

Oracle® E-Business Suite

Integrated SOA Gateway User's Guide

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Oracle E-Business Suite Integrated SOA Gateway User's Guide, Release 12.2

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Primary Author: David Weld, Melody Yang

Contributing Author: Leslie Studdard

Contributor: Rekha Ayothi, Sudipto Chakraborty, Vardhan Kale, Rajeev Kumar, Bhaskar Ghosh, Aditya Rao, Avinash Dabholkar, Mark Fisher, Kevin Hudson, Anil Kemiseti, Ravindra Nadakuditi, Dilbaghsingh Sardar, Vijayakumar Shanmugam, Abhishek Verma, Jason Xie

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

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Preface

Intended Audience

Welcome to Release 12.2 of the *Oracle E-Business Suite Integrated SOA Gateway User's Guide*.

This guide assumes you have a working knowledge of the following:

- The principles and customary practices of your business area.
- Computer desktop application usage and terminology.
- Oracle E-Business Suite integration interfaces.
- B2B, A2A and BP integrations.

This documentation assumes familiarity with Oracle E-Business Suite. It is written for the technical consultants, implementers and system integration consultants who oversee the functional requirements of these applications and deploy the functionality to their users.

If you have never used Oracle E-Business Suite, we suggest you attend one or more of the Oracle E-Business Suite training classes available through Oracle University.

See Related Information Sources on page viii for more Oracle E-Business Suite product information.

Documentation Accessibility

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Structure

- 1 Introduction to Oracle E-Business Suite Integrated SOA Gateway
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- 4 Working with Native Integration Interfaces
- 5 Working With Composite Services - BPEL
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- Glossary

Related Information Sources

This book is included in the Oracle E-Business Suite Documentation Library, which is supplied in the Release 12.2 Media Pack. If this guide refers you to other Oracle E-Business Suite documentation, use only the latest Release 12.2 versions of those guides.

Online Documentation

All Oracle E-Business Suite documentation is available online (HTML or PDF).

- **Online Help** - Online help patches (HTML) are available on My Oracle Support.
- **PDF Documentation** - See the Oracle E-Business Suite Documentation Library for current PDF documentation for your product with each release.
- **Release Notes** - For information about changes in this release, including new features, known issues, and other details, see the release notes for the relevant product, available on My Oracle Support.
- **Oracle Electronic Technical Reference Manual** - The Oracle Electronic Technical Reference Manual (eTRM) contains database diagrams and a detailed description of database tables, forms, reports, and programs for each Oracle E-Business Suite product. This information helps you convert data from your existing applications and integrate Oracle E-Business Suite data with non-Oracle applications, and write custom reports for Oracle E-Business Suite products. The Oracle eTRM is available on My Oracle Support.

Related Guides

You should have the following related books on hand. Depending on the requirements of your particular installation, you may also need additional manuals or guides.

Oracle E-Business Suite Concepts

This book is intended for all those planning to deploy Oracle E-Business Suite Release 12.2, or contemplating significant changes to a configuration. After describing the Oracle E-Business Suite architecture and technology stack, it focuses on strategic topics, giving a broad outline of the actions needed to achieve a particular goal, plus the installation and configuration choices that may be available.

Oracle E-Business Suite Security Guide

This guide contains information on a comprehensive range of security-related topics, including access control, user management, function security, data security, and auditing. It also describes how Oracle E-Business Suite can be integrated into a single sign-on environment.

Oracle Fusion Middleware Adapter for Oracle Applications User's Guide

This guide covers the use of Adapter for Oracle Applications in developing integrations between Oracle E-Business Suite and trading partners.

This book is available in the Oracle Fusion Middleware 11g Documentation Library.

Oracle Fusion Middleware Introduction to Oracle WebLogic Server

This book provides an overview of Oracle WebLogic Server features and describes how you can use them to create enterprise-ready solutions. This book is available in the Oracle Fusion Middleware 11g Documentation Library.

Oracle E-Business Suite User's Guide

This guide explains how to navigate, enter and query data, and run concurrent requests using the user interface (UI) of Oracle E-Business Suite. This guide also includes information on setting user profiles and customizing the UI.

Oracle E-Business Suite Integrated SOA Gateway Developer's Guide

This guide describes how system integration developers can perform end-to-end service integration activities. These include orchestrating discrete Web services into meaningful end-to-end business processes using business process execution language (BPEL), and deploying BPEL processes at run time.

This guide also explains how to invoke Web services using the Service Invocation Framework. This includes defining Web service invocation metadata, invoking Web services, and testing the Web service invocation.

Oracle E-Business Suite Integrated SOA Gateway Implementation Guide

This guide explains how integration repository administrators can manage and administer the Web service activities for integration interfaces including native packaged integration interfaces, composite services (BPEL type), and custom integration interfaces. It also describes how to invoke Web services from Oracle E-Business Suite by employing the Oracle Workflow Business Event System, and how to manage Web service security, configure logs, and monitor SOAP messages.

Oracle e-Commerce Gateway User's Guide

This guide describes the functionality of Oracle e-Commerce Gateway and the necessary setup steps in order for Oracle E-Business Suite to conduct business with trading partners through Electronic Data Interchange (EDI). It also contains how to run extract programs for outbound transactions, import programs for inbound transactions, and the relevant reports.

Oracle iSetup User's Guide

This guide describes how to use Oracle iSetup to migrate data between different instances of the Oracle E-Business Suite and generate reports. It also includes configuration information, instance mapping, and seeded templates used for data migration.

Oracle Workflow User's Guide

This guide describes how users can view and respond to workflow notifications and monitor the progress of their workflow processes.

Oracle XML Gateway User's Guide

This guide describes Oracle XML Gateway functionality and each component of the Oracle XML Gateway architecture, including Message Designer, Oracle XML Gateway Setup, Execution Engine, Message Queues, and Oracle Transport Agent. It also explains how to use Collaboration History that records all business transactions and messages exchanged with trading partners.

The integrations with Oracle Workflow Business Event System, and the Business-to-Business transactions are also addressed in this guide.

Integration Repository

The Oracle Integration Repository is a compilation of information about the service endpoints exposed by the Oracle E-Business Suite of applications. It provides a complete catalog of Oracle E-Business Suite's business service interfaces. The tool lets users easily discover and deploy the appropriate business service interface for integration with any system, application, or business partner.

The Oracle Integration Repository is shipped as part of the E-Business Suite. As your instance is patched, the repository is automatically updated with content appropriate for the precise revisions of interfaces in your environment.

You can navigate to the Oracle Integration Repository through Oracle E-Business Suite Integrated SOA Gateway.

Do Not Use Database Tools to Modify Oracle E-Business Suite Data

Oracle **STRONGLY RECOMMENDS** that you never use SQL*Plus, Oracle Data Browser, database triggers, or any other tool to modify Oracle E-Business Suite data unless otherwise instructed.

Oracle provides powerful tools you can use to create, store, change, retrieve, and

maintain information in an Oracle database. But if you use Oracle tools such as SQL*Plus to modify Oracle E-Business Suite data, you risk destroying the integrity of your data and you lose the ability to audit changes to your data.

Because Oracle E-Business Suite tables are interrelated, any change you make using an Oracle E-Business Suite form can update many tables at once. But when you modify Oracle E-Business Suite data using anything other than Oracle E-Business Suite, you may change a row in one table without making corresponding changes in related tables. If your tables get out of synchronization with each other, you risk retrieving erroneous information and you risk unpredictable results throughout Oracle E-Business Suite.

When you use Oracle E-Business Suite to modify your data, Oracle E-Business Suite automatically checks that your changes are valid. Oracle E-Business Suite also keeps track of who changes information. If you enter information into database tables using database tools, you may store invalid information. You also lose the ability to track who has changed your information because SQL*Plus and other database tools do not keep a record of changes.

Introduction to Oracle E-Business Suite Integrated SOA Gateway

Oracle E-Business Suite Integrated SOA Gateway Overview

Oracle E-Business Suite Integrated SOA Gateway (ISG) is enhanced to leverage Oracle SOA Suite 11g running on Oracle WebLogic Server to provide greater capabilities and infrastructure for exposing various integration interfaces within Oracle E-Business Suite as Web services.

With service enablement feature, integration interfaces published in the Oracle Integration Repository can be transformed into Web services with the supported type SOAP and REST.

SOAP services use Oracle SOA Suite. Once the services are generated with WSDL descriptions, they are deployed to Oracle SOA Suite for service consumption.

Unlike SOAP services, REST services, without the dependency on Oracle SOA Suite, are developed with the infrastructure of Oracle E-Business Suite. REST services described in WADL URLs are directly deployed to an Oracle E-Business Suite WebLogic environment. They can be used for user-driven applications such as Oracle E-Business Suite mobile applications.

Note: All service-enabled interfaces can be generated as standard SOAP services. However, only PL/SQL APIs can be exposed as REST services in this release.

- At development phase, users with the System Integration Developer role can create custom interfaces, and annotate custom interface's definitions. Users with the Integration Repository Administrator role can validate and upload annotated custom interfaces to the Integration Repository where all the registered interfaces, regardless of custom or Oracle packaged ones, can be viewed and accessed by all users.

- At design time, users with the Integration Repository Administrator role can generate SOAP services with desired operation patterns, and deploy them to Oracle SOA Suite by attaching an appropriate security policy. For interfaces can be exposed as REST services, the administrator can select desired service operations before deploying them to Oracle E-Business Suite.
- At run time, Web service clients send request messages to invoke Oracle E-Business Suite services enabled through ISG's Service Provider. After authenticating and authorizing the users who request the services, services can be invoked.

Users with the Integration Repository Administrator role are responsible for monitoring and managing the entire service deployment life cycle.

Major Features

Oracle E-Business Suite Integrated SOA Gateway can do the following:

- Display all Oracle E-Business Suite integration interface definitions through Oracle Integration Repository
- Support custom integration interfaces from Oracle Integration Repository
- Provide service enablement capability (SOAP and REST services) for seeded and custom integration interfaces within Oracle E-Business Suite
- Use the Integration Repository user interface to perform design-time activities such as generate and deploy Oracle E-Business Suite Web services
- Support synchronous and asynchronous (callback without acknowledgement only) interaction patterns for SOAP-based Web services

Note: In this release, only PL/SQL APIs can be enabled with the support for asynchronous service pattern.

- Support synchronous interaction pattern for REST-based Web services

Note: In this release, only PL/SQL APIs can be exposed as REST services.

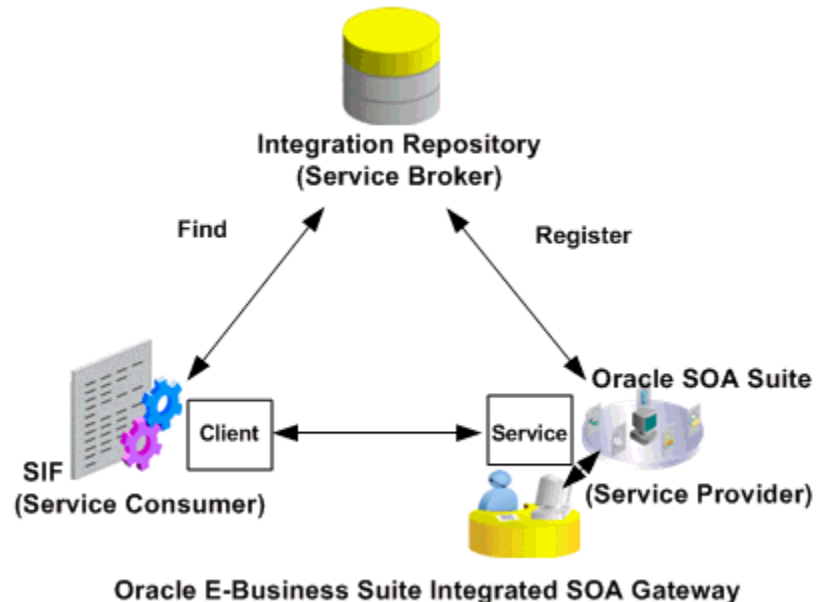
- Support multiple authentication types for inbound service requests in securing Web service content
- Enforce function security and role-based access control security to allow only authorized users to execute administrative functions

- Provide centralized, user-friendly logging configuration for Web services generated through Oracle E-Business Suite Integrated SOA Gateway's service provider
- Audit and monitor Oracle E-Business Suite inbound service operations from Service Monitor
- Leverage Oracle Workflow Business Event System to enable Web service invocation from Oracle E-Business Suite

Major Components of Oracle E-Business Suite Integrated SOA Gateway

Oracle E-Business Suite Integrated SOA Gateway has the following essential components in enabling Oracle E-Business Suite services. The relationship between these essential components can be illustrated in the following diagram:

Web Service Architecture in Oracle E-Business Suite



- **Oracle Integration Repository (Service Broker)**, an integral part of Oracle E-Business Suite, is the centralized repository that contains numerous interface endpoints exposed by applications within the Oracle E-Business Suite. It supports various interface types including PL/SQL, XML Gateway, Concurrent Program, Business Event, Open Interface Table/View, EDI, Business Service Object (Service Beans), Java, Java APIs for Forms, Security Service, and Composite - BPEL.

Oracle E-Business Suite Integrated SOA Gateway leverages Oracle Integration Repository to provide the capabilities of Web service generation and deployment, as well as service life cycle management.

Application users can browse these interface definitions and services through Oracle Integration Repository and view the interface details. Users with the Integration Repository Administrator role can perform design-time operations, monitor the Web services, and view log messages.

- **Service Provider** (previously known as SOA Provider) is the primary engine underlying the Web services. It is the engine that performs the actual service generation and deployment behind the scene.
- **Service Invocation Framework** serves as a service consumer to send a request through the invocation of a Web service from Oracle E-Business Suite. By leveraging Oracle Workflow Java Business Event System (JBES) and a seeded Java rule function, this framework provides an infrastructure that facilitates Web service invocation and consumption from Oracle E-Business Suite.

Additionally, **Service Monitor**, previously known as SOA Monitor, is the monitoring and auditing tool in Oracle E-Business Suite allowing you to view runtime messages for Web services provided through Oracle E-Business Suite Integrated SOA Gateway.

Note: Only SOAP services are monitored and audited through Service Monitor. Runtime REST service monitoring and auditing features are not supported in this release.

Oracle E-Business Suite Web Service Development Life Cycle

Application users can browse and view the integration interfaces resided in *Integration Repository*.

Integration repository administrators can perform administrative tasks to manage Web service life cycle activities, such as generating, deploying, resetting, retiring, and activating SOAP-based services. They can also create security grants for the services.

REST services have a simplified deployment life cycle. Integration repository administrators select PL/SQL interfaces that can be exposed as REST services through a single 'Deploy' action. Unlike SOAP services deployed to an Oracle SOA Suite managed server, REST services are deployed to an Oracle E-Business Suite managed server.

Understanding Service Enablement

Service Enablement Overview

Oracle E-Business Suite applications are developed through various technologies or written in different forms, such as PL/SQL, Java, Concurrent Programs, and so on. These applications or programs reside either in the Oracle E-Business Suite database or on the middle tier. Features such as Business Events System from Oracle Workflow and products such as Oracle XML Gateway for integrating Oracle E-Business Suite with trading partners are also widely used.

To accomplish the goal of integrating Oracle E-Business Suite applications with other systems, these programs written in various formats need to interact with external sources. This is achieved by service enabling or exposing these programs as Web services.

A **Web service** is a software system designed to support interoperable machine-to-machine interaction over a network. It has an interface described in a machine-processable format, such as WSDL or WADL. Other systems interact with the Web service in a manner prescribed by its description using SOAP messages for WSDL-based services or using REST messages for WADL-based services. Web services are loosely-coupled, self-describing, reusable software components encapsulating discrete functionality, which are programmatically accessible using standard based protocols.

The process of **service enablement** involves generating service artifacts, such as XSD, to validate XML messages, WSDL or WADL to describe the Web service, and deploying them on an application server so that the services are available to clients over the Web.

The WSDLs described for SOAP services can be used either to create clients which invoke the deployed SOAP services directly, or use Oracle SOA Suite BPEL component to create a composite application which coordinates the flow of data between various Web services to accomplish a business process.

The WADLs described for REST services can be used to create clients which invoke the deployed REST services for mobile applications or UI applications.

The architectural style involving collection of loosely-coupled services that communicate with each other using standard based technologies is referred as *service-oriented architecture* (SOA).

Common Terms Used in Web Services

Service-oriented architecture is a set of principles and methodologies for designing and developing software in the form of interoperable services. Web services building around SOA-based approach or technologies are reusable, scalable, and platform independent. To better understand the concept of Web services, the following common terminologies are explained in this section.

Web Services Discovery

Web services provide access to software systems over the Internet using standard protocols. Therefore, there exists at least a *service provider* that publishes certain services such as computer repair services, and a *service consumer* that uses the services. Web service discovery is the process of finding a suitable Web service for a given task.

Simple Object Access Protocol (SOAP)

SOAP is a protocol for exchanging XML-based messages over networks, normally using HTTP/HTTPS.

Web Services Description Language (WSDL)

WSDL is a format for describing a SOAP-based service interface. It is a way to describe services and how they should be bound to specific network addresses.

Representational State Transfer (REST)

REST is an architecture principle in which the Web services are viewed as resources and can be uniquely identified by their URLs. The key characteristic of a REST service is the explicit use of HTTP methods (GET, POST, PUT, and DELETE) to denote the invocation of different operations.

Please note only POST method is supported in this release.

Web Application Description Language (WADL)

WADL is designed to provide a machine-processable description of HTTP-based Web applications. It models the resources provided by a service and the relationships between them.

Web Service Interaction Pattern

Interaction pattern is the way that a Web service client can communicate with the service. Interaction pattern can be synchronous and asynchronous.

Web Service Security

Web service security (WS-Security) is a specification to enable applications to conduct secure message exchanges. It provides quality of protection through message integrity, message confidentiality, and single message authentication.

XML (Extensible Markup Language)

XML is a markup language that defines a set of rules for encoding documents in a format that is both human-readable and machine-readable.

JSON (JavaScript Object Notation)

JSON is a text-based open standard designed for human-readable data interchange. The JSON format is often used with REST services to transmit structured data between a server and Web application, serving as an alternative to XML.

HTTP Clients

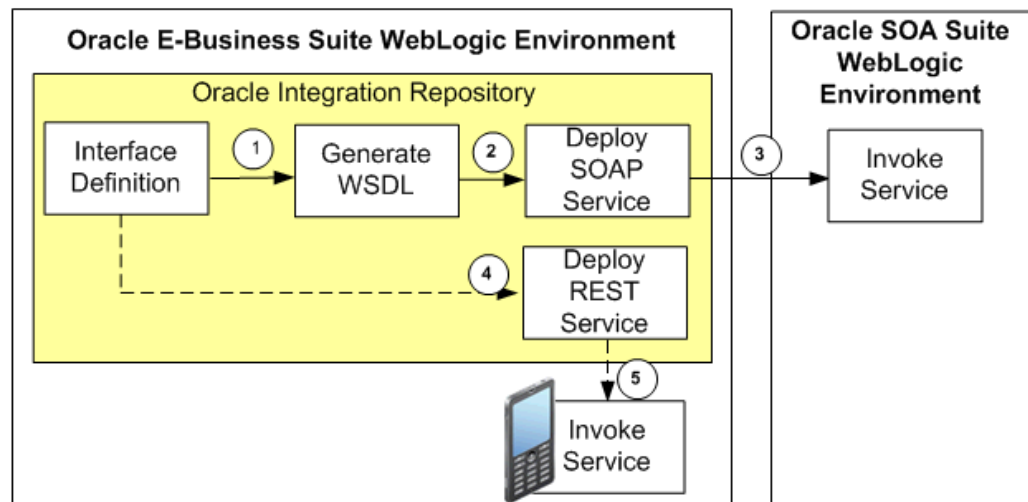
Hyper-Text Transfer Protocol (HTTP) is a significant protocol used over the Web. HTTP clients are the parties that use and consume the HTTP-based services, such as REST services, provided through HTTP protocol.

Service Enablement in Oracle E-Business Suite

Service enablement is one of the essential features in Oracle E-Business Suite Integrated SOA Gateway. It allows native packaged integration interface definitions written in PL/SQL, Java, and other formats and stored in Oracle Integration Repository to be transformed into Web services. This in turn enables all Oracle E-Business Suite services to integrate with other systems over the Web.

The following diagram illustrates the high level service enablement process flow within Oracle E-Business Suite:

Service Enablement Functional Process Flow



1. An integration repository administrator or a system integration developer transforms the integration interface definitions resided in Oracle Integration Repository into **SOAP**-based services described in WSDLs.

2. An integration repository administrator deploys the SOAP services. SOAP services are deployed to an Oracle SOA Suite WebLogic managed server.
3. At run time, Web service clients send inbound requests and invoke Oracle E-Business Suite SOAP services through Oracle SOA Suite.
4. If the selected interfaces can be exposed as **REST** services, an integration repository administrator or a system integration developer can deploy the REST services using a user action called 'Deploy'. REST services described in WADLs are deployed to an Oracle E-Business Suite managed server.
5. At runtime, REST services commonly used for mobile applications can be invoked through the HTTP method 'POST' to create or update resources in Oracle E-Business Suite.

For more service enablement on SOAP services, see SOAP Service Enablement, page 2-4.

For more service enablement on REST services, see REST Service Enablement, page 2-5.

SOAP Service Enablement

WSDL-based SOAP Services

In Web service environment, SOAP service provides a standard way of structuring XML documents and acts as a building block for Web service communication. For example, service provider receives SOAP requests from Web service clients to invoke services and also sends the corresponding SOAP responses to the clients.

At design-time, an integration repository administrator or a system integration developer can transform the interface definitions resided in Oracle Integration Repository into SOAP-based services described in WSDLs.

Support with Synchronous and Asynchronous Interaction Patterns

Before service generation, appropriate interaction patterns need to be identified for the desired service operations. Oracle E-Business Suite Integrated SOA Gateway supports both synchronous and asynchronous service processing and execution for SOAP-based services.

- **Synchronous Pattern:** This type of service execution provides an immediate response to a query. The client connection remains open from the time the request is submitted to the server. The client will wait until the server sends back the response message.
- **Asynchronous Pattern:** Unlike the synchronous service execution to obtain the result immediately, asynchronous services may require a significant amount of time to process a request. When the service request processing completes, the response will be sent back to the client that sent the request.

If synchronous (or asynchronous) is selected for the selected operation, the SOAP service operation is generated with the support for synchronous (or asynchronous) interaction pattern. If both operations are selected, then the service operation is generated with the support for both synchronous and asynchronous patterns.

For information on how to select interaction patterns, see *Generating SOAP Web Services, Oracle E-Business Suite Integrated SOA Gateway Implementation Guide*.

SOAP Service Security

To protect application data from unauthorized access, Oracle E-Business Suite integrated SOA Gateway enforces the security rules through subject authentication and authorization. Before service deployment, the administrator must select one desired authentication method.

- To authenticate users who request Oracle E-Business Suite Web services, the SOAP messages must be authenticated using UsernameToken or SAML Token based security. The identified authentication information is embedded in the `wsse:security` Web Security headers.
- To authorize users on specific services or operations, the access permissions must be explicitly given to the users through security grants. Multiple organization access control (MOAC) security rule is also implemented for authorizing interface execution related to multiple organizations.

For information on how to specify a desired authentication type, see *Deploying and Undeploying SOAP Web Services, Oracle E-Business Suite Integrated SOA Gateway Implementation Guide*.

Web Services Description Language (WSDL)

After service generation or deployment, users can view the generated or deployed WSDL link for the associated SOAP service.

Note: A deployed WSDL shows the physical location of service endpoint where the service is hosted in soa-infra in this release.

The WSDL URL can be used either to create clients which invoke the deployed SOAP services directly, or use Oracle SOA Suite BPEL component to create a composite application which coordinates the flow of data between various Web services to accomplish a business process. At run time, Web service clients send inbound requests and invoke Oracle E-Business Suite SOAP services through Oracle SOA Suite.

For information on how to generate and deploy SOAP services and other administrative tasks, see *Administering SOAP Web Services, Oracle E-Business Suite Integrated SOA Gateway Implementation Guide*.

REST Service Enablement

WADL-based REST Services

REST (Representational State Transfer) is an architecture principle in which the Web services are viewed as resources and can be uniquely identified by their URLs. The key characteristic of REST service is the explicit use of HTTP methods to denote the invocation of different operations. It is another style of Web services that serves as a simpler alternative to SOAP services allowing you to access services over the Web.

REST messages are supported with XML and JSON (non-XML data) formats in conjunction with other Web-related standards.

Important: In this release, Oracle E-Business Suite Integrated SOA Gateway supports REST services with POST method only.

Support with Synchronous Interaction Pattern Only

Unlike SOAP services, REST services are all generated with the support of synchronous request-response and request-only interaction patterns only. Asynchronous interaction pattern is not supported for REST services in this release. Therefore, there is no need to select an interaction pattern.

REST Service Security

Users who try to invoke Oracle E-Business Suite REST services must be authenticated using HTTP Basic Authentication or Token Based Authentication at HTTP transport level.

Service Deployment and Undeployment

REST services have a simplified life cycle - 'Deploy' and 'Undeploy'.

At design-time, an integration repository administrator or a system integration developer can deploy the REST services described in WADLs to an Oracle E-Business Suite managed server.

The administrator can undeploy the services if any changes need to be made to the deployed services.

