# Oracle<sup>®</sup> Retail Tax Integration Layer Installation Guide

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Oracle® Retail Tax Integration Layer Installation Guide, Release 14.1.1

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Oracle Retail Tax Integration Layer Installation Guide, Release 14.1.1.

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

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

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

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

**Note:** Before sending us your comments, you might like to check that you have the latest version of the document and if any concerns are already addressed. To do this, access the Online Documentation available on the Oracle Technology Network Web site. It contains the most current Documentation Library plus all documents revised or released recently.

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

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

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

# Preface

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

## Audience

This Installation Guide is written for the following audiences:

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

### **Related Documents**

You can find more information about this product in these resources:

- Oracle Retail Merchandising System Release Notes
- Oracle Retail Merchandising System User Guide and Online Help
- Oracle Retail Merchandising System Reports User Guide
- Oracle Retail Merchandising System Operations Guide
- Oracle Retail Merchandising System Data Model
- Oracle Retail Merchandising Batch Schedule
- Oracle Retail Merchandising Data Conversion Operations Guide
- Oracle Retail Merchandising Implementation Guide
- Oracle Retail Merchandising Security Guide
- Oracle Retail Merchandising System Custom Flex Attribute Solution Implementation Guide
- Oracle Retail Fiscal Management documentation for Brazil localization customers only

Also see the documentation library for Oracle Business Intelligence Enterprise Edition at this URL: http://www.oracle.com/technology/documentation/bi\_ee.html

# **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, 14.1) or a later patch release (for example, 14.1.1). 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

# **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 14.1.1 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 12cR1 Enterprise Edition. Options are:				
	<ul> <li>Oracle Linux 6 for x86-64 (Actual hardware or Oracle virtual machine).</li> </ul>				
	<ul> <li>Red Hat Enterprise Linux 6 for x86-64 (Actual hardware or Oracle virtual machine).</li> </ul>				
	<ul> <li>Oracle Linux 6 for x86-64 (Actual hardware or Oracle virtual machine).</li> </ul>				
	<ul> <li>Red Hat Enterprise Linux 6 for x86-64 (Actual hardware or Oracle virtual machine).</li> </ul>				
	<ul> <li>AIX 7.1 (Actual hardware or LPARs)</li> </ul>				
	<ul> <li>Solaris 11 SPARC (Actual hardware or logical domains)</li> </ul>				
	<ul> <li>HP-UX Itanium11.31 Integrity (Actual hardware, HPVM, or vPars)</li> </ul>				
Database Server 12cR1	Oracle Database Enterprise Edition 12cR1 (12.1.0.2) with the following specifications:				
	Components:				
	<ul> <li>Oracle Partitioning</li> </ul>				
	<ul> <li>Examples CD (Formerly the companion CD)</li> </ul>				
	Oneoff Patches:				
	<ul> <li>19623450: MISSING JAVA CLASSES AFTER UPGRADE TO JDK 7</li> </ul>				
	<ul> <li>20406840: PROC 12.1.0.2 THROWS ORA-600 [17998]</li> <li>WHEN PRECOMPILING BY 'OTHER' USER</li> </ul>				
	Other components:				
	<ul> <li>Perl compiler 5.0 or later</li> </ul>				
	<ul> <li>X-Windows interface</li> </ul>				
	• JDK 1.7				

**Note:** By default, JDK is at 1.6. After installing the 12.1.0.2 binary, apply the patches 19623450 and 20406840. Then follow the instructions on Oracle Database Java Developer's Guide 12c Release 1 to upgrade JDK to 1.7. The Guide is available here:

http://docs.oracle.com/database/121/JJDEV/chone.htm#JJ DEV01000

## **Check Supported Application Server Requirements**

Supported on	Versions Supported				
Application Server OS	OS certified with Oracle Fusion Middleware 11g Release1 (11.1.1.7). Options are:				
	<ul> <li>Oracle Linux 6 for x86-64 (Actual hardware or Oracle virtual machine).</li> </ul>				
	<ul> <li>Red Hat Enterprise Linux 6 for x86-64 (Actual hardware or Oracle virtual machine).</li> </ul>				
	<ul> <li>AIX 7.1 (Actual hardware or LPARs)</li> </ul>				
	<ul> <li>Solaris 11 SPARC (Actual hardware or logical domains)</li> </ul>				
	<ul> <li>HP-UX 11.31 Integrity (Actual hardware, HPVM, or vPars)</li> </ul>				
Application Server	Oracle Fusion Middleware 11g Release 1 (11.1.1.7)				
	Components:				
	<ul> <li>Oracle WebLogic Server 11g Release 1 (10.3.6)</li> </ul>				
	Java:				
	• JDK 1.7.0+ 64 bit				

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

## **Check Supported Web Browser and Client Requirements**

General requirements for client running RMS include the following.

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

**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)	14.1.1

# **Supported Third-Party Products**

Product	Version
TaxWeb Tax Rules (The Tax Rules software is a product of TaxWeb Compliance Software S.A.)	<ul> <li>taxinterfaces.jar – version 1</li> <li>taxcomponent.jar – version 55</li> <li>taxrulesdbplugin.jar – version 2</li> <li>Note: RTIL was tested with the above mentioned versions. Please contact TaxWeb for the latest compatible release (http://www.taxweb.com.br).</li> </ul>

# Supported Oracle Retail Integration Technologies

Integration Technology	Version
Oracle Retail Integration Bus (RIB)	14.1.1

# **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 12.1.0.2 RAC database. When using a RAC database, all JDBC connections should be configured to use THIN connections rather than OCI connections.

Clustering for Web Logic Server 10.3.6 is managed as an Active-Active cluster accessed through a Load Balancer. Validation has been completed utilizing a RAC 12.1.0.2 Oracle Internet Directory database with the Web Logic 10.3.6 cluster.

#### **References for Configuration:**

- Oracle® Fusion Middleware High Availability Guide 11g Release 1 (11.1.1) Part Number E10106-09
- Oracle Real Application Clusters Administration and Deployment Guide 12c Release 1 (12.1) E48838-08

# **RTIL Installation Tasks**

Before proceeding, you must install Oracle WebLogic Server 11g Release 1 (10.3.6), 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.

hange Center	A Home Log Out Preferences A Record Help	Q	Welcome, weblogic Connected to: RTILDon	
iew changes and restarts	Nome			
lick the Lock & Edit button to modify, add or elete Remo in this domain.	Home Page			
Lock & Edit	- Information and Resources			
Delease Confouration	Helpful Tuols	General Information		
	Configure applications	<ul> <li>Common Administration Task Descriptions</li> </ul>		
imain Structure	Configure GridLink for RAC Data Source	<ul> <li>Read the documentation</li> </ul>		
/LDomain	Recent Task Status	<ul> <li>Ask a question on My Oracle Support</li> </ul>		
Environment	Set your console preferences	Oracle Guardian Overview		
Services	- Domain Configurations			
Departly Rearns	Domain	Services	Interoperability	
Diagnostics	Domain	Messaging	WTC Servers	
		<ul> <li>JHS Servers</li> </ul>	Joint Connection Pools	
	Environment	<ul> <li>Store-and-Forward Agents</li> </ul>		
	Servers	<ul> <li>JHS Modules</li> </ul>	Diagnostics -	
	Clusters	<ul> <li>Path Services</li> </ul>	top Files	
	Virtual Hests	Bridges	Diagnostic Medules	
	Higratable Targets	Data Sources	Diagnostic Images	
w do I E	Coherence Servers	<ul> <li>Persistent Stores</li> </ul>	Request Performance	
Search the configuration	Coherence Clusters	<ul> <li>XPR, Registries</li> </ul>	Archives	
Use the Change Center	Machines	<ul> <li>XHL Entity Caches</li> </ul>	Context	
Record WLST Scripts	Work Managers	Foreign JNDE Providers	<ul> <li>State</li> </ul>	
Change Console preferences	<ul> <li>Startup And Shutdown Classes</li> </ul>	Work Contexts		
Nanage Console extensions		<ul> <li>3COM</li> </ul>	Cherts and Graphs	
fonitor servers	Your Deployed Resources	<ul> <li>Mail Sessions</li> </ul>	Honitoring Dashboard #	
	Deployments	<ul> <li>FileT3</li> </ul>		
stem Status 🛛	The second second	• JTA		
alth of Running Servers	Your Application's Security Settings			
Ealled (0)	Security Realms			
Critical (D)				
Overloaded (0)				
Warring (0)				
OK (2)				

