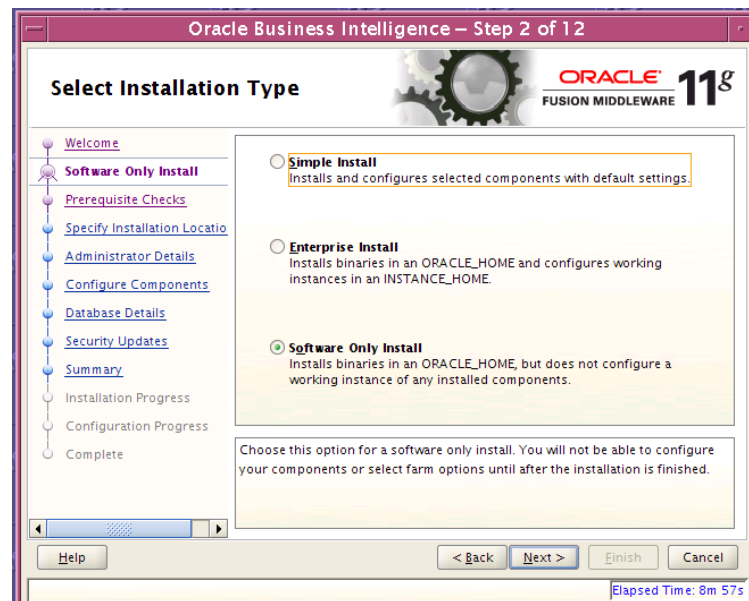


7. On the Select Components screen, select the Oracle Business Intelligence check box and click **Next**.

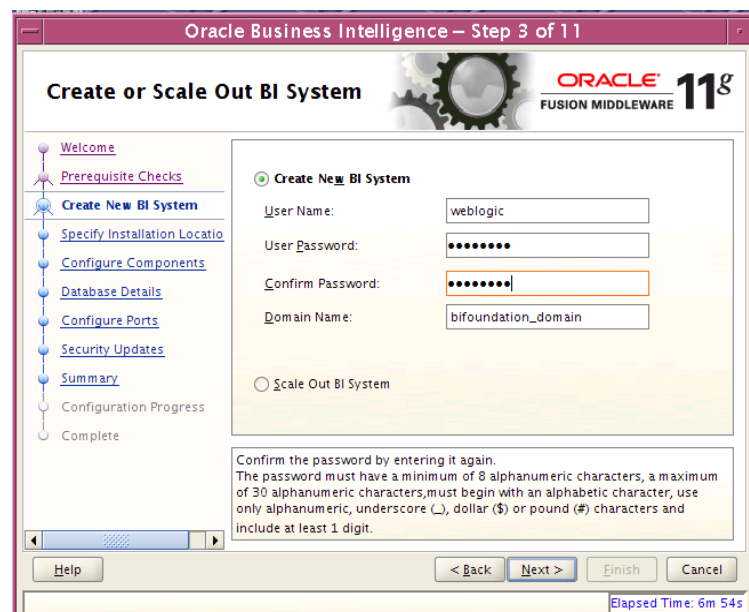


8. The Summary of the Components created by the RCU tool is displayed. Click **Create**.
9. Install a new instance of WebLogic Server 10.3.6 or use an existing one. Having one WebLogic Server for Oracle BI EE-BI Publisher 11g related items is recommended.

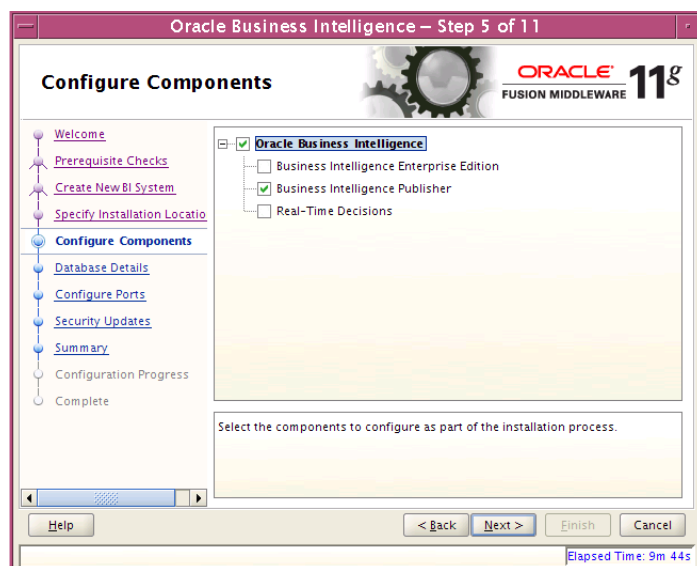
10. Install Oracle BI EE and select **Software Only Install**. You launch Oracle BI EE by going to OBIEE_INSTALL/obiee11.1.1.9/bishiphome/Disk1 and entering:
./runInstaller



11. Configure Oracle BI EE, create default bifoundation_domain and configure component “Business Intelligence Publisher” only. Click Next.



12. On the Create or Scale Out BI System screen, you are asked for the WebLogic password and provided with a recommended a Domain Name. Enter and confirm your WebLogic password and accept the recommended Domain Name; “bifoundation domain”. Click **Next**.



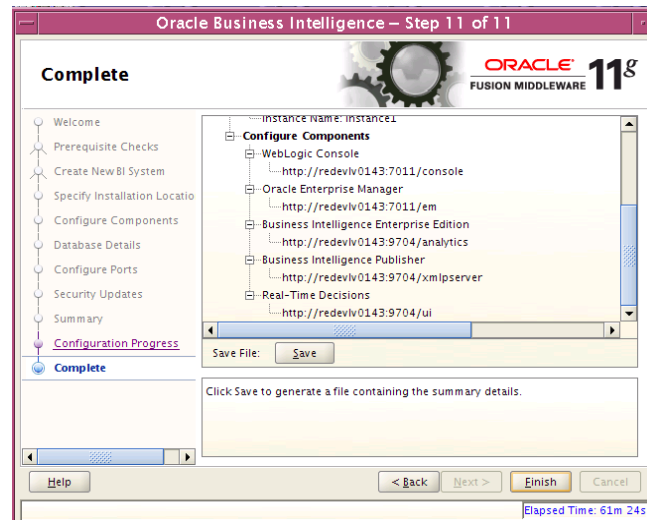
13. On the Configure Components screen, select only **Business Intelligence Publisher** and click **Next**.
14. Configure your BI ports. This screen allows you to assign Oracle BI EE ports from the staticports.ini file.
This file is located in the Oracle BI EE software at:
/obiee11.1.1.7/bishiphome/Disk1/stage/Response/staticports.ini



15. Edit this file to make sure you will have the ports you want for your BI Publisher components. Otherwise the installer will assign default port numbers. Click **Next**.

16. Document and test the URLs that are created.

This screen contains the URL's for the components that got installed.



17. Save this screen, so that you know the right URL's for your installation. Click **Finish**.

18. To test your BI Publisher installation, launch xmlpserver. Login with the credentials you entered in your Oracle BI EE configuration (weblogic / password).

ORACLE[®] BI Publisher Enterprise

Sign In

Please enter username and password

Username

Password

Accessibility Mode ☐

Sign In

19. Post install steps: Configure the BI Publisher repository. After sign on, select “Administration”.



20. On the System Maintenance Section, press Server Configuration
21. Navigate to the Configuration Screen.



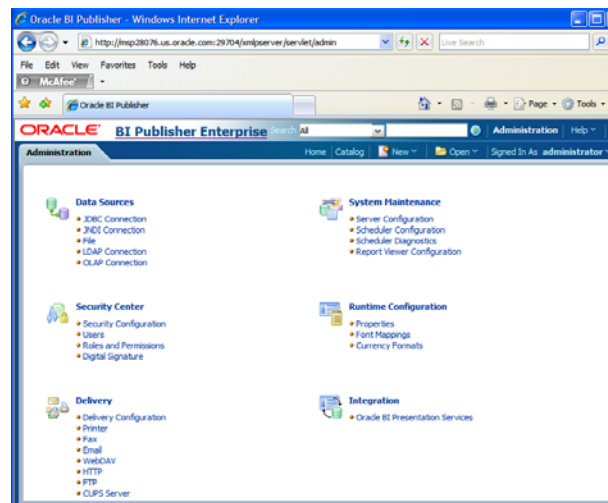
22. On this screen on the Configuration Folder section, enter the path to your repository. On the Catalog section enter Catalog Type: Oracle BI Publisher – File System from the drop down menu.

This is the path you entered in the Configuration Section and Catalog Section:

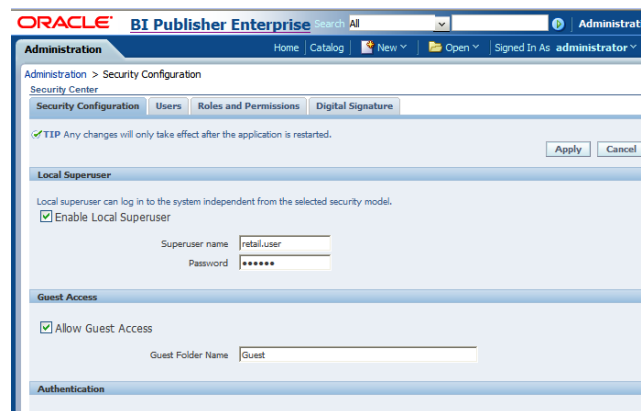
\$OBIEE_HOME/WLS/user_projects/domains/bifoundation_domain/config/bipublisher/repository

23. Restart the BI Publisher after this change.

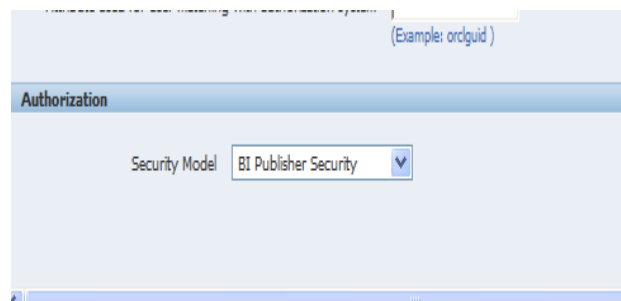
24. Post install step: Set BI Publisher security model



- a. On the BI Publisher 11g Administration Screen, click Security Configuration from the Security Center.



- b. Enable a superuser by checking the “Enable Local SuperUser” box and by entering name and password on the corresponding fields on this screen.
- c. Mark “Allow Guest Access” check box. Enter “Guest” as Guest Folder Name
- d. Scroll down the screen and locate the Authorization section:



- e. Select BI Publisher Security from the Security Model list.:
- f. The default user name for the BI Publisher Security Model is Administrator
- g. On the password text field, enter a value that you can remember. It is going to be the password for Login to xmlpserver.
- h. Save the changes and re-start the BI Publisher server.

- i. Launch xmlpserver. To Login you must use the new credentials that you set up in the former step: Username: Administrator Password: password.

Note: You will not be able to login to xmlpserver as weblogic any more because we have already changed the Security Model.