Web Application Description Language (WADL)

If an interface can be exposed as a REST service, the corresponding deployed WADL description can be viewed in a separate window.

WADL is designed to provide a machine-processable description of HTTP-based Web applications. It models the resources provided by a service and the relationships between them. WADL is intended to simplify the reuse of Web services that are based on the existing HTTP architecture of the Web. It is platform and language independent and aims to promote reuse of applications beyond the basic use in a Web browser.

The WADL URL can be used to create clients which invoke the deployed REST services.

At run time, Web service clients send inbound REST requests and invoke Oracle E-Business Suite REST services.

For information on how to deploy REST services and other administrative tasks, see *Administering REST Web Services, Oracle E-Business Suite Integrated SOA Gateway*

Implementation Guide.

Navigating Through Oracle Integration Repository

This chapter covers the following topics:

- Oracle Integration Repository Overview
- Getting Started with Oracle Integration Repository
- Discovering and Reviewing Interfaces

Oracle Integration Repository Overview

Oracle E-Business Suite Integrated SOA Gateway is the intrinsic part of Oracle E-Business Suite for service enablement. It provides the capability of invoking Web services and allowing Web service clients to make use of the services provided from Oracle E-Business Suite.

To accomplish this goal, there must be a centralized location where all service related business interfaces can be stored, and at the same time all application users can browse through these business interfaces knowing what type of services are available for service consumption. Oracle Integration Repository, an integral part of Oracle E-Business Suite, is the repository to serve this purpose.

Oracle Integration Repository contains numerous interface endpoints exposed by applications throughout the entire Oracle E-Business Suite. It is not only an essential component within Oracle E-Business Suite Integrated SOA Gateway, but also provides a complete catalog of integration interfaces within Oracle E-Business Suite. You can use this tool to easily discover and search on interfaces, regardless of custom or Oracle seeded ones.

Integration Interface Types Within Oracle E-Business Suite

Oracle Integration Repository supports various integration interface types categorized as follows:

- Service-enabled interface types

- PL/SQL
- XML Gateway Map (inbound)
- Concurrent Program

Important: Service enablement for concurrent programs linked to Open Interfaces are currently not supported. This type of concurrent programs can be viewed and displayed under the Open Interface category.

- Business Service Object (formerly known as Service Beans)
- Java APIs for Forms

Note: Java APIs for Forms are XML document-based integration points wrapped in Java classes for executing business logic in Oracle Forms. These specialized Java classes are categorized as a subtype of the Java interface.

- Security Services

Note: Unlike other service-enabled interfaces, security services are a set of predefined and predeployed REST services from Oracle Application Object Library. This type of services provides security related features for mobile applications.

- Subscription model
 - Business Event
 - XML Gateway Map (outbound)
- Composite services - BPEL
- Non-service enabled public interfaces
 - Open Interface Tables
 - Open Interface Views
 - EDI Interface
 - Java (except 'Java APIs for Forms' subtype)

Detailed information on each interface type, see *Interface Types*, page 3-13.

Major Features

- A unified repository from which all integration interface types are exposed.
- Any changes in interface definitions and descriptions are automatically reflected with release.
- A powerful user interface lets you easily browse and locate the interfaces by product family, interface type, or comprehensive search feature.
- It displays each interface details including source information, methods within the interface, and Web service information if the interface can be service enabled.
- It supports composite services containing a collection of native interfaces.
- It enforces security rules to allow only authorized users to perform administrative tasks.
- It supports custom integration interfaces.

Getting Started with Oracle Integration Repository

Accessing Oracle Integration Repository

To access Oracle Integration Repository, select the **Integrated SOA Gateway** responsibility from the Navigator menu (or through custom responsibility and navigation path) and then click the **Integration Repository** link.

Oracle E-Business Suite Integrated SOA Gateway allows the following three roles to access the Integration Repository user interfaces and perform necessary tasks:

- System Integration Analyst
- System Integration Developer
- Integration Repository Administrator

Users granted different roles can perform various tasks as described in the following table:

Privileges	System Integration Analyst	System Integration Developer	Integration Repository Administrator
View Public Interfaces	Yes	Yes	Yes
View Private/Internal Interfaces	No	Yes	Yes
Generate/Regenerate SOAP Web Services	No	Yes	Yes
Deploy SOAP Web Services	No	No	Yes
Activate SOAP Web Services	No	No	Yes
Retire SOAP Web Services	No	No	Yes
Undeploy SOAP Web Services	No	No	Yes
Reset SOAP Web Services	No	No	Yes
Deploy REST Web Services	No	Yes	Yes
Undeploy REST Web Services	No	No	Yes
Subscribe to Business Events	No	No	Yes
Create Grants	No	No	Yes
View Grants	No	Yes	Yes
Download Composite Service	No	Yes	Yes
(Configurable)			

Note: Oracle E-Business Suite Integrated SOA Gateway leverages the concepts of permissions and permission sets to grant data access privileges or permissions to users through roles. For example, multiple privileges related to administrative functions can be grouped into an administrative permission set and then granted to a user through the Integration Repository Administrator role. That user becomes an integration repository administrator and has privileges to perform administrative tasks.

System integration analysts by default do not have the privilege to download composite services unless they are granted the download privilege through a permission set. For more information on how to manage security through roles, see Role-Based Access Control (RBAC) Security, *Oracle E-Business Suite Integrated SOA Gateway Implementation Guide*.

For information on SOAP and REST Web services and how to perform additional administrative tasks, see Common Information on SOAP Web Services, page 4-8 and Common Information on REST Web Services, page 4-18.

For information on how to manage security grants, see Managing Grants, page 4-30.

Accessing the Administration Link to Perform Additional Administrative Tasks:

After logging on to Oracle E-Business Suite with the Integrated SOA Gateway responsibility, integration repository administrators can find the **Administration** link in addition to the **Integration Repository** link from the Navigator menu.

This **Administration** link is specifically for the administrators to perform additional administrative tasks outside the Integration Repository user interface. Expand the **Administration** link to display:

- **Service Monitor** link: This link allows the administrators to access the Service Monitor user interface where the administrators can monitor and audit all SOAP messages passed through Oracle SOA Suite for Oracle E-Business Suite Web services.

Please note that Service Monitor was previously known as SOA Monitor. For information about how to use Service Monitor, see Monitoring SOAP Messages Using Service Monitor, *Oracle E-Business Suite Integrated SOA Gateway Implementation Guide*.

- **Configuration** link: This link allows the administrators to access the centralized Log and Audit configuration user interface where the administrators can add log configuration and service audit at the integration interface level.

For information about log configuration, see Logging for Web Services, *Oracle E-Business Suite Integrated SOA Gateway Implementation Guide*.

For detailed information on each task performed by the Integration Repository Administrator role, see *Oracle E-Business Suite Integrated SOA Gateway Implementation Guide*. For tasks related to the System Integration Developer role, see *Oracle E-Business Suite Integrated SOA Gateway Developer's Guide*.

Using Integration Repository

Integration Repository has the following major user interfaces:

- Browse Interface (by default), page 3-6
- Search Interface, page 3-8
- Interface Details Page, page 3-12

To further understand how to use Oracle Integration Repository, the following topics are included in this section:

- Included interface types, page 3-13
- Integration standards, page 3-17
- Searching for a specific interface, page 3-8

Discovering and Reviewing Interfaces

Browsing the Integration Interfaces

The Browse interface appears by default while accessing the Oracle Integration Repository. You can also access the Browse interface by clicking **Browse** on the search page or any interface information page.

You can browse directly to an appropriate list of interfaces if you know which product family and product you want to integrate with, plus one of the following:

- **Business entity**

Business entities are objects that either perform business activities or have business activities performed on them. Sales orders, employees, purchase orders, customers, and receipts are all examples of business entities. An interface can be used by multiple business entities, and a business entity can be accessed using multiple interfaces.

- **Interface type**

Business interface information in Oracle Integration Repository is organized for browsing and searching by interface type, based on the integration technology used.

For more information, see *Interface Types*, page 3-13.

- **Integration standard**

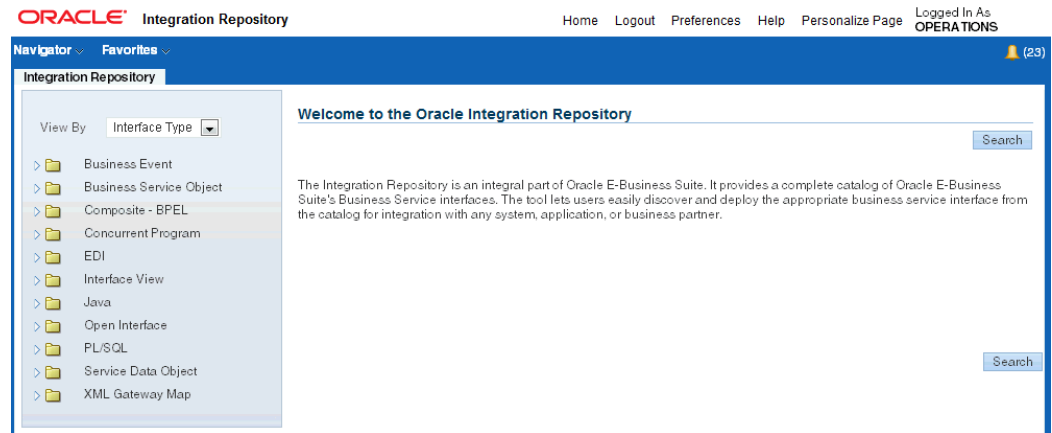
XML Gateway and Web service-based interfaces conform to various industry standards.

For more information, see *Integration Standards*, page 3-17.

Instead of browsing through the integration endpoints from the repository, you can

perform a search to locate your desired interfaces or services. See [Searching for an Integration Interface](#), page 3-8.

Oracle Integration Repository Browse Page



Oracle Integration Repository allows you to browse integration interfaces or services by selecting one of the following views from the **View By** list:

- **Product Family**
- **Interface Type**
- **Standard** (integration standard)

Expand the navigation tree in one of these views to see a list of the available interfaces. To save the list of interfaces in a CSV file, click **Export**.

To review the details of an interface, click the interface name link to access the interface details page.

Browsing by Product Family

The **Product Family** view is organized as follows: **Product Family > Product > Business Entity**.

For example, **Financials > Payables > Payables Invoice**.

After selecting a business entity (such as 'Payable Invoice'), click a desired integration interface name link from the Interface List table to view the interface details.

Please note that a business entity can include multiple interfaces of different types owned by different products. For example, the business entity 'Supplier Site' can include the following:

- Suppliers Package
- Supplier Sites Open Interface Import

Browsing by Interface Type

The **Interface Type** view is organized as follows: **Interface Type > Product Family > Product**.

For example, PL/SQL > Financials > Cash Management.

Use this view to see all of the interfaces available for a particular product that use a particular interface type.

Browsing by Standard

The **Standard** view is organized as follows: **Standard and Version > Product Family > Product**.

For example, OAG7.2 > Financials > Payables > Process Invoice.

Use this view to browse for a product's XML Gateway maps and Web services belonging to the specified standard, for example W3C or OAG 7.2.

Searching for an Integration Interface

Click **Search** in the Welcome to the Oracle Integration Repository page or any interface details page to access the main Search page.

Oracle Integration Repository Search Page

ORACLE Integration Repository Home Logout Preferences Help Personalize Page Logged In As OPERATIONS

Search Browse

Interface Name Internal Name
Product Family **Applications Technology** Interface Type **XML Gateway Map**
Product **All** Business Entity

[Hide More Search Options](#)
☒ **TIP** Select Category before a Category Value

Category **All** Web Service Status **Deployed**
Category Value Standard **All**
Interface Source **All** Standard Specification
Status **All** Scope **All**

Go **Clear All**

Export

Name ▲▼	Internal Name ▲▼	Product ▲▼	Type ▲▼	Source ▲▼	Status ▲▼	Description
Confirmation Message	ECX:CBODI	XML Gateway	XML Gateway Map	Oracle	Active	ECX_CBODI_OAG72_IN_CONFIRM map annotation public description.

You can search for interfaces with any combination of the following criteria:

Note: Before entering search criteria in the Search page, the default value 'All' is automatically displayed in the Product Family, Product,

and Interface Type fields. This allows a search to be executed appropriately if you do not make further selections from the drop-down lists.

Additionally, the same default value 'All' can be found in the Category, Status, Interface Source, Web Service Status, Standard, and Scope fields while clicking the **Show More Search Options** link.

- **Interface Name**

This is the interface name displayed in the browse tree of the Integration Repository user interface.

- **Internal Name**, page 4-5

This is the interface name used internally. It can be PL/SQL package name, the document name, or the Java service interface name.

- **Interface Type**, page 3-13

Interface definition can be categorized based on the integration technology used, such as PL/SQL or current program related interfaces, when it is displayed or browsed in the repository.

Interface types supported in Oracle Integration Repository are PL/SQL, Current Program, XML Gateway, Open Interface Tables and Views, Business Service Object, Business event, EDI Interface, Java, and Composite services - BPEL.

Note: Java APIs for Forms and Security Services are a subtype of Java interface.

- **Product Family**

An Oracle E-Business Suite application family that supplies the interface. Examples of product family can be Application Technology, Financials, and Manufacturing.

- **Product**

An Oracle E-Business Suite application or component that supplies the interface. Examples of product can be Payables, Cash Management, and Order Management.

- **Business Entity**

Business entities are objects that either perform business activities or have business activities performed on them. For example, sales orders, account numbers, employees, purchase orders, customers, and receipts are all business entities.

Click **Show More Search Options** to include any of the following additional criteria in your search:

- **Category and Category Value**

Use these two fields to qualify product-specific features or to categorize a subtype of an interface. Select one of the following available category drop-down values if needed:

- `All` (default) - This displays all integration interfaces regardless of category and category values.
- `Extensions` - This category indicates that specific methods of extending the API functionality are provided by certain products. Examples of extensions are the User Hooks provided by Human Resource Management System, and Client Extensions provided by Projects.

When `Extensions` category is selected, you can select the category value (for example, `HRMS User Hooks` provided).

- `Interface Subtype` - This category indicates that a subtype of an interface is available.

For example, 'Java APIs for Forms' and 'Security Services' are a subtype of Java interface.

When `Interface Subtype` category is selected, `Java APIs for Forms` and `Security Services` are automatically displayed as the list of values for your selection.

- **Interface Source**

Select one of the following values from the drop-down list:

- `All` (default) - All integration interfaces will be displayed from the search.
- `Oracle` - All Oracle native packaged integration interfaces and services are categorized by this interface source type.
- `Custom` - This indicates annotated custom integration interfaces that are uploaded and published in the Integration Repository.

- **Status**

Select one of the following values from the drop-down list:

- `All` (default)
- `Active`
- `Deprecated`
- `Obsolete`

- `Planned`

For more information, see *Status*, page 4-6 in the Common Information table.

- **Web Service Status**

Use the Web Service Status field to indicate different state of a Web service during the service generation and deployment life cycle. This field is relevant for the interfaces that can be service enabled.

Select one of the following values from the drop-down list:

- `All` (default) - This displays all interfaces regardless of the interface types whether they can be service enabled or not.
- `Not Generated` - This displays all service-enabled interfaces that do not have Web service generated.
- `Generated` - This displays all interfaces that have Web services generated, but have not yet been deployed.
- `Deployed` - This displays all interfaces that have Web services deployed including services with 'Deployed with Active' state and 'Deployed with Retired' state.

For more information, see *Common Information on Web Services*, page 4-8.

- **Scope**

Select one of the following values from the drop-down list:

- `All` (default) - This displays all integration interfaces regardless of public, internal, or private interfaces.
- `Public` - This displays public integration interfaces that can be used by anyone.
- `Internal To Oracle` - This displays the interfaces that are available for business integration between applications within Oracle E-Business Suite.

For example, if an interface of this type (Internal to Oracle) belongs to Application Object Library, then that interface can be used by any other applications within Oracle E-Business Suite for process integration in addition to using by the Application Object Library.

Only users with the System Integration Developer role or the Integration Repository Administrator role can access to this type of interfaces.

- `Private To Application` - This displays the interfaces that are available for business integration only within the application itself. This type of interfaces

can be used only by the applications that the interfaces belong to. For example, if an interface of this type belongs to Purchasing application, then it will not be used by any other applications within Oracle E-Business Suite but Purchasing.

Only users with the System Integration Developer role or the Integration Repository Administrator role can access to this type of interfaces.

- **Standard and Standard Specification**

For more information, see Integration Standards, page 3-17.

Viewing the Search Results

After selecting your criteria, click **Go** to launch the search. A list of the available interfaces is displayed in the search result table.

The search result table lists each interface information including interface name, internal name, product, interface type, source, status, and description. Click the interface name link from the search result to display the interface details page where you can view the details for the selected interface or service.

To have the search result displayed in your desired order, you can sort the entire set of the search result by clicking the **Up Arrow** or **Down Arrow** icon next to the field you want the result to be sorted against. Initially, the result will be sorted by Interface Name in ascending order. You can optionally change the sorting order by clicking on the **Down Arrow** icon next to the Name field to sort the result in descending order.

To save the list of interfaces to a CSV file, click **Export**. Click **Clear All** to clear all the search fields you entered and start a new search if desired.

Interface Details Page

Once an interface is selected from the browsing tree or the search result, the interface details page is displayed. It contains the following two types of information for a given interface:

- **Common information**

This includes a header region with general information, full description of the selected interface, interface source information, as well as procedures and functions or methods contained in the selected interface.

- **Web service information (optional)**

If the interface can be service enabled, the Web Service information is available in the interface details page. It contains interface or service information along with the service status indicating whether the selected interface has an associated service, or whether the service is deployed or not.

Integration repository administrators can perform administrative tasks for a selected interface in this page, such as generating and deploying a Web service, subscribing to a

business event, and creating security grants.

For more information about this interface details page, see Common Information in Interface Details, page 4-1.

Interface Types

Business interfaces are organized into *interface types* according to the integration technologies on which they're based.

Based on the natural way of how interfaces are formed or established, Oracle Integration Repository supports the following interface types:

- **Native Interfaces**

Native integration interfaces or Oracle seeded interfaces are integration endpoints shipped with the Oracle Integration Repository by default. It includes the following interface types:

- PL/SQL, page 3-14
- XML Gateway, page 3-14
- Concurrent Programs, page 3-15
- Business Events, page 3-15
- Open Interface Tables, page 3-15
- Open Interface Views, page 3-16
- EDI, page 3-16
- Business Service Object (Service Beans), page 3-16
- Java, page 3-17
 - Java APIs for Forms, page 3-17

Note: Java APIs for Forms are XML document-based integration points wrapped in Java classes for executing business logic in Oracle Forms. These specialized Java classes are categorized as a subtype of Java interface.

- Security Services, page 3-17

Note: Security Services are a set of predefined and

predeployed REST services from Oracle Application Object Library. This type of services provides Authentication and Authorization services for mobile applications. These services are built on Java; therefore, they are categorized as a subtype of Java interface.

- Composite Interfaces, page 3-17

Building upon native interfaces, a composite interface consists of a collection of native interfaces that belong to a specific product or product family available in the Integration Repository.

The supported composite interface type is Composite - BPEL.

Note: Oracle Integration Repository supports custom integration interfaces that are created and annotated based on Integration Repository annotation standards. After appropriate validation, these annotated custom source files can be uploaded and displayed along with Oracle interfaces through the Integration Repository browser tree, based on the interface types to which they belong.

To easily differentiate custom interfaces from Oracle ones, all custom integration interfaces are categorized with interface source 'Custom' while Oracle interfaces are marked with interface source 'Oracle'. For more information about custom integration interfaces and services, see *Working With Custom Integration Interfaces and Services*, page 6-1.

PL/SQL Interface

A business interface can be based on a PL/SQL package from which you invoke procedures and functions appropriate to an integration.

For more information about PL/SQL interface type in the Integration Repository, see *PL/SQL Information*, page 4-39.

XML Gateway Message Map

Oracle XML Gateway comprises a set of services that allows easy integration with Oracle E-Business Suite to support XML messaging. Oracle E-Business Suite utilizes Oracle Workflow Business Event System to support event-based XML message creation and consumption.

Oracle XML Gateway consumes events raised by Oracle E-Business Suite and subscribes to inbound events for processing. It uses the message propagation feature of Oracle Advanced Queuing to integrate with Oracle Transport Agent to deliver messages to and receive messages from business partners. XML Gateway message

maps can be used directly, or they can be exposed as Web services.

Note: The message map is a file of type .xgm and is created using the XML Gateway Message Designer. Message maps define the data source and data target, any hierarchies between the source and the target, and actions for data transformation and process control.

For more information about XML Gateway map interface type in the Integration Repository, see XML Gateway Map Information, page 4-34.

For more information about Oracle XML Gateway, see the *Oracle XML Gateway User's Guide*.

Concurrent Program

A concurrent program runs as a concurrent process that executes multiple programs running in the background. Functions performed by concurrent programs are normally data-intensive and long-running, such as posting a journal, and generating an EDI flat file.

For more information about Concurrent Program interface type in the Integration Repository, see Concurrent Program Information, page 4-64.

For more information about how to use concurrent programs, refer to the *Oracle E-Business Suite Setup Guide*.

Business Event

A business event is an occurrence in an internet application that might be significant to other objects in a system or to external agents. An example of a business event can be the creation of a new sales order or changes to an existing order.

Oracle Workflow uses the Business Event System that leverages the Oracle Advanced Queuing (AQ) infrastructure to communicate and manage business events between systems. When a local event occurs, the event subscribing code is executed in the same transaction as the code that raised the event. Subscription processing can include executing custom code on the event information, sending event information to a workflow process, and sending event information to other queues or systems.

For more business event information, see Events, *Oracle Workflow Developer's Guide*.

For more information about business event interface type in the Integration Repository, see Business Event Information, page 4-71.

Open Interface Table

An open interface consists of the interface tables to store data from external sources and concurrent programs, as well as to validate and apply this data into the Oracle E-Business Suite base tables. All open interfaces are implemented using concurrent programs.

Please note that Open Interface Table is often referred as Open Interface.

For more information about Open Interface Table interface type in the Integration Repository, see Open Interface Information, page 4-67.

Open Interface View

Interface views are database objects that make data from Oracle E-Business Suite products available for selection.

For more information about Interface View interface type in the Integration Repository, see Interface View Information, page 4-69.

EDI Message Transaction

Electronic Data Interchange (EDI) is one form of electronic commerce. Interface data files are electronically exchanged between trading partners as messages in a standard format to minimize manual effort. EDI message transactions are supported by *Oracle e-Commerce Gateway*.

Oracle e-Commerce Gateway provides users the ability to conduct business electronically between trading partners based on Electronic Commerce standards and methodology. When used for EDI solutions, Oracle e-Commerce Gateway integrates with EDI translators to provide specific EDI standard formats and versions.

For more information about EDI messages in the Integration Repository, see EDI Message Information, page 4-71.

For more information about Oracle e-Commerce Gateway, see the *Oracle e-Commerce Gateway User's Guide*.

Business Service Object

A business service object, formerly known as Service Bean, is a high-level service component that allows OA Framework or BC4J components to be deployed as Web services.

Business service object interfaces provide access to SOA services to facilitate integration between Oracle E-Business Suite and trading partners. They often employ *service data objects* as parameters to pass complex data.

Note: A service data object is not actually an interface type; rather, it is an object used by one or more business service objects or other service data objects to pass data.

For more information about Business Service Object interface type in the Integration Repository, see Business Service Object, page 4-51.

Java

A business interface can be based on a Java class from which you invoke methods that are appropriate to an integration.

Java APIs for Forms

Java APIs for Forms, a subtype of the Java interface, are XML document-based integration interfaces that are wrapped in Java classes for executing business logic in Oracle Forms. These specialized Java classes can be service-enabled through Oracle E-Business Suite Integrated SOA Gateway's Service Provider.

Security Services

Security services, built on Java, are a set of predefined and predeployed REST services from Oracle Application Object Library. These services including Authentication and Authorization services are developed for mobile applications.

Please note that security services will not require any REST service life cycle activities such as Deploy or Undeploy. Additionally, they are available to all users.

For more information about Java interface type in the Integration Repository, see Java Information, page 4-44.

Composite Interfaces

A composite interface consists of a collection of native packaged interfaces or services available in the Integration Repository.

Composite interfaces orchestrate the invocation sequence of Web services into an end-to-end business process through a Web service composition language BPEL (business process execution language).

Note: Composite interfaces can be designed and created in Oracle JDeveloper and Oracle Eclipse. Based on the creation methods, composite services have various composite types such as BPEL, ESB (enterprise service bus), or SCA (service component architecture) types. Composite - BPEL type is the only supported composite interface in this release.

For more information about composite interfaces, see Working with Composite Interfaces, page 5-1.

Integration Standards

Each Web service interface conforms to an integration standard, for example OAGIS or RosettaNet. The fully qualified standard includes the name, version, and specification. For example: OAG 7.2 CONFIRMBOD_004. The following standards are observed in Oracle Integration Repository:

- IFX1.2
- OAG6.2
- OAG7.0
- OAG7.1
- OAG7.2
- RosettaNet01.01.00
- RosettaNet01.03.00
- RosettaNet02.02.00
- RosettaNet02.03.00
- UCCnet2.4
- W3C

Working with Native Integration Interfaces

This chapter covers the following topics:

- Common Information
- XML Gateway Map Information
- PL/SQL Information
- Java Information
- Business Service Object
- Concurrent Program Information
- Open Interface Information
- Interface View Information
- EDI Message Information
- Business Event Information

Common Information

Each interface details page contains the following two types of information:

- **Interface Detail Information**

Interface detail information includes a header region with general information, full description of the selected interface, interface source information, as well as methods or procedures and functions contained in the selected interface.

