Oracle® Retail Tax Integration Layer

Installation Guide
Release 14.2BR
F36668-01

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Oracle® Retail Tax Integration Layer Installation Guide, Release 14.2BR

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Contributors: Nathan Young

Value-Added Reseller (VAR) Language

Oracle Retail VAR Applications

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Contents

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Oracle Retail Tax Integration Layer Installation Guide, Release 14.2BR.

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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).

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

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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

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, 14.2) or a later patch release (for example, 14.2.1). 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

Oracle Retail product documentation is 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. 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
```

1

Preinstallation Tasks

Implementation Capacity Planning

There is significant complexity involved in the deployment of Oracle Retail applications, and capacity planning is site specific. Oracle Retail strongly suggests that before installation or implementation you engage your integrator (such as the Oracle Retail Consulting team) and hardware vendor to request a disk sizing and capacity planning effort.

Sizing estimates are based on a number of factors, including the following:

- Workload and peak concurrent users and batch transactions
- Hardware configuration and parameters
- Data sparcity
- Application features utilized
- Length of time history is retained

Additional considerations during this process include your high availability needs as well as your backup and recovery methods.

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 Database Server Requirements

Oracle Retail Tax Integration Layer (RTIL) requires that the RMS 14.1.3.2 database schema be installed. See the *Oracle Retail Merchandising System Installation Guide* for the supported database server requirements.

General Requirements for a database server running RTIL include:

Supported on:	Versions Supported:
Database Server OS	OS certified with Oracle Database 19c Enterprise Edition. Options are: ▪ Oracle Linux 7.4 or later for x86-64 (Actual hardware or Oracle virtual machine). ▪ Red Hat Enterprise Linux 7.5 or later for x86-64 (Actual hardware or Oracle virtual machine). ▪ AIX 7.1 or later (Actual hardware or LPARs) ▪ Solaris 11.3 SRU31 SPARK (Actual hardware or logical domains) ▪ HP-UX 11.31 Integrity (Actual hardware, HPVM or vPars)
Database Server 19c	Oracle Database Enterprise Edition 19c (19.0.0.0) with the following specifications: **Required Components:** ▪ Oracle Partitioning ▪ Examples CD **Other components:** ▪ Perl interpreter 5.0 or later ▪ X-Windows interface ▪ JDK 1.8 or later

Check Supported Application Server Requirements

General requirements for an application server capable of running RTIL include the following.

Supported on	Versions Supported
Application Server OS	OS certified with Oracle Fusion Middleware 12c (12.2.1.4). Options are: ▪ Oracle Linux 7.4 or later for x86-64 (Actual hardware or Oracle virtual machine). ▪ Red Hat Enterprise Linux 7.5 or later for x86-64 (Actual hardware or Oracle virtual machine). ▪ AIX 7.1 or later (Actual hardware or LPARs) ▪ Solaris 11.3 SRU31 SPARK (Actual hardware or logical domains) ▪ HP-UX 11.31 Integrity (Actual hardware, HPVM or vPars)
Application Server	Oracle Fusion Middleware 12c (12.2.1.4) **Components:** ▪ Oracle WebLogic Server 12c Release 2 (12.2.1.4) **Java:** ▪ JDK 1.8 64 bit

Check Supported Web Browser and Client Requirements

General requirements for client running RMS include the following.

Requirement	Version
Operating system	Windows 10
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	1.8.0_80+
Browser	Microsoft Internet Explorer 11

Note: Oracle Retail does not recommend or support installations of RTIL with less than 256 kb bandwidth available between the PC client location (store and warehouse locations) and the data center at which the application server resides. Attempting to utilize less than 256 kb total available bandwidth causes unpredictable network utilization spikes, and performance of the ORFM screens degrades below requirements established for the product. The 256 kb requirement provides reasonable, predictable performance and network utilization.

Supported Oracle Retail Products

Product	Version
Oracle Retail Merchandising System (RMS)	14.1.3.2

Supported Third-Party Products

Product	Version
TaxWeb Tax Rules (The Tax Rules software is a product of TaxWeb Compliance Software S.A.)	▪ taxinterface-191.6.jar ▪ taxcomponent-191.6.jar ▪ taxrules.jar **Note:** RTIL was tested with the above mentioned versions. Please contact TaxWeb for the latest compatible release (http://www.taxweb.com.br).

Supported Oracle Retail Integration Technologies

Integration Technology	Version
Oracle Retail Integration Bus (RIB)	14.1.3.2

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RAC and Clustering

The Oracle Retail Tax Integration Layer has been validated to run in two configurations on Linux:

- Standalone Oracle Application Server or Web Logic Server and Database installations
- Real Application Cluster Database and Oracle Application Server or Web Logic Server Clustering

The Oracle Retail products have been validated against a 19c RAC database. When using a RAC database, all JDBC connections should be configured to use THIN connections rather than OCI connections.

Clustering for Web Logic Server 12c is managed as an Active-Active cluster accessed through a Load Balancer. Validation has been completed utilizing a RAC Oracle Internet Directory database with the WebLogic 12c cluster.

References for Configuration:

- Oracle® Fusion Middleware High Availability Guide 12c (12.2.1.4)
- Oracle Real Application Clusters Administration and Deployment Guide 19c

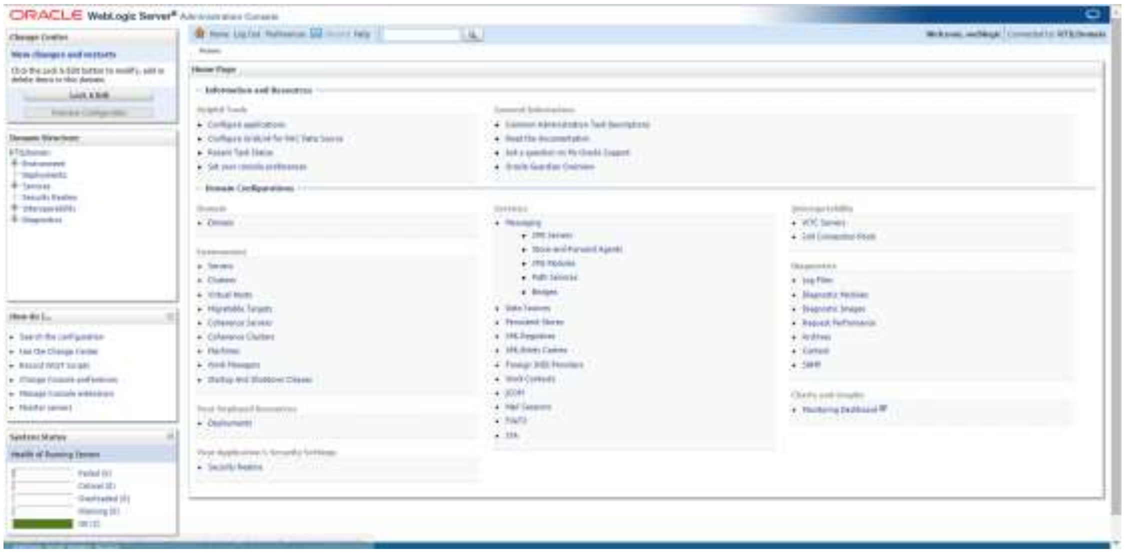
RTIL Installation Tasks

Before proceeding, you must install Oracle WebLogic Server 12c (12.2.1.4), create a separated domain for RTIL without any other applications not selecting any template like JRF along with all patches listed in Chapter 1, Preinstallation Tasks and create a separated domain for RTIL without any other applications. The RTIL application is deployed to a WebLogic Managed server within the WebLogic installation.

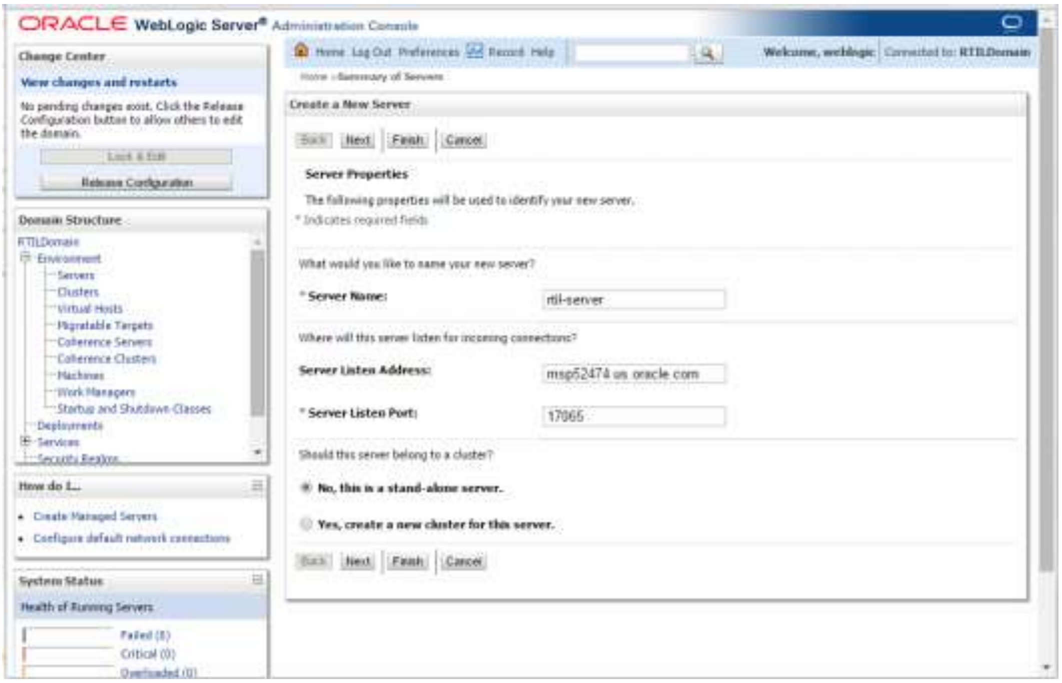
Install Managed Server in WebLogic

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

1. Log in to the Administration Console.



2. Click **Lock & Edit**.
3. Navigate to Environment > Servers. Select new tab of the servers on the right side.



No pending changes exist. Click the Release Configuration button to allow others to edit the domain.

Create a New Server

Server Properties

The following properties will be used to identify your new server.

* Indicates required fields

What would you like to name your new server?

* Server Name: rtil-server

Where will this server listen for incoming connections?

Server Listen Address: msp52474 us oracle com

* Server Listen Port: 17065

Should this server belong to a cluster?

● No, this is a stand-alone server.

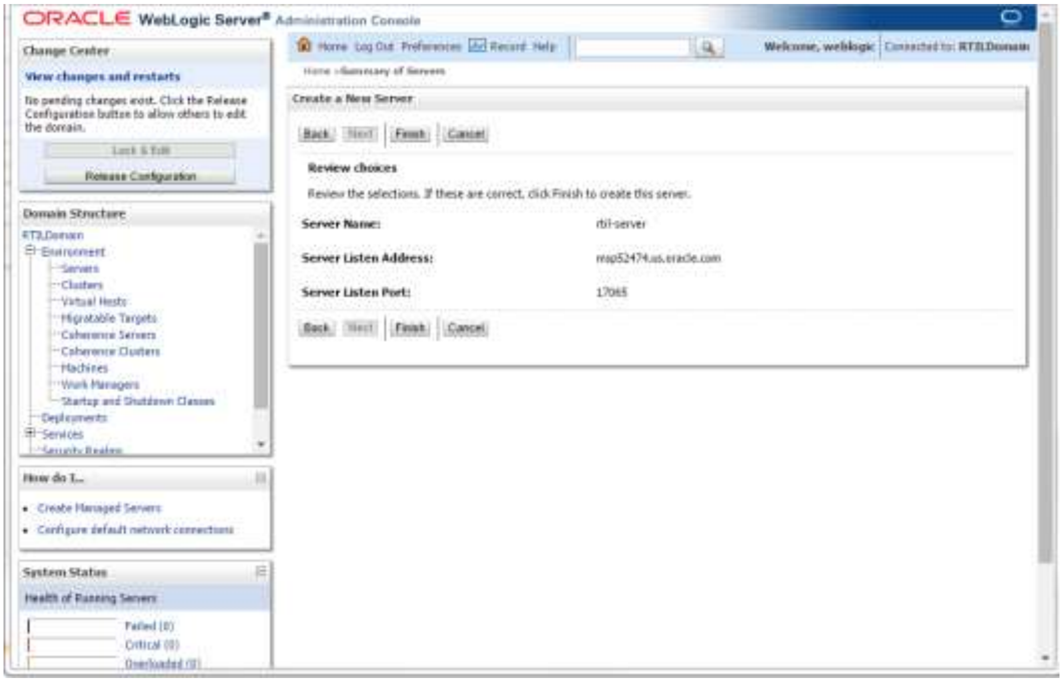
○ Yes, create a new cluster for this server.

4. Set the following variables:

   - **Server Name**: This value should be specific to your targeted application (for example, rtil-server).
   - **Server Listen Address**: <weblogic server>
     (for example, msp52474.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, and so on.)

5. Click **Next**.



No pending changes exist. Click the Release Configuration button to allow others to edit the domain.

Create a New Server

Review choices

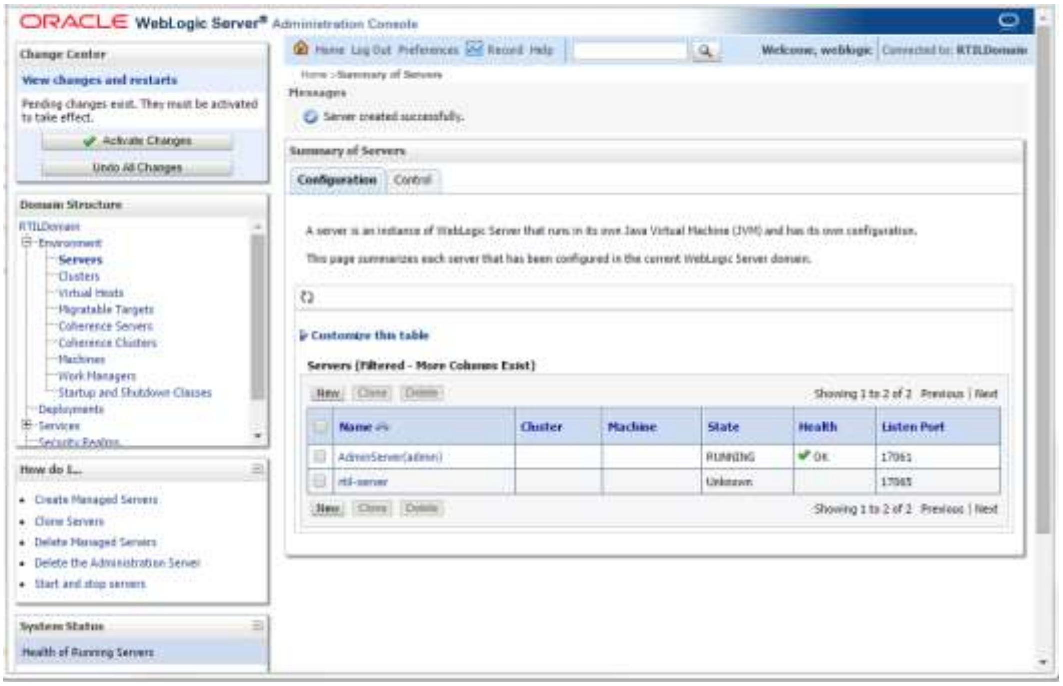
Review the selections. If these are correct, click Finish to create this server.

Server Name: rtil-server

Server Listen Address: msp52474.us.oracle.com

Server Listen Port: 17065

Click **Finish**.



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

Messages

Server created successfully.

Summary of Servers

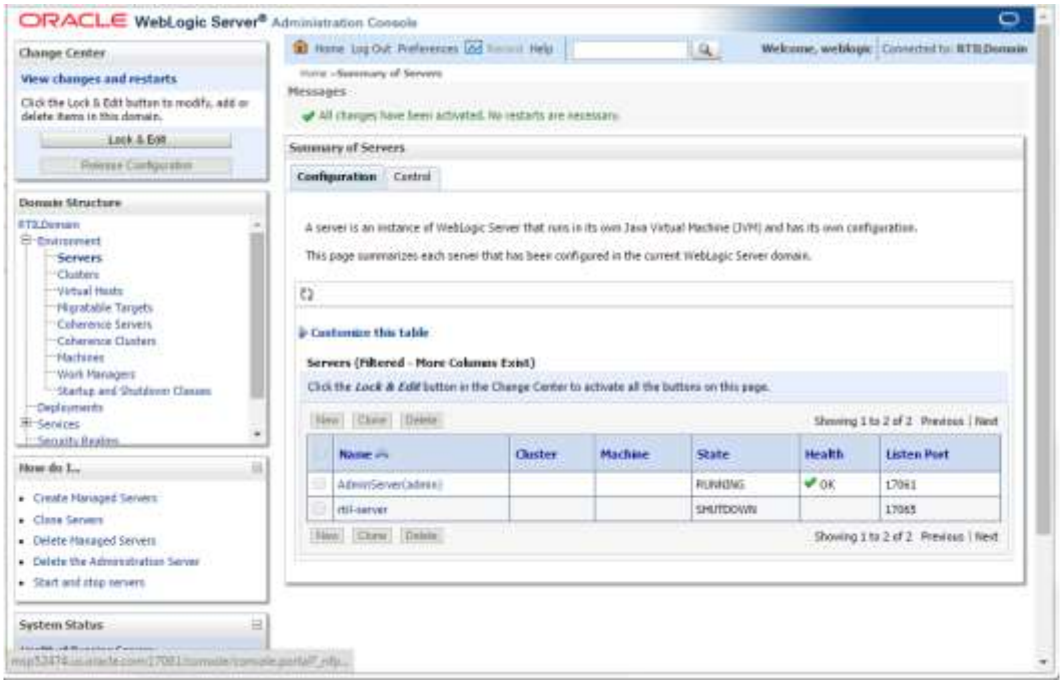
A server is an instance of WebLogic Server that runs in its own Java Virtual Machine (JVM) and has its own configuration.

This page summarizes each server that has been configured in the current WebLogic Server domain.

Servers (Filtered - More Columns Exist)

□	Name	Cluster	Machine	State	Health	Listen Port
□	AdminServer(admin)			RUNNING	✓ OK	17061
□	rtil-server			Unknown		17065

6. Click **Activate Changes** on the left side. Once the changes are activated, the State of the rtil-server should change to SHUTDOWN status.



Click the Lock & Edit button to modify, add or delete items in this domain.

All changes have been activated. No restarts are necessary.

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.

Servers (Filtered - More Columns Exist)

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

Showing 1 to 2 of 2 Previous | Next

	Name	Cluster	Machine	State	Health	Listen Port
□	AdminServer(admin)			RUNNING	✓ OK	17061
□	rtil-server			SHUTDOWN		17065

Showing 1 to 2 of 2 Previous | Next

msp53474.us.oracle.com:17061/console/console.portal?_nfp...

RTIL and TaxWeb Integration

For this release, it is possible to select the mode where tax rules will be available; either making the rules available in a database or archived in a jar file.

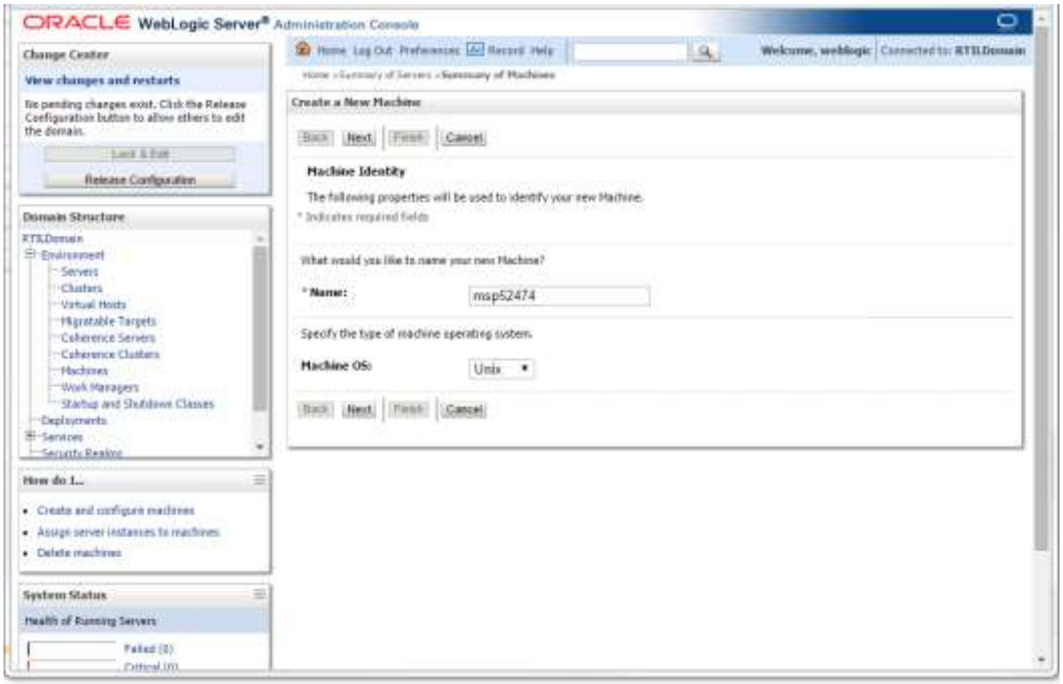
RTIL was tested using the database mode, but it is possible to use the taxrules.jar file provided by TaxWeb.

> **Note:** Refer to the installation guide provided by TaxWeb for additional information on using database mode or jar mode.
>
> The steps related to rules when installing RTIL are separated into database mode and jar mode. Refer to the procedures that are applicable to your installation decisions about tax rules.

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 admin console. Only one node manager is needed per WebLogic installation.

1. Log in to the Administration Console.
2. Click **Lock & Edit**. Navigate to Environments->Machines. Click **New**.
3. The following page is displayed. Set the following variables:
   - **Name**: Logical machine name
   - **Machine OS**: UNIX


ORACLE WebLogic Server® Administration Console
Home Log Out Preferences Record Help
Welcome, weblogic Connected to: RTILDomain
Home >Summary of Servers >Summary of Machines
Change Center