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

ORACLE WebLogic Server	Administration Console				õ
Change Center	🔒 Home Log Out Preferences 🖂	Record Help	Q	Welcome, weblogic	Connected to: RTILDomain
View changes and restarts	Home >Summary of Servers				
View Changes and restarts         No pending changes exist. Click the Release Configuration         Lock & Edit         Back       Next         Finish       Cancel         Server Properties         The following properties will be used to identify your new server.         * Indicates required fields					
RTILDomain 2 Conservers Clusters Virtual Hosts	What would you like to name your new * Server Name:	v server? rtil-server			
"Migratable Targets Coherence Servers Coherence Clusters Mere will this server listen for incoming connections? Coherence Clusters Server Listen Address: msp52474.us.oracle.com					
	Should this server belong to a cluster	?			
Create Managed Servers     Configure default network connections  System Status	Yes, create a new cluster for     Back Next Finish Cancel	cr. this server.			
Health of Running Servers Failed (0) Critical (0) Overloaded (0)					

- **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.

Change Center	
View changes and restarts         Home > Summary of Servers           No pending changes exist. Click the Release Configuration button to allow others to edit the domain.         Create a New Server           Back         Next         Finish	
No pending changes soit. Click the Release Configuration button to allow others to edit the domain. Back Next Finish Cancel	
Lock & Edit         Review choices           Release Configuration         Review the selections. If these are correct, click Finish to create this server.	
Domain Structure Common Namon still common	
RTILDomain	
Environment Server Listen Address: msp52474.us.orade.com	
"Servers	
Virtual Hosts Server Listen Port: 17065	
Deployments	
the Services	
How do I	
Create manageo servers	
Contrigure default network connections	
System Status	
Health of Running Servers	
Failed (0)	
Critical (0)	
Overloaded (0)	•

#### 6. Click Finish.

	dministration Co	onsole					Q
Change Center	Home Log O	ut Preferences 🔤 Recor	d Help		Q We	elcome, weblogic	Connected to: RTILDomain
Change Center View Changes and restarts Pending changes exist. They must be activated to take effect. Undo All Changes Domain Structure RTILDomain E: Environment ClustersClustersClustersVirtual HostsWignable TargetsChanges Course	Mome Log Out Preferences          Record Help         Q         Welcome, weblogic Connected to: RTILDomain         Home >Summary of Servers         Messages						
Concrete Servers     Coherence Clusters     Machines     Work Managers     Startup and Shutdown Classes     Deployments     Bergardee	Customize the Servers (Filter	his table ered - More Columns Ex e Delete	(luster	Machine	State	Showing 1 to	2 of 2 Previous   Next
Security Realms			cluster	- Identite	DURING	aff or	17001
How do I	Adminse	ar automini			Unknown	▼ UK	17065
Create Managed Servers     Clone Servers     Delete Managed Servers     Delete the Administration Server     Start and stop servers  System Status Health of Running Servers	New Clone Delete Showing 1 to 2 of 2 Previous   Next						

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

	Administration Con	sole					õ
Change Center	ሰ Home Log Out	Preferences 🔤 Record	Help		Q Weld	ome, weblogic	Connected to: RTILDomain
Change Center View changes and restarts Click the Lock & Edit button to modify, add or delete items in this domain. Lock & Edit Release Configuration Domain Structure RTILDomain	Image: Home Log Out     Home Log Out       Home >Summary of     Messages       ✓ All changes hard     Summary of Serve       Configuration     A server is an instate	Preterences (2) Record f Servers rs Control ance of WebLogic Server	Help	sary. : own Java Virtual	Achine (JVM) and I	ome, weblogic	Connected to: RTILDomain
Servers    Clusters    Virtual Hosts    Migratable Targets    Coherence Servers    Coherence Clusters    Machines    Work Managers    Startup and Shutdown Classes    Deployments    Security.Realms    Security.Realms    Security.Realms    Security.Realms	C2     Customize this     Servers (Filtere     Click the Lock &     New     Clone	table d - More Columns Exis Edit button in the Chang Delete	t) e Center to ac	tivate all the butto	ins on this page.	Showing 1 to	o 2 of 2 Previous   Next
How do I	📃 Name 🐟	c	uster	Machine	State	Health	Listen Port
Create Managed Servers     Clone Servers     Delete Managed Servers     Delete the Administration Server     Start and stop servers	AdminServer rtil-server New Clone	er(admin)			RUNNING SHUTDOWN	Showing 1 to	17061 17065 0 2 of 2 Previous   Next
System Status	.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

	Administration Console
Change Center	🏦 Home Log Out Preferences 🔤 Record Help
View changes and restarts	Home >Summary of Servers >Summary of Machines
No pending changes exist. Click the Release Configuration button to allow others to edit the domain. Lock & Edit Release Configuration	Create a New Machine           Back         Next         Finish         Cancel           Machine Identity         The following properties will be used to identify your new Machine.         Image: Cancel in the second s
Domain Structure	* Indicates required fields
RTILDomain ← Environment ← Clusters ← Clusters ← Clusters ← Charence Servers ← Coherence Clusters ← Machines ← Work Managers ← Services ← Coherence Clusters ← Machines ← Services ← Coherence Clusters ← Machines ← Services ← Coherence Clusters ← Machines ← Services ← Services ← Services ← Coherence Clusters ← Machines ← Services ← Services ← Services ← Coherence Clusters ← Machines ← Services ← Services ← Coherence Clusters ← Coherence Clusters ← Coherence Clusters ← Machines ← Services ← Coherence Clusters ← Coherence Clusters ← Machines ← Services ← Coherence Clusters ← Coherence Clusters ← Machines ← Coherence Clusters ← Machines ← Coherence Clusters ← Machines ← Coherence Clusters ← Machines ← Coherence Clusters ← Coherence Clusters ← Machines ← Coherence Clusters ← Machines ← Coherence Clusters ← Machines ← Coherence Clusters ← C	What would you like to name your new Machine?         * Name:       msp52474         Specify the type of machine operating system.         Machine OS:       Unix •         Back       Next
How do I 🖃	
Create and configure machines     Assign server instances to machines     Delete machines	
System Status	
Health of Running Servers	
Failed (0) Critical (0)	τ

