Oracle® Retail Service Backbone

Installation Guide Release 15.0.3 F18452-01

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Oracle® Retail Service Backbone Installation Guide, Release 15.0.3

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Oracle® Retail Service Backbone Installation Guide, Release 15.0.3.

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 http://www.oracle.com.

Preface

The Oracle® Retail Service Backbone Installation Guide contains the requirements and procedures that are necessary for the retailer to install Oracle Retail Service Backbone product.

Audience

The Installation Guide is written for the following audiences:

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

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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, 15.0) or a later patch release (for example, 15.0.3). If you are installing the base release and 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.ht
ml

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.ht
ml

(Data Model documents are not available through Oracle Technology Network. You can obtain these documents through My Oracle Support.)

Conventions

ConventionMeaningboldfaceBoldface type indicates graphical user interface elements associated
with an action, or terms defined in text or the glossary.italicItalic type indicates book titles, emphasis, or placeholder variables for
which you supply particular values.

The following text conventions are used in this document:

Convention	Meaning
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

1

Introduction

This document is the installation guide for the Retail Service Backbone (RSB) product. Generally, an RSB installation contains the following components:

- An installation of RSB's Decorator Services on Java EE 5 compliant application server.
- (Optional) Installation of the Java Service Interface Tester tool (JSIT)

It is important to also follow all installation steps of the Oracle Retail Applications that are being connected to the RSB. Failure to follow these may result in a faulty RSB installation. See the installation guides for the relevant Oracle Retail applications for more information.

Note: The instructions provided in this guide apply to a full installation of the RSB 15.0.3.

RSB Installation Master Checklist

RSB Installation Master Checklist

This list covers all of the sequential steps required to perform a full installation of the RSB using a command line installation.

Task	Notes
Install JDK 1.8	Prerequisite
Prepare the Oracle Database schemas that the RIB will use:	Prerequisite
 Install Repository Creation Utility (RCU) 12.2.1.3 	
• Create DB schema for OSB using RCU	
Prepare the Oracle WebLogic Servers for installation of the RSB Components:	Prerequisite
 Install Oracle Service Bus (OSB) on WebLogic 	
 Configure OSB domain and ADF runtime (Oracle JRF-12.2.1.3.0) 	
Create Cluster	
Verify that the applications to which RSB will be integrating are configured appropriately	
Gather information for the installation (URLs, credentials, path information etc)	During the prerequisites steps, there is information that should be noted that will be used to configure the RSB during the installation process.
Install using the RSB command line tools.	

Technical Specifications

RSB has several dependencies on Oracle Retail Application installations, as well as on the Oracle WebLogic servers. This section covers these requirements.

Note: Oracle Retail assumes that the retailer has applied all required fixes for supported compatible technologies.

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*.

Server Requirements

Supported On	Versions Supported
Database Server OS	OS certified with Oracle Database 12c Enterprise Edition. Options are:
	 Oracle Linux 6 or 7 for x86-64 (Actual hardware or Oracle virtual machine).
	 Red Hat Enterprise Linux 6 or 7 for x86-64 (actual hardware or Oracle virtual machine)
	 IBM AIX 7.1 (actual hardware or LPARs)
	 Solaris 11.3 Sparc (actual hardware or logical domains)
	 HP-UX Itanium 11.31 Integrity (Actual hardware, HPVM, or vPars)

Database Server 12c	Oracle Database Enterprise Edition 12c (12.1.0.2) with the following specifications:
	Components:
	Enterprise Edition
	• Examples CD (formerly the companion CD)
	Oneoff Patches:
	 20846438: ORA-600 [KKPAPXFORMFKK2KEY_1] WITH LIST PARTITION
	 Patch 19623450: MISSING JAVA CLASSES AFTER UPGRADE TO JDK 7
	 20406840: PROC 12.1.0.2 THROWS ORA-600 [17998] WHEN PRECOMPILING BY 'OTHER' USER
	Other Components:
	 Perl interpreter 5.0 or later
	 X-Windows interface
	 JDK 1.7 with latest security updates 64 bit
Application Server OS	OS certified with Oracle Fusion Middleware 12c. Optionare:
	 Oracle Linux 6 or 7 for x86-64 (Actual hardware or Oracle virtual machine).
	 Red Hat Enterprise Linux 6 or 7 for x86-64 (actual hardware or Oracle virtual machine)
	 IBM AIX 7.1 (actual hardware or LPARs)
	Solaris 11 Sparc (actual hardware or logical domains
	 HP-UX Itanium 11.31 Integrity (Actual hardware, HPVM, or vPars)
Application Server	Oracle Fusion Middleware 12c (12.2.1.3)
* *	Components:
	• Oracle WebLogic Server 12c (12.2.1.3)
	 Java: JDK 1.8.0+ latest security updates 64 bit
Minimum required JAVA version for all operating systems	JDK 1.8.0+ latest security updates 64 bit

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

http://docs.oracle.com/database/121/JJDEV/chone.htm#JJDEV0100 0.

Follow-through to complete the post-patch operation.

Important: If there is an existing WebLogic installation on the server, you must upgrade to WebLogic 12.2.1.3. All middleware components associated with WebLogic server should be upgraded to 12.2.1.3.

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

Additional Requirement for Retail Integration Console (RIC)

The RIC model and view components require ADF runtime to run properly. Verify that ADF runtime 12.2.1.3 or higher is available in the WebLogic Application Server (12.2.1.3) and applied to the domain where RIC will be installed.

Other Resources

For information about WebLogic Application Server 12.2.1.3, see the Oracle WebLogic Server Documentation Library.

- WebLogic Application Server 12c Index http://docs.oracle.com/middleware/1213/index.html
- WebLogic Application Server 12c Documents http://docs.oracle.com/middleware/1213/wls/index.html.

Note: See also the Oracle Database Administrator's Guide 12c (12.1) and the Oracle WebLogic Application Server 12c (12.2.1.3) documentation.

Additional Requirement for Installing JSIT

JSIT requires WebLogic Application Server 12c (12.2.1.3). Before installing JSIT, verify that the WebLogic Application Server 12c (12.2.1.3) is available in your environment. For more information on installing JSIT, see Install JSIT.

Supported Oracle Retail Products

Retail Product	Version Supported
Oracle Retail Warehouse Management System (RWMS) 15.0.3	RIB 15.0.3
Oracle Retail Merchandising System (RMS) 15.0.3	RIB 15.0.3
Oracle Retail Price Management (RPM) 15.0.3	RIB 15.0.3
Oracle Retail Store Inventory Management (SIM) 15.0.3	RIB 15.0.3
Oracle Retail Advanced Inventory Planning (AIP) 15.0.3	RIB 15.0.3
Integration Gateway Services (IGS) 15.0.3	RSB 15.0.3

Oracle Retail Financial Integration (ORFI) 15.0.3	RSB 15.0.3
Oracle Retail Returns Management (RM) 14.1	RSB 15.0.3
Oracle Retail Invoice Matching (ReIM) 15.0.3	RSB 15.0.3
POS Suite 14.1	RSB 15.0.3
Rib4OMS 15.0.3	RSB 15.0.3

The RSB and Oracle WebLogic Server Cluster

Oracle Service Bus (OSB) supports three types of topologies: Admin-only topology, Admin + Managed Server topology and Cluster topology. The first two topologies are non-clustered topologies which are not highly-available; therefore it is recommended that you use Cluster topology.

Clustering allows OSB to run on a group of servers that can be managed as a single unit. An OSB deployment can use clustering and load balancing to improve scalability by distributing the workload across nodes. A WebLogic server clustered domain consists of only one Admin Server, and one or more managed servers. The managed servers in an OSB domain can be grouped in a cluster. When OSB resources are configured, resources are targeted to the named cluster. The advantage of specifying a cluster as the target for resource deployment is that it makes it possible to dynamically increase capacity by adding Managed Servers to the cluster.

Singleton Resources

While most resources used by OSB are deployed homogeneously across the cluster, there are a few resources that must be pinned to a single Managed Server in order to operate correctly. The following table lists these components:

- Service Bus Cluster Singleton Marker Application
- Service Bus Domain Singleton Marker Application
- Service Bus Message Reporting Purger
- configwiz-jms service

Load balancing in an OSB cluster

Load balancing distributes the workload proportionately across all the servers in a cluster so that each server can run at full capacity. Web services (SOAP or XML over HTTP) can use HTTP load balancing. External load balancing can be accomplished through the WebLogic HttpClusterServlet, a WebServer plug-in or a hardware router. In the steps described in this document, it uses a HTTP proxy server which is a managed server in the same domain and is not a part of the cluster.

Preinstallation Tasks

Before you begin installation, check to be sure that you have the most recent version of this installation guide. Oracle Retail installation guides are available on the Oracle Technology Network.

Prepare WebLogic Application Server

Oracle Service Bus (OSB) supports 3 types of topologies: Admin-only, Admin + Managed Server and Cluster. The first two topologies are non-clustered topologies which are not high-available, therefore we recommend using Cluster topology and this document describes how to configure a sample cluster topology for RSB applications.

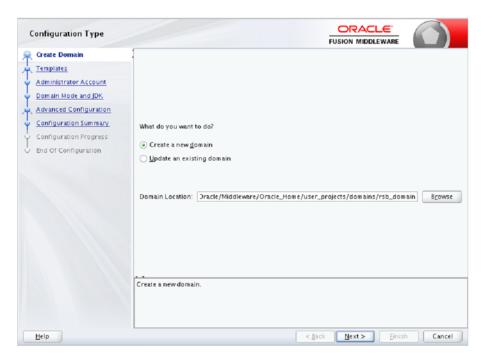
Steps for Configuring OSB Domain

This section describes step-by-step process of creating and configuring an OSB domain using the configuration wizard. In this configuration, there are following servers:

- One Admin Server
- Three Managed Servers: *rsb_server1*, *rsb_server2* and *rsb_http_proxy*.
- Cluster: The cluster consists of rsb_server1 and rsb_server2 as managed servers. OSB features are deployed on this cluster. Also, rsb_server1 hosts the singleton resources of OSB.
- Managed server *rsb_http_proxy* acts as the proxy server of the cluster. It does not have OSB code installed on it.

Perform the following steps to create a new WebLogic domain:

- 1. Run <WLS_HOME>/wlsserver/common/bin/config.sh.
- 2. Select Create a new Domain. Click Next.



3. Select Oracle Service Bus -12.2.1.3 [osb] option as shown, this will select other required options for OSB like EM, OWSM, JRF etc. Click **Next**.

Templates	FUSION MIDDLEWARE	
Create Domain Templates	Oreate Domain Using Product Templates:	
Application Location Administrator Account Domain Mode and JDK Database Configuration Type Component Datasources JDEC Test Advanced Configuration Configuration Summary Configuration Progress End Of Configuration	Template Categories: All Templates Available Templates Basic WebLogic Server Domain - 12.1.3.0 [wserver]* Oracle Service Bus - 12.1.3.0 [osb] WebLogic Advanced Web Services for JAX-RPC Extension - 12.1.3.0 [oracle_common] Oracle Enterprise Scheduler Service Basic - 12.1.3.0 [oracle_common] Oracle Enterprise Manager - 12.1.3.0 [oracle_common] Oracle Enterprise Manager - 12.1.3.0 [oracle_common] Oracle User Messaging Service Basic - 12.1.3.0 [oracle_common] Oracle Was Policy Manager - 12.1.3.0 [oracle_common] Oracle RAS Session Service - 12.1.3.0 [oracle_common] Oracle JRF SOAP/JMS Web Services - 12.1.3.0 [oracle_common] Oracle JRF SOAP/JMS Web Services - 12.1.3.0 [oracle_common] Oracle JRF - 12.1.3.0 [oracle_common] Oracle J	rse
Help	< Back Next > Finish Cane	cel

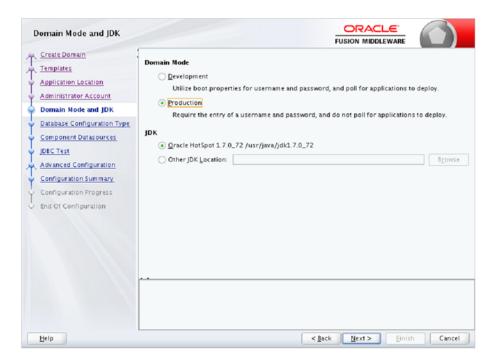
4. Select Application Location and click Next.