View changes and restarts
No pending changes exist. Click the Release Configuration button to allow others to edit the domain.
Lock & Edit
Release Configuration
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Migratable Targets
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Deployments
Services
Security Realms
How do I...
Create and configure machines
Assign server instances to machines
Delete machines
System Status
Health of Running Servers
Failed (0)
Critical (0)
Back
Next
Finish
Cancel

Create a New Machine

Machine Identity

The following properties will be used to identify your new Machine.

* Indicates required fields

What would you like to name your new Machine?

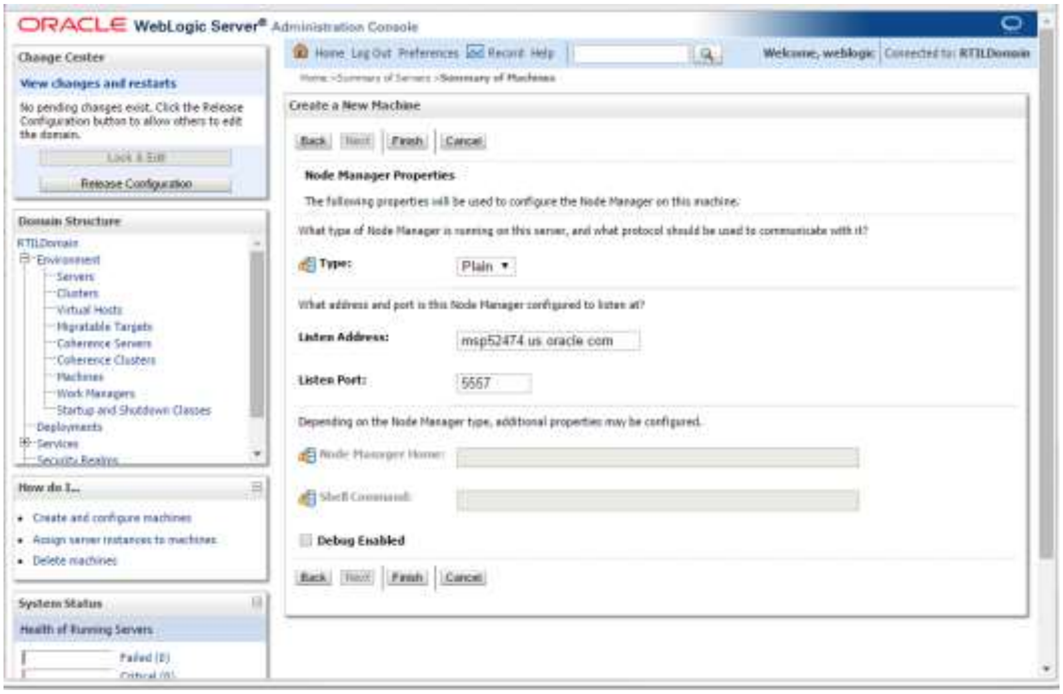
* Name: msp52474

Specify the type of machine operating system.

Machine OS: Unix

4. Click **Next.** The following page is displayed. Set the following variables:
   - **Type**: Plain
   - **Listen Address**: <weblogic server> (for example, msp52478.us.oracle.com)
   - **Listen Port**: Assign a port number. Example : 5557

The default port is 5556.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Assign server instances to machines
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Health of Running Servers
Failed (0)
Critical (0)
Back Next Finish Cancel

No pending changes exist. Click the Release Configuration button to allow others to edit the domain.

Create a New Machine

Node Manager Properties

The following properties will be used to configure the Node Manager on this machine.

What type of Node Manager is running on this server, and what protocol should be used to communicate with it?

Type: Plain

What address and port is this Node Manager configured to listen at?

Listen Address: msp52474.us.oracle.com

Listen Port: 5567

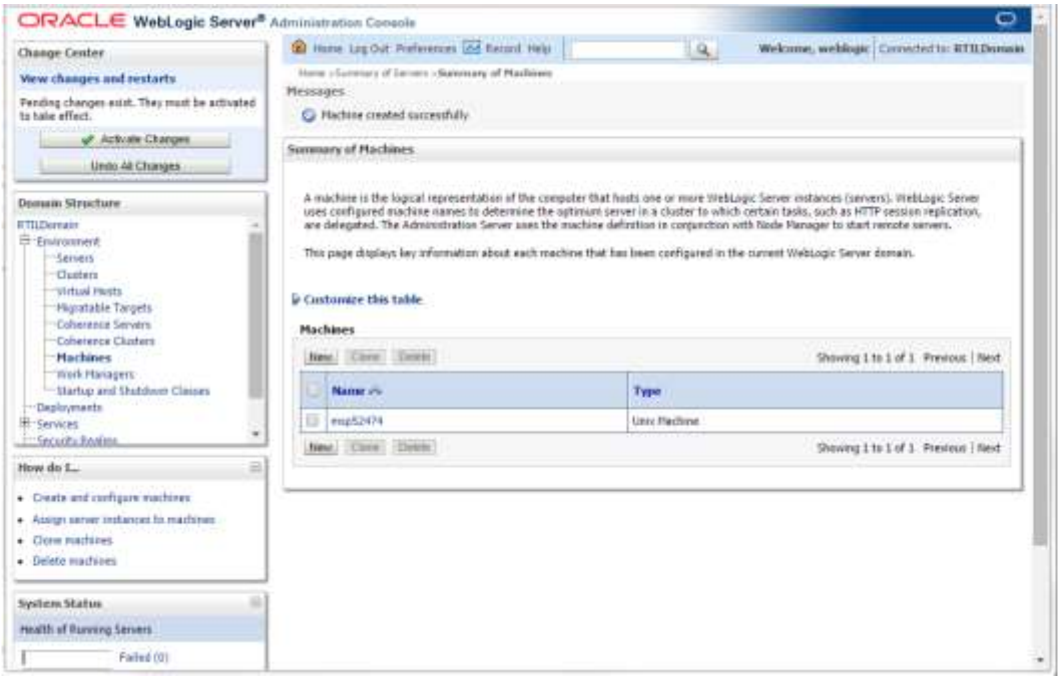
Depending on the Node Manager type, additional properties may be configured.

Node Manager Home:

Shell Command:

□ Debug Enabled

5. Click **Finish.**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Failed (0)
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New Clone Delete
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Pending changes exist. They must be activated to take effect.

Messages

Machine created successfully.

Summary of Machines

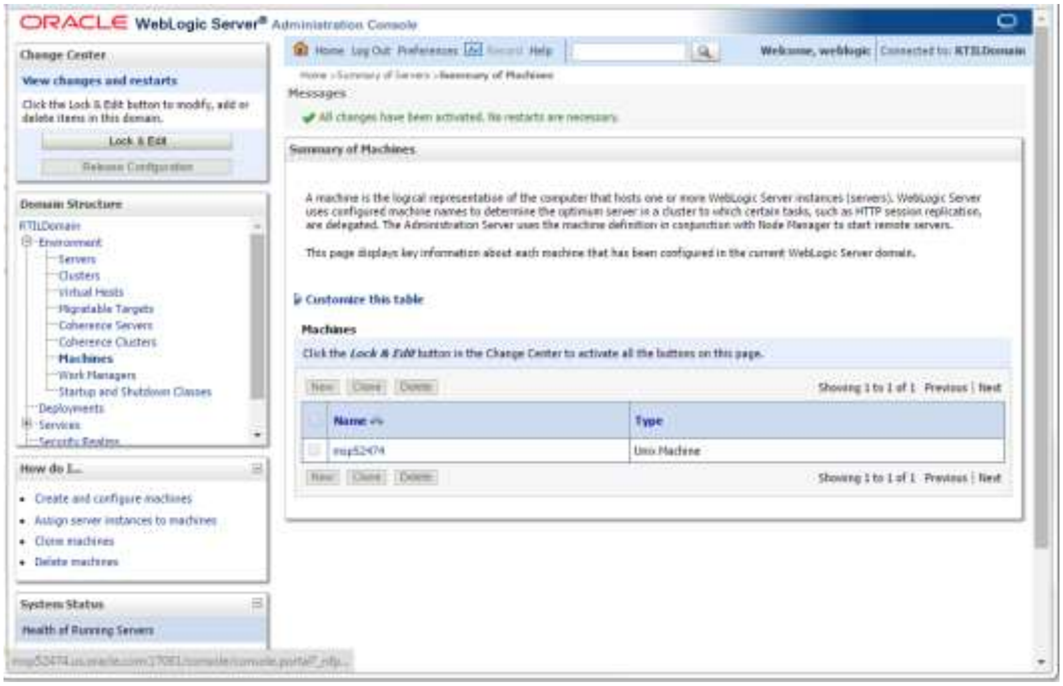
A machine is the logical representation of the computer that hosts one or more WebLogic Server instances (servers). WebLogic Server uses configured machine names to determine the optimum server in a cluster to which certain tasks, such as HTTP session replication, are delegated. The Administration Server uses the machine definition in conjunction with Node Manager to start remote servers.

This page displays key information about each machine that has been configured in the current WebLogic Server domain.

Machines

□	Name	Type
□	msp52474	Unix Machine

6. Click **Activate Changes**.



Click the Lock & Edit button to modify, add or delete items in this domain.

Messages

✓ All changes have been activated. No restarts are necessary.

Summary of Machines

A machine is the logical representation of the computer that hosts one or more WebLogic Server instances (servers). WebLogic Server uses configured machine names to determine the optimum server in a cluster to which certain tasks, such as HTTP session replication, are delegated. The Administration Server uses the machine definition in conjunction with Node Manager to start remote servers.

This page displays key information about each machine that has been configured in the current WebLogic Server domain.

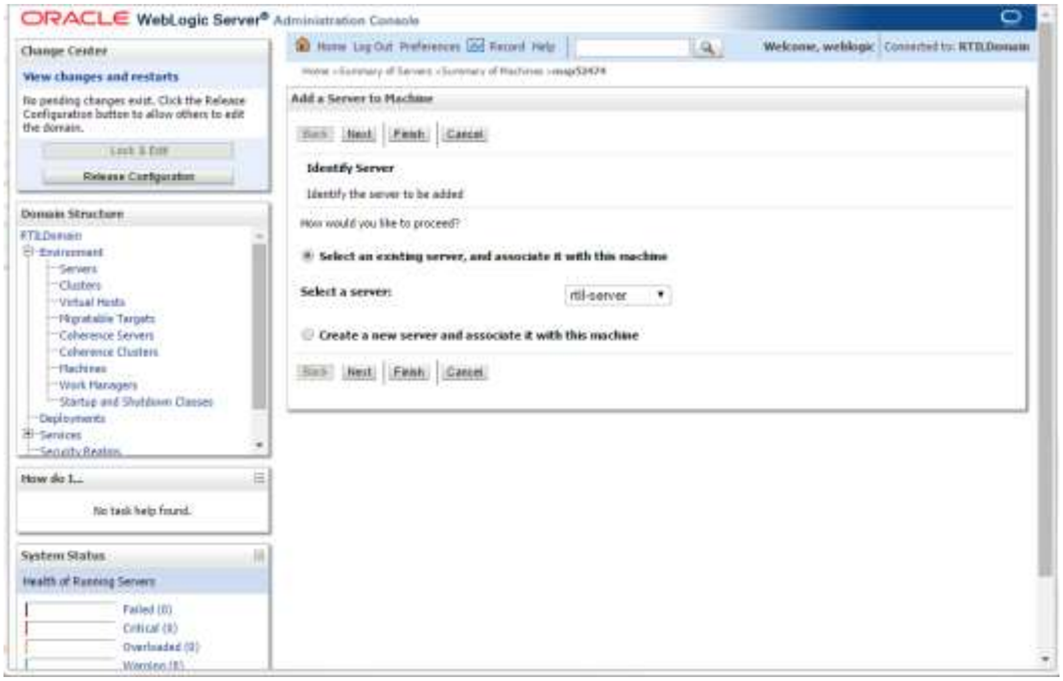
Machines

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

□	Name	Type
□	msp52474	Unix Machine

7. Click **Lock & Edit**.

8. Navigate to Environments > machines. Click the machine name. Select the **Servers** tab. Click **Add**.



No pending changes exist. Click the Release Configuration button to allow others to edit the domain.

No task help found.

Add a Server to Machine

Identify Server

Identify the server to be added

How would you like to proceed?

● Select an existing server, and associate it with this machine

Select a server: rtil-server

○ Create a new server and associate it with this machine

9. Add the managed servers that need to be configured with the Nodemanager. Save changes.
   - From the drop down select the managed server to be added to nodemanager
   - Server: <app-server> (for example: rtil-server)

10. Click **Next.** Click **Finish**.

11. Go to the managed server on which RTIL will be deployed and click the Server Start tab. In the Class Path box, add the following:

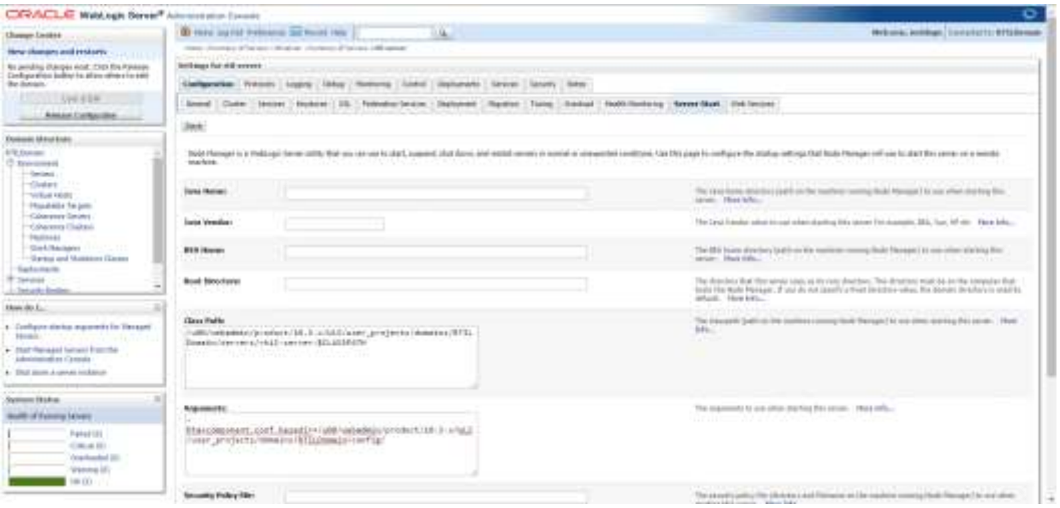
    ```
    <full-path-to-domain>/servers/<managed-server>
    ```

    For example:

    ```
    /u00/webadmin/product/10.3.x/WLS/user_projects/domains/RTILDomain/servers/r
    til-server:$CLASSPATH
    ```

12. When using tax rules in database mode, in the same Server Start Tab referenced in the above step add the line "-Dtaxcomponent.conf.basedir=[$DOMAIN_HOME]/config" to the Arguments box. Note that "[DOMAIN_HOME]" needs to be the full path to the domain, For Example:

    ```
    -Dtaxcomponent.conf.basedir=/u00/webadmin/product/10.3.x/WLS/user_projects/
    domains/RTILDomain /config
    ```



13. Click **Save**.
14. Click **Activate Changes**.

Start the Node Manager

To start the managed servers, complete the following steps.

1. Start up the nodemanager. Edit the nodemanager.properties file at the following location with the below values:

   $WLS_HOME/wlserver_10.3/common/nodemanager/nodemanager.properties

   - StartScriptEnabled=true
   - StartScriptName=startWebLogic.sh.
2. After making changes to the nodemanager.properties file, NodeManager must be restarted.

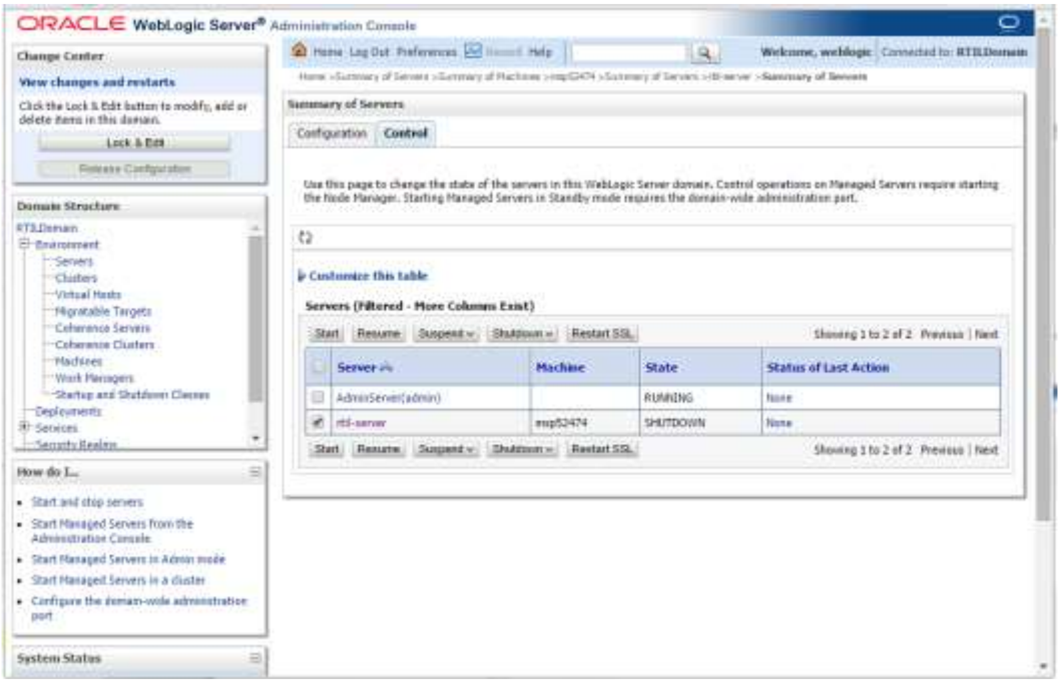
   > **Note:** The nodemanager.properties file is created after NodeManager is started for the first time. It is not available before that point.

3. Start the Node Manager from the command line.

   ```
   <WLS_HOME>/wlserver_10.3/server/bin startNodeManager.sh
   ```

   After the Node Manager is started, the managed servers can be started through the admin console.
4. Navigate to Environments > Servers. Select <app-server> (for example, rtil-server server managed server). Click the Control tab.

5. Click **Start** to start the managed server.



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Click the Lock & Edit button to modify, add or delete items in this domain.
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Use this page to change the state of the servers in this WebLogic Server domain. Control operations on Managed Servers require starting the Node Manager. Starting Managed Servers in Standby mode requires the domain-wide administration port.

Servers (Filtered - More Columns Exist)

	Server	Machine	State	Status of Last Action
☐	AdminServer(admin)		RUNNING	None
☑	rtil-server	msp52474	SHUTDOWN	None

Load TaxRules (Database Mode)

TaxWeb will provide a jar file (taxrules) with the rules necessary to use in ORFM. For this mode, check with TaxWeb for the steps used to load rules in their database schema .

Verify taxcomponent.conf (Database Mode)

This config file must be available in the same path defined in step 12 of the Install Node Manager section (Dtaxcomponent.conf.basedir).

Verify the following entries in taxcomponent.conf file.

- withDBAcess=true
- driverClass=jndi
- url=taxrules_component
- user=taxrules_component
- taxcomponent.rules.source=database
- # Taxrules DB plugin config
- dbplugin.flavor=oracle
- dbplugin.connection=jndi
- dbplugin.url=taxrules_data

Verify taxcomponent.conf (Jar Mode)

This file must be available in the config folder from the RTIL domain.

Verify the following entries in taxcomponent.conf file.

- onDemand=true
- dataFiles=<absolute path of the folder (for example: taxweb-slim)>
- withDBAcess=true

- driverClass=jndi
- url=<jndi of the taxweb datasource>

Install Datasource Configuration File

The prerequisite for this step is the availability of a TaxWeb Tax Rules schema which should be installed based on the TaxWeb Tax Rules installation guide. The datasource should be created in the WebLogic domain in which RTIL will be installed. Please refer to the TaxWeb Tax Rules installation guide for data source creation details.

The configured datasource name should be included in the taxcomponent.conf file supplied in the TaxWeb Tax Rules distribution and placed in the config folder of the Weblogic domain in which RTIL will be deployed.

Expand the RTIL Application Distribution

To expand the RTIL application distribution, complete the following steps.

1. Create a new staging directory for the RTIL application distribution (rtil14application.zip).

   Example:
   <WLS_HOME> /user_projects/domain/<domain_name>/servers/<rtil-server>/rtil-staging

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

2. Copy rtil14application.zip to STAGING_DIR and extract its contents.

Run the RTIL Application Installer

Once you have a WebLogic instance that is configured and started, you can run the RTIL application installer. This installer configures and deploys the RTIL application.

Note: See Appendix: RTIL Installer Screens for details on every screen and field in the RTIL application installer.

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

1. Change directories to STAGING_DIR/rtil/application. This directory was created when the rtil14application.zip file was expanded under STAGING_DIR.
2. Set and export the following environment variables.

Variable	Description	Example
ORACLE_HOME	The location where Weblogic has been installed	ORACLE_HOME= /u00/webadmin/product/10.3.6/WLS export ORACLE_HOME
WEBLOGIC_DOMAIN_HOME	The location where the Weblogic domain has been installed	WEBLOGIC_DOMAIN_HOME=$ORACLE_HOME/user_projects/domains/RTILDomain/ export WEBLOGIC_DOMAIN_HOME

Variable	Description	Example
JAVA_HOME	Location of a Java 8 (1.8.0+) JDK. 64 bit. For Linux and Solaris OS only). This should be set to the Java being used by the Weblogic server.	JAVA_HOME= /u00/webadmin/java/jdk1.8 export JAVA_HOME
ANT_HOME	Location of an Ant 1.9.6.x instance.	ANT_HOME=/usr/ant/ant1.9.6/ export ANT_HOME
DISPLAY	Address and port of X server on desktop system of user running installation. Optional for RTIL application installer.	DISPLAY=<IP address>:0 export DISPLAY

3. 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, do not set DISPLAY for text mode.

4. If a secured datasource is going to be configured you also need to set “ANT_OPTS” so the installer can access the key and trust store that is used for the datasource security:

```
export ANT_OPTS="-Djavax.net.ssl.keyStore=<PATH TO KEY STORE> -
Djavax.net.ssl.keyStoreType=jks -Djavax.net.ssl.keyStorePassword=<KEYSTORE
PASSWORD> -Djavax.net.ssl.trustStore=<PATH TO TRUST STORE> -
Djavax.net.ssl.trustStoreType=jks -
Djavax.net.ssl.trustStorePassword=<TRUSTSTORE PASSWORD>"
```

   An example of this would be:

```
export ANT_OPTS="-
Djavax.net.ssl.keyStore=/u00/webadmin/product/wls_retail
/wlserver_10.3/server/lib/orapphost.keystore -Djavax.net.ssl.keyStoreType=jks
-Djavax.net.ssl.keyStorePassword=retail123 -Djavax.net.ssl.trustStore=/
u00/webadmin/product/wls_retail
/wlserver_10.3/server/lib/orapphost.keystore -
Djavax.net.ssl.trustStoreType=jks -
Djavax.net.ssl.trustStorePassword=retail123"
```

5. Run the install.sh script. This launches the installer. After installation is complete, a detailed installation log file is created (rtil14install.<timestamp>.log).

Note: The typical usage for GUI mode is no arguments.

./install.sh [text | silent]

Note: If you are running the installer on AIX7.1, please set and export ANT_OPTS variable with “-Xmso1024k -Xss1024k”, prior to launching the installer. For example, assuming korn, bourne, or bash shell:

ANT_OPTS=”-Xmso1024k –Xss1024k”

export ANT_OPTS

6. The installer leaves behind the ant.install.properties file for future reference and repeat installations. This file contains inputs you provided. As a security precaution, make sure that the file has restrictive permissions.

   Example: `chmod 600 ant.install.properties`

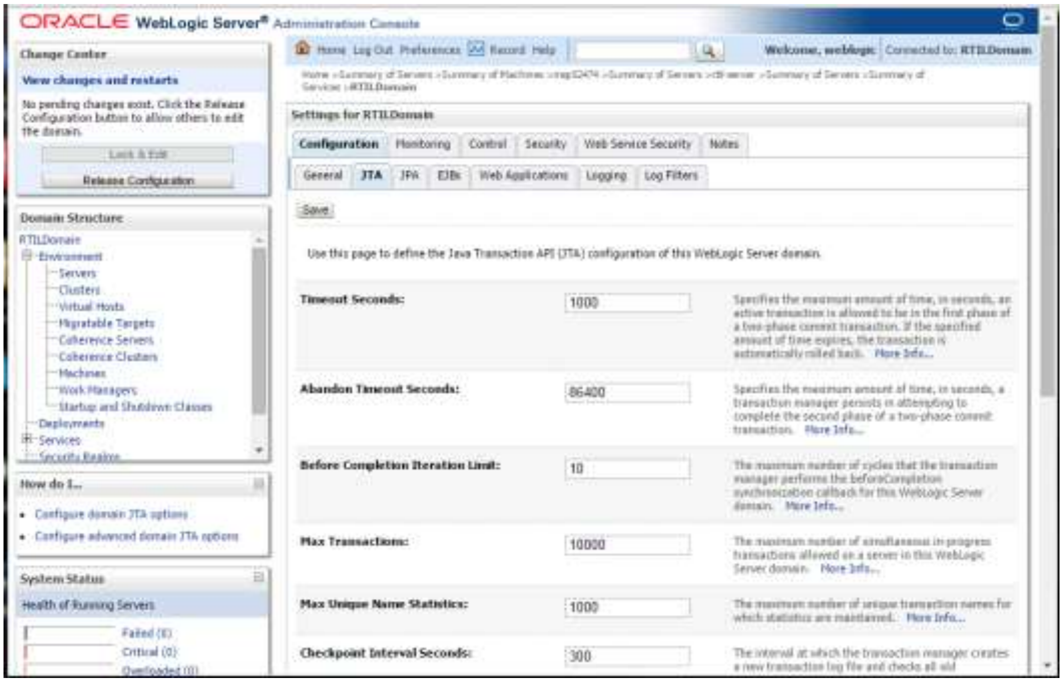
7. Once the installer is finished, open a web browser and navigate to the URL reported at the end if the installer logs. You should see something similar to the following (the text may not be the same):

   ```
   QtEquwkqJW06jSuzKbk5zGkweNJ6Wy9DdN7ZJagXkJw=
   ```

   This indicates that RTIL has been deployed and the application is running and accessible.

Post Install Steps

1. Once RTIL installation is complete, set the JTA transaction timeout to 1000 seconds in the WebLogic Admin console.
   - To override the default JTA timeout, log in to the WebLogic admin console. Navigate to Services > JTA link to go to the Configuration section.
   - Replace the default timeout of 30 seconds with 1000.
   - For the changes to take effect, bounce the WebLogic Server (for the domain).



Settings for RTILDomain

Use this page to define the Java Transaction API (JTA) configuration of this WebLogic Server domain.

Timeout Seconds: 1000 — Specifies the maximum amount of time, in seconds, an active transaction is allowed to be in the first phase of a two-phase commit transaction. If the specified amount of time expires, the transaction is automatically rolled back. More Info...

Abandon Timeout Seconds: 86400 — Specifies the maximum amount of time, in seconds, a transaction manager persists in attempting to complete the second phase of a two-phase commit transaction. More Info...

Before Completion Iteration Limit: 10 — The maximum number of cycles that the transaction manager performs the beforeCompletion synchronization callback for this WebLogic Server domain. More Info...

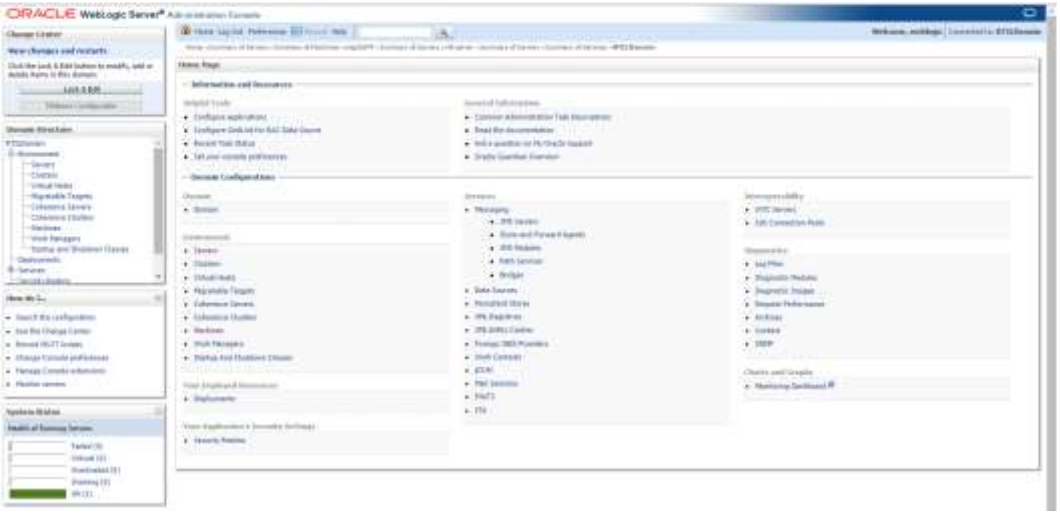
Max Transactions: 10000 — The maximum number of simultaneous in-progress transactions allowed on a server in this WebLogic Server domain. More Info...

Max Unique Name Statistics: 1000 — The maximum number of unique transaction names for which statistics are maintained. More Info...

Checkpoint Interval Seconds: 300 — The interval at which the transaction manager creates a new transaction log file and checks all old

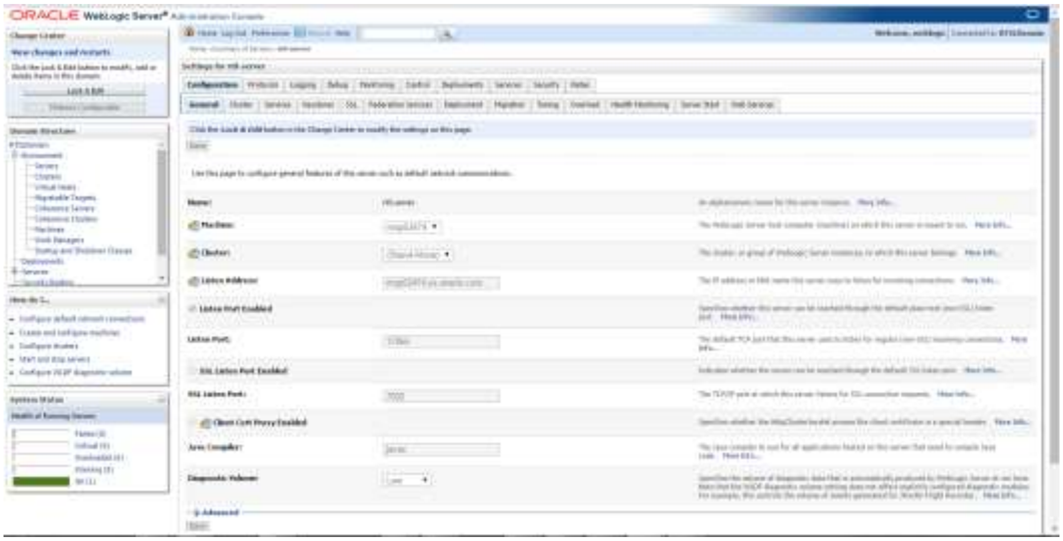
2. Once RTIL installation is complete, configure Xmx and Xms values in the WebLogic Admin console.

   a. Log in to the **admin console**.



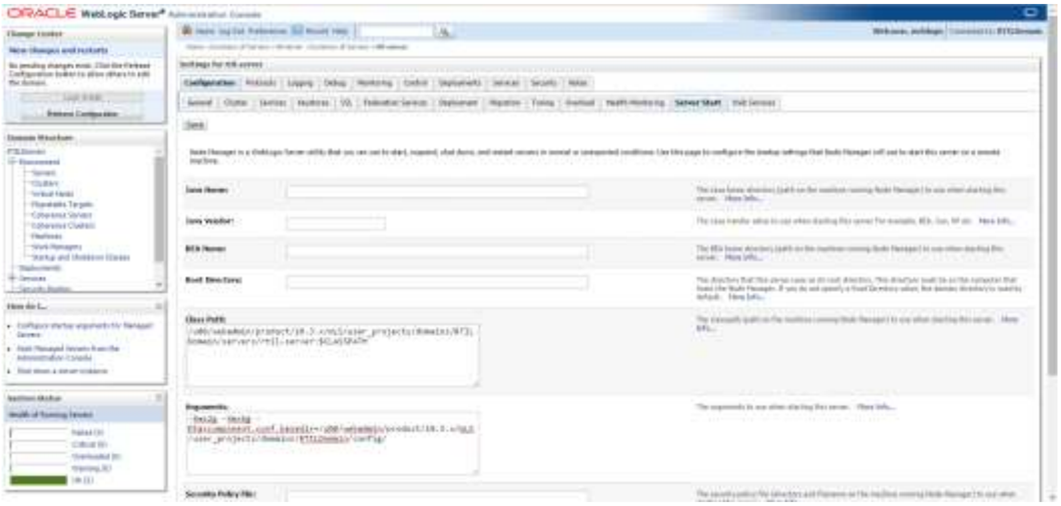
   b. Click **Lock & Edit**.

c. Navigate to Servers -> RTIL Managed Server (for example, rtil-server).



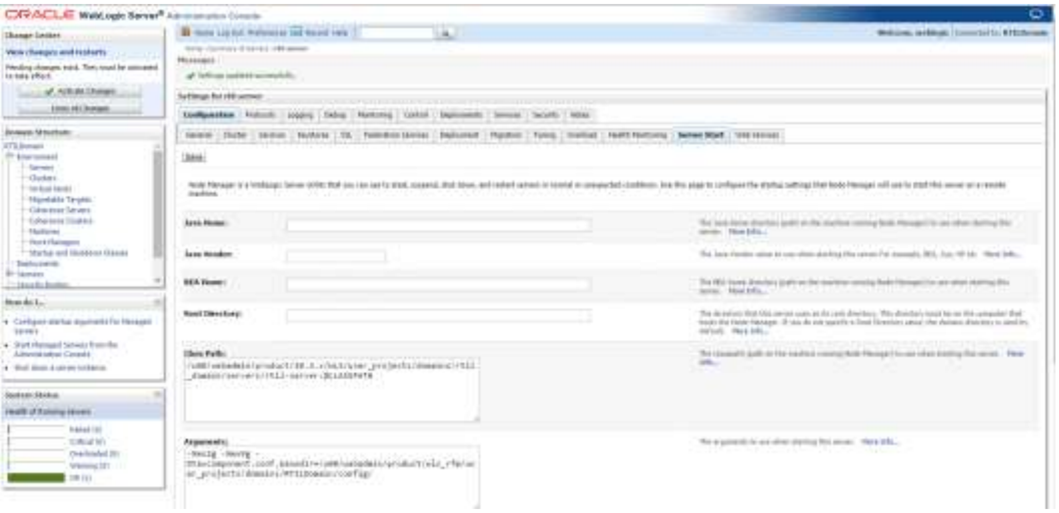
d. Click the Server Start tab under configuration.

e. Change the Xmx and Xms as below:
-Xms2g -Xmx9g



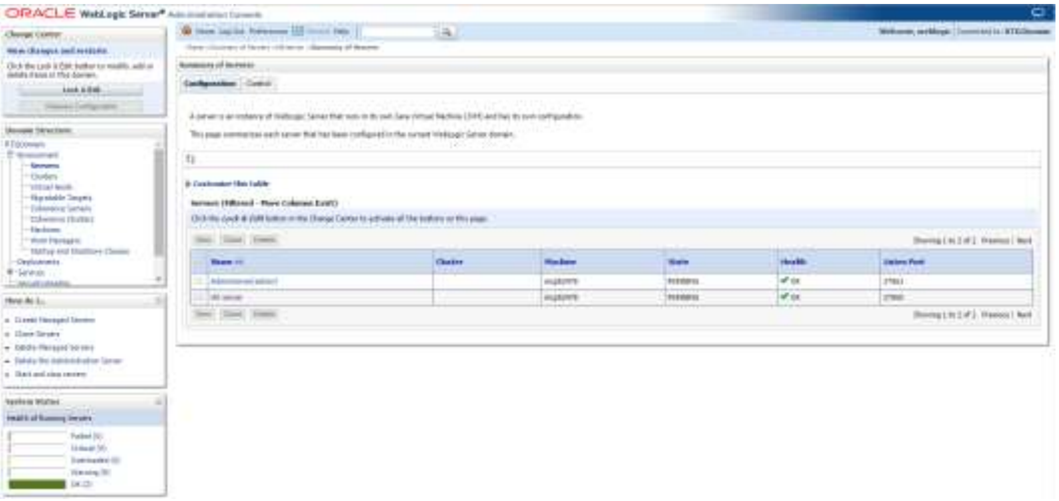
f. Save the configuration.

g. Click **Activate Changes**.



h. Navigate to Environment → Servers.

i. Click the Control Tab, under Summary of Servers.



j. Restart RTIL Managed Server.

> **IMPORTANT!** IF THE FOLLOWING STEP IS NOT DONE, IT WILL RESULT IN A NON-WORKING APPLICATION! Add the following in the RTIL database to configure the RTIL URL in the WebService Consumer.

k. Log in to the RMS database schema as an RMS user.

l. Add a record in the retail_service_report_url table with the following column values.

Column Name	**Value**
RS_CODE	RTIL
RS_NAME	Retail Tax Integration Layer
RS_TYPE	S

Column Name	Value
URL	<RTIL URL> (for example, http://<rtilhostname:port>/rtil-web/invokeApp
SERVER	<RTIL_SERVER_NAME>
PORT	<PORT_NUMBER> (for example, 17065)

Resolving Errors Encountered During Application Installation