- 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

ORACLE WebLogic Server® A	.dministration Console
Change Center	🏠 Home Log Out Preferences 🔤 Record Help
View changes and restarts	Home >Summary of Servers >Summary of Machines
No pending changes exist. Click the Release	Create a New Machine
the domain.	Back Next Finish Cancel
Lock & Edit	Node Manager Properties
Noicease Configuration	The following properties will be used to configure the Node Manager on this machine.
Domain Structure	What type of Node Manager is running on this server, and what protocol should be used to communicate with it?
RTILDomain	That type of foue hanager is fullying of the series) and that procees should be used to communicate that it.
Servers	d∰ Type: Plain ▼
Clusters Virtual Hosts	What address and port is this Node Manager configured to listen at?
Migratable Targets Coherence Servers	Listen Address: msp52474.us.oracle.com
Coherence Clusters Machines Work Managers	Listen Port: 5557
Startup and Shutdown Classes	Depending on the Node Manager type, additional properties may be configured.
Services     Security Realms	🕰 Node Manager Home:
How do I	E Shell Command:
Create and configure machines	
Assign server instances to machines	Debug Enabled
Delete machines	Back Next Finish Cancel
System Status	
Health of Running Servers	
Failed (0)	

#### The default port is 5556.

#### 5. Click Finish.

	Administration Console	Q
Change Center View changes and restarts Pending changes exist. They must be activated to take effect. Undo AI Changes Undo AI Changes Domain Structure RTILDomain Environment Servers Clusters Virtual Hosts Virtual Hosts Virtual Hosts Virtual Hosts Virtual Hosts Virtual Hosts Virtual Hosts Virtual Hosts Virtual Hosts	A Home Log Out Preferences Record Help Home >Summary of Servers >Summary of Machines Messages Machine created successfully Summary of Machines A machine is the logical representation of the computer that he uses configured machine names to determine the optimum servare delegated. The Administration Server uses the machine def This page displays key information about each machine that ha Customize this table Machines	Wekcome, weblogic Connected to: RTILDomain ists one or more WebLogic Server instances (servers). WebLogic Server er in a duster to which certain tasks, such as HTTP session replication, nition in conjunction with Node Manager to start remote servers. s been configured in the current WebLogic Server domain.
Coherence Clusters Machines Machines Startup and Shutdown Classes Copolyments Security Realms	New     Clone     Delete       Name      msp52474       New     Clone	Showing 1 to 1 of 1 Previous   Next Type Unix Machine Showing 1 to 1 of 1 Previous   Next
How do I  Create and configure machines Assign server instances to machines Clone machines Delete machines System Status Health of Running Servers Failed (0)		

**6.** Click **activate the changes**.

Change Center	💼 Home Log Out Preferences 🔤 Re	cord Help	Welcome, weblogic Connected to: RTILDomain
View changes and restarts	Home >Summary of Servers >Summary of	f Machines	
Click the Lock & Edit button to modify, add or delete items in this domain.	Messages All changes have been activated. No	o restarts are necessary.	
Lock & Edit Release Configuration	Summary of Machines		
Domain Structure	A machine is the logical representatio uses configured machine names to del are delegated. The Administration Ser	n of the computer that hosts one or more Web termine the optimum server in a cluster to whi ver uses the machine definition in conjunction	Logic Server instances (servers). WebLogic Server ch certain tasks, such as HTTP session replication, with Node Manager to start remote servers.
E <sup>+-</sup> Environment Servers Clusters	This page displays key information ab	out each machine that has been configured in t	he current WebLogic Server domain.
····Virtual Hosts ····Migratable Targets	Customize this table		
Coherence Servers	Machines		
Machines	Click the Lock & Edit button in the Ch	ange Center to activate all the buttons on this	page.
Work Managers Startup and Shutdown Classes	New Clone Delete		Showing 1 to 1 of 1 Previous   Next
Deployments Services	Name 🗞	Туре	
t==Security Realms	msp52474	Unix Machine	
How do I	New Clone Delete	'	Showing 1 to 1 of 1 Previous   Next
<ul> <li>Create and configure machines</li> </ul>			
<ul> <li>Assign server instances to machines</li> </ul>			
Clone machines			
Delete machines			
System Status			

7. Click Lock & Edit.

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

	Idministration Console	*
Change Center	🟦 Home Log Out Preferences 🗠 Record Help 🛛 🔍 Welcome, weblogic Connected to: RTILDomain	
View changes and restarts	Home >Summary of Servers >Summary of Machines >msp52474	
No pending changes exist. Click the Release Configuration button to allow others to edit the domain. Lock & Edit Release Configuration	Add a Server to Machine           Back         Inish         Cancel           Identify Server         Identify Server         Identify Server	
Domain Structure		
RTILDomain	How would you like to proceed?            • Select an existing server, and associate it with this machine         Select a server:       rtil-server v            • Create a new server and associate it with this machine         Back       Next         Finish       Cancel	
How do I   No task help found.		
System Status 🖃		
Health of Running Servers		
Failed (0)           Critical (0)           Overloaded (0)           Warning (0)		•

- **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

Change Center	1 Home Log Out Preferences	Record Help	Q					Welcome, weblogic Connected to: RTILDoma
View changes and restarts	Hime schummery of Servers settime	rvet s Summary of Servers articl server						
No pending changes exist. Click the Release	Settings for rtil-server							
Configuration button to allow others to edit the domain.	Configuration Protocols La	ogging Debug Monitoring Co	ntrol Deployments	Services Securi	v Notes			
Lock & Edit	General Cluster Senicer	Vantures CO Externion Car	uras Parloumant	Meratica   Tenin	Overland	I highly blockers	Carnes Chart	Web Centres
Release Configuration	Anna cana Martin	Allowed by reaction to	our opposition		orenter .		Server Server	
	Save							
Jonain Structure								
B'Environment Servers	Node Manager is a WebLagic Se machine.	over utility that you can use to start.	suspend, shut down, i	and restart pervers in a	ormal or unexp	pected conditions. Use	this page to cor	figure the startup settings that Node Hanager will use to start this server on a remote
Clusters Virtual Hosts Higratable Targets	Java Home:						The Jav perver.	a home directory (path on the machine running Node Hanager) to use when starting this Hore ${\rm Info}_{\rm m}$
Coherence Servers Coherence Clusters Hachines	Java Vendor:						The Jav	a Vendor value to use when starting this server For example, BEA, Sun, HP etc. Hore Info
Work Managers Startup and Shutdown Clauses	BEA Home:						The BEA server.	. None directory (path on the machine running Node Hanager) to use when starting this $\ensuremath{Hore}$ for $\ensuremath{For}$
Services     Security Realms	Root Directory:						The dire bosts th default	rctory that this server uses as its root directory. This directory must be on the computer that to Node Nanager. If you do not specify a Root Directory value, the domain directory is used by Nore Index.
How do I 8	Concerning and							
Cooffigure startup arguments for Hanaged Servers     Start Hanaged Servers from the Administration Costole     Shut down a server instance	Class Path: /u00/webadmin/product/ Domain/servers/rtil-se	/10.3.x/WLS/user_projects erver:\$CLASSPATH	/domains/RTIL				The clan befo	apath (path on the machine running Node Hanager) to use offen starting this server. Hore
System Status 8								
lealth of Funning Servers	-						the arg	sectors to the model priced tota better. Lifest \$2.0-
Failed (0)           Critical (0)           Overfoaded (0)           Warring (0)	Dtaxcomponent.conf.bas /user_projects/domains	s <u>edir+/u00/webadmin</u> /produ s/ <u>RTILDomain</u> /config/	ct/10.3.x/ <u>HL5</u>					
OK(2)	Security Policy File:						The sec	unty policy file (directory and filename on the machine running Node Hanager) to use when

- 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.