Application Location					
Create Domain Templates Application Location Administrator Account Domain Mode and JDK Database Configuration Type Component Datasources JDEC Test Advanced Configuration Configuration Summary Configuration Progress End Of Configuration	Domain name: Domain location: Application location:	rsb_domain 1e/dev03/Oracle/Middleware 1Middleware/Oracle_Home/u	/Oracle_Home/user_proje	ects/domain:	
Help			< <u>B</u> ack <u>N</u> ext >	Einish	Cancel

5. Enter **Name** (Username) and **User password** for the domain. Please note down the username and password. These are required again in the compilation phase of RSB.

Administrator Account		
Create Domain	1	
Templates		
Application Location		
Administrator Account		
Domain Mode and JDK		
Database Configuration Type		
Component Datasources		
UDBC Test	Name	weblogic
Advanced Configuration	Password	•••••
Configuration Summary	Confirm Password	•••••
Configuration Progress		
End Of Configuration		
	Must be the same as one number or spec	the password. Password must contain at least 8 alphanumeric characters with at least
	one number of spee	NU CTIM NEXCT.
Help	L	<gack next=""> Einish Cancel</gack>

6. Select domain mode option as production and point to latest jdk location. Click **Next**.



7. Select RCU Data option and enter database details like driver, hostname, service, port, schema owner and password. The schema must be created already using the RCU tool. Then click on Get RCU Configuration button to get the RCU data for RSB. If connection result logs are OK, then click Next.

Database Configuration Ty	
Create Domain Templates Application Location Administrator Account Domain Mode and JDK Database Configuration Type Component Datasources JDEC Test Advanced Configuration Configuration Summary Configuration Progress End Of Configuration	Specify AutoConfiguration Options Using: • RCU Data Manual Configuration Enter the database connection details using the Repository Creation Utility service table (STB) schema credentials. The Wizard uses this connection to automatically configure the datasources required for components in this domain. Vendor: Oracle Driver: "Oracle's Driver (Thin) for Service connections; Ver DBMS/Service: Iscpdb Host Name: birdv01. Port: 1521 Schema Owner: RSBDEV_STB Schema Password: •••••••••• Get RCU Configuration Cancel Connection Result Log Connecting to the database serverOK Binding local schema components with retrieved dataOK. Successfully Done. Click "Next" button to continue. Click "Next" button to continue. Click "Next" button to continue.
Help	<gack next=""> Einish Cancel</gack>

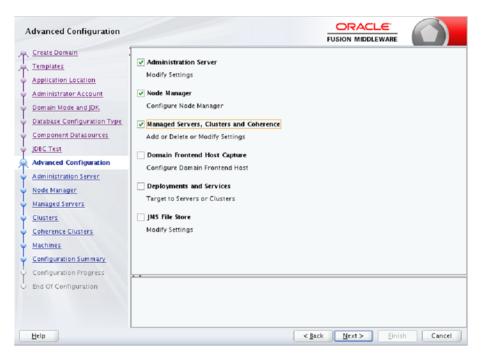
8. This screen shows all RCU schemas for RSB. Select all schemas by clicking on Component Schema Label and click **Next**.

Create Domain	Ver	dor: Oracle		Driver: *Oracle's Dr	iver (Thin) for Service cor	nections: Versile
Templates							
Application Location	DB	ISCPDB	H	lost Name: birdv01		P	ort: 1521
Administrator Account	Sch	ema Owner: Varies am	ong compo S	chema Password:	•••••	•••	
Domain Mode and JDK	Ora	cle RAC configuration f	or component s	chemas:			
Database Configuration Type		Convert to Gri	idLink 🔿 Co	nvert to RAC multi d	lata sourc	e 🔿 Don't c	onvert
Component Datasources		0	0			0	
JDBC Test	Edit	ts to the data above will a	affect all checke	d rows in the table b	elow.		
Advanced Configuration		Component Schema	DBMS/Service	Host Name	Port	Schema Owner	Schema Passwo
		LocalSvcTbl Schema	ISCPDB	birdv01.	1521	RSBDEV_STB	•••••
Configuration Summary		User Messaging Servic	ISCPD8	birdv01.''-	1521	RSBDEV_UMS	•••••
Configuration Progress		SOA (XA)	ISCPDB	birdv01.	1521	RSBDEV_STB	•••••
End Of Configuration		SOA (Local)	ISCPDB	birdv01.'	1521	RSBDEV_STB	•••••
		OWSM MDS Schema	ISCPD8	birdv01.'	1521	RSBDEV_STB	•••••
		OPSS Audit Schema	ISCPDB	birdv01.'	1521	RSBDEV_IAU_4	•••••
		OPSS Audit Viewer Sch	ISCPDB	birdv01	1521	RSBDEV_IAU_\	•••••
		OPSS Schema	ISCPDB	birdv01 '	1521	RSBDEV_OPSS	•••••
		OSB JMS Reporting Pro	ISCPDB	birdv01	1521	RSBDEV_STB	•••••
		OSB JMS Reporting Pro	ISCPD8	birdv01	1521	RSBDEV_STB	•••••

9. Here all the schemas will be tested and corresponding data sources will be created in domain. When all statuses are green, click **Next**.

J	DBC Component Schema 1	est					
墨	Create Domain		Status	Component Schema	JU	BC Connection URL	
*	Templates		1	LocalSvcTbl Schema	jdbc:oracle:thin:@//blrdv01	:1521/ISCPD8	
T.	Application Location		\$	User Messaging Ser	jdbc:oracle:thin:@//blrdv01.	1521/ISCPD8	1
Ι			1	SOA (XA)	jdbc:oracle:thin:@//blrdv01.	1521/ISCPD8	1
Ĭ.	Administrator Account		1	SOA (Local)	jdbc:oracle:thin:@//blrdv01.	:1521/ISCPD8	1
Ϋ́	Domain Mode and JDK		1	OWSM MDS Schema	jdbc:oracle:thin:@//blrdv01.	:1521/ISCPD8	1
ψ.	Database Configuration Type		1	OPSS Audit Schema	jdbc:oracle:thin:@//blrdv01.	:1521/ISCPD8	1
ŝ.	Component Datasources		1	OPSS Audit Viewer 5	jdbc:oracle:thin:@//blrdv01.	:1521/ISCPD8	1
7	JDBC Test		1	OPSS Schema	jdbc:oracle:thin:@//blrdv01.	::1521/ISCPD8	1
Ĭ.	Advanced Configuration		1	OSB JMS Reporting F	jdbc:oracle:thin:@//blrdv01.	:1521/ISCPD8	
¥	Configuration Summary		<u>r</u> est Sel	ected Connections	<u>C</u> ancel Testing		
ų.	Configuration Progress	Cor	nnectio	n Result Log			
-	End Of Configuration	Drive URL: User Pass SQL	er=ora =jdbc:o =RSBD word=' Test=S	Schema=LocalSvCTb cle jdbc.OracleDriver racle:thin:@//block ELECT 1 FROM DUAL 213: Test Successful 213: JDBC connection	1521/ISCPD8		
_	Help				< Back	Next > Einish	Cancel

10. Select the options for creating AdminServer, Node Manager, Managed Servers and Cluster. Click **Next**.



11. Enter Admin Server details, Listen address will be IP address and enter valid Listen port. If you are using SSL, you can enable SSL in this step and specify the SSL port.

Administration Server						_	
Create Domain Create Domain Templates Application Location Administrator Account Domain Mode and JDK Database Configuration Type Configuration Datasources UBECTest Advarded Configuration Administration Server Node Mariager Hanaged Sitivers Chotens Configuration Stammary Configuration Progress	Server Name Listen Address Listen Port Enable SSL SSL Listen Port Server Croups	65001			FUSION MIDDLEW/	NRE	,
bnd Of Configuration	Port number mu:	st be betw	een 1 and 65535, an	d different from	SSL listen port and o	Einish	Cancel

12. Enter Node Manager details like select Per Domain Default Location and provide Node Manager Credentials same as weblogic credentials. Click **Next**.

Node Manager					
Node Manager Create Domain Templates Application Location Administrator Account Domain Mode and JDK Database Configuration Type Component Datasources JDEC Test Advanced Configuration Administration Server Node Manager Managed Servers Clusters Coherence Clusters Machines Configuration Summary Configuration Summary Configuration Progress End Of Configuration	<u>M</u> anual Node Manage Node Manager Credentia Username: Password: Confirm Password:	Location : _cle_Home/user_project rr Setup 		odemanager	Browse
Help			< <u>B</u> ack Next >	Einish	Cancel

13. Enter details of all managed servers. If you are using SSL, you can enable the SSL in this step and specify the SSL port. Click Next.

Managed Servers						
<u>Create Domain</u> Templates	- 🕹 🕹	Clone 🔀 Delete			🗐 Diss	ard Changes
Application Location	Server Name	Listen Address	Listen Port	Enable SSL	SSL Listen Port	Server Croup
Administrator Account	rsb_server1	101176/249/33 -	65002		Disabled	OSB-MGD
Domain Mode and JDK	rsb_server2	101196(244)99 -	65003		Disabled	Unspecified
Database Configuration Type	rsb_http_proxy	10/10/26/244153 -	65004		Disabled	Unspecified
Managed Servers						
Clusters Coherence Clusters						
Clusters						
<u>Clusters</u> <u>Coherence Clusters</u> <u>Machines</u> <u>Configuration Summary</u>						
Clusters Coherence Clusters Machines Configuration Summary Configuration Progress						
Clusters Coherence Clusters Machines Configuration Summary						

Note: Oracle recommends to disable SSLv3 in all products. We recommend to use TLSv1.2 protocol. WebLogic server can be configured to use TLSv1.2 protocol by adding the following line in the setDomainEnv.sh. Restart the server after making the change.

JAVA_OPTIONS=" \$JAVA_OPTIONS -DwebLogic.security.SSL.minimumProtocolVersion=TLSv1.2"

14. Enter the cluster name.

Clusters			i		
T Create Domain	🛉 Add 🕽	Celete		ii) (Disgard Changes
Application Location	Cluster Name	Cluster Address	Frontend Host	Frontend HTTP Port	Frontend HTTPS
Administrator Account	rsb_cluster	birdv02.i		0	Port 0
Domain Mode and JDK Database Configuration Type					
Component Datasources					
Advanced Configuration					
Administration Server					
<u>Node Manager</u> <u>Managed Servers</u>					
Clusters					
Assign Servers to Clusters					
Coherence Clusters					
Configuration Summary					
Configuration Progress					
 End Of Configuration 					
Help	L		< <u>B</u> ack	Next > Einis	h Cancel

15. Add managed servers to the cluster. Notice that the proxy server, rsb_http_proxy, is not added to the cluster because we need that server as the HTTP proxy of the cluster.