If the application installer encounters any errors, execution is halted 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" for silent mode instructions.

See "Appendix: Common Installation Errors" for common installation errors.

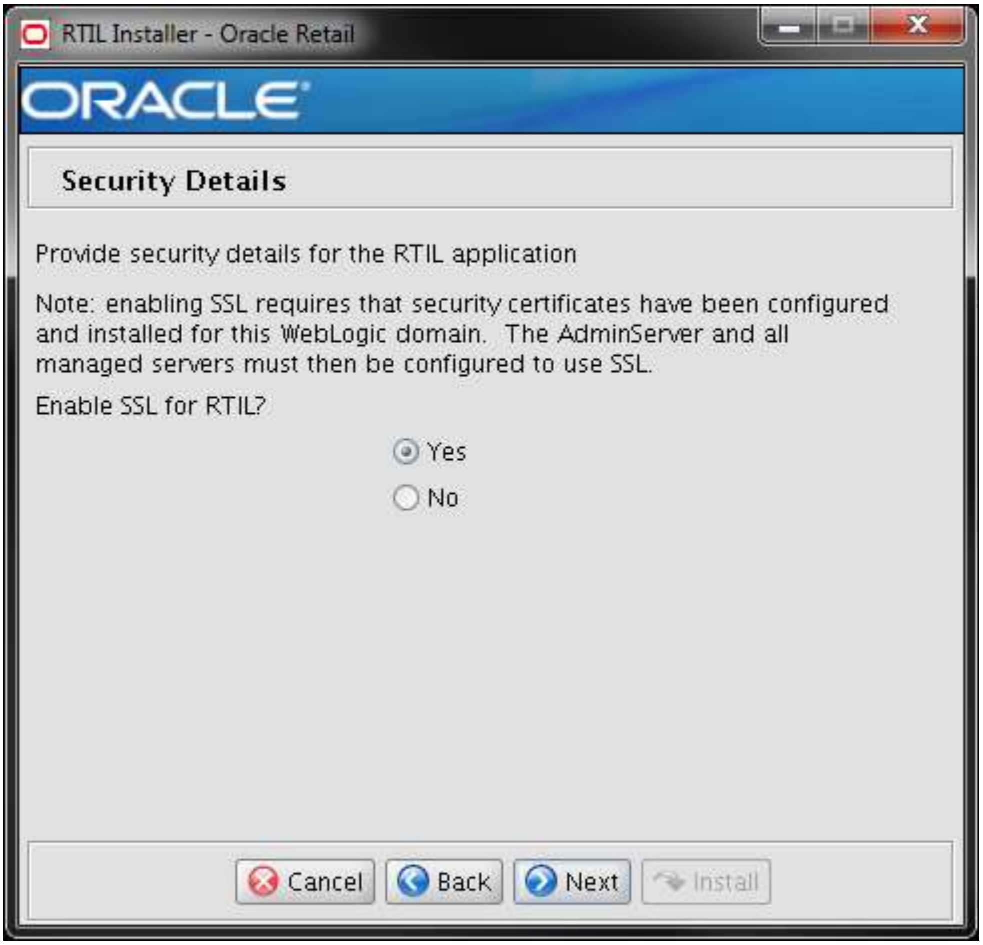
Because full application installation is required every time, any previous partial installations are overwritten by the successful installation.

A

Appendix: RTIL Installer Screens

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

Screen: Security Details



Security Details

Provide security details for the RTIL application

Note: enabling SSL requires that security certificates have been configured and installed for this WebLogic domain. The AdminServer and all managed servers must then be configured to use SSL.

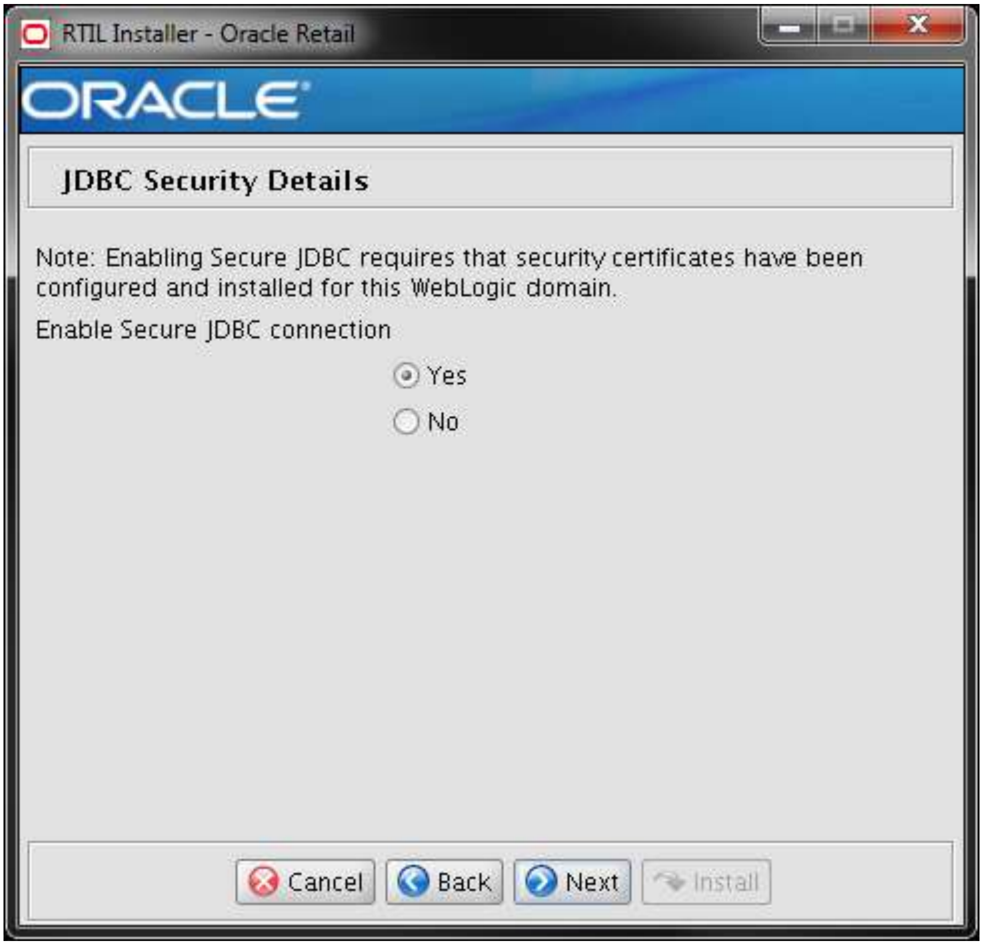
Enable SSL for RTIL?

● Yes

○ No

Field Title	Enable SSL for RTIL?
Field Description	Choosing Yes will deploy RTIL using SSL and configure RTIL to use SSL. In this case, SSL must be configured and the ports must be enabled for the AdminServer and RTIL managed servers. Choosing No will deploy and configure RTIL without SSL. In this case the non-SSL ports must be enabled for the AdminServer and for the RTIL managed servers.

Screen: JDBC Security Details



JDBC Security Details

Note: Enabling Secure JDBC requires that security certificates have been configured and installed for this WebLogic domain.

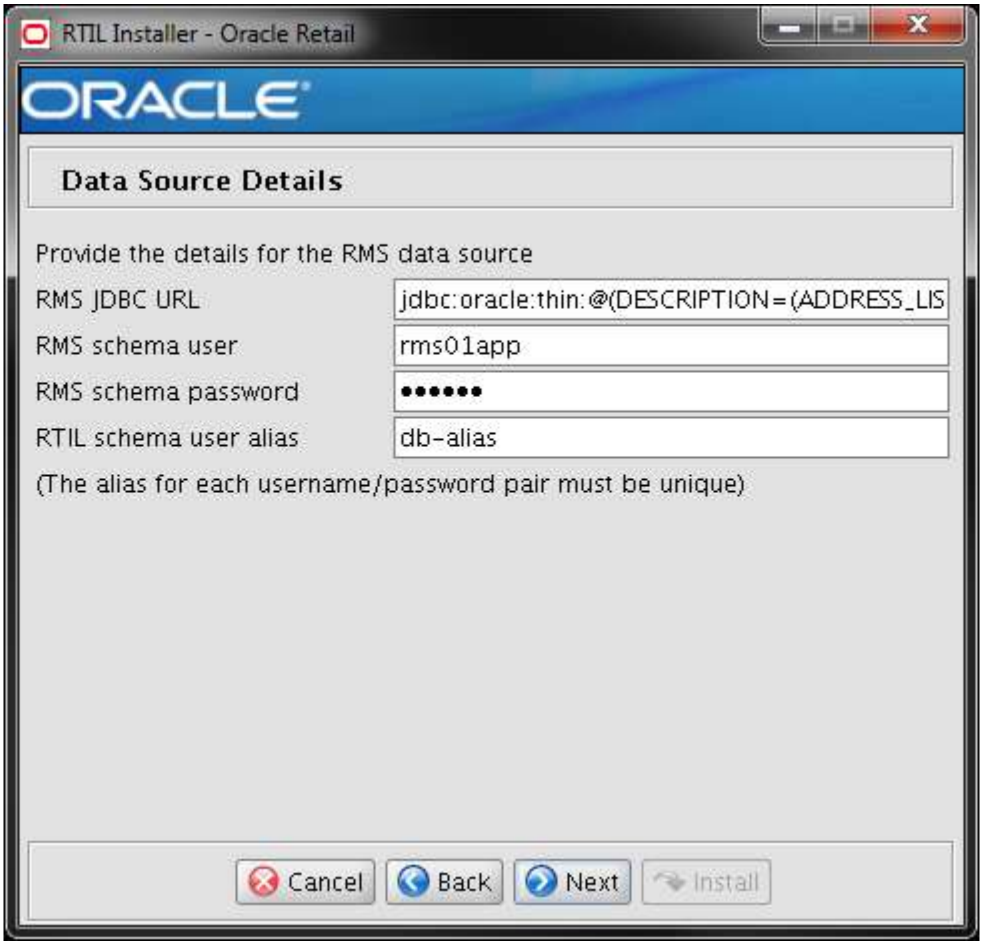
Enable Secure JDBC connection

● Yes

○ No

Field Title	Enable Secure JDBC connection
Field Description	Choose Yes to create secured data sources in WebLogic, otherwise choose No. A secure data base connection must already be set up if you want to create a secure data source.

Screen: Data Source Details



Data Source Details

Provide the details for the RMS data source

RMS JDBC URL: jdbc:oracle:thin:@(DESCRIPTION=(ADDRESS_LIS

RMS schema user: rms01app

RMS schema password: ••••••

RTIL schema user alias: db-alias

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

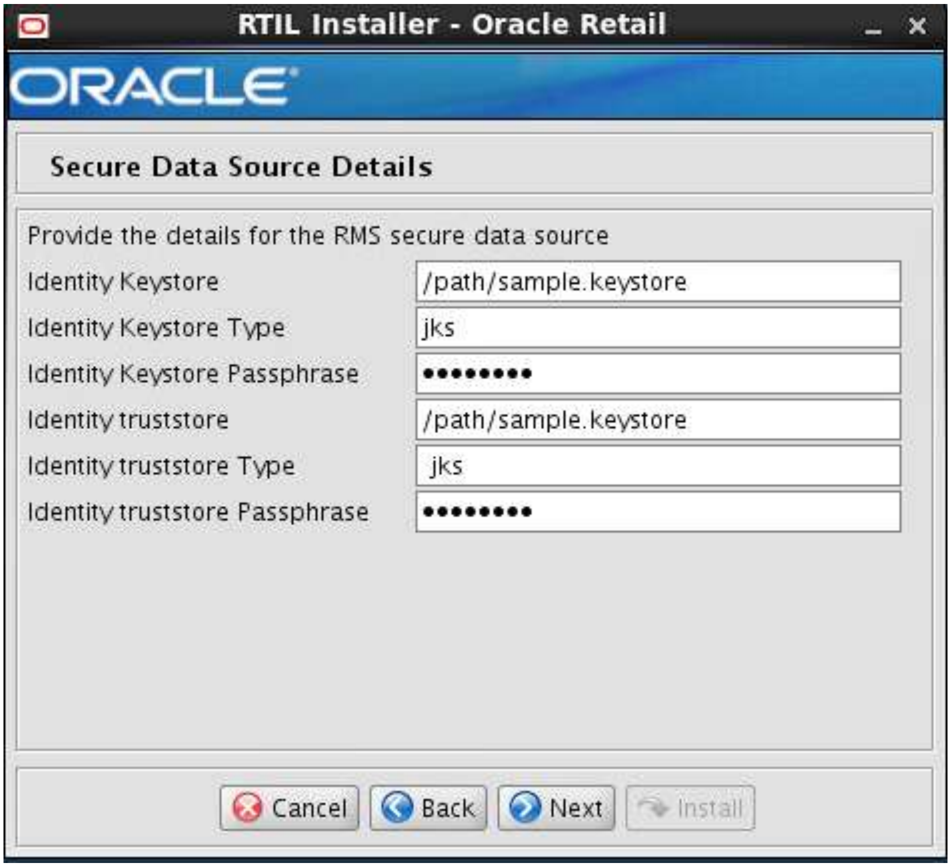
Field Title	RMS JDBC URL
Field Description	URL used by the RTIL application to access the RMS database schema. See Appendix: URL Reference for expected syntax. **Note:** The RTIL database tables are a part of the RMS schema.
Examples	For Non Secure JDBC Connection: jdbc:oracle:thin:@hostname:1521/dbname For Secure JDBC Connection: jdbc:oracle:thin:@(DESCRIPTION=(ADDRESS_LIST=(ADDRESS=(PROTOCOL=tcps)(HOST=dbhostname)(PORT=2484)))(CONNECT_DATA=(SERVICE_NAME=mydb)))

Field Title	RMS schema user
Field Description	RMS database user for accessing the RTIL tables. This should match what was given in the RMS schema field of the RMS database installer.
Example	rms01app

Field Title	RMS schema password
Field Description	Password for the RMS database user entered above to access the RTIL tables.

Field Title	RTIL schema user alias
Field Description	The alias to store the schema credentials.
Example	db-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: Secure Data Source Details



RTIL Installer - Oracle Retail

Secure Data Source Details

Provide the details for the RMS secure data source

Identity Keystore: /path/sample.keystore

Identity Keystore Type: jks

Identity Keystore Passphrase: ●●●●●●●●●

Identity truststore: /path/sample.keystore

Identity truststore Type: jks

Identity truststore Passphrase: ●●●●●●●●●

Note: This screen will appear only if you select Secure JDBC in the above screens.

Field Title	Identity Keystore
Field Description	Keystores ensure the secure storage and management of private keys and trusted certificate authorities (CAs). This screen lets you provide the keystore to be used for datasource connection These settings help you to manage the security of message transmissions. For further information, please refer to the *Oracle Retail Merchandising Operations Management Security Guide.* Location or path where identity keystore file is stored.
Example	/path/sample.keystore

Field Title	Identity Keystore Type
Field Description	The type of the keystore used.
Example	jks

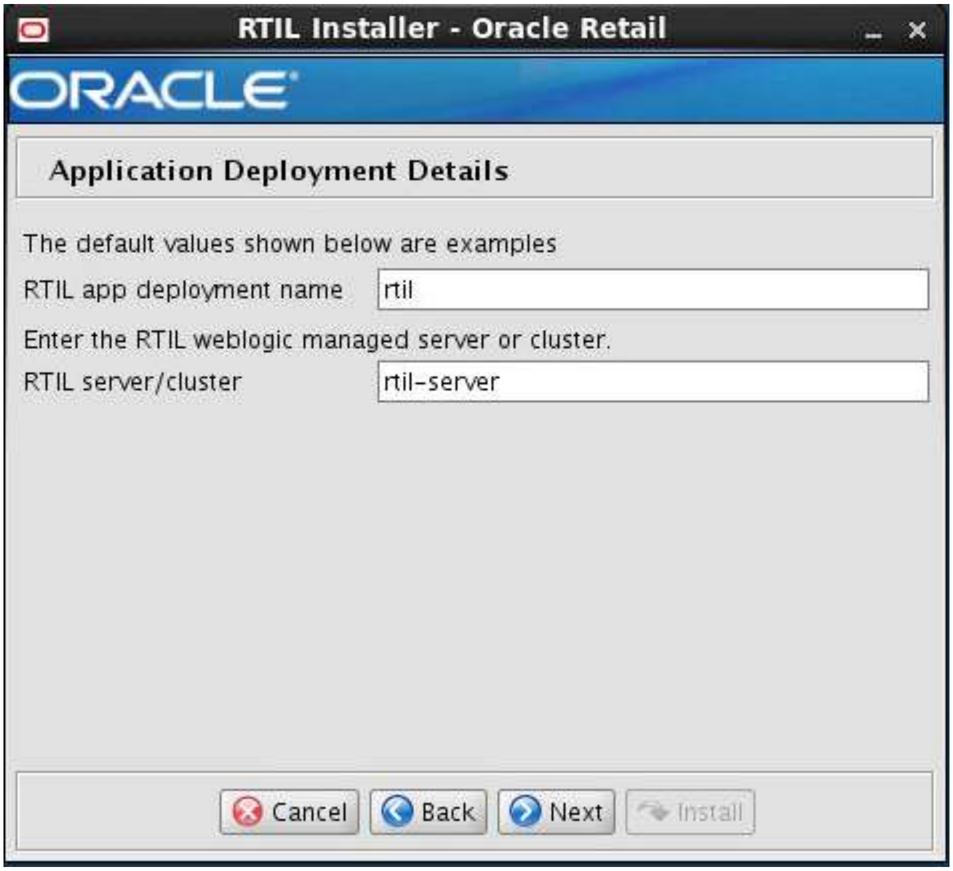
Field Title	Identity Keystore PassPhrase
Field Description	Please provide password to access the keystore mentioned above.

Field Title	Identity TrustStore
Field Description	This is the path of the keystore which contains the ssl root and optionally intermediate certificates as obtained from the certificate authority.
Example	/path/sample.keystore

Field Title	Identity TrustStore Type
Field Description	The type of the truststore used
Example	Jks

Field Title	Identity TrustStore PassPhrase
Field Description	Please provide password to access the truststore mentioned above.

Screen: Application Deployment Details



Application Deployment Details

The default values shown below are examples

RTIL app deployment name: rtil

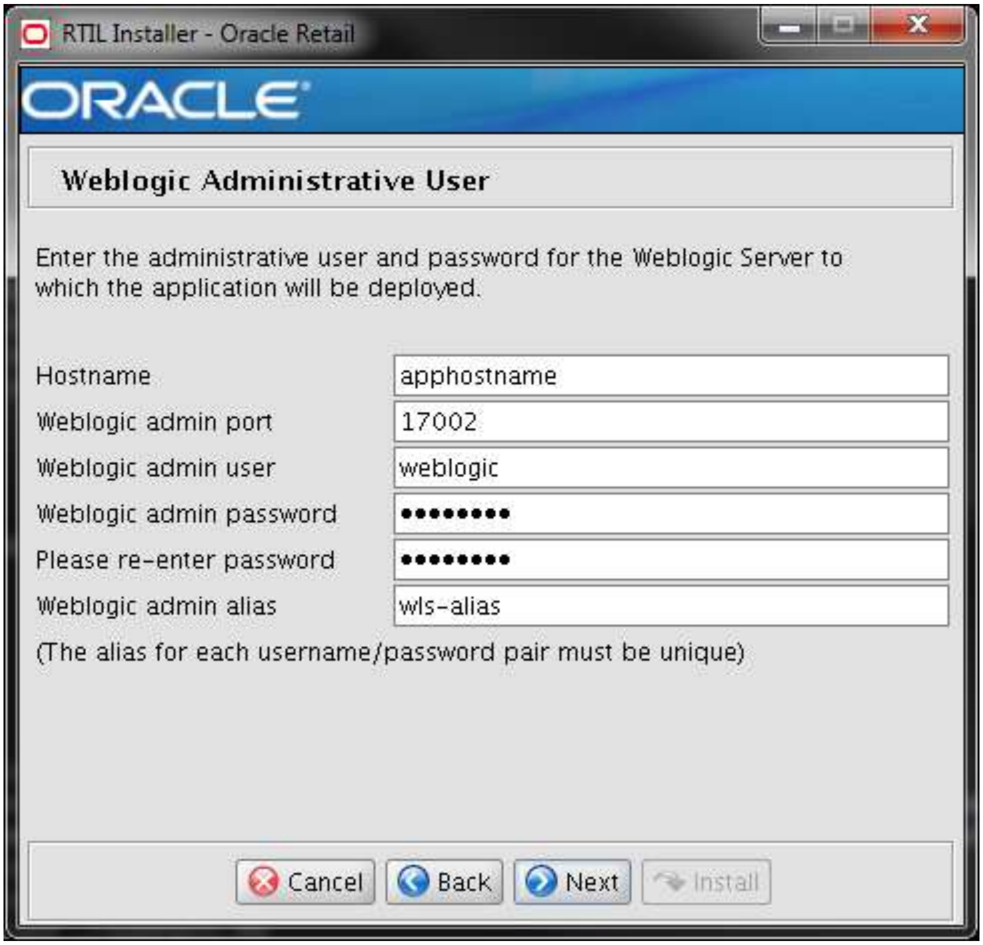
Enter the RTIL weblogic managed server or cluster.

RTIL server/cluster: rtil-server