25. Post install step: Set the repository path.

Example:

/u00/webadmin/product/10.3.X/WLS/user_projects/domains/bifoundation_domain/config/bipublisher/repository In the Oracle BI EE file system you will find the repository in the following location:

\$OBIEE/wls/user_projects/domains/bifoundation_domain/config/bipublisher/repository

In the repository you will see the following directories:

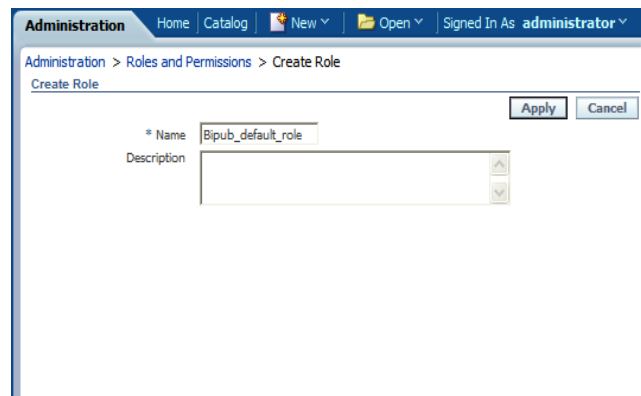
- Admin
- DemoFiles
- Reports
- Tools
- Users

26. Post install step: Create role Bipub_default_role.

- a. From the xmlpserver Administration screen, scroll down to Security Center and click Roles and Permissions.



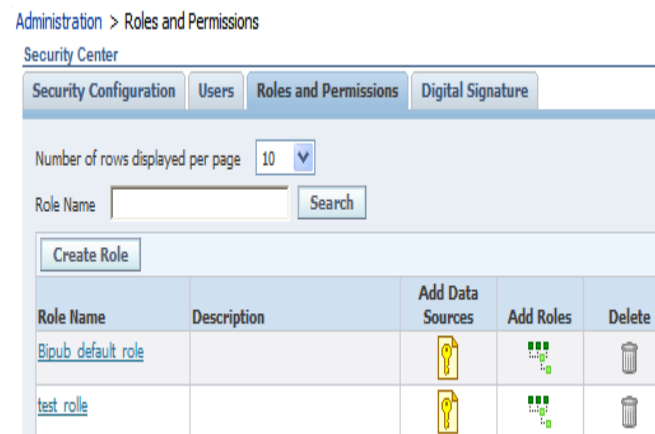
- b. On the Roles and Permissions screen, click the Create Role button.



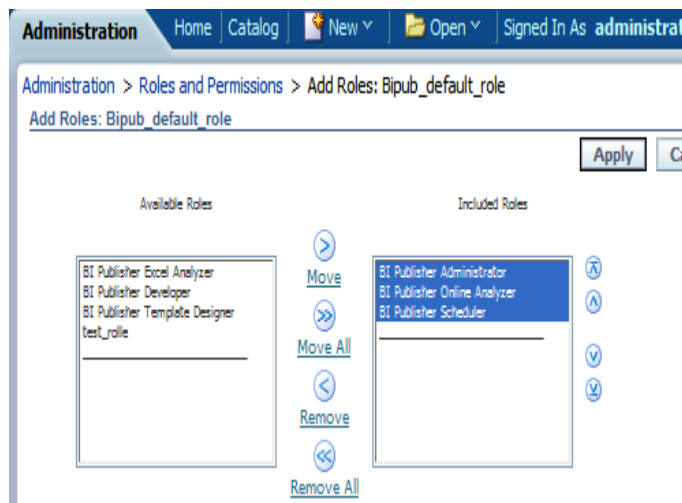
- c. Create the Bipub_default_role. Enter in Create Role Section name of the role.
 d. When the information has been entered press Apply changes.

27. Post install step: Assign BiPub system roles to the newly created Bipub_default_role.

- a. To assign BiPub system roles to the newly create Bipub_default_role, go to Security Center section and navigate to the Roles and Permissions screen:



- b. On the Roles and Permissions screen you should see the new role created: “Bipub_default_role”. Add multiple roles to the Bipub_Default_Role by pressing the corresponding green icon on the Add Roles column.



- c. From the “Available Roles” panel, select the ones needed for your reports and move them to the “Included Roles” panel.
- d. Press the Apply button to save your changes.

28. Post install step: create Guest (XMLP_GUEST) user.



- a. From the xmlpserver Administration screen scroll down to Security Center section and press Users to navigate to the next screen.

Administration > Users

Security Center

Security Configuration Users Roles and Permissions Digital Signature

Number of rows displayed per page 10

Username Search

Create User

Username	Assign Roles	Delete
administrator		
xmlp_quest		

- b. Select the “Create User” button to create the “xmlp_guest” user and save the changes.
29. Post install step: Adding the Bipub_default_role to XMLP_GUEST user.
- a. Open the Users section:

Administration > Users

Security Center

Security Configuration Users Roles and Permissions Digital Signature

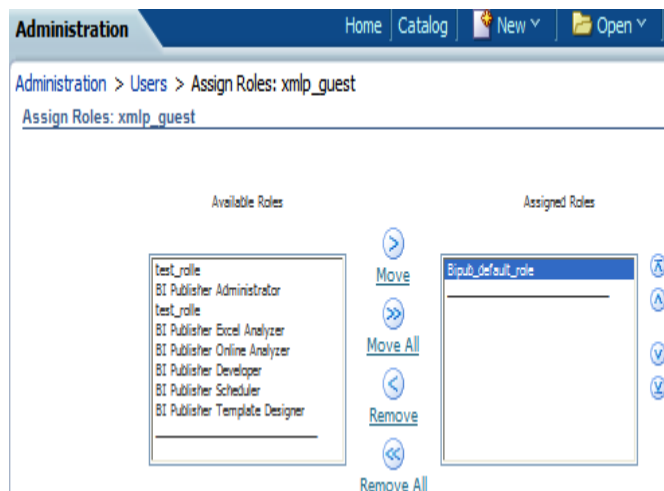
Number of rows displayed per page 10

Username Search

Create User

Username	Assign Roles
administrator	
xmlp_quest	

- b. For xmlp_guest user, press on the “Assign Roles” icon to navigate to the next screen:



- c. On the Assign Roles screen, select the BiPub_default_role from the Available Roles panel to the “Assigned Roles” panel and press the Apply button to save your changes.

30. Post install step: create folders. Complete the following steps:

- a. Create the “Guest” and “REIM13” directories on the server and change directory into this directory and make sure the permission to these new folders are 755. Example assuming that /u00/webadmin is the root of the installation:

```
cd
/u00/webadmin/product/10.3.X/WLS/user_projects/domains/bifoundation_domain
/config/bipublisher/repository/Reports
mkdir
/u00/webadmin/product/10.3.X/WLS/user_projects/domains/bifoundation_domain
/config/bipublisher/repository/Reports/Guest
cd Guest
mkdir
/u00/webadmin/product/10.3.X/WLS/user_projects/domains/bifoundation_domain
/config/bipublisher/repository/Reports/Guest/REIM13
cd REIM13
```

BI Publisher 11g – Manually Copy Reports to Install Directory

If you followed the instructions under “[Option 1: Use Application Installer to Patch](#)” in the chapter, “[Application Server Installation Tasks—Patch](#)”, you can skip to the next section (“[Installing the RMS BI Publisher Templates](#)”). If you followed “[Option 2: Compile RMS Toolset and Forms Directly](#),” you must manually copy the reports to INSTALL_DIR.

1. If the directory INSTALL_DIR/base/reports/10g or INSTALL_DIR/base/reports/11g exist follow these steps. Otherwise, skip to step 2:
 - a. Change directories to INSTALL_DIR/base/reports
 - b. Remove the entire 10g directory if it exists. We will no longer ship 10g reports in future releases.
 - c. Move all of the directories in INSTALL_DIR/base/reports/11g to INSTALL_DIR/base/reports
 - d. Remove the empty INSTALL_DIR/base/reports/11g directory.

2. If the directories `INSTALL_DIR/base/reports/10g` or `INSTALL_DIR/base/reports/11g` do not exist, and the reports under `INSTALL_DIR/base/reports/` are the 13.2.4 set of reports or earlier, delete all the directories under `INSTALL_DIR/base/reports/`. All reports that were a part of 13.2.4 and earlier releases are 10g reports that will be completely replaced by 11g reports included in the 13.2.5 and future releases.
3. Copy the reports from the REIM application patch `APP_PATCH_DIR/app-patch/<version>/reports` to `INSTALL_DIR/base/reports/`.

BI Publisher 11g Installing the REIM BI Publisher Templates

This section describes how the REIM report templates are installed into the appropriate BI server repositories. `BI_REPOSITORY` refers to the BI Publisher reports repository.

example:

```
/u00/webadmin/product/10.3.X/WLS/user_projects/domains/bifoundation_domain/
config/bipublisher/repository/
```

Report files are placed in the directory, `INSTALL_DIR/base/reports`, and must be copied into the BI repository directory.

1. Change directory to the proper directory under `INSTALL_DIR/base/reports/11g`. This directory contains subdirectories whose names reflect the names of report templates provided with REIM.
2. Copy each report directory into the directory created above

Example,

```
cp -R *
```

```
/u00/webadmin/product/10.3.X/WLS/user_projects/domains/bifoundation_domain
/config/bipublisher/repository/Reports/Guest/REIM13
```

BI Publisher 11g – Configuring the REIM JDBC connection

Follow the below steps to configure JDBC connection for REIM Data Source name. This is the data source that REIM uses for REIM reports.

1. Log on with the default user ID and passwords for BI Publisher using the administrative user and password configured previously.
2. Click the **Admin** tab and select the **JDBC Connection** hyperlink in the Data Sources lists. The following screen is displayed.

3. Enter “RMS13” for the datasource name, and enter the appropriate details for the RMS data source. Once the data is entered, click Test Connection to test the connection. Connection string is similar to this example:
 jdbc:oracle:thin:@redevlv0064.us.oracle.com:1521:dvols72 syntax is
 jdbc:oracle:thin:@<hostname>:<port>:<dbsid>, Pluggable database:
 jdbc:oracle:thin:@dbhostname:1521/servicename

Note: REIM shares a database with RMS which is why the Data Source Name is RMS13 instead of REIM13. The Data Source Name has to be RMS13 in order for the reports to work.

4. Click **Apply** to save the information.

Appendix: ReIM Application Installer Screens

You need the following details about your environment for the installer to successfully deploy the ReIM application. Depending on the options you select, you may not see some screens or fields.

Screen: Data Source Details

Invoice Matching 13 Installer - Oracle Retail

ORACLE

Data Source Details

Provide the details for the Invoice Matching data source

ReIM/RMS 13 JDBC URL: jdbc:oracle:thin:@dbhostname:1521:mydb

ReIM/RMS 13 schema user: rms01app

ReIM/RMS 13 schema password:

Enter the RMS schema owner. This is usually the same as the ReIM/RMS schema entered above

RMS 13 schema owner: rms01

REIM 13 schema user alias: dsalias

(The alias for each username/password pair must be unique)

Buttons: Cancel, Back, Next, Install

Field Title	ReIM/RMS 13 JDBC URL
Field Description	URL used by the ReIM application to access the ReIM/RMS database schema. See Appendix: URL Reference for expected syntax.
Destination	reim.properties
Examples	jdbc:oracle:thin:@dbhostname:1521:mydb Pluggable database: jdbc:oracle:thin:@dbhostname:1521/serviceName

Field Title	ReIM/RMS 13 schema user
Field Description	RMS database user for accessing the ReIM tables. This should match what was given in the RMS 13 schema field of the ReIM database installer.
Destination	reim.properties
Example	rms01app

Field Title	ReIM/RMS 13 schema password
Field Description	Password for the JDBC username. This should match what was given in the ReIM 13 schema password field of the ReIM database installer.
Destination	wallet

Field Title	RMS 13 schema owner
Field Description	Database user which owns the RMS and ReIM tables. This usually has the same value as the ReIM/RMS 13 schema field above.
Destination	reim.properties
Example	RMS01

Field Title	REIM 13 schema user alias
Field Description	The alias of the ReIM user.
Destination	reim.properties
Example	db-alias
Note	This alias must be unique. Do not use the same value for any other alias fields in the installer. If the same alias is used, entries in the wallet can override each other and cause problems with the application.