Assign Servers to Clusters			
Create Domain	Servers	1	Clusters
Templates	🗊 rsb_http_proxy		sp_cluster
Application Location			📦 rsb_server2
Administrator Account			
Domain Mode and JDK.			
Database Configuration Type			
Component Datasources		۲	
UDBC Test			
Advanced Configuration			
Administration Server			
🤟 <u>Node Manager</u>		8	
Managed Servers			
<u>Clusters</u>			
Assign Servers to Clusters			
HTTP Proxy Applications			
Coherence Clusters			
w Machines			
Configuration Summary	Select one or more servers in the left pane and or button (>) to assign the server or servers to the		er in the right pane. Then use the right arrow
Configuration Progress		croster.	
End Of Configuration			
Help		<	Back Next > Einish Cancel

16. Enter HTTP Proxy details.

HTTP Proxy Applications			
Create Domain	. Cluster Name	Create HTTP Proxy	Proxy Server
Templates	rsb_cluster		rsb_http_proxy
Application Location			
Administrator Account			
Domain Mode and JDK			
Database Configuration Type			
Component Datasources			
UDBC Test			
Advanced Configuration			
Administration Server			
Wode Manager			
Managed Servers			
Clusters			
Assign Servers to Clusters			
HTTP Proxy Applications			
<u>Coherence Clusters</u>			
Machines			
Configuration Summary			
Configuration Progress			
C End Of Configuration			
Help	1	< <u>B</u> ack	Next > Einish Cancel

17. Do not modify coherence cluster details keep it as is and Click Next.

Coherence Clusters			
Create Domain			🗐 Discard Changes
Templates			-y bisgard changes
Application Location	Cluster Name		Unicast Listen Port
Administrator Account	defaultCoherenceCluster	0	
Domain Mode and JDK			
Database Configuration Type			
Component Datasources			
JDBC Test			
Advanced Configuration			
Administration Server			
Node Manager			
Managed Servers			
Clusters			
Assign Servers to Clusters			
HTTP Proxy Applications			
Coherence Clusters			
Machines			
Configuration Summary			
Configuration Progress			
End Of Configuration			
Help		< Back Nex	ct > Finish Cancel

18. Configure Machine details. Click **Unix Machine** and specify the Name, Node Manager hostname and port. Click **Next**.

Machines							
Create Domain	Machine Unix M	achine					
Application Location	💠 👌	🕻 <u>D</u> elete				🗳 Dis <u>c</u> are	d Changes
Administrator Account Domain Mode and JDK Database Configuration Type	Name	Enable Post Bind CID	Post Bind CID	Enable Post Bind UID	Post Bind UID	Node Manager Listen Address	Node Manager Listen Port
Component Datasources	UnixMachine_1		nobody		nobody	10:176:211:53 -	5556
y JDBC Test							
Advanced Configuration							
Administration Server							
Vode Manager							
Managed Servers							
ý <u>Clusters</u>							
<u>Assign Servers to Clusters</u>							
<u>HTTP Proxy Applications</u>							
<u>Coherence Clusters</u>							
Machines							
Assign Servers to Machines							
Configuration Summary							
Configuration Progress							
End Of Configuration	L			<	ack 1	lext > Einish	Cancel

19. Add servers to the machine. Add all the servers.

Assign Servers to Machines		
A Create Domain	Servers	Machines
Templates		🗁 Unix Machine
Application Location		AdminServer
Administrator Account		Server1
Domain Mode and JDK		sb_server2
Database Configuration Type		
<u>Component Datasources</u>	3	
UDBC Test		
Advanced Configuration		
Administration Server		
🖞 Node Manager		2
Wanaged Servers		<u>*</u>
<u>Clusters</u>		
Assign Servers to Clusters		
HTTP Proxy Applications		
<u>Coherence Clusters</u>		
w Machines		
Assign Servers to Machines	Select one or more servers in the left pane and one m button (>) to assign the server or servers to the maci	
<u>Configuration Summary</u>		
Configuration Progress		
Send Of Configuration		
Help		< <u>Back</u> <u>N</u> ext> <u>Finish</u> Cancel

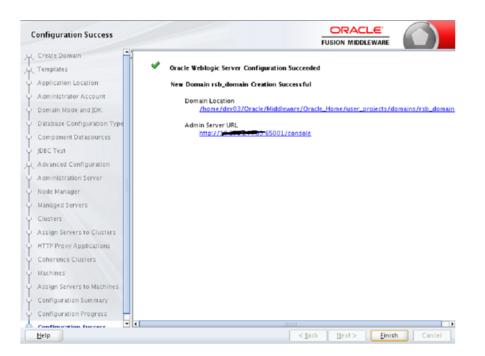
20. From the Configuration Summary page, click **Create**.

Create Domain Name Basic WebLogic Server Domain Templates Proprovide Startup Description Create a basic WebLogic Server do Author Application Location Cluster Cluster Component Datasources Name Description Domain Mode and JDK Difference Configuration Type Shutdown Class Name Description Author Component Datasources Difference Configuration Web Services Startup Class Description Author Oracle Service Bus Description Advanced Configuration Web Services Startup Class Description Location //mm//config-wiz-383-143866722 Managed Servers OOL-Startup DMS-Startup Class Description Extend an existing WebLogic Serve Author Oracle Service Bus Description Extend an existing WebLogic Serve Author Oracle Corporation Location //nome/dev03/Oracle/Middleware, Managed Servers OOL-Startup Name Oracle Corporation Location Managed Servers OSB JCA Transport Post-Activation Class Name ODSI XQuery 2004 Components Description Extend an existing WebLogic Serve Author Oracle Corp	Configuration Summary	
	Templates Application Location Administrator Account Domain Mode and JDK Database Configuration Type Component Datasources JDEC Test Advanced Configuration Administration Server Node Manager Managed Servers Clusters Assign Servers to Clusters HTTP Proxy Applications Coherence Clusters Machines Assign Servers to Machines Configuration Summary Configuration Progress	Description Create a basic WebLogic Server do Author Oracle Corporation Location /home/dev03/Oracle/Middleware Passcription Autogenerated HTTP Proxy Applics Author Oracle Corporation Location /tmp/config-wiz-383-143866722 Name Oracle Service Bus Description Extend an existing WebLogic Serve Author Oracle Corporation Location /home/dev03/Oracle/Middleware, Name WebLogic Advanced Web Services I Description Extend an existing WebLogic Serve Author Oracle Corporation Location /home/dev03/Oracle/Middleware, Name WebLogic Advanced Web Services I Description Extend an existing WebLogic Serve Author Oracle Corporation Location /home/dev03/Oracle/Middleware, Name ODSI XQuery 2004 Components Description Extend an existing WebLogic Serve Author Oracle Corporation Location /home/dev03/Oracle/Middleware, Mame ODSI XQuery 2004 Components Description Extend an existing WebLogic Serve Author Oracle Corporation Location /home/dev03/Oracle/Middleware, Mame ODSI XQuery 2004 Components Description Extend an existing WebLogic Serve Author Oracle Corporation Location /home/dev03/Oracle/Middleware, Mame Oracle Corporation Location /home/dev03/Oracle/Middl

21. Domain creation confirmation page

Configuration Progress		
Create Domain		
Templates	100%	
Application Location	Preparing	
Administrator Account	Extracting Domain Contents Creating Domain Security Information	
Domain Mode and JDK	Starting OPSS Security Configuration Data Processing	
Database Configuration Type	The OPSS Security Configuration Data Processing Completed Saving the Domain Information	
Component Datasources	Storing Domain Information String Substituting Domain Files	
JDBC Test	Performing OS Specific Tasks Performing Post Domain Creation Tasks	
Advanced Configuration	Starting OPSS Security Configuration Commit Task	
Administration Server	The OPSS Security Configuration Completed Domain Created Successfully!	
V Node Manager		
Managed Servers		
Clusters		
Assign Servers to Clusters		
HTTP Proxy Applications		
Coherence Clusters		
V Machines		
Assign Servers to Machines		
Configuration Summary		
Configuration Progress		
End Of Configuration		
Help	< <u>Back</u> <u>N</u> ext> <u>Finish</u> Can	icel

22. The following screen appears after successful domain creation. Click **Finish**.



23. Grant required permission for WebLogic to access the credential store. Edit the <wlsHome>/wlserver/server/lib/weblogic.policy file and add the following permission, after replacing <domain-home> with the correct value.

grant codeBase "file:<domain-home>/-" {

permission java.security.AllPermission;

permission oracle.security.jps.service.credstore.CredentialAccessPermission
"credstoressp.credstore", "read,write,update,delete";

permission oracle.security.jps.service.credstore.CredentialAccessPermission "credstoressp.credstore.*", "read,write,update,delete";

};

24. Edit the DOMAIN-HOME/bin/setDomainEnv.sh to add the max and min memory requirement for the servers. It is recommended to use 2GB or more for max memory.

USER_MEM_ARGS="-Xms1024m -Xmx2048m -XX:MaxPermSize=1024m"

25. If NodeManager is used to control the servers in the cluster, edit WL_ HOME/common/nodemanager/nodemanager.properties file to change the StartScriptEnabled property to true and make sure the StartScriptName property is set to startWebLogic.sh. Below is a sample from the file:

StartScriptName=startWebLogic.sh
StartScriptEnabled=true

HTTPS Configuration for WebLogic Server

If you are using https (for Policy A), you will have to configure the following:

Note: For additional information on configuring Policy A or Policy B, see the *Oracle Retail Service Backbone Security Guide*.

1. Enable https port for AdminServer, Http Proxy Server and all managed servers. Specify the Listen Address. The Listen Address must match the CN entry of the server certificate. Sometimes the CN entry of the server certificate is the fully qualified name (for example, rsbhost.example.com) instead of the short hostname (for example, rsbhost). If the entries do not match, the security configurations will not work.

Change Center	A Home Log (n Home Log Out Preferences 🔐 Record Help										
View changes and restarts	Home > Summar	y of Servers	>rsb_serve	4								
No pending changes exist. Click the Release	Settings for rsb_server1											
Configuration builton to allow others to edit the domain.	Configuration	Protocol	Logging	Debug	Hanitaring	Control	Deployments	Services	Security	Notes		
Lock & Edit	General CA	ater Ser	rices Key	tores S	R. Pederat	ion Services	Deployment	Migration	Tuning	Overload	Hea	
Release Configuration	Save											
Domain Structure												
sb_damain * © Druconment -Servers -Clusters	Use this page View 34DE Tre		general fea	ures of thi	server such	ss default n	etwork communi	atore.				
	Name:					rab_server1						
Coherence Servers Coherence Ousters	Machine:					UnixMachine						
Machines Work Managers	Cluster		rsb_duster									
Startup and Shutdown ClassesDeployments Services	👘 Listen Address:											
-feouity Realize	🗾 Listen Por	t Enabled										
How do I												
Configure default network connections	Listen Port:					19703						
Create and configure machines Configure dusters	SSL Listen	Bast Each	lad.									
 Start and stop servers 	S. SSL Listen	Port Enab	ne d									
Configure WLDP diagnostic volume	SSL Listen Po	rti			19704							
Sustem Status 🛛 🖓	III of cheet		Factor of									
Help					< [] 3	k Ne	a>	ate 🗌	C1058			

 Enable secure replication. Enable the Secure Replication Enabled option available in Environment --> Clusters --> <cluster name> --> Configuration --> Replication