Field Title	RTIL app deployment name
Field Description	Name by which this RTIL application is identified in the application server.
Example	Rtil

Field Title	RTIL server/cluster
Field Description	Name of the server/cluster that was created for this RTIL application. The installer deploys the RTIL application to all instances that are members of this server/cluster. For this reason, you should not use default_group. A new group dedicated to RTIL should be created instead.
Example	rtil-server

Screen: Weblogic Administrative User



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: 17002
Weblogic admin user: weblogic
Weblogic admin password: ●●●●●●●●●
Please re-enter password: ●●●●●●●●●
Weblogic admin alias: wls-alias
(The alias for each username/password pair must be unique)

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

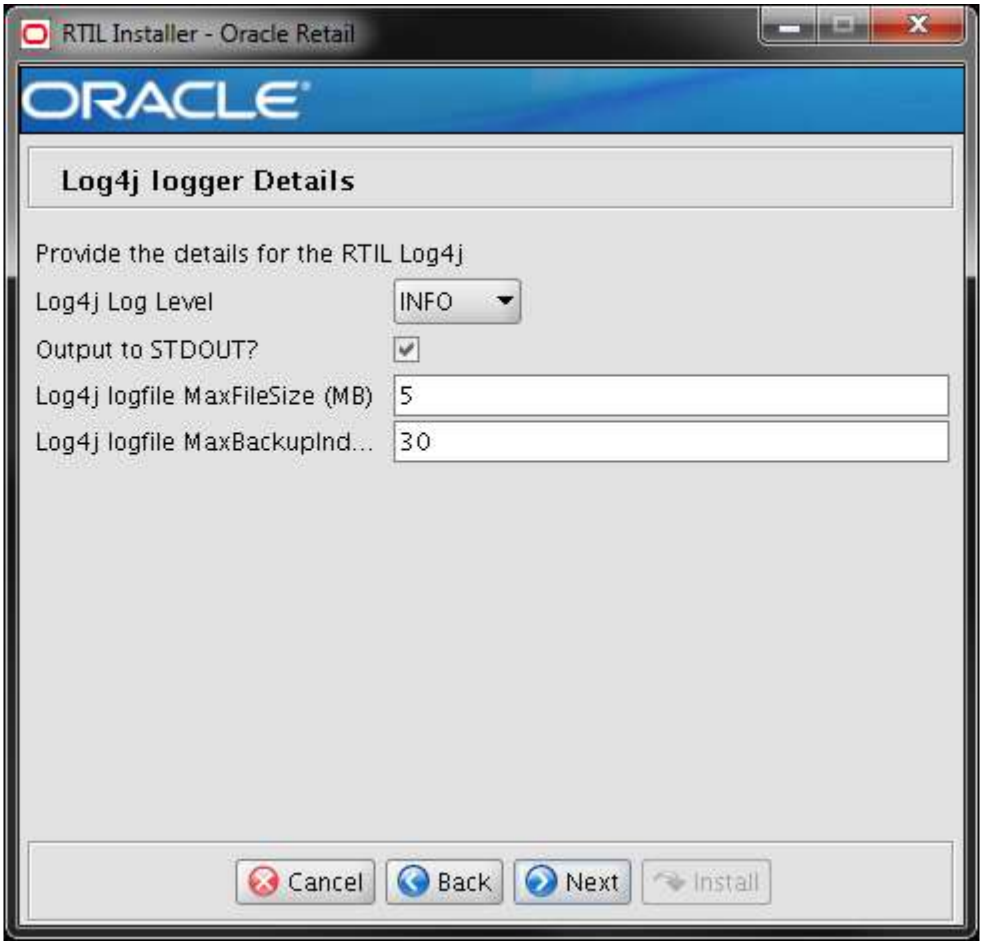
Field Title	Weblogic admin port
Field Description	Port number of admin console
Example	17002

Field Title	Weblogic admin user
Field Description	Username of the admin user for the WebLogic instance to which the RTIL 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 that is used for ORACLE java wallet.
Example	wls-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: Log4j logger Details



Log4j logger Details

Provide the details for the RTIL Log4j

Log4j Log Level: INFO

Output to STDOUT? ☑

Log4j logfile MaxFileSize (MB): 5

Log4j logfile MaxBackupInd...: 30

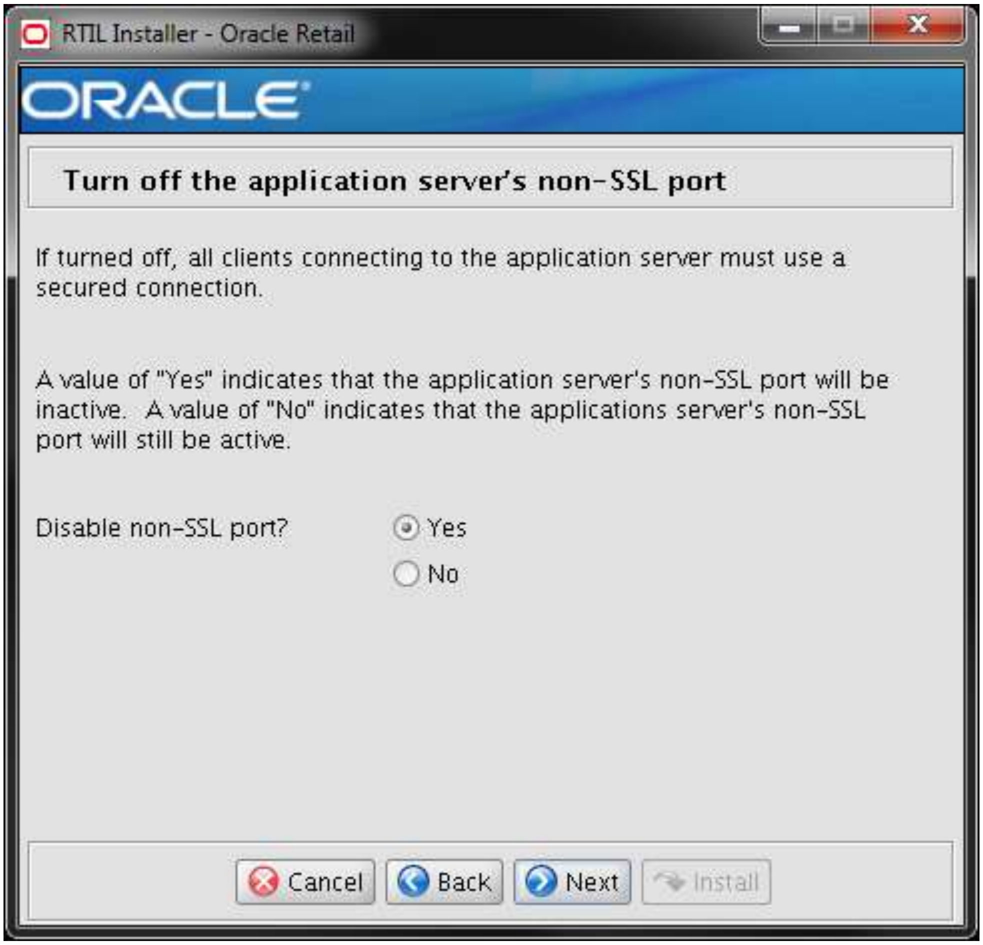
Field Title	Log4j Log Level
Field Description	Specifies the level at which the logging is enabled.
Example	INFO

Field Title	Output to STDOUT
Field Description	Specifies whether the logs should be routed to the console.

Field Title	Log4j logfile MaxFileSize (MB)
Field Description	Specifies the file size threshold beyond which the log file gets rolled over.
Example	5

Field Title	Log4j logfile MaxBackupIndex
Field Description	Specifies the number of rolled over log files that will be retained.
Example	30

Screen: Turn off the application server's non-SSL port



Turn off the application server's non-SSL port

If turned off, all clients connecting to the application server must use a secured connection.

A value of "Yes" indicates that the application server's non-SSL port will be inactive. A value of "No" indicates that the applications server's non-SSL port will still be active.

Disable non-SSL port? ● Yes ○ No

Note: This screen appears only if you have enabled SSL for RTIL. Ignore this step in case you have not enabled SSL for RTIL.

Field Title	Disable non-SSL port?
Field Description	Choosing Yes disables the non SSL port on the managed server. Choosing no will the leave the non SSL port of the managed server active.

B

Appendix: Installer Silent Mode

In addition to the GUI and text interfaces of the installer, there is a silent mode that can be run. This mode is useful if you wish to run a repeat installation without retyping the settings you provided in the previous installation. It is also useful if you encounter errors in the middle of an installation and wish to continue.

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 its previous run.
2. Look for duplicate properties in the ant.install.properties file. Some properties are set on multiple pages to ensure default values when a page is only displayed under certain conditions. For example, if there are two instances of input.property.name, remove all but the last one.
3. Run the installer again with the **silent** argument.

Example: install.sh silent

C

Appendix: URL Reference

This section provides URL reference information.

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

LDAP Server URL

Used by the Java application to connect to the LDAP directory.

Syntax: ldap://<host>:<port>

<host>: hostname of the directory server

<port>: LDAP server port

Example: ldap://myhost:389

D

Appendix: Common Installation Errors

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

Installer Crashes, Producing Dump Files

Symptom:

When the installer is launched on AIX7.1, it may crash during navigation of the installer screens. The crash produces two binary dump files (core.<timestamp>.dmp, Snap.<timestamp>.trc) and a javacore text file (javacore.<timestamp>.txt).

Solution:

Set and export ANT_OPTS variable with "-Xmso1024k -Xss1024k", prior to launching the installer. For example, assuming korn, bourne, or bash shell:

ANT_OPTS=”-Xmso1024k –Xss1024k”

export ANT_OPTS

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.

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. See http://bugs.sun.com for details.

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

Warning: Couldn't 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.

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.

Error Connecting to Database URL

Symptom:

After entering database credentials in the installer screens and hitting next, a message pops up with an error like this:

```
Error connecting to database URL <url> as user <user>
details...
```

The message prevents you from moving on to the next screen to continue the installation.

Solution:

This error occurs when the installer fails to validate the user credentials you have entered on the screen. Make sure that you have entered the credentials properly. If you receive a message similar to this:

```
Error connecting to database URL <url> as user <user>
java.lang.Exception: UnsatisfiedLinkError encountered when using the Oracle
driver.
Please check that the library path is set up properly or switch to the JDBC thin
client.
```

It may mean that the installer is using the incorrect library path variables for the platform you are installing on. Open the file <STAGING_DIR>/rms/dbschema/common/preinstall.sh and toggle the variable "use32bit" to "true" if it is set to "false" or vice versa. This setting is dependant on the JRE that is being used.

Multi-Threaded OCI Client Dumps Core after Reconnecting To Database

Symptom

If a multi-threaded Oracle client process that uses OCI to connect to a remote database loses connectivity with the database, it tries to reconnect and the client program continues to run. The program then dumps the core with the following stack trace, when Automatic Diagnostic Repository (ADR) is enabled.

```
skgfqio sdbgrfbibf_io_block_file dbgrfrbf_read_block_file dbgrmflrp_read_page
dbgrmblgmp_get_many_pages dbgrmmdrrmd_read_relation_meta_data
dbgrmmdora_open_record_access_full
dbgriporc_openrel_wcreate dbgrip_open_relation_access dbgrip_start_iterator
dbgrip_relation_iterator dbgruprac_read_adrctl...
```

Solution

Oracle Retail recommended you disable ADR (diag_adr_enabled=OFF, a sqlnet.ora parameter) while using multi-threaded OCI/OCCI application. diag_adr_enabled was introduced in Oracle 19c as a new method of tracing ADR. This will dump additional trace details.

Disabling 'diag_adr_enabled' does not disturb any functionality. Therefore, it can safely be unset by doing diag_adr_enabled=off in sqlnet.ora. However, if you still want tracing, you can have following parameters/variables set in sqlnet.ora:

```
trace_level_server=16 -- for server side NET tracing
trace_level_client=16 -- for client side NET tracing
```

For how to set traditional tracing, see the My Oracle Support document, "SQL*Net, Net8, Oracle Net Services - Tracing and Logging at a Glance" (ID 219968.1).

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 is an error 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.

F

Appendix: Setting Up Password Stores with wallets/credential stores

As part of an application installation, administrators must set up password stores for user accounts using wallets/credential stores. Some 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.

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

ORACLE Retail Merchandising applications now have 3 different types of password stores. They are database wallets, java wallets, and database credential stores. Background and how to administer them below are explained in this appendix

About Database 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 three different types of password stores. One type explain in the next section is for database connect strings used in program arguments (such as `sqlplus /@db_username`). The others are 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 using sqlplus or sqlldr, RETL, RMS, RWMS, and ARI

For RMS, RWMS, RPM Batch using sqlplus or sqlldr, RETL, RMS, RWMS, and ARI

To set up wallets for database user accounts, do the following:

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

```
cd /projects/rms14/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/rms14/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/19.0.0.0/network/admin/tnsnames.ora

Examples for a NON pluggable db:
dvols29_rms01user =
  (DESCRIPTION = (ADDRESS_LIST = (ADDRESS = (PROTOCOL = tcp)
  (host = xxxxxx.us.oracle.com) (Port = 1521)))
    (CONNECT_DATA = (SID = <sid_name> (GLOBAL_NAME = <sid_name>)))

dvols29_rms01user.world =
  (DESCRIPTION = (ADDRESS_LIST = (ADDRESS = (PROTOCOL = tcp)
  (host = xxxxxx.us.oracle.com) (Port = 1521)))
    (CONNECT_DATA = (SID = <sid_name>) (GLOBAL_NAME = <sid_name>)))

Examples for a pluggable db:
dvols29_rms01user =
  (DESCRIPTION = (ADDRESS_LIST = (ADDRESS = (PROTOCOL = tcp)
  (host = xxxxxx.us.oracle.com) (Port = 1521)))
    (CONNECT_DATA = (SERVICE_NAME = <pluggable db name>)))

dvols29_rms01user.world =
  (DESCRIPTION = (ADDRESS_LIST = (ADDRESS = (PROTOCOL = tcp)
  (host = xxxxxx.us.oracle.com) (Port = 1521)))
    (CONNECT_DATA = (SERVICE_NAME = <pluggable db name>)))
```

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/rms14/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.

   Two wallet files are created from the above command:

   – ewallet.p12

   – cwallet.sso

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/rms14/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 12

   Connected to:
   Oracle Database 12g

   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 the value of the entry:

  ```
  rms01user
  ```

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

  Returns the value of the entry:

  ```
  Passwd
  ```

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`
   - `RFX_TMP=/u00/rfx/rfx-13/tmp`
   - `JAVA_HOME=/usr/jdk1.8.0_233.64bit`
   - `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 `$RETAIL_HOME/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.

For Java Applications (SIM, ReIM, RPM, RIB, AIP, Alloc, ReSA, 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: /u00/webadmin/product/10.3.6/WLS/user_projects/domains/14_mck_soa_domain/retail/reim14/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:
- /u00/webadmin/product/10.3.6/WLS/user_projects/domains/REIMDomain/retail/reim14/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 applications 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:
- /u00/webadmin/reim14/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:

```
/u00/webadmin/product/10.3.x/WLS/user_projects/domains/RPMDomain/retail/rpm14/reta
il-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.
/u00/webadmin/product/10.3.x/WLS/user_projects/domains/RPMDomain/retail/rpm14/reta
il-public-security-api/bin>
```

dump_credentials.sh

dump_credentials.sh is used to retrieve information from 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
location:/u00/webadmin/product/10.3.x/WLS/user_projects/domains/REIMDomain/retail/
reim14/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/REIMDomain/retail/reim14/config

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

Application level key partition name:reim14
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:rms14mock
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.

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

Example:

```
/u00/webadmin/mock14_testing/rtil/rtil/application/retail-public-security-api/bin>
save_credential.sh -l wallet_test -a myalias -p mypartition -u myuser

=============================================
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 = reim14 to retrieve the password for application use.