For more information on interface details, see Common Information on Interface Details, page 4-4.

- **Web Service Information**

Based on the selected interface, Web service information can be displayed as follows:

- **Interfaces with Support for SOAP Web Service Only**

For interfaces that can be exposed only as SOAP services, SOAP service related information is displayed in the Web Service region of the interface details page.

Interface types of business events, open interface tables and views, and e-Commerce Gateway cannot be service enabled. Therefore, this region is not available for these interface types.

- Before service generation, an integration repository administrator or a system integration developer must specify desired interaction patterns in the interaction pattern table for an interface. At this time, the Web Service Status field is displayed as 'Not Generated'.
- After service generation represented in WSDL, the Web Service Status field is automatically changed from 'Not Generated' to 'Generated'. This indicates that the service has been successfully generated and the **View WSDL** link is available for you to view the generated WSDL description.

The administrator can regenerate, deploy, and reset the service if it's needed.

- Before service deployment, the administrator must select one authentication type (Username Token or SAML Token) to be used to authenticate the users who invoke the Web service. Once a generated Web service has been successfully deployed, 'Deployed' with 'Active' state appears in the Web Service Status field. Click the **View WSDL** link to display the deployed WSDL description.

The administrator can undeploy, reset, and retire the service if it's needed.

For more information on SOAP services and how to perform additional administrative tasks, see Common Information on SOAP Web Services, page 4-8.

- **PL/SQL Interfaces with Support for Both SOAP and REST Web Services**

For interfaces that can be exposed as both SOAP and REST services, in addition to the general interface information, the interface details page contains the following tabs:

Note: In this release, only PL/SQL APIs can be exposed as both SOAP and REST services. Security Services can be exposed as REST services only.

- **Overview Tab**

This tab displays read-only information about the interface including full description of the selected interface, interface source information, as well as

methods (or procedures and functions) contained in the selected interface.

For more information on the interface source information, see *Common Information on Interface Details*, page 4-4.

- **SOAP Web Service Tab**

This tab contains the information for a selected interface that can be exposed as a standard SOAP Web service. Users with the Integration Repository Administrator role can perform administrative tasks for the selected interface.

For more information on SOAP Web services and how to perform additional administrative tasks, see *Common Information on SOAP Web Services*, page 4-8.

- **REST Web Service Tab**

This tab contains the information related to an interface that can be exposed as a REST Web service.

- REST service development includes the following actions:

- **Deploy:** Before service deployment, an integration repository administrator or a system integration developer must enter the Service Alias field, and select desired methods to be deployed as REST service operations.

Once a Web service has been successfully deployed, 'Deployed' appears in the REST Service Status field. Click the **View WADL** link to view the deployed WADL description for the selected interface.

- **Undeploy:** After service deployment, the administrator can undeploy the deployed service. This changes the service status to its initial state - 'Not Deployed'.

For more information on REST Web services and how to perform additional administrative tasks, see *Common Information on REST Web Services*, page 4-18.

- **Grants Tab (Integration Repository Administrator Only)**

Users with the Integration Repository Administrator role can find the Grants tab for managing security grants. Before creating or revoking a grant, the administrators must select desired methods (or procedures and functions) from the Service Operations region and then click **Create Grant** or **Revoke Grant**.

This action creates or revokes the grants for the selected methods or service

operations of both SOAP and REST service types.

For more information on how to manage security grants, see *Managing Grants*, page 4-30.

Each interface details page also includes **Search** and **Printable Page** allowing you to perform a search and view the details page of a selected interface in a printable format. See *Searching for an Integration Interface*, page 3-8.

Additionally, the Log Configuration field is displayed with a value (either 'Disabled' or 'Enabled') indicating whether the selected interface has design-time log configured or not. By default, 'Disabled' is displayed.

Use design-time logs to troubleshoot any issues or exceptions encountered during SOAP based service generation and deployment life cycle. Users with the Integration Repository Administrator role can enable or disable the design-time logs for the selected interface by clicking **Configure**. The Log & Audit Setup Details page is displayed where the administrator can add a new log configuration or update existing configurations.

Please note that logging is supported for SOAP services only. If the design-time log is enabled for PL/SQL interfaces that have the support for both SOAP and REST services, log messages will be recorded during the design-time activities for SOAP services only.

For more information on log configurations, see *Logging for Web Services*, *Oracle E-Business Suite Integrated SOA Gateway Implementation Guide*.

Common Information on Interface Details

When you click an interface name link from the Interface List page or the Search Interface page, the interface details page appears where you can view the selected interface information.

For information on SOAP and REST Web services, see *Common Information on SOAP Web Services*, page 4-8 and *Common Information on REST Web Services*, page 4-18.

Common Information on Interface Details Page

Open Interface : Asset Number Import

Internal Name: EAMANIMP
 Type: Concurrent Program
 Product: Enterprise Asset Management
 Business Entity: Maintenance Asset Number

Status: Active
 Scope: Public

Full Description
 Users load asset data from their legacy system and execute Asset Number Import concurrent program processes rows in the interface tables and imports assets into Oracle Applications.

Source Information
 Source File: patch/115/import/US/eamprg.kdt
 Source Version: 120.37.12020000.7
 Source Product: EAM

Parameters

Name	Type	Required	Displayed	Description
BATCH_ID	EAM_MEANL_BATCH_ID	Yes	Yes	Batch ID
PURGE_OPTION	Yes_No	Yes	Yes	Purge Option

Open Interface Tables/Views

Name	Direction	Status	Description
MTL_EAM_ASSET_NUM_INTERFACE	Inbound	Active	Interface table for Asset Number Import program.
MTL_EAM_ATTR_VAL_INTERFACE	Inbound	Active	This is an interface table for Asset Attributes.

The following fields are common to almost all interface types:

Field	Notes
Internal Name	<p>This is the PL/SQL package name, the document name, or the Java service interface name.</p> <p>Note: For Java service interfaces, this is called Qualified Name, and includes the full Java package name and the class name.</p>
Type	<p>Business interfaces are organized into interface types according to the integration technologies on which they're based.</p> <p>Examples of interface types supported in Integration Repository are PL/SQL, XML Gateway, Concurrent Programs, Business Events, Open Interface Tables/Views, EDI, Business Service Object (Service Beans), Java, and Composite Service - BPEL.</p> <p>For more information about interface type, see interface type, page 3-13.</p>

Field	Notes
Product	An Oracle E-Business Suite application or component that supplies the interface.
Business Entity	<p>Business entities are objects that either perform business activities or have business activities performed on them. For example, sales orders, account numbers, employees, purchase orders, customers, and receipts are all business entities. An interface can be used by multiple business entities, and a business entity can be accessed by multiple interfaces.</p> <p>The Business Entity field lists the business entities accessed by an interface. Click a business entity name to view a list of available interfaces to that entity.</p>
Status	<p>Valid status codes are:</p> <ul style="list-style-type: none"> • Active • Deprecated - This interface should not be used, but it will be supported until obsolete. • Obsolete - The interface is no longer supported. • Planned - This interface will be activated at a future date.
Scope	<p>The scope can be one of the following:</p> <ul style="list-style-type: none"> • Public • Internal To Oracle • Private To Application <p>For more information, see Scope on the Oracle Integration Repository Search page, page 3-11.</p>
Interface Source	<p>The interface source can be one of the following:</p> <ul style="list-style-type: none"> • Oracle- All Oracle seeded integration interfaces are categorized with this interface source type. • Custom- This indicates the interface is a custom integration interface or service.

Field	Notes
My Oracle Support	Included for an interface that has a related My Oracle Support (formerly Oracle <i>MetaLink</i>) Knowledge Document. Click the link to log on to My Oracle Support with a valid user name and password and view the Knowledge Document.
Documentation	Included for an interface that has related online documentation. Click the link to view or download the documentation.
Online Help	Provided for an interface that has related Oracle E-Business Suite online help. Click the link to view online help for the interface.

The following table describes each field contained in the Source Information region:

Field	Notes
Source File	It indicates the source code file for this interface, and its location in the file system.
Source Version	<p>It indicates the version of the source file. The first portion of the number corresponds to the base release version of Oracle E-Business Suite; the second portion is the version of the file. For example, 12.0 . 8 is Oracle E-Business Suite 12.0, and 8 indicates that this is the 8th version of the file.</p> <p>Note: The version number changes only when it has been worked on by Oracle development. Therefore the version may increment multiple times between releases, or not at all.</p>

Field	Notes
Source Product	<p>It represents the product code of the source product. The source product specifies under which product directory the file resides in the Oracle E-Business Suite file system (also referred to as the <i>product top</i>).</p> <p>Tip: This field shows the product shortname. You can learn the corresponding full product name by choosing the System Administration responsibility from the Navigator menu, then selecting Oracle Applications Manager >License Manager >Reports >Licensed Products. On the product list that appears, you can filter the results for any product abbreviation (shortname) or license status.</p>

Common Information on SOAP Web Services

For service-enabled interfaces, SOAP service information is displayed in the Web Service region (or the SOAP Web Service tab if the interfaces can also be exposed as REST services) no matter if the selected interface is currently exposed as a Web service or not.

Note: Web service is defined in a way that the interface forms the service and the methods or functions within the interface are defined as the operations of the service.

By default, an interface is not exposed as a SOAP service. Hence, the service status is 'Not Generated'. An integration repository administrator may transform the selected interface into a SOAP Web service. Once the service for the selected interface has been successfully generated, the service status will be changed from 'Not Generated' to 'Generated'.

Integration Repository

Integration Repository >

XML Gateway : Confirmation Message

[Browse](#) | [Search](#) | [Printable Page](#)

Internal Name Type Product Status Business Entity Standard	ECX:CBODI XML Gateway Map XML Gateway Active XML Gateway Confirmation Message OAG 7.2 CONFIRM_BOD_004	Scope Interface Source Public Oracle
---	---	---

Log Configuration **Enabled**

Full Description

ECX_CBODI_OAG72_IN_CONFIRM map annotation public description.

Web Service

Web Service Status **Deployed | Active** | [View WSDL](#)
 Interaction Pattern **Synchronous**

* Authentication Type
 ☒ Username Token
 ☐ SAML Token (Sender Vouches)

> Show Generic XML Gateway Service

Source Information

Source File	patch/115/xml/us/ECX_CBODI_OAG72_IN_CONFIRM.xgm
Source Version	120.1
Source Product	ECX

Methods

Name ▲▼	Internal Name ▲▼	Status ▲▼	Description
CBODI	CBODI	Active	Process transaction.

The following fields are common in the Web Service region or the SOAP Web Service tab to almost all interface types:

Field	Description
Interaction Pattern table	<p>This table displays the interface name along with the method names contained in the interface in a table. An integration repository administrator or a system integration developer must select appropriate interaction patterns either at the interface level or at the method level before service generation.</p> <p>After service generation, the selected interaction patterns are displayed for the interface or for specific methods contained in the interface. Click the interface name node to expand and view the interaction pattern selection for all the methods within the interface.</p> <p>Please note that this table is still updatable after service generation, but any changes to the table will be applied only after regenerating the service.</p> <p>For more information on each field in the table, see Interaction Pattern Table, page 4-13.</p>

Field	Description
Web Service Status	This field indicates different state of a SOAP service during service generation and deployment life cycle.
(or SOAP Service Status if it's in the SOAP Web Service tab)	<ul style="list-style-type: none"> • Not Generated: This indicates that the selected interface does not have a SOAP service generated. • Generated: This indicates that the selected interface has a SOAP service available, but the service has not yet been deployed. Therefore, this generated service is not ready to be invoked. Once a service has been successfully generated, the following buttons appear: <ul style="list-style-type: none"> • Regenerate: This button lets you regenerate the service if the interface definition has been changed or the selected interaction pattern information has been modified before service deployment. • Deploy: This button lets you deploy the generated SOAP service with active deployment state. • Reset: This button lets you clear up the existing service artifact and change the Web Service Status field from 'Generated' to 'Not Generated'. • Deployed: This indicates that the selected interface has been deployed to Oracle SOA Suite. A deployed service can have either one of the following states: <ul style="list-style-type: none"> • Deployed with 'Active' state: By default, the deployed service is in active state ('Deployed' with 'Active' state). This indicates that the deployed service is ready to be invoked and accept new SOAP requests. Once a service has been successfully deployed with 'Active' state, the following buttons appear: <ul style="list-style-type: none"> • Retire: This button lets you disable the active service. The SOAP Service Status field is changed to Deployed with 'Retired' state indicating that this deployed service will no longer accept new requests. This action also ensures that current running requests for the service are finished. Once a service has been retired ('Deployed' with 'Retired' state), the service is no longer to be invoked. • Undeploy: This button lets you undeploy the SOAP service from Oracle SOA Suite back to Oracle Integration Repository if necessary.

Field	Description
	<ul style="list-style-type: none"> • Reset: This button lets you clear up the existing service artifact and change the SOAP Service Status field from 'Deployed' with 'Active' to 'Not Generated'. • Deployed with 'Retired' state: Once a service has been retired ('Deployed' with 'Retired' state), the service is no longer to be invoked. It cannot accept new SOAP requests until it is activated ('Deployed' with 'Active' state). The following buttons appear for the service with 'Deployed' with 'Retired' state: <ul style="list-style-type: none"> • Activate: This button lets you change the retired service back to an active service again. • Undeploy: This button lets you undeploy the retired service from an Oracle SOA Suite managed server to the repository. • Reset: This button lets you reset the retired service to its initial state - 'Not Generated' if needed. <p>In addition to 'Not Generated', 'Generated', 'Deployed' with 'Active' state, and 'Deployed' with 'Retired' state, more intermediate SOAP service statuses can be shown while the service is in the process of performing an action issued by the administrator and transforming to a different state. The following list describes intermediate Web service status information:</p> <ul style="list-style-type: none"> • Generating: This indicates that the selected interface is in the middle of the process of transforming the interface definition into a SOAP service. After this process completes successfully, 'Generated' is displayed in the Web Service Status field. • Regenerating: This indicates that the selected interface is in the middle of the process of regenerating the service. After this process is complete, 'Generated' is displayed in the Web Service Status field. • Deploying: This indicates that the selected interface is in the middle of the process of deploying the service. After this process is complete, 'Deployed' with 'Active' state is displayed in the Web Service Status field. • Undeploying: This indicates that the selected interface is in the middle of the process of undeploying the service. After this process is complete, 'Generated' state is displayed in the Web Service Status field. • Resetting: This indicates that the selected interface is in the middle of the process of removing the associated service artifact. After this process is

Field	Description
	<p>complete, 'Not Generated' is displayed in the Web Service Status field.</p> <ul style="list-style-type: none"> Retiring: This indicates that the selected interface is in the middle of the process of disabling the active state. After this process is complete, 'Deployed' with 'Retired' state is displayed in the Web Service Status field indicating that the service is retired and cannot accept new SOAP requests. Activating: This indicates that the selected interface is in the middle of the process of reverting the retired state back to active again. After this process is complete, 'Deployed' with 'Active' state is displayed in the Web Service Status field indicating that the deployed service is ready to accept new SOAP requests.
View WSDL	<p>This link is displayed after a selected interface has an associated SOAP service available. Click this link letting you review WSDL description for a generated or deployed service.</p> <p>See: Reviewing Web Service WSDL Source, page 4-22.</p>
Interaction Pattern	<p>After service generation, this information is displayed which corresponds to the selected interaction patterns in the Interaction Pattern table.</p> <p>For example, if 'Synchronous' is selected for a specific method contained in a PL/SQL interface, and 'Asynchronous' is selected for another method within the interface, then both 'Synchronous' and 'Asynchronous' are shown in this field.</p> <p>Note: Interface type of XML Gateway, Concurrent Program, Business Service Object, and Java API for Forms can be service enabled only with synchronous support. Therefore, 'Synchronous' is displayed in the Interaction Pattern field for those interfaces by default if the service is available.</p>

Field	Description
Authentication Type	<p>To secure Web service content and authenticate Web service operation, before deploying a generated service, an integration repository administrator must select one desired authentication type for the selected service in the Authentication Type field.</p> <ul style="list-style-type: none"> Username Token: This authentication type provides username and password information in the security header to authenticate SOAP requests. See: UsernameToken Based Security, <i>Oracle E-Business Suite Integrated SOA Gateway Implementation Guide</i>. SAML Token (Sender Vouches): This authentication type is used for Web services relying on sending a username only through SAML Assertion. See: SAML Sender-Vouches Token Based Security, <i>Oracle E-Business Suite Integrated SOA Gateway Implementation Guide</i>. <p>Once users with the integration repository administrator role can select and modify the authentication type. For other users, this field is displayed in read-only mode.</p>

Interaction Pattern Table

Oracle E-Business Suite Integrated SOA Gateway supports service generation synchronously, asynchronously, or both synchronously and asynchronously based on the selection made by the administrator or system integration developer in the Interaction Pattern table.

Interaction Pattern Selection

Before service generation, the administrator or system integration developer must select appropriate interaction patterns either at the interface level or at the method level by expanding the interface name node to list all the methods within the interface.

After service generation, the Interaction Pattern table is still updatable, but any changes will be applied only after service regeneration.

Note: In this release, asynchronous SOAP service operation is supported only in PL/SQL interface. Other SOAP service-enabled interface types including XML Gateway, Concurrent Program, Business Service Object, and Java APIs for Forms can be exposed as SOAP services only with the synchronous support.

The following table describes each field in the Interaction Pattern table:

Field	Description
Display Name	This is the interface name used externally.
Internal Name	This is the interface name used internally. It can be PL/SQL package name, the document name, or the Java service interface name.
Synchronous	<p>If the 'Synchronous' check box is selected for an interface or a specific method, the service or selected operation is generated with the support for synchronous interaction pattern.</p> <p>That is when Web service client sends a SOAP request for this service, service executes and provides an immediate response to the Web service client.</p>
Asynchronous	<p>If the 'Asynchronous' check box is selected for an interface or a specific method, the service or selected operation is generated with the support for asynchronous interaction pattern. This type of service execution may require a significant amount of time to process a request. However, the client that invoked the Oracle E-Business Suite Web service can continue with other processing in the meantime rather than waiting for the response.</p> <p>In this release, asynchronous operation is supported in PL/SQL interface only.</p>
Grant	<p>If the access permission of an operation has been granted to a specific user, user groups, or all users, then the Grant icon is available for the operation. Only users with the Integration Repository Administrator role and the System Integration Developer role can find the Grant icon and view the grant details.</p> <p>The Grant icon is shown only in the SOAP Web Service tab.</p>

Performing Administrative Activities for SOAP Web Services

Users with the Integration Repository Administrator role can perform administrative tasks. These tasks include generating, deploying, undeploying, resetting, retiring, and activating SOAP services by clicking the following buttons in the interface details page:

- **Generate:** This allows an integration repository administrator or a system integration developer to generate a SOAP service.

Note: System integration developers have the privilege to generate the services, but they do not have privileges to perform other administrative tasks including deploying, undeploying, and managing SOAP services throughout the life cycle.

For information about these roles and their associated privileges to administer and view SOAP services, see Accessing Oracle

Before service generation, desired interaction patterns must be selected first for an interface or specific methods contained in the interface. Once the service has been successfully generated, the SOAP service status is changed from 'Not Generated' to 'Generated'. Additionally, the **View WSDL** link appears letting you view the WSDL description for the generated service.

After service generation, the administrator can regenerate, deploy, or reset the generated service if it's needed.

For more service generation information, see *Generating SOAP Web Services, Oracle E-Business Suite Integrated SOA Gateway Implementation Guide*.

- **Deploy**

If the SOAP service has already been successfully generated, **Deploy** appears in the Web Service region (or the SOAP Web Service tab if the interface can be exposed as both SOAP and REST services) for the selected interface.

Prior to deploying a service, the administrator must select one of the following authentication types. This allows Service Provider to authenticate SOAP requests based on the selected type.

- Username Token

This authentication type provides username and password information used to authenticate SOAP requests. The username is the concept of Oracle E-Business Suite username/password (or the username/password created through the Users window in defining an application user).

- SAML Token (Sender Vouches)

This authentication type is used for Web services relying on sending a username only through SAML Assertion.

Click **Deploy** to deploy the generated service to Oracle SOA Suite with 'Active' state. This active deployed service is ready to be invoked and accept new SOAP requests.

Once a service has been successfully deployed, the **View WSDL** link appears letting you view the deployed WSDL details. The administrator can retire, undeploy, or reset the deployed service if it's needed.

For more service deployment information, see *Deploying and Undeploying SOAP Web Services, Oracle E-Business Suite Integrated SOA Gateway Implementation Guide*.

- **Retire:** This disables an active deployed service so that the retired service will not accept new requests. This action also ensures that current running requests are finished. Once a service has been successfully retired, the SOAP service status is

changed to 'Deployed' with 'Retired' state.

Once an active service has been successfully retired, the administrator can activate, undeploy, or reset the retired service if it's needed.

For more information on retiring services, see *Retiring SOAP Web Services, Oracle E-Business Suite Integrated SOA Gateway Implementation Guide*.

- **Activate:** For a retired service in Oracle SOA Suite, the administrator can activate the service by clicking **Activate**. This takes a retired service back to active state again. The service can be invoked and accept new SOAP requests.

Once a service has been successfully activated, the administrator can retire, undeploy, or reset the active service if it's needed.

For more information on activating services, see *Activating SOAP Web Services, Oracle E-Business Suite Integrated SOA Gateway Implementation Guide*.

- **Reset:** Once a service has been successfully generated or deployed, the administrator can clear up existing service artifact at any time by clicking **Reset**. This action takes the current state of the service to its initial state - 'Not Generated' no matter if it is 'Generated', 'Deployed' with 'Active' state, or 'Deployed' with 'Retired' state.

Once a service has been successfully reset, the administrator can generate the service again if it's needed.

For more information on resetting services, see *Resetting SOAP Web Services, Oracle E-Business Suite Integrated SOA Gateway Implementation Guide*.

- **Create Grant:** The administrator can create security grants by authorizing access permissions of interface methods to a user, a user group, or all users.

In addition to creating grants, the administrator can revoke the grants for an authorized user, user group, or all users if it's needed.

Please note that the grant feature applies to both SOAP and REST service operations if the selected interface can be exposed as both SOAP and REST services. For more information on security grants, see *Managing Grants*, page 4-30.

- **Configure:** This displays the Log & Audit Setup Details page where the administrator can configure a new design-time log for the selected interface, or update an existing configuration.

Use design-time logs to troubleshoot any issues or exceptions encountered during service generation and deployment life cycle.

Please note that logging is supported only for SOAP services. For more information on log configurations, see *Accessing the Logging Configuration User Interface, Oracle E-Business Suite Integrated SOA Gateway Implementation Guide*.

- **View Log:** This displays the Log & Error Details page where you can view log

details. If errors occurred during each stage of SOAP service life cycle activities, then error messages will also be displayed.

Please note that only if the design-time log is enabled for the selected interface, **View Log** would appear in the interface details page. Otherwise, **View Error** appears instead if errors occurred while performing the design-time activities. Click **View Error** to view the error details only in the Log & Error Details page. For more information on viewing logs recorded at design time, see Viewing Generate and Deploy Time Logs, *Oracle E-Business Suite Integrated SOA Gateway Implementation Guide*.

To view logs written in Service Monitor during the invocation of Oracle E-Business Suite SOAP services, see Viewing Service Processing Logs, *Oracle E-Business Suite Integrated SOA Gateway Implementation Guide*.

Note: In addition to performing service management activities in the Integration Repository tab, integration repository administrators can perform other administrative tasks in the Administration tab that are outside the Integration Repository user interface. These tasks include:

- **Monitoring and Auditing SOAP Messages in the Service Monitor Subtab**

Integration repository administrators can monitor and audit all SOAP messages received and sent from Oracle SOA Suite for Oracle E-Business Suite Web services using Service Monitor.

With the monitoring and auditing features, any operation errors if occurred during the message exchanges can be easily identified and audited. The administrators can search and view SOAP request and response message details, and take necessary actions.

For information on how to use Service Monitor, see Monitoring and Managing SOAP Messages Using Service Monitor, *Oracle E-Business Suite Integrated SOA Gateway Implementation Guide*.

- **Managing Log and Audit Setups in the Configuration Subtab**

Integration repository administrators have the privileges to configure log settings and enable service auditing feature at the integration interface level. With this logging feature, the administrators can easily monitor service activities, track and view log messages, and troubleshoot any issues encountered at each stage of SOAP service development life cycle.

For information on log configuration, see Logging for Web Services, *Oracle E-Business Suite Integrated SOA Gateway Implementation Guide*.

Common Information on REST Web Services

If a selected interface (such as a PL/SQL API) can be exposed as both SOAP and REST services, the REST Web Service tab is displayed in the interface details page.