Change Center	😰 Home Log Out Preferences 🔛 Record Help	Q							
View changes and restarts	Home >Summary of Clusters >nb_cluster >Summary of Clusters >	rsb_cluster							
No pending changes exist. Click the Release Configuration button to allow others to edit the domain.	Settings for rsb_cluster Configuration Monitoring Control Deployments Sir	ervices Notes							
Lock & Edit Release Configuration	General Messaging Servers Replication Mgrator	Singleton Services Scheduling Overload Health Monitoring HTTP							
Release Comparation	Save								
Domain Structure									
rsb_domain B Environment	This page is used to configure how WebLogic Server will replic	ate HTTP Session State across a cluster.							
Custers Custers	🚱 Cross-cluster Replication Type:	(None)	Optimizes cross-cluster replication for the type of n administrative communication. More Info						
Goherence Servers Coherence Clusters	₫ Remote Cluster Address:		Set the foreign duster. Cluster infrastructure uses Session WAN,MAN failover. More Info						
Machines Work Managers Startup and Shutdown Classes	🚓 Replication Channel:	ReplicationChannel	The channel name to be used for replication traffic- updates for HTTP sessions and stateful session bea used. More Info						
Services Security Realms	Data Source For Session Persistence:	(None) v	To support HTTP Session failover across data cent disk. More Info						
How do I	🗌 🚓 Persist Sessions On Shutdown		When shutting down servers, sessions are not upd session are shut down with no session updates, the						
Configure dusters Configure server migration in a duster Configure cross-cluster replication Configure HTTP settings for a duster			Person are and common a second power, or Person and the second power and active as Cluster Menon it get Database or off-or Session/Persistem be written at any other time. (For example, they a crash.) More Info						
Create 3DBC generic data sources			Servers in a cluster replicate session data. If a repl sent using the replication channel protocol and secu replication channel is defined and secured replicatio replication will be sent over SSU using the default a						
System Status E Health of Running Servers	2		replication traffic comes with a significant duster pe security is of greater concern than performance de						
Faled (0)	- D Advanced								
marled (U)	- Postalista								

Set the Frontend Hostname for the cluster. This should match the CN entry of the certificate. Environment --> Clusters --> <cluster name> --> Configuration --> HTTP

Change Center	Home Log O	Home Log Out Preferences I Record Help				Q							
View changes and restarts	Home > sitadmin >	Summary of En	vironment >	Summary of Clust	irs>nb_da	iter							
No pending changes exist. Click the Release	Settings for rsb.	duster											
Configuration button to allow others to edit the domain.	Configuration	Monitoring	Control	Deployments	Services	Notes							
Lock & Edit Release Configuration	General JTA	Messaging	Servers	Replication	Nigration	Singleton Services	Scheduling	Overload	Health Honitoring	HITP	Coherence		
Release Configuration	Save												
Domain Structure													
sb_domain B-Environment	This page allow	is you to define	the HTTP	settings for this	duster. The	se settings can be ov	erridden by expl	icitly setting	the member servers	of this du	ster.		
Deployments B ⁺⁻ Services *-Security Realms B ⁺ Interoperability B ⁺ Chagnostics	nontend Host:											The HTTP frontendHost is set when the H the presence of a firewall or proxy. If this always used. Hore Info	
	E Frontend HTTP Port:					18007						The frontend HTTP Port is set when the P the presence of a firewall or proxy. If this always used. Hore Info	
	🚓 Frontend H	ITTPS Port:				0					the	frontend HITPS Port is set when the presence of a finewall or proxy. If thi sys used. Hore Info	
	Save												

 Enable WebLogic plug-in. Check WebLogic Plug-In Enabled checkbox in Environment --> Clusters --> <cluster name> --> Configuration --> General --> Advanced. After the change, Save, Activate Changes and restart the Admin Server.

Lock & Edit		General	Messaging	Servers	Replication	Migration	Singleton Services	Scheduling	Overload	Heal
Release Configuration		Save								
main Structure										
_domain *Environment	-	This page	allows you to	define the	general setting	s for this clus	ster.			
Servers <mark>-Clusters</mark> Virtual Hosts		Name:						rsb_	duster	
Migratable Targets Coherence Servers Coherence Clusters Mork Managers Startup and Shutdown Classes		街 Defau	ﷺ Default Load Algorithm:							
Startup and Shutdown Classes Deployments Services Security Realms	•	👘 Cluste	er Address:							
w do I		@ Numb	er Of Server	c In Chuck	an Adduocci			-		
Configure clusters Assign servers to clusters Configure server migration in a cluster Configure cross-cluster replication		— ⊽ Adva						3		

Database Installation Tasks

This chapter describes how to install the necessary database.

Repository Creation Utility

Many of the Oracle Fusion Middleware components require the existence of schemas in a database prior to installation. These schemas are created and loaded in your database using the Repository Creation Utility (RCU).

See Repository Creation Utility documentation for more information:

http://docs.oracle.com/middleware/1213/core/RCUUG/toc.htm

RCU is available with the Oracle Fusion Middleware Infrastructure distribution in 12c (12.2.1.3).

The repository for Oracle Service Bus (OSB) must be created using RCU tool. The repository must contain SOA Infrastructure (SOAINFRA) schema and all schemas under AS Common Schemas label.

While creating a schema using RCU tool, user must select/mention a prefix which is added to all the schemas created by RCU. In the following example, RCU tool is used to create a repository with SOA Infrastructure schema as <prefix>_SOAINFRA, Metadata Services schema as <prefix>_MDS etc.

Steps for Creating Database Schema using RCU

1. Run rcu executable from <wlsHome>/Oracle_Home/oracle_common/bin

cd <wlsHome>/Oracle_Home/oracle_common/bin rcu

The Welcome page appears.

2. Click **Next** to continue.



3. In Repository Creation Utility window, select Create Repository option and System Load and Product Load. Click **Next**.

Repository Creation Utili	Y	
Welcome	Database Type:	Oracle Database
Database Connection Details	Host Name:	
Select Components		For RAC database, specify VIP name or one of the Node name as Host name. For SCAN enabled RAC database, specify SCAN host as Host name.
 Schema Passwords 	Pg/t:	1521
 Map Tablespaces 	Part.	1322
ý Summary	Service Name:	
Completion Summary		
	ÿsername:	sys as sysdba User with DBA or SYSDBA privileges. Example:sys
	Password:	••••
	Bole:	SYSOBA ·
		One or more components may require SYSDBA role for the operation to succeed.
	essages:	
Help		<pre>dack Bext> Enish Cancel</pre>

In Database Connection Details window, provide database details and click Next.
 Database Type: Oracle Database
 Role: SYSDBA

Select Components			
Select Components	manage the schemas later. Select existing prefix: Component	RSB RSBDEV Alpha numeric only. Car characters. / Components mas ices Append Viewer n Security Services ig Service ices ise Scheduler structure Services ture	
Help	Messages:		Back Next > Finish Cancel

5. In Select Components window, provide a prefix (Select an existing prefix from drop down or give a new one). In Component box, select all options under AS Common Schemas and SOA Infrastructure as shown.

Repository Creation Util	ity)</th
Y Welcome	 Define passwords for m Use same password 	aain and auxiliary schema users. s for all schemas	_	
Database Connection Details Select Components	Password:	Alpha numeric only.Cannot start with No special characters except: \$, # , .		
Schema Passwords Custom Variables Map Tablespaces	<u>C</u> onfirm Password: ∪Use <u>m</u> ain schema pa Specify different pas	asswords for auxiliary schemas]	
ý Summary Completion Summary				
	Messages:			
Help		<	Back Next > Ein	sh Cancel

6. In Schema Passwords window, provide password and Click **Next**. Note down the schema name and passwords. These are needed during the domain creation time for configuring the OSB schemas and RSB compilation phase as credentials for sidb-jdbc-user-alias.

	Default and temporary tab	lespaces for the selected	components appear in th	e table below
Welcome	To create new tablespaces			
Create Repository				Manage <u>T</u> ablespac
Database Connection Details				Manage Lablespac
Select Components	Component	Schema Owner	Default Tablespace	Temp Tablespace
	Metadata Services	RSBDEV_MDS	*RSBDEV_MDS	*RSBDEV_IAS_TEMP
Schema Passwords	Audit Services	RSBDEV_IAU	*RSBDEV_IAS_IAU	*RSBDEV_IAS_TEMP
Custom Variables	Audit Services Append	RSBDEV_IAU_APPEND	*RSBDEV_IAS_IAU	*RSBDEV_IAS_TEMP
	Audit Services Viewer	RSBDEV_IAU_VIEWER	*RSBDEV_IAS_IAU	*RSBDEV_IAS_TEMP
Map Tablespaces	Oracle Platform Secu	RSBDEV_OPSS	*RSBDEV_IAS_OPSS	*RSBDEV_IAS_TEMP
Summary	User Messaging Service		*RSBDEV_IAS_UMS	*RSBDEV_IAS_TEMP
	WebLogic Services	RSBDEV_WLS	*RSBDEV_WLS	*RSBDEV_IAS_TEMP
Completion Summary	Oracle Enterprise Sch	RSBDEV_ESS	*RSBDEV_ESS	*RSBDEV_IAS_TEMP
	SOA Infrastructure	RSBDEV_SOAINFRA	*RSBDEV_SOAINFRA	*RSBDEV_IAS_TEMP
	Common Infrastructu	RSBDEV_STB	*RSBDEV_STB	*RSBDEV_IAS_TEMP
	* Default tablespaces (spec	cified in the configuratio	n files) are to be created u	pon confirmation.
	Messages:			
	messages.			

7. In Map Tablespaces window, check tablespace mapping details and click Next.

Repository Creation Util	ity				
Welcome	Database details:				
Create Repository Database Connection Details Select Components Schema Passwords	Host Name: birdv01 Port: 1521 Service Name: ISCPD8 Connected As: sys Operation: System and Data I Prefix for (prefixable) Schema Own				
Custom Variables					
Map Tablespaces	Component	Schema Owner	Tablespace Type	Tablespace Name	Г
Summary	Metadata Services	RSBDEV_MDS	Default Temp	RSBDEV_MDS RSBDEV_IAS_TEMP	ł
Completion Summary	Audit Services	RSBDEV_IAU	Additional Default Temp Additional	None RSBDEV_IAS_IAU RSBDEV_IAS_TEMP None	
	Audit Services Append	RSBDEV_IAU_APPEND	Default Temp Additional	RSBDEV_IAS_IAU RSBDEV_IAS_TEMP None	
	Audit Services Viewer	RSBDEV_IAU_VIEWER	Default Temp Additional	RSBDEV_IAS_IAU RSBDEV_IAS_TEMP None	
	Oracle Platform Security Services	RSBDEV_OPSS	Default Temp Additional	RSBDEV_IAS_OPSS RSBDEV_IAS_TEMP None	ľ
	User Messaging Service	RSBDEV_UMS	Default Temp Additional	RSBDEV_IAS_UMS RSBDEV_IAS_TEMP None	
	WebLogic Services	RSBDEV_WLS	Default	RSBDEV_WLS	k
Help	WEDLOGIC SELAICES		Back Next >	Create Cano	

8. In Summary window, check database details and click Create.

Create Repository				
A PLEASE LICEARDINGLY	Host Name:			
· · · · · · · · · · · · · · · · · · ·	Port: 1521			
Database Connection Details	Service Name:			
Select Components	Connected As: sys Operation: System	and Data Load co	and a mention	
Schema Passwords	RCU Logfile: /home/	dev03/Oracle/id	gdir 2015-08-03_14-	
Custom Variables		dev03/Oracle/Io tes 47 seconds	gdir.2015-08-03_14-4	15
Map Tablespaces	ViewLog: rcu.log	2		
Summary	Prefix for (prefixable) Schema Owner	s:RSBDEV		
Completion Summary	-	Status	Time	Logfile(Click to view
•	Component			
	Component Metadata Services	Success	00:13.808(sec)	m ds.log
		Success Success	00:13.808(sec) 00:19.732(sec)	m ds.log iau.log
	Metadata Services			
	Metadata Services Audit Services	Success	00:19.732(sec)	iau.log
	Metadata Services Audit Services Audit Services Append	Success Success	00:19.732(sec) 00:09.213(sec)	iau.log iau_append.log
	Metadata Services Audit Services Audit Services Append Audit Services Viewer	Success Success Success	00.19.732(sec) 00.09.213(sec) 00.09.215(sec)	iau_append.log iau_xiewer.log
	Metadata Services Audit Services Audit Services Append Audit Services Viewer Oracle Platform Security Services	Success Success Success Success	00:19.732(sec) 00:09.213(sec) 00:09.215(sec) 00:09.215(sec) 00:34.172(sec)	iau.log iau_append.log iau_viewer.log opss.log
	Metadata Services Audit Services Audit Services Apend Audit Services Viewer Oracie Patform Security Services User Messaging Service	Success Success Success Success Success Success	00:19.732(sec) 00:09.213(sec) 00:09.215(sec) 00:34.172(sec) 00:13.140(sec)	iau.log iau_append.log iau_viewer.log opss.log ucsums.log
	Metadata Services Audit Services Audit Services Append Audit Services Viewer Oracle Platform Security Services User Messaging Service WebLogis Cervices	Success Success Success Success Success Success Success	00.19.732(sec) 00.09.213(sec) 00.09.215(sec) 00.34.172(sec) 00.13.140(sec) 00.11.916(sec)	iau.log iau_append.log iau_viewer.log opss.log ucsums.log wis.log

9. In Completion Summary window, click Close.

RSB Installation

This chapter provides instructions for installing RSB. The complete installation of RSB can be broadly divided into four phases:

- Download
- Configuration
- Compilation
- Deployment

Note: If there is an existing WebLogic installation on the server, you must upgrade to WebLogic 12.2.1.3. All middleware components associated with WebLogic server should be upgraded to 12.2.1.3.

