

Oracle® Retail Service Backbone (RSB)

Release Notes

Release 14.0

E51167-01

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This document announces the release of Oracle Retail Service Backbone (RSB). Release 14.0 is the first release of RSB.

Overview

Common integration patterns used for interoperability of the applications include asynchronous messaging (fire and forget), request response and bulk data transfer. In Oracle Retail, Retail Integration Bus (RIB) is used for asynchronous messaging and ODI is used for bulk data transfer. Retail Service Backbone (RSB) is a new product that uses the request-response style of Enterprise Integration in Oracle Retail. RSB uses web services as the mechanism for the request/reply style of integration. RSB products include pre-built services and flows and the integration API end points for all of the Oracle Retail Application's web services and the Enterprise Solution web service integration points and contracts for external application to connect to as part of the Solution business processing. RSB is an uptake of Oracle Service Bus (OSB) for Retail domain.

Both RSB and RIB use Retail Business Object (RBO) for the messages. This will ensure consistency and interoperability between the integration patterns. In addition to this, there are common tools like Retail SOA Enabler (RSE), Retail Integration Console (RIC) that work with both styles of integration products.

In other words, Oracle Retail Service Backbone (RSB) is a product comprising of a set of web services, ESB and security tools that standardize the deployment and runtime of web service flows within Oracle Retail Suite of applications.

RSB can also be viewed as a set of pre-built web service integration API end points delivered by Oracle Retail.

Technical Architecture

RSB is based on SOA architectural style. It uses OSB as the infrastructure component to realize the architecture. OSB provides many useful and advanced features like service virtualization, rapid service enablement, automated service pooling, multi-dimensional scaling, centralized provisioning and enforcement of security, out of the box connectivity with Oracle applications, databases, SOA suite, BPM, BAM and so on.

RSB contains the following components:

- Tools for generation of OSB projects with pre-built instrumentation
- Tools for automating full services lifecycle management

- Tools to manage service lifecycle phases (preparation, assembly, and deployment)
- Tools for generation and automation of web service security policies
- Centralized configuration management of all Oracle Retail services
- Enforcement of standardization and verification of Retail Enterprise services
- Configuration based extensible framework to enable customization
- Pre-configured instrumentation for alerts, SLA, logging, audit, and trace automatically built in to each integration flow
- Retail Integration Console (RIC) is a monitoring, diagnosis, and analysis tool

RSB Service Builder (RSB-HOME)

RSB Home is a pre-defined directory structure and tool-set to perform central configuration management for all Oracle Retail services. It has tools to manage software lifecycle phases of RSB services. There are three lifecycle phases defined. These are:

- Preparation Phase
- Service Assembly Phase
- Service Deployment Phase

In addition to lifecycle tools, there are security tools that help to secure the services with web service security policies. Also, the RSB service builder can parse the RIB configuration and make the information available to Retail Integration Console (RIC).

RSB and RIB Interoperability

Messages can be sent from RIB to RSB and vice versa. For incoming messages to RIB, RSB decorator services for IGS can be used. For outgoing messages from RIB, any injector service implementation can be used. RSB comes with an injector service implementation of RIB to OMS (RIB4OMS). Any service that implements the injector service WSDL can subscribe to RIB topics for messages from RIB.

Functional Components

The following are functional components of RSB:

- A set of pre-packaged Application Service contracts and code
- A set of pre-packaged OSB Decorator Service contracts and code
- A set of pre-packaged integration flows
- Functional integration documentation (built into RIC)

Among Oracle Retail applications, RMS, IGS, SIM, RWMS, and RPM act as service providers. SIM, RPM, REM, POS, RMS, and RIB4OMS act as service consumers. RSB supports the Commerce Anywhere business process integrations in 14.0 by providing packaged services and contracts that the Oracle Retail Applications expect from generalized applications such as an Order Management System (OMS) and an Online Order Capture System (OOC). RSB provides packaged support for the Oracle Retail Financial Integration (ORFI) releases.

Web Services in RSB

Following are the decorator services provided in RSB. For details of these services, please refer the relevant application documentation.