	A Hama Lag Out Br	afarancas 💽 Decord Halp			Walcome wahlagia	Connected to: BTII Don
hange Center	Home Log Out Pre	ererences 🔤 Record Help			welcome, weblogic	connected to: RTIEDON
View changes and restarts	Home >Summary of Ser	vers >Summary of Machines >m	sp52474 >Summary of	Servers >rtil-serve	r >Summary of Servers	
Click the Lock & Edit button to modify, add or delete items in this domain.	Summary of Servers					
Lock & Edit	Configuration Cont	trol				
Release Configuration	Use this page to char the Node Manager. S	nge the state of the servers ir tarting Managed Servers in St	this WebLogic Serve andby mode require	er domain. Contro s the domain-wid	ol operations on Managed S e administration port.	ervers require starting
TILDomain	٢5					
Churonment     Servers     Clusters     Wignatable Targets	Customize this ta	ble • More Columns Exist)				
Coherence Servers	Start Resume	Suspend v Shutdown v	Restart SSL		Showing 1 to 2	2 of 2 Previous   Next
Machines	🔲 Server 🐟	Mac	chine Sta	ite	Status of Last Action	1
Startup and Shutdown Classes	AdminServer(a	admin)	RUI	INING	None	
Deployments	✓ rtil-server	msp	52474 SHU	JTDOWN	None	
Security Realms	Start Resume	Suspend v Shutdown v	Restart SSL		Showing 1 to 2	of 2 Previous   Next
How do I					5.00.00 1 10 1	
Start and stop servers						
Start Managed Servers from the Administration Console						
Start Managed Servers in Admin mode						
Start Managed Servers in a cluster						
Configure the domain-wide administration     port						

### 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 .

#### Extract TaxRules (Jar Mode)

For the rules to be extracted as individual Java serialized files, extraction requires about about 7 GB of free space on the file system. The amount of space required depends on the number of tax rules in the taxweb drop and must be verified in the taxweb installation document.

**Note:** TaxRules extraction is done through a Java utility, which requires about 5 GB of RAM for the extraction. The amount of space depends on the number of tax rules in the taxweb drop and must be verified in the taxweb installation document.

TaxRules extraction can be done in one environment, where the extracted folder that contains rules can be transferred to all the RTIL deployment boxes independently. If this method is chosen, the deployment environment is not required to have five 5 GB of RAM available.

To extract TaxRules, do the following:

1. Create a folder/directory (for example, taxweb-slim).

**Note:** This directory should be created outside of WebLogic domain directory with read permission for all users (or at least for the Weblogic domain user).

- **2.** Transfer the taxrules.jar, taxcomponent.jar and the log4j-1.2.15.jar to taxweb-slim folder. The above mentioned jars are present in the TaxWeb Tax Rules bundle delivered by TaxWeb
- **3.** From the command prompt, run the following commands inside the taxweb-slim folder.

```
$ jar -xf taxrules.jar
$ java -Xmx6120m -cp log4j-1.2.15.jar:taxcomponent.jar:.
erija.taxrules.test.ondemand.RulesToDir
```

**Note:** Verify that a rules folder is created with individual rules in sub directory. (more than 1 GB).

#### 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 created in step 1 of the Extract TaxRules (Jar Mode) (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
JAVA_HOME	Location of a Java 7.0 (1.7.0+) 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/jdk1.7 export JAVA_HOME
ANT_HOME	Location of an Ant 1.9.4.x instance.	ANT_HOME=/usr/ant/ant1.9.4/ 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</ip>

**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).

	dministration C	onsole								Ç	^
Change Center	🛕 Home Log (	ut Prefe	ences	📐 Reco	rd Help			Q	Welcome, weblogic	Connected to: RTILDoma	in
View changes and restarts	Home >Summar Services >RTILI	of Servers	s >Sumr	mary of Mac	chines >msp!	2474 >Sum	nary of Servers	s >rtil-sen	ver >Summary of Servers >Su	immary of	
No pending changes exist. Click the Release Configuration button to allow others to edit	Settings for RT	(LDomaiı	1								а.
the domain.	Configuration	Monito	ring	Control	Security	Web Serv	ice Security	Notes			
Release Configuration	General JT4	JPA	EJBs	Web Ap	plications	Logging	Log Filters				
Domain Structure	Save										
RTILDomain	Use this page	to define	the Jav	a Transact	tion API (JT	A) configura	ition of this V	VebLogic	: Server domain.		
Clusters Virtual Hosts Mgratable Targets Coherence Servers Coherence Clusters	Timeout Seco	nds:			1	000		Sp ac a ar au	pecifies the maximum amore ctive transaction is allowed two-phase commit transact mount of time expires, the utomatically rolled back.	Int of time, in seconds, an to be in the first phase of tion. If the specified transaction is More Info	
Work Managers     Startup and Shutdown Classes     Deployments     Services	Abandon Tim	out Sec	onds:		8	6400		Sp tr cc tr	pecifies the maximum amor ansaction manager persists omplete the second phase of ansaction. More Info	int of time, in seconds, a ; in attempting to if a two-phase commit	Ľ
How do I	Before Compl	etion Ite	ration	Limit:	1	0		TÌ m sy do	he maximum number of cyc nanager performs the befor ynchronization callback for t omain. More Info	les that the transaction eCompletion this WebLogic Server	
Configure advanced domain JTA options	Max Transact	ions:			1	0000		TI tr Se	he maximum number of sim ansactions allowed on a se erver domain. More Info	ultaneous in-progress rver in this WebLogic	
Health of Running Servers	Max Unique N	ame Sta	tistics	:	1	000		TI W	he maximum number of uni hich statistics are maintain	que transaction names for ed. More Info	
Failed (0) Critical (0) Overloaded (0)	Checkpoint Ir	terval Se	conds		3	00		Ti a	he interval at which the tra new transaction log file an	nsaction manager creates d checks all old	

- **2.** Once RTIL installation is complete, configure Xmx and Xms values in the WebLogic Admin console.
- ORACLE WebLogic Server® A dministration Console Mome Log Out Preferences 🖂 Round Help Q. Change Center Welcome, weblogic Connected to: N oges and Home Page Click the Lock & Edit button to a delete items in this domain. - Informatic Lock & Edit Helphil Tools Configure applications Configure GridLink for RAC Data Source Recent Task Status Sat your console preferences eral Infor Common Administration Task Des
   Common Administration Task Des
   Read the documentation
   Ask a question on Hy Oracle Supp
   Oracle Quantian Overview Dee Domain WTC Servers
   Jult Connecti Servers Clusters
   Virtual H How do I... . 91 • .De · Security Realm Failed (0)
- **a.** Log in to the **admin console**.

- **b.** Click Lock & Edit.
- c. Navigate to Servers -> RTIL Managed Server (for example, rtil-server).