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

- Overview of RIC modes and installation of RIC in RSB only mode and DUAL mode.
 - RIC modes
 - Installation of RIC in different modes

Steps to Install RSB

The following sections describe the process of installing the RSB product.

Download

In this phase, you have to download all the necessary archive files.

1. Download RsbKernel15.0.3ForAll15.x.xApps_eng_ga.zip to a directory in Linux/Unix. The rsb-home will be created inside this directory. Extract the archive file.

unzip RsbKernel15.0.3ForAll15.x.xApps_eng_ga.zip

 Download all RsbAppServiceDecoratorPak<rsb_major_ version>For<app><app_version>_eng_ga.zip to **rsb-home/download-home/all-app-service-decorator** directory. Do not extract the files.

- 3. Download all RsbServiceIntegrationFlowPak<rsb_major_ version>For<service-name>_eng_ga.zip to rsb-home/download-home/all-functional-service-int-flow directory. Do not extract the files.
- 4. Set JAVA_HOME to a JDK 1.7.0+ 64 bit.

For example:

```
export JAVA_HOME=/usr/bin/java/1.7.05. Run rsb-home/download-home/bin/check-version-and-unpack.sh script.
```

check-version-and-unpack.sh

This will verify the versions of the kernel and downloaded decorators and extract them in respective folders.

Configuration

Note: Please run the command *uname -n* and make sure that the output matches exactly with hostname of the machine. This is important since hostname is a part of the names of many internal configuration attributes.

- **1.** Edit *rsb-home/deployment-home/conf/rsb-deployment-env-info.properties* to configure the following properties:
 - JAVA_HOME
 - rsb-deployment-env-info.service-provider-app-in-scope-for-integration
 - rsb-deployment-env-info.service-requester-app-in-scope-for-integration
 - rsb-osb-container.domain-name
 - rsb-osb-container.<domain-name>.home
 - rsb-osb-container.<domain-name>.cluster-name
 - rsb-osb-container.<domain-name>.<cluster-name>.http-url (Cluster port is the port of http proxy server)
 - rsb-osb-container.<domain-name>.admin-server-name
 - rsb-osb-container.<domain-name>.admin-server-http-url
 - rsb-osb-container.<domain-name>.admin-server-connection-url
 - rsb-osb-container.<domain-name>.<cluster-name>.managed-servers: It is a comma-separated list of managed servers in the cluster, excluding the http proxy managed server.
 - rsb-osb-container.<domain-name>.<cluster-name>.<managed-server>.managed-s erver-connection-url: Repeat this property for all the managed servers in the cluster.
 - service-infrastructure-db.jdbc-url
 - edge-app-container.<app>.connection-url: The host:port of the edge-application.

- global.app-service-end-point-url-pattern: The pattern of edge service URLs. (Note: This is different if the service is hosted on glassfish Vs WebLogic 12c)
- rib.home.path: It is an optional field, to be given only if a valid rib-home is present.

Following table lists the various properties and their example values:

Property	Value (Illustration)
JAVA_HOME	/usr/java/jdk1.7.0_51
rsb-osb-container.domain-name	rsb_domain
rsb-osb-container. <domain>.home</domain>	rsb-osb-container. <i>rsb-domain</i> .home =/u00/rsb/Oracle/Middleware/user_ projects/do mains/rsb_domain
rsb-osb-container. <domain>.cluster-name</domain>	rsb-osb-container. <i>rsb_</i> <i>domain</i> .cluster-name=rsb_cluster
rsb-osb-container. <domain>.<cluster name>.http-url</cluster </domain>	rsb-osb-container. <i>rsb_domain.rsb_</i> <i>cluster</i> .http-url=http:// <i>rsbhost</i> :7004
(Cluster port is the port of http proxy server)	
rsb-osb-container. <domain-name>.admin-s erver-name</domain-name>	rsb-osb-container.rsb_ domain.admin-server-name=AdminServer
rsb-osb-container. <domain>.admin-server- http-url</domain>	rsb-osb-container. <i>rsb_</i> <i>domain</i> .admin-server-http-url=http:// <i>rsbho</i> <i>st</i> :7001
rsb-osb-container. <domain>.admin-server- connection-url</domain>	rsb-osb-container. <i>rsb_</i> <i>domain.</i> admin-server-connection-url=t3:// <i>r</i> <i>sbhost</i> :7001
rsb-osb-container. <domain>.<cluster name>.managed-servers</cluster </domain>	rsb-osb-container. <i>rsb_domain.rsb_</i> <i>cluster</i> .managed-servers=rsb_server1,rsb_
(Comma separated list of managed servers in the cluster, excluding the http proxy managed server)	server2
rsb-osb-container. <domain>.<cluster name>.<managed server>.managed-server-connection-url</managed </cluster </domain>	rsb-osb-container. <i>rsb_domain.rsb_cluster.rsb_ server1</i> .managed-server-connection-url=t3: // <i>rsbhost</i> :7002
(Repeat this property for all the managed servers in the cluster)	
service-infrastructure-db.jdbc-url	jdbc:oracle:thin:@rsbhost:1521:rra1
edge-app-container. <app>.connection-url</app>	edge-app-container. <i>sim</i> .connection-url=t3:/
(the host:port of the edge application)	/rsbhost:8080
global.app-service-end-point-url-pattern	http:// <http_hostname>:<http_< td=""></http_<></http_hostname>
(The pattern of edge service URLs. Note: This is different if the service is hosted on glassfish Vs WebLogic)	PORT>/ <service_ NAME>Service/<service_name>Bean</service_name></service_
rib.home.path	rib1@ribhost:/u00/rib1/rib2/Rib1503ForAl
(optional)	l15xxApps/rib-home

Additional steps for Policy A configuration

If RSB is configured with Security Policy A, perform the following additional steps:

1. Property configuration in rsb-deployment-env-info.properties

rsb-osb-container.<domain>.<cluster>.https-url: The property provides the HTTPS URL of the http proxy managed server.

Override the <decorator>.app-service-end-point-url to use https protocol and SSL port. This can be done at global level OR app level too, but it is recommended to test single service end to end with SSL first during initial stabilization

Following table lists the various properties and their example values:

Property	Value (Illustration)
rsb-osb-container.rsb_domain.rsb_ cluster.https-url	rsb-osb-container. <i>rsb_domain.rsb_</i> <i>cluster</i> .http-url=https:// <i>rsbhost</i> :7104
<pre><decorator>.app-service-end-point-url oms-AdvancedShipmentNotification-AppS erviceDecorator.app-service-end-point-url</decorator></pre>	https://rsbhost:7102/AdvancedShipmentN otificationBean/AdvancedShipmentNotific ationService

3. Set the port in edge-app-container.<app>.connection-url property to point https port or override protocol with https in property global.app-service-end-point-url-pattern to apply pattern at global level in case all the services are secured with policyA for an app, by default its http.

The following table lists the various properties and their example values

Property	Value (Illustration)
edge-app-container. <app>.connection-url</app>	t3:// <hostname>:<httpsport></httpsport></hostname>
edge-app-container.sim.connection-url	t3s://rsbhost:8102
<i>global.app-service-end-point-url-pattern</i>	http:// <http_hostname>:<http_< td=""></http_<></http_hostname>
(The pattern of edge service URLs. Note:	PORT>/ <service_< td=""></service_<>
This is different if the service is hosted on	NAME>Bean/ <service_name>Service</service_name>
glassfish Vs WebLogic)	https:// <http_hostname>:<http_ PORT>/<service_ NAME>Bean/<service_name>Service</service_name></service_ </http_ </http_hostname>

4. Security Configuration: Download edge app service WSDL files.

cd rsb-home/service-assembly-home/bin download-app-service-wsdl.sh

5. Create Policy Mapping File: Create security policy mapping file.

generate-rsb-decorator-security-config.sh Additional steps for Policy B configuration

If RSB is configured with Policy B, perform the following additional steps:

1. Security Configuration: Download edge app web service WSDL files.

```
cd rsb-home/service-assembly-home/bin
download-app-service-wsdl.sh
```

2. Create Policy Mapping File: Create security policy mapping file

generate-rsb-decorator-security-config.sh

3. Setup Security Credentials: Setup security credentials for Message Protection.

setup-message-protection-security-credentials.sh

Compilation

Setup security credentials and compile:

cd rsb-home/service-assembly-home/bin
rsb-compiler.sh-setup-security-credential
During the compilation step, credentials need to be provided for the following aliases.

- sidb-jdbc-user-alias
- admin-server-user-alias

Example:

Alias Name	Value (Illustration)
sidb-jdbc-user-alias	<soainfra schema=""></soainfra>
admin-server-user-alias	<weblogic user=""></weblogic>

The -setup-security-credential option creates or updates the wallet file in *deployment-home/conf/security* folder. The wallet file contains userids and passwords in encrypted form. However it is possible to decrypt the information programmatically by anyone who has access to this file. Hence it is a good idea to lock down this folder from unauthorized users. You may use the following command to remove read access to this folder:

chmod 700 rsb-home/deployment-home/conf/security

Note: If the security credentials are already setup for the above aliases (in a previous compilation attempt), compilation can be directly carried out as follows:

cd rsb-home/service-assembly-home/bin

rsb-compiler.sh

Deployment

1. Start Admin Server, Proxy Server and Managed servers:

```
cd <domainHome>/bin
startManagedWebLogic.sh
<managed server>
<AdminServer URL>
For example:
```

startManagedWebLogic.sh "qa_test_managedServer_1" "http://rsbhost:17001"Prepare instrumentation configurations for WebLogic server.

cd rsb-home/deployment-home/bin rsb-deployer.sh -prepare-wls If RSB is configured with Policy B, perform the following steps before proceeding further. For unsecured configuration or RSB configuration with Policy A, move directly to Step 3.

a. Copy Script: Copy security scripts to RSB server

```
cd rsb-home/integration-lib/rsb-tools/scripts
scp generate-pki-certificate-keystore-for-osb.sh
<user>@<host>:/<domainHome>/config/
scp import-remote-server-public-key-certificate-into-keystore.sh
```

```
<user>@<host>:/<domainHome>/config/
scp export-server-public-key-certificate-from-keystore.sh
<user>@<host>:/<domainHome>/config/
```

b. Generate Certs and Key store: Generate private key, public key and key store for the RSB server (To be done in the RSB server).

<domainHome>/bin/setDomainEnv.sh (This command must be run in the current shell. Prefix the command with a period and a space character)

cd <domainHome>/config

generate-pki-certificate-keystore-for-osb.sh

You will be asked for a keystore password and private key password. Please note the passwords. You will have to provide the same passwords in subsequent steps.