Screen: Application Deployment Details

Invoice Matching 13 Installer - Oracle Retail

ORACLE

Application Deployment Details

The default values shown below are examples

ReIM 13 app deployment name:

ReIM 13 context root:

Enter the REIM13 weblogic managed server or cluster.
 REIM13 server/cluster:

Field Title	ReIM 13 app deployment name
Field Description	Name by which this ReIM application is identified in the application server. This value must match the <context_root> added to the weblogic.policy file when the managed server for ReIM was created.
Example	reim13

Field Title	ReIM 13 context root
Field Description	Path under the HTTP URL used to access the ReIM application (for example, a context root of reim results in the application accessed at http://host:port/reim01/index.jsp). This value must match the <context_root> added to the weblogic.policy file when the managed server for ReIM was created.
Example	reim13

Field Title	ReIM 13 server/cluster
Field Description	Name of the ReIM WebLogic managed server or cluster.
Example	reim-server

Screen: WebLogic Administrative User

ORACLE

Weblogic Administrative User

Enter the administrative user and password for the Weblogic Server to which the application will be deployed.

Hostname: apphostname

Weblogic admin port: 17001

Weblogic admin user: weblogic

Weblogic admin password:

Weblogic admin alias: weblogicalias

(The alias for each username/password pair must be unique)

Cancel Back Next Install

Field Title	Hostname
Field Description	Hostname of the application server
Example	apphostname

Field Title	WebLogic admin port
Field Description	This is the port of Administration Console.
Example	17001

Field Title	WebLogic admin user
Field Description	User name of the admin user for the WebLogic instance to which the ReIM application is being deployed.
Example	weblogic

Field Title	WebLogic admin password
Field Description	Password for the WebLogic admin user. You chose this password when you created the WebLogic instance or when you started the instance for the first time.

Field Title	WebLogic admin alias
Field Description	An alias for the WebLogic admin user.
Example	Weblogicalias
Note	This alias must be unique. Do not use the same value for any other alias fields in the installer. If the same alias is used, entries in the wallet can override each other and problems issues with the application.

Screen: LDAP Directory Details

LDAP Directory Server Details

ReIM requires the use of an LDAP directory for storage of its user, role, and store entries. Please provide the details for your LDAP directory.

Note: If the ldap server is configured to use SSL, use ldaps as the protocol. Otherwise use ldap.

LDAP Server URL:

Enter the search base DN. This is a directory entry under which ReIM will search for user and store entries

LDAP Search Base DN:

LDAP Group DN:

Enter the search user DN. ReIM will authenticate to the LDAP directory as this entry.

Search User DN:

Search User Password:

Search User Alias:

(The alias for each username/password pair must be unique)

Buttons: Cancel, Back, Next, Install

Field Title	LDAP server URL
Field Description	URL for your LDAP directory server. See Appendix: URL Reference for expected syntax.
Destination	ldap.properties
Example	ldap://ldaphost:389

Field Title	LDAP Search Base DN
Field Description	Distinguished name of the user that RPM uses to authenticate to the LDAP directory.
Destination	ldap.properties
Example	cn=Users,dc=us,dc=oracle,dc=com

Field Title	LDAP Group DN
Field Description	Distingused name of the group that RPM uses to authenticate to the LDAP directory
Destination	ldap.properties
Example	cn=Groups,dc=us,dc=oracle,dc=com

Field Title	Search User DN
Field Description	Search User DN that ReIM will authenticate to the ldap directory
Destination	ldap.properties
Example	cn=REIM.ADMIN,cn=Users,dc=us,dc=oracle,dc=com

Field Title	Search user password
Field Description	Search User DN Password that ReIM will authenticate to the ldap directory
Example	Search User Password

Field Title	Search User Alias
Field Description	The alias for the search user DN.
Destination	Ldap.properties
Example	ldap-alias
Notes	This alias must be unique. Do not use the same value for any other alias fields in the installer. If the same alias is used, entries in the wallet can override each other and cause problems with the application.

Screen: WebLogic Webservice Account Validation Details

Weblogic Webservice Account Validation Details

Provide the details for the Invoice Matching Weblogic Webservice Account Validation

Webservice Account Validation Drill

Webservice Account Validation

Webservice Account Validation Namespace

Field Title	Webservice Account Validation Drill
Field Description	The Web service provider URL used for drilling forward from the ReIM application. This information is from the financial application to which you are integrating (for example, PeopleSoft and Oracle E-Business Suite). Leave this field blank if there is no integration with a financial application.
Example	http://oracle.apps.aia.drillbackforward/

Field Title	Webservice Account Validation
Field Description	The URL for validating Web service accounts. This information is from the financial application to which you are integrating (for example, PeopleSoft and Oracle E-Business Suite). Leave this field blank if there is no integration with a financial application.
Example	http://host:port/GIAccountValidationBean/GIAccountValidationService?WSDL

Field Title	Webservice Account Validation Namespace
Field Description	The URL for validating the Web service namespace. This information is from the financial application to which you are integrating (for example, PeopleSoft and Oracle E-Business Suite). Leave this field blank if there is no integration with a financial application.
Example	<code>http://www.oracle.com/retail/fin/integration/services/ GIAccountValidationService/v1</code>

Screen: WebLogic Webservice Account Validation Credentials

ORACLE

Weblogic Webservice Account Validation Credentials

Provide the credentials for the Invoice Matching Weblogic Webservice Account Validation

Webservice Account Validation user:

Webservice Account Validation password:

Webservice Account Validation user alias:

(The alias for each username/password pair must be unique)

Buttons: Cancel, Back, Next, Install

Field Title	Webservice Account Validation user
Field Description	The user for validating the Web service user name. A value is required in this field, even if you are not using Web service integration. The field is not validated, so enter any value.
Example	user1

Field Title	Webservice Account Validation Password
Field Description	The password for validating Web service accounts. A value is required in this field, even if you are not using Web service integration. The field is not validated, so enter any value.

Field Title	Webservice Account Validation Alias
Field Description	The alias for the Web service account user names A value is required in this field, even if you are not using Web service integration. The field is not validated, so enter any value.
Example	webservice-alias
Note	This alias must be unique. Do not use the same value for any other alias fields in the installer. If the same alias is used, entries in the wallet can override each other and cause problems with the application.

Screen: Batch User Credentials

Batch User Credentials

Provide the credentials for the Batch User

Batch user: ADMIN

Batch User password:

Batch user alias: BATCH-ALIAS

(The alias for each username/password pair must be unique)

Buttons: Cancel, Back, Next, Install

Field Title	Batch User
Field Description	The ReIM user name of the person running ReIM batch. It must be a valid ReIM user that already exists in the database or through LDAP—or it must be a valid ReIM user that will be built in the database. It does not have to exist already in the database on the database table (IM_BUSINESS_ROLE_ID), but it must exist when you try to use the alias created in this step to run batches. Using one of the user names you will supply in subsequent screens (such as Setup Application Users) is recommended. ADMIN is the default user for the ReIM application.
Example	ADMIN

Field Title	Batch User Password
Field Description	The wallet password must match the database password on the database IM_USER_AUTHORIZATION table. The ReIM default scripts include User=ADMIN with and password=rettek..

Field Title	Batch User Alias
Field Description	The alias for the user running ReIM batch. This alias is part of ORACLE wallet implementation. You will use this alias when running ReIM batch scripts.
Example	BATCH-ALIAS
Note	This alias must be unique. Do not use the same value for any other alias fields in the installer. If the same alias is used, entries in the wallet can override each other and cause problems with the application.

Appendix: Oracle Single Sign-On for WebLogic

Single Sign-On (SSO) is a term for the ability to sign onto multiple Web applications via a single user ID/Password. There are many implementations of SSO. Oracle currently provides two different implementations: Oracle Single Sign-On (OSSO), and Oracle Access Manager (provides more comprehensive user access capabilities).

Most, if not all, SSO technologies use a session cookie to hold encrypted data passed to each application. The SSO infrastructure has the responsibility to validate these cookies and, possibly, update this information. The user is directed to log on only if the cookie is not present or has become invalid. These session cookies are restricted to a single browser session and are never written to a file.

Another facet of SSO is how these technologies redirect a user's Web browser to various servlets. The SSO implementation determines when and where these redirects occur and what the final screen shown to the user is.

Most SSO implementations are performed in an application's infrastructure and not in the application logic itself. Applications that leverage infrastructure managed authentication (such as deployment specifying Basic or Form authentication) typically have little or no code changes when adapted to work in an SSO environment.

What Do I Need for Oracle Single Sign-On?

The nexus of an Oracle Single Sign-On system is the Oracle Identity Management Infrastructure installation. This consists of the following components:

- An Oracle Internet Directory (OID) LDAP server, used to store user, role, security, and other information. OID uses an Oracle database as the back-end storage of this information.
- An Oracle HTTP Server 11g Release 1 as a front end to the Oracle WebLogic Server. The Oracle HTTP Server is included in the Oracle Web Tier Utilities 11g Release 1 (11.1.1).
- An Oracle Single Sign-On Plug-in, used to authenticate the user and create the OSSO session cookie. This is available in the Oracle Fusion Middleware 11g Web Tier Utilities (11.1.1.7) package. For Oracle Forms applications like RMS and RWMS, HTTP server will be used.
- The Delegated Administration Services (DAS) application in OID10g and Oracle Directory Services Manager (ODSM) application in OIM11g, used to administer users and group information. This information may also be loaded or modified via standard LDAP Data Interchange Format (LDIF) scripts.
- Additional administrative scripts for configuring the OSSO system and registering HTTP servers.

Additional WebLogic managed servers will be needed to deploy the business applications leveraging the OSSO technology.

Can Oracle Single Sign-On Work with Other SSO Implementations?

Yes, OSSO has the ability to interoperate with many other SSO implementations, but some restrictions exist.

Oracle Single Sign-on Terms and Definitions

The following terms apply to single sign-on.

Authentication

Authentication is the process of establishing a user's identity. There are many types of authentication. The most common authentication process involves a user ID and password.

Dynamically Protected URLs

A Dynamically Protected URL is a URL whose implementing application is aware of the OSSO environment. The application may allow a user limited access when the user has not been authenticated. Applications that implement dynamic OSSO protection typically display a Login link to provide user authentication and gain greater access to the application's resources.

Identity Management Infrastructure for 10g, Oracle Identity Management (OIM) and Oracle Access Manager (OAM) Oracle Access Manager (OAM) for 11g

If using OSSO 10g, The Identity Management Infrastructure is the collection of product and services which provide Oracle Single Sign-on functionality. For OSSO 10g, this includes the Oracle Internet Directory, an Oracle HTTP server, and the Oracle Single Sign-On services. The Oracle Application Server deployed with these components is typically referred as the Infrastructure instance.