RMS

- Supplier
- PayTerm
- ReportLocator
- LocationPurchaseOrder
- FulfillOrder
- CustOrdSubstitute
- InventoryDetail
- CustomerCreditCheck
- InventoryBackOrder
- PriceCosting
- InventoryAvailability

RWMS

- ShippingManifestSelection
- PendingReturns

SIM

- StoreInventory
- StoreShipmentManifest
- ActivityLock
- InventoryAdjustment
- POSTransaction
- StoreToStoreTransfer
- StockReturn
- StoreItem
- StoreItemPrice
- ItemBasket
- StoreFulfillmentOrder
- FulfillmentOrderDelivery
- FulfillmentOrderPick
- FulfillmentOrderReversePick
- InventoryAvailability

Generic Order Management System (OMS)

- CustomerOrder
- InvAvailableToPromise

- OrderReturn
- StockOrderStatus
- AdvancedShipmentNotification
- FulfillOrderConfirm
- FulfillOrderCancelConfirm
- Store Receiving

Generic Online Order Capture System (OOC)

- ShippingOptions

Generic Customer Master (CM)

- Customer

Generic Manifest System (MMS)

- ShipmentManifest

IGS

- CurRatePublishing
- FrtTermPublishing
- PayTermPublishing
- VendorPublishing
- XItemPublishing
- XItemLocPublishing
- XStorePublishing
- XAllocPublishing
- XCostChgPublishing
- XOrderPublishing
- XTsfPublishing
- ASNOutPublishing
- ASNInPublishing
- InvAdjustPublishing
- InvReqPublishing
- ReceivingPublishing
- RTVPublishing
- GLCOAPublishing
- FulfillOrder

Retail Integration Console (RIC)

RIC is an integration monitoring and analysis tool for RSB and RIB. It is based on Oracle ADF GUI framework. RIC provides full visibility to the Oracle Retail Integration System in a unified view within the business context of the Oracle Retail applications. Additionally, RIC directly integrates with the Integration Guide through contextual hyperlinks.

RIC tool is intended for business analysts, operations, and integration administrators.

RSB decorator services are enabled with instrumentation capability at the time of service generation using RSE. The instrumentation code asynchronously writes events to RSB schema during runtime. RIC presents this information in various business usable formats and charts. In addition to this, RIC uses WebLogic Diagnostic Framework (WLDF) to forward RSB logs from all managed server in the cluster to a central location.

RIC has integration summary screen which shows transaction counts, average response times, top problematic interfaces, system and business alerts, server status, and CPU and memory usage.

The integration flow page shows the RIB and RSB execution paths, diagrammatic representation of the flow, configuration details, security information, service uptime status, payload details, and so on. When the flow ID is clicked, a page in the integration guide corresponding to the clicked integration flow is displayed.

The deployment topology page shows the deployment details of RSB and RIB servers, application servers, database servers, JMS servers, and RSB decorator services.

The performance and diagnostic page shows top performing services, service configuration details, problematic interfaces, a mechanism to ping the decorator services, consolidated log files, trace and audit logs.

Historical trend page shows various trend graphs including daily, weekly, monthly, and yearly trends.

Integration guide page shows the built-in integration guide for RSB and RIB.

RSB-Home Lifecycle Tools

The following are RSB-Home lifecycle tools:

RSB Support Tools

- **Artifact Generator:** Generates Java beans, Oracle Objects and XML samples for Retail Business Objects and allows customizations and localizations.
- **Retail SOA Enabler (RSE):** Tool to generate web services, decorators and so on from service definition.
- **Java Service Interface Tester (JSIT):** Tool to mimic java service provider applications for testing and validation.
- **PL-SQL Service Interface Tester (PSIT):** Tool to mimic PL-SQL service provider applications for testing and validation.

Security Automation Scripts

- RSB supports two types of security configurations out of the box. These are called Policy A and Policy B
- Policy A is SSL over HTTP with Username Token
- Policy B is Message Protection with Username Token
- Scripts to attach identity, attach security policies and user credentials is packaged with the kernel
- The security information, such as, the type of policy for the service is visible in RIC
- RSB provides tools and documentation for securing service for design, install, and runtime
- RSB provides service provider and consumer side scripts for automating the security configuration
 - app-service-security-config
 - app-service-security-policy-config
 - app-service-security-policy-condition-config
 - import-remote-osb-server-public-key-certificate-into-keystore
 - configWss script

Integration Guide

The Integration guide is built into RIC with context hyperlinks from integration flows to the guide.