Note: If you are getting the certificate from a CA, do not run the above command. Instead, create a keystore with the name **<hostname>-keystore.jks** where hostname is the short hostname of the server (output of *hostname -s* command) and then import the certificate and key (public key and private key) to the key store. You may use the following command to import to the keystore.

For more information on RSB Policy Configuration, refer to the *Oracle Retail Service Backbone Security Guide*.

```
java utils.ImportPrivateKey -certfile <certificate file> -keyfile <private
key file> -keyfilepass <private key password> -keystore
<hostname>-keystore.jks -storepass <keystore password> -alias
<hostname>-public-private-key-alias -keypass <private key password>
```

c. Copy app server certificate(s)

Copy edge app certificate file(s) to *<domainHome>/config* of the RSB server. The file name must be *<remote-host>-certificate.der*

Note: See RSB Security Guide for instructions to export certificate from edge app server.

d. Import app server certificate(s):

Import all the edge app server public key certificates to RSB server's keystore. If the edge apps are deployed in different servers, import all the certificates to the keystore (To be done in the RSB server):

```
cd <domainHome>/config
import-remote-server-public-key-certificate-into-keystore.sh <app>
<remote-host>
For example:
```

import-remote-server-public-key-certificate-into-keystore.sh cm <hostname>
For the keystore password, provide the password you specified in the step b.

e. Configure RSB Server: Configure the RSB server to use the key store generate in the previous steps.

```
cd rsb-home/deployment-home/bin
configure-rsb-app-server-for-security-policy-b.sh
For the keystore password and private key password, provide the passwords
you specified in the step ii.
```

- f. Restart Servers: Restart Admin and Managed Servers
- 3. Deploy all the decorators using one of the methods below:

Deploy one decorator at a time.

```
cd rsb-home/deployment-home/bin
rsb-deployer.sh -deploy-rsb-service <0SB Project jar>
For example, rsb-deployer.sh -deploy-rsb-service
igs-ASNInPublishing-AppServiceDecorator.jar
```

Deploy all the decorators of an app at a time.

```
cd rsb-home/deployment-home/bin
rsb-deployer.sh -deploy-all-rsb-service-for-app <appName>
For example, rsb-deployer.sh -deploy-all-rsb-service-for-app igs
```

Deploy all the decorators of all apps in scope at a time.

```
cd rsb-home/deployment-home/bin
rsb-deployer.sh -deploy-all-rsb-service
```

4. Deploy rib4oms injector service

```
cd rsb-home/deployment-home/bin
rsb-deployer.sh -deploy-rsb-service
RibOmsToRsbOmsRouting-ServicesIntegrationFlow.jar
```

5. If RSB policy B is configured, perform the following step else jump to Step 6:

Export Certificate: Copy the script from integration-lib. Export the certificate, so that it can be used by the service consumers. (To be done in the RSB server).

cd <wlsHome>/config

export-server-public-key-certificate-from-keystore.sh

6. Restart all the servers i.e. Admin Server, managed servers and proxy server.

Note: By default the maximum number of in-memory sessions for WebLogic web applications is unlimited. This setting can be misused by external attackers to create unlimited number of sessions by accessing the web application. In such cases it is possible that the WebLogic server run out of memory and eventually crash. So it is required to limit the number of sessions to a reasonable number (e.g., 100). The settings can be changed through the admin console of the WebLogic server. Follow the steps below to change this configuration setting:

- 1. Login to Admin Console.
- 2. Click Deployments.
- **3.** Expand the rsb-admin-<version>.ear deployment. Click on the **rsb-admin** module.
- 4. Click Configuration.
- 5. Set Maximum in-memory Sessions to 100.
- 6. Save the changes. Activate the session, if needed.

RIC Modes

The following table shows different RIC modes:

	10 0-1		
Supported Modes	Description	When to use?	Settings in the deployment file
RSB ONLY	RIC is configured to collect and display only RSB data.	If RSB is in-scope for your	"ribEnable":"false",
		integration and not RIB.	"rsbEnable":"true",
			"ddiEnable":"true",
DUAL (RIB+RSB)	RIC is configured to collect and display both RIB and RSB data.	If both RIB and RSB are in-scope for your integration.	"ribEnable":"true",
			"rsbEnable":"true",
			"ddiEnable":"true",
RIB ONLY	RIC is configured to collect	If RIB is in-scope for your	"ribEnable":"true",
	and display only RIB data.	integration and not RSB.	"rsbEnable":"false",
			"ddiEnable":"true",

Table 6–1

How to decide which mode should RIC run on?

Retailer's site specific integration topology must drive this decision. RIC can be installed in DUAL mode if you have a valid rib-home with jms-console and rsb-home on same machine. This configuration yields maximum visibility of Integration system and is our recommended mode. When only service oriented integration (RSB) is used then, one must configure RIC with RSB_ONLY mode.

DDI is enabled by default in all RIC modes, irrespective of the value of ddiEnable flag in the configuration file. The value of the properties ribEnable and rsbEnable in the ric configuration file ric-deployment-env-info.json inside ric-home/conf/ folder decides RIC mode.

Note: For more information, see the *Oracle Retail Integration Bus Implementation Guide* and the *RIC User Guide*.

Installation of RIC in different modes

After configuring RIC follow the installation steps according to the selected RIC mode.

RIB only Mode

RIC can be installed in RIB only mode to provide visibility into RIB.

Pre-requisites

- **1.** RIB must be deployed.
- 2. JMS-Console must be deployed from rib-home/tools-home/.
- **3.** rib-home must be accessible to ric-home, in other words both reside in the same file system.

RIC can be deployed in RIB_Only mode with the following steps:

- 1. Download RicKernel15.0.3ForAll15.x.xApps_eng_ga.zip to a location (for example RIC-APP-BUILDER) on the computer which has your rib-home.
- **2.** Edit the configuration file ric-deployment-env-info.json inside ric-home/conf/ folder.
- **3.** Modify the MiddlewareServerDef and IntegrationProduct with information that is specific to your environment.

- Set the value of ribEnable property in the configuration file to true.
- Set the value of ribHome property in the configuration file to point to rib-home.
- **4.** Set the value of RicAppServer fields to point to the environment where you want to deploy RIC.
- 5. Go to the ric-home/bin/ folder, run the compiler to update the RIC ear as follows:

\$ sh ric-app-compiler.sh -setup-credentials

When prompted by the compiler, enter the user name and password for weblogic server and RIC admin user, the RIC admin user will be used to log in RIC.

6. From the same folder, run the deployer script to create the user and group and deploy RIC on your weblogic server as follows:

```
$ sh ric-app-deployer.sh -deploy-ric-app
```

RSB only Mode

RIC can be installed in RSB only mode to provide RSB visibility if you have a valid rsb-home, with the following steps:

Note: RIB is already installed then we recommend configuring DUAL mode, which will provide visibility into both RIB and RSB systems.

- 1. Download RicKernel15.0.3ForAll15.x.xApps_eng_ga.zip to a location (for example RIC-APP-BUILDER) on the computer which has your rsb-home.
- **2.** Edit the configuration file ric-deployment-env-info.json inside ric-home/conf/ folder.
- **3.** Modify the DataSourceDef, MiddlewareServerDef and IntegrationProduct with information that is specific to your environment.
 - set the value of rsbEnable property in the configuration file to true.
 - set the value of rsbHome property in the configuration file to point to rsb-home.
 - set the value of RicDataSource : jdbcUrl property same as service-infrastructure-db.jdbc-url property in rsb-home/deployment-home/conf/rsb-deployment-env-info.properties.
 - set the value of RicAppServer fields to point to the environment where you
 want to deploy RIC.

Note: RicDataSource and RsbDataSource should point to the same database schema.

4. Go to the ric-home/bin/ folder, run the compiler to update the RIC ear as follows:

\$ sh ric-app-compiler.sh -setup-credentials

When prompted by the compiler, enter the user name and password for the WebLogic server, RicDataSource and RIC admin user, the RIC admin user will be used to log in RIC.

Note: If the DISPLAY environment variable is set but no XWindow is running, the RIC compiler will fail. As a workaround, run this command before running compiling:

```
unset DISPLAY
```

5. Run the deployer script to deploy RIC and create the user and group on your WebLogic server from the same folder as follows:

```
$ sh ric-app-deployer.sh -deploy-ric-app
```

DUAL Mode (RIB and RSB)

RIC can be installed in DUAL mode to provide visibility into both RIB and RSB.

Prerequisites

- RIB must be deployed.
- JMS-Console must be deployed from rib-home/tools-home/.
- RSB must be deployed.
- rib-home and rsb-home must be accessible to ric-home. rib-home and rsb-home (or copies of them) must reside in the same machine as ric-home.

RIC can be deployed in DUAL mode with the following steps:

- 1. Download RicKernel15.0.3ForAll15.x.xApps_eng_ga.zip to a location (for example RIC-APP-BUILDER) on your computer which has your rib-home and rsb-home.
- **2.** Edit the configuration file ric-deployment-env-info.json inside ric-home/conf/ folder.

Note: Although users can deploy RIC in any domain, for dual mode it is recommended to deploy RIC in the RSB domain.

- **3.** Modify the DataSourceDef, MiddlewareServerDef and IntegrationProduct with information that is specific to your environment.
 - set the value of ribEnable and rsbEnable property in the configuration file to true.
 - set the value of ribHome property in the configuration file to point to your rib-home.
 - set the value of rsbHome property in the configuration file to point to your rsb-home.
 - set the value of ddiHome property in the configuration file to point to rsb-home.
 - set the value of RicDataSource : jdbcUrl property same as service-infrastructure-db.jdbc-url property in rsb-home/deployment-home/conf/rsb-deployment-env-info.properties.
 - set the value of RicAppServer fields to point to the environment where you want to deploy RIC.

Note: RicDataSource and RsbDataSource should point to the same database schema.

4. Go to the ric-home/bin/ folder, run the compiler to update the RIC ear as follows:

\$ sh ric-app-compiler.sh -setup-credentials

When prompted by the compiler, enter the user name and password for the WebLogic server, RicDataSource and RIC admin user, the RIC admin user will be used to log in RIC.

Note: If the DISPLAY environment variable is set but no XWindow is running, the RIC compiler will fail. As a workaround, run this command before running compiling:

unset DISPLAY

5. Run the deployer script to deploy RIC and create the user and group on your WebLogic server from the same folder as follows:

\$ sh ric-app-deployer.sh -deploy-ric-app

7 Install JSIT

JSIT is a tool that can help to mock the behavior of retail applications. JSIT can be used to validate the installation of RSB, in the absence of edge applications. This is an optional step, only needed when one or more real oracle retail edge application is not ready at the time of RSB installation. Later, when the applications are ready, modify the service endpoints in the RSB configuration file (*rsb-deployment-env-info.properties*), recompile RSB and redeploy RSB decorators.

Download and Prepare SIT

- 1. Download and save javaee-service-interface-tester-<version>.ear in an install stage folder, which will be referred to here as SIT_JAVAEE_APP_HOME.
- 2. Download and save RSE generated JavaEE ejb-jar (<app>-service-ejb.jar) in SIT_ JAVAEE_APP_HOME. <app> is the application name that hosts the application service. e.g., rms-service-ejb.jar. The <app>-service-ejb.jar can be found inside the RsbServiceIntegration Paks, for example:

RsbServiceIntegrationPak15.0.3For<app>15.0.3_eng_ ga.zip<<app>-app-service-contract\service-provider\generated-output\deployablecomponent\<app>_JavaEEServiceProvider.zip<<app>-service-ejb.jar Merge the two components:

```
jar -uvf javaee-service-interface-tester-<version>.ear <app>-service-ejb.jar
```

Note: Multiple applications can be hosted on JSIT.