Reim.properties code sample:

```
datasource.url=jdbc:oracle:thin:@xxxxxxx.us.oracle.com:1521:pkols07
datasource.schema.owner=rms14mock
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/REIMDomain/
retail/reim14/config
csm.wallet.partition.name=reim14
```

How does the Wallet Relate to Java Batch Program use?

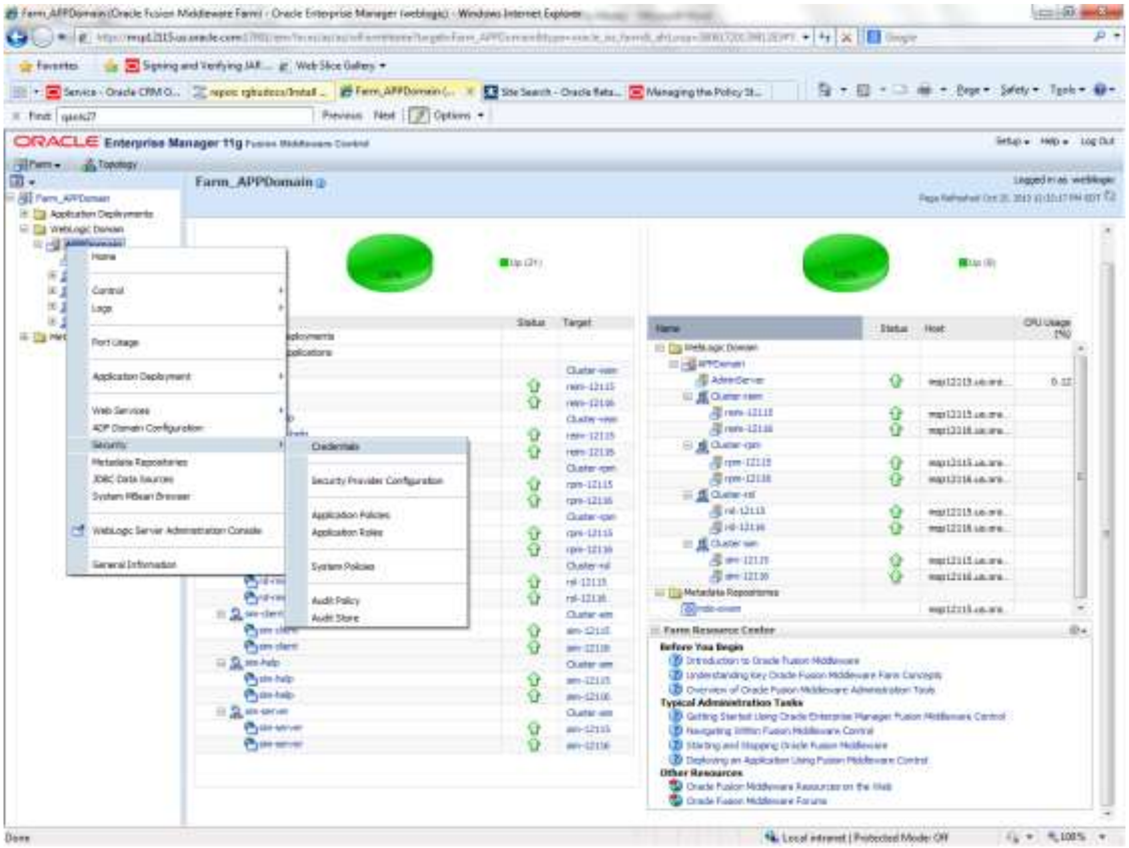
Some of the ORACLE Retail Java batch applications have an alias to use when running Java batch programs. For example, alias REIMBAT-ALIAS maps through the wallet to dbuser RMS01APP, already on the database. To run a ReIM batch program the format would be: reimbatchpgmname REIMBAT-ALIAS <other arguments as needed by the program in question>

Database Credential Store Administration

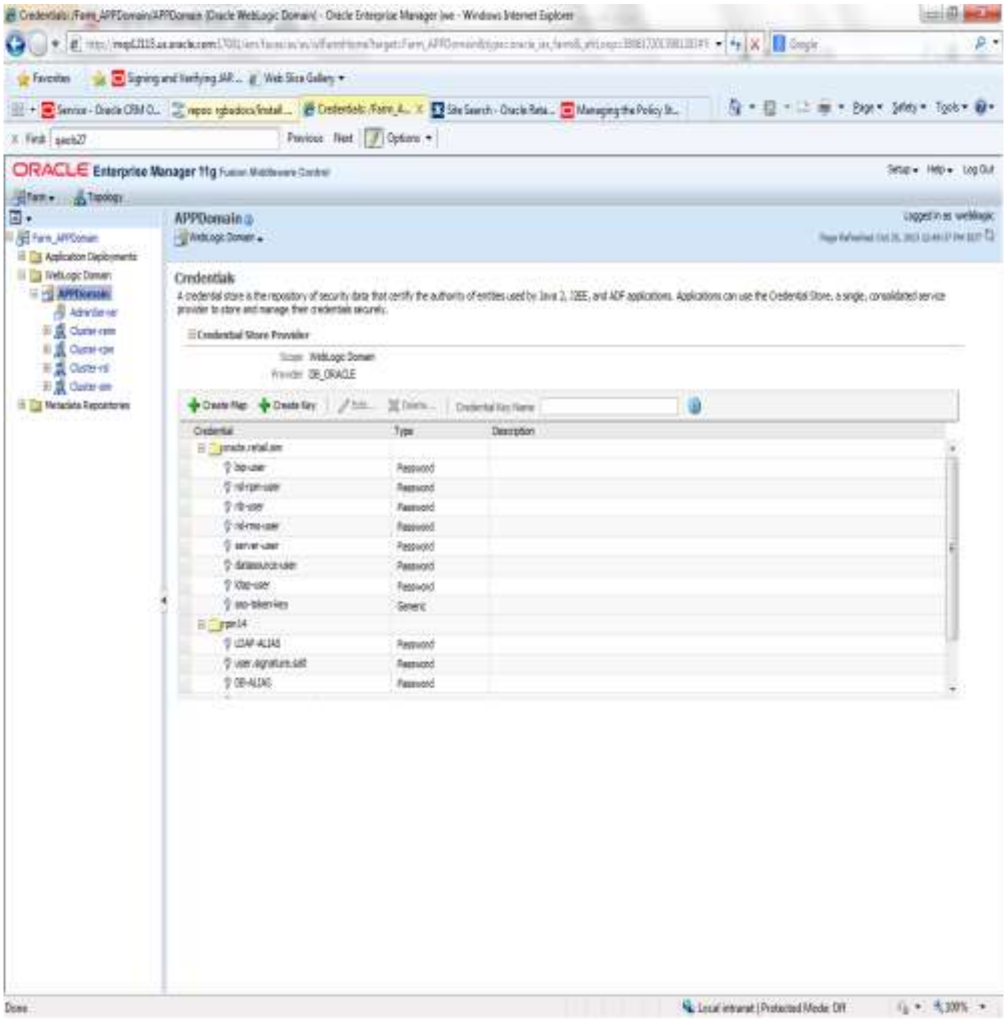
The following section describes a domain level database credential store. This is used in RPM login processing, SIM login processing, RWMS login processing, RESA login processing and Allocation login processing and policy information for application permission. Setting up the database credential store is addressed in the RPM, SIM, ReSA, RWMS, and Alloc 14.1 install guides.

The following sections show an example of how to administer the password stores thru ORACLE Enterprise Manger Fusion Middleware Control, a later section will show how to do this thru WLST scripts.

1. The first step is to use your link to Oracle Enterprise Manager Fusion Middleware Control for the domain in question. Locate your domain on the left side of the screen and do a right mouse click on the domain and select **Security** > **Credentials**



2. Click on Credentials and you will get a screen similar to the following. The following screen is expanded to make it make more sense. From here you can administer credentials.



Credentials

A credential store is the repository of security data that certify the authority of entities used by Java 2, J2EE, and ADF applications. Applications can use the Credential Store, a single, consolidated service provider to store and manage their credentials securely.

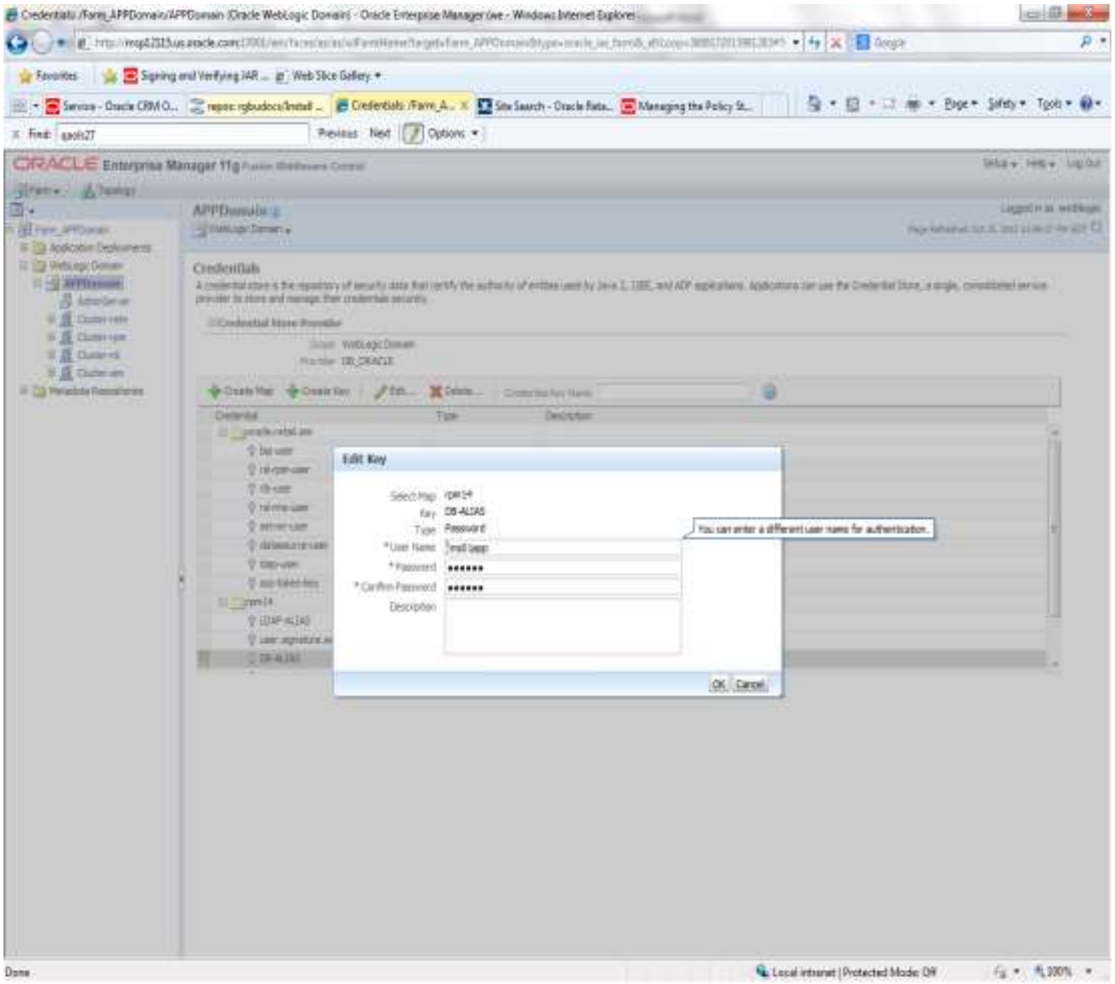
Credential Store Provider

Scope: WebLogic Domain
Provider: DB_ORACLE

Credential	Type	Description
oracle.retail.sim		
bip-user	Password	
rsl-rpm-user	Password	
rib-user	Password	
rsl-rms-user	Password	
server-user	Password	
datasource-user	Password	
ldap-user	Password	
sso-token-key	Generic	
rpm14		
LDAP-ALIAS	Password	
user.signature.salt	Password	
DB-ALIAS	Password	

The Create Map add above is to create a new map with keys under it. A map would usually be an application such as rpm14. The keys will usually represent alias to various users (database user, WebLogic user, LDAP user, etc). The application installer should add the maps so you should not often have to add a map.

Creation of the main keys for an application will also be built by the application installer. You will not be adding keys often as the installer puts the keys out and the keys talk to the application. You may be using EDIT on a key to see what user the key/alias points to and possibly change/reset its password. To edit a key/alias, highlight the key/alias in question and push the edit icon nearer the top of the page. You will then get a screen as follows:



Edit Key

Select Map rpm14

Key DB-ALIAS

Type Password

*User Name rms01app

*Password ••••••

*Confirm Password ••••••

Description

You can enter a different user name for authentication.

The screen above shows the map (rpm14) that came from the application installer, the key (DB-ALIAS) that came from the application installer (some of the keys/alias are selected by the person who did the application install, some are hard coded by the application installer in question), the type (in this case password), and the user name and password. This is where you would check to see that the user name is correct and reset the password if needed. REMEMBER, a change to an item like a database password WILL make you come into this and also change the password. Otherwise your application will NOT work correctly.

Managing Credentials with WSLT/OPSS Scripts

This procedure is optional as you can administer the credential store through the Oracle enterprise manager associated with the domain of your application install for RPM, SIM, RESA, or Allocation.

An Oracle Platform Security Scripts (OPSS) script is a WLST script, in the context of the Oracle WebLogic Server. An online script is a script that requires a connection to a running server. Unless otherwise stated, scripts listed in this section are online scripts and operate on a database credential store. There are a few scripts that are offline, that is, they do not require a server to be running to operate.

Read-only scripts can be performed only by users in the following WebLogic groups: Monitor, Operator, Configurator, or Admin. Read-write scripts can be performed only by users in the following WebLogic groups: Admin or Configurator. All WLST scripts are available out-of-the-box with the installation of the Oracle WebLogic Server.

WLST scripts can be run in interactive mode or in script mode. In interactive mode, you enter the script at a command-line prompt and view the response immediately after. In script mode, you write scripts in a text file (with a py file name extension) and run it without requiring input, much like the directives in a shell script.

For platform-specific requirements to run an OPSS script, see http://docs.oracle.com/cd/E21764_01/core.1111/e10043/managepols.htm#CIHIBBDJ

The weakness with the WLST/OPSS scripts is that you have to already know your map name and key name. In many cases, you do not know or remember that. The database credential store way through enterprise manager is a better way to find your map and key names easily when you do not already know them. A way in a command line mode to find the map name and alias is to run orapki. An example of orapki is as follows:

```
/u00/webadmin/product/wls_apps/oracle_common/bin> ./orapki wallet display –wallet
/u00/webadmin/product/wls_apps/user_projects/domains/APPDomain/config/fmwconfig
```

(where the path above is the domain location of the wallet)

Output of orapki is below. This shows map name of rpm14 and each alias in the wallet:

```
Oracle PKI Tool: Version 12.2.1.4

Requested Certificates:
User Certificates:
Oracle Secret Store entries:
rpm14@#3#@DB-ALIAS
rpm14@#3#@LDAP-ALIAS
rpm14@#3#@RETAIL.USER
rpm14@#3#@user.signature.salt
rpm14@#3#@user.signature.secretkey
rpm14@#3#@WEBLOGIC-ALIAS
rpm14@#3#@WLS-ALIAS
Trusted Certificates:
Subject: OU=Class 1 Public Primary Certification Authority,O=VeriSign\, Inc.,C=US
```

OPSS provides the following scripts on all supported platforms to administer credentials (all scripts are online, unless otherwise stated. You need the map name and the key name to run the scripts below

- listCred
- updateCred
- createCred
- deleteCred
- modifyBootStrapCredential
- addBootStrapCredential

listCred

The script `listCred` returns the list of attribute values of a credential in the credential store with given map name and key name. This script lists the data encapsulated in credentials of type password only.