If using SSO with OAM11g, Oracle Identity Management (OIM) 11g includes Oracle Internet Directory and ODSM. Oracle Access Manager (OAM) 11g should be used for SSO using osso agent. Oracle Forms 11g contains Oracle HTTP server and other Retail Applications will use WebTier11g for HTTP.

MOD_OSSO

mod_osso is an Apache Web Server module an Oracle HTTP Server uses to function as a partner application within an Oracle Single Sign-On environment. The Oracle HTTP Server is based on the Apache HTTP Server.

MOD_WEBLOGIC

mod_WebLogic operates as a module within the HTTP server that allows requests to be proxied from the Apache HTTP server to the WebLogic server.

Oracle Internet Directory

Oracle Internet Directory (OID) is an LDAP-compliant directory service. It contains user ids, passwords, group membership, privileges, and other attributes for users who are authenticated using Oracle Single Sign-On.

Partner Application

A partner application is an application that delegates authentication to the Oracle Identity Management Infrastructure. One such partner application is the Oracle HTTP Server (OHS) supplied with Oracle Forms Server or WebTier11g Server if using other Retail Applications other than Oracle Forms Applications. OHS or WebTier uses the MOD_OSSO module to configure this functionality.

All partner applications must be registered with the Oracle Single Sign-On server if using OSSO10g and all partner applications must be registered with Oracle Access Manager (OAM) 11g if using OAM11g for SSO implementation. An output product of this registration is a configuration file the partner application uses to verify a user has been previously authenticated.

Realm

A Realm is a collection users and groups (roles) managed by a single password policy. This policy controls what may be used for authentication (for example, passwords, X.509 certificates, and biometric devices). A Realm also contains an authorization policy used for controlling access to applications or resources used by one or more applications.

A single OID can contain multiple Realms. This feature can consolidate security for retailers with multiple banners or to consolidate security for multiple development and test environments.

Statically Protected URLs

A URL is considered to be Statically Protected when an Oracle HTTP server is configured to limit access to this URL to only SSO authenticated users. Any attempt to access a Statically Protected URL results in the display of a login page or an error page to the user.

Servlets, static HTML pages, and JSP pages may be statically protected.

Note: Dynamically Protected URL and Statically Protected URL are within the context of the Oracle Software Security Assurance (OSSA). The static protection for URLs is a common JEE feature.

What Single Sign-On is not

Single Sign-On is NOT a user ID/password mapping technology.

However, some applications can store and retrieve user IDs and passwords for non-SSO applications within an OID LDAP server. An example of this is the Oracle Forms Web Application framework, which maps OSSO user IDs to a database logins on a per-application basis.

How Oracle Single Sign-On Works

Oracle Single Sign-On involves a couple of different components. These are:

- The Oracle Single Sign-On (OSSO) servlet, which is responsible for the back-end authentication of the user.
- The Oracle Internet Directory LDAP server, which stores user IDs, passwords, and group (role) membership.
- The Oracle HTTP Server associated with the Web application, which verifies and controls browser redirection to the OSSO servlet.
- If the Web application implements dynamic protection, then the Web application itself is involved with the OSSO system.

Statically Protected URLs

When an unauthenticated user accesses a statically protected URL, the following occurs:

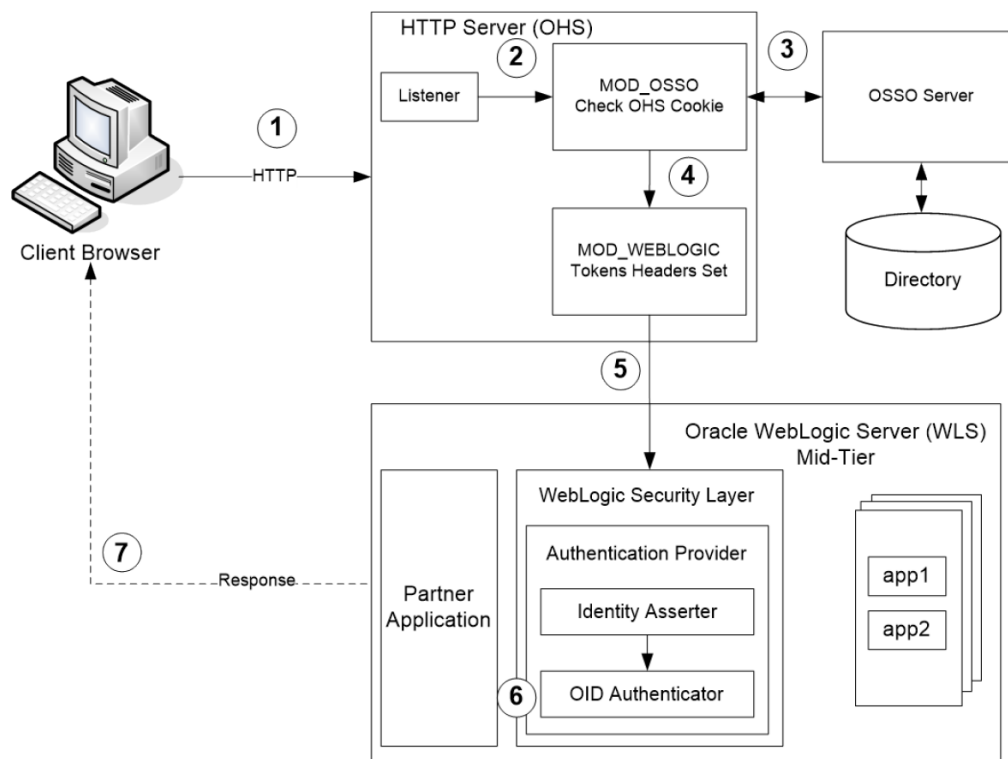
1. The user's Web browser makes an HTTP request to a protected URL serviced by the Oracle HTTP Server (OHS).
2. The Oracle HTTP Server processes the request and routes it to the mod_oss module.
3. This module determines whether the user is already authenticated. If the authentication is required, it directs the browser to the OSSO server. The OSSO server checks for a secure cookie containing the authentication information. If the cookie is not found, the following occurs:
 - a. The OSSO servlet determines the user must authenticate, and displays the OSSO login page.
 - b. The user must sign in via a valid user ID and password. If the OSSO servlet has been configured to support multiple Realms, a valid realm must also be entered. The user ID, password, and realm information is validated against the Oracle Internet Directory LDAP server. The browser is then redirected back to the Oracle HTTP Server with the encrypted authentication credentials. It does NOT contain the user's password.
4. The mod_osso module then decrypts the user credentials and sets HTTP headers with relevant user attributes, marking the user's session as authenticated.
5. The mod_WebLogic module (within the Oracle HTTP Server) then forwards the request to the Oracle WebLogic Server.
6. The Oracle WebLogic Server then invokes the configured authentication providers that decode the headers and provide the user's role membership. In an OSSO implementation, ensure that the OSSO Identity Asserter is invoked and Oracle Internet Directory (OID) Authenticator is executed to provide the user's role membership.
7. Once the authentication is established, the relevant application logic is initiated and the response is sent back to the user through the Oracle HTTP Server. Because the Web browser session is now authenticated, subsequent requests in that session are not redirected to the OSSO server for authentication.

Dynamically Protected URLs

When an unauthenticated user accesses a dynamically protected URL, the following occurs:

1. The user's Web browser makes an HTTP request to a protected URL serviced by the Oracle HTTP Server (OHS). The Oracle HTTP server recognizes the user has not been authenticated, but allows the user to access the URL.
2. The application determines the user must be authenticated and send the Oracle HTTP Server a specific status to begin the authentication process.
3. The Oracle HTTP Server processes the request and routes it to the mod_oss module.
4. This module determines whether the user is already authenticated. If the authentication is required, it directs the browser to the OSSO server. The OSSO server checks for a secure cookie containing the authentication information. If the cookie is not found, the following occurs:
 - a. The OSSO servlet determines the user must authenticate, and displays the OSSO login page.
 - b. The user must sign in via a valid user ID and password. If the OSSO servlet has been configured to support multiple Realms, a valid realm must also be entered. The user ID, password, and realm information is validated against the Oracle Internet Directory LDAP server. The browser is then redirected back to the Oracle HTTP Server with the encrypted authentication credentials. It does NOT contain the user's password.
5. The mod_osso module then decrypts the user credentials and sets HTTP headers with relevant user attributes, marking the user's session as authenticated.
6. The mod_WebLogic module (within the Oracle HTTP Server) then forwards the request to the Oracle WebLogic Server.
7. The Oracle WebLogic Server then invokes the configured authentication providers that decode the headers and provide the user's role membership. In an OSSO implementation, ensure that the OSSO Identity Asserter is invoked and Oracle Internet Directory (OID) Authenticator is executed to provide the user's role membership.
8. Once the authentication is established, the relevant application logic is initiated and the response is sent back to the user through the Oracle HTTP Server. Because the Web browser session is now authenticated, subsequent requests in that session are not redirected to the OSSO server for authentication.

Single Sign-on Topology



Installation Overview

Installing Oracle Single Sign-On 10g requires installation of the following:

1. Oracle Internet Directory (OID) LDAP server and the Infrastructure Oracle Application Server (OAS). They are typically installed using a single session of the Oracle Universal Installer and are performed at the same time. OID requires an Oracle relational database. If one is not available, the installer will install this as well. The Infrastructure OAS includes the Delegated Administration Services (DAS) application as well as the OSSO servlet. The DAS application can be used for user and realm management within OID.
2. Additional midtier instances (such as Oracle Forms 11g) for Oracle Retail applications based on Oracle Forms technologies (such as RMS). These instances must be registered with the Infrastructure OAS installed in step 1. For additional information on SSO 10g installation, see the Creating a High-Availability Environment Whitepaper (My Oracle Support Doc ID: 1311392.1).
3. Additional application servers to deploy other Oracle Retail applications and performing application specific initialization and deployment activities.

Installing Oracle Single Sign-On using OAM11g requires installation of the following:

1. Oracle Internet Directory (OID) ldap server and the Oracle Directory Services Manager. They are typically installed using the Installer of Oracle Identity Management 11gR1 (11.1.1.7). The ODSM application can be used for user and realm management within OID.
2. Oracle Access Manager 11gR1 (11.1.1.5) has to be installed and configured.

3. Additional midtier instances (such as Oracle Forms 11g) for Oracle Retail applications based on Oracle Forms technologies (such as RMS). These instances must be registered with the OAM installed in step 2.
4. Additional application servers to deploy other Oracle Retail applications and performing application specific initialization and deployment activities must be registered with OAM installed in step 2. For additional information on SSO 11g installation, see the Oracle Access Manager and Single Sign-On Whitepaper (My Oracle Support Doc ID 1492047.1).

Infrastructure Installation and Configuration

The Infrastructure installation for OSSO and Oracle Access Manager (OAM) is dependent on the environment and requirements for its use. Deploying an Infrastructure OAS or Oracle Access Manager (OAM) to be used in a test environment does not have the same availability requirements as for a production environment. Similarly, the Oracle Internet Directory (OID) LDAP server can be deployed in a variety of different configurations. See the *Oracle Application Server Installation Guide and the Oracle Internet Directory Installation Guide (if using OSSO 10g) for more details and Oracle Identity Management Installation Guide11g (if using OAM11)*.

OID User Data

Oracle Internet Directory is an [LDAP v3](#) compliant directory server. It provides standards-based user definitions out of the box.