PL/SQL Interface Details Page

Navigator ▾ Favorites ▾

Integration Repository

Integration Repository >

PLSQL Interface : User

Browse Search Printable Page

Log Configuration Enabled

Internal Name FND_USER_PKG
Type PL/SQL
Product Application Object Library
Status Active
Business Entity User
Online Help [See the related online help](#)

Scope Public
Interface Source Oracle

Overview SOAP Web Service REST Web Service

Service Alias test

REST Service Status Deployed | [View WSDL](#)

Verb POST

Service Operations

Previous 1-10 Next 10

Name ▲ ▾	Internal Name ▲ ▾	Included Operations
Change User Name	CHANGE_USER_NAME	✓
Create/Update User	LOAD_ROW	✓
Derive Person Party Id	DERIVE_PERSON_PARTY_ID	✓
LDAP Wrapper Change User Name	LDAP_WRAPPER_CHANGE_USER_NAME	✓
LDAP Wrapper Create User	LDAP_WRAPPER_CREATE_USER	✓
LDAP Wrapper Update User	LDAP_WRP_UPDATE_USER_LOADER	✓
LDAP Wrapper Update User	LDAP_WRAPPER_UPDATE_USER	✓
Remove PII user information	REMOVE_PII_USER	✓
Set Old Person Party Id	SET_OLD_PERSON_PARTY_ID	✓
Set Old User GUID	SET_OLD_USER_GUID	✓

Previous 1-10 Next 10

☒ TIP To apply any changes in Operation,Undeploy the service.

REST Service Security

REST Web Service is secured by HTTP Basic Authentication at HTTP Transport level. Send either of the following in 'Authorization' header as per HTTP Basic scheme:
- Username:Password
- Security Token.

An integration repository administrator or a system integration developer can deploy selected service operations by clicking **Deploy**. Once the REST service has been successfully deployed, the REST Service Status field will be changed from 'Not Deployed' to 'Deployed'.

The following fields are common in the REST Web Service tab:

Field	Description
Service Alias	Each REST service should be associated with a unique alias name. Before deploying a REST service, the administrator or a system integration developer must enter this field which will be used in service endpoint, WADL, XSDs, and namespaces.
REST Service Status	<p>This field indicates different state of a REST service during service life cycle.</p> <ul style="list-style-type: none"> Not Deployed: This indicates that the selected interface is not deployed. <p>Click Deploy to deploy the REST service. The REST Web Service Status is changed from 'Not Deployed' to 'Deployed'.</p> <ul style="list-style-type: none"> Deployed: This indicates that the selected interface is deployed to an Oracle E-Business Suite managed server. <p>Once a REST service has been successfully deployed, the administrator can undeploy the service by clicking Undeploy. This action undeploys the REST service from the Oracle E-Business Suite managed server back to Oracle Integration Repository, and at the same time it clears up the existing service artifact. The REST Service Status field is changed from 'Deployed' to 'Not Deployed'.</p> <p>In addition to 'Not Deployed' and 'Deployed' service states, more intermediate service statuses can be shown while the service is in the process of performing an action issued by the administrator and transforming to a different state. The following list describes intermediate service status information:</p> <ul style="list-style-type: none"> Deploying: This indicates that the selected interface is in the middle of the process of deploying the service. After this process is complete, 'Deployed' is displayed in the REST Service Status field. Undeploying: This indicates that the selected interface is in the middle of the process of undeploying and removing the associated service artifact. After this process is complete, 'Not Deployed' is displayed in the REST Service Status field.
View WADL	<p>This link is displayed after the selected interface has an associated REST service deployed. Click this link letting you review WADL description for the deployed REST service.</p> <p>This field appears only when the REST service has been successfully deployed with 'Deployed' status.</p> <p>See: Reviewing Web Service WADL Source, page 4-27.</p>

Field	Description
Verb	<p>This field is displayed when the REST service has 'Deployed' status. The Verb value indicates how the REST service is implemented using an HTTP method.</p> <p>Please note that 'POST' is the only method supported in this release.</p>
REST Service Security	<p>To secure REST service content, all REST services are secured by either one of the following security methods:</p> <ul style="list-style-type: none"> • HTTP Basic Authentication: This authentication type is for an HTTP client application to provide username and password when making a REST request that is typically over HTTPS. <p>See: HTTP Basic Authentication, <i>Oracle E-Business Suite Integrated SOA Gateway Implementation Guide</i>.</p> <ul style="list-style-type: none"> • Token Based Authentication: This security authenticates a user using a security token obtained by invoking the security Login service. When a user tries to log on to a server, a token may be sent along with username in place of password. This authentication method can be used in multiple consecutive REST invocations. <p>Please note that Oracle E-Business Suite session ID may be used as the security token and passed as user credentials in place of password.</p> <p>See: Token Based Authentication, <i>Oracle E-Business Suite Integrated SOA Gateway Implementation Guide</i>.</p>
Service Operations table	<p>This table displays the list of procedures or functions contained in the selected interface that can be exposed as REST service operations.</p> <p>For more information on each field in the table, see Service Operations Table, page 4-20.</p>

Service Operations Table

The Service Operations table displays each method (or procedure or function) contained in the selected interface, and whether it is exposed as a service operation. Users with the Integration Repository Administrator role can perform administrative tasks including deploying or undeploying services with desired service operations and creating or revoking security grants.

The following table describes each field in the Service Operations table:

Field	Description
Select	Users with the Integration Repository Administrator role can select one or more methods from the table before deploying the service.
Display Name	This is the interface name used externally.
Internal Name	This is the interface name used internally.
Included Operations	This column is displayed when the selected interface has been exposed as a REST service. A check is displayed for the method or operation that has been exposed as a REST service operation.
Grant	If the access permission of an operation has been granted to a specific user, user groups, or all users, then the Grant icon is displayed for the operation. Only users with the Integration Repository Administrator role and the System Integration Developer role can find the Grant icon and view the grant details.

Performing Administrative Activities for REST Web Services

REST services have a simplified service development life cycle. Users with the Integration Repository Administrator role can perform the following administrative tasks in the interface details page:

Note: For information about different user roles and their associated privileges to administer and view REST services, see *Accessing Oracle Integration Repository*, page 3-3.

- **Deploy** (REST Web Service tab): This allows an integration repository administrator or a system integration developer to deploy the REST service.

Before deploying the service, an integration repository administrator must enter a unique name in the Service Alias field and select desired service operations. Once the REST service has been successfully deployed, the service status is changed to 'Deployed'. This indicates that this deployed service is ready to be invoked and accept new service requests.

For more REST service deployment information, see *Deploying REST Web Services, Oracle E-Business Suite Integrated SOA Gateway Implementation Guide*.

- **Undeploy** (REST Web Service tab): This action not only undeploys the service from an Oracle E-Business Suite managed server to the Integration Repository, but also resets its status to the initial state 'Not Deployed'.

For more REST service undeployment information, see Undeploying REST Web Services, *Oracle E-Business Suite Integrated SOA Gateway Implementation Guide*.

- **Create Grant** (Grants tab): The administrator selects desired service operations before clicking **Create Grant**. The Create Grants page appears where grants can be created for a user, a user group, or all users.

The administrator selects desired service operations and clicks **Revoke Grant**. This opens the Revoke Grants page where the administrator can remove existing grants from an authorized user, a user group, or all users.

The grant feature applies to both SOAP and REST services. For more information on security grants, see Managing Grants, page 4-30.

Reviewing Web Service WSDL Sources

Once a Web service represented in WSDL has been successfully generated, the SOAP service status is changed from 'Not Generated' to 'Generated'. The WSDL link appears in the Web Service region (or the SOAP Web Service tab if the interface can be exposed as both SOAP and REST services) allowing you to view the WSDL description.

Generated WSDL and Deployed WSDL Descriptions

For a generated service before it is deployed, the WSDL description is an abstract definition of the message that has been transmitted. Once the service has been successfully deployed, the WSDL description contains concrete service binding and transport details.

For example, the following elements contain different URL information in the generated and deployed WSDL descriptions:

- Message Schema Location (`schemaLocation`)
 - For a generated service, a temporary schema location is displayed in the generated WSDL description (such as `schemaLocation="http://<hostname>:<port>/ISG-ISG-context-root/iscapp/plsql/pa_cost_plus/APPS_PA_COST_PLUS_GET_BURDEN_AMOUNT.xsd"`).
 - For a deployed service, a physical location of the service endpoint where the service is hosted in `soa-infra` is displayed instead in the deployed WSDL description (such as `schemaLocation="http://<soa_suite_hostname>:<port>/soa-infra/services/default/<jndi_name>_PLSQL_PA_COST_PLUS/PA_COST_PLUS_Service?XSD=xsd/APPS_PA_COST_PLUS_GET_BURDEN_AMOUNT.xsd"`).
- Service Address Location (`soap:address location`)
 - For a generated WSDL, 'Not_Deployed' is shown in the `soap:address`

location element (such as `<soap:address location="#NOT_DEPLOYED#"/>`).

- For a deployed service, a physical location of the service endpoint where the service is hosted in soa-infra is displayed in the deployed WSDL description (such as `<soap:address location="http://<soa_suite_hostname>:<port>/soa-infra/services/default/<jndi_name>_PLSQL_PA_COST_PLUS/PA_COST_PLUS_Service"/>`).

For more information on WSDL elements, see *Reviewing WSDL Element Details*, *Oracle E-Business Suite Integrated SOA Gateway Developer's Guide*.

To view a WSDL file:

1. Log on to Oracle E-Business Suite with the Integrated SOA Gateway responsibility or through custom responsibility and navigation path.

Select the Integration Repository link from the navigator to open the Integration Repository.
2. Locate your desired interface definition through a search or browse from the interface tree structure within the repository.
3. Click the interface name to open the interface details.
4. In the Web Service region (or the SOAP Web Service tab if the interface can be exposed as both SOAP and REST services), click the **View WSDL** link to view the WSDL source code.

The following sample shows the generated WSDL description with synchronous interaction pattern for the PLSQL interface PA_COST_PLUS:

```

<?xml version="1.0" encoding="UTF-8" standalone="no" ?>
<definitions
xmlns:tns="http://xmlns.oracle.com/apps/pa/soapprovider/plsql/pa_cost_plus/"
xmlns="http://schemas.xmlsoap.org/wsdl/"
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"

xmlns:tns1="http://xmlns.oracle.com/apps/pa/soapprovider/plsql/pa_cost_plus/get_burden_amount/" name="PA_COST_PLUS"

targetNamespace="http://xmlns.oracle.com/apps/pa/soapprovider/plsql/pa_cost_plus/">
<types>
<schema xmlns="http://www.w3.org/2001/XMLSchema"
elementFormDefault="qualified"

targetNamespace="http://xmlns.oracle.com/apps/pa/soapprovider/plsql/pa_cost_plus/get_burden_amount/">
  <include schemaLocation
= "http://<hostname>:<port>/ISG-ISG-context-root/isgapp/plsql/pa_cost_plus/APPS_PA_COST_PLUS_GET_BURDEN_AMOUNT.xsd" />
</schema>
<schema xmlns="http://www.w3.org/2001/XMLSchema"
elementFormDefault="qualified"

targetNamespace="http://xmlns.oracle.com/apps/pa/soapprovider/plsql/pa_cost_plus/">
  <element name="SOAHeader">
    <complexType>
      <sequence>
        <element name="Responsibility" minOccurs="0" type="string" />

        <element name="RespApplication" minOccurs="0" type="string" />
      </sequence>
    </complexType>
  </element>
</schema>
</type>
<message name="GET_BURDEN_AMOUNT_Input_Msg">
<part name="header" element="tns:SOAHeader" />
<part name="body" element="tns1:InputParameters" />
</message>
<message name="GET_BURDEN_AMOUNT_Output_Msg">
<part name="body" element="tns1:OutputParameters" />
</message>
<portType name="PA_COST_PLUS_PortType">
<operation name="GET_BURDEN_AMOUNT">
<input message="tns:GET_BURDEN_AMOUNT_Input_Msg" />
<output message="tns:GET_BURDEN_AMOUNT_Output_Msg" />
</operation>
</portType>
<binding name="PA_COST_PLUS_Binding"
type="tns:PA_COST_PLUS_PortType">
<soap:binding style="document"
transport="http://schemas.xmlsoap.org/soap/http" />
<operation name="GET_BURDEN_AMOUNT">
<soap:operation soapAction="GET_BURDEN_AMOUNT" />

```

```

<input>
<soap:header message="tns:GET_BURDEN_AMOUNT_Input_Msg" part="header"
use="literal" />
<soap:body parts="body" use="literal" />
</input>
<output>
<soap:body use="literal" />
</output>
</operation>
</binding>
<service name="PA_COST_PLUS_Service">
<port name="PA_COST_PLUS_Port" binding="tns:PA_COST_PLUS_Binding">
<soap:address location="#NOT_DEPLOYED#" />
</port>
</service>
</definitions>

```

Note: Values passed in the Responsibility, Responsibility Application, Security Group, NLS Language, and Organization ID complex types listed under the "SOAHeader" are used to set applications context during service execution.

Please note that NLS Language and Organization ID are optional values to be passed. However, if the execution of a service is dependent on any particular organization, then you must pass the ORG_ID element in the "SOAHeader" of that SOAP request.

For more information, see Setting Other Web Service Input Message Parts, *Oracle E-Business Suite Integrated SOA Gateway Implementation Guide*.

Please note that the username and password information is defined by the Web service security policy (such as oracle/wss_username_token_service_policy). Detailed instructions on how to pass the security headers along with the SOAP request, see Configuring Web Service Policies, *Oracle E-Business Suite Integrated SOA Gateway Developer's Guide*.

For more WSDL element information, see Reviewing WSDL Element Details, *Oracle E-Business Suite Integrated SOA Gateway Developer's Guide*.

To view a deployed WSDL file:

Once a service has been successfully deployed to an Oracle SOA Suite WebLogic managed server, the SOAP service status is changed from 'Not Generated' to 'Deployed' with 'Active' state along with the selected authentication type. A deployed WSDL link also appears confirming that the service has been successfully deployed.

Click the **View WSDL** link to view the deployed WSDL file.

The following sample shows the deployed WSDL description with synchronous interaction pattern for the same PLSQL interface PA_COST_PLUS:

```

<?xml version="1.0" encoding="UTF-8" ?>
<definitions name="PA_COST_PLUS"

targetNamespace="http://xmlns.oracle.com/apps/pa/soapprovider/plsql/pa_co
st_plus/"
  xmlns="http://schemas.xmlsoap.org/wsdl/"

xmlns:tns1="http://xmlns.oracle.com/apps/pa/soapprovider/plsql/pa_cost_pl
us/get_burden_amount/"
  xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/"

xmlns:tns="http://xmlns.oracle.com/apps/pa/soapprovider/plsql/pa_cost_plu
s/"
  xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
<documentation>
<abstractWSDL>http://<soa_suite_hostname>:<port>/soa-infra/services/defa
ult/<jndi_name>_PLSQL_PA_COST_PLUS!1/PA_COST_PLUS_soap.wsdl</abstractWSD
L
</documentation>
<wsp:Policy xmlns:wsp="http://schemas.xmlsoap.org/ws/2004/09/policy"
  xmlns:orawsp="http://schemas.oracle.com/ws/2006/01/policy"

orawsp:provides="{http://docs.oasis-open.org/ns/opencsa/sca/200903}authe
ntication,
  {http://docs.oasis-open.org/ns/opencsa/sca/200903}clientAuthentication,

{http://docs.oasis-open.org/ns/opencsa/sca/200903}clientAuthentication.m
essage,
  {http://schemas.oracle.com/ws/2006/01/policy}token.usernamePassword"
  xmlns="http://schemas.xmlsoap.org/ws/2004/09/policy"

xmlns:wsu="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssec
urity-utility-1.0.xsd"
  wsu:Id="wss_username_token_service_policy"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
<sp:SupportingTokens
xmlns:sp="http://schemas.xmlsoap.org/ws/2005/07/securitypolicy">
<wsp:Policy>
<sp:UsernameToken
sp:IncludeToken="http://schemas.xmlsoap.org/ws/2005/07/securitypolicy/In
cludeToken/AlwaysToRecipient">
<wsp:Policy>
<sp:WssUsernameToken10 />
</wsp:Policy>
</sp:UsernameToken>
</wsp:Policy>
</sp:SupportingTokens>
</wsp:Policy>
<types>
<schema xmlns="http://www.w3.org/2001/XMLSchema"
elementFormDefault="qualified"

targetNamespace="http://xmlns.oracle.com/apps/pa/soapprovider/plsql/pa_co
st_plus/get_burden_amount/">
<include
schemaLocation=http://<soa_suite_hostname>:<port>/soa-infra/services/de
fault/<jndi_name>_PLSQL_PA_COST_PLUS/PA_COST_PLUS_Service?XSD=xsd/APPS_P
A_COST_PLUS_GET_BURDEN_AMOUNT.xsd />
</schema>
<schema xmlns="http://www.w3.org/2001/XMLSchema"

```

```

elementFormDefault="qualified"

targetNamespace="http://xmlns.oracle.com/apps/pa/soapprovider/plsql/pa_co
st_plus/">
  <element name="SOAHeader">
    <complexType>
      <sequence>
        <element name="Responsibility" minOccurs="0" type="string" />
        <element name="RespApplication" minOccurs="0" type="string" />
        <element name="SecurityGroup" minOccurs="0" type="string" />
        <element name="NLSLanguage" minOccurs="0" type="string" />
        <element name="Org_Id" minOccurs="0" type="string" />
      </sequence>
    </complexType>
  </element>
</schema>
</type>
<message name="GET_BURDEN_AMOUNT_Input_Msg">
  <part name="header" element="tns:SOAHeader" />
  <part name="body" element="tns1:InputParameters" />
</message>
<message name="GET_BURDEN_AMOUNT_Output_Msg">
  <part name="body" element="tns1:OutputParameters" />
</message>
<portType name="PA_COST_PLUS_PortType">
  <operation name="GET_BURDEN_AMOUNT">
    <input message="tns:GET_BURDEN_AMOUNT_Input_Msg" />
    <output message="tns:GET_BURDEN_AMOUNT_Output_Msg" />
  </operation>
</portType>
<binding name="PA_COST_PLUS_Binding" type="tns:PA_COST_PLUS_PortType">
  <soap:binding style="document"
transport="http://schemas.xmlsoap.org/soap/http" />
  <wsp:PolicyReference
xmlns:wsp="http://schemas.xmlsoap.org/ws/2004/09/policy"
URI="#wss_username_token_service_policy" wsdl:required="false" />
  <operation name="GET_BURDEN_AMOUNT">
    <soap:operation soapAction="GET_BURDEN_AMOUNT" />
    <input>
      <soap:header message="tns:GET_BURDEN_AMOUNT_Input_Msg" part="header"
use="literal" />
      <soap:body parts="body" use="literal" />
    </input>
    <output>
      <soap:body use="literal" />
    </output>
  </operation>
</binding>
<service name="PA_COST_PLUS_Service">
  <port name="PA_COST_PLUS_Port" binding="tns:PA_COST_PLUS_Binding">
    <soap:address
location="http://"<soa_suite_hostname>:<port>/soa-infra/services/default
/<jndi_name>_PLSQL_PA_COST_PLUS/PA_COST_PLUS_Service" />
  </port>
</service>
</definitions>

```

Reviewing Web Service WADL Sources

Once a REST Web service represented in WADL has been successfully deployed, the

REST Service Status field is changed from 'Not Deployed' to 'Deployed'. The WADL link appears in the REST Web Service tab allowing you to view the WADL description.

For example, the following WADL description is for a PL/SQL API Invoice Creation (AR_INVOICE_API_PUB) that includes 'CREATE_INVOICE' and 'CREATE_SINGLE_INVOICE' REST service operations:

```
<?xml version="1.0" encoding="UTF-8" standalone="no" ?>
<application
  xmlns:tns="http://xmlns.oracle.com/apps/ar/soapprovider/plsql/rest/ar_invoice_api_pub/"
  xmlns="http://wadl.dev.java.net/2009/02"
  xmlns:tns1="http://xmlns.oracle.com/apps/ar/rest/ar/create_invoice/"
  name="AR_INVOICE_API_PUB"
  targetNamespace="http://xmlns.oracle.com/apps/ar/soapprovider/plsql/rest/ar_invoice_api_pub/">
  <grammars>
    <include xmlns="http://www.w3.org/2001/XMLSchema"
      href="https://host01.example.com:1234/webservices/rest/Invoice?XSD=CREATE_INVOICE_SYNCH_TYPEDEF.xsd" />

    <include xmlns="http://www.w3.org/2001/XMLSchema"
      href="https://host01.example.com:1234/webservices/rest/Invoice/?XSD=CREATE_SINGLE_INVOICE_SYNCH_TYPEDEF.xsd" />
  </grammars>
  <resources base="http://host01.example.com:1234/webservices/rest/Invoice/">
    ...
  </resources>
</application>
```

Note: The service alias value `Invoice` entered earlier before service deployment is now displayed as part of the schema for the service operations - 'CREATE_INVOICE' and 'CREATE_SINGLE_INVOICE'.

```

<?xml version="1.0" encoding="UTF-8" standalone="no" ?>
<application xmlns:tns=...
...
  <resources base="http://host01.example.com:1234/webservices/rest/
Invoice/">
    <resource path="create_invoice/">
      <method id="CREATE_INVOICE" name="POST">
        <request>
          <representation mediaType="application/xml"
type="tns1:InputParameters" />
          <representation mediaType="application/json"
type="tns1:InputParameters" />
        </request>
        <response>
          <representation mediaType="application/xml"
type="tns1:OutputParameters" />
          <representation mediaType="application/json"
type="tns1:OutputParameters" />
        </response>
      </method>
    </resource>
    <resource path="create_single_invoice/">
      <method id="CREATE_SINGLE_INVOICE" name="POST">
        <request>
          <representation mediaType="application/xml"
type="tns2:InputParameters" />
          <representation mediaType="application/json"
type="tns2:InputParameters" />
        </request>
        <response>
          <representation mediaType="application/xml"
type="tns2:OutputParameters" />
          <representation mediaType="application/json"
type="tns2:OutputParameters" />
        </response>
      </method>
    </resource>
  </resources>
</application>

```

Note: POST is shown as the method name for two service operations 'CREATE_INVOICE' and 'CREATE_SINGLE_INVOICE'. This is the only HTTP method supported in this release.

Input and output messages can be exchanged in both XML and JSON formats for both service operations.

For more information about WADL description, see *Reviewing WADL Element Details, Oracle E-Business Suite Integrated SOA Gateway Developer's Guide*.

To view a deployed WADL file:

1. Log on to Oracle E-Business Suite with the Integrated SOA Gateway responsibility or through custom responsibility and navigation path.

Select the Integration Repository link from the navigator to open the Integration

Repository.

2. Locate your desired interface definition through a search or browse from the interface tree structure within the repository.
3. Click the interface name to open the interface details page.
4. In the REST Web Service tab, click the **View WADL** link to view the WADL source code.

Managing Grants

Only integration repository administrators or users with the Integration Repository Administrator role can create security grants by authorizing the access permissions of interface methods (or procedures and functions) to a user, a user group, or all users. Similarly, the administrators can revoke the grants from an authorized user, user group, or all users on a selected method or service.

Note: Interface types that have the security grant feature available are PL/SQL, Concurrent Program, Business Service Object, Java APIs for Forms, and Inbound XML Gateway Map interfaces.

Please note that the grant feature applies to the interfaces that can be exposed as both SOAP and REST services. For example, when a user (OPERATIONS) is authorized to have access permission on a PL/SQL API method name called 'Change User Name', the user will have the permission to access the associated 'Change User Name' service operations of both SOAP and REST service types through the same grant.

Managing Grants in the Methods Region for Interfaces with the Support for SOAP Services Only

For interfaces with the support for SOAP services only, security grants are managed in the Methods region of the interface details page.

Managing Grants in the Methods Region

Integration Repository Administration

Integration Repository >

XML Gateway : Confirm BOD

Browse Search Printable Page

Log Configuration **Disabled** Configure

Internal Name: **XNB:CBODI** Scope: **Public**
 Type: **XML Gateway Map** Interface Source: **Oracle**
 Product: **Telecommunications Billing Integrator**

Status: **Active**
 Business Entity: [XML Gateway Confirmation Message](#)
 Standard: **OAG 7.2 Confirm_BOD_004**

Full Description

Confirmation BOD map annotation public description.

Web Service

Hide Generic XML Gateway Service

Web Service Status: **Not Deployed**
 Interaction Pattern: **Synchronous**
 Authentication Type: **Username Token**

Source Information

Source File: **patch/115/xml/US/XNB_CLN_CBOD_OAG72_IN.xgm**
 Source Version: **120.1**
 Source Product: **XNB**

Methods

Select Object and **Create Grant**

Select All | Select None

Select	Details	Name	Internal Name	Status	Description
<input type="checkbox"/>	>	CBODI	CBODI	Active	Process transaction.

Browse Search Printable Page

To create a grant, select appropriate method name check boxes in the Methods region. Click **Create Grant** to open the Create Grants page.

In the Create Grants page, select a grantee type and grantee name if it's applicable. Click **Apply**. This creates security grants for the selected methods.

To revoke a grant, in the Methods region select the **Show** link for the method that you want to view or revoke the grant. The Grant Details section of the selected method appears with the grantee and grantee type information. Click the **Revoke** icon for the grant that you want to revoke.

For more information about how to manage grants for interfaces with the support for SOAP services only, see *Managing Security Grants for SOAP Web Services Only, Oracle E-Business Suite Integrated SOA Gateway Implementation Guide*.

Managing Grants in the Grants Tab for PL/SQL Interfaces with the Support for

SOAP and REST Services

For interfaces that can be exposed as both SOAP and REST services, security grants are managed in the Grants tab instead.