ORACLE WebLogic Server	Administration Console		0
Change Center	Home Log Out Preferences 🔤 Record H	Hp Q	Welcome, weblogic Connected to: RTILDonnain
View changes and restarts	Harre >Summery of Servers >Holl-server		
Click the Lock & Edit botton to modify, add or delete items in this domain.	Settings for rtil-server		
Lock & Edit	Configuration Protocols Logging Deb	ug Monitoring Control Deployments Services Security Notes	
Ileiease Confguratum	General Cluster Services Keystores	SSL Federation Services Deployment Higration Tuning Overload Health Monitoring	Server Start Web Services
Domain Structure	Click the Lock & Edit button in the Change Co	erter to modify the settings on this page.	
RTILDomein	(Save)		
B'Enironment Servers Clusters Wrbail Hosts	Use this page to configure general features of	This server such as default network communications.	
-Nigratable Targets Coherence Servers	Name:	rtil-server	An alphanumeric name for this server instance. Here Info
Coherence Clusters Hadones	🛃 Machine:	map52474 •	The WebLopic Server host computer (machine) on which this server is meant to run. Hore Infis
-Startup and Shutdown Classes Deployments	👩 Cluster:	(Stand-Alone) •	The cluster, or group of WebLogic Server instances, to which this server belongs. Here Sefe
R Services	de Listen Address:	msp52474 us oracle.com	The IP address or DNS name this server uses to listen for incoming connections. Hore Info
How do L. E	🗹 Listen Port Enabled		Specifies whether this server can be reached through the default plan-text (non-SSL) listen port. Here ${\rm Info}_m$
Create and configure machines     Configure clusters	Listen Port:	17065	The default TCP part that this server uses to listen for regular (non-SSL) incoming connections. More ${\rm Infe}_{\rm err}$
Start and stop servers     Configure WLDF diagnostic volume	SSL Listen Port Enabled		Indicates whether the server can be reached through the default SSL listen port. Hore Info
System Status E	SSL Listen Port:	7002	The TCP/SP port at which this server listens for 55L connection requests. Hore Info
Health of Running Servers	💷 👩 Client Cert Proxy Enabled		Specifies whether the Http:Cluster/Servlet process the client certificate is a special header. Here before
Pailed (0) Critical (0) Overloaded (0)	Java Compiler:	javac	The Java complet to use for all applications hosted on this server that need to compile Java code. More $\rm Info_{\rm m}$
OK (1)	Diagnostic Volume:	[Low •]	Specifies the volume of diagnostic data that is automatically produced by WebLopic Server at run time. Note that the WLCP diagnostic volume setting does not affect explicitly configured diagnostic modules. For example, this controls the volume of events generated far 30 should replace theorem.
	- § Advanced		
	(Seve)		

- **d.** Click the Server Start tab under configuration.
- **e.** Change the Xmx and Xms as below:

-Xms2g -Xmx9g

Change Contes	Home Log Out Preference	ers Record Help		19						Welcome, weblogic Connected ta: RTILDom	
Change Center	Mana - Kommune of Kanana and	distant of contrast of t	and a still stand of	- Incoment							
View changes and restarts	rises a provide y in the rest of	a serve internary of	at the s other sectors								
No pending changes exist. Click the Release Configuration button to allow others to edit the domain.	Settings for rtil-server Configuration Protocols	Logging Debug	Monitoring Control	Deployments	Services	Security	Notes				
Lock & East	General Cluster Service	es Keystores 55	L Federation Services	Deployment	Higration	Turing	Overload	Health Honitoring	Server Start	Web Services	
Release Configuration	(Save)										
Jomain Structure											
TLDomain - Exercisement - Servers	Node Manager is a WebLog machine.	c Server utility that ye	u can use to start, suspe	nd, shut down, a	nd restart se	vers in nor	nal or unexp	ected conditions. Use	this page to cort	figure the startup settings that Node Manager will use to start this server on a remote	
Clusters Virtual Hosts Higratable Targets	Java Home:								The Java server.	$a$ home directory (path on the machine running Node Managar) to use when starting the Hore ${\rm Info}_{-}$	
Coherence Servers Coherence Clusters Hachines	Java Vendor:								The Java	a Vendor value to use when starting this server For example, BEA, Sun, HP etc. Here $Infe_{ex}$	
Work Nanagers Startug and Shutdown Classes	BEA Home:								The BEA server.	home directory (path on the machine running Sode Planager) to use when starting this Hore $\mathrm{Inf}\omega$	
Services	Root Directory:								The dire hosts the default.	ectory that this server uses as its root directory. This directory must be on the computer that a field Hanager. If you do not specify a Root Directory value, the domain directory is used by Nore lafts.	
How do I	and the second s										
Configure startup arguments for Hanaged Servers Start Hanaged Servers from the Administration Console 9 Shot down a server instance	Class Path: /u00/webadmin/produ Domain/servers/rtil	ict/10.3.x/WLS/ -server:\$CLASS	user_projects/dom PATH	eins/RTIL					The class	apath (path on the machine numbing Node Manager) to see when starting this server. Here	
iystem Status 🖂	Annual to								The sec	manife the same selection while answer 11 Mars Soft	
lealth of Running Servers	Arguments:								The arguments to use when starting this server. More brito		
Failed (0) Critical (0) Oversleaded (0) Verning (0) Ok (2)	Dtaxcomponent.conf. /user_projects/doma	basedir=/u00/m ins/RTILDomain	thedmin/product/1 /config/	8.3.x/ <u>HLS</u>							
and the second	Security Policy file:								The seco	urity policy file (directory and filename on the machine running Node Hanager) to use when	

- **f.** Save the configuration.
- g. Click Activate Changes.

ORACLE WebLogic Server®	Administration Console	0
Change Center	🙆 Nome Log Out Preferences 🖾 Record Help	Welcome, weblogic Connected to: RTILDoesain
View changes and restarts	Harm >Sommary of Servers >H8-server	
Pending changes exist. They must be activated to take effect.	rressages	
Activate Changes	Settings for rtil-server	
Undo All Changes	Configuration Protocols Logging Debug Monitoring Control Deployments Services Security Notes	
Domain Structure	General Cluster Services Keystores 55L Federation Services Deployment Higration Tuning Overload Health Honitor	ing Server Start Web Services
RTILDomain	Save	
- Clusters Virtual Hosts - Highertable Targets - Coherence Sanam	Node Manager is a WebLopic Server utility that you can use to start, suspend, shut down, and restart servers in normal or unexpected conditions machine.	Use this page to configure the startup settings that Node Manager will use to start this server on a remote
Coherence Clusters Hachines	Java Home:	The Java home directory (path on the machine running Node Manager) to use when starting this server. More lafa
Startup and Shutdown Classes	Java Vendor:	The Java Vendor value to use when starting this server For example, BEA, Sun, HP etc. More Info.,
Services	BEA Home:	The BEA home directory (path on the machine running Node Manager) to use when starting this server. Home befa
How do L_		
Configure startup arguments for Managed Servers	Rost Directory:	The directory that this server uses as its root directory. This directory must be on the computer that hosts the Node Manager. If you do not specify a Root Directory value, the domain directory is used by default. More Info
<ul> <li>Start Hanaged Servers from the Administration Console</li> </ul>	Class Path:	The classoath (path on the machine running Node Nanaper) to use when starting this server. Hore
Shut down a server instance	/u00/webadmin/product/10.3.x/wi5/user_projects/domains/rtil _domain/servers/rtil-server:\$CLASSPATH	244_
System Status		
Health of Running Servers		
Failed (0)		
Critical (0)	Arguments:	The arguments to use when starting this server. More Info
Overloaded (0) Warning (0) OK (1)	<pre>^Xms2g -Xms2g - Dtaxcomponent.comf.basedir=/u00/webadmin/product/wls_rfm/us er_projects/domains/RTILDomain/config/</pre>	inter established preservation et l'entrop robernistig

- **h.** Navigate to Environment  $\rightarrow$  Servers.
- i. Click the Control Tab, under Summary of Servers.