The current version of Oracle Single Sign-On only supports OID as its user storage facility. Customers with existing corporate LDAP implementations may need to synchronize user information between their existing LDAP directory servers and OID. OID supports standard LDIF file formats and provides a JNDI compliant set of Java classes as well. Moreover, OID provides additional synchronization and replication facilities to integrate with other corporate LDAP implementations.

Each user ID stored in OID has a specific record containing user specific information. For role-based access, groups of users can be defined and managed within OID. Applications can thus grant access based on group (role) membership saving administration time and providing a more secure implementation.

OID with Multiple Realms

OID and OSSO can be configured to support multiple user Realms. Each realm is independent from each other and contains its own set of user IDs. As such, creating a new realm is an alternative to installing multiple OID and Infrastructure instances. Hence, a single Infrastructure OAS can be used to support development and test environments by defining one realm for each environment.

Realms may also be used to support multiple groups of external users, such as those from partner companies. For more information on Realms, see the *Oracle Internet Directory Administrators Guide*.

User Management

User Management consists of displaying, creating, updating or removing user information. There are two basic methods of performing user management: LDIF scripts and the Delegate Administration Services (DAS) application available for OID10g or Oracle Directory Services Manager (ODSM) available for OID11g.

OID DAS

The DAS application is a Web-based application used in OID10g is designed for both administrators and users. A user may update their password, change their telephone number of record, or modify other user information. Users may search for other users based on partial strings of the user's name or ID. An administrator may create new users, unlock passwords, or delete users.

The DAS application is fully customizable. Administrators may define what user attributes are required, optional or even prompted for when a new user is created.

Furthermore, the DAS application is secure. Administrators may also what user attributes are displayed to other users. Administration is based on permission grants, so different users may have different capabilities for user management based on their roles within their organization.

ODSM

Oracle Directory Services Manager (ODSM) is a Web-based application used in OID11g is designed for both administrators and users which enables you to configure the structure of the directory, define objects in the directory, add and configure users, groups, and other entries. ODSM is the interface you use to manage entries, schema, security, adapters, extensions, and other directory features.

LDIF Scripts

Script based user management can be used to synchronize data between multiple LDAP servers. The standard format for these scripts is the LDAP Data Interchange Format (LDIF). OID supports LDIF script for importing and exporting user information. LDIF scripts may also be used for bulk user load operations.

User Data Synchronization

The user store for Oracle Single Sign-On resides within the Oracle Internet Directory (OID) LDAP server. Oracle Retail applications may require additional information attached to a user name for application-specific purposes and may be stored in an application-specific database. Currently, there are no Oracle Retail tools for synchronizing changes in OID stored information with application-specific user stores. Implementers should plan appropriate time and resources for this process. Oracle Retail strongly suggests that you configure any Oracle Retail application using an LDAP for its user store to point to the same OID server used with Oracle Single Sign-On.

Appendix: Installer Silent Mode

In addition to the GUI and text interfaces of the ReIM installer, there is a silent mode that can be run. This mode is useful if you wish to run a repeat installation attempt without going through the installer screens again.

The installer runs in two distinct phases. The first phase involves gathering settings from the user. At the end of the first phase, a properties file named `ant.install.properties` is created with the settings that were provided. Then the second phase begins, where this properties file is used to provide your settings for the installation.

To skip the first phase and re-use the `ant.install.properties` file from a previous run, follow these instructions:

1. Edit the `ant.install.properties` file and correct any invalid settings that may have caused the installer to fail in the previous run.
2. Run the installer again with the **silent** argument.

```
install.sh silent
```

Appendix: URL Reference

Both the database schema and application installers for the Invoice Matching product require certain URLs, including the following.

JDBC URL for a Database

Used by the Java application and by the installer to connect to the database.

Thick Client Syntax: `jdbc:oracle:oci:@<sid>`

<sid>: system identifier for the database

Example: `jdbc:oracle:oci:@mysid`

Thin Client Syntax: `jdbc:oracle:thin:@<host>:<port>:<sid>`

<host>: hostname of the database server

<port>: database listener port

<sid>: system identifier for the database

Example: `jdbc:oracle:thin:@myhost:1521:mysid`, Pluggable database:

`jdbc:oracle:thin:@<dbhostname>:<port>/<servicename>`

Appendix: Common Installation Errors

This section provides some common errors encountered during installation of ReIM.

Database installer hangs on startup

Symptom

When the database schema installer is run, the following is written to the console and the installer hangs indefinitely:

```
Running pre-install checks
Running tnsping to get listener port
```

Solution

The installer startup script is waiting for control to return from the **tnsping** command, but tnsping is hanging. Type Control+C to cancel the installer, and investigate and solve the problem that is causing the tnsping <sid> command to hang. This can be caused by duplicate database listeners running.

Unreadable buttons in the Installer

If you are unable to read the text within the installer buttons, it could mean that your JAVA_HOME is pointed to an older version of the JDK than is supported by the installer. Set JAVA_HOME to the appropriate Java that is being used by the WebLogic Application Server and run the installer again.

Warning: Could not create system preferences directory

Symptom

The following text appears in the installer Errors tab:

```
May 22, 2006 11:16:39 AM java.util.prefs.FileSystemPreferences$3 run
WARNING: Could not create system preferences directory. System preferences are
unusable.
May 22, 2006 11:17:09 AM java.util.prefs.FileSystemPreferences
checkLockFile0ErrorCode
WARNING: Could not lock System prefs. Unix error code -264946424.
```

Solution

This is related to Java bug 4838770. The /etc/.java/.systemPrefs directory may not have been created on your system.

This is an issue with your installation of Java and does not affect the Oracle Retail product installation.

ConcurrentModificationException in Installer GUI

Symptom

In GUI mode, the Errors tab shows the following error:

```
java.util.ConcurrentModificationException
      at
java.util.AbstractList$Itr.checkForComodification(AbstractList.java:448)
      at java.util.AbstractList$Itr.next(AbstractList.java:419)
... etc
```

Solution

You can ignore this error. It is related to third-party Java Swing code for rendering of the installer GUI and does not affect the retail product installation.

Warning: Could not find X Input Context

Symptom

The following text appears in the console window during execution of the installer in GUI mode:

```
Couldn't find X Input Context
```

Solution

This message is harmless and can be ignored.

Warning: Lower case user IDS supplied with the application do not work

Symptom

The default user supplied with the ReIM application (for example, retail.user, where password = retek) does not work to for signing on to the application.

Solution

The user/password combination does not work because the password hashing is incorrect in the database scripts run by the installer code that affect only lower case user IDs/user names.

Run this code instead of the ReIM database to fix the passwords for the lower case user IDs supplied as part of the ReIM application:

```
update im_user_authorization iua
set password = reim_security_sql .hash(username, password) where lower (username) =
username;
commit;
```


Installer fails because of missing .jar in \$ORACLE_HOME/utls/ccr/lib

Symptom

The jar file expected by the installer (emocmcInt.jar) is overwritten after the OPatch patch 6880880 is applied, and any other patch is applied afterward using that OPatch. If you try to run the installer after patching, as outlined in the installation guides, the installer fails. All applications that are installed in the same WebLogic server that hosts any of the forms applications will be affected by this issue. This is because of required Oracle patches for Linux 64-bit systems that are applied to the forms server using OPatch.

Solution

Back up the content of the \$ORACLE_HOME/utls/ccr/lib directory prior to applying OPatch patch 6880880, and recopy the content back after you apply any patches using that OPatch.

GUI screens fail to open when running Installer

Symptom

When running the installer in GUI mode, the screens fail to open and the installer ends, returning to the console without an error message. The ant.install.log file contains this error:

```
Fatal exception: Width (0) and height (0) cannot be <= 0
java.lang.IllegalArgumentException: Width (0) and height (0) cannot be <= 0
```

Solution

This error is encountered when Antinstaller is used in GUI mode with certain X Servers. To work around this issue, copy ant.install.properties.sample to ant.install.properties and rerun the installer.

Installer fails with sun.security.validator.KeyStores exception

Symptom

Installer first throws the error

```
Exception in thread "main" java.lang.NoClassDefFoundError:
sun.security.validator.KeyStores
```

And then on continuing aborts with the same error.

Solution

OCM does not work on AIX 7.1. The workaround after facing this exception, is to recreate the INSTALL_DIR and then delete the "retail-OCM-withAnt.zip" file present in INSTALL_DIR/reim directory, before running the installer.

Appendix: Setting Up Password Stores with Oracle Wallet

As part of an application installation, administrators must set up password stores for database user accounts using Oracle Wallet. These password stores must be installed on the application database side. While the installer handles much of this process, the administrators must perform some additional steps.

A password store for the application and application server user accounts must also be installed; however, the installer takes care of this entire process.

About Password Stores and Oracle Wallet

Oracle databases have allowed other users on the server to see passwords in case database connect strings (username/password@db) were passed to programs. In the past, users could navigate to `ps -ef | grep <username>` to see the password if the password was supplied in the command line when calling a program.

To make passwords more secure, Oracle Retail has implemented the Oracle Software Security Assurance (OSSA) program. Sensitive information such as user credentials now must be encrypted and stored in a secure location. This location is called password stores or wallets. These password stores are secure software containers that store the encrypted user credentials.

Users can retrieve the credentials using aliases that were set up when encrypting and storing the user credentials in the password store. For example, if `username/password@db` is entered in the command line argument and the alias is called `db_username`, the argument to a program is as follows:

```
sqlplus /@db_username
```

This would connect to the database as it did previously, but it would hide the password from any system user.

After this is configured, as in the example above, the application installation and the other relevant scripts are no longer needed to use embedded usernames and passwords. This reduces any security risks that may exist because usernames and passwords are no longer exposed.

When the installation starts, all the necessary user credentials are retrieved from the Oracle Wallet based on the alias name associated with the user credentials.

There are two different types of password stores or wallets. One type is for database connect strings used in program arguments (such as `sqlplus /@db_username`). The other type is for Java application installation and application use.

Setting Up Password Stores for Database User Accounts

After the database is installed and the default database user accounts are set up, administrators must set up a password store using the Oracle wallet. This involves assigning an alias for the username and associated password for each database user account. The alias is used later during the application installation. This password store must be created on the system where the application server and database client are installed.

This section describes the steps you must take to set up a wallet and the aliases for the database user accounts. For more information on configuring authentication and password stores, see the *Oracle Database Security Guide*.

Note: In this section, <wallet_location> is a placeholder text for illustration purposes. Before running the command, ensure that you specify the path to the location where you want to create and store the wallet.

To set up a password store for the database user accounts, perform the following steps:

1. Create a wallet using the following command:

```
mkstore -wrl <wallet_location> -create
```

After you run the command, a prompt appears. Enter a password for the Oracle Wallet in the prompt.

Note: The `mkstore` utility is included in the Oracle Database Client installation.

The wallet is created with the auto-login feature enabled. This feature enables the database client to access the wallet contents without using the password. For more information, refer to the *Oracle Database Advanced Security Administrator's Guide*.

2. Create the database connection credentials in the wallet using the following command:

```
mkstore -wrl <wallet_location> -createCredential <alias-name> <database-user-name>
```

After you run the command, a prompt appears. Enter the password associated with the database user account in the prompt.