Packaging

The following files are packaged for RSB:

RSB Infrastructure

- *RsbKernel14.0.0ForAll14.x.xApps_eng_ga.zip*
- *RsbAdministrationApp14.0.0ForAll14.x.xApps_eng_ga.zip* (RIC)
- *RsbAppServiceSecuritySetupSamplesPak14.0.0ForAll14.0.0Apps.zip* (Samples for security configuration)

RIB to RSB Routing Service

RsbServiceIntegrationFlowPak14.0.0ForRibOmsToRsbOmsRouting_eng_ga.zip

Integration Guide

IntegrationGuide14.0.0ForAll14.0.0Apps.zip

RSB Decorators packs

- *RsbAppServiceDecoratorPak14.0.0ForCm14.0.0_eng_ga.zip*
- *RsbAppServiceDecoratorPak14.0.0ForFin14.0.0_eng_ga.zip*
- *RsbAppServiceDecoratorPak14.0.0ForIgs14.0.0_eng_ga.zip*
- *RsbAppServiceDecoratorPak14.0.0ForMms14.0.0_eng_ga.zip*
- *RsbAppServiceDecoratorPak14.0.0ForOms14.0.0_eng_ga.zip*
- *RsbAppServiceDecoratorPak14.0.0ForOoc14.0.0_eng_ga.zip*
- *RsbAppServiceDecoratorPak14.0.0ForRm14.0.0_eng_ga.zip*
- *RsbAppServiceDecoratorPak14.0.0ForRms14.0.0_eng_ga.zip*
- *RsbAppServiceDecoratorPak14.0.0ForRpm14.0.0_eng_ga.zip*
- *RsbAppServiceDecoratorPak14.0.0ForRwms14.0.0_eng_ga.zip*
- *RsbAppServiceDecoratorPak14.0.0ForSim14.0.0_eng_ga.zip*

Development Tools

- *RetailSOAEnabler14.0.0ForAll14.0.0Apps_eng_ga.tar*
- *ArtifactGenerator14.0.0ForAll14.x.xApps_eng_ga.tar*

Service Interface Testers (SIT)

There are two test mockup applications. One for java based Oracle Retail application and the other for PLSQL based application.

- *JavaEeSit14.0.0ForAll14.x.xApps_eng_ga.zip*
- *PlsqlSit14.0.0ForAll14.x.xApps_eng_ga.tar*

Service Integration packs

- *RsbServiceIntegrationPak14.0.0ForCm14.0.0_eng_ga.zip*
- *RsbServiceIntegrationPak14.0.0ForExternalApp14.0.0_eng_ga.zip*
- *RsbServiceIntegrationPak14.0.0ForFin14.0.0_eng_ga.zip*
- *RsbServiceIntegrationPak14.0.0ForIgs14.0.0_eng_ga.zip*
- *RsbServiceIntegrationPak14.0.0ForMms14.0.0_eng_ga.zip*
- *RsbServiceIntegrationPak14.0.0ForOms14.0.0_eng_ga.zip*
- *RsbServiceIntegrationPak14.0.0ForOoc14.0.0_eng_ga.zip*
- *RsbServiceIntegrationPak14.0.0ForPos14.0.0_eng_ga.zip*
- *RsbServiceIntegrationPak14.0.0ForReim14.0.0_eng_ga.zip*
- *RsbServiceIntegrationPak14.0.0ForRm14.0.0_eng_ga.zip*
- *RsbServiceIntegrationPak14.0.0ForRms14.0.0_eng_ga.zip*
- *RsbServiceIntegrationPak14.0.0ForRtil14.0.0_eng_ga.zip*
- *RsbServiceIntegrationPak14.0.0ForRwms14.0.0_eng_ga.zip*

- *RsbServiceIntegrationPak14.0.0ForSim14.0.0_eng_ga.zip*

Hardware and Software Requirements

See the *Oracle Retail Service Backbone (RSB) Installation Guide* for information about the following:

- Hardware and software requirements
- Oracle Retail application software compatibility

Technical Enhancements

The following technical enhancements are included in this release.

Software Operating Environment Upgrades

Note: The list below announces the addition of Oracle Retail support for the technology described. See the Installation Guide requirements section for critical information, such as whether the enhancement below replaces previous versions or is supported in addition to already existing versions.

The technology below has been upgraded:

- Oracle Linux 6 for x86-64 (Actual hardware or Oracle virtual machine)
- Red Hat Enterprise Linux 6 for x86-64 (Actual hardware or Oracle virtual machine).
- Java 1.7.0+ 64 bit for the server side (JDK)

Known Issues

There are no known issues in this release.

Related Documentation

For more information, see the following documents in the Oracle Retail Service Backbone (RSB), Release 14.0 documentation set:

- *Oracle Retail Service Backbone (RSB) Developers Guide*
- *Oracle Retail Service Backbone (RSB) Installation Guide*
- *Oracle Retail Service Backbone (RSB) Implementation Guide*
- *Oracle Retail Service Backbone (RSB) Security Guide*
- *Oracle® Retail Integration Console (RIC) Guide*

Supplemental Training on My Oracle Support

The following document is available on the My Oracle Support Web site. Access My Oracle Support at the following URL:

<https://support.oracle.com>

Transfer of Information (TOI) Material (ID 732026.1)

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