ORACLE WebLogic Server	Administration Console						0
Change Center	🙆 Home Log Out Preferences 🐼 Record Help	9				Welcome, weblogic Connected to	: RTILDomain
View changes and restarts	Home >Summary of Servers >Historie >Summary of Servers	vers					
Click the Lock & Edit button to modify, add or delete items in this domain.	Summary of Servers						
Lock & Edt	Configuration Control						
Release Configuration	A server is an instance of WebLogic Server that runs in	n its own Java Virtual Machine (JVH) and ha	as its own configuration.				
Domain Structure RTILDomain	This page summarizes each server that has been confi	ipured in the current WebLogic Server doma	sin.				
B-Environment	63						
Servers           Outers         Usters           Outers         b Controace this table           With Alvest         b Controace this table           Marchine Toppt         Servers (Witered - Fore Columns Exist)							
Coherence Clusters	Click the Lock & Edit button in the Change Center to	activate all the buttons on this page.					
Work Managers	[New] [Clans] [Deletis]					Showing 1 to 2 of 2 Previo	ous   Nest
Startup and Shutdown Classes	🔄 Name 🏯	Cluster	Hachine	State	Health	Listen Port	
Security Realmy	AdminServer(admin)		msp52478	RUNNING	✓ ox.	17061	
How do I	🗇 rti-server		msp52478	RUNNENG	🖋 ок.	17065	
Create Managed Servers     Clone Servers     Delete Managed Servers     Delete the Administration Server	[New] (Dors) [Dolets]				to de la	Showing 1 to 2 of 2 Previo	pus   fiest
Start and stop servers System Status	]						
Health of Punning Servers							
Failed (0)           Critical (0)           Ourfloaded (0)           Viarring (0)           Cick (2)							

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.
- I. 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
URL	<rtil url=""> (for example, http://<rtilhostname:port>/rtil- web/invokeApp</rtilhostname:port></rtil>
SERVER	<rtil_server_name></rtil_server_name>
PORT	<port_number> (for example, 17065)</port_number>

## **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.

# **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

RTIL Installer - Oracle Retail
ORACLE
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?
<ul> <li>Yes</li> </ul>
○ No
😣 Cancel 🔇 Back 🕢 Next 🐟 Install

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

O RTIL Installer - Oracle Retail
ORACLE <sup>®</sup>
JDBC Security Details
Note: Enabling Secure JDBC requires that security certificates have been configured and installed for this WebLogic domain.
Yes
⊖ No
Cancel 🔇 Back 🕢 Next 🗇 Install

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

O RTIL Installer - Oracle Retail		
ORACLE		
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/p	bassword pair must be unique)	
😣 Cancel	Sack Next Install	

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=(PR OTOCOL=tcps)(HOST=dbhostname)(PORT=2484)))(CONNECT_DAT A=(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 Instal	ler - Oracle Retail 🛛 🗛 🕹
ORACLE <sup>®</sup>	
Secure Data Source Deta	ils
Provide the details for the RMS s	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	•••••
😡 Cancel 🔇	Back Next Next

**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 <i>Oracle Retail Merchandising Operations</i> <i>Management Security Guide</i> . 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

RTIL Inst	taller - Oracle Retail	_ ×
ORACLE <sup>®</sup>		
Application Deployme	ent Details	
The default values shown bel	ow are examples	
RTIL app deployment name	rtil	
Enter the RTIL weblogic mana	iged server or cluster.	
RTIL server/cluster	rtil-server	
😣 Cancel	🔇 Back 📎 Next 🗇 Install	

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

🖸 RTIL Installer - Oracle Retail		
ORACLE		
Weblogic Administrative User		
Enter the administrative user and password for the Weblogic Server to which the application will be deployed.		
Hostname	apphostname	
Weblogic admin port	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)		
😣 Cancel	🔇 Back 🕢 Next 🗇 Instal	

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

O RTIL Installer - Oracle Retail		_ <b>_</b> ×
ORACLE <sup>®</sup>		
Log4i logger Details		
Log if logger becans		
Provide the details for the RTIL	. Log4j	
Log4j Log Level	INFO 💌	
Output to STDOUT?	¥	
Log4j logfile MaxFileSize (MB)	5	
Log4j logfile MaxBackupInd	30	
🐼 Cancel	🔇 Back 🕢 Next 🗇 Install	]

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 on the application server's non-55L port	Screen:	Turn of	f the app	olication	server's	non-SSL	port
---	---------	---------	-----------	-----------	----------	---------	------

O RTIL Installer - Oracle Retail		
ORACLE		
Turn off the application	on server's non-SSL port	
If turned off, all clients connection.	ting to the application server mu	st use a
A value of "Yes" indicates that inactive. A value of "No" indic port will still be active.	the application server's non-SSL ates that the applications server'	port will be s non-SSL
Disable non-SSL port?	<ul> <li>Yes</li> </ul>	
	⊖ No	
😣 Cancel	Sack Next 🗇 Instal	

**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.

# **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

# **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

# **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 thsping 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 checkLockFileOErrorCode

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

... 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 dependent 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 11g 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.

# 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-username>

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.

**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\_rms0luser.

ifile = /u00/oracle/product/11.2.0.1/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 ths alias that was setup in the wallet's thsnames.ora file.

mkstore -wrl . -createCredential <tns\_alias> <username> <password>

```
Example: mkstore -wrl . -createCredential dvols29_rms0luser rms0luser 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 "rms0luser"

Running batch programs or shell scripts would be similar:

Ex: dtesys /@dvols29\_rms0luser
script.sh /@dvols29\_rms0luser
Set the UP unix variable to help with some compiles :
export UP=/@dvols29\_rms0luser
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\_rms0luser rms0luser 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\_rms0luser mkstore -wrl . -viewEntry oracle.security.client.user1 Returns the value of the entry: rms0luser

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/jdk1.6.0\_12.64bit
  - 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\_domai n/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>/retailpublic-security-api/bin for administering wallet entries.
- Example:
- /u00/webadmin/product/10.3.6/WLS/user\_projects/domains/REIMDomain/retai l/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/REIMDom ain/retail/reim14/config