Script Mode Syntax

```
listCred.py -map mapName -key keyName
```

Interactive Mode Syntax

```
listCred(map="mapName", key="keyName")
```

The meanings of the arguments (all required) are as follows:

- `map` specifies a map name (folder).
- `key` specifies a key name.

Examples of Use:

The following invocation returns all the information (such as user name, password, and description) in the credential with map name `myMap` and key name `myKey`:

```
listCred.py -map myMap -key myKey
```

The following example shows how to run this command and similar credential commands with WLST:

```
/u00/webadmin/product/wls_apps/oracle_common/common/bin>
sh wlst.sh

Initializing WebLogic Scripting Tool (WLST)...

Welcome to WebLogic Server Administration Scripting Shell


wls:/offline> connect('weblogic','password123','xxxxxx.us.oracle.com:17001')
Connecting to t3://xxxxxx.us.oracle.com:17001 with userid weblogic ...
Successfully connected to Admin Server 'AdminServer' that belongs to domain
'APPDomain'.

wls:/APPDomain/serverConfig> listCred(map="rpm14",key="DB-ALIAS")
Already in Domain Runtime Tree

[Name : rms01app, Description : null, expiry Date : null]
PASSWORD:retail
*The above means for map rpm14 in APPDomain, alias DB-ALIAS points to database
user rms01app with a password of retail
```

updateCred

The script `updateCred` modifies the type, user name, and password of a credential in the credential store with given map name and key name. This script updates the data encapsulated in credentials of type password only. Only the interactive mode is supported.

Interactive Mode Syntax

```
updateCred(map="mapName", key="keyName", user="userName", password="passW",
[desc="description"])
```

The meanings of the arguments (optional arguments are enclosed by square brackets) are as follows:

- `map` specifies a map name (folder) in the credential store.
- `key` specifies a key name.
- `user` specifies the credential user name.
- `password` specifies the credential password.
- `desc` specifies a string describing the credential.

Example of Use:

The following invocation updates the user name, password, and description of the password credential with map name `myMap` and key name `myKey`:

```
updateCred(map="myMap", key="myKey", user="myUsr", password="myPassw")
```

createCred

The script `createCred` creates a credential in the credential store with a given map name, key name, user name and password. This script can create a credential of type password only. Only the interactive mode is supported.

Interactive Mode Syntax

```
createCred(map="mapName", key="keyName", user="userName", password="passW",
[desc="description"])
```

The meanings of the arguments (optional arguments are enclosed by square brackets) are as follows:

- `map` specifies the map name (folder) of the credential.
- `key` specifies the key name of the credential.
- `user` specifies the credential user name.
- `password` specifies the credential password.
- `desc` specifies a string describing the credential.

Example of Use:

The following invocation creates a password credential with the specified data:

```
createCred(map="myMap", key="myKey", user="myUsr", password="myPassw")
```

deleteCred

The script `deleteCred` removes a credential with given map name and key name from the credential store.

Script Mode Syntax

```
deleteCred.py -map mapName -key keyName
```

Interactive Mode Syntax

```
deleteCred(map="mapName",key="keyName")
```

The meanings of the arguments (all required) are as follows:

- `map` specifies a map name (folder).
- `key` specifies a key name.

Example of Use:

The following invocation removes the credential with map name `myMap` and key name `myKey`:

```
deleteCred.py -map myMap -key myKey
```

modifyBootStrapCredential

The offline script `modifyBootStrapCredential` modifies the bootstrap credentials configured in the default jps context, and it is typically used in the following scenario: suppose that the policy and credential stores are LDAP-based, and the credentials to access the LDAP store (stored in the LDAP server) are changed. Then this script can be used to seed those changes into the bootstrap credential store.

This script is available in interactive mode only.

Interactive Mode Syntax

```
modifyBootStrapCredential(jpsConfigFile="pathName", username="usrName",
password="usrPass")
```

The meanings of the arguments (all required) are as follows:

- `jpsConfigFile` specifies the location of the file `jps-config.xml` relative to the location where the script is run. Example location: /u00/webadmin/product/wls_apps/user_projects/domains/APPDomain/config/fmwconfig. Example location of the bootstrap wallet is /u00/webadmin/product/wls_apps/user_projects/domains/APPDomain/config/fmwconfig/bootstrap
- `username` specifies the distinguished name of the user in the LDAP store.
- `password` specifies the password of the user.

Example of Use:

Suppose that in the LDAP store, the password of the user with distinguished name `cn=orcladmin` has been changed to `welcome1`, and that the configuration file `jps-config.xml` is located in the current directory.Then the following invocation changes the password in the bootstrap credential store to `welcome1`:

```
modifyBootStrapCredential(jpsConfigFile='./jps-config.xml',
username='cn=orcladmin', password='welcome1')
```

Any output regarding the audit service can be disregarded.

addBootStrapCredential

The offline script `addBootStrapCredential` adds a password credential with given map, key, user name, and user password to the bootstrap credentials configured in the default jps context of a jps configuration file.

Classloaders contain a hierarchy with parent classloaders and child classloaders. The relationship between parent and child classloaders is analogous to the object relationship of super classes and subclasses. The bootstrap classloader is the root of the Java classloader hierarchy. The Java virtual machine (JVM) creates the bootstrap classloader, which loads the Java development kit (JDK) internal classes and `java.*` packages included in the JVM. (For example, the bootstrap classloader loads `java.lang.String`.)

This script is available in interactive mode only.

Interactive Mode Syntax

```
addBootStrapCredential(jpsConfigFile="pathName", map="mapName", key="keyName",
username="usrName", password="usrPass")
```

The meanings of the arguments (all required) are as follows:

- `jpsConfigFile` specifies the location of the file `jps-config.xml` relative to the location where the script is run. Example location: /u00/webadmin/product/wls_apps/user_projects/domains/APPDomain/config/fmwconfig
- `map` specifies the map of the credential to add.
- `key` specifies the key of the credential to add.
- `username` specifies the name of the user in the credential to add.
- `password` specifies the password of the user in the credential to add.

Example of Use:

The following invocation adds a credential to the bootstrap credential store:

```
addBootStrapCredential(jpsConfigFile='./jps-config.xml', map='myMapName',
key='myKeyName', username='myUser', password =’myPass’)
```

Quick Guide for Retail Password Stores (db wallet, java wallet, DB credential stores)

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 (RETAIL_HOME)>/.wallet	n/a	<Database SID>_<Database 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>_<Database 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>_<Database schema owner>	<rwms schema owner>	Compile forms, execute batch	Installer	n/a	Alias hard-coded by installer
RPM batch plsql and sqlldr	DB	<RPM batch install dir>/.wallet	n/a	<rms schema owner alias>	<rms schema owner>	Execute batch	Manual	rms-alias	RPM plsql and sqlldr batches
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	rwms14inst	
			<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
			aip14	<AIP weblogic user alias>	<AIP weblogic user name>	App use	Installer	aip-weblogic-alias	
			aip14	<AIP database schema user alias>	<AIP database schema user name>	App use	Installer	aip01user-alias	
			aip14	<rib-aip weblogic user alias>	<rib-aip weblogic user name>	App use	Installer	rib-aip-weblogic-alias	
RPM app	DB credential store		Map=rpm14 or what you called the app at install time.	Many for app use					<weblogic domain home>/config/fmwconfig/jps-config.xml has info on the credential store. This directory also has the domain cwallet.sso file.
RPM app	JAVA	<weblogic domain home>/retail/<deployed rpm app name>/config							Each alias must be unique
			rpm14	<rpm weblogic user alias>	<rpm weblogic user name>	App use	Installer	rpm-weblogic-alias	

Retail app	Wallet type	Wallet loc	Wallet partition	Alias name	User name	Use	Create by	Alias Example	Notes
			rpm14	<rpm batch user name> is the alias. Yes, here alias name = user name	<rpm batch user name>	App, batch use	Installer	RETAIL.USER	
	JAVA	<retail_home>/orpatch/config/javaapp_rpm							Each alias must be unique
			retail_installer	<rpm weblogic user alias>	<rpm weblogic user name>	App use	Installer	weblogic-alias	
			retail_installer	<rms shema user alias>	<rms shema user name>	App, batch use	Installer	rms01user-alias	
			retail_installer	<reim batch user alias>	<reim batch user name>	App, batch use	Installer	reimbat-alias	
			retail_installer	<LDAP-ALIAS>	cn=rpm.admin,cn=Users,dc=us,dc=oracle,dc=com	LDAP user use	Installer	LDAP_ALIAS	
ReIM app	JAVA	<weblogic domain home>/retail/<deployed reim app name>/config							Each alias must be unique
			<installed app name, ex: reim14>	<reim weblogic user alias>	<reim weblogic user name>	App use	Installer	weblogic-alias	
			<installed app name, ex: reim14>	<rms shema user alias>	<rms shema user name>	App, batch use	Installer	rms01user-alias	

Retail app	Wallet type	Wallet loc	Wallet partition	Alias name	User name	Use	Create by	Alias Example	Notes
			<installed app name, ex: reim14>	<reim webservice validation user alias>	<reim webservice validation user name>	App use	Installer	reimwebservice-alias	
			<installed app name, ex: reim14>	<reim batch user alias>	<reim batch user name>	App, batch use	Installer	reimbat-alias	
			<installed app name, ex: reim14>	<LDAP-ALIAS>	cn=REIM.ADMIN,cn=Users,dc=us,dc=oracle,dc=com	LDAP user use	Installer	LDAP_ALIAS	
	JAVA	<retail_home>/orpatch/config/javaapp_reim							Each alias must be unique
			retail_installer	<reim weblogic user alias>	<reim weblogic user name>	App use	Installer	weblogic-alias	
			retail_installer	<rms shema user alias>	<rms shema user name>	App, batch use	Installer	rms01user-alias	
			retail_installer	<reim webservice validation user alias>	<reim webservice validation user name>	App use	Installer	reimwebservice-alias	
			retail_installer	<reim batch user alias>	<reim batch user name>	App, batch use	Installer	reimbat-alias	
			retail_installer	<LDAP-ALIAS>	cn=REIM.ADMIN,cn=Users,dc=us,dc=oracle,dc=com	LDAP user use	Installer	LDAP_ALIAS	

Retail app	Wallet type	Wallet loc	Wallet partition	Alias name	User name	Use	Create by	Alias Example	Notes
RESA app	DB credential store		Map=resa14 or what you called the app at install time	Many for login and policies					<weblogic domain home>/config/fmwconfig/jps-config.xml has info on the credential store. This directory also has the domain cwallet.sso file. The bootstrap directory under this directory has bootstrap cwallet.sso file.
RESA app	JAVA	<weblogic domain home>/retail/<deployed resa app name>/config							Each alias must be unique
			<installed app name>	<resa weblogic user alias>	<resa weblogic user name>	App use	Installer	wlsalias	

Retail app	Wallet type	Wallet loc	Wallet partition	Alias name	User name	Use	Create by	Alias Example	Notes
			<installed app name>		<rmsdb shema user name>	App use	Installer	Resadb-alias	
			<installed app name>	<resa schema user alias>	<rmsdb shema user name>>	App use	Installer	resa-alias	
	JAVA	<retail_home>/orpatch/config/javaapp_resa							Each alias must be unique
			retail_installer	<resa weblogic user alias>	<resa weblogic user name>	App use	Installer	wlsalias	

Retail app	Wallet type	Wallet loc	Wallet partition	Alias name	User name	Use	Create by	Alias Example	Notes
			retail_installer		<rmsdb shema user name>	App use	Installer	Resadb-alias	
	JAVA	<retail_home>/orpatch/config/javaapp_rasrm							Each alias must be unique
			retail_installer	<alloc weblogic user alias>	<alloc weblogic user name>	App use	Installer	weblogic-alias	

Retail app	Wallet type	Wallet loc	Wallet partition	Alias name	User name	Use	Create by	Alias Example	Notes
Alloc app	DB credential store		Map=alloc 14 or what you called the app at install time	Many for login and policies					<weblogic domain home>/config/fmwconfig/jps-config.xml has info on the credential store. This directory also has the domain cwallet.sso file. The bootstrap directory under this directory has bootstrap cwallet.sso file.
Alloc app	JAVA	<weblogic domain home>/retail/config							Each alias must be unique
			<installed app name>	<alloc weblogic user alias>	<alloc weblogic user name>	App use	Installer	weblogic-alias	
			<installed app name>	<rms schema user alias>	<rms schema user name>	App use	Installer	dsallocAlias	
			<installed app name>	<alloc batch user alias>	<SYSTEM_ADMINISTRATOR>	Batch use	Installer	alloc14	
	JAVA	<retail_home>/orpatch/config/javaapp_alloc							Each alias must be unique

Retail app	Wallet type	Wallet loc	Wallet partition	Alias name	User name	Use	Create by	Alias Example	Notes
			retail_installer	<alloc weblogic user alias>	<alloc weblogic user name>	App use	Installer	weblogic-alias	
			retail_installer	<rms schema user alias>	<rms schema user name>	App use	Installer	dsallocAlias	
			retail_installer	<alloc batch user alias>	<SYSTEM_ADMINISTRATOR>	Batch use	Installer	alloc14	
	JAVA	<retail_home>/orpatch/config/javaapp_rasrm							Each alias must be unique
			retail_installer	<alloc weblogic user alias>	<alloc weblogic user name>	App use	Installer	weblogic-alias	
SIM app	DB credential store		Map=oracle.retail.sim	Aliases required for SIM app use					<weblogic domain home>/config/fmwconfig/jps-config.xml has info on the credential store. This directory also has the domain cwallet.sso file.
	JAVA	<weblogic domain home>/retail/<deployed sim app name>/batch/resources/conf	oracle.retail.sim	<sim batch user alias>	<sim batch user name>	App use	Installer	BATCH-ALIAS	

Retail app	Wallet type	Wallet loc	Wallet partition	Alias name	User name	Use	Create by	Alias Example	Notes
	JAVA	<weblogic domain home>/retail/<deployed sim app name>/wireless/resources/conf	oracle.retail.sim	<sim wireless user alias>	<sim wireless user name>	App use	Installer	WIRELESS-ALIAS	
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	
RFI	Java	<RFI-HOME>/retail-financial-integration-solution/service-based-integration/conf/security							
			<installed app name>	rfiAppServerAdminServerUserAlias	<rfi weblogic user name>	App use	Installer	rfiAppServerAdminServerUserAlias	
			<installed app name>	rfiAdminUiUserAlias	<ORFI admin user>	App use	Installer	rfiAdminUiUserAlias	
			<installed app name>	rfiDataSourceUserAlias	<ORFI schema user name>	App use	Installer	rfiDataSourceUserAlias	
			<installed app name>	ebsDataSourceUserAlias	<EBS schema user name>	App use	Installer	ebsDataSourceUserAlias	
			<installed app name>	smtpMailFromAddressAlias	<From email address>	App use	Installer	smtpMailFromAddressAlias	

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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 some, but not all, 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)
2. Oracle Retail Sales Audit (ReSA)
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)
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 (RCM)
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 Analytics
26. Oracle Retail Advanced Science Engine (ORASE)
27. Oracle Retail Integration Bus (RIB)
28. Oracle Retail Service Backbone (RSB)
29. Oracle Retail Financial Integration (ORFI)
30. Oracle Retail Point-of-Service (ORPOS)
    - Oracle Retail Mobile Point-of-Service (ORMPOS) (requires ORPOS)
31. Oracle Retail Markdown Optimization (MDO)
32. Oracle Retail Clearance Optimization Engine (COE)
33. Oracle Retail Analytic Parameter Calculator for Markdown Optimization (APC-MDO)
34. Oracle Retail Analytic Parameter Calculator for Regular Price Optimization (APC-RPO)
35. Oracle Retail Macro Space Planning (MSP)

    The Oracle Retail Enterprise suite includes Macro Space Planning. This can be installed independently of and does not affect the installation order of the other applications in the suite. If Macro Space Planning is installed, the installation order for its component parts is:

    - Oracle Retail Macro Space Management (MSM)
    - Oracle Retail In-Store Space Collaboration (ISSC) (requires MSM)
    - Oracle Retail Mobile In-Store Space Collaboration (requires MSM and ISSC)