3. Repeat Step 2 for all the database user accounts.
4. Update the `sqlnet.ora` file to include the following statements:

```
WALLET_LOCATION = (SOURCE = (METHOD = FILE) (METHOD_DATA = (DIRECTORY =  
<wallet_location>)))  
SQLNET.WALLET_OVERRIDE = TRUE  
SSL_CLIENT_AUTHENTICATION = FALSE
```

5. Update the `tnsnames.ora` file to include the following entry for each alias name to be set up.

```
<alias-name> =  
  (DESCRIPTION =  
    (ADDRESS_LIST =  
      (ADDRESS = (PROTOCOL = TCP) (HOST = <host>) (PORT = <port>))  
    )  
    (CONNECT_DATA =  
      (SERVICE_NAME = <service>)  
    )  
  )
```

In the previous example, <alias-name>, <host>, <port>, and <service> are placeholder text for illustration purposes. Ensure that you replace these with the relevant values.

Setting Up Wallets for Database User Accounts

The following examples show how to set up wallets for database user accounts for the following applications:

- For RMS, RWMS, RPM Batch, RETL, RMS, RWMS, and ARI
- For Java Applications (SIM, ReIM, RPM, Alloc, RIB, RSL, AIP, RETL)

For RMS, RPM Plsql Batch, RETL DB, RWMS batch, and ARI

Complete the following steps.

1. Create a new directory called wallet under your folder structure.

```
cd /projects/rms13.2/dev/
mkdir .wallet
```

Note: The default permissions of the wallet allow only the owner to use it, ensuring the connection information is protected. If you want other users to be able to use the connection, you must adjust permissions appropriately to ensure only authorized users have access to the wallet.

2. Create a sqlnet.ora in the wallet directory with the following content.

```
WALLET_LOCATION = (SOURCE = (METHOD = FILE) (METHOD_DATA =
(DIRECTORY = /projects/rms13.2/dev/.wallet)) )
SQLNET.WALLET_OVERRIDE=TRUE
SSL_CLIENT_AUTHENTICATION=FALSE
```

Note: WALLET_LOCATION must be on line 1 in the file.

3. Setup a tnsnames.ora in the wallet directory. This tnsnames.ora includes the standard tnsnames.ora file. Then, add two custom tns_alias entries that are only for use with the wallet. For example, sqlplus /@dvols29_rms01user.

```
ifile = /u00/oracle/product/11.2.0.4/network/admin/tnsnames.ora
```

```
dvols29_rms01user =
(DESCRIPTION = (ADDRESS_LIST = (ADDRESS = (PROTOCOL = tcp)
(host = mspdv311.us.oracle.com) (Port = 1521)))
(CONNECT_DATA = (SID = dvols29) (GLOBAL_NAME = dvols29)))

dvols29_rms01user.world =
(DESCRIPTION = (ADDRESS_LIST = (ADDRESS = (PROTOCOL = tcp)
(host = mspdv311.us.oracle.com) (Port = 1521)))
(CONNECT_DATA = (SID = dvols29) (GLOBAL_NAME = dvols29)))
```

Note: It is important to not just copy the tnsnames.ora file because it can quickly become out of date. The ifile clause (shown above) is key.

4. Create the wallet files. These are empty initially.
 - a. Ensure you are in the intended location.

```
$ pwd
/projects/rms13.2/dev/.wallet
```
 - b. Create the wallet files.

```
$ mkstore -wrl . -create
```
 - c. Enter the wallet password you want to use. It is recommended that you use the same password as the UNIX user you are creating the wallet on.
 - d. Enter the password again.
5. Create the wallet entry that associates the user name and password to the custom tns alias that was setup in the wallet's tnsnames.ora file.

```
mkstore -wrl . -createCredential <tns_alias> <username> <password>
```

Example: `mkstore -wrl . -createCredential
dvols29_rms01user rms01user passwd`

6. Test the connectivity. The ORACLE_HOME used with the wallet must be the same version or higher than what the wallet was created with.

```
$ export TNS_ADMIN=/projects/rms13.2/dev/.wallet /* This is very import to use
wallet to point at the alternate tnsnames.ora created in this example */
```

```
$ sqlplus /@dvols29_rms01user
```

```
SQL*Plus: Release 11
```

```
Connected to:
Oracle Database 11g
```

```
SQL> show user
USER is "rms01user"
```

Running batch programs or shell scripts would be similar:

```
Ex: dtesys /@dvols29_rms01user
script.sh /@dvols29_rms01user
```

Set the UP unix variable to help with some compiles :

```
export UP=/@dvols29_rms01user
for use in RMS batch compiles, and RMS, RWMS, and ARI forms compiles.
```

As shown in the example above, users can ensure that passwords remain invisible.

Additional Database Wallet Commands

The following is a list of additional database wallet commands.

- Delete a credential on wallet

```
mkstore -wrl . -deleteCredential dvols29_rms01user
```
- Change the password for a credential on wallet

```
mkstore -wrl . -modifyCredential dvols29_rms01user rms01user passwd
```

- List the wallet credential entries

```
mkstore -wrl . -list
```

This command returns values such as the following.

```
oracle.security.client.connect_string1
oracle.security.client.user1
oracle.security.client.password1
```

- View the details of a wallet entry

```
mkstore -wrl . -viewEntry oracle.security.client.connect_string1
```

Returns the value of the entry:

```
dvols29_rms01user
mkstore -wrl . -viewEntry oracle.security.client.user1
```

Returns value of the entry:

```
rms01user
```

```
mkstore -wrl . -viewEntry oracle.security.client.password1
```

Returns value of the entry:

```
passwd
```

For Java Applications (SIM, ReIM, RPM, Alloc, RIB, RSL, AIP, RETL)

For Java applications, consider the following:

- For database user accounts, ensure that you set up the same alias names between the password stores (database wallet and Java wallet). You can provide the alias name during the installer process.
- Document all aliases that you have set up. During the application installation, you must enter the alias names for the application installer to connect to the database and application server.
- Passwords are not used to update entries in Java wallets. Entries in Java wallets are stored in partitions, or application-level keys. In each retail application that has been installed, the wallet is located in
 <WEBLOGIC_DOMAIN_HOME>/retail/<appname>/config Example:
 mspdv351:[103x_WLS] /u00/webadmin/product/10.3.x/WLS/user_projects/
 domains/132_mck_soa_domain/retail/reim13/config
- Application installers should create the Java wallets for you, but it is good to know how this works for future use and understanding.
- Scripts are located in <WEBLOGIC_DOMAIN_HOME>/retail/<appname>/retail-public-security-api/bin for administering wallet entries.

Example:

```
mspdv351:[103x_WLS] /u00/webadmin/product/10.3.x/WLS/user_projects/  
domains/132_mck_soa_domain/retail/reim13/retail-public-security-api/bin
```

- In this directory is a script to help you update each alias entry without having to remember the wallet details. For example, if you set the RPM database alias to rms01user, you will find a script called update-RMS01USER.sh.

Note: These scripts are available only with application installed by way of an installer.

- Two main scripts are related to this script in the folder for more generic wallet operations: dump_credentials.sh and save_credential.sh.

- If you have not installed the application yet, you can unzip the application zip file and view these scripts in <app>/application/retail-public-security-api/bin.

Example:

```
mspdv351:[103x_WLS] /u00/webadmin/reim/application/retail-public-security-api/bin
```

update-<ALIAS>.sh

update-<ALIAS>.sh updates the wallet entry for this alias. You can use this script to change the user name and password for this alias. Because the application refers only to the alias, no changes are needed in application properties files.

Usage:

```
update-<username>.sh <myuser>
```

Example:

```
mspdv71:[103xWLS]
/u00/webadmin/product/10.3.x/WLS/user_projects/domains/java_domain/retail/rpml
32test/retail-public-security-api/bin> ./update-RMS01USER.sh
usage: update-RMS01USER.sh <username>
<username>: the username to update into this alias.
Example: update-RMS01USER.sh myuser
Note: this script will ask you for the password for the username that you pass
in.
mspdv71:[103xWLS]
/u00/webadmin/product/10.3.x/WLS/user_projects/domains/java_domain/retail/rpml
32test/retail-public-security-api/bin>
```

dump_credentials.sh

dump_credentials.sh is used to retrieve information from the wallet. For each entry found in the wallet, the wallet partition, the alias, and the user name are displayed. Note that the password is not displayed. If the value of an entry is uncertain, run save_credential.sh to resave the entry with a known password.

```
dump_credentials.sh <wallet location>
```

Example:

```
dump_credentials.sh
/u00/webadmin/product/10.3.x/WLS/user_projects/domains/132_mck_soa_dom
ain/retail/reim13/config
```

```
Retail Public Security API Utility
```

```
=====
```

```
Below are the credentials found in the wallet at the
location:/u00/webadmin/product/10.3.x/WLS/user_projects/domains/132_mck_s
oa_domain/retail/reim13/config
```

```
=====
```

```
Application level key partition name:reim13
User Name Alias:WLS-ALIAS User Name:weblogic
User Name Alias:RETAIL-ALIAS User Name:retail.user
User Name Alias:LDAP-ALIAS User Name:RETAIL.USER
User Name Alias:RMS-ALIAS User Name:rms132mock
User Name Alias:REIMBAT-ALIAS User Name:reimbat
```


save_credential.sh

save_credential.sh is used to update the information in wallet. If you are unsure about the information that is currently in the wallet, use dump_credentials.sh as indicated above. You can add new or update using save_credential.sh as shown below:

```
save_credential.sh -a <alias> -u <user> -p <partition name> -l <path of the
wallet file location where credentials are stored>
```

Example:

```
mispdv351:[103x_WLS]
/u00/webadmin/mock132_testing/rtil/rtil/application/retail-public-security-
api/bin> save_credential.sh -l
/u00/webadmin/product/10.3.x/WLS/user_projects/domains/132_mck_soa_domain/reta
il/reiml3/config
-a RMS-ALIAS -p reiml3 -u rmsl32mock
```

```
=====
Retail Public Security API Utility
=====
```

```
Enter password:
Verify password:
```

Note: -p in the above command is for partition name. You must specify the proper partition name used in application code for each Java application.

save_credential.sh and dump_credentials.sh scripts are the same for all applications. If using save_credential.sh to add a wallet entry or to update a wallet entry, bounce the application/managed server so that your changes are visible to the application. Also, save a backup copy of your cwallet.sso file in a location outside of the deployment path, because redeployment or reinstallation of the application will wipe the wallet entries you made after installation of the application. To restore your wallet entries after a redeployment/reinstallation, copy the backed up cwallet.sso file over the cwallet.sso file. Then bounce the application/managed server.

Usage

```
=====
Retail Public Security API Utility
=====
usage: save_credential.sh -au[plh]
E.g. save_credential.sh -a rms-alias -u rms_user -p rib-rms -l ./
-a,--userNameAlias <arg>          alias for which the credentials
needs to be stored
-h,--help                          usage information
-l,--locationofWalletDir <arg>     location where the wallet file is
created.If not specified, it creates the wallet under secure-credential-wallet
directory which is already present under the retail-public-security-api/
directory.
-p,--appLevelKeyPartitionName <arg> application level key partition name
-u,--userName <arg>               username to be stored in secure
credential wallet for specified alias*
```

How Does the Wallet Relate to the Application?

The ORACLE Retail Java applications have the wallet alias information you create in an <app-name>.properties file. Below is the reim.properties file. Note the database information and the user are presented as well. The property called datasource.credential.alias=RMS-ALIAS uses the ORACLE wallet with the argument of RMS-ALIAS at the csm.wallet.path and csm.wallet.partition.name = reim13 to retrieve the password for application use.