```
------
```

Application level key partition name:reiml4 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

## 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:

## How does the Wallet Relate to Java Batch Program use?

csm.wallet.partition.name=reim14

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.

 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.

Find: qaols27	Previous Next [	7 Options •				
PRACLE Enterprise Manag Farm → Antopology	ger 11g Fusion Middleware Control					
Farm - 🔏 Topology - A						Setup ▼ Help ▼ Lo
• A						
	(PPDomain ()					Logged in as web
# Farm_APPDomain	🖥 WebLogic Domain 🗸				Page Rafreshe	ed Oct 25, 2013 12:49:37 PM E
E i Application Deployments						
Wettoge tomain     Wettoge tomain     Arppomain     AdminGerver     P     B     AdminGerver	Credentials A credential store is the repository of security data that certify the authority of entities used by Jone 2, 122E, and ADT applications. Applications can use the Gredential Store, a single, consolidated service provider to store and manage their credential securely. Encedential Store Provider					
E Custer-rpm     Custer-rpi     Duster-rpi     E Custer-rpi	Scope WebLogic Doma Provider DB_ORACLE	'n				
E 📋 Metadata Repositories	💠 Create Map 💠 Create Key 🛛 🧷 Edit.	💥 Delete   C	redential Key Name			
	Credential	Type	Description			
	🖃 🦳 oracle.retail.sim					
	bip-oser     bip-oser	Password				1
	😵 rsi rpm-user	Password				
	😵 nb-user	Password				
	🖗 rsl-ms-user	Password				
	💡 server-user	Password				- 11
	🖞 datasource-user	Password				
0	🖗 Idap-user	Password				
	🖗 sso-taken-key	Generic				
	🖂 🦳 rpm 14					
	P LDAP-ALIAS	Password				
		Password				
	V DE 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:



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/fmw config

(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 11.1.1.7.0

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','xxxxx.us.oracle.com:17001') Connecting to t3://xxxxx.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 : rms0lapp, Description : null, expiry Date : null]
PASSWORD:retail
\*The above means for map rpm14 in APPDomain, alias DB-ALIAS points to database
user rms0lapp 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  ${\tt myMap}$  and key name  ${\tt myKey}$ :

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')
Retail app	Wallet type	Wallet loc	Wallet partition	Alias name	User name	Use	Create by	Alias Example	Notes
RMS batch	DB	<rms batch="" dir<br="" install="">(RETAIL_HOME)&gt;/.wallet</rms>	n/a	<database SID&gt;_<data base schema owner&gt;</data </database 	<rms schema owner&gt;</rms 	Compile, execution	Installer	n/a	Alias hard-coded by installer
RMS forms	DB	<forms install<br="">dir&gt;/base/.wallet</forms>	n/a	<database SID&gt;_<data base schema owner&gt;</data </database 	<rms schema owner&gt;</rms 	Compile	Installer	n/a	Alias hard-coded by installer
ARI forms	DB	<forms install<br="">dir&gt;/base/.wallet</forms>	n/a	<db_ari01></db_ari01>	<ari schema<br="">owner&gt;</ari>	Compile	Manual	ari-alias	
RMWS forms	DB	<forms install<br="">dir&gt;/base/.wallet</forms>	n/a	<database SID&gt;_<data base schema owner&gt;</data </database 	<rwms schema owner&gt;</rwms 	Compile forms, execute batch	Installer	n/a	Alias hard-coded by installer
RPM batch plsql and sqlldr	DB	<rpm batch="" install<br="">dir&gt;/.wallet</rpm>	n/a	<rms schema owner alias&gt;</rms 	<rms schema owner&gt;</rms 	Execute batch	Manual	rms-alias	RPM plsql and sqlldr batches
RWMS auto- login	JAVA	<forms install<br="">dir&gt;/base/.javawallet</forms>							
			<rwms Installation name&gt;</rwms 	<rwms database user alias&gt;</rwms 	<rwms schema owner&gt;</rwms 	RWMS forms app to avoid dblogin screen	Installer	rwms14inst	
			<rwms Installation name&gt;</rwms 	BI_ALIAS	<bi Publisher administrat ive user&gt;</bi 	RWMS forms app to connect to BI Publisher	Installer	n/a	Alias hard-coded by installer

## 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
AIP app	JAVA	<weblogic domain<br="">home&gt;/retail/<deployed aip app name&gt;/config</deployed </weblogic>							Each alias must be unique
			aip14	<aip weblogic user alias&gt;</aip 	<aip weblogic user name&gt;</aip 	App use	Installer	aip- weblogic- alias	
			aip14	<aip database schema user alias&gt;</aip 	<aip database schema user name&gt;</aip 	App use	Installer	aip01user- alias	
			aip14	<rib-aip weblogic user alias&gt;</rib-aip 	<rib-aip weblogic user name&gt;</rib-aip 	App use	Installer	rib-aip- weblogic- alias	
RPM app	DB credenti al store		Map=rpm14 or what you called the app at install time.	Many for app use					<weblogic domain<br="">home&gt;/config/fmwc onfig/jps-config.xml has info on the credential store. This directory also has the domain cwallet.sso file.</weblogic>
RPM app	JAVA	<weblogic domain<br="">home&gt;/retail/<deployed rpm app name&gt;/config</deployed </weblogic>							Each alias must be unique
			rpm14	<rpm weblogic user alias&gt;</rpm 	<rpm weblogic user name&gt;</rpm 	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<br="">user name&gt; is the alias. Yes, here alias name = user name</rpm>	<rpm batch<br="">user name&gt;</rpm>	App, batch use	Installer	RETAIL.US ER	
	JAVA	<retail_home>/orpatch/co nfig/javaapp_rpm</retail_home>							Each alias must be unique
			retail_install er	<rpm weblogic user alias&gt;</rpm 	<rpm weblogic user name&gt;</rpm 	App use	Installer	weblogic- alias	
			retail_install er	<rms shema<br="">user alias&gt;</rms>	<rms shema user name&gt;</rms 	App, batch use	Installer	rms01user- alias	
			retail_install er	<reim batch<br="">user alias&gt;</reim>	<reim batch<br="">user name&gt;</reim>	App, batch use	Installer	reimbat- alias	
			retail_install er	<ldap- ALIAS&gt;</ldap- 	cn=rpm.ad min,cn=Use rs,dc=us,dc =oracle,dc= com	LDAP user use	Installer	LDAP_ALI AS	
ReIM app	JAVA	<weblogic domain<br="">home&gt;/retail/<deployed reim app name&gt;/config</deployed </weblogic>							Each alias must be unique
			<installed app name, ex: reim14&gt;</installed 	<reim weblogic user alias&gt;</reim 	<reim weblogic user name&gt;</reim 	App use	Installer	weblogic- alias	
			<installed app name, ex: reim14&gt;</installed 	<rms shema<br="">user alias&gt;</rms>	<rms shema user name&gt;</rms 	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&gt;</installed 	<reim webservice validation user alias&gt;</reim 	<reim webservice validation user name&gt;</reim 	App use	Installer	reimwebser vice-alias	
			<installed app name, ex: reim14&gt;</installed 	<reim batch<br="">user alias&gt;</reim>	<reim batch<br="">user name&gt;</reim>	App, batch use	Installer	reimbat- alias	
			<installed app name, ex: reim14&gt;</installed 	<ldap- ALIAS&gt;</ldap- 	cn=REIM.A DMIN,cn= Users,dc=u s,dc=oracle, dc=com	LDAP user use	Installer	LDAP_ALI AS	
	JAVA	<retail_home>/orpatch/co nfig/javaapp_reim</retail_home>							Each alias must be unique
			retail_install er	<reim weblogic user alias&gt;</reim 	<reim weblogic user name&gt;</reim 	App use	Installer	weblogic- alias	