For example:

jar uvf javaee-service-interface-tester-<version>.ear rms-service-ejb.jar ooc-service-ejb.jar oms-service-ejb.jar

Deploy javaee-service-interface-tester-<version>.ear to Glassfish

1. Open Glassfish (JavaEE 6) Application Service console.

For example:

```
http://localhost:4848/"http://localhost:4848
```

```
2. Deploy javaee-service-interface-tester-<version>.ear.
```

Your web browser --> Glassfish AdminConsole --> Application --> Deploy --> Browse to javaee-service-interface-tester-<version>.ear

3. Click **Deploy**.

Deploy SIT to WebLogic 12c

- **1.** Open WebLogic 12c Console.
 - a. Deploy javaee-service-interface-tester-<version>.ear.

Your Web Browser --> WebLogic AdminConsole --> Deployments --> Deploy --> Browse to javaee-service-interface-tester-<version>.ear

b. Click **Deploy**.

Note: Please do not change the default application name. It should be kept as *javaee-service-interface-tester-<version>.ear*.

If run into any DERB jar error, add derby.jar into weblogic startup classpath. To do this edit the commEnv.sh script in WLS and add the derby.jar to DERBY_CLIENT_CLASSPATH variable.

For example, DERBY_CLIENT_CLASSPATH="\${DERBY_HOME}/lib/derby.jar:\${DERBY_HOME}/lib/derbyclient.jar"

- **c.** Create a new user for JSIT:
 - click on Security Realms
 - click on myrealm
 - click on Users and Groups
 - create a new group called "sitadmin"
 - create a new user. Add this new user to the sitadmin group.

Verify JSIT

JSIT Installation can be verified by browsing the URL http://<hostname>:<port>/javaee-service-interface-tester-web. You should be able to see the following screens if the installation is successful.

me, situse

ORACLE Service Interface Tester

Home Show All RequestResponseStageData Items Search RequestResponseStageData Items
About Service Interface Tester [SIT] toot: Service Interface Tester(ST) tood provides an easy way to test Web Services generated through Retail SOA Enabler(RSE) tool even before the real business implementation behind the Web Services are hooked into them. The ST for that new version on the real hortchoology(JaduetE or FLSQL) that RSE generates/supports.
How to use Service Interface Tester (SIT) tool:
1. Point your service requestire code to the ST endoprint unf. 2. Call the service strongware class. 3. Through STLAI field and edit the response data 4. Reinvolke your service to get new response.
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Displaying 1.10 of 19 records						
RequestXml	ResponseXml	RequestXmiHash	Status	OperationName	ServiceName	
<pre>cashiticalicectobes substancestory/ive.casis.com/retail/integra onbase/or/tailioectobes/v?w substancest?ws/vo/railioectobes/v?w substancest?ws/vo/railioectobe/v/s> com/sas/vo/railioectobe/v/s> casis customs_case_nos/railioectobe/vo/sasis/ ActoVIIIogBourdeec/nailioutoms_case_nos ActoVIIIogBourdeec/nailioutoms_case_nos actis tailial_case.ps/railiogtovIII00000000 DpdeOOdevrashpeec/nailioutoms_topbe/ actionaling.ps/railioutoms_topbe/ Activity.ps/railioutoms/case.ps/ actis/casis.ps/railioutoms_topbe/ actionaling.ps/railioutoms/casis.ps/ ps/casis.ps/railioutoms_topbe/ railioutoms_topbe/railioutoms_topbe/ activity.ps/railioutoms_topbe/ railioutoms_topbe</pre>	n/hase/Do/Trvointiodioucess/vi*> cms286isuccess_message>kc/ns286isuccess_message> c/ns286iDvocationduccess> X	DBADETAP TOEDEZ1105D41D6664P555EB	ACTIVE SUCCESS RESPONSE 304, (*)	orderConfirm	FullEOrderConfirmService	Edt
cadd Gardemarchiyo mian had senteriyo mian had senteriyo you creater, com/retall/integra mian had senteriyo you you you you you you you you you y	<pre>ion/base/bo/FhoneDeso/vi* reh wils:ne40+#http://www.orsole.com/retail/integrati d> on/base/bo/EmailDeso/vi* wils:ne64+#http://www.orsole.com/retail/integrati</pre>		ACTIVE, SUCCESS, RESPONSE, JMA. (*)	queryCustomer	CustomerService	El View Edit
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Post Installation Tasks

Verification using Oracle Service Bus Console

Once Deployement process is completed and decorators deployed can also be verified using weblogic test client Oracle Service Bus (OSB) console.

Open the link: http://hostname:port/sbconsole, where hostname and port are of weblogic Admin Server. All decorators are visible on Resources tab of Oracle Service Bus (OSB) Console.

		Create Disca	d.
	All Projects $_{\times}$	8.9	2
ources Admin	All Projects Definition		
All Projects	📩 View 🕶 💥 🛃 🛃 Detach		
Cm-Customer-AppServiceDecorator	0	All Types	
o default	Name	Type Actions	
in-brilBackForwardUrl-AppServiceDecorator in-GIAccountValidation-AppServiceDecorator	Cm-Customer-AppServiceDecorator	Project	
Igs-ASNInPublishing-AppServiceDecorator	s Gefaut	Project	
Igs-ASNOutPublishing-AppServiceDecorator	5 fn-DriBackForwardUrl-AppServiceDecorator	Project	
Igs-CurRatePublishing-AppServiceDecorator	5 fm-GIAccountValidation-AppServiceDecorator	Project	
gs-FitTermPublishing-AppServiceDecorator igs-FutFlOrdPublishing-AppServiceDecorator	g gs-ASNInPublishing-AppServiceDecorator	Project	
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gs-BrvReqPublishing-AppServiceDecorator gs-BrvReqPublishing-AppServiceDecorator	ige for Fit TermPublishing-AppServiceDecorator	Project	
ig igs-kay removaling-hopserviceDecorator			
Igs-RTVPublishing-AppServiceDecorator	ps-FufflOrdPublishing-AppServiceDecorator	Project	
Igs-VendorPublishing-AppServiceDecorator	gs-GLCOAPublishing-AppServiceDecorator	Project	
[igs-XAllocPublishing-AppServiceDecorator [igs-XCostChgPublishing-AppServiceDecorator	igs-InvAdjustPublishing-AppServiceDecorator	Project	
 igs-XctscorgPublishing-AppServiceDecorator igs-XttemLocPublishing-AppServiceDecorator 	igs-InvReqPublishing-AppServiceDecorator	Project	
igs-XItemPublishing-AppServiceDecorator	gs-PayTermPublishing-AppServiceDecorator	Project	
Igs-X0rderPublishing-AppServiceDecorator	igs-ReceivingPublishing-AppSenriceDecorator	Project	
gr-XStorePublishing-AppServiceDecorator isr-XTsfPublishing-AppServiceDecorator	igs-RTVPublishing-AppServiceDecorator	Project	
G gs-XTstPublishing-AppServiceDecorator G mms-ShipmentManifest-AppServiceDecorator	igs-VendorPublishing-ApgSen/ceDecorator	Project	
Image: State St	igi ya-XAlocPublishing-AppServiceDecorator	Project	
coms-CustomerOrder-AppServiceDecorator coms-FulfilOrderCancelConfirm-AnnServiceDecorator		Property	

Verification using Retail Integration Console

Once the deployment process is completed and all the servers are restarted, verify the success by accessing the Retail Integration Console (RIC)

Open the link: *http://hostname:port/rsb-admin*, where hostname and port are specific to the RIC deployment server.

Check if all the tabs are opening without error.

Common Issues

-bash: sqlplus command not found

Solution: sqlplus command should be run on machine where Oracle database is installed.

Set Oracle Database Home directory path in a variable say ORACLE_HOME and export ORACLE_HOME/bin in the classpath. To add entries into path perform the following steps:

```
ORACLE_HOME= /u00/oracle/app/oracle/product/12.1/dbhome_1
```

export ORACLE_HOME

PATH=\$PATH:\$ORACLE_HOME/bin

export PATH

Decorators not getting deployed in unsecured environment.

Solution: OWSM is required even in non-secure deployment. Make sure that OWSM is configured for WebLogic domain where decorators are being deployed. User must make sure that Oracle Service Bus OWSM Extension is selected while WebLogic domain is created/extended.

 Admin app was showing the error "Could not initialize class au.awt.GraphicsEnvironment" or web browser stuck in refresh loop after logging in.

Solution: Issue can be resolved by setting the variable *java.awt.headless* to true.

(-Djava.awt.headless=true)

Appendix: RSB Installation Checklist

Notations

- wlsHome The home directory of WebLogic. e.g., /u00/rsb/Oracle/Middleware/Oracle_Home
- domainHome The home directory of the domain. e.g., /u00/rsb/Oracle/Middleware/Oracle_Home/user_projects/domains/rsb_ domain
- app the application acronym. e.g., sim, rms
- HIGHLIGHTED STEPS ARE ADDITIONAL STEPS REQUIRED FOR SECURITY. INSTALLATION WILL WORK WITHOUT ENABLING THE SECURITY
- [PolicyA] These instructions are specific to security policy A configuration
- [PolicyB] These instructions are specific to security policy B configuration

Prerequisites

Task	Notes	Command	Example
[PolicyA][PolicyB]	RSB supports	Refer to the	
ecurity Prerequisite: ecure Edge App ervices	security. However, primary lifecycle steps work with/without enabling security	document <i>RSB</i> <i>Security Guide</i> for securing app services	
Download and ge all third-party tware			
Install JDK	Version 1.7		
Install WebLogic	Version 12.2.1.3		
Install Oracle DB rver	12c		
Install OSB on bLogic	Version 12.2.1.3		
Install RCU	Version 12.2.1.3		
	The repository for OSB must be created with this tool		

8. Create DB schema for OSB	Use Repository Creation Utility (RCU)	<wlshome>/oracle_ common/bin/rcu</wlshome>	Create schema name: RSB_SOAINFRA -Under SOA Infrastructure in RCU
			[PolicyA][PolicyB]Cr eate schema name: RSB_MDS - Under Metadata Services in RCU
			(OWSM domain requires MDS schema)
9. Configure OSB	Choose OSB (Oracle	cđ	rsb_domain
domain [PolicyA][Policy B] Create OWSM domain	Service Bus - 12.2.1.3.0). This will select all other required templates	<wlshome>/wlserver /common/bin config.sh</wlshome>	(See <i>RSB Deployment</i> <i>Architecture.doc</i> in References for detailed instructions)
Create a cluster	ADF (Oracle JRF - 12.2.1.3.0) Create AdminServer Create 1 managed server for Http Proxy		rsb_cluster
			AdminServer
			rsb_server1
			rsb_server2
	Create 2 managed servers		[PolicyA] Note: Enable SSL for all the managed servers during creation. This can be done post creation too using WebLogic Console.
			Environment> Servers> Click on <m.server>> Check "SSL Listen Port Enabled"> Specify the port number> Save> Activate Session</m.server>
10. Install RIB (optional)	A valid RIB home is required for the deployment of RSB, if RIB is enabled.		