Reim.properties code sample:

```
datasource.url=jdbc:oracle:thin:@mspdv349.us.oracle.com:1521:pkols07
datasource.schema.owner=rms132mock
datasource.credential.alias=RMS-ALIAS
# =====
# ossa related Configuration
#
# These settings are for ossa configuration to store credentials.
# =====

csm.wallet.path=/u00/webadmin/product/10.3.x/WLS/user_projects/domains/132_mck_soa
_domain/retail/reim13/config
csm.wallet.partition.name=reim13
```

Note:

For Pluggable database REIM code sample:

```
datasource.url=jdbc:oracle:thin:@mspdv349.us.oracle.com:1521:pkols07
```

How Does the Wallet Relate to Java Batch Program Use?

Some of the ORACLE Retail Java batch applications have an alias to use when running Java batch programs. For example, alias REIMBAT-ALIAS maps through the wallet to REIM app user reimbat, already on the database. To run a ReIM batch program the format would be: reimbatchpgmname REIMBAT-ALIAS <other arguments as needed by the program in question>.

Setting up RETL Wallets

RETL creates a wallet under \$RFX_HOME/etc/security, with the following files:

- cwallet.sso
- jazn-data.xml
- jps-config.xml
- README.txt

To set up RETL wallets, perform the following steps:

1. Set the following environment variables:
 - ORACLE_SID=<retaildb>
 - RFX_HOME=/u00/rfx/rfx-13.2.0
 - RFX_TMP=/u00/rfx/rfx-13.2.0/tmp
 - JAVA_HOME=/usr/jdk1.7.64bit
 - LD_LIBRARY_PATH=\$ORACLE_HOME
 - PATH=\$RFX_HOME/bin:\$JAVA_HOME/bin:\$PATH
2. Change directory to \$RFX_HOME/bin.

3. Run `setup-security-credential.sh`.
 - Enter 1 to add a new database credential.
 - Enter the dbuseralias. For example, `retl_java_rms01user`.
 - Enter the database user name. For example, `rms01user`.
 - Enter the database password.
 - Re-enter the database password.
 - Enter D to exit the setup script.
4. Update your RETL environment variable script to reflect the names of both the Oracle Networking wallet and the Java wallet.

For example, to configure RETLforRPAS, modify the following entries in `$MMHOME/RETLforRPAS/rfx/etc/rmse_rpas_config.env`.

 - The RETL_WALLET_ALIAS should point to the Java wallet entry:
`export RETL_WALLET_ALIAS="retl_java_rms01user"`
 - The ORACLE_WALLET_ALIAS should point to the Oracle network wallet entry:
`export ORACLE_WALLET_ALIAS="dvols29_rms01user"`
 - The SQLPLUS_LOGON should use the ORACLE_WALLET_ALIAS:
`export SQLPLUS_LOGON="/@${ORACLE_WALLET_ALIAS}"`
5. To change a password later, run `setup-security-credential.sh`.
 - Enter 2 to update a database credential.
 - Select the credential to update.
 - Enter the database user to update or change.
 - Enter the password of the database user.
 - Re-enter the password.

Quick Guide for Retail Wallets

Retail app	Wallet type	Wallet loc	Wallet partition	Alias name	User name	Use	Create by	Alias Example	Notes
RMS batch	DB	<RMS batch install dir (MMHOME)>/.wallet	n/a	<Database SID>_<Data base schema owner>	<rms schema owner>	Compile, execution	Installer	n/a	Alias hard-coded by installer
RMS forms	DB	<forms install dir>/base/.wallet	n/a	<Database SID>_<Data base schema owner>	<rms schema owner>	Compile	Installer	n/a	Alias hard-coded by installer
ARI forms	DB	<forms install dir>/base/.wallet	n/a	<Db_Ari01>	<ari schema owner>	Compile	Manual	ari-alias	
RMWS forms	DB	<forms install dir>/base/.wallet	n/a	<Database SID>_<Data base schema owner>	<rwms schema owner>	Compile forms, execute batch	Installer	n/a	Alias hard-coded by installer
RPM app	DB	<RPM batch install dir>/.wallet	n/a	<rms schema owner alias>	<rms schema owner>	Execute batch	Manual	rms-alias	
RWMS auto-login	JAVA	<forms install dir>/base/.javawallet							
			<RWMS Installation name>	<RWMS database user alias>	<RWMS schema owner>	RWMS forms app to avoid dblogin screen	Installer	rwms13inst	
			<RWMS Installation name>	BI_ALIAS	<BI Publisher administrative user>	RWMS forms app to connect to BI Publisher	Installer	n/a	Alias hard-coded by installer

Retail app	Wallet type	Wallet loc	Wallet partition	Alias name	User name	Use	Create by	Alias Example	Notes
AIP app	JAVA	<weblogic domain home>/retail/<deployed aip app name>/config							Each alias must be unique
			aip13	<AIP weblogic user alias>	<AIP weblogic user name>	App use	Installer	aip-weblogic-alias	
			aip13	<AIP database schema user alias>	<AIP database schema user name>	App use	Installer	aip01user-alias	
			aip13	<rib-aip weblogic user alias>	<rib-aip weblogic user name>	App use	Installer	rib-aip-weblogic-alias	
RPM app	JAVA	<weblogic domain home>/retail/<deployed rpm app name>/config							Each alias must be unique
			rpm13	<rpm weblogic user alias>	<rpm weblogic user name>	App use	Installer	rpm-weblogic-alias	
			rpm13	<rms shema user alias>	<rms shema user name>	App, batch use	Installer	rms01user-alias	
			rpm13	<rpm application user one alias>	<rpm application user one name>	App use	Installer	user1-alias	

Retail app	Wallet type	Wallet loc	Wallet partition	Alias name	User name	Use	Create by	Alias Example	Notes
			rpm13	<rpm application user two alias>	<rpm application user two name>	App use	Installer	user2-alias	
			rpm13	<rpm batch user alias>	<rpm batch user name>	App, batch use	Installer	rpmbatch-alias	
			rpm13	<rib-rpm weblogic user alias>	<rib-rpm weblogic user name>	App use	Installer	rib-rpm-weblogic-alias	
ReIM app	JAVA	<weblogic domain home>/retail/<deployed reim app name>/config							Each alias must be unique
			<installed app name>	<reim weblogic user alias>	<reim weblogic user name>	App use	Installer	weblogic-alias	
			<installed app name>	<rms shema user alias>	<rms shema user name>	App, batch use	Installer	rms01user-alias	
			<installed app name>	<reim webservice validation user alias>	<reim webservice validation user name>	App use	Installer	reimwebservice-alias	
			<installed app name>	<reim batch user alias>	<reim batch user name>	App, batch use	Installer	reimbat-alias	
Alloc app	JAVA	<weblogic domain home>/retail/<deployed alloc app name>/config							Each alias must be unique

Retail app	Wallet type	Wallet loc	Wallet partition	Alias name	User name	Use	Create by	Alias Example	Notes
			<installed app name>	<alloc weblogic user alias>	<alloc weblogic user name>	App use	Installer	weblogic-alias	
			<installed app name>	<rms shema user alias>	<rms shema user name>	App use	Installer	rms01user-alias	
			<installed app name>	<rsl for rms weblogic user alias>	<rsl for rms weblogic user name>	App use	Installer	rsl-rms-weblogic-alias	
RSL app	JAVA	<RSL INSTALL DIR>/rsl-rms/security/config							Each alias must be unique
			rsl-rsm	<rsl weblogic user alias>	<rsl weblogic user name>	App use	Installer	weblogic-alias	
			rsl-rsm	<rms shema user alias>	<rms shema user name>	App use	Installer	rms01user-alias	
SIM app	JAVA	<weblogic domain home>/retail/<deployed sim app name>/config							
			rpm	<rpm weblogic user alias>	<rpm weblogic user name>	App use	Installer	rpm-weblogic-alias	
			rms	<rsl for rms weblogic user alias>	<rsl for rms weblogic user name>	App use	Installer	rsl-rms-weblogic-alias	
			rib-sim	<rib-sim weblogic user alias>	<rib-sim weblogic user name>	App use	Installer	rib-sim-weblogic-alias	

Retail app	Wallet type	Wallet loc	Wallet partition	Alias name	User name	Use	Create by	Alias Example	Notes
RETL	JAVA	<RETL home>/etc/security	n/a	<target application user alias>	<target application db userid>	App use	Manual	retl_java_rms01user	User may vary depending on RETL flow's target application
RETL	DB	<RETL home>/wallet	n/a	<target application user alias>	<target application db userid>	App use	Manual	<db>_<user>	User may vary depending on RETL flow's target application
RIB	JAVA	<RIBHOME DIR>/deployment-home/conf/security							<app> is one of aip, rfm, rms, rpm, sim, rwms, tafr
JMS			jms<1-5>	<jms user alias> for jms<1-5>	<jms user name> for jms<1-5>	Integration use	Installer	jms-alias	
WebLogic			rib-<app>-app-server-instance	<rib-app weblogic user alias>	<rib-app weblogic user name>	Integration use	Installer	weblogic-alias	
Admin GUI			rib-<app>#web-app-user-alias	<rib-app admin gui user alias>	<rib-app admin gui user name>	Integration use	Installer	admin-gui-alias	
Application			rib-<app>#user-alias	<app weblogic user alias>	<app weblogic user name>	Integration use	Installer	app-user-alias	Valid only for aip, rpm, sim
DB			rib-<app>#app-db-user-alias	<rib-app database schema user alias>	<rib-app database schema user name>	Integration use	Installer	db-user-alias	Valid only for rfm, rms, rwms, tafr

Retail app	Wallet type	Wallet loc	Wallet partition	Alias name	User name	Use	Create by	Alias Example	Notes
Error Hospital			rib- <app>#hosp -user-alias	<rib-app error hospital database schema user alias>	<rib-app error hospital database schema user name>	Integration use	Installer	hosp-user- alias	