			retail_install er	<rms shema<br="">user alias&gt;</rms>	<rms shema user name&gt;</rms 	App, batch use	Installer	rms01user- alias	
			retail_install er	<reim webservice validation user alias&gt;</reim 	<reim webservice validation user name&gt;</reim 	App use	Installer	reimwebser vice-alias	
			retail_install er	<reim batch<br="">user alias&gt;</reim>	<reim batch<br="">user name&gt;</reim>	App, batch use	Installer	reimbat- alias	
			retail_install er	<ldap- ALIAS&gt;</ldap- 	cn=REIM.A DMIN,cn= Users,dc=u s,dc=oracle, dc=com	LDAP user use	Installer	LDAP_ALI AS	

Retail app	Wallet type	Wallet loc	Wallet partition	Alias name	User name	Use	Create by	Alias Example	Notes
RESA app	DB credenti al store		Map=resa14 or what you called the app at install time	Many for login and policies					<weblogic domain<br="">home&gt;/config/fmwc onfig/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.</weblogic>
RESA app	JAVA	<weblogic domain<br="">home&gt;/retail/<deployed resa app name&gt;/config</deployed </weblogic>							Each alias must be unique
			<installed app name&gt;</installed 	<resa weblogic user alias&gt;</resa 	<resa weblogic user name&gt;</resa 	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&gt;</installed 		<rmsdb shema user name&gt;</rmsdb 	App use	Installer	Resadb-alias	
			<installed app name&gt;</installed 	<resa schema user alias&gt;</resa 	<rmsdb shema user name&gt;&gt;</rmsdb 	App use	Installer	resa-alias	
	JAVA	<retail_home>/orpatch/co nfig/javaapp_resa</retail_home>							Each alias must be unique
			retail_install er	<resa weblogic user alias&gt;</resa 	<resa weblogic user name&gt;</resa 	App use	Installer	wlsalias	

Retail app	Wallet type	Wallet loc	Wallet partition	Alias name	User name	Use	Create by	Alias Example	Notes
			retail_install er		<rmsdb shema user name&gt;</rmsdb 	App use	Installer	Resadb-alias	
	JAVA	<retail_ home&gt;/orpatch/config/ja vaapp_rasrm</retail_ 							Each alias must be unique
			retail_install er	<alloc weblogic user alias&gt;</alloc 	<alloc weblogic user name&gt;</alloc 	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 credenti al store		Map=alloc 14 or what you called the app at install time	Many for login and policies					<weblogic domain<br="">home&gt;/config/fmwc onfig/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.</weblogic>
Alloc app	JAVA	<weblogic domain<br="">home&gt;/retail/config</weblogic>							Each alias must be unique
			<installed app name&gt;</installed 	<alloc weblogic user alias&gt;</alloc 	<alloc weblogic user name&gt;</alloc 	App use	Installer	weblogic- alias	
			<installed app name&gt;</installed 	<rms schema user alias&gt;</rms 	<rms schema user name&gt;</rms 	App use	Installer	dsallocAlias	
			<installed app name&gt;</installed 	<alloc batch<br="">user alias&gt;</alloc>	<system_ ADMINIST RATOR&gt;</system_ 	Batch use	Installer	alloc14	
	JAVA	<retail_ home&gt;/orpatch/config/ja vaapp_alloc</retail_ 							Each alias must be unique

Retail app	Wallet type	Wallet loc	Wallet partition	Alias name	User name	Use	Create by	Alias Example	Notes
			retail_install er	<alloc weblogic user alias&gt;</alloc 	<alloc weblogic user name&gt;</alloc 	App use	Installer	weblogic- alias	
			retail_install er	<rms schema user alias&gt;</rms 	<rms schema user name&gt;</rms 	App use	Installer	dsallocAlias	
			retail_install er	<alloc batch<br="">user alias&gt;</alloc>	<system_ ADMINIST RATOR&gt;</system_ 	Batch use	Installer	alloc14	
	JAVA	<retail_ home&gt;/orpatch/config/ja vaapp_rasrm</retail_ 							Each alias must be unique
			retail_install er	<alloc weblogic user alias&gt;</alloc 	<alloc weblogic user name&gt;</alloc 	App use	Installer	weblogic- alias	
SIM app	DB credenti al store		Map=oracle. retail.sim	Aliases required for SIM app use					<pre><weblogic domain="" home="">/config/fmwc onfig/jps-config.xml has info on the credential store. This directory also has the domain cwallet.sso file.</weblogic></pre>
	JAVA	<weblogic domain<br="">home&gt;/retail/<deployed sim app name&gt;/batch/resources/c onf</deployed </weblogic>	oracle.retail. sim	<sim batch<br="">user alias&gt;</sim>	<sim batch<br="">user name&gt;</sim>	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<br="">home&gt;/retail/<deployed sim app name&gt;/wireless/resources /conf</deployed </weblogic>	oracle.retail. sim	<sim wireless user alias&gt;</sim 	<sim wireless user name&gt;</sim 	App use	Installer	WIRELESS- ALIAS	
RETL	JAVA	<retl home&gt;/etc/security</retl 	n/a	<target application user alias&gt;</target 	<target application db userid&gt;</target 	App use	Manual	retl_java_rm s01user	User may vary depending on RETL flow's target application
RETL	DB	<retl home="">/.wallet</retl>	n/a	<target application user alias&gt;</target 	<target application db userid&gt;</target 	App use	Manual	<db>_<user &gt;</user </db>	User may vary depending on RETL flow's target application
RIB	JAVA	<ribhome DIR&gt;/deployment- home/conf/security</ribhome 							<app> is one of aip, rfm, rms, rpm, sim, rwms, tafr</app>
JMS			jms<1-5>	<jms user<br="">alias&gt; for jms&lt;1-5&gt;</jms>	<jms user<br="">name&gt; for jms&lt;1-5&gt;</jms>	Integra- tion use	Installer	jms-alias	
WebLogic			rib- <app>- app-server- instance</app>	<rib-app weblogic user alias&gt;</rib-app 	<rib-app weblogic user name&gt;</rib-app 	Integra- tion use	Installer	weblogic- alias	
Admin GUI			rib- <app>#web- app-user- alias</app>	<rib-app admin gui user alias&gt;</rib-app 	<rib-app admin gui user name&gt;</rib-app 	Integra- tion use	Installer	admin-gui- alias	
Application			rib- <app>#user- alias</app>	<app weblogic user alias&gt;</app 	<app weblogic user name&gt;</app 	Integra- tion use	Installer	app-user- alias	Valid only for aip, rpm, sim
DB			rib- <app>#app- db-user-alias</app>	<rib-app database schema user alias&gt;</rib-app 	<rib-app database schema user name&gt;</rib-app 	Integra- tion 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</app>	<rib-app error hospital database schema user alias&gt;</rib-app 	<rib-app error hospital database schema user name&gt;</rib-app 	Integra- tion use	Installer	hosp-user- alias	
RFI	Java	<rfi-home>/retail- financial-integration- solution/service-based- integration/conf/security</rfi-home>							
			<installed app name&gt;</installed 	rfiAppServe rAdminServ erUserAlias	<rfi weblogic user name&gt;</rfi 	App use	Installer	rfiAppServe rAdminServ erUserAlias	
			<installed app name&gt;</installed 	rfiAdminUi UserAlias	<orfi admin user&gt;</orfi 	App use	Installer	rfiAdminUi UserAlias	
			<installed app name&gt;</installed 	rfiDataSourc eUserAlias	<orfi schema user name&gt;</orfi 	App use	Installer	rfiDataSourc eUserAlias	
			<installed app name&gt;</installed 	ebsDataSour ceUserAlias	<ebs schema user name&gt;</ebs 	App use	Installer	ebsDataSour ceUserAlias	
			<installed app name&gt;</installed 	smtpMailFr omAddress Alias	<from email address&gt;</from 	App use	Installer	smtpMailFr omAddress Alias	

## **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)