Please note that in this release, only PL/SQL APIs can be exposed as REST services.

Managing Grants in the Grants Tab

Integration Repository Administration

Integration Repository >

PLSQL Interface : API Hook Call

Browse Search Printable Page

Log Configuration Disabled Configure

Internal Name: HR_API_HOOK_CALL_API
Type: PLSQL
Product: Human Resources
Status: Active

Scope: Public
Interface Source: Oracle

Overview SOAP Web Service REST Web Service **Grants**

Select Object and Create Grant Revoke Grant

Select All | Select None

Select	Name ▲▼	Internal Name ▲▼	SOAP Service Operation ▲▼	REST Service Operation ▲▼	Grant ▲▼
<input type="checkbox"/>	Create API Hook Call	CREATE_API_HOOK_CALL			
<input type="checkbox"/>	Delete API Hook Call	DELETE_API_HOOK_CALL			
<input type="checkbox"/>	Update API Hook Call	UPDATE_API_HOOK_CALL			

Browse Search Printable Page

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To create grants, select appropriate procedure and function name check boxes in the Service Operations region. Click **Create Grant** to open the Create Grants page where the administrator can select a grantee type and grantee name if applicable and click **Create Grant**. This creates security grants for the selected procedure and functions.

Please note that the grant action applies to both SOAP and REST services.

To revoke a grant, the administrator can perform the action in the Grants tab in two ways:

- **Revoking Commonly Assigned Grants to All Procedures**

Select more than one procedure and function name that have grants created earlier, and click **Revoke Grant** in the Grants tab. The Revoke Grants page is displayed where you can find existing grants that are commonly assigned to the selected procedures and functions.

For example, two procedures and functions (such as 'Create Credit Request' and 'Get Application Number') are assigned to the same User (grantee type) 'operations' (grantee name). This common grant User 'operations' is displayed in the second table of the Revoke Grants page.

Navigator Favorites (114)

Integration Repository Administration

Integration Repository > PLSQL Interface : Create Credit Request >

Revoke Grants

Cancel Revoke Grant

Selected Procedures and Functions

Name	Internal Name
Create Credit Request	CREATE_CREDIT_REQUEST
Get Application Number	GET_APPLICATION_NUMBER

Select All | Select None

Select	Granted Via	Grantee Type	Grantee
<input type="checkbox"/>	Direct	USER	operations@computersvcsrental.com

Cancel Revoke Grant

The administrator should be able to select the desired common grant(s) (such as User 'operations' in the above example) and click **Revoke Grant**. The specified common grant(s) should be removed for the selected procedures and functions.

- *Revoking Grants for a Single Procedure and Function*

Select a desired procedure and function from the Service Operations region first and then click **Revoke Grant**. The Revoke Grants page displays the existing grants details assigned to the selected procedure and function.

ORACLE® Home Logout Preferences Logged In As SYSADMIN

Navigator Favorites (114)

Integration Repository Administration

Integration Repository > PLSQL Interface : Create Credit Request >

Revoke Grants

Cancel Revoke Grant

Selected Procedures and Functions

Name	Internal Name
Get Application Number	GET_APPLICATION_NUMBER

Select	Granted Via	Grantee Type	Grantee
<input type="checkbox"/>	Direct	GLOBAL	All Users
<input type="checkbox"/>	Direct	USER	operations@computersvcsrental.com

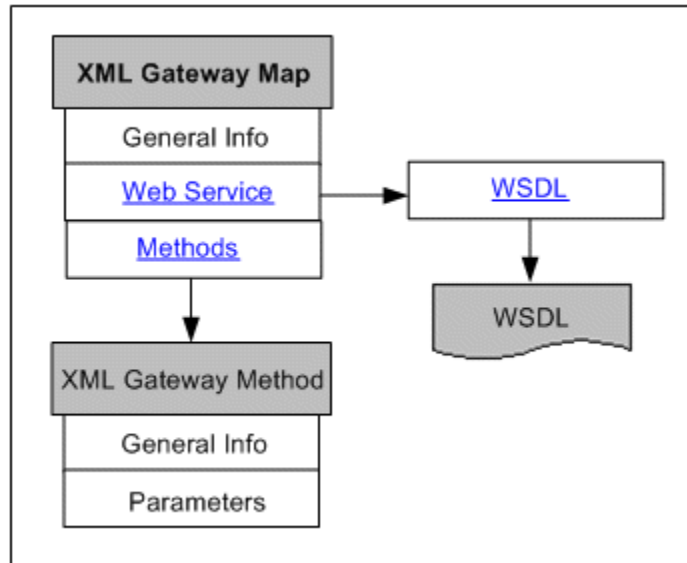
Cancel Revoke Grant

Select one or more existing grants from the table for the selected procedure, and click **Revoke Grant** to revoke the grants.

For more information about how to manage grants for interfaces with the support for SOAP and REST services, see Managing Security Grants for SOAP and REST Web Services, *Oracle E-Business Suite Integrated SOA Gateway Implementation Guide*.

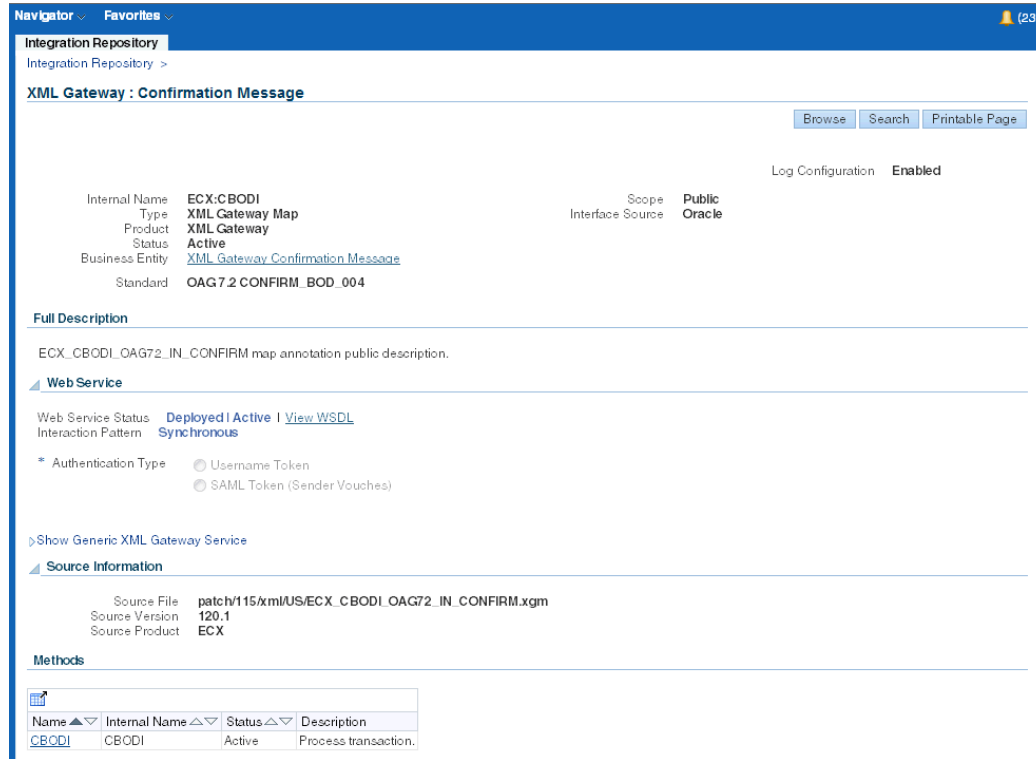
XML Gateway Map Information

The following diagram illustrates the basic structure of the XML Gateway Map information page and its connections to related pages:



The XML Gateway Map information page includes standard fields shown in the common region of the selected XML Gateway interface along with the Web Service region and Method region.

For XML Gateway interface, it can be either inbound or outbound direction. An inbound XML Gateway map indicates that the interface receives incoming transactions or messages into the Oracle E-Business Suite. An outbound map indicates that the interface sends outgoing transactions or messages to another system. For more common information shown in the interface details page, see Common Information on Interface Details, page 4-4.



- **Web Service Region**

The Web Service region appears only for inbound XML Gateway maps. It contains interface or service information for a given interface.

This region contains the following fields:

- **Web Service Status:** This indicates whether the selected XML Gateway map has an associated service generated or not, or if it is deployed.
- **View WSDL link:** This link lets you view the WSDL description for the generated or deployed service.

For information on viewing WSDL description, see *Reviewing Web Service WSDL Source*, page 4-22.

- **Interaction Pattern:** 'Synchronous' appears in this field only when the associated service is generated for this XML Gateway map.

Please note that there is no Interaction Pattern table displayed for XML Gateway map. This is because each XML Gateway interface contains only one method, and this interface type can be service enabled only with synchronous operation pattern. If a selected XML Gateway interface is exposed as a Web service, the single method contained in the interface must be generated only with the support for synchronous pattern by default.

- **Authentication Type:** This field displays the selected Authentication Type in read-only mode once the service has been deployed.

For more information on each field in the Web Service region, see *Common Information on SOAP Web Services*, page 4-8.

Generic XML Gateway Service Subregion

If your system is upgraded from a previous Oracle E-Business Suite release and if you have been using generic XML Gateway Web services, the generic XML Gateway service information can be displayed in the Web Service region for the selected XML Gateway map.

Setup Tasks

To successfully display the generic XML Gateway service and its WSDL URL in the Generic XML Gateway Service subregion, ensure the following tasks are in place:

- The *FND: XML Gateway Map Generic Service* profile value must be set to 'Yes'.

Use this profile option to display or hide the Generic XML Gateway Service subregion for the selected XML Gateway interface. If it is set to 'Yes', the Generic XML Gateway Services subregion can be displayed within the Web Service region.

- The generic XML Gateway service must be deployed. Otherwise, no WSDL URL is shown.

Once a generic XML Gateway service has been deployed, the deployed service WSDL URL is populated as the profile value for the *ISG: Generic Service WSDL URL for XMLG* profile option. The WSDL URL is also displayed in the Generic XML Gateway Service subregion.

If the generic XML Gateway service is not deployed, the profile value will not be shown. Therefore, no WSDL URL is displayed in the subregion and the Web Service Status field is marked as 'Not Deployed'.

For more setup information about generic XML Gateway services, see *Installing Oracle E-Business Suite Integrated SOA Gateway, Release 12.2*, available from My Oracle Support Knowledge Document 1311068.1 for details.

For information on setting profile options, see *Setting Profile Options, Oracle E-Business Suite Integrated SOA Gateway Implementation Guide*.

Displaying Generic XML Gateway Services

Click the **Show Generic XML Gateway Service** or **Hide Generic XML Gateway Service** link to display or close the Generic XML Gateway Service subregion for the selected XML Gateway interface.

Generic XML Gateway Service Subregion

Web Service

Web Service Status **Deployed | Active** | [View WSDL](#)
Interaction Pattern **Synchronous**

* Authentication Type ☐ Username Token
☒ SAML Token (Sender Vouches)

Hide Generic XML Gateway Service

Web Service Status **Deployed | Active** | [View Generic WSDL](#)
Interaction Pattern **Synchronous**
Authentication Type **Username Token**

This subregion contains the following fields:

- **Web Service Status:** This field indicates the current state of the generic XML Gateway service.

If the setup is not configured for generic XML Gateway service, the Web Service Status field is displayed as 'Not Deployed'.

- **View Generic WSDL:** Click the **View Generic WSDL** link to display the deployed generic WSDL URL for the selected XML Gateway interface.

The deployed generic WSDL URL has the following syntax:

```
http://<SOA server host>:<SOA Suite managed server  
port>/soa-infra/services/default/XMLGatewayService!<versio  
n chosen while deploying>XMLGateway?WSDL
```

- **<SOA Suite managed server port>:** It is the port of the server where the SOA composite is deployed.
- **<version chosen while deploying>:** At the time of deployment, deployment version will be asked. Default version value is 1.0.

For example, `http://<SOA server host>:<SOA Suite managed server port>/soa-infra/services/default/XMLGatewayService!1.0/XMLGateway?WSDL`.

Please note that after the upgrade to Oracle E-Business Suite Release 12.2, the deployed WSDL URL information has been changed from a previous release. Therefore, you may have to replace it with the new WSDL URL and service location or address accordingly in Web service clients while invoking the generic XML Gateway service.

The updated WSDL URL is also populated in the *ISG: Generic Service WSDL URL for XMLG* profile option by default if the setup tasks for generic XML Gateway services are configured properly.

- **Interaction Pattern:** 'Synchronous' is displayed by default in read-only mode.
- **Authentication Type:** 'Username Token' is displayed by default in read-only mode.

Performing Web Service Activities in the Web Service Region

If a Web service has been generated successfully, the integration repository administrators can perform additional administrative tasks including deploying the generated service, regenerating the service, or clearing up the generated service artifact which changes the Web Service Status field from 'Generated' to 'Not Generated'.

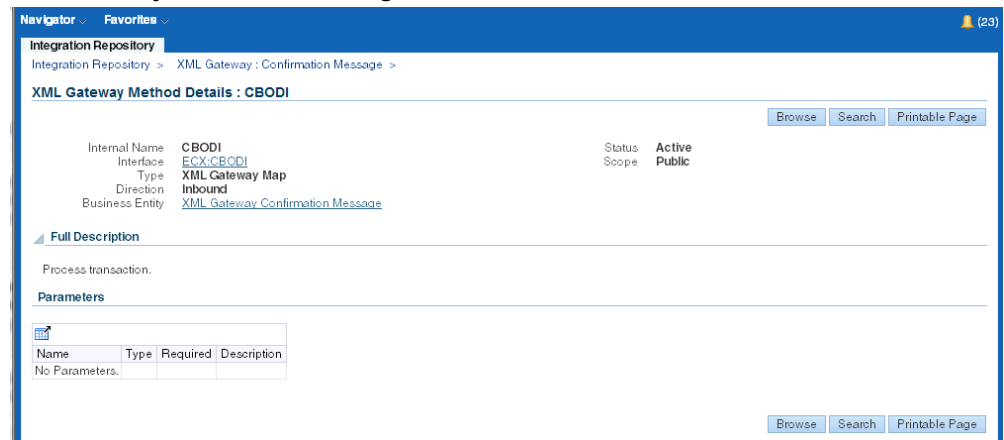
If a Web service has been successfully deployed as an active service in Oracle SOA Suite, the integration repository administrators can undeploy the active service, reset the deployed service to its initial state - 'Not Generated', retire the service so that it is no longer to accept new SOAP requests, or activate the retired service so that it can become active again.

For more information on these administrative tasks, see Performing Administrative Activities for SOAP Web Services, page 4-14.

- **Methods Region**

The XML Gateway method details page appears when you click a method name in the Methods region.

XML Gateway Method Details Page

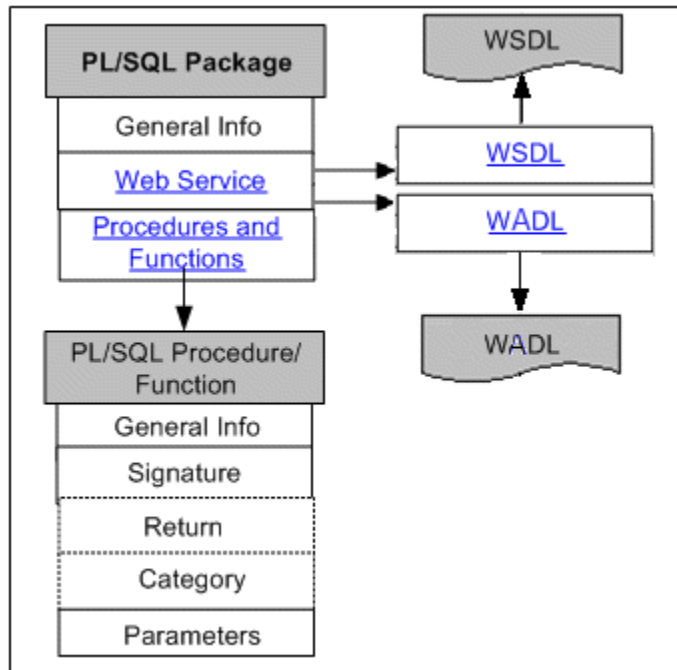


The Methods region includes a table listing the XML Gateway method parameters, including each parameter's data type and whether the parameter is required or not.

PL/SQL Information

The following diagram illustrates the basic structure of the PL/SQL information page

and its connection to the related PL/SQL procedure and function details:



PL/SQL interfaces can be exposed as both SOAP services and REST services. Therefore, the PL/SQL interface details page includes general section of a selected PL/SQL interface, the Overview tab, the SOAP Web Service tab, and the REST Web Service tab.

Users with the Integration Repository Administrator role can find an additional Grants tab displayed in the interface details page. This tab allows the administrator to create and revoke security grants. For more information on how to manage security grants, see *Managing Grants*, page 4-30.

For information on the general section, see *Common Information*, page 4-1.

PL/SQL Interface Details Page

Integration Repository
Integration Repository >

PL/SQL Interface : User

Browse Search Printable Page

Log Configuration **Enabled**

Internal Name	FND_USER_PKG	Scope	Public
Type	PL/SQL	Interface Source	Oracle
Product	Application Object Library		
Status	Active		
Business Entity	User		
Online Help	See the related online help		

Overview SOAP Web Service **REST Web Service**

Service Alias **test**

REST Service Status **Deployed** | [View WSDL](#)

Verb **POST**

Service Operations

Name	Internal Name	Included Operations
Change User Name	CHANGE_USER_NAME	✓
Create/Update User	LOAD_ROW	✓
Derive Person Party Id	DERIVE_PERSON_PARTY_ID	✓
LDAP Wrapper Change User Name	LDAP_WRAPPER_CHANGE_USER_NAME	✓
LDAP Wrapper Create User	LDAP_WRAPPER_CREATE_USER	✓
LDAP Wrapper Update User	LDAP_WRP_UPDATE_USER_LOADER	✓
LDAP Wrapper Update User	LDAP_WRAPPER_UPDATE_USER	✓
Remove PII user information	REMOVE_PII_USER	✓
Set Old Person Party Id	SET_OLD_PERSON_PARTY_ID	✓
Set Old User GUID	SET_OLD_USER_GUID	✓

TIP To apply any changes in Operation, Undeploy the service.

REST Service Security

REST Web Service is secured by HTTP Basic Authentication at HTTP Transport level. Send either of the following in "Authorization" header as per HTTP Basic scheme:

- Username:Password
- Security Token.

Note: For more information about SOAP and REST Web services, see the following topics:

- Understanding Web Services, page 2-1
- Common Information on SOAP Web Services, page 4-8
- Common Information on REST Web Services, page 4-18
- **Overview Tab**
This tab displays read-only information about the selected PL/SQL API. It includes full description, interface source information, as well as methods (or procedures and functions) contained in the selected interface.
For more information on the interface source information, see Common Information on Interface Details, page 4-4.
- **SOAP Web Service Tab**

This tab contains SOAP service information for a selected PL/SQL interface.

- **SOAP Service Status:** This indicates whether the selected PL/SQL interface has an associated service generated or not, or if it is deployed.

If the selected PL/SQL interface has an associated service generated, the field is changed from 'Not Generated' to 'Generated'. If the service is deployed, 'Deployed' with 'Active' state appears. If the service is retired, 'Deployed' with 'Retired' state appears instead.

- **View WSDL link:** This link lets you view the WSDL description for the generated or deployed service.

For information on viewing WSDL description, see *Reviewing Web Service WSDL Source*, page 4-22.

- **Interaction Pattern Table:** For PL/SQL interface, both the Synchronous and Asynchronous columns are displayed in the table allowing the administrator or system integration developer to select desired interaction patterns either at the interface level or at the method level before service generation.

After service generation, the selected interaction patterns shown in the table are still editable. However, modification to the Interaction Pattern table will be effective only after the service regeneration.

Click a procedure or function name listed in the table to access the PL/SQL Method Details page, page 4-44.

- **Authentication Type:** This field displays the selected Authentication Type (either Username Token or SAML Token) in read-only mode once the service has been deployed.

If a SOAP service has been successfully generated, the integration repository administrators can perform additional administrative tasks including deploying the generated service, regenerating the service, or clearing up the generated service artifact.

If a Web service has been successfully deployed as an active service in Oracle SOA Suite, the integration repository administrators can undeploy the active service, reset the deployed service to its initial state - 'Not Generated', retire the service, or activate the retired service so that it can become active again.

For more information on these administrative tasks, see *Performing Administrative Activities for SOAP Web Services*, page 4-14.

- **REST Web Service Tab**

This tab contains REST service information for the selected PL/SQL API.

- **Service Alias:** The REST alias should be displayed as a read-only text.

Each REST service should be associated with a unique alias name. Before deploying a REST service, the administrator must enter this field which will be used in service endpoint, WADL, and XSDs.

- **REST Service Status:** This indicates whether the selected PL/SQL interface has an associated REST service deployed or not.

If the selected PL/SQL interface is exposed as a REST service indicating that the REST service has been deployed, 'Deployed' is displayed as the service status. Otherwise, 'Undeployed' is shown.

- **View WADL link:** This link appears only if the REST service has been deployed. Click this link to view the WADL description for the deployed REST service.

For information on viewing WADL description, see *Reviewing Web Service WADL Source*, page 4-27.

- **Verb:** This field displays the Verb value indicating how the REST service is implemented using an HTTP method. Please note that 'POST' is the only method supported in this release.

This field is displayed only when the REST service has 'Deployed' status.

- **Service Operations**

This table displays the list of procedures or functions contained in the selected interface that can be exposed as REST service operations. Click a procedure or function name to access the PL/SQL Method Details page, page 4-44.

Please note that all REST services are secured by HTTP Basic Authentication or Token Based Authentication at HTTP or HTTPS transport level.

Note: HTTPS is the recommended secure transport protocol while using HTTP Basic Authentication security to authenticate user credentials (username and password).

For more information on REST service security, see *Managing Web Service Security, Oracle E-Business Suite Integrated SOA Gateway Implementation Guide*.

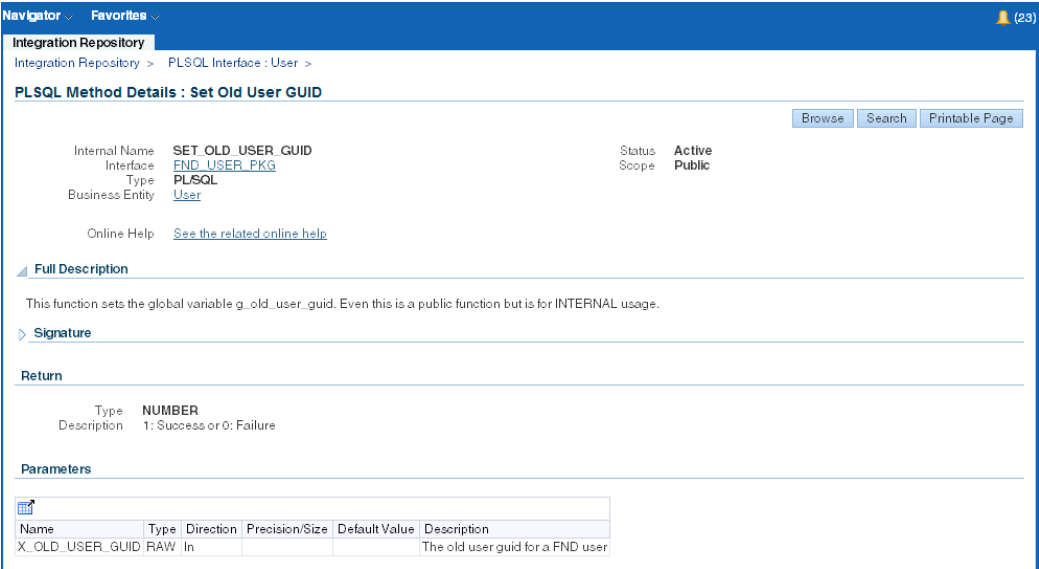
If a REST service has been successfully deployed to an Oracle E-Business Suite WebLogic server, the integration repository administrators can undeploy the service to reset the service to its initial state - 'Not Deployed'.

For more information on these administrative tasks, see *Performing Administrative Activities for REST Web Services*, page 4-21.

PL/SQL Method Details Page

The PL/SQL method details page appears when you click a method name in the Overview tab, the SOAP Web Service tab, or the REST Web Service tab.

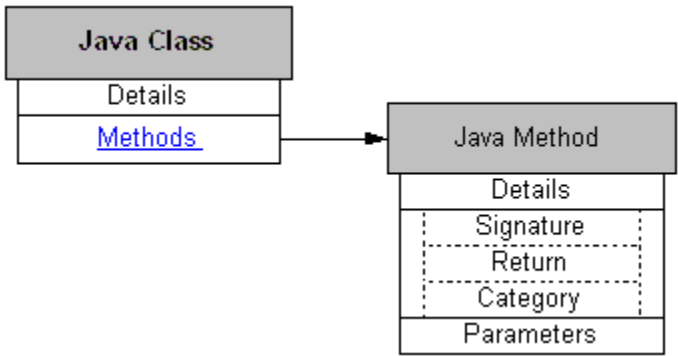
PL/SQL Method Details Page



This page displays the signature of the selected method, and a table listing the parameters and their attributes.

Java Information

The following diagram illustrates the basic structure of the Java information page and its connection to the related Java method information page.



The general section of the Java information page displays common information, page 4-1 for the selected Java class.