Appendix: Oracle 11g Database Parameter File

```
#####
# Oracle 11.2.0.x Parameter file
#
# NOTES: Before using this script:
#       1. Change <datafile_path>, <admin_path>, <utl_file_path>, <diag_path>
#       and <hostname>
#           values as appropriate.
#       2. Replace the word SID with the database name.
#       3. Size parameters as necessary for development, test, and production
#       environments.
# -----
# MAINTENANCE LOG
#
# Date      By      Parameter      Old/New      Notes
# +-----+ +-----+ +-----+ +-----+ +-----+
#
# #####
# -----
# The policy is to give 60% for sga and 40% for PGA out of Memory Target at
# startup
# -----
memory_target = 2000M
# -----
audit_file_dest = <admin_path>/adump
compatible = 11.2.0
control_files = (<datafile_path>/control01.ctl
                 ,<datafile_path>/control02.ctl)
db_block_size = 8192 # Default is 2k; adjust before db creation,
cannot change after db is created
db_file_multiblock_read_count = 16 # Platform specific (max io
size)/(block size)
db_name = SID
diagnostic_dest = '<diag_path>'
java_pool_size = 100M
job_queue_processes = 5 # Oracle Retail required; number of
cpu's + 1
local_listener =
"(ADDRESS=(PROTOCOL=TCP)(HOST=<hostname>)(PORT=1521))"
nls_calendar = GREGORIAN
nls_date_format = DD-MON-RR # Oracle Retail required; if RDW
database see later entry for proper format
nls_language = AMERICAN # Default
nls_numeric_characters = "., " # Should be explicitly set to ensure all
users/batch get the same results
nls_sort = BINARY # Should be explicitly set to ensure all
sessions get the same order
nls_territory = AMERICA # Default
open_cursors = 900 # Oracle Retail required (minimum=900);
default is 50
plsql_optimize_level = 2 # 10g change; use this setting
to optimize plsql performance
```

```
processes                = 2000          # Max number of OS processes that can connect
to the db
query_rewrite_enabled    = TRUE          # Oracle Retail required for function-
based indexes
session_cached_cursors  = 900           # Oracle Retail required;
undo_management          = AUTO
undo_retention           = 1800          # Currently set for 30 minutes; set to avg
length of transactions in sec
undo_tablespace          = undo_ts
user_dump_dest           = <admin_path>/udump
utl_file_dir             = <utl_file_path>
workarea_size_policy     = auto          # Should be set to auto
when pga_aggregate_target is set
#
# *** Set these parameters for Oracle Retail Data Warehouse (RDW) database ***
#nls_date_format         = DD-MON-RRRR   # Required by MicroStrategy
#query_rewrite_integrity = TRUSTED
#star_transformation_enabled = TRUE
#utl_file_dir            = <Windows_utl_file_path>,
<UNIX_util_file_path>
#
# *** Archive Logging, set if needed ***
#log_archive_dest_1      = 'location=<admin_path>/arch/'
#log_archive_format      = SIDarch_%r_%s_%t.log
#log_buffer              = 10485760      # Set to (512K or 128K)*CPUs
#log_checkpoint_interval = 51200         # Default:0 - unlimited
#log_checkpoint_timeout  = 7200          # Default:1800 seconds
```

Appendix: Oracle 12cR1 Database Parameter File

```
#####
# Copyright (c) 2015 by Oracle Corporation
# Oracle 12.1.0.x Parameter file
# NOTES: Before using this script:
#       1. Change <datafile_path>, <admin_path>, <utl_file_path>, <diag_path>
#       and <hostname>
#           values as appropriate.
#       2. Replace the word SID with the database name.
#       3. Size parameters as necessary for development, test, and production
#       environments.
# -----
*.audit_file_dest=full_path_of_audit_dir
*.audit_trail='db'
*.compatible='12.1.0.2'
*.control_files='full_path_of_controlfile_1','full_path_of_controlfile_2'
#####
# Memory Settings:
# xxxM = Some reasonable starting value for your environmen
#####
*.db_block_size=xxxM
*.db_cache_size=xxxM
*.java_pool_size=xxxM
*.memory_target=xxxM
*.pga_aggregate_target=xxxM
*.shared_pool_size=xxxM
*.streams_pool_size=xxxM

#####

*.db_block_size=8192
*.db_domain=''
*.db_name='dbName'
*.diagnostic_dest='full_path_of_diag_dir'
*.enable_pluggable_database=true|false
*.fast_start_mttr_target=900
*.nls_calendar='GREGORIAN'
*.nls_date_format='DD-MON-RR'
*.nls_language='AMERICAN'
*.nls_numeric_characters='.,'
*.nls_sort=BINARY
*.open_cursors=900
*.os_authent_prefix=''
*.plsql_optimize_level=2
*.processes=2000
*.query_rewrite_enabled='true'
*.remote_dependencies_mode='SIGNATURE'
*.remote_login_passwordfile='EXCLUSIVE'
*.remote_os_authent=true
*.undo_tablespace='UNDOTBS1'
```

Appendix: Configuring Listener and Tnsnames

Note: This example illustrates the listener configuration for External procedures, container and non-container databases. . It does not include environment specific settings that may be needed. Consult Oracle Net Services guides for additional information

```
#####
# File: listener.ora
# Desc: Oracle Net8 listener file.
# Notes: Modify <hostname>
#####

LISTENER =
  (DESCRIPTION_LIST =
    (DESCRIPTION =
      (PROTOCOL_STACK =
        (PRESENTATION = TTC)
        (SESSION = NS))
      (ADDRESS =
        (PROTOCOL = tcp)
        (HOST = <hostname>)
        (PORT = 1521))
      (ADDRESS =
        (PROTOCOL = IPC)
        (KEY = extproc_key))
    )
  )

SID_LIST_LISTENER =
  (SID_LIST =
    (SID_DESC =
      (PROGRAM = extproc)
      (SID_NAME = extproc_agent_1521)
      (ORACLE_HOME = /u00/oracle/product/12.1.0.2)
      (ENVS='EXTPROC_DLLS=ANY')
    )
    (SID_DESC =
      (SID_NAME = prod_sid1)
      (ORACLE_HOME = /u00/oracle/product/12.1.0.2)
      (ENVS='TNS_ADMIN=/dba/network/extproc_1521')
    )
  )
)
```

Note: This example illustrates the configuration of net services for External procedures, container and non-container databases. It does not include environment specific settings that may be needed. Consult Oracle Net Services guides for additional information

```
#####
# File: tnsnames.ora
# Desc: Net Services configuration file.
# Note: Change these values: <service_name>, <oracle_sid>, <hostname>,
#       <global_name>
#####

EXTPROC_CONNECTION_DATA =
  (DESCRIPTION =
    (ADDRESS_LIST = (ADDRESS = (PROTOCOL = IPC)(Key = extproc_key)))
    (CONNECT_DATA = (SID = extproc_agent)))

EXTPROC_CONNECTION_DATA.world =
  (DESCRIPTION =
    (ADDRESS_LIST = (ADDRESS = (PROTOCOL = IPC)(Key = extproc_key)))
    (CONNECT_DATA = (SID = extproc_agent)))

< Connect_string> =
  (DESCRIPTION =
    (ADDRESS_LIST = (ADDRESS = (PROTOCOL = tcp)(host = <hostname>)(Port = 1521)))
    (CONNECT_DATA = (Service_Name = <Service_Name>) (GLOBAL_NAME =
<global_name>)))

<Connect_String>.world =
  (DESCRIPTION =
    (ADDRESS_LIST = (ADDRESS = (PROTOCOL = tcp)(host = <hostname>)(Port = 1521)))
    (CONNECT_DATA = (Service_Name = <Service_Name> >) (GLOBAL_NAME =
<global_name>)))

< Connect_string> = (DESCRIPTION = (ADDRESS_LIST = (ADDRESS = (PROTOCOL =
tcp)(host = server_01)(Port = 1521))) (CONNECT_DATA = (SERVICE_NAME =
<Service_Name>)))

<Service_Name>.world = (DESCRIPTION = (ADDRESS_LIST = (ADDRESS = (PROTOCOL =
tcp)(host = server_01)(Port = 1521))) (CONNECT_DATA = (SERVICE_NAME =
<Service_Name>)))
```

Example:

```
EXTPROC_CONNECTION_DATA =
  (DESCRIPTION =
    (ADDRESS_LIST = (ADDRESS = (PROTOCOL = IPC)(Key = extproc_key)))
    (CONNECT_DATA = (SID = extproc_agent)))

EXTPROC_CONNECTION_DATA.world =
  (DESCRIPTION =
    (ADDRESS_LIST = (ADDRESS = (PROTOCOL = IPC)(Key = extproc_key)))
    (CONNECT_DATA = (SID = extproc_agent)))
```

Database configuration for tnsnames entries (Container and Non-container):

```
prod_sid1 =
  (DESCRIPTION =
    (ADDRESS_LIST = (ADDRESS = (PROTOCOL = tcp)(host = server_01)(Port = 1521)))
    (CONNECT_DATA = (Service_Name = sid1) (GLOBAL_NAME = prod_sid1.world)))
```

```
prod_sid1.world =  
  (DESCRIPTION =  
    (ADDRESS_LIST = (ADDRESS = (PROTOCOL = tcp)(host = server_01)(Port = 1521)))  
    (CONNECT_DATA = (Service_Name = prod_sid1) (GLOBAL_NAME = prod_sid1.world)))
```

Pluggable Database configuration for tnsnames entries:

```
pdbl = (DESCRIPTION = (ADDRESS_LIST = (ADDRESS = (PROTOCOL = tcp)(host =  
server_01)(Port = 1521))) (CONNECT_DATA = (SERVICE_NAME = pdb1)))  
  
pdbl.world = (DESCRIPTION = (ADDRESS_LIST = (ADDRESS = (PROTOCOL = tcp)(host =  
server_01)(Port = 1521))) (CONNECT_DATA = (SERVICE_NAME = pdb1)))
```

Appendix: Installation Order

This section provides a guideline as to the order in which the Oracle Retail applications should be installed. If a retailer has chosen to use only some of the applications, the order is still valid, less the applications not being installed.

Note: The installation order is not meant to imply integration between products.

Enterprise Installation Order

1. Oracle Retail Merchandising System (RMS), Oracle Retail Trade Management (RTM), Oracle Retail Sales Audit (ReSA). Optional: Oracle Retail Fiscal Management (ORFM)

Note: ORFM is an optional application for RMS if you are implementing Brazil localization.

2. Oracle Retail Service Layer (RSL)
3. Oracle Retail Extract, Transform, Load (RETL)
4. Oracle Retail Active Retail Intelligence (ARI)
5. Oracle Retail Warehouse Management System (RWMS)
6. Oracle Retail Invoice Matching (ReIM)
7. Oracle Retail Price Management (RPM)

Note: During installation of RPM, you are asked for the RIBforRPM provider URL. Because RIB is installed after RPM, make a note of the URL you enter. To change the RIBforRPM provider URL after you install RIB, edit the `remote_service_locator_info_ribserver.xml` file.

8. Oracle Retail Allocation
9. Oracle Retail Central Office (ORCO)
10. Oracle Retail Returns Management (ORRM)
11. Oracle Retail Back Office (ORBO) or Back Office with Labels and Tags (ORLAT)
12. Oracle Retail Store Inventory Management (SIM)

Note: During installation of SIM, you are asked for the RIB provider URL. Because RIB is installed after SIM, make a note of the URL you enter. To change the RIB provider URL after you install RIB, edit the `remote_service_locator_info_ribserver.xml` file.

13. Oracle Retail Predictive Application Server (RPAS)
14. Oracle Retail Demand Forecasting (RDF)
15. Oracle Retail Category Management (CM)
16. Oracle Retail Replenishment Optimization (RO)

17. Oracle Retail Analytic Parameter Calculator Replenishment Optimization (APC RO)
18. Oracle Retail Regular Price Optimization (RPO)
19. Oracle Retail Merchandise Financial Planning (MFP)
20. Oracle Retail Size Profile Optimization (SPO)
21. Oracle Retail Assortment Planning (AP)
22. Oracle Retail Item Planning (IP)
23. Oracle Retail Item Planning Configured for COE (IP COE)
24. Oracle Retail Advanced Inventory Planning (AIP)
25. Oracle Retail Integration Bus (RIB)
26. Oracle Retail Point-of-Service (ORPOS)
27. Oracle Retail Markdown Optimization (MDO)
28. Oracle Retail Clearance Optimization Engine (COE)
29. Oracle Retail Analytic Parameter Calculator for Markdown Optimization (APC-MDO)
30. Oracle Retail Analytic Parameter Calculator for Regular Price Optimization (APC-RPO)
31. Oracle Retail Promotion Intelligence and Promotion Planning and Optimization (PI-PPO)
32. Oracle Retail Analytics
33. Oracle Retail Workspace (ORW)