Recommended Port Numbers for WebLogic Servers

Each WLS Domain has a unique number in the thousands place value. It starts from 7, increments of 1	SSL or non SSL is designated by the hundredth place value	Admin Server - Tenth and Unit place value is always 01	Managed Server - covers unit and tenth place value, starting from 2 increment of 1	Example
7XXX - first domain in a machine, 8XXX - second domain in a machine, 9XXX, 10XXX, 11XXX	X0XX for non-SSL X1XX for SSL	X001 - for non SSL	X0X2, X0X3, X0X4,X0X9,X010, X011 - for non SSL	7001 7101

X101 - for SSL	X1X2, X1X3, X1X4,X1X9,X110, X111 - for SSL

Prepare WebLogic Server for RSB deployment

Task	Notes	Command	Example
1. Grant WebLogic permission to access credential wallet	Edit <i>weblogic.policy</i> and add the permission to access credential wallet.	cd <wlshome>/wlserver /server/lib vi weblogic.policy</wlshome>	grant codeBase "file:/u00/rsb/Oracl e/Middleware/user_ projects/domains/rs b_domain/-" {
			permission java.security.AllPerm ission;
			permission oracle.security.jps.ser vice.credstore.Creden tialAccessPermission "credstoressp.credsto re", "read,write,update,de lete";
			permission oracle.security.jps.ser vice.credstore.Creder tialAccessPermission "credstoressp.credsto re.*", "read,write,update,de lete";
			};
2. JVM heap size (Optional)	Set maximum and minimum heap size	cd <domainhome>/bin vi setDomainEnv.sh</domainhome>	USER_MEM_ ARGS="-Xms1024m -Xmx2048m -XX:MaxPermSize=10 24m"

Download

Task	Notes	Command/Example
1. Download RSB Kernel	Download <i>RsbKernel15.0.3ForAll</i> <i>15.x.xApps_eng_ga.zip</i> to a directory in Linux/Unix. The rsb-home will be created inside this directory. Extract the archive file.	

2. Download Decorators	Download all <i>RsbAppServiceDecorat</i> <i>orPak<rsb_major_< i=""> <i>version>For<app< i=""> <i>><app_version>_eng_</app_version></i> <i>ga.zip</i> to rsb-home/download- home/all-app-service -decorator/directory. Do not extract the files.</app<></i></rsb_major_<></i>	
3. Download Service Flows	Download all RsbServiceIntegrationF lowPak< rsb_major_ version >For <service-name>_ eng_ga.zip to rsb-home/download-ho me/all-functional-servic e-int-flow directory. Do not extract the files.</service-name>	
4. Set JAVA_HOME	Set JAVA_HOME to a JDK 1.7.0+ 64 bit with latest security updates.	export JAVA_ HOME=/usr/bin/java /1.7.0_75
5. Check version and unpack	Run the check version and unpack script	cd rsb-home/download- home/bin check-version-and- unpack.sh
6. Create tablespaces with names 'RETAIL_ DATA' and 'RETAIL_ INDEX'	The rsb-deployer.sh script expects permanent Tablespace with correct names created as a prerequisite and will use these Tablespaces to create RSB_SOAINFRA database objects.	

Configure

Edit *rsb-home/deployment-home/conf/rsb-deployment-env-info.properties* to configure following properties:

Property	Example Value
JAVA_HOME	/usr/java/jdk1.7.0_ 75
rsb-osb-container.do main-name	rsb_domain
rsb-osb-container. <do main>.home</do 	rsb-osb-container. <i>rsb-domain</i> .home =/u00/rib1/Oracle/ Middleware/user_ projects/do mains/rsb_domain

rsb-osb-container. <do main>.cluster-name</do 	rsb-osb-container. <i>rsb_</i> <i>domain</i> .cluster-name= rsb_cluster
rsb-osb-container. <do main>.<cluster name>.http-url</cluster </do 	rsb-osb-container. <i>rsb_</i> <i>domain.rsb_</i> <i>cluster</i> .http-url=http: //rzbkact/2004
(Cluster port is the port of http proxy server)	//rsbhost:7004
[PolicyA] rsb-osb-container.rsb _domain.rsb_ cluster.https-url	rsb-osb-container. <i>rsb_ domain.rsb_</i> <i>cluster</i> .http-url=https: // <i>rsbhost</i> :7104
(Provide the HTTPS URL of the http proxy managed server)	
rsb-osb-container. <do main>.admin-server- http-url</do 	rsb-osb-container. <i>rsb_ domain</i> .admin-server- http-url=http:// <i>rsbho</i> <i>st</i> :7001
rsb-osb-container. <do main>.admin-server- connection-url</do 	rsb-osb-container. <i>rsb_ domain</i> .admin-server- connection-url=t3:// <i>rsbhost</i> :7001
rsb-osb-container. <do main>.<cluster name>.managed-serv ers</cluster </do 	rsb-osb-container. <i>rsb_</i> <i>domain.rsb_</i> <i>cluster</i> .managed-serv ers=rsb_server1,rsb_
(Comma separated list of managed servers in the cluster, excluding the http proxy managed server)	server2
rsb-osb-container. <do main>.<cluster name>.<managed server>.managed-ser ver-connection-url</managed </cluster </do 	rsb-osb-container. <i>rsb_</i> <i>domain.rsb_</i> <i>cluster.rsb_</i> <i>server1</i> .managed-serv er-connection-url=t3:
(Repeat this property for all the managed servers in the cluster)	//rsbhost:7002
service-infrastructure -db.jdbc-url	jdbc:oracle:thin:@dbh ost:1521:rra1
edge-app-container.< app>.connection-url (the host:port of the edge application)	edge-app-container. <i>si</i> <i>m</i> .connection-url=t3: // <i>edgeapphost</i> :8080

global.app-service-en d-point-url-pattern (The pattern of edge service URLs. Note: This is different if the service is hosted on	http:// <http_ HOSTNAME>:<htt P_ PORT>/<service_ NAME>Service/<se RVICE_NAME>Bean</se </service_ </htt </http_
glassfish Vs WebLogic)	
rib.home.path (optional)	rib1@ <i>ribhost</i> :/u00/rib 1/rib2/Rib1503ForAl l15xxApps/rib-home

Compile

Task	Notes	Command	
1. [Policy A] [PolicyB]	Download edge app service WSDLs	cd rsb-home/service-a	
Security Configuration		ssembly-home/bin/ download-app-servi ce-wsdl.sh	
2. [PolicyA]	Create security policy	generate-rsb-decor	
[PolicyB]	mapping file	ator-security-conf	
Create Policy Mapping file		ig.sh	
3. [PolicyB]	Setup security	setup-message-prot	
Setup Credentials	credentials for Message Protection	ection-security-cr edentials.sh	
4. Setup credentials and compile	Setup the user IDs and passwords in the wallet file	cd rsb-home/service-a ssembly-home/bin/	
	 admin-server-user-al ias 	-setup-security-cr	
	 sidb-jdbc-user-alias 	edential	
5. Compile	Compile the	cđ	
Note: If step 4 is executed, skip this step.	configurations	rsb-home/service-a ssembly-home/bin/ rsb-compiler.sh	

Deploy

Task	Notes	Command
1. Start the servers	Start Admin Server, Proxy Server, Managed Servers	cd <domainhome>/bin startWeblogic.sh startManagedWebLog ic.sh <managed server></managed </domainhome>
2. Prepare WLS	Prepare instrumentation configurations for WebLogic server	cd rsb-home/deploymen t-home/bin rsb-deployer.sh -prepare-wls

3. Restart Servers	Restart all the servers (Admin + Managed servers)	
4. [PolicyB] Copy script	Copy security scripts to RSB server	cd rsb-home/integrati on-lib/rsb-tools/s cripts scp generate-pki-certi ficate-keystore-fo r-osb.sh <user>@<host>:/<do mainHome>/config/ scp import-remote-serv er-public-key-cert ificate-into-keyst ore.sh <user>@<host>:/<do mainHome>/config/ scp export-server-publ ic-key-certificate -from-keystore.sh <user>@<host>:/<do< td=""></do<></host></user></do </host></user></do </host></user>
5. [PolicyB] Generate Certs and Key store	Generate private key, public key and key store for the RSB server (To be done in the RSB server) Note : If you are using CA certificates, do not generate	<domainhome>/bin/s etDomainEnv.sh cd <domainhome>/confi g generate-pki-certi ficate-keystore-fo</domainhome></domainhome>
	certificates. Instead import the certificates to the keystore.	r-osb.sh
6. [PolicyB] Copy app server certificate(s)	Go to <wlshome>/config of the remote edge app server and export the public key certificate. Copy the certificate file to < wlsHome>/config of the RSB server. The file name must be <remote-host>-certifi cate.der</remote-host></wlshome>	Follow RSB Security Guide for instructions to export certificate

7. [PolicyB] Import app server certificate(s)	Import all the edge app server public key certificates to RSB server's key store. If the edge apps are deployed in different servers, import all the certificates to the keystore (To be done in the RSB server)	<pre>cd <domainhome>/confi g import-remote-serv er-public-key-cert ificate-into-keyst ore.sh <app> <remote-host></remote-host></app></domainhome></pre>
		e.g., import-remote-serv er-public-key-cert ificate-into-keyst ore.sh cm <hostname></hostname>
8. [PolicyB] Configure RSB Serve	Configure the RSB server to use the key store generate in the previous steps	cd rsb-home/deploymen t-home/bin configure-rsb-app- server-for-securit y-policy-b.sh
9. [PolicyB] Restart	Restart Admin and Managed Servers	
10. Deploy Decorator	Deploy all the decorators	cd rsb-home/deploymen t-home/bin rsb-deployer.sh -deploy-all-rsb-se rvice
11. Deploy Injector	Deploy rib4oms injector service	cd rsb-home/deploymen t-home/bin rsb-deployer.sh -deploy-rsb-servic e RibOmsToRsbOmsRout ing-ServicesIntegr ationFlow.jar
12. [PolicyB] Export OSB certificate	Copy the script from integration-lib	cd <wlshome>/config export-server-publ ic-key-certificate -from-keystore.sh</wlshome>
	Export the certificate, so that it can be used by the service consumers. (To be done in the RSB server)	
13. Restart	Restart all the servers (Admin + Managed servers)	

Appendix: How to Secure Application Service (including JSIT)

Depending on the security configuration chosen for each application (i.e., Policy A or Policy B) various security related configuration changes need to be made in the application side. This must be done prior to the installation of RSB. If the security on the application side is done after RSB installation, some of the steps of RSB deployment will have to redone after the security configuration change in the edge app server. The details steps on how to secure edge app services is given in the RSB Security guide.

Note: For more information, see *RSB Security Guide*.

C

Appendix: Installation Order

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

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

Enterprise Installation Order

- 1. Oracle Retail Merchandising System (RMS), Oracle Retail Trade Management (RTM)
- 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)
- 8. Oracle Retail Allocation
- 9. Oracle Retail Mobile Merchandising (ORMM)
- **10.** Oracle Retail Xstore Office
- **11.** Oracle Retail Xstore Point-of-Service, including Xstore Point-of-Service for Grocery, and including Xstore Mobile
- 12. Oracle Retail Xstore Environment
- 13. Oracle Retail EFTLink
- 14. Oracle Retail Store Inventory Management (SIM), including Mobile SIM
- 15. Oracle Retail Batch Service Architecture (BSA)
- 16. Oracle Retail Predictive Application Server (RPAS)
- 17. Oracle Retail Demand Forecasting (RDF)
- Oracle Retail Category Management Planning and Optimization/Macro Space Optimization (CMPO/MSO)
- 19. Oracle Retail Replenishment Optimization (RO)

- **20.** Oracle Retail Analytic Parameter Calculator Replenishment Optimization (APC RO)
- 21. Oracle Retail Regular Price Optimization (RPO)
- 22. Oracle Retail Merchandise Financial Planning (MFP)
- **23.** Oracle Retail Size Profile Optimization (SPO)
- 24. Oracle Retail Assortment Planning (AP)
- 25. Oracle Retail Item Planning (IP)
- 26. Oracle Retail Item Planning Configured for COE (IP COE)
- 27. Oracle Retail Advanced Inventory Planning (AIP)
- 28. Oracle Retail Integration Bus (RIB)
- **29.** Oracle Retail Services Backbone (RSB)
- 30. Oracle Retail Financial Integration (ORFI)
- 31. Oracle Retail Data Extractor for Merchandising
- 32. Oracle Retail Clearance Optimization Engine (COE)
- **33.** Oracle Retail Analytic Parameter Calculator for Regular Price Optimization (APC-RPO)
- **34.** Oracle Retail Insights, including Retail Merchandising Insights (previously Retail Merchandising Analytics) and Retail Customer Insights (previously Retail Customer Analytics)