This page also contains a table listing the class methods, including active status and internal name. Click the Java method name link to access the Java Method Details page, page 4-45.

If you are granted the Integration Repository Administrator role, **Create Grant** appears in the Methods region. This lets you grant the access permissions of selected methods to a user, a user group, or all users. For more information on how to create security grants, see Managing Grants, page 4-30.

Java Method Information

The Java method details page appears when you click a method name on the Java interface details page.

The general section of the Java method information page displays common information for the selected method, plus the following additional fields:

- **Interface**

This Interface field displays the interface that uses this Java method. Click the link to view the interface details.

- **See Also**

This See Also field displays a related Java method. Click a related Java method name link to view the Java method details.

This page also displays the signature of a selected method, information about the return type, and a table listing the method parameters.

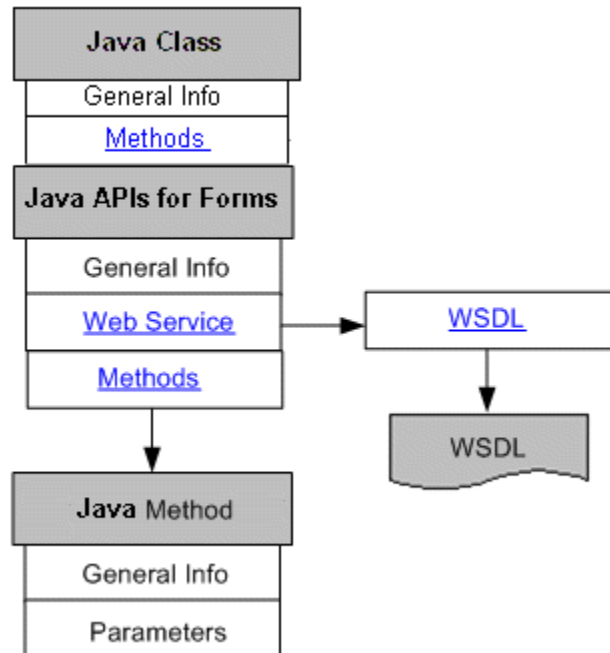
Java APIs for Forms

Java APIs for Forms are categorized as a subtype of Java interface type. These specialized Java classes are XML document-based integration points wrapped in Java classes for executing business logic in Oracle Forms. Java APIs for Forms interfaces can be transformed into Web services for further consumption.

Note: For information about Web services, see the following topics:

- Understanding Web Services, page 2-1
- Common Information on Web Services, page 4-8

The following diagram illustrates the basic structure of the Java APIs for Forms information page:



Searching and Viewing Java APIs for Forms Interfaces

To locate Java APIs for Forms interfaces, you must perform a search through the combination of Category and Category Value fields.

Click **Search** to open the main Search page, and then click **Show More Search Options** to display more search fields. Enter the following key search values as the search criteria:

- Category: Interface Subtype
- Category Value: Java APIs for Forms

For information about category and category value fields, see *Category and Category Value*, page 3-10.

The Java APIs for Forms information page includes general section of the selected Java APIs for Forms interface, the Web Service region, and the Methods region.

For information on the general section, see *common information*, page 4-1.

- **Web Service Region**

The Web Service region contains interface or service information for a selected Java APIs for Forms interface. It includes the following information:

- **Interaction Pattern Table:** This table displays the interface name and all the methods contained in the selected interface. The Synchronous column is also displayed as part of the table.

Note: In this release, asynchronous Web service operation is supported only in PL/SQL interface. Therefore, only the Synchronous column is displayed in the table for Java APIs for Forms interface type.

Instead of exposing all the methods contained in the interface as serviceable operations, the administrator or a system integration developer can select the Synchronous check boxes only for desired methods.

After service generation, the selected methods for synchronous operation are displayed in the table. Please note that this table is still editable, but modification to the table will be applied only after the service regeneration.

- **Web Service Status:** This indicates whether the selected interface has an associated service generated or not, or if it is deployed.

If the selected Java APIs for Forms interface is exposed as a Web service, but it has not yet been deployed, 'Generated' is shown in this field. If the service has been deployed, 'Deployed' with 'Active' state appears. If the service has been retired, 'Deployed' with 'Retired' state appears instead.

- **View WSDL:** This link lets you view the WSDL description for the generated or deployed service. For information on viewing WSDL description, see *Reviewing Web Service WSDL Source*, page 4-22.
- **Interaction Pattern:** This field appears only after service generation.

For Java APIs for Forms interface, 'Synchronous' is displayed by default in this field.

- **Authentication Type:** Authentication type is used to secure Web service content and authenticate Web service operation. Before deploying a service, an integration repository administrator must select one authentication type for the service. See: *Deploying and Undeploying Web Services, Oracle E-Business Suite Integrated SOA Gateway Implementation Guide*.

Once a service has been deployed with a desired authentication type, this field is displayed with the selected type in read-only mode.

If a Web service has been successfully generated, the integration repository administrators can perform additional administrative tasks including deploying the generated service, regenerating the service if needed, or clearing up the generated service artifact which changes the Web Service Status field from 'Generated' to 'Not Generated'.

If a Web service has been successfully deployed as an active service in Oracle SOA Suite, the administrators can undeploy the active service, reset the deployed service to its initial state - 'Not Generated', retire the service so that it is no longer ready to

accept new SOAP requests, or activate the retired service so that it can become active again.

For more information on these administrative tasks, see *Performing Additional Web Service Activities*, *Oracle E-Business Suite Integrated SOA Gateway User's Guide*.

- **Methods Region**

The Methods region displays the associated method information, including active status, internal name, and description, in a table for the selected Java API for Forms interface.

Integration repository administrators can find **Create Grant** in this region to create security grants by authorizing access permissions of selected methods to a user, a user group, or all users. For more information, see *Managing Grants*, page 4-30.

Java Method Details

In the Methods region, click a method name link to open the Java Method Details page for the selected method.

Security Services

Security services are a set of predefined and predeployed REST services from Oracle Application Object Library. These services include Authentication and Authorization services and are used for mobile applications.

For example, Login service validates the user credentials and returns an access token. Logout service invalidates the access token and any associated authentication sessions. These two services are included in the Authentication service that helps session initialization with security or applications context information. Authorization service retrieves the Access Control List which may contain assigned responsibilities, roles, and privileges for all logged-in users.

For more information about these REST security services, refer to the *Oracle E-Business Suite Security Guide*.

Searching and Viewing Security Services

To locate security services, you must click **Show More Search Options** and then perform a search through the combination of Category (subtype) and Category Value (Security Services) fields.

Searching for Security Services

Integration Repository

Search

Browse

Interface Name

Product Family

Product

Internal Name

Interface Type

Business Entity

Hide More Search Options

TIP Select Category before a Category Value

Category

Interface Subtype

Category Value

Security Services

Interface Source

All

Status

All

Web Service Status

All

Standard

All

Standard Specification

Scope

All

Go

Clear All

Export

Table

Name	Internal Name	Product	Type	Source	Status	Description
Authentication Services	oracle.apps.fnd.services.restimpl.security.AuthnServices	Application Object Library	Java	Oracle	Active	This class is used for all the security services delivered by AOL for teams developing applications invoking EBS SOAP/REST services. Implements Aol REST. JAVA methods namely, 12.2 and 12.2 which conforms to the signature as defined in 12.2 Also the class must define a no-arg constructor
Authorization Service	oracle.apps.fnd.services.restimpl.security.ACSServices	Application Object Library	Java	Oracle	Active	This class gives EBS authorization data like all available roles and responsibilities of a user and all accessible privileges of a user for a given responsibility.

Browse

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For information about category and category value fields, see [Category and Category Value](#), page 3-10.

Viewing Security Service Interface Details

After a search, select a desired security service from the search results table. The interface details page for the selected security service is displayed. It contains some common interface information, REST Web Service region, and Methods region.

Working with Native Integration Interfaces 4-49

Navigator Favorites (23)

Integration Repository

Integration Repository >

Java Details : Authentication Services

Browse Search Printable Page

Log Configuration **Enabled**

Internal Name	oracle.apps.fnd.services.rest.implsecurity.AuthnServices	Scope	Public
Type	Java	Interface Source	Oracle
Product	Application Object Library	Interface Subtype	Security Services
Status	Active		
Business Entity	Single Sign On Manager		
Derived Interface	Generated REST Service Interface		

Full Description

This class is used for all the security services delivered by AOL for teams developing applications invoking EBS SOAP/REST services: Implements Aol REST_JAVA methods, namely, [12.2](#) and [12.2](#) which conforms to the signature as defined in 12.2. Also the class must define a no-arg constructor

REST Web Service

REST Service Status **Deployed** | [View WADL](#)

Verb **POST**

Source Information

Source File	java/services/rest/implsecurity/AuthnServices.java
Source Version	120.0.12020000.14
Source Product	FND

Methods

Name ▲▼	Internal Name ▲▼	Status ▲▼	Description
AuthnServicesInitializeGetterMethod	initialize	Active	This method fetches the complete application context information like respId, respApplId, securityGroupId, orgId with which the requestor has previously initialized the underlying EBS session.
AuthnServicesInitializeSetterMethod (2)	initialize	Active	The payload for this service would be complete application context information like respId, respApplId, securityGroupId, orgId with which the requestor wants to initialize the underlying EBS session.
AuthnServicesLogin	login	Active	This method is used for login service which authenticates EBS * mobile apps user against EBS authentication model.
AuthnServicesLogout	logout	Active	This method is used to log-out the authenticated user, invalidates the authenticated session and releases the resources created during login service.

For information on the general section, see Common Information, page 4-1.

REST Web Service Region

The REST Web Service region contains the selected security service information.

- **REST Service Status:** 'Deployed' is always displayed for security services because all security services are predeployed REST services.

Click the **View WADL** link to view the WADL description for the selected security service in a separate window.

- **Verb:** This field displays the Verb value indicating how the REST service is implemented using an HTTP method.

'POST' is the only method supported in this release.

Please note that security services are pregranted to all Oracle E-Business Suite users which means that all the users can invoke these services.

Methods Region

In the Methods region, click a method name link to open the Java Method Details page for the selected method.

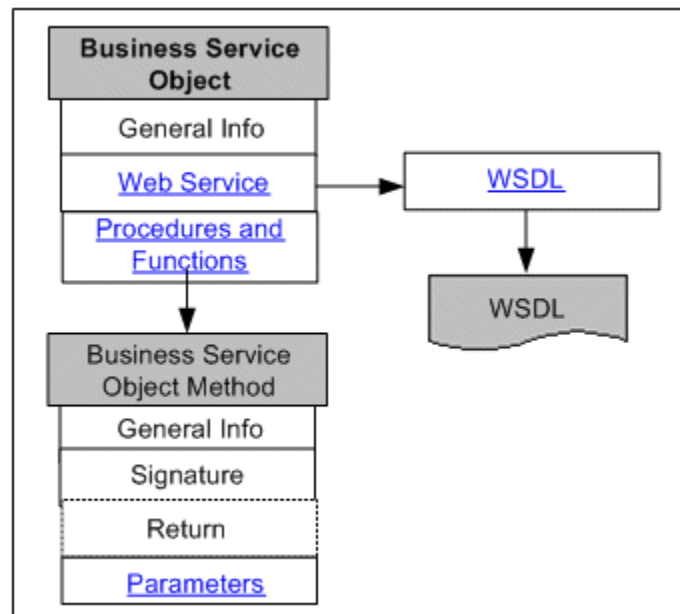
Business Service Object

Business service object (BSO) interface type, formerly known as service bean, provides the access to SOA services and facilitates integration between Oracle E-Business Suite and trading partners. This type of interfaces can be used directly or exposed as *Web services*. BSO interface type often employs *service data objects* as parameters to pass complex data.

A service data objects (SDO) defines a generic API for accessing and manipulating structured data. It is designed to simplify and unify the way in which applications handle data. The SDO API is independent of the actual data source. For example, SDO can be used to access XML data or SQL data. For more information about SDO, see *Reviewing Service Data Objects*, page 4-58.

Note: A business service object is not actually an interface type, but rather an object used by one or more Java service interfaces or other service data objects to pass data. Oracle Integration Repository includes it on list of interface types, so that you can browse or search for Java service interfaces based on the business service objects that they use.

The following diagram illustrates the basic structure of the business service object interface information page and its connections to related pages:



Business Service Object Interface Details Page

The business service object interface details page contains general section of a selected

BSO interface, the Web Service region, and Methods region.

Business Service Object Interface Details Page

Integration Repository

Integration Repository >

Business Service Object : Ebiz Homepage Service

Browse

Search

Printable Page

Log Configuration Enabled

Qualified Name

/oracle/apps/fnd/framework/favorites/EbizHomepageService

Status

Active

Interface

oracle.apps.fnd.framework.favorites.EbizHomepageService

Scope

Public

Interface Source

Oracle

Extends

oracle.svc.Service

Product

Application Object Library

Ebiz Homepage Service

Full Description

Ebiz Homepage Service

Web Service

Expand All | Collapse All

Display Name	Internal Name	Synchronous
Ebiz Homepage Service	/oracle/apps/fnd/framework/favorites/EbizHomepageService	<input checked="" type="checkbox"/>
Get Favorites	getFavorites	<input checked="" type="checkbox"/>
get Function Url	getFunctionUrl	<input checked="" type="checkbox"/>
get Functions	getFunctions	<input checked="" type="checkbox"/>

☒ TIP To apply any changes in Interaction Pattern, Generate or Regenerate the service.

Web Service Status **Deployed | Active** | [View WSDL](#)

Interaction Pattern **Synchronous**

* Authentication Type ☐ Username Token ☐ SAML Token (Sender Vouches)

Source Information

Methods

Internal Name	Status	Description
getFavorites	Active	Returns the list of favorites corresponding to the user
getFunctionUrl	Active	Returns the function URL
getFunctions	Active	Returns the list of functions corresponding to the user

The general section displays common information for the selected business service object interface, plus interface name, and the interface that extends.

- **Web Service Region**

The Web Service region contains interface or service information for a selected interface. It includes the following information:

Note: For more information about Web services, see the following topics:

- Understanding Web Services, page 2-1
- Common Information on Web Services, page 4-8

- **Interaction Pattern Table:** This table displays the interface name and all the methods contained in the selected interface. The Synchronous column is also

displayed as part of the table.

Since each BSO interface may contain more than one method, instead of exposing all the methods contained in the interface as serviceable operations, the administrator can select only desired methods from the table.

After service generation, the selected methods with the support for synchronous operation are shown in the table which can be editable. However, modification to the Interaction Pattern table will be effective only after the service regeneration.

- **Web Service Status:** Initially when service is not generated, 'Not Generated' is displayed in this field indicating that the selected interface does not have Web service generated.

If the selected Business Service Object interface is exposed as a Web service, but has not yet been deployed, the field is changed from 'Not Generated' to 'Generated'. If the service has been deployed, 'Deployed' with 'Active' state appears. If the service has been retired, 'Deployed' with 'Retired' state appears instead.

- **View WSDL:** This link lets you view the WSDL description for the generated or deployed service.

- **Interaction Pattern:** This field appears only after service generation.

For BSO interface, 'Synchronous' is displayed by default. This is because BSO interface can be service enabled only with the synchronous operation pattern.

- **Authentication Type:** Before deploying a service, an integration repository administrator must select one authentication type for the service. Once a service has been deployed with a desired authentication type, this field is displayed with the selected type in read-only mode.

If a Web service has been successfully generated, the integration repository administrators can perform additional administrative tasks including deploying the generated service, regenerating the service if needed, or clearing up the generated service artifact which changes the Web Service Status field from 'Generated' to 'Not Generated'.

If a Web service has been successfully deployed as an active service in Oracle SOA Suite, the integration repository administrators can undeploy the active service, reset the deployed service to its initial state - 'Not Generated', retire the service so that it is no longer ready to accept new SOAP requests, or activate the retired service so that it can become active again.

For more information on these administrative tasks, see Performing Additional Web Service Activities, *Oracle E-Business Suite Integrated SOA Gateway User's Guide*.

- **Methods Region**

This interface details page includes a table listing the business service object interface methods. Click a method name to access the information page for that method.

For more information about the Methods region for business service object, see [Business Service Object Interface Method Information](#), page 4-56.

Viewing WSDL description

Click the **View WSDL** link to view the WSDL file. The following sample shows the WSDL description for the Integration Repository Service:

```
<?xml version="1.0"?>
<definitions name="IntegrationRepositoryService"
targetNamespace="http://xmlns.oracle.com/oracle/apps/fnd/rep/ws/IntegrationRepositoryService"
  xmlns="http://schemas.xmlsoap.org/wsdl/"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
  xmlns:tns2="http://xmlns.oracle.com/apps/fnd/ServiceBean"
  xmlns:tns1="http://xmlns.oracle.com/apps/fnd/rep/ws"

xmlns:tns="http://xmlns.oracle.com/oracle/apps/fnd/rep/ws/IntegrationRepositoryService">
<types>
<xsd:schema>
  <xsd:import namespace="http://xmlns.oracle.com/apps/fnd/rep/ws"
schemaLocation="http://<hostname>:<port>/ISG-ISG-context-root/isdapp/apps/bso/ws/IntegrationRepositoryService.xsd"/>
</xsd:schema>
<xsd:schema elementFormDefault="qualified"
targetNamespace="http://xmlns.oracle.com/apps/fnd/ServiceBean" >
  <xsd:element name="ServiceBean_Header">
    <xsd:complexType>
      <xsd:element name="RESPONSIBILITY_NAME" minOccurs="0"
type="xsd:string"/>
      <xsd:element name="RESPONSIBILITY_APPL_NAME" minOccurs="0"
type="xsd:string"/>
      <xsd:element name="SECURITY_GROUP_NAME" minOccurs="0"
type="xsd:string"/>
      <xsd:element name="NLS_LANGUAGE" minOccurs="0" type="xsd:string"/>
      <xsd:element name="ORG_ID" minOccurs="0" type="xsd:string"/>
    </xsd:sequence>
    </xsd:complexType>
  </xsd:element>
</xsd:schema>
. . .
```

Note: Values passed in the Responsibility Name, Responsibility Application Name, Security Group, NLS Language, and Organization ID elements listed under the ServiceBean_Header are used to set applications context during service execution.

Please note that NLS Language and Organization ID are optional values to be passed. However, if the execution of a Business Service Object interface is dependent on a particular organization, then you

must pass the ORG_ID element in the ServiceBean_Header of that SOAP request.

For more information, see *Setting Other Web Service Input Message Parts, Oracle E-Business Suite Integrated SOA Gateway Implementation Guide*.

The username and password information is defined by the Web service security policy (such as oracle/wss_username_token_service_policy). Detailed instructions on how to pass the security headers along with the SOAP request, see *Configuring Web Service Policies, Oracle E-Business Suite Integrated SOA Gateway Developer's Guide*.

If error occurred, the following error message information appears under <Method>_Response:

```
...
<xsd: complexType name
="IntegrationRepositoryService_GetServiceDescription_Response">
  ...
  <xsd:sequence>
    <xsd:element name="serviceDescription"
type="oans3:ServiceDescription" minOccurs="0" nillable="true"/>
    <xsd:element name="Message" type="oans1:ServiceMessage"
minOccurs="0" maxOccurs="unbounded"/>

    <xsd:element name="ErrorMessage" type="oans1:ServiceMessage"
minOccurs="0" maxOccurs="unbounded"/>
  </xsd:sequence>
</xsd: complexType name>
```

Note: The Message and ErrorMessage elements listed under <Method>_Response are used for error messages. The Message element will appear as warning messages in the SOAP response. It is used to display any warning message returned by the API. The ErrorMessage element corresponds to OAExceptions that were raised during the method invocation. In general, the response for any service method can contain any of the following:

- The original output data
- Warning messages if any (in <Message> element)
- OAExceptions raised during the method invocation if any (in <ErrorMessage> element)

For more information about error messages, see Error Handling section, *Building an OA Framework Application (the Basics) chapter, Oracle Application Framework Developer's Guide Release 12.2*, available from My

Business Service Object Interface Method Information

The business service object interface method details page appears when you click a method name link in the Methods region.

Business Service Object Method Details Page

The screenshot shows the 'Integration Repository' page for the 'Business Service Object: Ebiz Homepage Service'. The 'Service Bean Method Details : getFavorites' section is active. It displays the following information:

- Internal Name:** getFavorites
- Interface:** [oracle.apps.fnd.framework.favorites.EbizHomepageService](#)
- Type:** Business Service Object
- Status:** Active
- Scope:** Public

Buttons for 'Browse', 'Search', and 'Printable Page' are visible. The 'Full Description' section states: 'Returns the list of favorites corresponding to the user'. The 'Signature' section is expanded, showing the 'Return' type as 'java.util.List' with an inner type of [oracle.apps.fnd.framework.favorites.Favorite](#) and a description of 'List of favorites'. The 'Parameters' section shows a table with the header 'Sequence', 'Name', 'Type', and 'Description', and a single row indicating 'No Parameters.'.

In addition to common information, the general section of the method details page contains a link to the interface that uses this method.

The following regions also appear on the method details page:

- **Signature**

The region describes the interface method, parameter type, value, and return information.

- **Return**

If the return type is a service data object, click the link in the **Type** field to access the service data object details page.

- **Parameters**

If a parameter is a service data object, click the link in the **Type** column to access the service data object details page. See: Reviewing Service Data Object, page 4-58.

Note: An XML schema describes the structure of an XML document with all input and output message definitions and data types. Click

the **XML schema** link that is associated with your selected business service object to view the XML schema document displayed in a separate window.

Integration repository administrators have the privileges to create security grants by clicking **Create Grant** in the Methods region. This authorizes access permissions of selected methods to a user, a user group, or all users.

For more information on how to create security grants, see: Managing Grants, page 4-30

Integration Repository Service

Based on business service object interface, Integration Repository Service is a service component in the Integration Repository. It queries Integration Repository data, and provides information about all the interface definitions to facilitate the integration between Oracle E-Business Suite and trading partners.

When you search for Integration Repository Service through the business service object interface type, all business service objects contained in the Integration Repository Service are displayed.

Integration repository administrators or users granted the Integration Repository Administrator role can create security grants by authorizing each business service object method contained in the service to a user, a user group, or all users. For more information, see Managing Grants, page 4-30.

Use the following steps to locate the Integration Repository Service:

1. Log on to Oracle E-Business Suite with the Integrated SOA Gateway responsibility or through custom responsibility and navigation path. Select the Integration Repository link from the navigation menu.
2. Click **Search**.
3. Enter the following information in the Search page:
 - Product Family: Application Technology
 - Interface Type: Business Service Object
4. Click **Go** to execute the search.
5. Click the **Integration Repository Service** link from the search result table.

This opens the Business Service Object interface details page.

See: Business Service Object Interface Details Page, page 4-51.

6. Click a method name link in the Methods region to get to business service object method details.

See: Business Service Object Method Information, page 4-56.

Reviewing Service Data Object

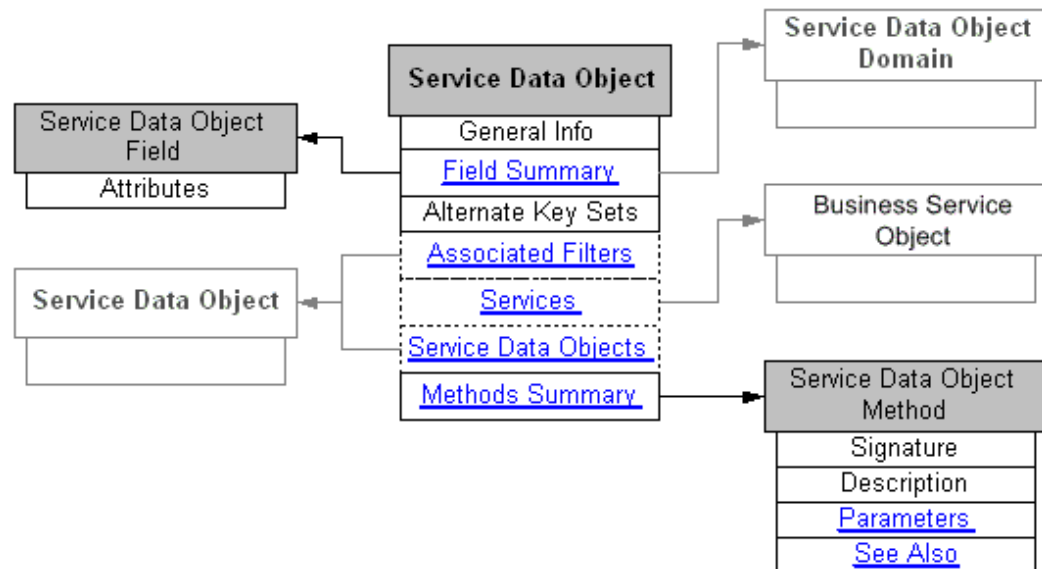
A service data objects (SDO) defines a generic API for accessing and manipulating structured data. It is designed to simplify and unify the way in which applications handle data. The SDO API is independent of the actual data source. For example, SDO can be used to access XML data or SQL data.

The data objects associated with business service objects include *service data objects* (SDO) and *filter data objects* (FDO).

Service Data Object Information

The service data object details page is accessible directly from the Integration Repository browse interface through the list of interface types. It is also accessible from the `getDataList` and `processDataList` method details pages.

The following diagram illustrates the basic structure of the service object information page and its connections to related pages.



The general section of the service data object page displays common information, plus the data object class name, implementation name, and its associated XML schema.

Click the XML schema name link to view the schema document displayed in a separate window.

Note: An XML schema describes the structure of an XML document

with all input and output message definitions and data types.

Service Data Object Information Page

[Navigator](#)
[Favorites](#)

(67834)

Integration Repository

Integration Repository >

Repair Order

[Browse](#)
[Search](#)
[Printable Page](#)

Internal Name

Class

Type

Product

Implementation

/oracle/apps/csd/svcb/RepairOrder

oracle.apps.csd.svcb.RepairOrder

Service Data Object

Depot Repair

oracle.apps.csd.svcb.server.RepairOrdersSVO

Status

Active

Scope

Public

XML Schema

[RepairOrder](#)

Repair order data object contains repair order information.

Full Description

Repair order data object contains repair order information.

Source Information

Source File

Source Version

Source Product

java/svcb/server/RepairOrdersSVO.xml

120.1

CSD

Fields

Name	Type	Scale	Precision	Description	Primary Key	Sortable
RepairLineId	oracle.jbo.domain.Number		15	Repair line id is a generated key for the repair order object.	Y	Y
RepairNumber	java.lang.String		30	Unique identifier for the repair order object.	N	N
Status	java.lang.String		30	Repair order status.	N	N
StatusReasonCode	java.lang.String		30	Reason code for status change.	N	N
FlowStatusId	oracle.jbo.domain.Number		0	Flow status id.	N	N

Alternate Key Sets

Filters

Services

Service Data Objects

Methods

Name	Status	Description
setRepairLineId	Active	Sets RepairLineId.
getRepairLineId	Active	Gets RepairLineId.
setRepairNumber	Active	Sets RepairNumber.
getRepairNumber	Active	Gets RepairNumber.
setStatus	Active	Sets Status.
getStatus	Active	Gets Status.
setStatusReasonCode	Active	Sets StatusReasonCode.
getStatusReasonCode	Active	Gets StatusReasonCode.
setFlowStatusId	Active	Sets FlowStatusId.
getFlowStatusId	Active	Gets FlowStatusId.

[Browse](#)
[Search](#)
[Printable Page](#)

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The following regions also appear on the service object details page:

- Fields**

Click a link in the **Name** column to view the field's complete attributes.

If the field type is a filter, you can click the link in the **Type** column to display the filter data object information page for that filter.

- **Alternate Key Sets**

These are the key sets that can be used to identify an instance of this data object in the absence of the primary keys. These key sets are evaluated in the sequence specified.

- **Filters**

The Filters region lists filters that can be used to filter data sources based on this service data object.

For example, data sources based on `BaseDataSourceNameDomain` service data object can be filtered by `BaseDataSourceNameFilter` filter data object.

Click the name of a filter (such as `BaseDataSourceNameFilter`) to display the selected filter data object details page.

- **Services**

The Services region lists the services that directly use this service data object.

Click the name of a service to display the information page for a business service object interface that uses this service object.

- **Service Data Objects**

This Service Data Objects region lists the data objects that directly reference this service data object.

Click the name of a service data object to display the object details page.

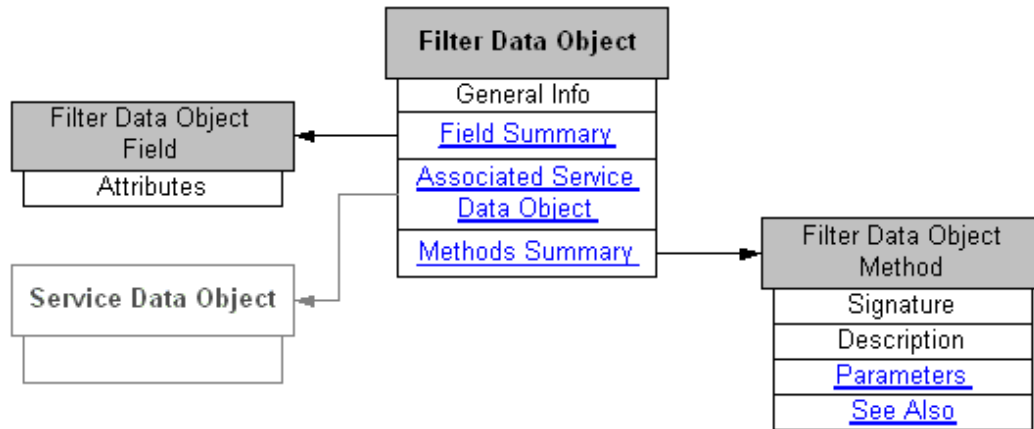
- **Methods**

Click a link in the **Name** column to display the service object method details page.

Filter Data Object Information

The filter data object details page is accessible only from the `getDataList` method details page.

The following diagram illustrates the basic structure of the filter data object details page and its connections to related pages.



A filter data object is a type of service object. The general section of the filter data object page displays common information, plus the data object class name, implementation name, filter type, and its associated XML schema information.

Note: There are two types of filter:

- Expression Filter: Allows a client program to construct a simple or complex expression, including nested expressions.
- Fixed Filter: Allows a simple list of attributes. This is used when the view object must do custom processing of filter attributes and the client program should not be allowed to build nested and complex filter expressions.

For more information on filters, see *Oracle Application Framework Developer's Guide Release 12.2*, available from My Oracle Support Knowledge Document 1303462.1.

Click the XML schema name link to view the schema document displayed in a separate window.

Filter data object information page

The screenshot shows the 'Repair Order Filter' details page in the Integration Repository. The page has a blue header with 'Navigator' and 'Favorites' tabs. The breadcrumb trail is 'Integration Repository > Repair Order >'. The title is 'Repair Order Filter'. There are three buttons: 'Browse', 'Search', and 'Printable Page'. The main content area is divided into sections: 'Internal Name', 'Class', 'Type', 'Product', 'Implementation', 'XML Schema', and 'Filter Type'. The 'Internal Name' section shows a tree structure: 'Internal Name' (value: /oracle/apps/csd/svcb/RepairOrderFilter), 'Class' (value: oracle.apps.csd.svcb.RepairOrderFilter), 'Type' (value: Service Data Object), 'Product' (value: Depot Repair), and 'Implementation' (value: oracle.apps.csd.svcb.server.RepairOrdersSVO). The 'XML Schema' section shows 'XML Schema' (value: RepairOrderFilter) and 'Filter Type' (value: Fixed Filter). Below this is a description: 'Filter object to query the repair order based on repair line or repair number.' There are two expandable sections: 'Full Description' and 'Source Information'. The 'Source Information' section shows 'Source File' (value: java/svcb/server/RepairOrdersSVO.xml), 'Source Version' (value: 120.1), and 'Source Product' (value: CSD). There are three more expandable sections: 'Fields', 'Associated Service Data Object', and 'Methods'. The 'Methods' section is expanded, showing a table with columns 'Name', 'Status', and 'Description'. The table has four rows: 'setRepairLineId' (Active, Sets RepairLineId.), 'getRepairLineId' (Active, Gets RepairLineId.), 'setRepairNumber' (Active, Sets RepairNumber.), and 'getRepairNumber' (Active, Gets RepairNumber.). At the bottom right, there are three buttons: 'Browse', 'Search', and 'Printable Page'.

Internal Name	Class	Type	Product	Implementation	Status	Scope
/oracle/apps/csd/svcb/RepairOrderFilter	oracle.apps.csd.svcb.RepairOrderFilter	Service Data Object	Depot Repair	oracle.apps.csd.svcb.server.RepairOrdersSVO	Active	Public

XML Schema: [RepairOrderFilter](#)
Filter Type: Fixed Filter

Filter object to query the repair order based on repair line or repair number.

[Full Description](#)

Filter object to query the repair order based on repair line or repair number.

[Source Information](#)

Source File	Source Version	Source Product
java/svcb/server/RepairOrdersSVO.xml	120.1	CSD

[Fields](#)

[Associated Service Data Object](#)

[Methods](#)

Name	Status	Description
setRepairLineId	Active	Sets RepairLineId.
getRepairLineId	Active	Gets RepairLineId.
setRepairNumber	Active	Sets RepairNumber.
getRepairNumber	Active	Gets RepairNumber.

The following regions also appear on the filter object details page:

- **Fields**

Click a link in the **Name** column to view the field's complete attributes.

- **Associated Service Data Object**

This region describes the associated service data object name that can be filtered by this selected filter data object.

Click the name of a service data object to display the service data object details page.

- **Methods**

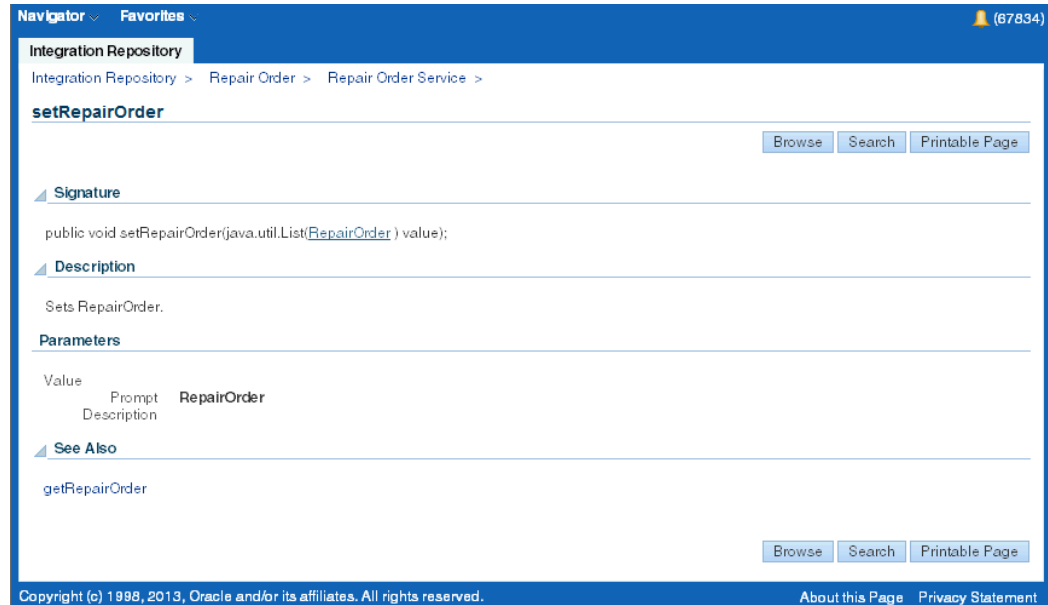
Click a link in the **Name** column to display the object method details page.

Service Data Object Method Information

The type of information provided for filter data object methods is the same as for

service data object methods. The data object method details page appears when you click a method name on the service data object details page or the filter data object details page.

Service Data Object Method Details Page

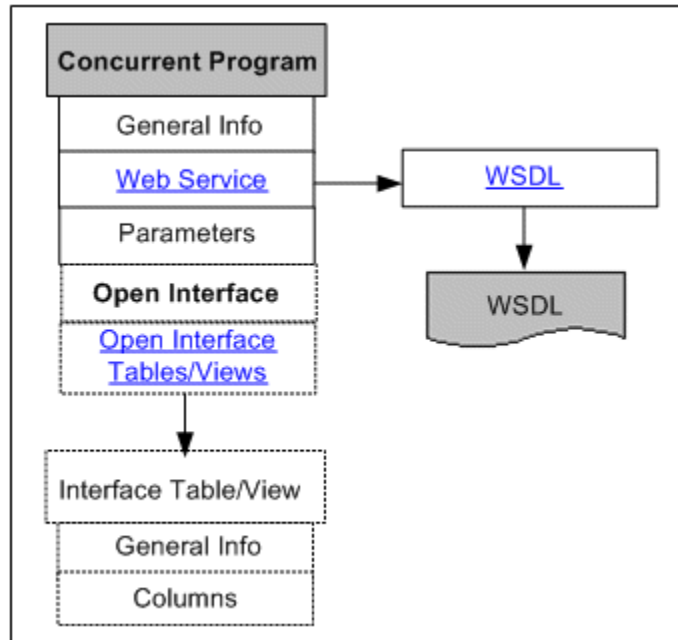


In addition to a description, the following regions also appear on the service data object method details page:

- **Signature**
This region describes the interface method, parameter type, value, and return type information.
- **Parameters**
This region contains descriptions of the parameters that are listed in the Signature region.
- **See Also**
This region displays related service object methods. Click a related object method link to display the selected service object method details.

Concurrent Program Information

The following diagram illustrates the basic structure of the concurrent program information page.



The concurrent program interface details page includes general section of a selected concurrent program, the Web Service region, and the Methods region.

For information on the general section, see common information, page 4-1.

Concurrent Program Interface Details Page

Integration Repository

Integration Repository >

Concurrent Program : Transaction Layout Definition

Browse

Search

Printable Page

Log Configuration

Enabled

Internal Name

ECRDTLD

Type

Concurrent Program

Product

e-Commerce Gateway

Status

Active

Business Entity

[EDI Transaction Layout Definition Report](#)

Online Help

[See the related online help](#)

Scope

Public

Interface Source

Oracle

Full Description

Reports the layout of a specified transaction data file.

Web Service

Web Service Status

Deployed | Active | [View WSDL](#)

Interaction Pattern

Synchronous

* Authentication Type

☐ Username Token

☐ SAML Token (Sender Vouches)

Source Information

Parameters

Name	Type	Required	Displayed	Description
Transaction Code	ECE_SRS_DOCUMENT_TYPE_ALL	Yes	Yes	Transaction Code
Include Data Not Mapped	Yes_No	Yes	Yes	Include Data Not Mapped

Methods

Name	Internal Name	Status	Description
Process	Process	Active	Transaction Layout Definition Report

Web Service Region

The Web Service region contains interface or service information for a selected concurrent program. It includes the following information:

- Note:** For more information about Web Services, see
 - Understanding Web Services, page 2-1
 - Common Information on Web Services, page 4-8
 - Reviewing Web Service WSDL Source, page 4-22
- Web Service Status:** This indicates whether the selected concurrent program has an associated service generated or not, or if it is deployed.
- View WSDL:** This link lets you view the WSDL description for the generated or deployed service.
- Interaction Pattern:** 'Synchronous' appears in this field only when the associated service is generated for the selected current program.

Please note that there is no Interaction Pattern table displayed for concurrent programs. This is because each concurrent program contains only one method, and this interface type can be service enabled only with synchronous operation. If a selected concurrent program is exposed as a Web service, the single method contained in the interface must be generated only with the support for synchronous pattern by default. 'Synchronous' is automatically displayed in this field.

- **Authentication Type:** This field displays the selected Authentication Type in read-only mode once the service has been deployed.

If a Web service has been successfully generated, the integration repository administrators can perform additional administrative tasks including deploying the generated service, regenerating the service if needed, or clearing up the generated service artifact which changes the Web Service Status field from 'Generated' to 'Not Generated'.

If a Web service has been successfully deployed as an active service in Oracle SOA Suite, the integration repository administrators can undeploy the active service, reset the deployed service to its initial state - 'Not Generated', retire the service so that it is no longer to accept new SOAP requests, or activate the retired service so that it can become active again.

For more information on these administrative tasks, see *Performing Additional Web Service Activities, Oracle E-Business Suite Integrated SOA Gateway User's Guide*.

Methods Region

The Methods region displays its associated method information.

Integration repository administrators can create security grants by authorizing the access permissions of selected methods to a user, a user group, or all users. See *Managing Grants*, page 4-30.

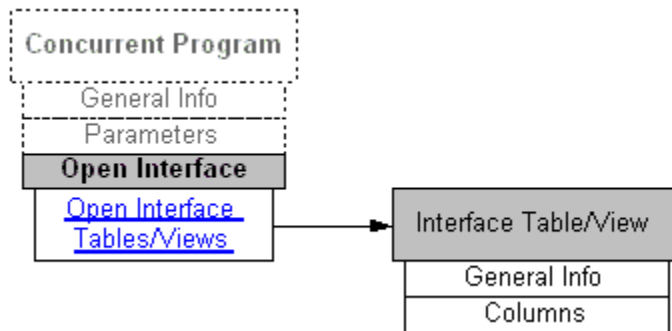
Note: Oracle Integration Repository does not support service enablement for Open Interface Tables and Views interface types. If a concurrent program is linked to Open Interface Tables or Views, this concurrent program will be viewed and displayed under the Open Interface category and cannot be service-enabled.

For more information about the Open Interface integration type, see *Open Interface Information*, page 4-67.

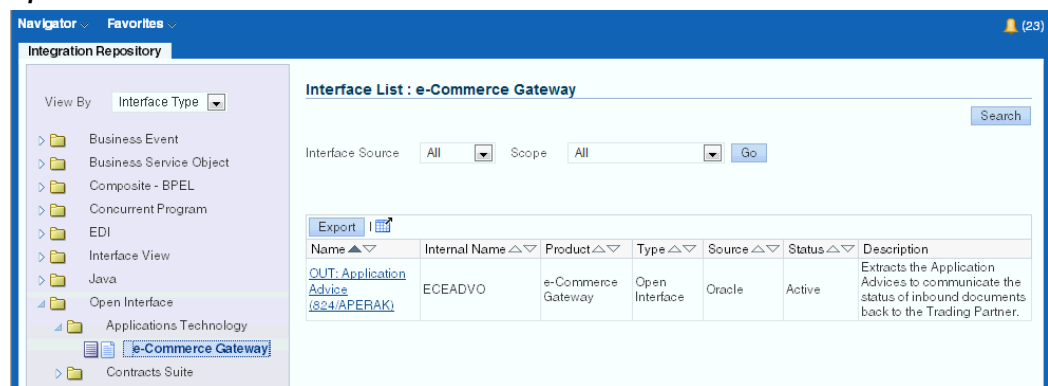
Open Interface Information

Open Interface integrations are always implemented using concurrent programs; therefore, Open Interface information is listed in a region on the concurrent program interface details page. The following diagram illustrates the basic structure of the Open Interface information and its connection to the related interface table or view

information page.



Open Interface List



After browsing through the interfaces with View by 'Open Interface', open interface tables and views are listed based on your selected product family. This type of interface stores the interface data, including active status, and whether it stores data inbound to Oracle E-Business Suite or outbound to another system.

Open Interface Table Information

The Open Interface details page appears when you click an Open Interface table name from the interface list table in the Integration Repository.

Open Interface Details Page

Integration Repository

Integration Repository >

Open Interface : Asset Genealogy Import

Browse Search Printable Page

Internal Name	EAMGEIMP	Status	Active
Type	Concurrent Program	Scope	Public
Product	Enterprise Asset Management		
Business Entity	Maintenance Asset Number		

Full Description

Users load data to Asset Number Genealogy Interface table and execute this concurrent program which processes rows in the interface tables and imports Asset Number Genealogy into Oracle Applications.

> **Source Information**

Parameters

Name	Type	Required	Displayed	Description
BATCH_ID	EAM_MOGI_BATCH_ID	Yes	Yes	Batch ID
PURGE_OPTION	Yes_No	Yes	Yes	Purge Option

Open Interface Tables/Views

Name	Direction	Status	Description
MTL_OBJECT_GENEALOGY_INTERFACE	Inbound	Active	Interface table for Asset Number Genealogy Import.

The general section of this page displays common information for the selected interface table.

Click a name link in the Open Interface Tables/Views region to display the selected Open Interface Table details page containing interface table columns and their attributes such as data type, data length, data precision, and data scale.

Interface View Information

The Open Interface View details page appears when you click an Open Interface view name from the interface list table in the Integration Repository.

Open Interface View List

The screenshot shows the 'Open Interface View List' page. On the left is a 'Navigator' pane with a tree view of the 'Integration Repository'. The 'Interface View' folder is expanded, showing 'Applications Technology', 'Workflow' (selected), and 'e-Commerce Gateway'. The main area is titled 'Interface List : Workflow'. It includes a search bar and filters for 'Interface Source' (All) and 'Scope' (All). Below these is a table with columns: Name, Internal Name, Product, Type, Source, Status, and Description. One entry is visible: 'WF_ACTIVE_SUBSCRIPTIONS_V' with internal name 'WF_ACTIVE_SUBSCRIPTIONS_V', product 'Workflow', type 'Interface View', source 'Oracle', and status 'Active'. The description states: 'WF_ACTIVE_SUBSCRIPTIONS_V view stores information about active subscriptions to events.'

Open Interface View Details Page

The screenshot shows the 'Open Interface View Details' page for 'WF_ACTIVE_SUBSCRIPTIONS_V'. The left 'Navigator' pane is expanded to 'Workflow'. The main area is titled 'View Details : Active Subscriptions View'. It includes a search bar and a 'Printable Page' button. Below this is a summary section with fields for 'Internal Name' (WF_ACTIVE_SUBSCRIPTIONS_V), 'Type' (Interface View), 'Product' (Workflow), and 'Business Entity' (Business Event). The 'Status' is 'Active' and the 'Scope' is 'Public'. A 'Full Description' section contains text about the view's purpose. Below that is a 'Source Information' section. The 'Columns' section contains a table listing the columns of the view.

Name	Type	Data Len...	Data Precisi...	Data Sc...	Description
EVENT_NAME	VARCHAR2	240			EVENT_NAME
GENERATE_FUNCTION	VARCHAR2	247			GENERATE_FUNCTION
SUBSCRIPTION_EXPRESSION	VARCHAR2	4000			SUBSCRIPTION_EXPRESSION
SUBSCRIPTION_GUID	RAW	16			SUBSCRIPTION_GUID
SUBSCRIPTION_ON_ERROR_TYPE	VARCHAR2	30			SUBSCRIPTION_ON_ERROR_TYPE
SUBSCRIPTION_OUT_AGENT_GUID	RAW	16			SUBSCRIPTION_OUT_AGENT_GUID
SUBSCRIPTION_PARAMETERS	VARCHAR2	4000			SUBSCRIPTION_PARAMETERS
SUBSCRIPTION_PHASE	NUMBER	22			SUBSCRIPTION_PHASE
SUBSCRIPTION_PRIORITY	NUMBER	22			SUBSCRIPTION_PRIORITY
SUBSCRIPTION_RULE_DATA	VARCHAR2	8			SUBSCRIPTION_RULE_DATA
SUBSCRIPTION_RULE_FUNCTION	VARCHAR2	247			SUBSCRIPTION_RULE_FUNCTION
SUBSCRIPTION_SOURCE_AGENT_GUID	RAW	16			SUBSCRIPTION_SOURCE_AGENT_GUID
SUBSCRIPTION_SOURCE_TYPE	VARCHAR2	8			SUBSCRIPTION_SOURCE_TYPE
SUBSCRIPTION_TO_AGENT_GUID	RAW	16			SUBSCRIPTION_TO_AGENT_GUID
SYSTEM_GUID	RAW	16			SYSTEM_GUID
WF_PROCESS_NAME	VARCHAR2	30			WF_PROCESS_NAME
WF_PROCESS_TYPE	VARCHAR2	30			WF_PROCESS_TYPE

Similar to the interface details page for Open Interface Table, the open interface view details page contains a table listing the interface view columns and their attributes, including the data type, data length, data precision, and data scale for each view column.

For information on the general section, see common information, page 4-1.

EDI Message Information

Oracle Integration Repository does not support service enablement for EDI messages; therefore, the EDI interface details page contains only general interface information.

EDI message information page

Interface List : e-Commerce Gateway

Interface Source: All Scope: All Go

Export

Name ▲▼	Internal Name ▲▼	Product ▲▼	Type ▲▼	Source ▲▼	Status ▲▼	Description
OUT: Application Advice (S24/APERAK)	EC:ADVO	e-Commerce Gateway	EDI	Oracle	Active	This is the source file to support the Application Advice transaction, diagnostic message used in response to the inbound ship notice, shipment/billing notice, and invoice transactions. The ASC X12 name is S24.

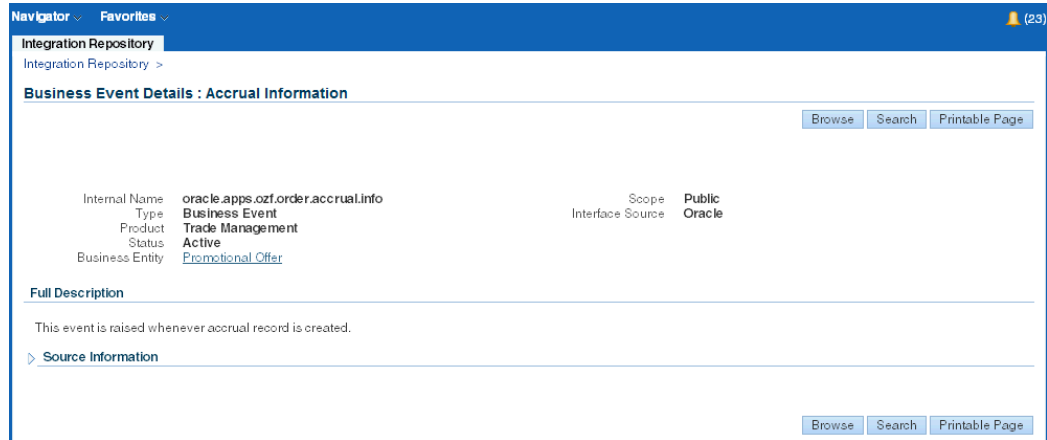
The EDI Message interface details page displays the message direction in the Direction field:

- Inbound indicates that the interface is for receiving an incoming transaction or message into Oracle E-Business Suite.
- Outbound indicates that the interface is for sending an outgoing transaction or message to another system.

For more information on the general section, see common information, page 4-1.

Business Event Information

The general section of the Business Event displays common information, page 4-1 for business event.



An integration repository administrator can perform the administrative tasks:

- Subscribe to an event

If a selected business event is not subscribed, the **Subscribe** button appears in the event details page for an integration repository administrator. Clicking the **Subscribe** button lets you subscribe to the selected business event. Internally, an event subscription is automatically created for that event with `WF_BPEL_QAGENT` as Out Agent. Once the event subscription has been successfully created, a confirmation message appears on the Business Event interface detail page.

To consume the business event message, you should register to dequeue the event from Advanced Queue `WF_BPEL_Q`. If a business event is enabled and if there is at least one subscriber registered to listen to the `WF_BPEL_Q` queue, then the event message will be enqueued in `WF_EVENT_T` structure to Advanced Queue `WF_BPEL_Q`.

For more information on how to dequeue messages, see the *Oracle Streams Advanced Queuing User's Guide and Reference*.

- Unsubscribe the event

The **Unsubscribe** button becomes available in the details page if the selected event has been subscribed. Clicking the **Unsubscribe** button lets you remove or unsubscribe the event.

For more information about subscribing to business events, see *Subscribing to Business Events, Oracle E-Business Suite Integrated SOA Gateway Implementation Guide*.

Working With Composite Services - BPEL

This chapter covers the following topics:

- Overview of Composite Services - BPEL
- Viewing Composite Services - BPEL
- Downloading Composite Services - BPEL

Overview of Composite Services - BPEL

Composite services use native interfaces as building blocks to construct the sequence of business flows. Basically, this interface type orchestrates the invocation sequence of Web services into a meaningful end-to-end business process through a Web service composition language BPEL (business process execution language). For example, use BPEL component in Oracle JDeveloper to integrate the Order to Receipt business process that contains sales order entry, item availability check, pack and ship, and invoice to Accounts Receivable subprocesses handled by various applications. This approach effectively tightens up the control of each individual process and makes the entire business flow more efficiently.

A composite service has its own WSDL definition and service endpoints allowing external Web service clients to invoke the services at run time.

Please note that in Oracle SOA Suite 11g, BPEL process is managed and deployed together with the associated SOA composite application. In Oracle SOA Suite 10g, it is developed and deployed as a separate component. Integration Repository displays 'Composite Services - BPEL' of Oracle SOA Suite 10g as catalogue in this release.

The screenshot shows the Oracle JDeveloper 10g IDE with the Business Event Outbound (BEO) configuration. The main workspace displays a BPMN diagram for 'BusinessEventOutbound.bpel'. The diagram includes a 'Receive' event, a 'SetEventData' activity, and an 'Invoke' activity. The 'Invoke' activity is connected to a 'Partner Link' named 'GetApprovalEvent'. The 'SetEventData' activity is connected to a 'Partner Link' named 'WriteEventData'. The left sidebar shows the 'Structure' view, which lists the project's components, including 'BusinessEventOutbound.bpel' and its associated 'Activity Structure'.

Note: Since composite interfaces can be designed and created in Oracle JDeveloper and Oracle Eclipse, based on the different creation methods, composite interfaces can have various composite types such as BPEL, ESB (enterprise service bus), or SCA (service component architecture) types. However, composite - BPEL is the only composite interface type supported in this release.

You can view composite interfaces by navigating to the Composite - BPEL interface type directly from the Oracle Integration Repository Browser window with View By

'Interface Type' or by performing a search in the Search page.

Click a composite - BPEL interface name link from the navigation tree or the search result to display the composite service - BPEL interface details page where you can view the interface name, description, BPEL file, abstract WSDL, and other annotated information.

Composite Service - BPEL Interface Details Page



The composite service - BPEL interface details page allows you to perform the following tasks in the BPEL Files region:

- View the composite service abstract WSDL file by clicking the **View Abstract WSDL** link.

See: Reviewing Web Service WSDL Source, page 4-22.

- View the composite - BPEL file by clicking the **View BPEL File** link

The BPEL code is displayed in a pop-up window containing major BPEL process components and activities included for the selected composite service.

Users granted the download composite service privilege can download the service by clicking **Download Service** in the interface details page. This lets you download a corresponding composite service project file, such as a BPEL file, to your local directory. See: Downloading Composite Services - BPEL, page 5-4.

For information on how to upload composite - BPEL definitions to the Integration Repository, see Enabling Custom Integration Interface Process Flow, *Oracle E-Business Suite Integrated SOA Gateway Implementation Guide*.

To view a composite service - BPEL:

1. Log on to Oracle Integration Repository with the Integrated SOA Gateway responsibility or through custom responsibility and navigation path. Select the

Integration Repository link.

2. In the Integration Repository tab, select 'Interface Type' from the View By drop-down list.
3. Expand the Composite - BPEL interface type node to locate your desired composite service.
4. Click the composite - BPEL interface that you want to review to open the Composite Service - BPEL interface details page.
5. Click the **View Abstract WSDL** link to review the WSDL description.
6. Click the **View BPEL File** link to view the BPEL code.

Downloading Composite Services - BPEL

In addition to viewing composite service - BPEL details and reviewing a WSDL file, users with the download privilege can download a composite - BPEL .JAR file to their local directories by clicking **Download Service** in the composite service details page.

Important: In general, only system integration developers and integration repository administrators can download the composite services - BPEL. However, users who are granted the download privilege through Integration Repository Download Composite Service permission set (FND_REP_DOWNLOAD_PERM_SET) can also perform the download action. Otherwise, **Download Service** may not appear in the details page by default.

For information about how to grant the download composite service privilege, see Role-Based Access Control (RBAC) Security, *Oracle E-Business Suite Integrated SOA Gateway Implementation Guide*.

Composite Service - BPEL Interface Details Page with Download Privilege

The screenshot displays the Oracle Integration Repository interface. On the left is a 'Navigator' pane with a tree view of the repository structure. The 'View By' dropdown is set to 'Interface Type'. The tree shows a hierarchy: Business Event, Business Service Object, Composite - BPEL, Order Management Suite, Order Management, Supply Chain Management, Concurrent Program, EDI, Interface View, Java, Open Interface, PL/SQL, Service Data Object, and XML Gateway Map. The 'Order Management' node under 'Supply Chain Management' is selected. The main pane shows the details for 'Composite Service BPEL : Purchase Order'. It includes a 'Search' button, a 'Printable Page' button, and a 'Download Service' button. The details table shows: Internal Name: oracle.apps.ont.ONT_POL_R121XB7A, Type: Composite - BPEL, Product: Order Management, Status: Active, Business Entity: ONT_3A4R_OAG72_IN, Scope: Public, Interface Source: Custom. Below this is a 'Full Description' section stating 'This is a bpel file for Requesting Purchase Order.' and a 'BPEL Files' section with links to 'View BPEL File' and 'View Abstract WSDL'.

Internal Name	Type	Product	Status	Business Entity	Scope	Interface Source
oracle.apps.ont.ONT_POL_R121XB7A	Composite - BPEL	Order Management	Active	ONT_3A4R_OAG72_IN	Public	Custom

Full Description
This is a bpel file for Requesting Purchase Order.

BPEL Files
BPEL File [View BPEL File](#)
Abstract WSDL [View Abstract WSDL](#)

To download a composite service - BPEL:

1. Log on to Oracle Integration Repository with the username granted with the download composite service privilege. Select the Integrated SOA Gateway responsibility from the navigation menu or through custom responsibility and navigation path, and then select the Integration Repository link.
2. In the Integration Repository tab, select 'Interface Type' from the View By drop-down list.
3. Expand the Composite - BPEL interface type node to locate your desired composite service.
4. Click the composite service that you want to download it to open the composite service - BPEL interface details page.
5. Click **Download Service** to download the selected composite file to your local directory.

Working with Custom Integration Interfaces

This chapter covers the following topics:

- Overview of Custom Integration Interfaces
- Searching Custom Integration Interfaces
- Viewing Custom Interface Details
- Performing Additional Web Service Activities for Custom Integration Interfaces

Overview of Custom Integration Interfaces

Oracle E-Business Suite Integrated SOA Gateway supports custom integration interfaces and allows them to be published along with Oracle seeded ones through the Oracle Integration Repository where they can be exposed to all users.

Integration developers create and annotate custom integration interfaces based on the Integration Repository annotation standards. Integration repository administrators use a standalone design time tool to validate these annotated source files against the annotation standards. After validation, a loader file is generated and then uploaded to the Integration Repository through backend processing. These custom interfaces are displayed based on the interface types to which they belong and displayed together with Oracle seeded ones from the Integration Repository user interface.

Supported custom interface types include XML Gateway Map, Business Event, PL/SQL, Concurrent Program, Business Service Object, Java APIs and Composite Service - BPEL type.

Note: Please note that custom interface types of EDI, Open Interface Tables, Interface Views, and Java APIs for Forms interfaces are not supported in this release.

Oracle Integration Repository currently does not support the creation of custom Product Family and custom Business Entity.

To easily distinguish annotated custom interface definitions from Oracle seeded interfaces, the Interface Source 'Custom' is used to categorize those custom integration interfaces in contrast to Interface Source 'Oracle' for Oracle interfaces.

For information on Integration Repository annotation standards, refer to:

- Integration Repository Annotation Standards, *Oracle E-Business Suite Integrated SOA Gateway Developer's Guide*
- *Oracle Application Framework Developer's Guide Release 12.2*, available from My Oracle Support Knowledge Document 1303462.1

The following topics explain more about how to search, view, and administer custom integration interfaces:

- Searching Custom Integration Interfaces, page 6-2
- Viewing Custom Integration Interfaces, page 6-4
- Performing Additional Web Service Activities for Custom Integration Interfaces, page 6-5

Searching Custom Integration Interfaces

Use the following ways to locate custom integration interfaces from the Integration Repository user interface:

- From the Interface List page, select 'Custom' from the Interface Source drop-down list along with a value for the Scope field to restrict the custom integration interfaces display.

Viewing from Interface List Page

Interface List : Order Management

Interface Source: All, All, **Custom**, Oracle

Scope: All

Name	Internal Name	Product	Type	Source	Status	Description
Purchase Order	oracle.apps.ont.ONT_POL_R121XB7A	Order Management	Composite - BPEL	Custom	Active	This is a bpel file for Requesting Purchase Order.

- From the Search page, click **Show More Search Options** to select 'Custom' from the Interface Source drop-down list along with any interface type, product family, or scope if needed as the search criteria.

Viewing from Interface Search Page

Search

Interface Name:

Product Family: All

Product: All

Internal Name:

Interface Type: All

Business Entity:

Category: All

Category Value:

Interface Source: All, All, **Custom**, Oracle

Status:

Web Service Status: All

Standard: All

Standard Specification:

Scope: All

Go Clear All

Name	Internal Name	Product	Type	Source	Status	Description
No search conducted.						

For example, select 'Custom' as the Interface Source and 'PL/SQL' as the Interface Type to locate the custom interfaces for PL/SQL type.

To view the custom integration interface details page:

- Log on Oracle E-Business Suite with the Integrated SOA Gateway responsibility or through custom responsibility and navigation path. Select the Integration Repository link to open the repository browser.
- Locate custom integration interface definitions using the following two ways:

- **From the Interface List page**

Select the following values:

- Interface Source: Custom
- Scope: Select an appropriate value

- **From the Search page**

1. Click **Show More Search Options** to open more search options.

2. Select the following values:

- Interface Source: Custom
- Scope: Select an appropriate value
- Product Family: Select an appropriate value

3. Click **Go** to execute the search.

Custom integration interfaces that match your search criteria are displayed in table format.

4. Click a desired custom interface name from the search result to view the interface details.

Please note that the custom integration interface details page shows 'Custom' as the Interface Source value allowing you to differentiate it from an Oracle seeded one.

Viewing Custom Interface Details

After performing a search on custom integration interfaces, you can view the custom interface details by selecting a custom interface name from the search result table. Custom interface information including name, description, and other annotated information is displayed in the details page.

Please note that all custom interface definitions have 'Custom' value displayed in the Interface Source field indicating that they are custom interfaces in contrast to Oracle seeded ones that have the Interface Source 'Oracle'.

Users with the integration repository administrator role can perform the following tasks:

- For the custom interface that can be exposed as SOAP Web service
 - Generate SOAP Web services

- Deploy (or undeploy) SOAP Web services
- Reset SOAP Web Services
- Retire SOAP Web Services
- Activate SOAP Web Services
- For the custom interface that can be exposed as REST Web service
 - Deploy REST Web services
 - Undeploy REST Web services

For more information about these administrative tasks, see *Performing Additional Web Service Activities for Custom Integration Interfaces*, page 6-5.

Performing Additional Web Service Activities for Custom Integration Interfaces

In addition to viewing custom integration interface details, users with the integration repository administrator role can perform the following administrative tasks:

- **For Custom Integration Interfaces with Support for SOAP Web Services**
 - Generating SOAP Web Services

Users with the Integration Repository Administrator role or system integration developer role can transform custom integration definitions into Web services with desired interaction patterns. Once a service has been successfully generated, the service status is changed from 'Not Generated' to 'Generated'.

Note: System integration developers have the privilege to generate Web services, but they are not able to deploy or undeploy services.

If a service definition is changed or the interaction pattern information is modified, before deploying the service, the administrator must regenerate the service for the change to take effect. For more information about how to generate Web services, see *Generating SOAP Web Services, Oracle E-Business Suite Integrated SOA Gateway Implementation Guide*.

- Deploying SOAP Web Services

If a service has been successfully generated, users with the Integration Repository Administrator role can deploy the service with an appropriate authentication type in the Web Service region.

If the service has been successfully deployed, the service status is updated to 'Deployed' with 'Active' state. This means the active service resided in Oracle SOA Suite is ready to accept new SOAP requests.

- Undeploying Web Services

If a Web service has been successfully deployed, the administrator can click **Undeploy** to undeploy the Web service that has been deployed earlier.

For more information on deploying and undeploying services, see Deploying and Undeploying SOAP Web Services, *Oracle E-Business Suite Integrated SOA Gateway Implementation Guide*.

- Resetting SOAP Web Services

Once a service has been successfully generated or deployed, integration repository administrators can clear up existing service artifact if needed by clicking **Reset**. This action takes the current state of Web service to its initial state - 'Not Generated'.

For more information on how to reset services, see Resetting SOAP Web Services, *Oracle E-Business Suite Integrated SOA Gateway Implementation Guide*.

- Retiring SOAP Web Services

When a custom service has been deployed to Oracle SOA Suite with active state, the administrator can retire the deployed custom service and ensure that current running requests are completed. Once the service has been successfully retired, the service status is changed to 'Deployed' with 'Retired' state indicating that this deployed service will no longer accept new requests.

For more information on how to retire deployed services, see: Retiring SOAP Web Services, *Oracle E-Business Suite Integrated SOA Gateway Implementation Guide*.

- Activating SOAP Web Services

For a retired custom service in Oracle SOA Suite, the administrator can activate the retired service by clicking **Activate** in the interface details page. This lets a retired custom service become active again. Once the service has been successfully activated, the service status is changed back to 'Deployed' with 'Active' state indicating that this deployed service is ready to be invoked and accept new requests again.

For more information on how to activate services, see Activating SOAP Web Services, *Oracle E-Business Suite Integrated SOA Gateway Implementation Guide*.

- Viewing Log Messages

To effectively troubleshoot any issues or exceptions encountered at each stage of service generation and deployment life cycle, the administrators can view

design-time logs through the Integration Repository interface details page, and runtime logs through Service Monitor for a service if the design-time and runtime logs are enabled.

For information on how to view design-time logs, see Viewing Generate and Deploy Time Logs, *Oracle E-Business Suite Integrated SOA Gateway Implementation Guide*.

For information on how to view runtime logs, see Viewing Service Processing Logs, *Oracle E-Business Suite Integrated SOA Gateway Implementation Guide*.

For detailed information about administrative tasks, see Administering SOAP Web Services, *Oracle E-Business Suite Integrated SOA Gateway Implementation Guide*.

- **For Custom Interfaces with Support for Both SOAP and REST Web Services**

Note: In this release, only PL/SQL APIs can be exposed as both SOAP and REST services.

- Deploying REST Web Services

After selecting one or more desired methods from the Service Operations table, users with the Integration Repository Administrator role can click **Deploy** to execute the REST service deployment action in the REST Web Service tab for the selected methods contained in the interface.

If the REST service has been successfully deployed, the REST Service Status field is updated to 'Deployed' from 'Not Deployed'. This indicates that the active service is ready to accept new service requests.

For more information on deploying REST services, see Deploying REST Web Services, *Oracle E-Business Suite Integrated SOA Gateway Implementation Guide*.

- Undeploying REST Web Services

If a REST service has been successfully deployed, the administrator can click **Undeploy** to undeploy the REST service if necessary and at the same time to reset the service status to its initial state - 'Not Deployed'.

For more information on undeploying REST services, see Undeploying REST Web Services, *Oracle E-Business Suite Integrated SOA Gateway Implementation Guide*.

For detailed information about administrative tasks, see Administering REST Web Services, *Oracle E-Business Suite Integrated SOA Gateway Implementation Guide*.

- **For Business Events**

The administrator can subscribe to a business event by clicking **Subscribe** in the business event interface details page. This creates subscription for the selected

event.

For information on how to subscribe to an event, see *Subscribing to Business Events, Oracle E-Business Suite Integrated SOA Gateway Implementation Guide*.

- **For Custom Composite Services - BPEL**

- Viewing Custom Composite Services - BPEL

To view a custom composite service - BPEL, perform a search from the Search page and click **Show More Search Options** to display more search fields. Enter the following values in the Search page along with product family, scope, or any other values if needed to locate your custom composite interfaces:

- Interface Source: Custom
 - Interface Type: Composite

For more information on viewing composite services, see *Viewing Composite Services - BPEL*, page 5-2.

- Downloading Custom Composite Services - BPEL

Similar to downloading composite services, users with the download privilege can download a custom composite - BPEL .JAR file to their local directories by clicking **Download Service** in the interface details page.

For more information on how to download a custom composite service, see *Downloading Composite Services - BPEL, Oracle E-Business Suite Integrated SOA Gateway Implementation Guide*.

Glossary

Agent

A named point of communication within a system.

Agent Listener

A type of service component that processes event messages on inbound agents.

Asynchronous Operation

Unlike the synchronous service execution to obtain the result immediately, asynchronous operations may require a significant amount of time to process a request.

However, the client that invoked the Oracle E-Business Suite Web service can continue with other processing in the meantime rather than wait for the response.

BPEL

Business Process Execution Language (BPEL) provides a language for the specification of executable and abstract business processes. By doing so, it extends the services interaction model and enables it to support business transactions. BPEL defines an interoperable integration model that should facilitate the expansion of automated process integration in both the intra-corporate and the business-to-business spaces.

Business Event

See Event.

Callback Pattern

Callback pattern is an important communication method in asynchronous services. An asynchronous callback means that a request is made to the service provider and a response (callback) is sent back to the requester when it is ready. This pattern can be used in conjunction with acknowledgement to recognize the receipt of a request sent by a requester.

Concurrent Manager

An Oracle E-Business Suite component that manages the queuing of requests and the operation of concurrent programs.

Concurrent Program

A concurrent program is an executable file that performs a specific task, such as posting a journal entry or generating a report.

Event

An occurrence in an internet or intranet application or program that might be significant to other objects in a system or to external agents.

Event Activity

A business event modelled as an activity so that it can be included in a workflow process.

Event Data

A set of additional details describing an event. The event data can be structured as an XML document. Together, the event name, event key, and event data fully communicate what occurred in the event.

Event Key

A string that uniquely identifies an instance of an event. Together, the event name, event key, and event data fully communicate what occurred in the event.

Event Message

A standard Workflow structure for communicating business events, defined by the datatype `WF_EVENT_T`. The event message contains the event data as well as several header properties, including the event name, event key, addressing attributes, and error information.

Event Subscription

A registration indicating that a particular event is significant to a system and specifying the processing to perform when the triggering event occurs. Subscription processing can include calling custom code, sending the event message to a workflow process, or sending the event message to an agent.

Function

A PL/SQL stored procedure that can define business rules, perform automated tasks within an application, or retrieve application information. The stored procedure accepts standard arguments and returns a completion result.

Integration Repository

Oracle Integration Repository is the key component or user interface for Oracle E-Business Suite Integrated SOA Gateway. This centralized repository stores native packaged integration interface definitions and composite services.

Integration Repository Parser

It is a standalone design-time tool used by the integration repository administrator to validate annotated custom interface definitions against the annotation standards and generate an Integration Repository loader file (iLDT). This generated iLDT file can be uploaded to Integration Repository where custom interfaces can be exposed to all users.

Interface Type

Integration interfaces are grouped into different interface types.

JSON

JSON (JavaScript Object Notation) is a text-based open standard designed for human-readable data interchange. The JSON format is often used with REST services to transmit structured data between a server and Web application, serving as an alternative to XML.

Loose Coupling

Loose coupling describes a resilient relationship between two or more systems or organizations with some kind of exchange relationship. Each end of the transaction makes its requirements explicit and makes few assumptions about the other end.

Lookup Code

An internal name of a value defined in a lookup type.

Lookup Type

A predefined list of values. Each value in a lookup type has an internal and a display name.

Message

The information that is sent by a notification activity. A message must be defined before it can be associated with a notification activity. A message contains a subject, a priority, a body, and possibly one or more message attributes.

Message Attribute

A variable that you define for a particular message to either provide information or prompt for a response when the message is sent in a notification. You can use a predefined item type attribute as a message attribute. Defined as a 'Send' source, a message attribute gets replaced with a runtime value when the message is sent. Defined as a 'Respond' source, a message attribute prompts a user for a response when the message is sent.

Notification

An instance of a message delivered to a user.

Notification Worklist

A Web page that you can access to query and respond to workflow notifications.

Operation

An abstract description of an action supported by a service.

Port

A port defines an individual endpoint by specifying a single address for a binding.

Port Type

A port type is a named set of abstract operations and abstract messages involved.

Process

A set of activities that need to be performed to accomplish a business goal.

REST

Representational State Transfer (REST) is an architecture principle in which the Web services are viewed as resources and can be uniquely identified by their URLs. The key characteristic of a REST service is the explicit use of HTTP methods (GET, POST, PUT, and DELETE) to denote the invocation of different operations.

Please note that only POST method is supported in this release.

SAML Token (Sender-Vouches)

This type of security model authenticates Web services relying on sending a username only through Security Assertion Markup Language (SAML) assertion.

SAML is an XML-based standard for exchanging authentication and authorization data between security domains, that is, between an identity provider and a service provider. SAML Token uses a sender-vouches method to establish the correspondence between a SOAP message and the SAML assertions added to the SOAP message.

See Username Token.

Service

A service is a collection of related endpoints.

Service Component

An instance of a Java program which has been defined according to the Generic Service Component Framework standards so that it can be managed through this framework.

Service Monitor

It is the monitoring and auditing tool in Oracle E-Business Suite allowing you to view runtime messages for web services provided by Oracle E-Business Suite Integrated SOA

Gateway.

It is known as SOA Monitor in earlier releases.

SOA

Service-oriented Architecture (SOA) is an architecture to achieve loose coupling among interacting software components and enable seamless and standards-based integration in a heterogeneous IT ecosystem.

SOA Composite (SCA Composite)

It is a new set of specifications that define a new way of assembling SOA-enabled applications. It is developed and deployed as a single service that includes all the components it assembles to form the application implementation. In Oracle SOA Suite 11g, it may contain one or more cooperating component types such as Mediator component, BPEL process component, and so on.

SOAP

Simple Object Access Protocol (SOAP) is a lightweight protocol intended for exchanging structured information in a decentralized, distributed environment. It uses XML technologies to define an extensible messaging framework providing a message construct that can be exchanged over a variety of underlying protocols.

Subscription

See Event Subscription.

Synchronous Operation

Synchronous operation provides an immediate response to a query. In this situation, the client connection remains open from the time the request is submitted to the server. The client will wait until the server sends back the response message.

Username Token

A type of security model based on username and password to authenticate SOAP requests at run time.

See SAML Token (Sender-Vouches).

WADL

Web Application Description Language (WADL) is designed to provide a machine-processable description of HTTP-based Web applications. It models the resources provided by a service and the relationships between them.

Web Services

A Web service is a software system designed to support interoperable machine-to-machine interaction over a network. It has an interface described in WSDL. Other systems interact with the Web service in a manner prescribed by its description

using SOAP-messages, typically conveyed using HTTP with an XML serialization in conjunction with other Web-related standards.

Workflow Engine

The Oracle Workflow component that implements a workflow process definition. The Workflow Engine manages the state of all activities for an item, automatically executes functions and sends notifications, maintains a history of completed activities, and detects error conditions and starts error processes. The Workflow Engine is implemented in server PL/SQL and activated when a call to an engine API is made.

WSDL

Web Services Description Language (WSDL) is an XML format for describing network services as a set of endpoints operating on messages containing either document-oriented or procedure-oriented information. The operations and messages are described abstractly, and then bound to a concrete network protocol and message format to define an endpoint.

WS-Addressing

WS-Addressing is a way of describing the address of the recipient (and sender) of a message, inside the SOAP message itself.

WS-Security

WS-Security defines how to use XML Signature in SOAP to secure message exchanges, as an alternative or extension to using HTTPS to secure the channel.

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